SEMANTIC, PROSODIC AND SYNTACTIC MARKING OF INFORMATION STRUCTURAL UNITS IN TURKISH

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SEMANTIC, PROSODIC AND SYNTACTIC MARKING OF INFORMATION STRUCTURAL UNITS IN TURKISH

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DECLARATION OF ORIGINALITY

I, Aslı Gürer, certify that,

- I am the sole author of this thesis and that I have fully acknowledged and documented in my thesis all sources of ideas and words, including digital resources, which have been produced and published by another person or institution;
- this thesis contains no material that has been submitted or accepted for a degree or diploma in any other educational institution;
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ABSTRACT

Semantic, Prosodic, and Syntactic Marking

of Information Structural Units in Turkish

This dissertation focuses on how Turkish encodes information structural units within semantics, prosody and syntax interface. Information packaging is investigated under the classification of (i) aboutness topic, (ii) contrastive topic, (iii) contrastive focus, (iv) discourse-new focus, and (v) discourse anaphoric constituents. Focus phrases are differentiated not based on a designated syntactic position or the feature of contrast but based on exhaustive identification with contrastive focus phrases. The prosodic properties of focus phrases in SOV order indicate that (i) when focus is in the immediately preverbal position, contrastive focus and discourse-new focus and broad focus sentences do not differ significantly with respect to duration or pitch height at any of the measurement points, (ii) focus in sentence initial, medial or final domains is always marked as the rightmost phonological phrase with intonational phrase level prominence, which marks the beginning of the nuclear fall. The syntactic investigation of the interaction of information structural units with negation and quantifier scope illustrate that all movement operations are driven by discourse-interpretational purposes. Additionally, *v*P does not show phasehood properties and the derivation of the data is captured via eventual, situational, and propositional domains and clause-internal functional projections. In the absence of TP, (i) CP does not show phasehood properties as evidenced by binding data, ECM clauses, bounding nodes, (ii) temporal information is encoded as a secondary effect of Mood.

ÖZET

Türkçe Bilgi Yapısı Öğelerinin Anlamsal, Bürünsel ve Sözdizimsel İşaretlenmesi

Bu tez Türkçe'nin bilgi yapısı öğelerinin anlambilim, bürünbilim ve sözdizim ara yüzlerinde nasıl kodladığına odaklanır. Bilgi paketleme (i) hakkındalık konusu, (ii) karşıtsal konu, (iii) karşıtsal odak, (iv) yeni-söylem odağı, (v) yinelem-söylem sınıflandırması altında incelenir. Odak öbekleri sözdizimde belli bir konum ya da karşıtlık özelliğiyle değil, karşıtsal odakların kapsamlı belirleme yönüyle birbirlerinden ayrılırlar. Özne-Nesne-Yüklem sıralamasında odak öbeklerinin bürünbilimsel araştırması (i) odak hemen yüklem öncesi konumda olduğunda geniş odak, karşıtsal odak ve yeni söylem odakları arasında perde yüksekliği ve süre olarak hiç bir ölçüm noktasında fark olmadığını, (ii) cümle başı, ortası ya da sonunda odağın en sağ sesbilimsel öbek olduğunu ve çekirdeksel düşüşün başlangıcını da gösteren ezgisel öbek düzeyinde vurgu ile işaretlendiğini gösterir. Bilgi yapısı birimlerinin olumsuzluk ve niceleyen etki alanıyla olan etkileşiminin sözdizimsel araştırması, tüm hareket işlemlerinin söylem-yorumsal sebeplerle olduğunu gösterir. İlaveten, *v*P evresel özellikleri göstermemektedir ve verinin türetimi olaysal, durumsal, önermesel alanlarla yapılabilmektedir. TP'nin yokluğunda, (i) bağlama verisi, ECM tümceleri, bağlayıcı düğümlerinde gösterdiği gibi CP evresel özelikleri göstermemektedir, (ii) zaman bilgisi, kipin yan etkisi olarak ortaya çıkmaktadır.

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This thesis is dedicated to my parents, İsmail and İpek Gürer,

for their endless love and support

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ABBREVIATIONS

1SG	first person singular
2SG	second person singular
3SG	third person singular
1PL	first person plural
2PL	second person plural
3PL	third person plural
ABL	ablative
ABIL	ability
ACC	accusative
AGR	agreement
AOR	aorist
ASP	aspect
AT	aboutness topic
CAUS	causative
CL	classifier
COP	copula
COM	commutative
COMP	complementizer
COND	conditional
CF	contrastive focus
CT	contrastive topic
DA	discourse anaphoric
DEON	deontic
DN	discourse new
EVI	evidential
F(OC)	focus
FUT	future
DAT	dative
GEN	genitive
IMPRF	imperfect
INF	inferential
INST	instrumental
LOC	locative
NEG	negation
NOM	nominative
NOML	nominalizer
OBJ	object
QP	question particle
PASS	passive
PERF	perfect
PL	plural
POSS	possessive
PRES	present
PROG	progressive
REL	relativizer
SUBJ	subject
T(OP)	topic

CHAPTER 1

INTRODUCTION

1.1 Aim

The aim of this thesis is to investigate the semantic, prosodic and syntactic marking of information structural units in Turkish. A three-way classification is made for information structural constituents as (i) topic, which is further classified as aboutness topic and contrastive topic, (ii) focus, which is realized as discourse-new constituents or contrastively focused constituents and (iii) discourse anaphoric constituents.[1] Turkish has been cited as a free word order language, as definite arguments allow six word order permutations (Erkü 1982, Erguvanlı 1984, Kural 1992, Göksel and Kerslake 2005, Şener 2010, among many others). However, the same researchers have concluded that this variation is not fully free in the sense that each word order serves a special discourse interpretational purpose. Word order variation is used to express a different information structuring and hence it is not possible to suggest a syntactic analysis for movement operations in Turkish without recourse to semantic properties of these units.

Languages can use prosodic, semantic, morphological or syntactic strategies to mark information structuring within an utterance. From a morphological perspective, languages such as West Chadic languages Bole, Hausa and Tangale (Zimmerman 2011) and Somali (Frascarelli 2012), mark focus with overt morphological markers. In Chickasaw, subject and object constituents carry focus

[1] In the literature, various terms have been used for the discussion of information structural notions. Discourse-new constituents have also been labeled as presentational focus (Selkirk 2002) or information focus (Kiss 1998) and all new sentences have been labeled as broad focus sentences (Ladd 1996). Contrastive focus constituents have been labeled as identificational focus (Kiss 1998) or narrow focus (Ladd 1996). Within this study, we will use the terms discourse new and contrastive focus constituent.

markers (Büring 2009). In Gungbe, focus and topic phrases are marked with special morphological markers (Dyakonova 2009).

Some languages encode information structure via prosodic strategies. Katz and Selkirk (2011) note that in English the distinction between discourse-new and contrastive focus is reflected in prosody in that contrastive focus has a higher pitch height and duration than non-contrastive, discourse-new constituents. Frascarelli (1997) points out that in Italian if a constituent in a sentence is marked with [+F] it restructures and enlarges its phonological phrase but this is not the case in constructions with all-new constituents. Féry and Ishihara (2009) compare structures with focus and given information and argue that focus and givenness have an effect on pitch register without changing prosodic phrasing in Japanese and German. In Tangale a phrase boundary is inserted before the focused phrase (Zimmerman 2011).

Syntactic reordering is another strategy used to mark information structuring. Frascarelli and Hinterhölzl (2007) classify topic phrases under three categories and suggest that in German and Italian these topic phrases show different phonological and syntactic properties. In Romanian, Catalan, Hungarian the immediately preverbal position has been suggested to be the identificational focus position (Kiss 1998). It is the sentence final position that is reserved for this purpose in Russian (Dyakonova 2009) and Spanish (Zubizarretta 1998) or sentence initial position in Finnish (Vallduví and Vilkuna 1998) and Hausa (Zimmermann 2011). In Bole, focused subjects undergo movement to the post-verbal position, in which case morphological marking becomes optional (Zimmermann 2011).

As one can easily understand even from the list above, a language can also use mixed strategies and encode the information status of the constituent in different domains of the grammar. In Hungarian narrow focus phrases undergo movement to

the immediately preverbal position. Additionally Genzel, Ishihara and Surányi (2014) find out that in the prosodic domain narrow focus phrases have higher f0 values and longer duration when compared to broad focus sentences. Zimmermann and Onea (2011) point out that the prosodic, syntactic or morphological strategies used to realize information structural units can also be used for certain other constructions as well. In Gungbe and Somali the morphological marker used with focus phrases is also used with wh-phrases (Dyakonova 2009, Frascarelli 2012). In Bole, Hausa and Tangale focus marking shows variation and with non-subject constituents focus marking is optional. Hence the investigation of information structural encoding is not an easy task as one cannot restrict the investigation to a single domain.

In this study we aim to find out how Turkish encodes information packaging taking into consideration the above mentioned dimensions of the grammar. The following research questions are raised:

(i) How is information packaging encoded in Turkish based on the distinction of (i) aboutness topic, (ii) contrastive topic, (iii) contrastive focus, (iv) discourse-new/presentational focus, (v) discourse anaphoric constituents?
(ii) What are the ordering restrictions for these information structural units and can we propose an analysis for these restrictions based on their semantic composition?
(iii) How are focus phrases realized prosodically and can we observe a phonological or phonetic difference between the focus types?
(iv) What is the relation between sentential stress and stress due to focus prominence? Are they distinct operations?

(v) Given that word order permutations yield different interpretational purposes, does Turkish have movement operations devoid of discourse interpretational purposes, is scrambling a free movement operation?

(vi) What is the interaction between quantifier scope and information structural units? Does focus shape the scope relations of quantifiers? How are the information structural units marked in the phrase structure of Turkish?

(vii) How can we account for the syntactic marking of these units via (i) features checked by dedicated functional projections if yes in which order and at which periphery, (ii) LF movement analysis similar to quantifiers?

(viii) What do all these discussions tell us with respect to the phrase structure of Turkish?

The first two questions are addressed in the Chapter 2, and we find out that contrastive focus phrases differ from discourse new focus with respect to exhaustive identification. However both focus types can surface in-situ optionally followed by discourse anaphoric constituents. The semantic composition of contrastive topic is dependent on focus and hence contrastive topic cannot surface within the scope domain of focus or in the absence of focus. Aboutness topics occur in sentence initial position and without making a contrast tell us what the rest of the sentence is about. Finally, discourse anaphoric constituents are given, salient constituents in the previous discourse.

The third and fourth questions are discussed in Chapter 3. The experimental studies conducted reveal that discourse-new and contrastive focus phrases in the immediately preverbal position do not differ from broad focus sentences or from each other with respect to f0 height or duration in SOV order. Additionally, focus

prominence is realized phonologically as right alignment of the phonological phrase including the focus phrase and as IP level stress phonetically.

In addition to the binding data (Şener 2010), negation data and the experimental studies on the interaction of information structural units with quantifier scope, discussed in Chapter 4, reveal the answers of the fifth, sixth and seventh questions. We propose FocP and DaP above *v*P domain and discourse features as syntactic formal features to capture the Turkish data. All movement operations are triggered by discourse-interpretational purposes and quantifier scope and binding data can be accounted for via restrictions on movement of information structural units. The *v*P does not show phasehood properties and restrictions on movement and reconstruction sites signal the presence of the scope domain of focus which maps on to the eventual domain (Ramchand and Svenonius 2013). LF movement analysis cannot account for the Turkish data when scope properties of discourse anaphoric constituents are taken into account.

Finally in Chapter 5, we investigate the last question. The discussion shows that in addition to *v*P, CP in Turkish does not show phasehood properties. We base our arguments on the data coming from (i) subject reflexives, (ii) ECM clauses, (iii) bounding nodes, (iii) subject-object extraction, (iv) the absence of expletives, (v) sequence of tense, (vi) suspended affixation (Zanon 2014). Additionally, in line with Bošković (2012) we suggest that in addition to DP, TP does not exist in Turkish which makes CP defective. In the absence of TP, TopP at the left periphery is the target position of the topic phrases which captures the propositional versus utterance level distribution of focus and topic phrases respectively. Temporal information is provided by relevant aspect and mood markers and tense interpretation is only

secondary effect of Mood. The next section briefly summarizes the theoretical framework.

1.2 Theoretical framework

1.2.1 The minimalist program

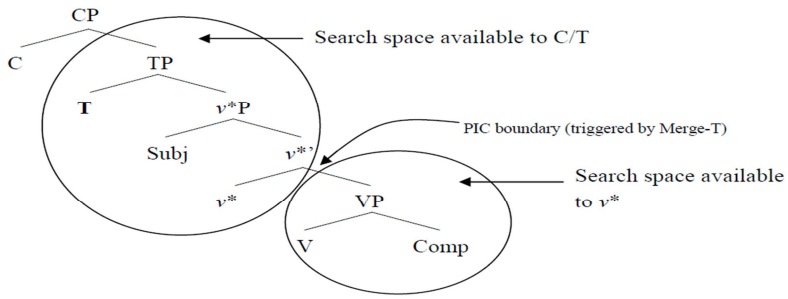
Within the Minimalist Program (MP), the syntactic output is sent in steps to LF and PF for conceptual intentional interpretation and phonological realization respectively. Transfer to Spell-Out occurs cyclically via the phases CP and *v*P. Phases take away the burden on the computational system deriving the structure with multiple Spell-Outs.[2] Chomsky (2000) suggests two criteria for phasehood. Phases are 'propositional' in that these syntactic units can be judged as true or false and 'independent' in the sense that *v*P has 'full argument structure' while CP has 'tense and force' properties. A phase is composed of a domain and an edge. The domain deals with argument structure and predication while the edge serves as the escape hatch for further movement operations. Legate (2003) suggests the following criteria as the diagnostics for phasehood.

(1) a. Phase edges are possible quantifier raising targets in antecedent contained deletion (ACD).
b. Phase edges are possible reconstruction sites.
c. Parasitic gaps are licensed by a wh-trace at the V phase edge. (Legate 2003)

[2] Butler (2004) questions the role of phases as lessening the computational load based on adjunction and raising data. Adjunction to a phase is infinite, and when we cannot comprehend the layers of adjunction, adding an additional adjunct becomes a problem. Phases are suggested to take the burden on the computation but they cannot have an effect on infiniteness of adjunction which is predicted to be a computational load. Raising data poses a similar problem. There are two phases in the following example: the mostly embedded *v*P and the matrix CP.
(1) [$_{CP}$Emma [$_{vP}$seems [$_{TP}$to [$_{vP}$appear [$_{TP}$to [$_{vP}$be unlikely [$_{TP}$to [$_{vP}$happen [$_{TP}$to [$_{vP}$arrive soon]]]]]]]]]] (Butler 2004, 5)
Based on phase impenetrability condition the lower phase waits until the higher phase CP is merged and hence the derivation has to wait till the end of the structure which cannot lessen the computational load.

Note that the diagnostics in (1) depend heavily on the edge positions of the phases which serve as the space for movement. As the computational system takes one phase into derivation, when the derivation moves to the next phase, the complement domain of the previous phase is sent to LF and PF for interpretation. While the complement domain of a phase is no longer available for computation, the edges can still be within the search domain of probes in the higher phase. This restriction is labeled as Phase Impenetrability Condition (PIC) as illustrated in (2) below.

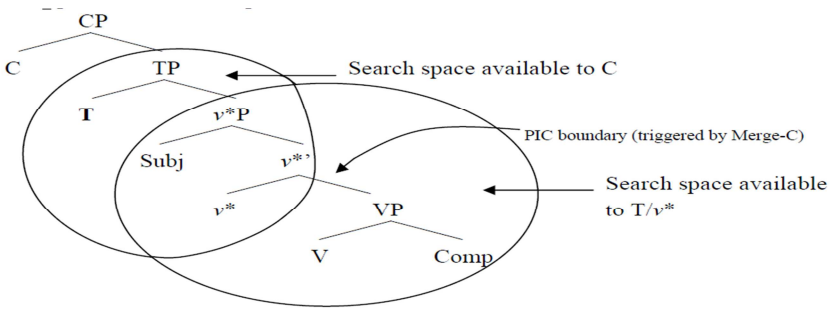
(2)



(Richards 2008, 3)

The VP domain, the complement domain of the lower phase is sent to Spell-Out when T is merged. However in some unaccusative and passive constructions it was found out that the VP complement domain is accessible to T which cannot be captured within this system. Hence the phase impenetrability condition has been revised in the following way.

(3)



(Richards 2008, 7)

As shown in (3), the complement domain of *v*P is not sent to Spell-Out until the merge of CP and hence VP is within the search domain of the T head.

Phases have not been exempt from disagreement. Chomsky (2001) makes a distinction for phases as strong and weak phases and suggests that unaccusative and passive *v*Ps are weak phases. Legate (2003) opposes this view and argues that unaccusative and passive *v*Ps show phasehood properties relying on reconstruction effects, quantifier raising and parasitic gap tests. Butler (2004) argues that if *v*P and CP are phases then they should have equal amount of semantic and syntactic structures and proposes IP internal CP level projections in the middle field. With this adjustment to the phase system, quantificational heads such as FocP, NegP, which are generated at the left periphery within the cartographic approach (Rizzi 1997), can surface above the lower phase. These additional functional projections above the lower phase evaluate the quantificational relations and make the domain of the phase a referential unit to be used in the higher phases. Based on CP/DP parallelism, Hiraiwa (2005) suggests not only CP but also DP as a phase. Öztürk (2005) argues that in Turkish the *v*P phase does not exist. Grohmann (2003), on the other hand, suggests prolific domains of *v*P, IP, and CP which are spell-out units similar to phase theory. However, in his work, instead of PIC, restriction on movement and reconstruction is dealt with via restrictions on successive cyclic movement. Hence phase edges do not have a special status within his analysis. To sum up, there is no consensus on the status of phases from a theoretical and cross-linguistic perspective.

The other important aspects of the MP are the operations Merge and Agree. Merge is further classified as External Merge (EM) and Internal Merge (IM). Chomsky (2005:7) suggests that "…EM yields generalized argument structure (theta roles, the "cartographic" hierarchies, and similar properties); and IM yields discourse

related properties such as old information and specificity, along with scopal effects." The second operation within the system is Agree. From the lexicon, the lexical items enter the derivation equipped with some interpretable and uninterpretable features. Before the derivation is sent to Spell-Out, the uninterpretable features have to be deleted for that domain to be fully interpretable at the interfaces. This feature checking operation between the probe and the goal is Agree. The probe with uninterpretable features searches a matching goal with interpretable features within its search domain. The uninterpretable feature is checked and deleted via Agree and if the probe has an additional Edge feature, the goal is attracted to the specifier position of the probe. The phase heads are the locus of all features which can percolate down to T or V heads.

1.2.2 Formal features vs. discourse features

With this background in mind, if information structural categories are encoded in syntax, the constituents marked with focus, topic or discourse anaphoric functions have to enter the derivation with the relevant discourse features as it is the case with formal features. However this suggestion has been questioned based on the distinction between formal features and information structural features. The formal features such as phi features are part of the lexical item coming from the lexicon while this is not the case with information structural features. A constituent can be focus, topic or discourse anaphoric based on the context so information structure is more of a relational concept when compared to formal features. This raises a problem for the Inclusiveness Condition which states that the output of a system does not contain anything beyond its input (Slioussar 2007). Horvath (2005) suggests that discourse features are not encoded by formal features and what is taken as focus

movement in some languages is in fact an operational movement driven by exhaustive identification. Horvath (2005) further argues that the Agree mechanism in the case system cannot be extended to topic and focus movement as these movements are not morphologically marked.

Aboh (2007), (as cited in Dyakonova, 2009) and Frascarelli (2012) argue against this analysis based on languages that mark focus or topic with overt morphological markers such as Bole (Zimmerman 2008), Chickasaw (Büring 2009), Gungbe (Dyakonova 2009) and Somali (Frascarelli 2012). Aboh (2007) further notes that there is a close relation between the wh-feature which is an unquestioned formal feature and focus, in that in Gungbe wh-questions also bear this focus marker. Somali (Frascarelli 2012) is similar to Gungbe in that both wh-phrases and focus phrases are marked with the same morphological marker. For Turkish, Şener (2010) also suggests that non-discourse linked wh-phrases are focus phrases marked with [f] feature similar to non-wh-focus phrases. The other proposal for discourse features to be encoded in syntax comes from the differences between root and embedded CPs with respect to information structuring. Frascarelli (2012) suggests that as root and embedded CPs do not have the same array of functional projections, some of the discourse related features are available only with the main clauses. If syntax were blind to discourse features we could not explain the parallelism between the lack of some functional projections in embedded CPs and the lack of some information structural units.

In Turkish, there is no morphological marker that obligatorily surfaces with focus and topic phrases. However, there are optional discourse particles that surface with contrastive focus, discourse new focus and contrastive topic phrases. Additionally, the discussion in Chapter 3 indicates that F marked constituents always

attract IP level stress whether they are in the sentence initial, medial or final domains. If focus is not encoded in syntax how does prosody assign IP level prominence to this constituent as the focused constituent is not restricted to a syntactic position? Hence in this study we assume that focus and topic features must be encoded in syntax to be interpretable at LF and PF. The next section is a brief discussion of Turkish facts on information structuring.

1.3 Basic information structural notions in the context of Turkish

For the annotation of an utterance with respect to information structural packaging, many different labels have been suggested in the literature. We will briefly go over the primitive notions used in the literature and the ones we use in this study before we discuss the Turkish facts based on these terms.

Erguvanlı (1984:34) defines the constituent in focus as "....the most information bearing element in that context…" and suggests that it corresponds to the 'rheme' in the analysis that makes a partitioning based on the distinction between 'theme-rheme'. Sentence initial topic is what the rest of the sentence is about and roughly corresponds to the label of 'theme'.[3]As for the constituent following the focus phrase in the post-verbal domain, the label 'background' is used.[4]

(4) [Ayşe]$_{\text{TOPIC}}$ [ye-di]$_{\text{FOCUS}}$ [elma-yı]$_{\text{BACKGROUND}}$
Ayşe eat-PAST apple-ACC
'Ayşe ate the apple.'

[3] Dik (1978, cited in Erguvanlı 1984) suggests that there is a difference between theme and topic in that themes are not dependent of predicates but topics are. Hence in (1) the constituent 'as for Paris' is theme, but 'that man' in (2) is topic.
(1) As for Paris, the Eiffel Tower is spectacular.
(2) That man, I hate.
The dislocated constituent in (2b) is the internal argument of the predicate.
[4] Throughout the dissertation we will indicate the information structural status of the constituents with diacritics. We will use the same diacritics with quoted examples as well in accordance with the source of the examples.

Hoffman (1995) makes a distinction between topic and comment. In line with Erkü (1982) and Erguvanlı (1984), he takes the sentence initial constituent in Turkish as topic. Comment is composed of focus and ground. Ground can be defined as the shared information between the speaker and the hearer.

(5) [Ayşe]$_{\text{TOPIC}}$ [[ye-di]$_{\text{FOCUS}}$ [elma-yı]$_{\text{GROUND}}$]$_{\text{COMMENT}}$

İşsever (2003) makes a major division for information structuring as focus and ground. Ground is composed of the link and the tail (Vallduví 1990). İşsever (2003) labels the sentence initial constituents which do not carry primary stress as link. Post-verbal constituents are marked as tail.

(6) [Ayşe]$_{\text{LINK/GROUND}}$ [ye-di] $_{\text{FOCUS}}$ [elma-yı]$_{\text{TAIL/GROUND}}$

Özge and Bozşahin (2010) use the terms ‘rheme’ and ‘theme’. Remember that rheme refers to focused constituent. With theme, background/topic or tail/link distinction is lost and discontinuous theme projection is used.

(7) [Ayşe]$_{\text{THEME}}$ [ye-di]$_{\text{RHEME}}$ [elma-yı]$_{\text{THEME}}$

For these studies, the position of the information structural unit in the sentence is important for information packaging. Şener (2010) triggers information structural units based on contexts. He takes the constituents answering the question of *‘tell me about’* and surfacing at the left periphery as aboutness topic phrases, and the ones that narrow down the issue under discussion or shifts the topic as contrastive topic. Presentational and contrastive focus phrases are syntactically marked being restricted to the immediately preverbal position. Discourse anaphoric constituents, marking given or salient information in the context, can surface in the preverbal or post-verbal

domain but they cannot follow focus phrases which have to be strictly adjacent to the verb. As illustrated in (8) below, Şener (2010) investigates the interaction of information structural units with binding facts and proposes a phrase structure for Turkish.

(8) A: Dünkü törende her öğretmen bir öğrencisini tebrik etmiş. Doğru mu?
'I hear that at the ceremony yesterday every teacher congratulated a student of her. Is that right?'
B: Valla, öğrencilerden haberim yok ama…
'Frankly, I do not know about the students but…..
[*pro*$_{i}$ bir arkadaş-ı-nı]$_{CT}$ [her öğretmen$_{i}$]$_{DA}$ t_{pro} [azarla-dı]$_{F}$
a friend-3SG.POSS-ACC every teacher scold-PAST
sert bir şekilde.
in a harsh manner
'Every teacher scolded a friend of her in a harsh way.' (Şener 2010, 68c)

Within this dissertation, we will use the terms used by Şener (2010) but we propose different ordering restrictions for focus, topic and discourse anaphoric constituents based on the data which is discussed in detail in the Chapter 2. Taking these ordering restrictions into consideration, we investigate the interaction of information structural units with negation and quantifier scope in SOV and OSV orders. The quantifier scope data is based on an experimental study with three steps and again the information structural units are triggered within a context. With this in mind, the next section gives a brief summary of word order possibilities in Turkish.

1.4 Word order permutations in Turkish

This section briefly summarizes possible word orders in Turkish and presents a set of data that we will go over throughout the study. The adult speech corpus of Slobin

and Bever (1982) which consists of 500 utterances shows that nearly half of the data is in SOV order (%48). İkizoğlu (2010), on the other hand, reports that more than half of the data in the spoken corpus on quotatives was VO. All word order variations are possible due to different discourse interpretational effects.

(9) a. Ali ev-i sat-tı. *SOV*
Ali house-ACC sell-PERF
'Ali sold the house.'
b. Ev-i Ali sat-tı. *OSV*
c. Ali sat-tı ev-i. *SVO*
d. Ev-i sat-tı Ali. *OVS*
e. Sat-tı Ali ev-i. *VSO*
f. Sat-tı ev-i Ali. *VOS*
(Göksel and Kerslake 2005, 46)

These word order possibilities are infelicitous in certain contexts. In (10) the focus phrase is triggered by a wh-question. In (10a-b), the focus is on the internal argument and these provide felicitous answers to (10). The answer in (c), on the other hand, is not felicitous even when we put focus on the internal argument.

(10) Ali ne-yi sat-tı?
Ali what-ACC sell-PAST
'What did Ali sell?'
a. Ali $[\text{ev-i}]_F$ sat-tı *SOV*
b. $[\text{Ev-i}]_F$ sat-tı Ali. *OVS*
c. #Ali sat-tı $[\text{ev-i}]_F$. *SVO*

The non-questioned constituents given in the question can be dislocated to the post-verbal domain in the answer as in (b).

In the following example, an alternative question triggers focus on the verb. Focus on one of the arguments is infelicitous as in (11c-d).

(11) Ali ev-i yap-tı mı yık-tı mı?
Ali house-ACC do-PAST QP demolish-PAST QP
'Did Ali build or demolish the house?'
a. [Yık-tı]$_F$ Ali ev-i. *VSO*
b. Ali [yık-tı]$_F$ ev-i. *SVO*
c. #Ali [ev-i]$_F$ yık-tı. *SOV*
d. #[Ali]$_F$ yık-tı ev-i. *SVO*

Now let's take a look at the following example.

(12) A: Ali ev-i yık-mış.
Ali house-ACC demolish-PAST
'Ali demolished the house.'
B:#Valla, Ali-yi bil-mi-yor-um ama Ayşe ev-i
well Ali-ACC know-NEG-PROG-1SG but Ayşe house-ACC
yık-mış.[5]
demolish-PAST
'Well, I do not know about Ali but Ayşe demolished the house.'

The unacceptability of the answer has nothing to do with the order of the constituents in the sentence. The different triggering constructions and contexts as in (10) and (11), word order and well-formedness conditions as in (12) are all within the scope of this study. The next section is a brief summary of previous studies.

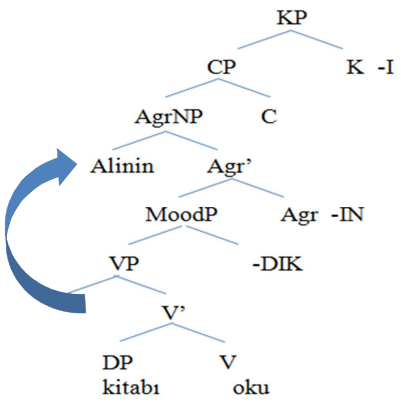
[5] This sentence becomes more acceptable only when we put focus on the verb.

1.4.1 Phrase structure and functional projections in previous studies

Different analyses have been proposed in order to explain word order variation in Turkish. In some of these studies the SOV order and possible variations have been explained via movement operations for case checking or EPP purposes (Kornfilt 2001, 2003, Özsoy 2001, Aygen 2002). In some other studies discourse interpretational purposes have been assumed to be the trigger of movement operations but with different phrase structures and functional projections (Kural 1992, Öztürk 2005, Şener 2010). In this section we will briefly go over these studies. The studies cited in this section are of course not an exhaustive list of the studies on Turkish syntax but we tried to overview the ones that are directly related to this study, namely movement operations due to interpretive purposes. We will conclude the chapter with the phrase structure and functional projections we arrived at, based on the interaction of quantifier scope, binding and negation data with information structural units in Turkish which is discussed in detail in Chapter 4.

Kornfilt (2001, 2003) suggests that both the subject and the object are base generated in the VP domain.

(13) Ali-nin kitab-ı oku-duğ-un-u
Ali-GEN book-ACC read-NOML-3SG-ACC
'That Ali read the book'



(Kornfilt 2001, 8)

In cases of verbal agreement, the subject moves to Spec AgrS (TP) for case purposes. In the presence of nominal agreement, the subject moves to AgrN for genitive case as illustrated in (13) above. In SOV order, the internal and the external arguments leave their base generated positions for case purposes. Özsoy (2001) assumes a similar analysis for nominative case bearing subjects of embedded clauses in that they move out of their base generated positions for case purposes.

Aygen (2002) suggests that it is the mood feature on C together with epistemic modality feature on T that licenses nominative case in Turkish. Additionally based on subject/object extraction possibilities in finite and non-finite clauses, Aygen (2000) suggests that in Turkish, movement of the constituents are driven by EPP feature on T or C heads.

(14) Bu soru-nu ancak Ayse coz-er.
this problem-ACC only Ayşe solve-AOR
'Only Ayse can solve this problem' (Aygen 2000, 26)

In (14), the verb moves only up to T position. The subject agrees with the T^o in-situ and gets frozen. Hence the object moves to Spec TP to satisfy EPP. The object in Spec TP can further move to Spec CP via A' movement.

These studies take movement of the subject or the object as triggered by case checking or EPP purposes. In contrast to these studies, Kural (1992), Öztürk (2005), Şener (2010), Jiménez-Fernandez and İşsever (2012) suggest movement operations triggered by interpretive purposes. Now we will briefly go over these studies.

Kural (1993) suggests that the verb moves from I to C positions and this amalgamate agrees with the subject in Spec TP, as a result of which agreement morphology is realized on the verb. Within the discussion of the target position of

clause internal scrambling, Kural (1992) suggests that the movement of the dislocated object anaphor is to an A position as reconstruction is not possible.

(15) a. Adam-lar birbirleri-ni gör-müş
man-PL each other-ACC see-PAST
'The men saw each other.'
b. *Birbirleri-ni$_i$ adam-lar t_i gör-müş. (Kural 1992, 44)

However, based on the data in (16), Kural (1992) concludes that the preposed object moves to an A' position. He explains the difference between the two sets of data suggesting that in Turkish the position of the focus phrase should be the same at surface structure and at LF. In (15b) above it is the immediately preverbal object phrase that bears focus at LF but it is the subject at surface syntax which yields unacceptability.

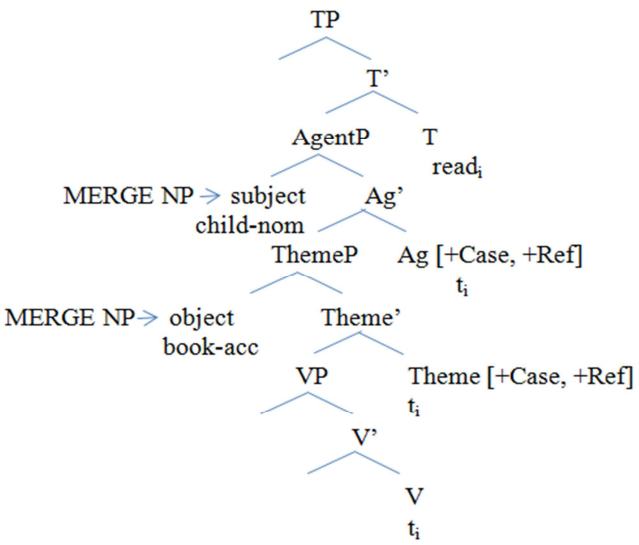
(16) a. Adam-lar birbirleri-ni [dün]$_F$ gör-müş
man-PL each other-ACC yesterday see-PAST
'The men saw each other yesterday.'
b. Birbirleri-ni$_i$ adam-lar t_i [dün]$_F$ gör-müş.
(Kural 1992, 58)

Kural (1992) suggests that the structure in (16b) above is acceptable because at LF and surface structure representations of the sentence focus remains to be on the same constituent. Öztürk (2005) points out one of the problems of this analysis with the following example.

(17) Birbirleri-ni$_i$ [adam-lar]$_F$ ara-dı (kadın-lar değil).
each other-ACC man-PL call-PAST (woman-PL not)
'The men called each other, not the women.' (Öztürk 2005, 139)

It is the immediately preverbal object that bears focus similar to (15b). Namely at LF and surface structure focus does not remain on the same constituent but the structure is acceptable. Öztürk (2005) suggests that scrambling shows both A and A' movement properties. Before we take a look her analysis of scrambling for this construction we will go over what she assumed for Turkish phrase structure. Öztürk (2005) suggests that in Turkish, the external argument is merged at AgentP and the internal argument is merged at ThemeP at which both theta role assignment and case checking are realized.

(18) Çocuk kitab-ı oku-du
child book-ACC read-PAST
'The child read the book'



The external argument does not move up to Spec TP position for case or EPP purposes and Spec TP is overtly realized only for scope/interpretational purposes.[6] Additionally, Öztürk (2005) suggests that there is no conclusive test that shows that *v*P exists in Turkish phrase structure. She notes that in Turkish Antecedent Contained

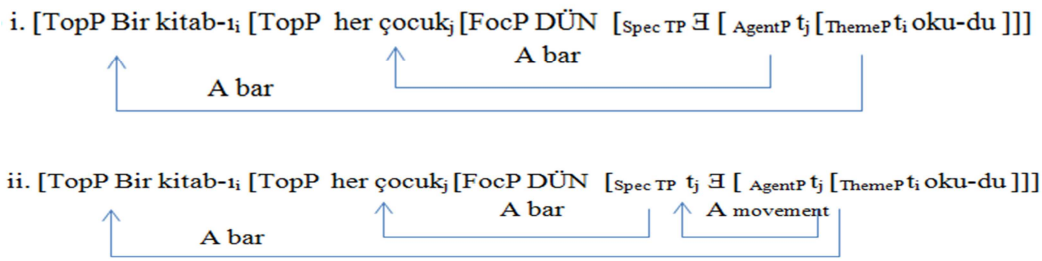
[6] Some other researchers (Özsoy 2001, Kelepir 2001, Gürer 2010), on the other hand, suggest that EPP exists in Turkish and subjects leave their base generated positions and move to Spec TP. See Chapter 5 for the discussion of EPP in Turkish.

Deletion (ACD) constructions and parasitic gaps are not observed, based on the studies of Özsoy (1996) and İnce (2004), and wh-question formation is sensitive to information structure of the sentence. Hence she concludes that the diagnostics for phasehood are not conclusive tests for determining the status of *v*P as a phase in Turkish.[7]

Now we will take a look at how Öztürk (2005) explains scrambling data that poses a challenge to the analysis of Kural (1992) within these assumptions.

(19) a. Bir kitab-ı her çocuk [dün]$_F$ oku-du
one book-ACC every child yesterday read-PAST
i. 'Every child read a specific book yesterday.'
ii. 'Every child read a different book out of a definite set yesterday.'

(20)



(Öztürk 2005, 157)

In (20i), both the subject and the object move to TopP projections via A' movements. Reconstruction to the base generated positions yields narrow scope for the universal quantifier as it remains within the existential closure. In (20ii) on the other hand the subject universal quantifier first moves to Spec TP as an instance of A movement

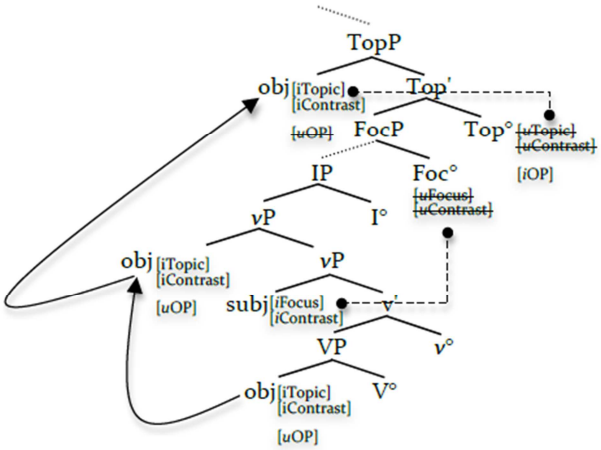
[7] Ulutaş (2008) explains the case checking mechanism in Turkish via *v*P and CP phases. He suggests that phi complete C and T with an independent tense interpretation license nominative case. Phi complete FinP percolates its features down to T head. FinP-T amalgamate agrees with the subject in the specifier position of vP and nominative case is valued.

and then moves to TopP position. Hence reconstruction is to the Spec TP and it remains above the existential closure which makes the wide scope reading possible.

Şener (2010) suggests that in Turkish all movement operations are triggered by discourse interpretational purposes. In line with the cartographic approach of Rizzi (1997), Şener (2010) assumes TopP, FocP and DaP projections at the left periphery. Based on binding data, Şener (2010) also suggests that Spec TP in Turkish does not have to be filled overtly. Discourse anaphoric expressions, topic, and focus phrases have interpretable discourse anaphoric, topic, and focus features respectively that are checked against the functional projections at the left periphery via Agree. Contrastive topic and focus phrases have an additional contrast feature. Additionally, topics and discourse anaphoric expressions have an operator feature which triggers movement to the left periphery projections. Focus phrases differ in that they lack an uninterpretable operator feature that makes them strictly verb adjacent.

Şener (2010) elicits the information structure for the following OSV sentence (21) in a context. The object is the contrastive topic and the subject is the contrastive focus phrase. Şener (2010) suggests that TopP agrees with the contrastive topic object phrase and checks the uninterpretable topic and contrast features in-situ. It is the uninterpretable operator feature of the object that triggers it to the Spec TopP.

(21) A: Çorbadan n'aber? Ondan içen oldu mu peki?
What about the soup? Has anyone eaten that?
B: Valla çorbadan haberim yok ama…
Frankly, I don't know about the soup but…
[Dolma-lar-dan]$_{CT}$ [Aylin]$_{CF}$ $t_{dolmalardan}$ ye-di.
dolma-PL-ABL Aylin eat-PAST
'Aylin ate from the dolmas.'



(Şener 2010, 10, 12)

The FocP agrees with the focused subject phrase and checks its uninterpretable focus and uninterpretable contrast feature in-situ. As focus phrases do not have operator feature the subject remains in-situ.

Investigating the topic fronting issue in Turkish, Jiménez-Fernandez and İşsever (2012) suggest that information focus and anaphor are categorical features to be checked at narrow syntax. Anaphoric constituents have [+anaphor] feature, in narrow syntax they adjoin this feature to a functional head such as *v* and T and define their binding domain. They adjoin this feature to a c-commanding functional projection. In line with Miyagawa (2005), Jiménez-Fernandez and İşsever (2012) suggest that in Turkish C dislocates agree and discourse features to T, when the subject bears the focus feature, the focus feature of *v* head is retained, otherwise it can be percolated down to V head. Now we will take a look at the derivation of binding data within these assumptions.

(22) [Işık-ı$_i$]$_j$ [kendi$_i$ komşu-su]$_F$ t$_j$ gör-dü.
Işık-ACC self neighbor-POSS see-PAST
'Işık was seen by her neighbor.'

(Jiménez-Fernandez and İşsever 2012, 9)

The anaphor feature of the subject adjoins to the next functional projection TP as in (23). The topic phrase moves up to Spec TP due to discourse feature at T head. The binder in Spec TP can bind the anaphor feature at T head. Hence the structure is grammatical.

(23) [$_{TP}$ binder_obj_top [$_{T}$ (+anaphor) [$_{vP}$ ~~binder_obj_top~~ [$_{v'}$ bindee_subj_foc [$_{VP}$ ~~binder_obj_top~~]]]]

Now let's take a look at an infelicitous structure.

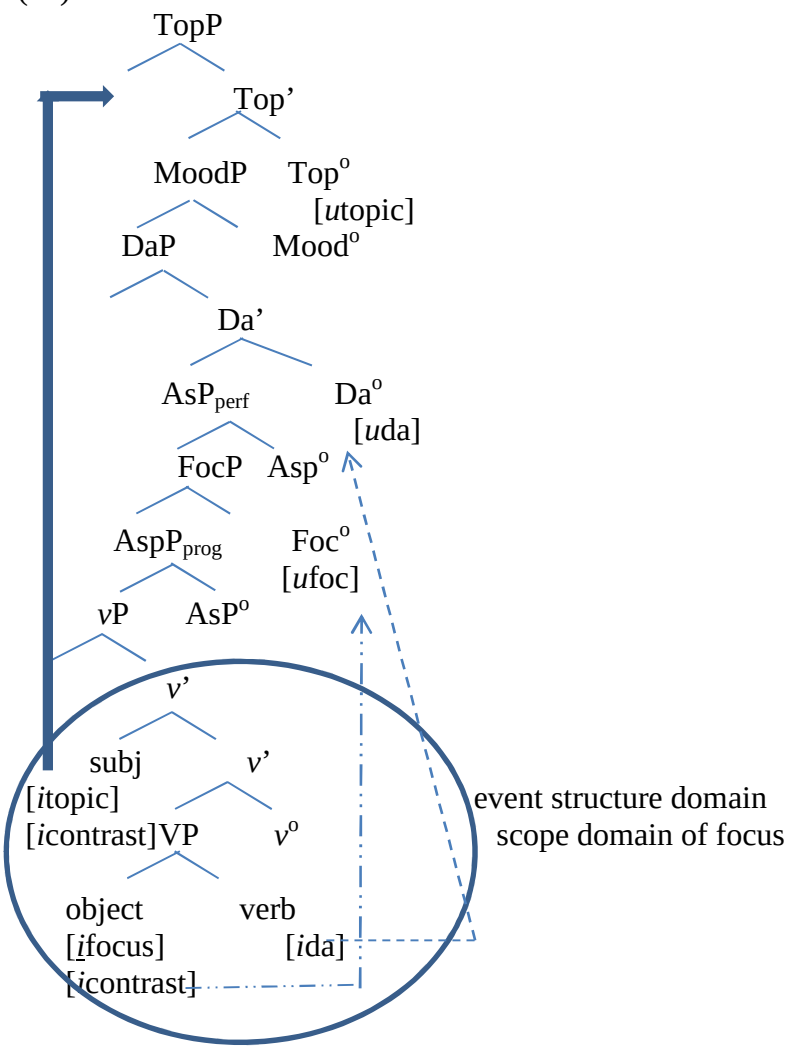
(24) *[Kendi$_{i}$ komşu-sun-u]$_{j}$ [Işık $_{i}$]$_{F}$ t$_{j}$ gör-dü.
self neighbor-POSS-ACC Işık see-PAST
'Her neighbor was seen by Işık'
(Jiménez-Fernandez and İşsever 2012, 22)

The anaphor feature of the object adjoins to the projection of *v*P as in (25). Then the object moves up to Spec TP to check the topic discourse feature at T head. The binder in Spec *v*P can bind the anaphor feature at v head, however the focus feature creates an intervention effect.

(25) [$_{TP}$ bindee_obj_top [$_{T}$ [$_{vP}$ ~~bindee_obj_top~~ [$_{v'}$ binder_subj_foc [$_{v}$ (+anaphor) [$_{VP}$ ~~bindee_obj_top~~]]]]

In the current study, in line with Şener (2010), we assume that all movement operations are driven by discourse interpretational purposes. We propose the phrase structure in (26) to capture the data on the interaction of information structural units with quantifier scope, binding and negation as discussed in detail in Chapter 4 and 5.

(26)



To briefly summarize, FocP and DaP surface above *v*P domain. This also explains the tendency in Turkish to put focus in the immediately preverbal position. The lower eventual domain is the scope domain of focus to which contrastive topic cannot reconstruct. Only the outer specifier of *v*P is a possible reconstruction site for contrastive topic phrases. In SOV order only contrastive topic undergoes movement, while in OSV only focus phrases do not move. The scope domain of focus is a possible reconstruction site for aboutness topic and discourse anaphoric constituents. Hence we assume that *v*P in Turkish does not have phasehood properties in that (i) restrictions on reconstruction to the complement domain is observed only for

contrastive topics but not for aboutness topic and discourse anaphoric constituents, (ii) the escape hatch for contrastive topic does not map on to impenetrable domain given in (2-3), (iii) binding is possible across two CP boundaries.

In the middle domain, TP is lacking which is based on the discussion on (i) subject reflexives, (ii) ECM clauses, (iii) bounding nodes, (iii) subject-object extraction, (iv) the absence of expletives, (v) sequence of tense, (vi) suspended affixation (Zanon 2014) data. Aspect and Mood projections encode temporal interpretation. In the absence of TP, CP lacks phasehood properties as shown with binding data. Finally, TopP is in the left periphery, being the target positions for topic phrases, in the speech act domain. This captures the generalization that topic is an utterance level constituent, while focus is a propositional level constituent. The next section is a brief outline of the dissertation.

1.5 Layout of the dissertation

Following this chapter, in Chapter 2, we explicate the information structural units of topic, focus and discourse anaphoric constituents. We discuss the subtypes of topic and focus. Ordering restrictions for information structural units are investigated in this chapter which gives ideas with respect to the syntactic marking of these units in Turkish.

Chapter 3 deals with how focus is encoded prosodically. We discuss the results of two experimental studies we conducted in order to find out the prosodic properties of focus phrases in SOV order. The studies also reveal how Turkish marks focus in initial, medial and final domains.

Chapter 4 focuses on syntactic mechanism behind the movement operations that are all triggered by discourse interpretational purposes. The discussion is based

on the interaction of focus with negation, quantifier scope and binding. Quantifier scope data relies on three experimental studies that we conducted and we also use the binding data of Şener (2010).

Chapter 5 investigates the phrase structure of Turkish based on CP/DP parallelism. We question the phasehood properties of *v*P and CP and the existence of DP/TP in Turkish.

Chapter 6 concludes the dissertation with the findings, implications and suggestions for future research.

CHAPTER 2

SEMANTIC AND PRAGMATIC MARKING OF INFORMATION STRUCTURAL UNITS IN TURKISH

In this chapter we will investigate how information structural notions are marked semantically and pragmatically in Turkish. We make a three-way distinction for information structural units: (i) focus, (ii) topic, (iii) discourse anaphoric/given constituents. We make a further distinction for focus phrases as (i) contrastive focus, (ii) discourse new information, and for topic phrases as (i) contrastive topic, (ii) aboutness topic. In the first part of the chapter we elaborate on how focus, topic and discourse anaphoric constituents are explicated in this study. In the second half, the ordering restrictions of information structural units are discussed, which paves the way for a syntactic analysis.

In the literature, it is suggested that syntactic strategies are used to mark discourse new constituents being restricted to the immediately preverbal position while this is not the case for contrastive focus phrases (İşsever 2003). The Turkish data in this chapter indicate that different syntactic strategies are not used to distinguish contrastive focus and discourse new constituents. Focus phrases can appear in-situ and optionally in the immediately preverbal position following the movement of discourse anaphoric constituents. What differentiates contrastive focus from discourse new focus is not contrast but exhaustive identification. Only contrastive focus phrases are exhaustively identified as the correct answer. Aboutness topic phrases appear in the sentence initial position (Erkü 1982, Erguvanlı 1984) and simply mark what the rest of the sentence is about. We also investigate contrastive topic phrases which are labeled as strong topics by Erguvanlı (1984).

Contrastive topic phrases mark a shift in conversation or narrow down the issue under discussion. They can neither surface in the domain of focus nor in the absence of focus. We explain this ordering restriction based on semantic compositionality of contrastive topic phrases in that the set of alternative propositions triggered by focus phrase is part of the set of sets of alternative propositions of contrastive topic. We analyze double focus constructions in the literature (Göksel and Özsoy 2000, Kılıçaslan 2004, Güneş 2012) as CT-F pair based on semantic diagnostics. Finally with discourse anaphoric constituents, focus phrases do not have to surface in the immediately preverbal position and discourse anaphoric constituents can optionally surface following the focus phrases.

2.1 Information structuring

Communication can be thought of as the mutual organization or structuring of the informational content of the message between the speaker and the hearer. The speaker structures the knowledge as a unit composed of an informative part and an anchoring part. The informative part adds new information to the knowledge store of the hearer. The anchoring part helps the hearer to organize the new information based on the already existing body of knowledge. This dynamic, continuous structuring of the knowledge store has been labeled as information packaging (Chafe 1976). Chafe (1976:28) notes that the term information packaging refers to "…..how the message is sent and only secondarily with the message itself, just as the packaging of toothpaste can affect sales in partial independence of the quality of the toothpaste inside." Hence sentences with the same semantic content can have different information structural organizations. Let us take a look at the following sentences.

(1) Haber-ler-i duy-du-n mu? Ayşe bu yaz [evlen-iyor-muş]$_F$.
news-PL-ACC hear-PAST-2SG QP Ayşe this summer marry-PROG-PAST
'Did you hear the news? Ayşe will get married this summer.'

(2) Haber-ler-i duy-du-n mu? Ayşe [bu yaz]$_F$ evlen-iyor-muş.

Although they have the same content, the new information and vehicular parts differ in both sentences. Different parts of the sentence bear prominence in each case. The focus marked constituents are the informative parts and the rest is the anchoring part of the clauses. The sentence in (1) is felicitous in a context in which both the speaker and the hearer have the information within their knowledge store that the person called Ayşe is in preparation of something for the following summer. The contribution of the speaker is the information that Ayşe will get married. The sentence in (2) on the other hand is felicitous in a context in which the shared information between the speaker and the hearer is that the person called Ayşe will get married at some time in the future. The speaker updates the hearer's knowledge store with the new information that the marriage will take place the following summer.

Speaking with the terms of Reinhart (1981) and Heim (1982), discourse is composed of a set of utterances which function as instructions given by the speaker to the hearer to update the relevant file. The rules are given in the following way:

(3) I. TOPIC instructs the hearer to locate on the top of his file an existing card (or an existing set of cards) with the relevant heading and index.
II. FOCUS instructs the hearer to either
(i) open a new card and put it on the top of the file. Assign it a *heading* and a new index (in the case of an indefinite) or
(ii) locate an existing card and put it on top of the file (in the case of a definite)

III. PREDICATION instructs the hearer to evaluate the predicate with respect to the topic where the predicate is taken to be the complement of the topic. If the result of the evaluation is TRUE the UPDATE rule applies:

IV. UPDATE instructs the hearer to enter the focus on the topic card and then to copy all entries to all cards activated by the focus rule.

(Erteschik-Shir 1997, pg.18)

Taking the utterance in (1) as an example, the speaker starts the sentence with a shared constituent and guides the hearer to the card bearing the name of *'Ayşe'* like a heading. This heading functions as the topic and signals what the rest of the sentence will be about. On that card the fact that she will get married is also written as part of the shared information. The hearer evaluates the predicate (complement of the topic) with respect to the heading and moves to the next step. With the focused phrase the speaker adds further information to the card. The hearer updates the existing card and enters the new information to the card. Vallduví (1990) criticizes this metaphor, based on the redundancy the cards are likely to cause. Following an utterance, the cards which share the given information in the utterance will get activated. And new information will be entered to all these activated cards. For example, in (1) not only the card for *'Ayşe'* but also the card for *'bu yaz'* will be activated. The new information will be entered to these existing cards in the same way which causes redundancy for the system.

We agree with Vallduví (1990) and further suggest that this mechanism cannot capture finer distinctions among different focus and topic types or shed light on their semantic compositionality. By relating topics with already existing cards, the system equates topichood with givenness which we evaluate and criticize in section 2.3.2. Additionally, in the following sections for Turkish data we will see that there are some ordering restrictions for the position of information structural units within a sentence and also with regard to each other. The card system does not have enough

mechanisms to explain these finer restrictions. The next section discusses different partitioning analyses for the information structuring in the literature.

2.2 Different approaches to information structuring

In the literature many different analyses have been proposed for the partitioning of utterances. Vallduví (1990) lists the following analyses, with our addition of the tripartite analysis of Erguvanlı (1984) in (4f), Vallduví's own analysis in (4g) and following analysis for Turkish in (4h-i):

(4) a. *Theme-Rheme* (Ammann 1928, Danes 1968 (1957), Firbas 1964, 1971, 1975, Halliday 1967, Contreras 1976)
b. *Topic-Comment* (Mathesius 1915, Hockett 1958, Strawson 1964, Gundel 1974, 1988, Dahl 1974, Li and Thompson 1976, Kuno 1980, Reinhart 1982, Davison 1984)
c. *Topic-Focus* (Sgall and Hajicova 1977, 1978)
d. *Focus- Presupposition or Focus/Open-Proposition* (Akmajian 1970 (1978), Chomsky 1971, Jackendoff 1972, Dahl 1974, Rochemont 1978, 1986, Wilson and Sperber 1979, Williams 1981, Prince 1981, 1984, 1986, Selkirk 1984, Ward 1985, Lambrecht 1987, 1988, Valimaa-Blum 1988)
e. *Dominance* (Erteschik-Shir 1973, 1979, 1986, Erteschik-Shir and Lappin 1979, 1983)
f. *Topic - Focus - Background* (Erguvanlı 1984)
g. *S = Focus, Ground* *Ground = Link, Tail* (Vallduví 1990)
h. *S = Topic, Comment* *Comment = Focus, Ground* (Hoffman 1995)
i. *S = Focus, Ground* *Ground = Topic, Tail* (İşsever 2003)

The analyses in (4a-e) offer a bipartite structuring of the utterance which can be categorized roughly as (i) topic-comment, (ii) topic-focus. Erguvanlı (1984) makes the first tripartite structuring marking sentence initial constituents as topic, immediately preverbal constituents as focus and postverbal constituents as background as illustrated in the Chapter 1 repeated below for ease of exposition.

(5) [Ayşe]$_{TOPIC}$ [ye-di]$_{FOCUS}$ [elma-yı]$_{BACKGROUND}$
Ayşe eat-PAST apple-ACC
'Ayşe ate the apple.'

Note that this partitioning cannot be fully captured by a bipartite structuring. Vallduví (1990) points out the shortcoming of these binomial approaches with the examples in (6) and related ones in (7-8).

(6) a. She gave the SHIRT to Harry
b. To Harry she gave the SHIRT. (Vallduví 1990, 40)

Within topic-comment or theme-rheme partitioning, in (6a) the sentence initial pronominal will be the topic/theme of the sentence while the rest will be the rheme/comment, namely, what the rest of the sentence says about the topic as illustrated in (7).

(7) [She]$_{TOPIC}$ [gave the SHIRT to Harry]$_{COMMENT}$

However, this partitioning does not differentiate the focused direct object from the indirect object which surface in the domain of comment. The focus-presupposition approach can capture this difference as illustrated in (8) below. While the indirect object is part of the presupposition, the direct object is the focus phrase.

(8) [She gave]$_{PRESUPPOSITION}$ [the SHIRT]$_{FOCUS}$ [to Harry] $_{PRESUPPOSITION}$

However focus-presupposition approach cannot explain the displacement of the indirect object in (6b). If in both (6b) and (8) the indirect object is the presupposition, why do have movement in (6b)? The tripartite analysis can capture the difference by labeling the sentence initial constituent as topic/link, and the post-focal constituent as

background/tail in (5). Decomposable ground and comment is possible in tripartite analyses which make it possible to capture the data in (5-8). However, it is still not possible to make finer distinctions for topic and focus phrases and explain ordering restrictions. Now we will turn to these notions of information structure and how they are explicated within this study.

2.3 Information structural units in Turkish

In order to pin down the information packaging mechanism and restrictions on ordering, we trigger each target constituent in a rich context.

2.3.1 Focus

In the literature on Turkish linguistics, within the information structural notions, focus has been the most widely studied unit from syntactic (Cevat 1931, Erguvanlı 1984, Kural 1993, Demircan 1996, Kennelly 1997, 2003, Göksel and Özsoy 2000, İşsever 2003, Şener 2010), semantic (Erguvanlı 1984, Göksel 1998, Göksel and Özsoy 2003, Şener 2010) and prosodic (Göksel and Özsoy 2003, İşsever 2003, Özge and Bozşahin 2010, İpek 2011, Güneş 2012) perspectives. In the following sub-sections, we will discuss focus, restricting ourselves to the semantic/pragmatic analysis of focus but first we will go over the literature to see how focus is defined.

Focus can be defined as the most prominent constituent in an utterance. A focused constituent is not part of the shared information between the speaker and the hearer and it pushes the conversation forward. Krifka (2006) suggests that taking focus as the ‘most important’ part of the utterance is not explanatory enough as illustrated in (9).

(9) It wasn't JOHN who stole the cookie. (Krifka 2006, 24)

The most important thing in this utterance is the fact that someone stole the cookie. The fact that that person was not John is not so important. Hence the function of focus cannot be reduced to bearing prominence.

Jackendoff (1972:230) defines focus as "the information in the sentence that is assumed by the speaker not to be shared by him and the hearer" within the Structured Meaning Approach. The presupposition on the other hand denotes "the information in the sentence that is assumed to be shared by him and the hearer" (1972:16), which gives us a partitioning similar to theme-rheme. [8]

(10) a. John introduced $[\text{Bill}]_F$ to Sue.
b. John introduced Bill to $[\text{Sue}]_F$.

(11) a. $< \lambda x\ [\text{introduce}\ (j, x, s)], b>$
b. $< \lambda y\ [\text{introduce}\ (j, b, y)], s>$ (Rooth 1996, 14-15)

The lambda operator entails the presupposition that in (11a) there is someone whom John introduced to Sue and it is Bill. In (11b) there is someone to whom John introduced Bill and it is Sue. Zimmermann and Onea (2011) mention that this partitioning is compatible with syntactic analyses which assume focus movement.

[8]The definition of 'presupposition' has been taken as shared information or common ground (Stalnaker 1974, 2002, Karttunen 1974).

"A proposition P is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that P, assumes or believes that his addressee assumes or believes that P, and assumes or believes that his addressee recognizes that he is making these assumptions, or has these beliefs." (Stalnaker, 1974:473)

As cited in Horn (1996), Burton-Roberts (1989) suggest that presupposition cannot be purely defined as shared assumption between speaker and hearer.

"If I were to say to you, "My sister is coming to lunch tomorrow", I do presuppose that I have a sister but in presupposing it I do not necessarily assume that you have a prior assumption or belief that I have a sister. (Burton-Roberts 1989:26)"

Stalnaker (2002) in turn claims that "to presuppose something is to take it for granted or at least to act as if one takes it for granted, as background information-as common ground among the participants in the conversation.' In line with Stalnaker (2002), we will take presupposition as background information that is taken as granted even if it is not shared.

The semantic partitioning decomposes the structure as focus and background. In syntax, this partitioning is observed as focus movement to the left periphery.

Rooth (1996) suggests that as existential presupposition can be cancelled within context, existential presupposition cannot be taken as part of focus semantics. As illustrated in (12) below, the existential presupposition can be cancelled in focus constructions within a context.

(12) A: Did anyone win the football pool this week?
B: Probably not, because it is unlikely that [[Mary_F won it] ~ C], and I know that nobody else did.

(13) A: Did anyone win the football pool this week?
B: #I doubt it, because it is unlikely that it's $[\text{Mary}]_F$ who won it, and I know that nobody else did.

(Rooth 1996, 57-58)

The focused phrase in (12) evokes a set of alternatives in the form of *'x won the pool'* where *x* ranges over a set of people. The existential presupposition triggered by the alternative set of propositions is that 'someone won the pool' but the following sentence cancels this presupposition. This is further illustrated in (13) with a cleft construction which already evokes an existential presupposition that 'there is someone who won the pool'. As the existential presupposition is cancelled with the sentence following the cleft sentence, the whole structure sounds odd. The discussion so far indicates that focus cannot be defined as the most prominent constituent or as a constituent triggering existential presupposition.

Within the assumptions of Alternative Semantics, Rooth (1985, 1992, 1996) suggests that the function of focus is to evoke alternatives. In this approach the focus-presupposition partition is replaced by the set of alternative propositions. The

proposition of the sentence constitutes the ordinary semantic value as illustrated below. The focus semantic value is derived by making a substitution in the position corresponding to the focus phrase. The alternative propositions differ only with respect to the focused phrase.

(14) Does Ede want tea or coffee?

Ede wants coffee_F

ordinary semantic value

{Ede wants coffee, Ede wants tea}

focus semantic value

{Ede wants coffee, Ede wants tea}

(15) Who wants coffee?

Ede_F wants coffee.

ordinary semantic value

{Ede wants coffee}

focus semantic value

{Ede wants coffee, Mary wants coffee, John wants coffee,…}

(Rooth 1996, 1 with modifications)

Rooth (1996) further adds that questions determine the alternative sets in answers with focus phrases. The question serves as the antecedent for the variable and focus evokes alternative propositions. The question in (14) is an alternative question and the ordinary semantic value of the question already includes two propositions as *{Ede wants coffee, Ede wants tea.. }.* In (15) the question evokes an open set of alternative propositions as its focus semantic value.

This analysis can be extended to interrogatives to capture their semantic properties (Rooth 1985, Roberts 1996, Abusch 2009).

(16) a. [Who took Mary's bike] (=Q)

b. Q is a set of propositions of the form 'x took Mary's bike', where x ranges over a set of relevant people. (Abusch 2009, 34)

As is the case with focus phrases, the wh-phrase evokes a set of propositions. Note that the propositions are in the form of answers. We get question-answer congruence as the set of alternative propositions of the question is a subset of the set of propositions of the focus phrase.[9]

The existential presuppositions in the structured meaning approach are replaced by the set of alternatives in the alternative semantics approach. Within the alternative semantics approach, presuppositions that accompany interrogatives and focus constructions are analyzed to be secondary effects of alternative sets in that there is a default process that generates presuppositions from alternative sets. In (15) for instance, the focus phrase evokes a set of alternative propositions in the form of *'x wants coffee'* and the assumption is that one of these propositions is true. It is the alternative set of propositions that triggers this existential presupposition. Additionally, Krifka (2006) suggests that focus is defined as 'highlighted', the 'most important' constituent due to the presence of alternatives evoked by focus phrases. As illustrated in (14-15) above, one of the propositions is chosen in contrast to other alternatives which makes the chosen focus phrase as highlighted and important. It is due to the presence of these alternatives, we tend to interpret focus phrases as the most important constituents.

Rooth (1996) further criticizes the structured meaning approach as (i) in addition to the semantics of focused phrase the structured meaning approach gives

[9] As indicated in Zimmerman and Onea (2011) in order to avoid an unconstrained set of alternatives which can yield incorrect predictions, the focus operator mediates between the context variables for which the question serves as the antecedent and the focus alternatives and makes sure that C is a subset of the set of alternatives evoked by the focus phrase.

too much information about the rest of the sentence and (ii) it is a construction specific approach and it is not possible to draw a conclusion about the semantics and pragmatics of focus in general.

In section 2.2, we saw that bipartite analyses for information structuring cannot capture the discourse interpretational role of each constituent in an utterance. The discussion in this section has further shown that the existential presupposition, highlighted and important nature of a focused constituent is not an essential part of the semantics of focus phrases. All these interpretations surface due to the alternatives evoked by the focus phrase. Hence within this study, we will analyze focus phrases as indicating the presence of alternatives within the assumptions of alternative semantics.

In the literature a further distinction is made for focus phrases as (i) discourse new/presentational focus (ii) contrastive focus. There is also some empirical evidence for this distinction. Katz and Selkirk (2011) note that this distinction is reflected in prosody in that in English contrastive focus has a higher pitch height and duration than non-contrastive discourse new constituents. Additionally there are some languages such as West Chadic languages (Zimmermann 2011) which mark contrastive and informational focus with a special morphological marker which is obligatory with contrastive focus phrases but not with informational focus phrases. In the next sub-sections we will investigate how this distinction is reflected in Turkish from a semantic/pragmatic point of view.

2.3.1.1 Discourse-new constituents

As the name of this focus type suggests, these phrases introduce discourse-new constituents to the discourse that is not shared by the speaker and the hearer.

Discourse-new constituents are triggered by wh-questions as illustrated in (17-18) below.[10] They evoke a set of alternatives without exhaustively identifying one of the alternatives in the set as the correct answer.

(17) *You saw Mete leaving the house…..*

A: Mete nere-ye git-ti?

Mete where-DAT go-PAST

'Where did Mete go?'

B: Mete [sinema-ya]$_F$ git-ti.

Mete cinema-DAT go –PAST

'Mete went to the cinema.'

ordinary semantic value

{Mete sinema-ya git-ti}

'Mete went to the cinema.'

focus semantic value

{Mete sinema-ya git-ti, Mete tiyatro-ya git-ti, Mete spor-a git-ti,…..)

'Mete went to the cinema, Mete went to the theatre, Mete went to the gym,…..'

(18) *When you cannot see or understand the thing that Mete gave to the students….*

A: Mete öğrenci-ler-e ne ver-di?

Mete student-PL-DAT what give-PAST

'What did Mete give to the students?'

B: Mete öğrenci-ler-e [izin kağıd-ı]$_F$ ver-di.

Mete student-PL-DAT permission slip-ACC give-PAST

'Mete gave the students a permission slip.'

ordinary semantic value

{Mete öğrenci-ler-e izin kağıd-ı ver-di}

'Mete gave the students a permission slip.'

[10] The answer to a wh-question can include some additional information which is purely discourse new but which does not evoke alternatives as indicated below with the underlined constituent. We do not take these constituents as discourse new focus phrase.

(1) A: What did she buy? B: She bought [some carrots]$_F$ <u>at the supermarket.</u>

focus semantic value

{Mete öğrenci-ler-e izin kağıd-ı ver-di, Mete öğrenci-ler-e karne ver-di, Mete öğrenci-ler-e elma ver-di…}

'Mete gave the students a permission slip, Mete gave the students the reports, Mete gave the students apples….'

In (17), the focus phrase evokes a set of alternatives and the alternatives range over a set of places or activities.[11] In (18), the focus phrase evokes a set of alternatives which range over a set of things that can be given to someone. Note that the alternatives triggered by the discourse new constituent are not given in the previous context (See section 2.4.2).

2.3.1.2 Contrastive focus phrases

Contrastive focus phrases also evoke a set of alternatives. In contrast to discourse new constituents, with contrastive focus phrases the answer is exhaustively identified as the correct answer to the exclusion of the other alternatives. Alternative questions and corrective statements trigger contrastive focus phrases as exemplified in (19) and (20) respectively.

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[11] Not every wh-question triggers focus as already indicated by Şener (2010) who makes a distinction between discourse-linked and non-discourse linked wh- phrases. With non-discourse linked wh-phrases the antecedent of the wh-phrase is not existentially presupposed and they are like focus phrases. Discourse linked wh-phrases have an antecedent in the given discourse. For the following wh-question given in a context, Şener (2010) suggests that the discourse linked wh-phrase moves to contrastive DaP at the left periphery.

(1) *Mete and Pelin are invited to Suna's wedding. They see at the wedding ceremony that Suna has kissed at least 10 well---wishers so far, and her husband, Selim, has kissed as many people as Suna has. Thinking that Pelin has been a better observer of all that than he has, Mete asks Pelin*:

kim(---ler)---i yalnızca Suna op---tu?
who(---pl)---acc only S---nom kiss---past
'Who did only Suna kiss?'

The discussion in section 2.3.2.2 shows that the discourse linked wh-phrase in this example can also be analyzed to be triggering contrastive topic as the big question of 'who kissed whom?' is narrowed to the question in (1) triggering a partial answer. Whether it is contrastive discourse anaphoric or contrastive topic, the important point here is that without putting the sentence in a rich context, one cannot conclude that each wh-phrase triggers discourse-new information. (See section 2.5.1.)

(19) A: Mete sinema-ya mı yoksa tiyatro-ya mı git-ti?
Mete cinema-DAT QP or theatre-DAT QP go-PAST
'Did Mete go the cinema or to the theatre?'
B: Mete [sinema-ya]$_{CF}$ gitti.
Mete cinema-DAT go-PAST
'Mete went to the cinema.'
ordinary semantic value
{Mete sinema-ya git-ti, Mete tiyatro-ya git-ti}
'Mete went to the cinema, Mete went to the theatre'
focus semantic value
{Mete sinema-ya git-ti, Mete tiyatro-ya git-ti)
'Mete went to the cinema, Mete went to the theatre'

(20) A: Mete tiyatro-ya git-ti.
Mete theatre-DAT go-PAST
'Mete went to the theatre.'
B: Hayır, Mete [sinema-ya]$_{CF}$ git-ti.
No, Mete cinema-DAT go-PAST
'No, Mete went to the cinema.'
ordinary semantic value
{Mete sinema-ya git-ti}
'Mete went to the cinema'
focus semantic value
{Mete sinema-ya git-ti, Mete tiyatro-ya git-ti, Mete spor-a git-ti)
'Mete went to the cinema, Mete went to the theatre, Mete went to the gym,…..'

Note that in contrast to the alternative sets of discourse new constituents; with contrastive focus phrases at least one of the constituents in the alternative set is explicitly given in the previous context.[12]

Additionally, yes/no questions can trigger contrastive focus phrases in Turkish as illustrated in (21-22) below. Note that the position of the question particle

[12] Based on similar examples, Krifka (2006) suggests that focus cannot be taken as 'new' information that is not shared between the speaker and the hearer.

signals the focus phrase in the answer in that in (21) it is the object phrase and in (22) it is the verb that bear focus.[13]

(21) A: Yurt dışında çalışmaya giden Alanya ve Anamurlular çalışmalarıyla büyük beğeni toplamış. Şimdi de bir Alman kanalında teşekkür konuşması yapılıyor.
The guest worker groups who went from Alanya and Anamur to Germany won recognition with their work. Now the German people make a speech that praises them.

B: Almanyalılar Alanyalıları mı övüyor?
Do the German people praise the people from Alanya?

A: Hayır, Almanyalı-lar [Anamurlu-lar-ı]$_{CF}$ öv-üyor.
No, German-PL people of Anamur-PL-ACC praise-PROG
'No, the German people praise the people from Anamur.'

(22) A: Almanya'ya giden Alanyalı bir grup hakkında televizyonda bir konuşma var.
There is a program on the television that praises a group of people from Alanya who went to Germany.

B: Almanyalılar Alanyalıları övüyor mu?
Do the German people praise the people from Alanya?

A: Hayır, Almanyalı-lar Alanyalı-ı [yer-iyor]$_{CF}$.
No, German-PL people of Alanya-ACC criticize-PROG
'No, the German people criticize the people from Alanya.'

---

[13] Truckenbrodt (2009) notes a similar property of yes/no questions in German with a falling intonation pattern. He suggests that alternative questions (1a) and yes/no questions which have a falling intonation (1b) have an assertive salient proposition. The yes/no question in (1c) differs from the one in (1b) in that it ends with a rising intonation and the most salient proposition is not asserted.
(1) a. Hat Peter einen Hund [/] oder eine Katze? [\] L%
'Does Peter have a dog or a cat?'
Most salient proposition: *Peter has a dog or a cat.*
b. Hat Peter einen Hund? [\] L%
'Does Peter have a dog?
Salient proposition: *Peter has a dog or he doesn't.*
c. Hat Peter einen Hund? [/] H%
'Does Peter have a dog?'
Most salient proposition: *Peter has a dog.* (Truckenbrodt 2009, 6-7-8-9)

Note that we can easily paraphrase yes/no questions as alternative questions as exemplified in (19). In (21) the implicit alternative is *'Do the German people praise the people from Alanya or Anamur?'* In (22), it is *'Do the German people praise people from Alanya or not?'* Based on this similarity we suggest that yes/no questions in Turkish trigger contrastive focus phrases.

To recap, with contrastive focus the alternative propositions composing the focus value are excluded as the wrong answer and only one of the alternatives is asserted to be the correct answer. Krifka (2006) defines contrastive focus not based on the feature 'contrast' but based on the nature of the alternative set, suggesting that contrastive focus phrases have a restricted alternative set which is labeled as closed focus. He defines discourse new constituents as focus phrase with an open set of alternatives which is labeled as open focus. For instance the alternative set of the alternative question in (23) is composed of only two alternatives while the alternative sets of discourse new constituent in (24) has more alternatives.

(23) A: What do you want to drink, tea or coffee?
B: I want $[\text{tea}]_F$
focus semantic value {I want tea, I want coffee}

(24) A: What do you want to drink?
B: I want $[\text{tea}]_F$
focus semantic value {I want tea, I want coffee, I want water, I want lemonade}

In both (23-24) one of the alternatives is chosen as the correct answer in 'contrast' to the other alternatives in the set. Hence, Krifka (2006) suggests that it is redundant to make a distinction based on 'contrast' feature in the presence of exhaustive focus already noted in the literature (Kiss 1998), the discussion of which will be given soon in this section. This is also the case in (17-18) versus (19-20) in the Turkish data.

With both discourse new and contrastive focus constituents one of the alternatives is chosen as the correct answer in contrast to other alternatives. Hence both focus types are contrastive in nature.

Neeleman and Vermeulen (2012) on the other hand make the distinction between contrastive focus and discourse new constituents based on the presence of a negation operator with contrastive focus phrases. This is illustrated with contrastive focus triggered by a corrective statement in (25).

(25) A: John read The Extended Phenotype.
B: (No, you are wrong.) He read [The Selfish Gene]$_{CF}$.

(26) a. < λx [John read x], The Selfish Gene, {The Blind Watchmaker, The Ancestor's Tale,
The Extended Phenotype,….}>
b. $\exists y$ [$y \in$ {The Blind Watchmaker, The Ancestor's Tale, The Extended Phenotype,….}& $\neg$ [John read y]]
(Neeleman and Vermeulen 2012, 20, 27)

The lambda operator in (26) entails that John read something. The ordinary value of the focus is given as the *'The Selfish Gene'* which is followed by the alternative phrases that can replace the focused phrase. Note that up to this point, this line of an analysis is not different from the alternative semantics approach. However this is not the end of the representation for the contrastive focus phrase. In (26b), the negation operator asserts that the alternative propositions are not correct and John did not read these books.

Kiss (1998, 2002) makes the distinction between contrastive focus and discourse new constituents in Hungarian based on 'exhaustive identification' using the tests proposed by Szabolcsi (1981) and Donka Farkas (cited in Kiss 1998 as p.c.). Contrastive focus which surfaces ex-situ in the immediately preverbal position

expresses exhaustive identification. In-situ informational focus does not express exhaustive identification based on which Kiss concludes that contrastive focus constituents are quantificational in nature.

Now we will see whether Turkish contrastive focus and discourse-new constituents show different properties with respect to exhaustive identification. Szabolcsi (1981) suggests that an answer to an alternative question as in (27A) may include focus constituents composed of two individuals or entities as in (27B). However, a following confirmation sentence which drops one of the constituents and includes only one of the entities is not possible with contrastive focus phrases as in (27C).

(27) A: Ahmet Ayşe-ye [Büşra ve Sevgi-yi]$_{CF}$ mi yoksa [Ali ve Veli-yi]$_{CF}$ mi
Ahmet Ayşe-DAT B. and S.-ACC QP or A. and V.-ACC QP
tanıt-tı?
introduce-PAST
'Did Ahmet introduce Büşra and Sevgi or Ali and Veli to Ayşe?'
B: Ahmet Ayşe-ye [Ali ve Veli-yi]$_{CF}$ tanıt-tı
Ahmet Ayşe-DAT A. and V.-ACC introduce-PAST
'Ahmet introduced Ali and Veli to Ayşe.'
C: #Ahmet Ayşe-ye [Ali-yi]$_{CF}$ tanıt-tı.

The answer in (27C) is licit only when uttered as a corrective statement for (27B) but not as a confirmation sentence. Now we will take a closer look at the alternative sets of the focus phrase to understand the reason behind the unacceptability of the sentence in (27C).

(28) *ordinary semantic value*

{Ahmet Ayşe-ye Büşra ve Sevgi-yi tanıt-tı, Ahmet Ayşe-ye Ali ve Veli-yi tanıt-tı}

'Ahmet introduced Büşra and Sevgi to Ayşe, Ahmet introduced Ali and Veli to Ayşe.'

focus semantic value

{Ahmet Ayşe'ye Ali ve Veli'yi tanıttı, Ahmet Ayşe'ye Büşra ve Sevgi'yi tanıttı, Ahmet Ayşe'ye Ali'yi tanıttı, Ahmet Ayşe'ye Veli'yi tanıttı…… }

'Ahmet introduced Ali and Veli to Ayşe, Ahmet introduced Büşra and Sevgi to Ayşe, Ahmet introduced Ali to Ayşe, Ahmet introduced Veli to Ayşe…..'

The answer in (27B) identifies *'Ali ve Veli'* as the correct answer to the exclusion of the other alternatives given in (28). The sentence in (27C) is out because the sentence includes an alternative already excluded by the focus phrase in (27B).

A similar context with the discourse new counterpart in the follow up sentence is not unacceptable as exemplified in (29) below. [14]

(29) Y*ou see that Ahmet introduces someone to Ayşe, but you cannot see or recognize the person…*

A: Ahmet Ayşe-ye kim-i tanıt-tı?

Ahmet Ayşe-DAT whom-ACC introduce-PAST

'Whom did Ali introduce to Ayşe?'

---

[14] Göksel and Özsoy (2003) suggest that this test is not applicable in Turkish as with both informational focus (1) and contrastive focus (2), the follow up sentence is logical consequence of the preceding sentence.

(1) A: Deniz-de her gün [bir adam ve bir kadın]$_{DN}$ yüz-üyor-du.
sea-LOC every day a man and a woman swim-PROG-PAST
'A man and a woman used to swim at the sea every day.'
B: Deniz-de her gün [bir kadın]$_{DN}$ yüz-üyor-du.
sea-LOC every day a woman swim-PROG-PAST
'A woman used to swim at the sea every day.'

(2) A: [Bir adam ve bir kadın]$_{CF}$ her gün deniz-de yüz-üyor-du.
a man and a woman every day sea-LOC swim-PROG-PAST
'A man and a woman used to swim at the sea every day.'
B: [Bir kadın]$_{CF}$ her gün deniz-de yüz-üyor-du.
a woman every day sea-LOC swim-PROG-PAST (Göksel and Özsoy 2003, 16-18)

Note that contrastive focus is not triggered in a context and hence we cannot make sure whether it is contrastive focus or not. As the sentences are not triggered via contrastive focus eliciting context, we suggest that both sentences are acceptable because they are interpreted as discourse-new focus. When we put the sentences in the triggering contexts, we get the difference between the two focus types as illustrated in (27) and (29) in the text above.

B: Ahmet Ayşe-ye [Ali ve Veli-yi]$_{DN}$ tanıt-tı.
Ahmet Ayşe-DAT A. and V.-ACC introduce-PAST
'Ali introduced Ali and Veli to Ayşe.'
C. Ahmet Ayşe-ye [Ali-yi]$_{DN}$ tanıt-tı.

(29C) can follow the conversation as a felicitous sentence in this context. (29C) is a logical consequence of (29B).

Donka Farkas (as cited in Kiss, 1998) suggests another test to differentiate contrastive focus from discourse-new constituents with respect to exhaustive identification. In (30A) the speaker asks an alternative question. In (30B) another speaker answers the question with a contrastive focus excluding the explicitly given alternative in the question in (30C). Adding a further focus constituent as an answer with a sentence initial opposition does not yield contradiction with the previous answer in (30B).

(30) A: Ahmet Ayşe-ye [Ali-yi]$_{CF}$ mi yoksa [Mehmet-i]$_{CF}$ mi tanıt-tı?
Ahmet Ayşe-DAT A.-ACC QP or M.-ACC QP introduce-PAST
'Did Ahmet introduce Ali or Mehmet to Ayşe?'
B: Ahmet Ayşe-ye [Ali-yi]$_{CF}$ tanıt-tı.
Ahmet Ayşe-DAT Ali-ACC introduce-PAST
'Ahmet introduced Ali to Ayşe.'
C: Hayır, Ahmet Ayşe-ye Veli-yi de tanıt-tı.
No Ahmet Ayşe-DAT Veli-ACC too introduce-PAST
'No, Ahmet also introduced Veli to Ayşe.'

We will again take a closer look at the alternative set of contrastive focus to see what makes the answer in (30C) felicitous with a sentence initial opposition.

(31) *ordinary semantic value*
{Ahmet Ayşe-ye Ali-yi tanıt-tı, Ahmet Ayşe-ye Mehmet-i tanıt-tı}
'Ahmet introduced Ali to Ayşe, Ahmet introduced Mehmet to Ayşe'

focus semantic value

{Ahmet Ayşe-ye Veli-yi tanıttı, Ahmet Ayşe-ye Mehmet-i tanıt-tı}

As the contrastive focus constituent in (30B) excludes all other possible answers given in (31), the addition of a further constituent requires contradicting the previous sentence. In a sense, the alternative set has to be triggered anew with (30C).

In (32) with a discourse-new constituent, on the other hand, contradicting the previous answer for adding a further constituent as an answer yields degradation.

(32) A: Ahmet Ayşe-ye [kim-i]$_{DN}$ tanıt-tı?
Ahmet Ayşe-DAT whom-ACC introduce-PAST
'Whom did Ahmet introduce to Ayşe?'
B: Ahmet Ayşe-ye [Ali-yi]$_{DN}$ tanıt-tı.
Ahmet Ayşe-DAT Ali-ACC introduce-PAST
'Ahmet introduced Ali to Ayşe.'
C: #Hayır, Ahmet Ayşe-ye Veli-yi de tanıt-tı.
'No, Ahmet also introduced Veli to Ayşe too.'

The answer with a sentence initial opposition in (32C) is not felicitous. Based on these tests we conclude that it is not 'contrast' that differentiates contrastive focus from discourse-new focus. Both discourse-new and contrastive focus phrases evoke alternatives and one of the propositions in the alternative set is chosen in 'contrast' to other alternatives. However they differ in that only contrastive focus phrases encode exhaustive identification. Discourse-new constituents evoke an alternative set of propositions without exhaustive identification while contrastive focus constituents evoke an alternative set of propositions and involve exhaustive identification. The next section turns to the investigation of topic.

2.3.2 Topic

The discussion in this section clearly indicates that it is not so easy to identify topic phrases as it is the case with focus phrases. Topichood is associated with the information status of being *'old'* or *'given'* or alternatively as the sentence initial position which is taken as the subject position (Chafe 1976). Within this analysis information status is a property of the referents. Reinhart (1981) notes that topichood cannot be defined based on givenness in the previous context or being in a sentence initial position as illustrated in (33-34).

(33) A: Who did Felix praise?
B: Felix praised himself. (Reinhart 1981, 37)

(34) A: I can't find broccoli anywhere.
B: Crack they sell at every corner but broccoli it is like they don't grow it anymore. (Vallduví 1990, 21)

In (33b) Felix denotes given information in that the speaker assumes that the item is in the addressee's consciousness. However the same entity is also taken as the entity the speaker introduces to the addressee's consciousness as the object and hence it denotes new information. In (34b) the sentence initial topic is not given and it is not part of the previous discourse. Hence topichood cannot be defined based on the referential status of referents as given/new. The criterion of subjecthood also fails as a conclusive test for topichood as illustrated in the following example.

(35) Max saw Rosa yesterday. (Reinhart 1981, 6)

Reinhart (1981) indicates that 'Max' can be labeled as topic if this sentence is given as an answer to the question of *'Who did Max see yesterday?'*, and 'Rosa' if the same

sentence is an answer to the question of *'Has anybody seen Rosa yesterday?'* Hence the sentence initial position cannot always be associated with topichood.

Reinhart (1981:80) suggests that topics are "referential entries under which we classify propositions in the context set and the propositions under such entries in the context set represent what we know about them in this set." Reinhart (1981) proposes *"as for"*, *"what about"*, and *"said about"* tests to identify topics in an utterance. Taking the example in (35) as our testing ground we will apply these tests to find the topic within this sentence. As illustrated in (36) 'Max' can easily be identified as the topic of this utterance.

(36) a. As for Max, he saw Rosa yesterday.
b. What about Max? Max saw Rosa yesterday.
c. I said about Max that he saw Rosa yesterday.

However note that 'Rosa' also passes these tests and can be identified as the topic of the sentence.

(37) a. As for Rosa, Max saw her yesterday.
b. What about Rosa? Max saw her yesterday.
c. I said about Rosa that Max saw her yesterday.

These tests are too permissive and identify both the subject and the object as the topic of the utterance. However these tests have also been criticized as being too strong to identify aboutness topics as illustrated in (38) below.

(38) She told me I needed a change in my life, like getting a new job. It was to no avail. *Linguistics fascinated me*. Wall Street would have to wait.
a. I said about linguistics that it fascinated me.
b. (?) As for linguistics, it fascinated me.
c. What about linguistics? It fascinated me. (Vallduví 1990, 31-32)

As illustrated above, *'linguistics'* as the topic of the sentence fails the *"as for"* test. I think *"as for"* and *"what about"* tests fail to identify the aboutness topic because they can identify contrastive topic better than aboutness topics, the discussion of which is given in section 2.3.2.2. Note that with both *"as for"* and *"what about"* phrases, a shift for the topic under discussion is signaled. This problem is closely related to the aboutness topic definition of Reinhart (1981) who takes aboutness topic as newly introduced units or constituents marking a shift in the conversation. *"As for"* and *"what about"* phrases mark a shift in the conversation and hence they serve as a better test for contrastive topic. Within our study, aboutness topics which can be new or given in the previous discourse mark only what the rest of the sentence is about without marking a shift in the conversation.

The following sub-sections elaborate on what we mean by aboutness topic and contrastive topic within this study.

2.3.2.1 Aboutness topic

For Turkish, Erkü (1982) and Erguvanlı (1984) suggest sentence initial constituents to be the topics.

(39) A: Ahmet ne oku-du?
Ahmet what read-PAST
'What did Ahmet read?
B: [Ahmet]$_{AT}$ kitab-ı oku-du
Ahmet book-ACC read-PAST
'Ahmet read the book.' (Erkü 1982, 1 and 5)

The sentence initial subject as the aboutness topic marks what the rest of the sentence is about. Now we will apply the topichood tests to see whether aboutness topic phrases always surface in sentence initial position.

(40) [Ahmet]$_{AT}$ Ayşe-yi gör-müş.
Ahmet Ayşe-ACC see-PAST
'Ahmet saw Ayşe.'
a. Ahmet'e gelince, Ahmet'in Ayşe'yi gördüğünü söyledim.
'As for Ahmet, I told that Ahmet saw Ayşe.'
b. Peki ya Ahmet? Ahmet Ayşe'yi görmüş.
'What about Ahmet? Ahmet saw Ayşe.'
c. Ahmet ile ilgili, Ahmet'in Ayşe'yi gördüğünü söyledim.
'I said about Ahmet that Ahmet saw Ayşe.'

As pointed out above in the text *"as for"* and *"what about"* tests can trigger contrastive topic phrases that mark a shift for the topic under discussion. For example the sentence in (40a) can follow the sentence in (41a) while the sentence in (40b) can follow (41b).

(41) a. Mehmet-in Ayşe ile buluş-tuğ-un-u söyle-di-m.
Mehmet-GEN Ayşe with meet-NOML-3SG-ACC say-PAST-1SG
'I said that Mehmet met with Ayşe.'
b. Mehmet Ayşe-yi yemeğ-e çıkar-mış.
Mehmet Ayşe-ACC dinner-DAT take-PAST
'Mehmet took Ayşe out to dinner.'

Hence only *"said about"*, *"tell me about"* or *"what is new about"* can trigger aboutness topic phrases without making a topic shift.

As illustrated in (36-37) not only the sentence initial subject phrase but also the object phrase can pass the topichood tests. Now we will see whether the object phrase in (40) can mark aboutness topic.

(42) Ayşe ile ilgili yeni bir şey var mı?
Ayşe with about new anything exist QP
'Is there anything new about Ayşe?'

A: [Ayşe-yi]$_{AT}$ [Ahmet]$_{F}$ gör-müş.
Ayşe-ACC Ahmet see-PAST
'Ahmet saw Ayşe.'
B: ?[Ahmet] [Ayşe-yi]$_{AT}$ [gör-müş]$_{F}$
C: #[Ahmet]$_{F}$ [Ayşe-yi] $_{AT}$ gör-müş.

As illustrated in the answers in (42), preposed object in (42a) is the most natural answer while the in-situ answer is better when the focus is on the verb (42b). In SOV order when the focus is on the subject and object is the aboutness topic, the sentence is not felicitous as in (42c).

The in-situ answer with the focus on the verb is a bit problematic in that aboutness topic phrases signal what the rest of the sentence is about and hence the function of the preceding sentence initial constituent is puzzling. The in-situ answer is even better when put in a rich context and there is a referential relation between the subject and the object.

(43) *Ayşe ile ilgili yeni bir şey var mı?*
Ayşe with about new anything exist QP
'Is there anything new about Ayşe?'
A: Hoca-sı Ayşe-yi sınıf-tan at-mış.
teacher-3SG Ayşe-ACC class-LOC take out-PAST
'Ayşe's teacher took her out of the class.'
B: Ahmet Ayşe-yi aldat-mış.
Ahmet Ayşe-ACC cheat-PAST
'Ahmet cheated on Ayşe'
C: Patron-u Ayşe-yi iş-ten çıkar-mış.
boss-3SG Ayşe-ACC job-LOC take-PAST
'Ayşe's boss dismissed her from her job.'
D: Köpek Ayşe-yi ısır-mış.
dog Ayşe-ACC bite-PAST
'The dog bit Ayşe.'

All these answers are judged to be better because we predict a relation between the subject and the object. We tend to interpret the subjects of these sentences as the teacher of Ayşe (43a), Ahmet with whom we both know that Ayşe has a close relation (43b), the boss of Ayşe (43c), the dog of Ayşe or a dog we both know (43d) respectively. There are two possibilities either (i) the subject forms a semantic unit with the object and we interpret the utterance as a sentence about this compact unit or (ii) only the sentence initial constituent functions as the aboutness topic while the object is just a discourse anaphoric constituent given in the previous context. We will test these options based on movement possibilities to the post-verbal domain. If aboutness topic signals what the rest of the sentence is about, we do not expect the constituent to move to the post-verbal domain.

(44) *Ayşe ile ilgili yeni bir şey var mı?*
Ayşe with about new anything exist QP
'Is there anything new about Ayşe?'
A: Hocası sınıf-tan at-mış Ayşe-yi.
teacher-3SG class-LOC take out-PAST Ayşe-ACC
'Ayşe's teacher took her out of the class.'
B: Sınıf-tan at-mış hoca-sı Ayşe-yi.
C: Ayşe-yi sınıf-tan at-mış hoca-sı.

All the sentences seem to be acceptable. The problem with this test is that we cannot be sure whether the post-verbal constituent is still the aboutness topic or discourse anaphoric constituent. In fact we have the same problem in (42B) and (43). Hence this is not a reliable test. Based on the following example, Kılıçaslan (2004) suggests that not all sentence initial constituents are aboutness topic phrases and it is the object phrase mentioned in the previous context that is the topic.

(45) A: Istakoz-dan ne haber? O-na ne ol-du?
lobster-LOC what news it-DAT what happen-PAST
'What about the lobster? What happened to it?'
B: Hasan [ıstakoz-u]$_T$ [Ali-ye]$_F$ ver-di
Hasan lobster-ACC Ali-DAT give-PAST
'Hasan gave the lobster to Ali.' (Kılıçaslan 2004, 22)

This example differs from the ones given in (43) in that we cannot make a relational bond between the subject and the object. As aboutness topics mark what the rest of the sentence is about, we suggest that in the examples in (43-45), all the sentence initial constituents are in fact aboutness topic phrases, while the constituent following the sentence initial constituent is a discourse anaphoric constituent given in the previous context (see section 2.3.3). Note that we can easily move it to the post-verbal position or delete it. I think we find it difficult to analyze the sentence initial constituents in (43-45) as aboutness topic phrases because we expect aboutness topic phrases to be given in the previous context which is not necessarily so in these examples.

To recap, we take the sentence initial constituents as aboutness topics which do not mark a shift in the conversation but mark only what the rest of the sentence is about. The next section investigates contrastive topic phrases.

2.3.2.2 Contrastive topic

Within the cartographic approach (Rizzi 1997), TopP projection is assumed for topic phrases. In contrast to FocP which is unique in the tree structure a recursive TopP projection is assumed surfacing above and below FocP. Frascarelli and Hinterhölzl (2007), Neeleman and Vermeulen(2012) argue against recursive Topic projections in the cartographic approach and suggest that recursive topic projections in fact reflects

the need for a further distinction for the topic phrases. Frascarelli and Hinterhölzl (2007) make a three way distinction for topic phrases as (i) aboutness topic, (ii) contrastive topic and (iii) familiar topic. The definition of aboutness topic is in line with the definition of Reinhart's sentence topic in that aboutness topic is newly introduced or marks a shift in the conversation. Familiar topics are constituents that are given or salient in discourse which are analyzed as discourse anaphoric constituents within this study as will be discussed in the next section. Neeleman and Vermeulen (2012) make a bipartite classification for topic phrases as (i) aboutness topic and (ii) contrastive topic. While aboutness topic phrases bear only a topic feature, contrastive topic phrases bear the additional contrast feature. Contrastive topics differ from aboutness topics in that contrastive topics evoke alternatives, as illustrated below.

(46) A: Tell me about Bill. Was he invited to a party when he went to New York?
B: Well, I don't know about Bill, but Maxine_{CT} was invited to a party on her first trip to New York by Claire.

(47) a. < λx ASSERT [x was invited by Claire to a party in New York], Maxine, {Susan, Bill,….}>
b. $\exists y$ [$y \in$ {Susan, Bill,….}& ¬ASSERT [x was invited by Claire to a party in New York](y)]

(Neeleman and Vermeulen 2012, 41, 44)

Note that the answer in (46B) marks a shift in the conversation and indicates the presence of alternatives. However in contrast to contrastive focus phrases the alternatives in the set are not excluded with contrastive topic phrases. While the contrastive topic is asserted as the answer, the other alternatives are left unresolved by the speaker.

Büring (2013) briefly summarizes the functions of contrastive topic under five headings, illustrated with our examples below:

a. A sense of incompleteness with the functions of addition, possibility and openness

(48) A: Ayşe ile kaç-ta buluş-acak-sın?
Ayşe with what time-LOC meet-FUT-2SG
'When will you meet with Ayşe?'
B: [Ayşe]$_{CT}$ ile [üç-te]$_{F}$ buluş-uyor-uz ama bir-de
Ayşe with three-LOC meet-PROG-1PL but one-LOC
toplantı-ya gid-eceğ-im.
meeting-DAT go-FUT-1SG
'I will meet Ayşe at 3, but I will go to the meeting at 1 o'clock.'

The answer signals that it is not an exhaustive answer and adds another alternative to the list without excluding the first alternative.

b. Partial topics

(49) A: Doğum gün-ün-de kim ne getir-miş?
birthday-2SGPOSS-LOC who what bring-PAST
'Who brought what for your birthday?'
B: [Abi-m]$_{CT}$ [küpe]$_{F}$ al-mış.
brother-1SGPOSS earring buy-PAST
'My brother bought earrings.'

The speaker in B gives only a partial answer to the question which triggers a pair list answer and refrains from giving a complete answer. The question under discussion namely the immediate topic of discussion (Roberts 1996) is not fully resolved.

c. Shifting topics

(50) A: Doğum gün-ün-e Ahmet gel-ecek mi?
birthday-2SGPOSS-DAT Ahmet come-FUT QP
'Will Ahmet come to your birthday party?'

B: Ahmet-i bil-mi-yor-um ama [abi-m]$_{CT}$ [gel-ecek]$_{F}$.
A.-ACC know-NEG-PROG-1SG but brother-1SGPOSS come-FUT
'I don't know about Ahmet but my brother will come.'

Similar to the case in (46), the issue under discussion is not resolved and the speaker gives an answer shifting the topic of the previous utterance.

d. Purely implicational topics

(51) A: Dün bütün gün nere-de-ydi-n?
yesterday whole day where-LOC-PAST.COP-2SG
'Where were you the whole day yesterday?'
B: [Ben]$_{CT}$ [ev-de-ydi-m]$_{F}$, ya sen?
I home-LOC-PAST.COP-1SG how about you
'I was at home, how about you?'

The question puts the referent of the question at the center of the discussion but the answer shifts the topic. Even in the absence of the tag question it is clear that the speaker in B directs the same question to the other speaker.

e. Scope Fixing

(52) A: Parti-ye kim-ler gel-di?
party-DAT who-PL come-PAST
'Who came to the party?'
B: [Davet et-tik-ler-im]$_{CT}$ [gel-di]$_{F}$.
invite-REL-PL-1POSS come-PAST
'Those I invited came.'
B': #[Herkes]$_{CT}$ [gel-di]$_{F}$.
everybody come-PAST
'Everybody came.'

Similar to the example in (49) the speaker does not give a satisfactory answer to the question. Note that a quantifier which resolves the question under discussion is not

felicitous in the same context which is expected, as contrastive topic phrases "….can never be…. thoroughly exhaustive answers" (Constant 2014:50).

All the functions listed above clearly indicate that answers with contrastive topic phrases narrow down the question into sub-questions and answer only one of them, refraining from giving an exhaustive answer, or they make a shift in the current discussion. The speaker does not give a thorough answer to the question either because she does not know the complete answer or because she is unwilling to do so. Hence the usage of contrastive topic is a kind of discourse strategy as indicated in the literature (Büring 2003, Krifka 2008, Wagner 2007, 2008, Dyakonova 2009, Tomioka 2010, Neeleman and Vermeulen2012, Constant 2014). The discussion in section 2.3.1.2 indicated that, in Turkish yes/no questions trigger contrastive focus phrases. Additionally, based on the position of the question particle, yes/no questions also trigger contrastive topic phrases as already noted by Kamali and Büring (2011).

(53) A: Almanya ve Hollanda'ya çalışmaya giden Alanyalılar büyük beğeni toplamışlar. Hollandalılar da onları öven bir konuşma yapıyor.
One of the groups that went from Alanya to Dutch and Germany won recognition with their work. Now the Dutch people give a vote of thanks.

B: [Almanyalı-lar]$_{CT}$ Alanyalı-lar-ı [öv-üyor]$_{F}$ mu?
German-PL people of Alanya-ACC praise-PROG QP
'Do the German people praise the people from Alanya?'

(54) A: Yurt dışında çalışmaya giden Alanya ve Anamurlular çalışmalarıyla büyük beğeni toplamış. Şimdi de bir Alman kanalında Anamurlulara teşekkür konuşması yapılıyor.
The guest worker groups who went from Alanya and Anamur to Germany won recognition with their work. Now the German people make a speech that praises the people from Anamur.

B: [Almanyalı-lar]$_{AT}$ [Alanyalı-lar-ı]$_{CT}$ [övü-yor]$_{F}$ mu?
German-PL people of Alanya-ACC praise-PROG QP
'Do the German people praise the people from Alanya?'

Both of the questions mark a shift in the topic under discussion. The comparison between (21) and (53) indicates that the question particle can directly follow the focused constituent even if it is not the verb. In both (22) and (54) the question particle is in its canonical sentence final position and it follows the focus phrase. In these examples, the difference is marked only via intonation.

Now we will focus on the alternatives induced by contrastive topic phrases by comparing them with the alternatives evoked by contrastive focus phrases at each step. Remember that within alternative semantics, the function of focus is taken as evoking alternatives (Rooth 1985, 1992). The alternative propositions differ with respect to the constituent in the focus position and we get the focus value of the sentence.

(55) What did Ayşe fly?
ordinary semantic value
{Ayşe flew the kite}
focus semantic value
{Ayşe flew the kite, Ayşe flew the balloon, Ayşe flew the plane}

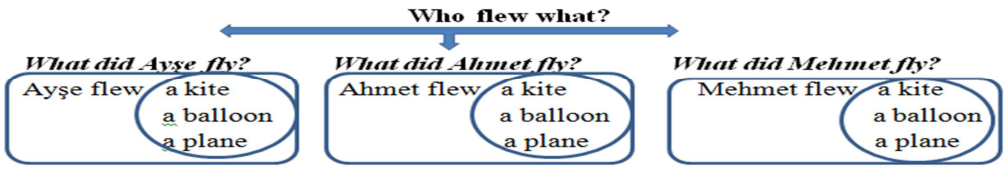
As for the focus semantic value of a question, remember that the question has a set of possible answers. We get question-answer congruence because the set of alternative propositions of the question is a subset of the set of alternative propositions of the focus phrase as illustrated in (55-56).

(56) What did Ayşe fly? {Ayşe flew the kite, Ayşe flew the balloon, Ayşe flew the plane}

As illustrated in (48-52) above, the answers with contrastive topic either mark a shift in the topic under discussion or the discussion is narrowed down to sub-questions and the speaker answers only one of these sub-questions leaving the topic under discussion unresolved. Contrastive topics evoke alternatives via a set of questions. Hence the semantic value of contrastive topics denotes a set of sets of alternative propositions as shown in (57) below. This is illustrated below in line with the discourse trees representation of Büring (2003).

(57) A: Hava rüzgarlı-ydı, kim ne uçur-muş?
weather windy-PAST.COP who what fly-PAST
'The weather was windy, who flew what?'
B: [Ayşe]$_{CT}$ [uçurtma]$_{F}$ uçur-muş.
Ayşe kite flew-PAST
'Ayşe flew a kite.'

(58)



The big question (Roberts 1996) is narrowed down to sub-questions which evoke a set of possible answers as alternatives, hence contrastive topic is a set of questions or set of sets of alternative propositions.[15] The answer with contrastive topic in (57) is not exhaustive answer to the issue under discussion as we leave some questions

[15] Adopting the analysis of Roberts (1996), Büring (2003) develops a hierarchical discourse tree in which discourse is represented as questions which are further decomposed into sub-questions and answers. In the tree each node represents a sentence with a focus and a contrastive topic which is labeled as CTF pattern.

unresolved. Note that the semantic value of the focus phrase in (55) which is defined as the semantic value of a question or a set of alternative propositions is only a sub-part of the semantic representation of contrastive topic. The semantic value of the focus phrase is used in the semantic computation of the contrastive topic.

Now we will take a look some data taken as focus phrases in the literature which we suggest to be contrastive topic phrases. Göksel and Özsoy (2000) take the sentence initial constituents in (60) as focus phrases and suggest that wh-phrases can follow focus phrases but not vice versa.

(59) a. *Ne zaman [okula]$_F$ id-ecek-sin?
when school-DAT go-FUT-2SG
When will you go to school?

b.*Kim [sen-i]$_F$ sev-iyor?
who you-ACC love-PROG
Who loves YOU?

c.* Kim-i [sinema-da]$_F$ gör-ecek-sin?
who-ACC cinema-LOC see-FUT-2SG
Who will you see AT THE CINEMA?

(60) a. [okula]$_F$ ne zaman gid-ecek-sin?[16]
school-DAT when go-FUT-2SG

b. [sen-i]$_F$ kim sev-iyor?
you-ACC who love-PROG

c. [sinema-da]$_F$ kim-i gör-ecek-sin?
cinema-LOC who-ACC see-FUT-2SG

(Göksel and Özsoy 2003, 10-11)

[16] The construction in (60) in the text can also be used in the following context. Within this context, the sentence initial constituent is not contrastive topic.
(1) A: Ne zaman gid-ecek-sin?
When go-FUT-2SG
'When will you go?'
B: Ev-e mi?
House-DAT QP
'To the house?'
A: Ev-e değil, OKUL-A ne zaman gid-ecek-sin.
house-DAT not school-DAT when go-FUT-2SG
'Not to the house, when will you go to the school.'
Note that the construction has the intonational properties of a declarative clause, not an interrogative clause.

We suggest that the sentence initial constituents in (60) above are in fact contrastive topic phrases followed by focused wh- phrases. The utterances in 60(a-c) are exemplified below in a context.[17]

(61) A: Ev-e saat 2-de gid-eceğ-im.
home-DAT hour two-LOC go-FUT-1SG
'I will go home at 2 o'clock.'
B: Peki, okul-a ne zaman gid-ecek-sin?
OK, school-DAT when go-FUT-2SG
'OK, when will you go to school?'

(62) A: Ahmet Ayşe-yi sev-iyor.
Ahmet Ayşe-ACC love-PROG
'Ahmet loves Ayşe.'
B: Peki, ya sen, sen-i kim sev-iyor?
OK you you-ACC who love-PROG
'OK, what about you, who loves you?'

(63) A: Yarın okul-da İpek-i gör-eceğ-im.
tomorrow school-DAT İpek-ACC see-FUT-1SG
'Tomorrow I will see İpek at school.'
B: Peki sinema-da kim-i gör-ecek-sin?
OK cinema-LOC who-ACC see-FUT-1SG
'OK, whom will you see at the cinema?'

---

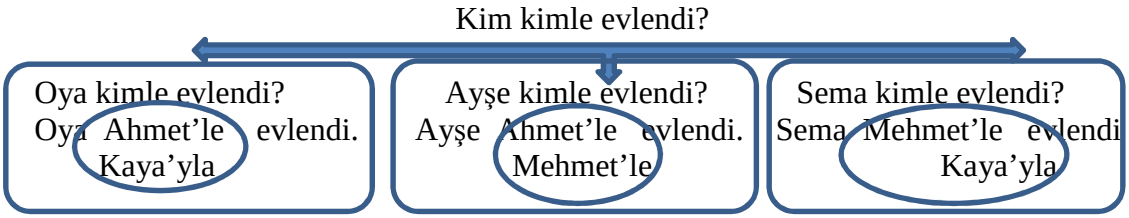
[17] Analyzing the sentence initial phrases in (60) also gives us more ideas with respect to the analysis of intervention effects in Turkish. Kesen (2010) notes that although focus phrases with overt particles and negative polarity items induce intervention effects for wh- phrases (1-2a), focus phrases without focus particles do not (3b).

(1) a. *Kimse kim-i gör-me-di? b. Kim-i kimse gör-me-di?
anyone who-ACC see-NEG-PAST 'Whom nobody saw?'
(2) a. *Sadece Ali kim-i ara-dı? b. Kim-i sadece Ali ara-dı?
Only Ali who-ACC call-PAST 'Whom Ali called only?' (Kesen 2010, 4a-b)
(3) a. *Ne zaman okul-a gid-ecek-sin? b. Okul-a ne zaman gid-ecek-sin?
when school-DAT go-FUT-2SG 'When will you go to school?'

Based on three judgment tests Kesen (2010) concludes that interveners in Turkish do not form a homogeneous class and in contrast to Korean, the interveners cannot be grouped as focus phrases. However as illustrated above, the sentence initial constituents are in fact contrastive topic phrases not focus phrases.

Similar to the example in (50), contrastive topic phrases in (61-63) mark a topic shift. Kılıçaslan (2004) also suggests a multiple foci analysis based on the example below.

(64) A: Kim kim-le evlen-di?
who who-COM marry-PAST
'Who married who?'
B: [Oya]$_F$ [Kaya-yla]$_F$ evlen-di.
Oya Kaya-COM marry-PAST
'[Oya] married [Kaya]. (Kılıçaslan 2004, 7)



The big question under discussion includes many sub-questions. We suggest that the answer in (64) given to the question triggering pair list answer has a sense of incompleteness or openness. It gives a partial answer to the question similar to the answers in (49-50) and hence while the first wh-phrase is a contrastive topic, the second wh-phrase is a focus phrase. In the next section, we focus on contrast.

2.3.3 Contrast

For the compositional nature of contrastive topic many different analyses have been proposed. Neeleman and Vermeulen (2012), Frascarelli and Hinterhölzl (2007) take contrast as a primitive feature not as a part of topic or focus. Büring (2003), Krifka (2008), Wagner (2007, 2008), Dyakonova (2009), Tomioka (2010), Constant (2014) on the other hand take contrast not as a primitive feature but a dependent feature on topic and focus.

In addition to topic and focus, Neeleman and Vermeulen(2012) take contrast as a primitive feature because based on the feature ‘contrast’ they can make some generalizations about contrastive topic and contrastive focus. For example, in some languages only contrastive topic and focus can undergo A’ scrambling while this is not possible with non-contrastive topic and focus phrases.

In Turkish there is no overt focus movement, so this cannot be a common property of contrastive topic and focus in Turkish. Additionally, there are some generalizations that extend to not only contrastive topic and focus but also to discourse-new constituents. For example not only contrastive topic and contrastive focus but also discourse-new constituents evoke alternatives. With contrastive focus the other alternatives are excluded, with contrastive topic the speaker refrains from talking about the other alternatives and the answer does not resolve the issue under discussion. Finally with discourse-new constituents the other alternatives are not excluded and the answer is not an exhaustive answer. We can generalize the property of evoking alternatives over contrastive topic, focus and discourse-new constituents. Dyakonova (2009) on the other hand suggests that topic and focus are absolute in nature while contrast is gradable in the sense that contrast depends on different factors such as the explicitness, or the range of the alternative sets. As pointed out earlier with both discourse-new and contrastive focus one of the alternatives is chosen as the correct answer in ‘contrast’ to other alternatives. Dyakonova (2009) suggests that we tend to interpret contrastive focus more contrastive because it has a closed set of alternatives when compared to discourse-new focus with an open set of alternatives. Additionally, contrast can be cancelled with contrastive focus (65a) and contrastive topic (65b) and hence contrast is not a primitive notion.

(65) a. Manuel slapped his daughter$_{CF}$.

Implicature: not his wife, or any of his other kids

Cancellation: and not only her, his wife got a couple of boxes in the ear as well

b. Mary$_{CT}$ sent Daniel a birthday card.

Implicature: there were other people who congratulated him.

Cancellation: in fact, she was the only one who happened to remember about his birthday. (Dyakonova 2009, 49-50)

Additionally when we compare the alternative sets of these constituents, we easily note that the alternative sets of discourse-new and contrastive topic phrases are more closely related as the answer is not an exhaustive answer with these constituents in contrast to contrastive focus phrases. There is no syntactic or semantic property that we can generalize only to contrastive topic and focus. Moreover contrast can easily be cancelled as illustrated (65). Hence we conclude that contrast is not a primitive notion and does not occupy a specific position in the structure.

2.3.4 Discourse anaphoric constituents

Discourse anaphoric expressions are information structural units that are salient or given in the discourse such as pronominals. Neeleman and Vermeulen(2012) suggest that the topic notion used by Rizzi (1997) actually covers discourse anaphoric expressions, as topic is defined as a discourse constituent "normally expressing old information somehow available and salient in previous discourse" (Rizzi, 1997:285).

In this study we will not take topic as a cover term and assume discourse anaphoric constituents as a distinct category in line with Şener (2010). Discourse anaphoric expressions can be defined as the familiar topic notion of Frascarelli and Hinterhölzl (2007:2) which is defined as "….given or accessible (Chafe 1987) constituent, which is typically distressed and realized in a pronominal form (Pesetsky

1987)….”. In the following example it is *‘the check’* which is given in the discourse and serves as the continuing topic.

(66) *B: io dovevo studiare le regole qui e li fare solo esercizio, invece mi aspettvo di trovare dei punti a cui far riferimento ogni volta per vedere la regola, questo mi e mancato praticamento per avare la conferma di ricodare tutto insomma; A: comunque quelle domande ti davano la conferma che avevi capito; B: ma… magari non me la- non riesco a darmela da sola la conferma.*
B’: I was supposed to study rules here and do the exercises there, while I expected to find some outlines I could refer to, at any point, to check the relevant rule, this is what I missed, to check that I could remember everything. A: however those questions gave you the possibility to check your understanding; B; well, maybe I cannot make this check on my own.’

(Frascarelli and Hinterhölzl 2007, 6)

Within this study discourse anaphoric constituents are taken to be constituents that are explicitly given in the previous context. They do not evoke alternatives or mark a contrast with another constituent in the previous context. In the following example it is the dative marked constituent in the answer that functions as the discourse anaphoric constituent.

(67) A: İzmir’de düzenlenecek konferans için Ankara’dan bakanlar gelmiş. İstanbul ve Ankara’dan getirilen 10 kişilik güvenlik ekibi yoğun güvenlik önlemleri almış. Duyduğum kadarıyla, İstanbullu güvenlik görevlileri bakanlara hiç yardımcı olmamışlar. *For the conference that will be held in İzmir, some ministers came from Ankara. The security guard crew who came from İstanbul and Ankara took precautionary security measures. As far as I have heard the security guards from İstanbul didn’t help the ministers.*
B: İstanbullu güvenlik görevlilerini bilmiyorum ama
I don’t know the security guards from İstanbul but

[Ankaralı güvenlik görevlileri]$_{CT}$ [bakan-lar-a]$_{DA}$ [eskortluk etmiş-ler]$_{FOC}$.
from A. security guards minister-PL-DAT escort do-3PL
'The security guards from Ankara escorted the ministers.'

Prosodic or syntactic strategies can be used to mark discourse anaphoric constituents in a sentence. Krifka (2006) lists three strategies used to signal given information as (i) deaccentuation, (ii) deletion and (iii) word order change. We will focus on the first strategy in the next chapter. Turkish widely uses the other strategies. Discourse anaphoric expressions as continuing or familiar topics can be omitted or postposed to the post-verbal position.

(68) Yeni aldığın Paul Auster kitabını ne yaptın?
What did you do with the Paul Auster book you bought?
……
a. [*o-nu*]$_{DA}$ yarın oku-ma-ya başla-yacağ-ım
it-ACC tomorrow read-NOML-DAT begin-FUT-1SG
b. yarın oku-ma-ya başla-yacağ-ım [*o-nu*]$_{DA}$
c. yarın oku-ma-ya ~~*o-nu*~~ başla-yacağ-ım
'I will begin to read it tomorrow.' (Şener 2010, 19-20)

Based on the observation that contrastive topic and focus phrases cannot appear in the post-verbal position in Turkish, Şener (2010) assumes that discourse anaphoric expressions in the left periphery have an additional [contrast] feature which post-verbal discourse anaphoric constituents lack (see also section 2.5.2). The post-verbal position is also illicit for discourse-new constituents, which are not contrastive, and hence we will not assume an additional contrast feature to make a distinction between discourse anaphoric expressions in the right or left periphery. However in the syntax chapter we will only deal with preverbal discourse anaphoric constituents as the data is restricted to SOV and OSV orders in Turkish.

2.4 Overt particles with contrastive topic and focus phrases

In the literature focus phrases with overt particles have been suggested to have truth conditional effect and have a semantic dimension (Rooth 1996, Krifka 2006). Answers to wh- questions, corrections, confirmations have been suggested to be pragmatic purposes of focus (Krifka 2006).

(69) a. John only showed Mary [the PICTures]$_F$.
b. John only showed [MARy]$_F$ the pictures.

(70) a. A: What did John show Mary?
B: John showed Mary [the PICTures]$_F$.
b. A: Who did John show the pictures?
B: John showed [MARy]$_F$ the pictures. (Krifka 2006, 1-2)

The difference is that while the focus status of the constituents in (70) is dependent on the context as shown in (70a-b), the focus status of the constituents in (69) is not. We will discuss this issue in detail in section 2.6, but remember that there is a semantic distinction between discourse-new and contrastive focus constituents as illustrated with exhaustive identification tests. In the following sections we discuss discourse particles that follow contrastive topic and focus phrases.

2.4.1 Sadece/yalnızca, bile

The particles *'sadece/yalnızca'*, 'only', surface with contrastive focus phrases. This is expected as contrastive focus is identified with exhaustive identification.

(71) A: Ahmet tiyatro-ya git-ti.
Ahmet theatre-DAT go-PAST
'Ahmet went to the theatre.'

B: Hayır, [sadece Mete]$_{CF}$ tiyatro-ya git-ti.
No, only Mete theatre-DAT go-PAST
'No, only Mete went to the theatre.'

In (71) above, the focus phrase evokes alternatives ranging over a set of the names of people. However, only one of the answers is exhaustively identified as the correct answer to the exclusion of the alternatives in the set.

The other particle that surfaces with focus phrases is *'bile'* with the meaning of 'even'. In fact the focus type of the host this particle attaches to is controversial. Kerslake (1992:92) explains this controversy in the following way: "….although it does sometimes have an additive function its primary meaning is not 'in addition *x*' but 'as an extreme case, *x*', and this does not depend upon a specific 'non-extreme' case being having been mentioned or implied in the preceding discourse." Take a look at the following example.

(72) A: Gid-eceğ-imiz film güzel mi?
go-FUT-POSS1PL film good QP
'Is the film that we will see good?'
B: Mete bile o film-i izle-miş. Daha ne olsun?
Mete even that film-ACC watch-PAST What else do you expect?
'Even Mete has seen that film. What else do you expect?'

In this example the host subject phrase evokes a set of alternatives. The particle *'bile'* signals that there are some additional alternatives of people that saw the film. One of the alternatives is chosen as an extreme case of the alternative set to the exclusion of the other alternatives. The other alternatives are excluded as they are not as surprising or unexpected as the chosen focus phrase. The following example further

illustrates that *'bile' does* not just signal addition of an alternative to the set of alternatives.

(73) A: Ahmet tiyatro-ya git-miş. Başka kim git-miş?
Ahmet theatre-DAT go-PAST else who go-PAST
'Ahmet went to the theatre. Who else went to the theatre?'
B:?Mete bile tiyatro-ya git-miş.
Mete even theatre-DAT go-PAST
'Even Mete went to the theatre.'

The answer is fully acceptable only when the fact that Mete's going to the theatre is taken as an exceptional case when compared to the other alternatives in the set. Hence we suggest that the host phrase of the particle is a contrastive focus phrase and not a discourse-new constituent.[18]

2.4.2 dA

Erguvanlı (1984) is the first to note that *dA* surfaces with strong topics. Kerslake (1992) identifies two functions for this particle as (i) non-focused '*dA*' marking a change of subject as topic marker and (ii) focused '*dA*' signaling the focused phrase making an addition to the preceding context. Göksel and Özsoy (2003) suggest that '*dA*' either marks the focus phrase as in (74a) or attaches to a non-focused constituent as in (74b). Kesen (2010) also suggests that *dA* surfaces with focus phrases in examples similar to the one in (74a).

(74) a. $[\text{Ahmet}]_F$ de sinema-ya gid-iyor.
Ahmet dA cinema-DA go-PROG
'Ahmet, too, is going to the cinema.'

[18] Kiss (1998) suggests that 'even' in Hungarian surfaces with information focus, but not with identificational focus (except in special contexts).

b. Ahmet de [sinema-ya]$_F$ gid-iyor.
Ahmet dA cinema-DA go-PROG
'As for Ahmet, he is going to the cinema.'
'Ahmet, on the other hand, is going to the cinema.'
(Göksel and Özsoy 2003, 7)

Göksel and Özsoy (2003) suggest that in (74a) the focused phrase together with the clitic *dA* evokes a set of alternatives and *dA* asserts that one of the alternatives is true. In (74b) on the other hand both the clitic and focused phrase evoke alternatives and the *dA* forces one of these alternatives to be true.

We will first start with the example in (74b) which we analyze as an instance of contrastive topic.[19]As Kerslake (1992) points out, the host marks a shift in conversation as illustrated below. In (75b) the speaker shifts the topic under discussion from 'Mete' to 'Ahmet' which is signaled with the particle *dA.* [20]

(75) A: Mete tiyatro-ya gid-iyor.
Mete theatre-DA go-PROG
'Mete is going to the theatre.'

[19] Erguvanlı (1984) analyzes topic phrases marked with this particle as strong topics.
(1) Bir gömlek san-a bir gömlek de kardeş-in-e al-dı-m.
one shirt you-DAT one shirt too brother-POSS2SG-DAT get-PAST-1SG
'I got a shirt for you and a shirt for your brother.' (Erguvanlı 1984, 97)

[20] Note that the intonational properties of the structures in (61) and (75), which are illustrated below as (1-2) for ease of exposition, differ although we have the same ordering namely contrastive followed by focus phrase.
(1) A: Mete tiyatro-ya gid-iyor. B: Ahmet$_{CT}$ de sinema-ya$_F$ gid-iyor.
Mete theatre-DA go-PROG Ahmet dA cinema-DA go-PROG
'Mete is going to the theatre.' 'As for Ahmet, he is going to the cinema.
(2) A: Ev-e saat 2-de gid-eceğ-im. B: Peki, okul-a$_{CT}$ ne zaman$_F$ gid-ecek-sin?
home-DAT hour two-LOC go-FUT-1SG OK, school-DAT when go-FUT-2SG
'I will go home at 2 o'clock.' 'OK, when will you go to school?'
We suggest that this difference is due to the interaction of contrastive topic and focus phrases with the intonational patterns of questions and declaratives in Turkish which needs a controlled prosodic analysis that we leave for further research.

B: [Ahmet]$_{CT}$ de [sinema-ya]$_{F}$ gid-iyor.
Ahmet dA cinema-DA go-PROG
'As for Ahmet, he is going to the cinema.'

Remember that not only focus phrases but also contrastive topic phrases evoke a set of alternatives. Göksel and Özsoy (2003) suggest the host of the clitic evokes a set involving the names of people and one of the alternatives is asserted to be true. The big question of 'Who went where?' is decomposed into sub-questions as 'Who went to the cinema?, Who went to the theatre?, Who went to the market?' In this example, the first speaker was talking about a specific node of the tree about *'Mete'* when the other speaker moves to another node to talk about *'Ahmet'*. This is similar to the utterance in (50) under the labeling of 'shifting topics'.

Now we will move onto the additive function of this clitic attached to focus phrases as exemplified below.

(76) A: Mete sinema-ya git-miş. Başka kim git-miş?
Mete cinema-DAT go-PAST else who go-PAST
'Mete went to the cinema. Who else went to the cinema?'
B: Ahmet de sinema-ya git-miş.
Ahmet dA cinema-DA go-PAST
'Ahmet, too, went to the cinema.'

The focused host of the particle is triggered by a wh-question. Note that the focused phrase evokes a set of alternatives however it does not exclude the other alternatives nor contrasts with the other alternatives as an exceptional case. Hence we suggest that the clitic *dA* when attached to a focused phrase signals discourse-new focus constituents.

2.4.3 ise

Finally we will take a look at the particle *'ise'* with the meaning of 'as for'. Kerslake (1992) suggests that this particle shifts the attention to a new topic in a more marked way than *dA.* As the following example illustrates, the host of this particle functions as a contrastive topic.

(77) A: Mete tiyatro-ya gid-iyor.
Mete theatre-DA go-PROG
'Mete is going to the theatre.'
B: $[\text{Ahmet}]_{CT}$ ise $[\text{sinema-ya}]_{F}$ gid-iyor.
Ahmet ise cinema-DA go-PROG
'As for Ahmet, he is going to the cinema.'

The contrastive topic marked with *'ise'* again marks a shift for the topic under discussion as it is the case in (75). Hence we will analyze it as a topic shifter as in (50).

2.5 Distributional properties of information structural units in Turkish

2.5.1 Focus phrases

The following analyses have been suggested in Turkish with respect to the position of focus (i) all types of focus must be left adjacent to the verb (Erguvanlı 1984, Şener 2010), (ii) presentational focus must be left adjacent to the verb but contrastive focus can appear in the preverbal domain (İşsever 2003), (iii) all focus types can appear in the preverbal domain (Göksel and Özsoy 2000, Kılıçaslan 2004).

Hence the first question to be addressed in this section is whether discourse-new and contrastive focus phrases can appear in-situ, not restricted to the

immediately preverbal position or not. However what we mean by in-situ focus is not similar to Hungarian in which identificational focus moves to the immediately preverbal position while informational focus remains in-situ. In Turkish, focused constituents do not move as illustrated below.

(78) A: Ahmet sınav öncesi tutmuş defterini vermiş başka birine. Nasıl çalışacak şimdi defteri olmadan?
Ahmet gave his notebook to someone before the exam. How is he going to study for the exam now without his notebook?

B: [Mehmet]$_F$ [defter-in-i]$_{DA}$ [ver-miş]$_{DA}$, Ahmet değil.
Mehmet notebook-POSS-ACC give-PAST Ahmet not
'Mehmet gave his book to someone not Ahmet.'

C: [Defter-in-i]$_{DA}$ [Mehmet]$_F$ [ver-miş]$_{DA}$, Ahmet değil.

In (78C), non-focused constituent surfaces in a position preceding the focused phrase leaving the focused phrase in the immediately preverbal position.[21] Göksel and Özsoy (2003:1153) also suggest that "the generalization that Turkish is a focus-in-situ language holds in all instances." An in-situ focus in Turkish means the discourse anaphoric constituents following the focus phrase move to another position leaving the focus phrase in the immediately preverbal position. To evaluate this claim, first we will start with contrastive focus phrases triggered by alternative questions or corrective statements.

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[21] The other question is whether we have focus movement to the immediately preverbal position or not in Turkish. Vallduví and Engdahl (1996) suggest that Turkish immediately preverbal focus differs from Hungarian immediately preverbal focus with respect to projection possibilities. In Hungarian focus projection of the immediately preverbal focus phrase is to the right, while it is to the left in Turkish which indicates that the syntactic make up is different.

(1) Bir hizmetçi [$_F$ masa-nın üzer-i-ne [$_F$ yemek-ten önce [$_F$ [not-u]$_F$ bırak-tı]]].
a servant table-GEN on-POSS-DAT lunch-ABL before note-ACC leave-PAST
A. What did a servant leave on the table before lunch?
B. What did a servant do before lunch having to do with the table?
C. What did a servant do before lunch?
D. What did a servant do?

(79) Okulumuz öğretmenlerinden bazıları öğrencileriyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Öğretmenler de öğrenciler gibi eğlenmişler. Sen biliyor musun, piknikten sonra öğretmenler mi yoksa öğrenciler mi uçurtmaları uçurmuşlar?
Some of the teachers from our school went on a picnic with their students after school. The students brought with them some kites to fly. The teachers also had fun. Do you know whether after the picnic the teachers or the students flew the kites?

A: [Öğrenci-ler]$_{CF}$ [uçurtma-lar-ı]$_{DA}$ [uçur-muş-lar]$_{DA}$ *SOV*
student-PL kite-PL-ACC fly-PAST-3PL
'The students flew the kites.'

B: [Öğrenci-ler]$_{CF}$ [uçur-muş-lar]$_{DA}$ [uçurtma-lar-ı]$_{DA}$ *SVO*

C: [Öğrenci-ler]$_{CF}$ [uçur-muş-lar]$_{DA}$ *SV*

(80) Ayşe'nin dolabına sınav kağıtlarını bırakmıştım. Toplantıda velilere dağıtacaktı. Dolapta sınav kağıdı kalmadığına göre velilere vermiş.
I had left the exam papers to Ayşe's cupboard. She was going to give them to the parents at the meeting. As there are no exam result papers in the cupboard, Ayşe gave them to the parents.

A: Yoo, hayır. [Ayşe]$_{AT}$ [öğrenci-ler-e]$_{CF}$ [sınav kağıt-lar-ı-nı]$_{DA}$
No. Ayşe student-PL-DAT exam paper-PL-3SGPOSS-ACC
[ver-di]$_{DA}$ (veli-ler-e değil).
give-PAST parents-PL-DAT not
'No. Ayşe gave the exam papers to the students (not to the parents)'

B: Yoo, hayır. [Ayşe]$_{AT}$ [sınav kağıt-lar-ın-ı]$_{DA}$ [öğrenci-ler-e]$_{CF}$ [ver-di]$_{DA}$ (veli-ler-e değil) .

C: Yoo, hayır. [Ayşe]$_{AT}$ [öğrenci-ler-e]$_{CF}$ [ver-di]$_{DA}$ [sınav kağıt-lar-ın-ı]$_{DA}$ (veli-ler-e değil).

D: Yoo, hayır. [Ayşe]$_{AT}$ [öğrenci-ler-e]$_{CF}$ [verdi]$_{DA}$ (veli-ler-e değil).

As exemplified above, the subject in (79) or the dative marked constituent in (80) can bear contrastive focus in their base generated positions in the presence of discourse anaphoric constituents in the immediately preverbal domain. The in-situ focused subject followed by the in-situ discourse anaphoric expression in (79) sounds more

acceptable than the in-situ dative marked focused constituent followed by the discourse anaphoric constituent in (80). Additionally, the contrastive focus phrase can appear in the immediately preverbal position and the discourse anaphoric constituents can either move to an ex-situ position as in (79b), 80(b-c) or get deleted as in (79c) and (80d).

There are similar analyses suggesting that contrastive focus can appear in the preverbal domain without restricting it to the immediately preverbal domain (Göksel and Özsoy 2000, İşsever 2003, Kılıçaslan 2004). However, İşsever (2003) suggests that this optionality is only restricted to contrastive focus phrases and discourse-new constituents can only appear in the immediately preverbal position. Now we will investigate whether the optionality of appearing in the surface order is possible for discourse-new constituents or not.

İşsever (2003) gives the following example as evidence that presentational focus cannot surface in-situ.

(81) A: Fatma-yı kim arı-yor?
Fatma-ACC who look for-PROG
'Who is looking for Fatma?'
B: #Ali Fatma-yı arı-yor.
Ali Fatma-ACC look for-PROG
'Ali is looking for Fatma.' (İşsever 2003, 15)

Note that there is question and answer congruence in that the alternatives of the question given in (82a) are a subset of the alternative propositions of the focus phrase in (82b).

(82) *ordinary semantic value*

a. {Fatma-yı Ali arı-yor}

Fatma-ACC Ali look for-PROG

'Ali is looking for Fatma'

focus semantic value

{Fatma-yı Ali arıyor, Fatma-yı Ayşe arı-yor….}

ordinary semantic value

b. {Ali Fatma-yı arı-yor}

Ali Fatma-ACC look for-PROG

'Ali is looking for Fatma'

focus semantic value

{Ali Fatma-yı arı-yor, Ayşe Fatma-yı arı-yor….}

However the position of the focus phrase differs in the question and the answer above. The unacceptability of this sentence can be due to a mismatch between the melody of the question and the answer due to the difference in the position of the focus phrase.

Now we will test whether it is the difference in the position of the focus phrase in the question and answer that makes the sentence unacceptable. We list three types of questions (i) subject wh-in-situ and discourse new constituent in-situ in the answer (83), (ii) immediately preverbal subject wh-phrase and in-situ discourse new in the answer (84), (iii) immediately preverbal subject wh-phrase and in-situ discourse new with preceding additional information (85).

(83) A: Kapı-nın zil-i tüm gün çal-dı. Kim Ayşe-yi sor-uyor?

door-GEN bell-POSS whole day ring-PAST Who Ayşe-ACC ask-PROG

'The doorbell rang the whole day. Who is asking for Ayşe?'

B: $[\text{Ali}]_{DN}$ Ayşe-yi sor-uyor.

Ali Ayşe-ACC ask-PROG

'Ali is asking for Ayşe.'

(84) A: Ayşe-nin telefon-u tüm gün çal-dı. Ayşe-yi kim arı-yor?
Ayşe-GEN phone-POSS whole day ring-PAST Ayşe-ACC who call-PROG
'Ayşe's phone rang the whole day. Who is calling Ayşe?'
B: #[Ali]$_{DN}$ Ayşe-yi arı-yor.
Ali Ayşe-ACC call-PROG
'Ali is calling Ayşe.'

(85) A: Ayşe-nin telefon-u tüm gün çal-dı. Ayşe-yi kim arı-yor?
A.-GEN phone-POSS whole day ring-PAST Ayşe-ACC who call-PROG
'Ayşe's phone rang the whole day. Who is calling Ayşe?'
B: Herkes de bu soru-yu sor-uyor. [Ali]$_{DN}$ Ayşe-yi arı-yor.
everybody dA this question-ACC ask-PROG Ali Ayşe-ACC call-PROG
'Everybody is asking this question. Ali is calling Ayşe.'

As the examples in (83-85) illustrate, the acceptability decreases when the position of the wh- phrase and the focus phrase do not match. However when additional information is given so that this mismatch of the melody is disguised the structure is more acceptable as in (85). Hence these examples show that similar to contrastive focus phrases, discourse-new constituents can appear in-situ.

Based on the data discussed in Vallduví and Engdahl (1996), İşsever (2003) further adds that in the following examples the answers in 86-88(a) can be interpreted in contrastive and non-contrastive contexts while the answers in 86-88(b) can only be interpreted in a 'contrastive context'. Following from this, he suggests that in-situ focus can only be contrastive focus.

(86) When did a servant put a note on the table?
a. Bir hizmetçi masa-nın üzer-in-e not-u [yemek-ten önce]$_F$ bırak-tı.
a servant table-GEN on-POSS-DAT note-ACC lunch-ABL before leave-PAST
b. Bir hizmetçi [yemek-ten önce]$_F$ masa-nın üzer-in-e not-u bırak-tı.
'A servant left the note on the table before lunch.'

(87) Where did a servant put a note before lunch?

a. Bir hizmetçi not-u yemek-ten önce [masa-nın üzer-in-e]$_F$ bırak-tı.
a servant note-ACC lunch-ABL before table-GEN on-POSS-DAT leave-PAST

b. Bir hizmetçi yemek-ten önce [masa-nın üzer-in-e]$_F$ not-u bırak-tı.
'A servant left the note on the table before lunch.'

(88) Who put a note on the table before lunch?

a. Yemekten önce not-u masa-nın üzer-in-e [bir hizmetçi]$_F$ bırak-tı.
lunch-ABL before note-ACC table-GEN on-POSS-DAT a servant leave-PAST

b. [bir hizmetçi]$_F$ yemek-ten önce not-u masa-nın üzer-in-e bırak-tı.
'A servant left the note on the table before lunch.'

(Vallduví and Engdahl 1996, 70-72)

İşsever (2003) suggests that the answers in 86-88(b) are contrastive in the sense that there is at least another alternative under discussion that contrasts with the focus phrase. We suggest that it is still possible to analyze the focus phrases in 86-88(b) as discourse new constituents being triggered by wh-phrases as none of the alternatives are explicitly given in the previous context. Additionally, this explanation is not explanatory enough conceptually because for all the contexts triggering discourse new constituents there is a set of implicit contrastive alternatives as discussed in sections 2.3.1.1 and 2.3.1.2. Malte Zimmerman (p.c) suggests that there is contrast as soon as there are alternatives in that in contrast to the alternatives in the set one is chosen as the answer with both discourse-new and contrastive focus phrases. If we suggest that with contrastive focus phrases there is an implicit contrasting alternative, there is no way to make a distinction between discourse-new constituents and contrastive focus phrases. The difference between the two focus types is that only contrastive focus phrases are exhaustively identified as the correct answer to the exclusion of the other alternatives. Hence we do not take the examples in 86-88(b) as

evidence that discourse- new constituents have to occur in the immediately preverbal position.

Now we will take a look at other examples the answers of which are triggered by wh- phrases to shed light on the distribution of discourse-new constituents.

(89) A: Bu tür silahların yapımında uranyum kullanımı onaylanmadığı halde kullanıldığını biliyoruz.
Although the usage of uranium in these kinds of weapons is not approved, we know that it is used.

B: Peki kim uranyum-u onaylı-yor?
then who uranium-ACC approve-PROG
'Then, who approves the usage of uranium.'

A: Romanyalı-lar uranyum-u onaylı-yor.
Romanian-PL uranium-ACC approve-PROG
'Romanians approve uranium.'

The subject is the answer of the wh- phrase in the question, the alternatives are not explicitly given in the question but we still have a problem. The question can be analyzed as triggering a contrastive topic. In the preceding context it is clear that there are two groups of countries, those who approve the usage of uranium and those who don't. Hence the question denotes a subset of the topic introduced in the context. How about the following example?

(90) A: Anamurdan yurt dışına giden bir grup çalışmalarıyla büyük beğeni toplamış. Şimdi de misafir ülke onları öven bir konuşma yapıyor ama anlayamadım.
The guest worker groups who went abroad from Anamur won recognition with their work. Now the host country makes a speech that praises them but I couldn't understand.

Kim Anamurlu-lar-ı öv-üyor?
who people of Anamur-PL-ACC praise-PROG
'Who praise the people of Anamur?'

B: Almanyalı-lar Anamurlu-lar-ı öv-üyor.
German-PL people of Anamur-PL-ACC praise-PROG
'The German praise the people of Anamur.'

There is no topic shift in that the previous discourse topic continues without partitioning it into sub-questions. However it is still possible to interpret the question as triggering contrastive topic as in the context it is pointed out that these workers went abroad and the question is out of possible countries which country praised the people of Anamur. Now let's take a look at the following example.

(91) A: Ayşe'nin dolabına sınav kağıtlarını bırakmıştım. Toplantıda velilere dağıtacaktı. Veliler sınav kağıtlarını almamışlar ama dolapta da yok kağıtlar.
I had left the exam papers in Ayşe's cupboard. She was going to give them to the parents at the meeting. The parents didn't take the papers but the papers are also not in the cupboard.

Ayşe kim-e sınav kağıt-lar-ın-ı ver-di?
Ayşe who-DAT exam paper-PL-POSS-ACC give-PAST
'To whom did Ayşe give the exam papers?'

B: (?)Ayşe öğrenci-ler-e sınav kağıt-lar-ın-ı ver-di. [22]
Ayşe student-PL-DAT exam paper-PL-POSS-ACC give-PAST
'Ayşe gave the exam papers to the students.'

[22] The answer in (91B) is judged to be better when accompanied by the other alternative in the post-verbal domain.
(1) Ayşe öğrenci-ler-e sınav kağıt-lar-ın-ı ver-di veli-ler-e değil.
Ayşe student-PL-DAT exam paper-PL-POSS-ACC give-PAST parent-PL-DAT not
'Ayşe gave the exam papers to the students not to the parents'

Although the answer is triggered by a wh-question, we can easily analyze the focused phrase as contrastive focus in that the set of students is contrasted with the set of parents which is similar to a corrective statement.

The problem with this analysis is that the answer of the wh-question can be interpreted as contrastive topic or focus phrase. One of the strategies to discard 'contrast', as a confounding variable within these contexts, is to use wh-questions asking for discourse-new and additional information as illustrated below.

(92) A: Bu programda her ili temsilen gelen yarışmacılar hünerlerini gösteriyor. Örneğin Yalovalılar elektronik cihaz onarıyorlar. Oldukça da yetenekliler.
In this program contestants who represent towns show their skills. For instance, the people of Yalova repair electrical devices. They are very skillful.

B: Yalovalı-lar başka ne onar-ıyor-lar?
people of Yalova else what repair-PROG-3PL
'*What else do the people of Yalova repair?*'

A: Yalovalı-lar mobilya onar-ıyor-lar.
people of Yalova furniture repair-PROG-3PL
'The people of Yalova repair the furniture.'

(93) A: Bu programda her ili temsilen gelen yarışmacılar hünerlerini gösteriyor. Örneğin Yalovalılar elektronik cihaz onarıyorlar. Oldukça da yetenekliler.
In this program contestants who represent towns show their skills. For instance, the people of Yalova repair the electrical devices. They are very skillful.

B: Başka kim elektronik cihaz onar-ıyor?
else who electrical device repair-PROG
Who else repair electrical devices?

A: Gümüşhaneli-ler elektronik cihaz onar-ıyor.
people of Gümüşhane-PL electrical device repair-PROG
'The people of Gümüşhane repair electrical devices.'

(94) A: Duy-du-n mu, Hale Ayşe-ye yılbaşı hediye-si al-mış.
hear-PAST-2SG QP Hale Ayşe-DAT Christmas gift-POSS buy-PAST
'Have you heard that Hale bought a Christmas gift to Ayşe?'
B: Peki Hale başka kim-e yılbaşı hediye-si al-mış?
well Hale else who-DAT Christmas gift-POSS buy-PAST
'Well, to whom else did Hale buy a Christmas gift?'
A: Hale Ahmet-e de yılbaşı hediye-si al-mış.
Hale Ahmet-DAT dA Christmas gift-POSS buy-PAST
'Hale bought a gift for Ahmet too.'

In (92) it is the object phrase, in (93) it is the subject phrase, in (94) it is the indirect object phrase that serves as the discourse-new constituent providing additional information not available in the preceding context. Remember that answers with contrastive topic are partial in nature and they do not resolve the issue under discussion or make shift for the topic under discussion. In (92-94), we cannot analyze the constituent providing additional information as contrastive topic as the answer resolves the issue under discussion. The other point is that in these sentences the constituents providing discourse-new information are not uttered as the same with the contrastive topic constituents given in (48-52). There is an additional focus phrase in (48-52) that bear main prominence in the sentence while in (92-94) it is the discourse-new constituent that bears main prominence. The discussion in 4.2 on contrastive topic phrases will further show that this is a crucial difference between the contrastive topic asking for additional information and discourse-new constituents with additional information. Based on the discussion so far we conclude that as is the case with contrastive focus phrases, discourse-new focus phrases are not restricted to the immediately preverbal position.

The questioned raised at this point is why it is difficult to form a sentence with discourse-new constituents not surfacing in the immediately preverbal position.

I think when it is not explicitly indicated with additional constituents that the in-situ constituent is a discourse-new constituent as in (92-94), the sentence initial position is interpreted to be the position of contrastive topic or aboutness topic. This is indicated in the examples (89-90). As it is the case with contrastive focus phrases discourse-new constituents are not restricted to the immediately preverbal position but as the sentence initial position is mostly occupied by topic phrases, discourse-new constituents must be accompanied by expressions indicating that the information is purely discourse-new and additional. Maybe that is why in (91), addition of contrastive alternatives in the post-verbal domain marking contrast explicitly makes the structure more acceptable indicating that the in-situ constituent is a contrastive focus.

Finally in this section we will take a look at the restriction on movement of focus phrases to the post-verbal domain. As already noted in the literature focus phrases cannot surface in the post-verbal domain (Erguvanlı 1984, Kural 1993, Demircan 1996, Kennelly 1997, Göksel and Özsoy 2000, İşsever 2003, Şener 2010) this domain not being a discourse prominent domain.

(95) A: Romanyalı-lar uranyum-u onay-lıyor.
Romanian-PL uranium-ACC approve-PROG
'Romanians approve uranium.'
B: #Hayır, Romanyalı-lar onay-lıyor [magnezyum-u]$_{CF}$.
No Romanian-PL approve-PROG magnesium-ACC
Intended reading: 'No, Romanians approve magnesium.'

(96) A: İyonyalı-lar nere-ye yayıl-ıyor?
Ionian-PL where-DAT move-PROG
'Where do the Ionians move towards?'

B:#İyonyalı-lar yayıl-ıyor [Menemen-e]$_{CF}$.
Ionian-PL move-PROG Menemen-DAT
'Ionians move towards Menemen.'

However with focus phrases marked with overt particles the particle can surface in the post-verbal domain but prominence cannot be on the particle.

(97) a. [Sadece Romanyalı-lar]$_{CF}$ uranyum-u onaylı-yor.
only Romanian-PL uranium-ACC approve-PROG
'Only Romanians approve uranium.'
b.#Uranyum-u onaylı-yor [sadece Romanyalı-lar]$_{CF}$.
Intended reading: 'Only Romanians approve uranium.'
c. [Romanyalı-lar]$_{CF}$ uranyum-u onaylı-yor sadece.

The difference between (97a) and (97c) is that in (97c) we have to put main prominence on the subject otherwise the particle can be interpreted to be attached to the object or the verb. The next section takes a look at the distribution of topic phrases in Turkish.

2.5.1.1 Focus categorization

The final issue to be resolved about focus phrases is the semantic/pragmatic distinctions between contrastive and discourse-new focus. The discussions in section 2.3.1.1 and 2.3.1.2 has shown that both discourse-new and contrastive focus phrases evoke a set of alternatives. One of the alternatives is chosen as the answer in contrast to the other alternatives with discourse-new and contrastive focus constituents. Hence contrast seems to be a side effect of the presence of alternatives that are not chosen. If we take contrast as the main difference between the focus types as the focus phrase in the answer is contrasted with the other alternatives in the set and

chosen as the correct answer, both discourse-new and contrastive focus are 'contrastive'. Krifka (2006) also suggests that the distinction between the two focus types is not due to the feature of 'contrast' but due to the nature of the alternative sets, one being closed and the other open. This is similar to the analysis of contrast by Kiss (1998:267) who suggests that identificational focus is contrastive "…. If it operates on a closed set of entities whose members are known to the participants of the discourse." Note that this property of contrastive focus is closely related with the triggering contexts which are corrections or alternative questions. Hence the distinction between the two focus types cannot be 'contrast' as it is context dependent due to triggered alternative sets.

The other option is to take syntactic position of discourse-new and contrastive focus phrases as marking the difference. The contrastive focus has also been suggested as a subtype of focus due to movement possibilities in that they move to a designated position to be marked as contrastive focus which is not possible with discourse-new constituents as in Hungarian. However, Zimmermann and Onea (2011) suggest that in some languages contrastive focus phrases which appear ex-situ can optionally surface in-situ. Additionally in Hausa for instance the ex-situ focus position occupied by contrastive focus can also be occupied by discourse new focus.

In Finish, contrast is identified with the sentence initial position. Vallduví and Vilkuna (1998) make a distinction as 'rheme' and 'kontrast'. Rheme refers to new information while 'kontrast' is equivalent of identificational/exhaustive focus.

(98) A: What things did Anna get for her birthday?
B: Anna sai [kukkia]$_R$
Anna got flowers

(99) A: What is it that Anna got for her birthday?

B: [kukkia]$_R$ Anna sai

Vallduví and Vilkuna (1998) suggest that in (98) and (99) the accented phrase is rheme, but in addition in (99) it is contrastive. Therefore it is contrast which determines the position of the focus phrase. However they also note that when the answer is exhaustive the answer in (98) is also possible with a contrastive interpretation. Remember the discussion in section 2.5.1 on the distributional properties of focus phrases in Turkish. Both discourse-new and contrastive focus phrases can appear in-situ or in the immediately preverbal position. When 'contrastive' 'additional discourse new' functions of focus phrases are marked in the context, contrastive and discourse-new constituents can surface in-situ followed by discourse anaphoric constituents. Hence the syntactic position does not also make a distinction between the two focus types as it is suggested to be for Turkish (İşsever 2003).

To recap, if we take contrast as a side effect of alternatives, the distinction between contrastive focus and discourse new focus is lost. Even contrastive topic phrases evoke alternatives out of which one is chosen. The syntactic position is not distinctive either. We suggest that it is neither contrast nor syntactic position but exhaustive identification that differentiates contrastive focus from discourse new focus from a semantic point of view as illustrated in section 2.3.1.2. Within the terms of Kiss (1998), the predicate phrase exhaustively holds for the contrastive focus, not with discourse new focus.

2.5.2 Topic phrases

First we will take a look at the distributional properties of contrastive topic phrases. Contrastive topic phrases cannot surface following the focus phrase as illustrated below.

(100) Can'dan n'aber? O ne yedi partide?
What about John? What did he eat at the party?
Valla Can'ı bilmiyorum ama…
Frankly, I don't know about John, but…
[Aylin]$_{CT}$ [dolma-lar-dan]$_{F}$ ye-di.
Aylin dolma-PL-ABL eat-PAST
Aylin ate from dolmas.'
#[Dolma-lar-dan]$_{F}$ [Aylin]$_{CT}$ ye-di. [23] (Şener 2010, 10-12)

Additionally, we suggest that contrastive topic phrases cannot surface in the absence of a focus phrase in the same sentence. The sentence in (101B) is grammatical only when we put focus on the verb. The elliptical cause in (101C) is out in the absence of a focus phrase. Şener (2010) suggests that ellipsis must be maximal all the way down to but not into XP, and XP is the focused constituent. In (101C), the elliptical part includes the focused part and hence the sentence is out with a single contrastive topic.[24] The structure becomes acceptable when we include the focused part as in (101D).

[23] Wagner (cited in Neeleman and Vermeulen2012) argues that the questions the answers of which require a contrastive topic and a focus phrase can be analyzed as a pair list question. The question in (100) in the text above can be thought of as "Who ate what at the party?" The reader can easily swap the positions of contrastive topic and focus in the answer and find the answer acceptable. Hence in order to understand the unacceptability of the answer in (100) we should also read the target sentence with the correct intonation.

[24] The structure in (101b) is acceptable only when *dA* is interpreted to be attached to a discourse-new constituent encoding additional information.

(101) A: Toplantı-dan sonra çalışan-lar istifa mektub-u-nu ver-miş-ler.
meeting-DAT after worker-PL resignation letter-POSS-ACC give-PAST-3PL
'After the meeting the workers gave the resignation letters.'

B: #Valla, çalışan-lar-ı bil-me-m ama [patron]$_{CT}$ istifa
well worker-PL-ACC know-NEG-1SG but boss resignation
mektub-u-nu ver-miş.
letter-POSS-ACC give-PAST
Intended reading: 'Well, I don't know about the workers but the boss gave the resignation letter.'

C. #Çalışan-lar istifa mektub-u-nu ver-miş-ler, [patron]$_{CT}$ da.
worker-PL resignation letter-POSS-ACC give-PAST-3PL boss as for

D. Çalışan-lar istifa mektub-u-nu ver-miş-ler,
worker-PL resignation letter-POSS-ACC give-PAST-3PL
[patron]$_{CT}$ da [rapor-u]$_{F}$
boss as for report-ACC
'The workers gave the resignation letter, as for the boss (he gave) the report.'

In the literature it is suggested that in some languages such as Dutch (Neeleman and Vermeulen 2012) and English (Constant 2014), contrastive topic phrases can surface without a following focus phrase which are labeled as 'lone' contrastive topic phrases (Constant 2014). Now we will take a closer look at the Turkish equivalents of those examples. Although it seems that there is an lone contrastive topic in (102), it is easy to analyze yes/no questions in Turkish as alternative questions with an implicit and negated coordinate as shown in (101).Remember that alternative questions are analyzed as a sub-type of contrastive focus (Götze et al. 2007).[25]

[25] Kelepir (2001) notes that in Turkish negative polarity items are licensed either in the presence of negation or in yes/no questions. I suggest it is the presence of the implicit negation that licenses negative polarity items in yes/no questions.

(102) A: Ahmet CD-yi Ayşe-ye ver-di mi?
Ahmet CD-ACC Ayşe-DAT give-PAST QP
'Did Ahmet give the CD to Ayşe?'
B: Valla CD-yi bil-mi-yor-um ama, [kitab-ı]$_{CT}$ ver-di.
well CD-ACC know-NEG-PROG-1SG but book-ACC give-PAST
'Well, I don't know about the CD but (he) gave the book.'

(103) A: Ahmet CD-yi Ayşe-ye ver-di mi yoksa ver-me-di mi?
Ahmet CD-ACC Ayşe-DAT give-PAST QP or give-NEG-PAST QP
'Did Ahmet give the CD to Ayşe or not?'
B: Valla CD-yi bil-mi-yorum ama, [kitab-ı]$_{CT}$ [ver-di]$_{F}$.
well CD-ACC know-NEG-PROG-1SG but book-ACC give-PAST
'Well, I don't know about the CD but (he) gave the book.'

The other example which is analyzed to be a case of 'lone' contrastive topic is given in (104) below. The subject of the answer is analyzed to be a contrastive topic because it is not an exhaustive answer to the question under discussion. The issue is not resolved completely with the given answer.

(104) A: Zararları bilindiği halde uranyum kullanımı devam ediyormuş. Hangi ülkeler uranyumu onaylıyor? *Although its damage is known, the usage of uranium continues. Which countries approve uranium?*
B: Valla, bildiğim kadarıyla, [Romanyalı-lar]$_{CT}$ uranyum-u onaylı-yor.
well as far as I know, Romanian-PL uranium-ACC approve-PROG
'Well, as far as I know, Romanians approve uranium.'

This is not a yes/no question and note that the verb in the answer is the same with the verb in the question.[26] Note that the same answer can be given to this question with

[26] When the truth value of the whole proposition is emphasized it is called verum focus. (Götze et. al 2007). The emphasized part is not only the semantic content of the constituent bearing focus but the whole proposition. We suggest that this construction is an example of verum focus.

focus on the subject which makes the answer an exhaustive answer and does not leave the issue unresolved as exemplified in (105).

(105) A: Zararları bilindiği halde uranyum kullanımı devam ediyormuş. Hangi ülkeler uranyumu onaylıyor?

Although its damage is known, the usage of uranium continues. Which countries approve uranium?

B: [Romanyalı-lar]$_F$ uranyum-u onaylı-yor.

Romanian-PL uranium-ACC approve-PROG

'Romanians approve uranium.'

In order to make sure that there is really no focus phrase and we have a 'lone' contrastive topic in the answer in (104) we compared the pitch track of the same sentence with focus on the subject in (105).[27]

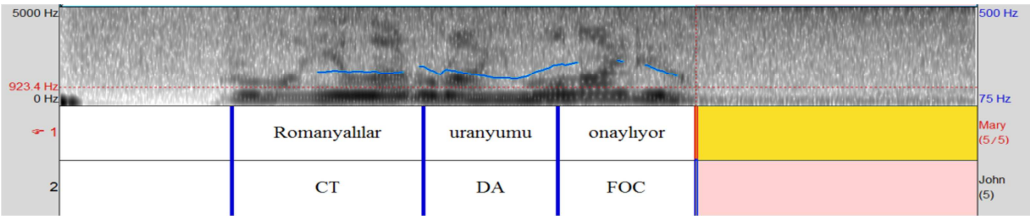

Fig. 1. Answer with the subject as the contrastive topic.

[27] With the aim of having a non-perturbated pitch track and a pitch track with a prenuclear, nuclear and post-nuclear domains we presented dialogues with words composed of sonorants and sentences composed of at least three constituents. Hence the contextual difference between (104) and (105) may not be so clear, so we give the following dialogue as another example to illustrate the difference better.

(1) A: Partiye kaç kişi gel-ecek?

party-DAT how many person come-FUT

'How many people will come to the party?'

B: Bil-diğ-im kadarıyla, [üç kişi]$_{CT}$ gel-ecek, diğer-ler-in-den haber-im yok.

As far as I know, three person come-FUT other-PL-GEN-LOC news-POSS absent

'As far as I know, three people will come, I don't know anything about the others.'

(2) A: Partiye kaç kişi gel-ecek?

'How many people will come to the party?'

B: [Üç kişi]$_F$ gel-ecek, başka kimse ism-in-i liste-ye yaz-dır-ma-mış.

Three person come-FUT else anyone name-POSS-ACC list-DAT write-CAUS-NEG-PAST

'Three people will come; no one else wrote his/her name.'

While the answer in (2) resolves the issue under discussion, the answer in (1) can only be regarded as a partial answer.

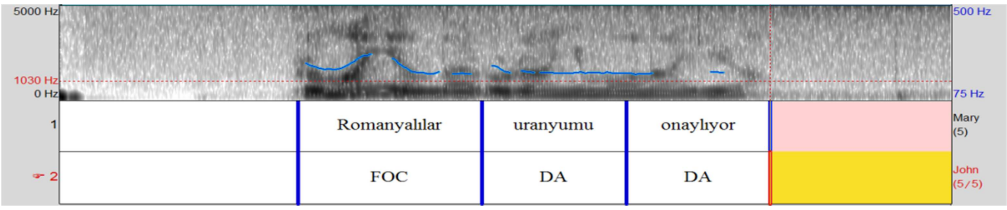

Fig. 2. Answer with the subject as the focus.

In Fig. 1, when the subject is the contrastive topic the verb bears focus and shows the prosodic properties of the nuclear and post-nuclear domain in that there is a bump with the accented syllable of the verb and the fall starts only after the accented syllable of the verb (see Chapter 3 for the details). The non-final domains show the properties of the prenuclear domain in that there is H boundary tone at the right edge of these domains. In Fig. 2, on the other hand, the initial domain shows the prosodic properties of the nuclear domain in that there is a bump with the accented syllable of the subject which is followed by a low reference height till the end of the sentence. Hence we can safely conclude that contrastive topic in Turkish cannot surface within the scope of focus and in the absence of focus.

As for the distribution of aboutness and contrastive topic, the data given in (54) repeated below as (106) for ease of exposition illustrate that aboutness topic precedes contrastive topics.

(106) A: Yurt dışında çalışmaya giden Alanya ve Anamurlular çalışmalarıyla büyük beğeni toplamış. Şimdi de bir Alman kanalında Anamurlulara teşekkür konuşması yapılıyor. *The guest worker groups who went from Alanya and Anamur to Germany won recognition with their work. Now the German people are making a speech that praises the people from Anamur.*

B: [Almanyalı-lar]$_{AT}$ [Alanyalı-lar-ı]$_{CT}$ [övü-yor]$_{F}$ mu?

German-PL people of Alanya-ACC praise-PROG QP

Do the German people praise the people from Alanya?

B’:#[Alanyalı-lar-ı]$_{CT}$ [Almanyalı-lar]$_{AT}$ [övü-yor]$_{F}$ mu?

When contrastive topic precedes aboutness topic, the sentence is not felicitous. Finally, we will test whether contrastive topic phrases can appear in the postverbal domain.

(107) Can'dan n'aber? O ne yedi partide?
What about John? What did he eat at the party?
Valla Can'ı bilmiyorum ama…
Frankly, I don't know about John, but…
[dolma-lar-dan]$_F$ ye-di [Aylin]$_{CT}$
dolma-PL-ABL eat-PAST Aylin
Aylin ate from dolmas.'

The first observation is that although the intonational property of this sentence is not the same with the ones given in (103-104), the sentence is fully acceptable. Göksel and Özsoy (2003, fn. 7) note that when *dA* is attached to a non-focused phrase, the host and the clitic cannot appear to the right of the focus phrase with the exception of answers echoing questions. This provides an evidence for the argument that the non-focused host with *dA* clitic is in fact a contrastive topic phrase. Göksel and Özsoy (2003) further note that when *dA* is not attached to the focus phrase, the host of this clitic, which is contrastive topic, can appear in the postverbal domain.

(108) a. Anne-si-yle de Ahmet bu günlerde [hiç]$_F$
mother-3SG.POSS-COM dA Ahmet nowadays at.all
anlaş-a-mı-yor-muş.
get along-AB-NEG- PROG-EVI
'As for his mother, Ahmet can't along at all with her nowadays.'
b. Ahmet bu günlerde [hiç]$_F$ anlaş-a-mı-yor-muş *anne-si-yle de*.
(Göksel and Özsoy 2003, 9)

We do not take post-verbal constituents in (107-108) as discourse anaphoric constituent because they still preserve the function of shifting the discussion under question. The data shows that in contrast to focus phrases, contrastive topic phrases can surface in the post-verbal domain losing their intonational properties which are observed when they occur in the preverbal domain. This poses a challenge for the analysis of Wagner (2007, 2008) who takes contrastive topic and focus phrases as nested focus phrases. If we take contrastive topic as focus phrases, we cannot explain the restriction for F phrases to appear in the post-verbal domain which does not hold for contrastive topic phrases as illustrated above. As indicated in the previous sections contrastive topic phrases cannot surface in the scope of focus phrases. Movement of the contrastive topic to the post-verbal position is not a problem for this requirement as post-verbal constituents are observed to be able to take scope over preverbal constituents in Turkish (Kural 1997, Göksel 1998).

2.5.3 Discourse anaphoric constituents

Şener (2010) suggests that discourse anaphoric constituents cannot surface between the verb and the focus phrase, as focus phrases have to appear in the immediately preverbal position. As the discussion on focus phrases has already shown, in this study we suggest that discourse anaphoric constituents can actually optionally follow in-situ focus phrases. The relevant examples are repeated below for ease of exposition.

(109) A: Ahmet sınav öncesi tutmuş defterini vermiş başka birine. Nasıl çalışacak şimdi defteri olmadan?
Ahmet gave his notebook to someone before the exam. How is he going to study for the exam now without his notebook?

B: [Mehmet]$_{F}$ [defter-in-i]$_{DA}$ [ver-miş]$_{DA}$, Ahmet değil.
Mehmet notebook-POSS-ACC give-PAST Ahmet not
'Mehmet gave his book to someone not Ahmet.'

(110) A: Duy-du-n mu, Hale Ayşe-ye yılbaşı hediye-si al-mış.
hear-PAST-2SG QP Hale Ayşe-DAT Christmas gift-POSS buy-PAST
'Have you heard that Hale bought a Christmas gift to Ayşe?'
B: Peki Hale başka kim-e yılbaşı hediye-si al-mış?
well Hale else who-DAT Christmas gift-POSS buy-PAST
'Well, to whom else did Hale buy a Christmas gift?'
A: Hale Ahmet-e de yılbaşı hediye-si al-mış.
Hale Ahmet-DAT dA Christmas gift-POSS buy-PAST
'Hale bought a gift for Ahmet too.'

However these sentences are not acceptable for the speakers who place focus phrases in the immediately preverbal position. We keep the discussion of this issue to the next chapter.

Additionally, discourse anaphoric constituents cannot surface in a position preceding the contrastive topic phrases.

(111) A: Duy-du-n mu, Hale Ayşe-ye yılbaşı hediye-si ver-miş.
hear-PAST-2SG QP Hale Ayşe-DAT Christmas gift-POSS give-PAST
'Have you heard that Hale gave a Christmas gift to Ayşe?'
B: Valla, yılbaşı hediyesini bilmem ama
Well, I don't know about the Christmas gift but
#[Hale]$_{AT}$ [Ayşe-ye]$_{DA}$ [araba-yı]$_{CT}$ [ver-miş]$_{F}$
Hale Ayşe-DAT car-ACC give-PAST
'Hale gave Ayşe the car.'

The sentence initial constituent is the aboutness topic and the dative marked constituent is the discourse anaphoric constituent given in the preceding context. The direct object shifts the topic under discussion and hence it is the contrastive topic.

The verb bears focus but the structure is infelicitous. This structure is felicitous only when the dative marked constituent is contrastive topic and the direct object bears focus. But then the sentence initial constituent is not the discourse anaphoric constituent. Hence we conclude that discourse anaphoric constituents cannot precede contrastive topic phrases.

2.6 Conclusion

In this chapter we investigated the partitioning of information structural units in Turkish under the headings of (i) discourse-new constituents, (ii) contrastive focus, (iii) aboutness topic, (iv) contrastive topic and (v) discourse anaphoric constituents. The main findings of this chapter are that:

- Focus phrases are distinguished not with respect to 'contrast' but 'exhaustive identification' in that contrastive focus phrases are identified exhaustively as the correct answer while this is not the case with discourse-new constituents. However this distinction is not reflected in syntax in that both discourse-new and contrastive focus phrases do not have to surface in the immediately preverbal position when they are put in appropriate contexts specifying their function.
- Contrastive topics cannot surface in the absence of focus phrases but neither can they do so in the domain of focus, which is due to the semantic composition of the contrastive topic. The set of alternative propositions of the focus phrase is part of the set of sets of alternative propositions of the contrastive topic phrase.
- Contrast is not a primitive notion as it is easily cancelled within context and it is gradable (Dyakonova 2009).

- Post-verbal domain cannot be identified as non-contrastive domain as contrastive topic can surface in this domain. While the post-verbal domain is not licit for focus phrases even devoid of their intonational properties in Turkish, contrastive topic phrases can surface in this domain. Based on this distinction we suggest that contrastive topic cannot be analyzed as a focus phrase in contrast to the analysis of Wagner (2007, 2008).
- Aboutness topics are taken to be sentence initial constituents telling us what the rest of the sentence is about without marking a contrast or making a shift in the topic under discussion. They precede contrastive topic phrases in the sentence and they can be new or given in the context.
- Finally discourse anaphoric constituents are given, salient constituents in the previous context that do not mark a topic shift or contrast. Departing from the immediately preverbal focus analysis (Şener 2010); we suggest that discourse anaphoric constituents can surface between the focus phrase and the verb.

The next chapter deals with prosodic properties of focus phrases in Turkish building on the findings of two experimental studies.

CHAPTER 3

PROSODIC MARKING OF FOCUS PHRASES IN TURKISH

In this chapter, we investigate the prosodic marking of focus phrases in Turkish within the assumptions of the focus prominence rule.[107]

(1) If F is a focus and domain of focus (DF) is its domain, then the highest prominence in DF will be within F. (Truckenbrodt 1995)

The investigation of prosodic realization of focus phrases has been an intriguing issue, as languages opt for different phonological or phonetic strategies to realize the highest prominence for focus phrases. In Italian (Frascarelli 1997) and Tangale (Zimmerman 2011), phonological rephrasing applies such as boundary insertion or deletion. For Japanese and German (Féry and Ishihara 2009) focus and givennes have been suggested to have an effect on tonal height of the pitch accent or the boundary tone without having an effect on phrasing. In Hungarian, focus is marked via overt syntactic movement to the immediately preverbal position, which is also the position of nuclear prominence. Genzel, Ishihara and Surányi (2014) indicate that even in Hungarian, in which syntactic strategies are used to mark focus, dislocated narrow focus in the immediately preverbal position is realized with extended height of the fundamental frequency (f0) and longer duration when compared to broad focus sentences.[108] Katz and Selkirk (2011) suggest that grammar makes a distinction between contrastive focus and discourse-new constituents by marking only

[107] The earlier version of this chapter was published as Gürer (2014).

[108] F0, fundamental frequency is the lowest frequency component of a sound signal. Ladefoged (2006:23) defines frequency as "a technical term for an acoustic property of a sound –namely, the number of complete repetitions (cycles) of variations in air pressure occurring in a second." The pitch on the other hand is "an auditory property that enables a listener to place it on a scale going from low to high, without considering its acoustic properties (2006:23)." Although they are not the same, as their up and down movements coincide measuring f0 is equated as measuring the pitch of a sound signal in the literature.

contrastive focus with F feature. Contrastive focus differs from discourse-new information in that the accented syllable of contrastive focus has an increased duration, pitch excursion is larger for the contrastive focus constituent, and finally contrastive focus has greater intensity.[109]

For Turkish, we raise the following questions to be answered in this chapter:
(i) In Turkish linguistics literature it was suggested that focus phrases are marked distinctively with a H*L pitch accent (Özge and Bozşahin 2010). Is there a difference between broad focus sentences and narrow focus sentences with respect to tonal height of the pitch accents and boundary tones or phonological phrasing?
(ii) İşsever (2003) suggests that only contrastive focus is marked via prosody while discourse- new/presentational focus is marked via its syntactic position. Given that there is not a distinctive position for contrastive focus and discourse-new information as discussed in Chapter 2, how contrastive focus is marked differently than discourse-new focus in the prosodic domain?
(iii) Finally, what is the relationship between sentential stress and stress due to focus prominence? Are they distinct operations?

Turkish is similar to Hungarian in that the immediately preverbal position is the default nuclear prominence position (Ahmet Cevat 1931, Erkü 1983, Erguvanlı 1984, Göksel and Özsoy 2000). The experimental studies conducted in this chapter reveal that unlike Hungarian (Genzel, Ishihara and Surányi 2014); narrow focus in the immediately preverbal position in Turkish does not differ from broad focus condition with regard to f0 and duration measurements. Additionally, contrastive and discourse-new focus is not marked in the prosody in a distinct way. However when focus is in the initial or final domains, the F marked constituents attract IP level

[109] Pitch excursion is the difference between the minimum and maximum f0 in the target syllable.

stress which indicates that focus prominence is realized as IP stress in Turkish. Finally, it will be shown that a phase based stress assignment analysis (Üntak-Tarhan 2006) cannot capture the Turkish data.

3.1 Prosodic realization of focus

The phonological representation of syntactic structures is composed of prosodic domains. The post-syntactic hierarchical prosodic domains (Selkirk 1983, 1995, 2005, Truckenbrodt 1995) can be illustrated in the following way with their equivalents in the syntactic domain.[110]

(2) Utterance (Utt) : Utterance
Intonational Phrase (IP) : Root clause
Phonological Phrase (PhP)[111] : XP
Prosodic Word (PWd) : X^o

In Italian, some phonological rules apply taking phonological phrases as the domain of application. Frascarelli (1997) compares structures with an [+F] marked constituent and structures with broad focus with all-new constituents as illustrated in (3) below.

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[110] For Japanese, phonological phrase is further analyzed as the minor (MiP) and major phrase (MaP). There are some phonological and phonetic properties which indicate hierarchical organization of prosodic domains of languages in general. The pitch reset at the MaP is found to be stronger than the reset at the MiP edge (Selkirk and Tateishi 1991), prosodic breaks are observed following IPs but obligatory pauses are not observed after MaP (Kawahara and Shinya 2008, Kan 2009), vowels are found to be longer (Kan 2009) or more creaky (Kawahara and Shinya 2008) at IP edges, the initial rises and final lowering is suggested to be stronger at the Utt level (Kawahara and Shinya 2008).

[111] Phonological rules for a phonological phrase is summarized below:
(1) Wrap XP: for every XP, XP a projection of a lexical category, there is a phonological phrase Ø, such that all terminal elements that are dominated by XP are also dominated by Ø
(2) Stress XP: Each lexically headed XP must contain a phrasal stress.
(3) Align (PPh, R/L): align the right/left edge of every phonological phrase with the right/left edge of phrasal stress. (Truckenbrodt 1995)
While the Wrap XP rule maps syntactic constituents onto prosodic constituents, the Stress XP rule in (1) determines the prominence at the level of phonological phrase making sure that each phonological phrase has a phrasal stress. The last rule in (3) determines the direction of the edge-most prominence for the phonological phrases which can be rightmost or leftmost.

(3) a. new-new-new
b. new-contrastive-new

Frascarelli (1997) uses (i) phonological phrase domain rule *Raddoppiamento Sintattico* (RS) which applies between two words and lengthens the initial consonant of the second word under certain conditions and (ii) intonational phrase domain rule *Gorgia Toscana* (GT) which changes the voiceless stops into corresponding fricatives between two vowels within and across words.

In an all-new sentence as in (4a) phonological phrase domain rules do not apply as the words belong to different phrases as indicated with brackets.

(4) a. [portero] [tre [b:]assotti]
bring- will- 1SG three dachshunds
'(I) will bring three dachshunds.'
b. [portero [t:]RE [b:]assotti] (Frascarelli 1997, 21-22a)

In (4b), the F-marked constituent *[tre]* enlarges its phonological phrase domain, *RS* applies and the initial consonant of *[tre]* is lengthened. In (5a) all the constituents are in the same IP domain. *GT* which changes voiceless stops into fricatives between two vowels and across words applies and [k] of *[kon]* turns into [h] between two vowels across words.

(5) a. *[[Andro]Φ [αl cinema]Φ [[h]on Luigi]Φ]* $_I$
go-will-1SG to-the cinema with Luigi
(I) will go to the cinema with Luigi.'
b. *[[Andro]Φ [al CINEMA]Φ]*$_I$ *[[k]on Luigi]*$_I$ (Frascarelli 1997, 38-39)

In (5b) on the other hand *[al cinema]* is focused and an IP boundary is inserted to the right edge of the focused constituent which blocks the application of GT as a result

of which the voiceless stop surfaces as [k]. Hence in Italian focus has an effect on the phonological phrasing.

Féry and Ishihara (2009) indicate that in Japanese and German focus and givenness keeps phonological phrasing the same having an impact on the pitch accent and boundary tone height.[112] In Japanese, within a phonological phrase downstep applies and the reference height of the prosodic words undergoes lowering as illustrated in Fig. 3 below. Downstep is blocked with the beginning of the adverbial phrase *[imademo]* as it forms a separate phrase.

(6) Náoya-wa [CP Mári-ga wain-oi [VP nomíya-de ti nónda] to] ímademo omótteru
N.-TOP M.-NOM wine-ACC bar-LOC drank that still think
'Naoya still thought that Mari drank something at the bar.'

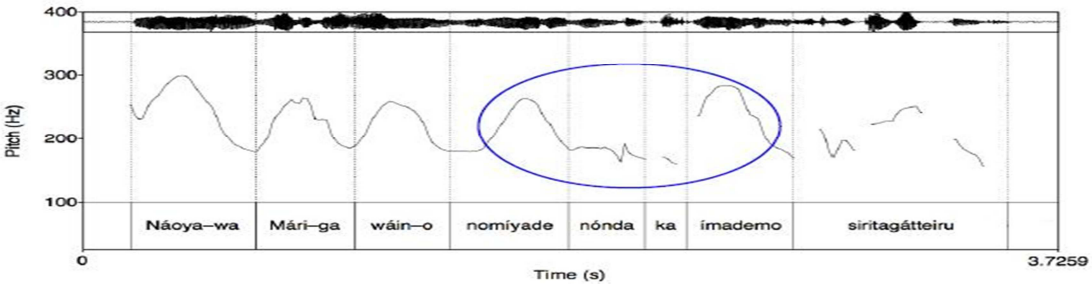

Fig. 3. Pitch track of an all-new declarative sentence in Japanese.
(Féry and Ishihara 2009, 18)

In the presence of a sentence initial focus phrase as in (7), post-focal compression is observed.[113]

(7) dáre-ga [CP Mári-ga wáin-oi [VP nomíya-de ti nónda] to] ímademo omótteru no?
who-NOM M.-NOM wine-ACC bar-LOC drank that still think Q
'Who still thinks that Mari drank wine at the bar?'

[112] Pitch accents mark the prominent syllable and boundary tones mark the edge of a phonological phrase.
[113] Post-focal compression refers to compression of the pitch height of the post-focal constituents or deaccenting.

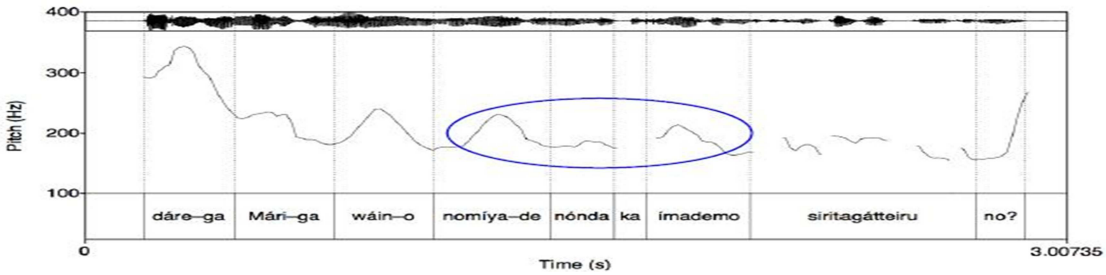

Fig. 4. Pitch track of a wh- question in Japanese.

(Féry and Ishihara 2009, 18)

However, phonological phrasing remains the same as illustrated in Fig. 4.

For English, Katz and Selkirk (2011) investigate the prosodic properties of contrastive focus and discourse-new constituents based on the following set.

(8)	a. Focus-new:	[..… […]Focus	[…] Discourse-New]
	b. new-Focus:	[..… […]Discourse-New	[…] Focus]
	c. new-new:	[..… […]Discourse-New	[…] Discourse-New]

Katz and Selkirk (2011) suggest that contrastive focus and discourse-new constituents do not differ with respect to types of pitch accents or prosodic phrasing. Pitch accents are marked with H* preceding a phrase final L tone. However, contrastive focus differs from discourse new information in that the pitch accented syllable of contrastive focus has an increased duration, larger pitch excursion and greater intensity.

Finally, for Hungarian, Genzel, Ishihara and Surányi (2014) suggest that syntactic focus marking is not the only strategy and narrow focus phrases in the immediately preverbal position also have a higher pitch height and longer duration than broad focus sentences. As for the distinction between contrastive and non-contrastive focus distinction they find out that there is not a distinction with the focus

phrase itself but contrastive focus reduces the prominence of the post-focal background domain more than the non-contrastive focus.

To recap, different prosodic means are used to encode focus prosodically and the aim of this chapter is to find out the prosodic mechanisms used in Turkish. Before we move onto the discussion of the experimental studies conducted, we will go over the prosodic properties of Turkish discussed in the literature.

3.2 Prosodic properties of Turkish

Kabak and Vogel (2001) organize the prosodic domains of Turkish as Phonological Phrase (PPh), Clitic Group (CG) and Phonological Word (PW) to explain the stress domains of Turkish. PW is the domain of word stress and the final syllable of the phonological word is stressed. CG is the domain of clitic group stress and the first word in this domain is promoted in stress. PPh is the domain of phrasal stress and the first word in this domain is promoted in stress.

(9) a. Phrase

[[[sűt]$_{PW}$]$_{CG}$ [[beyáz]$_{PW}$-dır]$_{CG}$]

milk white-EP COP

'Milk is white.'

b. Compound

[[[sűt]$_{PW}$ [beyaz]$_{PW}$-dır]$_{CG}$]

'(It) is milk-white.'

(Kabak & Vogel 2001, 3)

In (9a) word stress is assigned to the phonological word *'süt'* and to the final syllable of *'beyaz'*. In (9b) only the leftmost prosodic word *'süt'* receives stress as the whole compound is within Clitic Group. Kabak and Vogel (2001) makes a distinction between phrase and compound stress based on the assumption that the constituents of a compound are under a single CG while the constituents of a phrase are under separate CGs. Charette, Göksel and Şener (2007) and İkizoğlu and Kamali (2008) on the other hand suggest that the distinction of phrase and compound stress based on

CGs is not well motivated. İkizoğlu and Kamali (2008) argue that (i) in (9a) *'süt'* is the syntactic subject even the topic of the clause and hence separate phrasing is expected. As phonological phrasing distinction can explain the different stress patterns of 9(a-b), in this study we do not take CG as a hierarchical prosodic domain of Turkish.

Kan (2009) works on the tonal representation of Turkish and lists the following accents for Turkish. Pitch accents which mark the prominent syllable are realized as H*,!H*, L+H* and L+!H*. They are in free variation as nuclear accents, the starred tone indicating the prominent syllable. Boundary tones mark the edge of phrases and L%, H% are boundary tones marking IP in Turkish. Finally, phrase accents surface between the last pitch accent and the boundary tone. L-, H- and bitonal L+H- and L+!H- are possible phrase accents marking the PPh boundary in Turkish.

Kan (2009) further adds that in addition to the prosodic domains suggested by Kabak and Vogel (2001), there is an Intonational Phrase as a higher prosodic domain above PPh in Turkish. Kan (2009) bases her arguments on (i) boundary tone placement, (ii) linguistic pause distribution, (iii) head prominence and (iv) phrase-final lengthening of vowels.

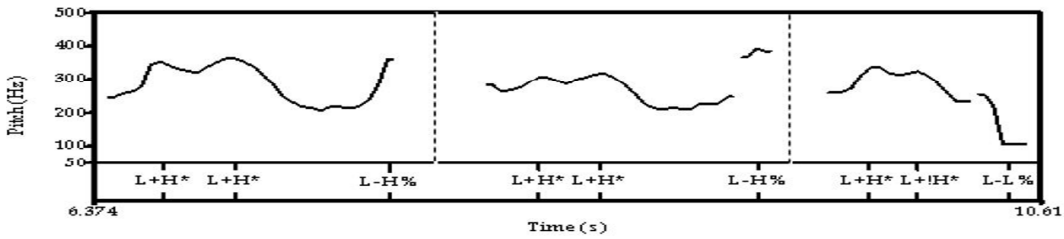

Fig. 5. Pitch track of conjoined IPs.

(10) L+H* L+H* L- H% L+H* L+H* L- H%

[[Ay*la*]$_{PPh}$ [muz-la*r-ı* soy-uyo]$_{PPh}$]$_{IP}$ [[Nu*man*]$_{PPh}$ [elma-la*r-ı* yıkı-yo]$_{PPh}$]$_{IP}$

Ayla banana-PL-ACC peel-PROG Numan apple-PL-ACC wash-PROG

L+H* L+!H* L- L%

[[Mi*ray*]$_{PPh}$ [ayva-la*r-ı* dilimli-yo]$_{PPh}$]$_{IP}$

Miray quince-PL-ACC slice-PROG

'Ayla is peeling the bananas, Numan is washing the apples, and Miray is slicing the quinces.' (Kan 2009, 15)

The first piece of evidence for a distinct level of IP in Turkish is that there is a rapid rise in IP final position as illustrated in Fig. 5 above. Kan (2009) suggests that this L-H% boundary tone marks the end of IP. The second piece of evidence comes from linguistic pauses. Although there is no obligatory pause at phonological phrase level, there is a pause IP finally as illustrated above. The third piece of evidence is that IP final vowels are lengthened even if no pause follows in fast speech rate.

Kan (2009) further suggests that prominence realization at PPh and IP levels differs. At PPh domain prominence is realized on the left most constituent.

(11) Pitch Accent Placement Rule (PAPR)

The head of a Phonological Phrase requires an intonational pitch accent.

(Kan 2009, 2)

According to this rule pitch accent is anchored to the stress bearing syllable of the head in the PPh. This is illustrated in (12) below.

(12)

L+H* L+H* L- H%

[[Ana*ne-m*]$_{PPh}$ [e*vi* yenile-di]$_{PPh}$]$_{IP}$

grandmother-ACC-1SG.POSS house- ACC renew-PAST

H* !H* L- L%

[[ki bu o*n-a*]$_{PPh}$ [pahalı-*ya* mal ol-du]$_{PPh}$]$_{IP}$

COMP this she-DAT expensive-DAT cost COP-PAST

‘My grandmother renewed the house, which cost her a lot.‘

Each pitch accent is anchored to the stress bearing syllable of the head of the PPhs. At IP level on the other hand the prominence is on the rightmost PPh within the IP. There are two IPs and hence IP stress is on the rightmost PPh in each case. *‘evi’* and *‘pahalıya’* bear IP stress being the head of the rightmost PPh within the IPs.

Özge & Bozşahin (2010) investigate prosody of focus phrases in Turkish and claim that prosody is the only strategy that signals focus and it is marked with H*L- pitch contour in Turkish. Özge & Bozşahin (2010) suggest that there is no semantic distinction between contrastive focus and presentational focus and they are not marked with different strategies. The difference is due to the fact that contrastive focus is more restricted with regard to projection possibilities and it is followed by a deaccentuated domain while presentational focus can project focus and include the verb in the same phrase as well.

(13) a. Berlin seyahat-iniz nasıl geç-ti?

B. trip-2PL how pass-PAST

‘How was your trip to Berlin?’

b. (AYNUR) Berlin-e gitti. O-na sor.

A. B.DAT go-PAST s/he-DAT ask

‘Aynur has been to Berlin; ask her.’ (Özge & Bozşahin 2010, 70)

(14) a. Ali kim-i gör-dü?
Ali who-ACC see-PAST
'Whom did Ali see?'
b. Ali ne yap-tı?
Ali what do-PAST
'What did Ali do?'

	rheme	*theme*		*rheme*	
(15) a.	……(AYNUR-U	gör-dü)…...	b.	……(AYNUR-U	gör-dü)…..
	H*	L-L%		H*	L-L%

(Özge & Bozşahin 2010, 62-63)

In (13b), the contrastive focus is on a narrow argument. The answers in (15a-b) with H* L-L% tones on the other hand are potential answers to the questions in (14a-b) respectively and as (15b) indicates focus can project to the whole VP.[114] As the discussion in the previous chapter has shown, contrastive focus and discourse new constituents differ semantically with respect to exhaustive identification. In (15a) the object phrase is triggered as the focus phrase while in (15b) the whole VP is triggered. Within each phonological phrase it is the leftmost constituent that gets PPh level prominence and hence (15a-b) are both potential answers to (14a-b). Instead of analyzing this set of data as the difference between the projection possibilities of focus phrases we suggest that the difference is due to focus phrases triggered.

[114] Özge and Bozşahin (2010) suggest that there is not semantic distinction between contrastive focus and presentational focus based on the following example in which the answer is not necessarily contrastive.

(1) a. Daha once Berlin-e git-miş biri-ler-inin yardım-ın-a ihtiyac-ımız var.
more before B.DAT go-REL one-PL-GEN help-3SGPOSS-DAT need-1PLPOSS exist
'We need help from someone who has been to Berlin before.'
b. (AYNUR) (Berlin-e git-ti) o-ndan sor-abil-ir-im
A. B.-DAT go-PAST s/he-ABL ask-ABL-PRES-1SG
'Aynur has been to Berlin. I can ask her.' (Özge and Bozşahin 2010, 69)

We also think that contrastive focus interpretation is not available in this sentence because the subject given in capital letters is in fact a contrastive topic phrase. The implicit big question under discussion is among us, who has been to Berlin?' and this question is answered for only one person and hence the answer is partial.

Kamali (2011) refines the tonal representation of Turkish in the following way. The boundary tones are restricted to H- boundary tone at the right edge of the utterance initial domain and L- at the right edge of the non-initial domains. As for pitch accents, in line with Levi (2005), Kamali suggests H*L for the lexically accented words with stress on the non-final syllable.[115] Kamali (2011) does not suggest a pitch accent for non-lexically accented words. [116] Now we will go over the prosodic properties of the prenuclear, nuclear and post-nuclear domains in Turkish under neutral intonation based on the findings of Kamali (2011).

Prenuclear Domain: Under neutral intonation, the subject in an SOV sentence surfaces in the prenuclear domain.

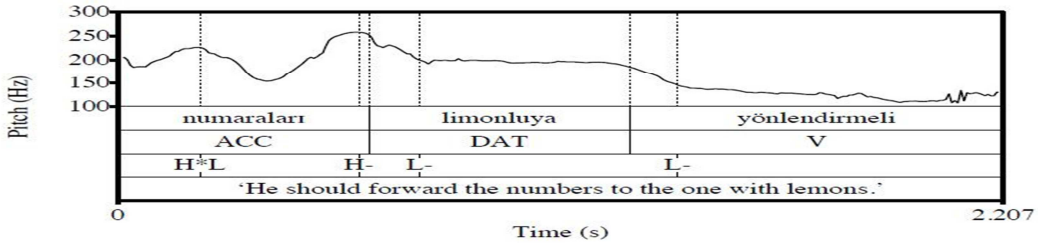

Fig. 6. Prenuclear domain. (Kamali 2011, 3.4)

The pitch accent of the subject is realized as H*L and a H- boundary tone surfaces at the right edge of this domain.

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[115] See also Özge (2003), Levi (2005) and Özge and Bozşahin (2010), İpek and Jun (2013) for the tonal representations of Turkish. As the labeling of the tonal properties of the constituents does not make a difference for our study we use the tonal representation of Kamali (2011).

[116] In Turkish the majority of the words have stress on the final syllable, labeled as non-lexically accented words. Stress shifts when affixes are added to the stem.

(1) a. eleman b. eleman-lar
'personnel' personnel-PL
'personnels'

Some of the words are stressed on a non-final syllable and stress does not shift when affixes are added to the stem. These words are lexically accented words.

(2) a.İyonya b. İyonya-da
'Ionia' Ionian-LOC
'in Ionia'

Nuclear Domain: In SOV order this is the domain where object surfaces under neutral intonation and gets nuclear prominence. There is a different pattern between lexically accented words and finally stressed words in this domain. When there is a finally stressed word a plateau is observed followed by a fall starting with the onset of the verb as in Fig. 7 below.

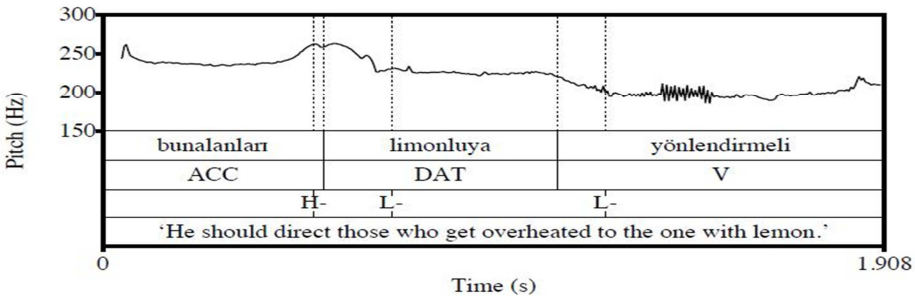


Fig. 7. Nuclear domain with a finally stressed word. (Kamali 2011, 3.8)

With lexically accented words, the fall starts earlier with the L of the H*L pitch accent of the lexically accented syllable as in Fig. 8 below.

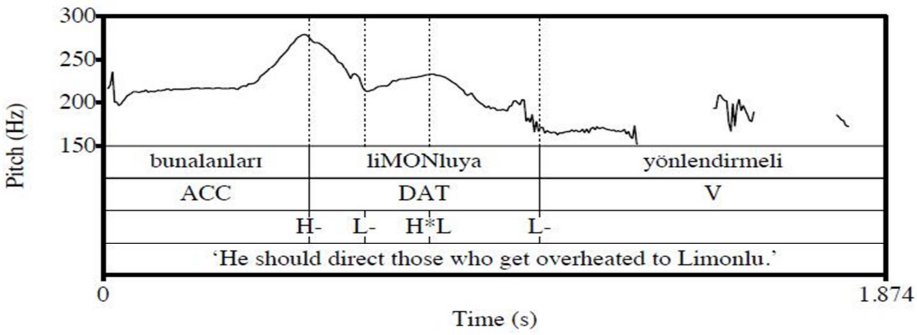


Fig. 8. Nuclear domain with a lexically accented word. (Kamali 2011, 3.9)

Post-nuclear Domain: In the post-nuclear domain, the reference height of the nuclear domain is not preserved and a lower height is retained until the end of the utterance as illustrated in Fig. 9 below.

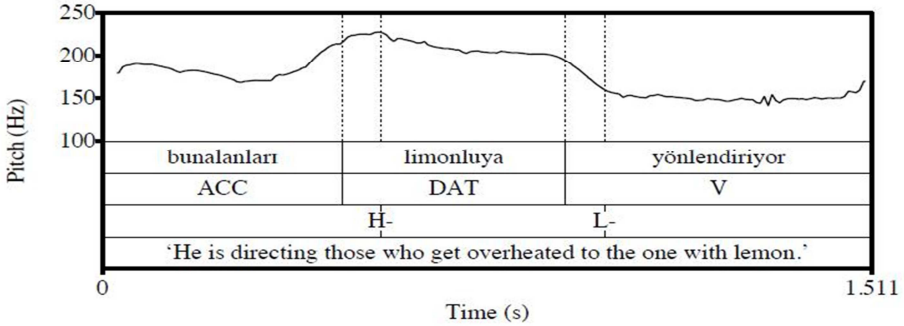


Fig. 9. Post-nuclear domain. (Kamali 2011, 3.14)

Before we move on to the current study we will go over a final study on prosodic realization of focus in Turkish. İpek (2011) measures f0, duration and intensity of focus phrases in medial, initial and final domains based on the following target sentences.

(16) a. Tuna babamı dövmüş
'Tuna beat my dad.'

b. Lale duvarı boyamış
'Lale painted the wall.'

c. Döne dedemi kovmuş.
'Döne sent away my grandpa.'

d. Mine burnunu yıkamış.
'Mine washed her nose.'

As for the results of the study, İpek (2011) notes that (i) medial focus does not differ from broad focus with regard to f0, duration or intensity, (ii) initial focus has a higher duration, (iii) final focus has greater intensity. İpek (2011) suggests these sentences were triggered by questions to trigger right information structure but the triggering questions are not included in the paper. Hence we do not know whether the focus phrases are contrastive or discourse-new focus in this work.

The studies of Kan (2009) and Kamali (2011) are based on focus neutral sentences. Hence it is not possible to see prosodic marking of focus phrases in Turkish in these studies. Özge and Bozşahin (2010) work on focus phrases but their study is not a strictly controlled study in that contrastive focus and presentational

focus do not appear on the same constituent in the same environment. The study of İpek (2011) is more controlled in that focus in initial, medial and final domains are investigated based on the same set of sentences. However as pointed out earlier, we do not know much about the nature of the focus phrase as sentences are given out of context. Hence we needed to conduct a controlled experimental study. The next section is the investigation of the current study.

3.3 First study

In the first study, we aimed to find an answer to the research questions raised at the beginning of the chapter namely, the prosodic realization of (i) broad focus and narrow focus sentences, (ii) contrastive focus and discourse-new focus and possible differences among these conditions.

3.3.1 The stimuli

The target (a-b-e) and control sentences (c-d) included the following information structural ordering in SOV order.

Table 1. The Order of the Structures Used in the First Study

		S	O	V
(a)	GNG	given	discourse-new	given
(b)	GCG	given	contrastive focus	given
(c)	Broad Focus	discourse-new	discourse-new	discourse-new
(d)	GGG	given	given	given
(e)	CGG	contrastive focus	given	given

In target structures (a-b), contrastive focus and discourse-new information is in the medial position, given constituents surfacing in the initial and final positions. Given constituents explicitly surface in the preceding context. As Katz and Selkirk (2011)

indicate, comparing the context in (b) with the context in (c) has some drawbacks in that contrastive focus constituent can be found to have greater phonetic prominence than discourse-new constituent as they are not in the same minimal context. In (c) discourse-new constituent is preceded and followed by new information and downstep is expected following the prenuclear domain. In (b) on the other hand the contrastive focus constituent is surrounded by given material which is expected to be phonetically non-prominent (Féry and Samek-Lodovici 2006). Hence downstep pattern will not have the same effect in this structure and the contrastive focus constituent can be found to have greater phonetic prominence. In this study this is controlled for as discourse-new and contrastive focus is presented in the same minimal context surrounded by given information in both cases as in (a-b). The comparison of (a-b) with (c) will show whether contrastive focus and discourse-new object phrase is realized in a different way than the object in broad focus condition which is our first research condition. The comparison of (a-b) will indicate whether there is a difference between the two focus types which is our second research question. With the last order in (e) we aim to find out whether focus phrases show different prosodic properties with respect to pitch register and phonological phrasing in sentence initial and medial positions which will give us ideas with respect to the third research question.

For each condition we had the same 4 target sentences in total. Three of these sentences were composed of lexically accented words and one of them was composed of finally stressed words. With the aim of avoiding perturbations in the pitch track due to sounds in the obstruent category, we used sonorants in all structures. The sentences were put in a dialogue to make sure that right information

structural notions were triggered. We also aimed to make the reading process as natural as possible (See Appendix A for examples of the structures in the first study). Contrastive focus was triggered by corrective statements (17) or alternative questions (18) in medial and initial domains (19).

(17) A: İyonyalı-lar Ömerli-ye yayıl-ıyor-lar.
Ionian-PL Ömerli-DAT move-PROG-3PL
"The Ionians move towards Ömerli"
B: Hayır yanılıyorsun, İyonyalı-lar [Menemen-e]$_{CF}$ yayıl-ıyor-lar.
No, you are wrong, Ionian-PL Menemen-DAT move-PROG-3PL
"The Ionians move towards Ömerli"

(18) A: İyonyalı-lar Menemen-e mi yoksa Ömerli-ye mi
Ionian-PL Menemen-DAT QP or Ömerli-DAT QP
yayıl-ıyor-lar?
move-PROG-3PL
"Do the Ionians move towards Menemen or Ömerli?"
B: İyonyalı-lar [Ömerli-ye]$_{CF}$ yayıl-ıyor-lar.
Ionian-PL Ömerli-DAT move-PROG-3PL
"The Ionians move towards Ömerli"

(19) A: Pek çok ülke bu tür silahların yapımında uranyum kullanımını onaylıyor.
Bunlardan biri de Yunanlılar.
Many of the countries approve the usage of uranium in these kinds of weapons. The Greek is one of them.
B: Hayır yanıl-ıyor-sun, Yunanlı-lar değil.
No wrong-PROG-2SG Greek-PL not
[Romanyalı-lar]$_{CF}$ uranyum-u onaylı-yor.
Romanian-PL uranium-ACC approve-PROG
No you are wrong. It is not the Greek. Romanians approve uranium.

Discourse-new focus was triggered by wh- questions (20).

(20) A: İyonyalı-lar nereye yayıl-ıyor-lar?
Ionian-PL where move-PROG-3PL
'Where do the Ionians move?'
B: İyonyalı-lar [Menemen-e]$_{DN}$ yayıl-ıyor-lar.
Ionian-PL Menemen-DAT move-PROG-3PL
"The Ionians move towards Menemen"

Broad focus sentences (21) and all-given sentences (22) were triggered in dialogues similar to the one exemplified below.

(21) A: Ne izli-yor-sun, ne var televizyon-da?
what watch-PROG-2SG what present television-LOC
'What are you watching, what is on TV?'
B: [Almanyalı-lar Anamurlu-lar-ı öv-üyor-lar]
German-PL people of Anamur-PL-ACC praise-PROG-3PL
Belli ki Anamurlu-lar iyi çalış-ıyor-lar.
apparently people of Anamur-PL good work-PROG-3PL
'The German people praise people from Anamur. Apparently, people from Anamur work hard.'

(22) A: Biliyor mu-sun, şu anda bir televizyon program-ı izli-yor-um
know-PROG QP-2SG now a TV program-ACC watch-PROG-1SG
ve Almanyalı-lar Anamurlu-lar-ı öv-üyor-lar.
and German-PL people of Anamur-PL-ACC praise-PROG-3PL
'You know what, I am watching a TV program now and the German praise the people from Anamur.'
B: Bil-iyor-um, biliyorum. [Almanyalı-lar Anamurlu-lar-ı öv-üyor-lar]
know-PROG-1SG German-PL people of A.-PL-ACC praise-PROG-3PL
Ben de şu an aynı programı izliyorum. Bir Anamurlu olarak çok mutlu-yum.
'I know, I know. The German praise the people of Anamur. I am also watching the same program now. As a person from Anamur, I am very happy.'

In total we had 20 sentences, four sentences for each condition, and six fillers. The next section takes a look at the elicitation process and the participants.

3.3.2 Participants and the recording procedure

Three female speakers (AD, ET, Nİ) and three male speakers (İG, OG, ST) with the age span between 26 and 58 participated in the first study. All the participants were native speakers of Turkish living in Istanbul. None of them was a linguist and they were all naïve to purpose of the study.

The recording was done in a quiet setting and in three sessions. The target and control dialogues were given to the informants in a paper in random order. The dialogues were rehearsed with the researcher and the participant in order to make the conversation as natural as possible. For each dialogue, the researcher read the triggering context and the participant read the target structures. Repetition of the structures was done only for mispronunciation cases and hesitation pauses. Each session was recorded via the recording function of the software program Praat (Boersma and Weenink 1992-2014) without giving a break and then the target and control sentences were extracted for the analysis in Praat.

3.3.3 Measurement points

The sentences were annotated manually by the researcher taking the syllables as intervals. The annotation was done listening to the sound file and focusing on the characteristic formants of the vowels in the spectrogram as a cue for the boundaries (Ladefoged 2006).

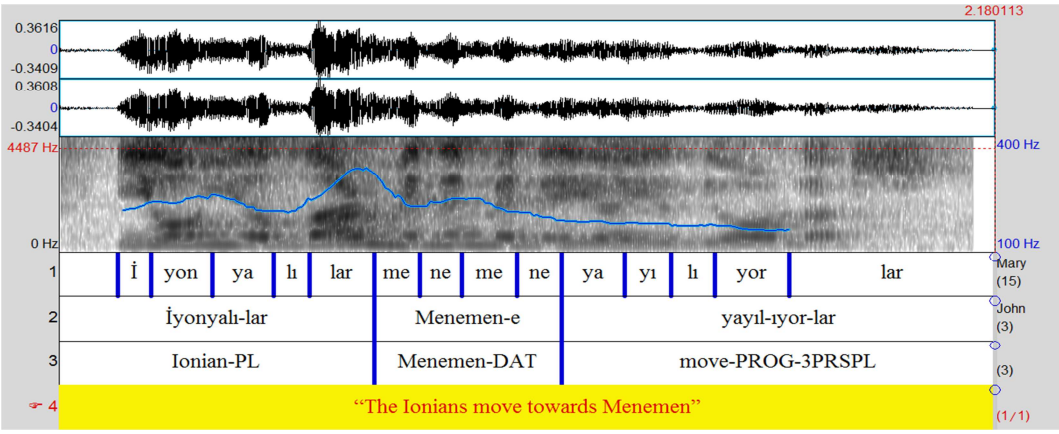


Fig. 10. Measurement points in the first study, GNG sentence, speaker Nİ.

In the pre-nuclear domain, in which the subject surfaces, we measured the (i) maximum height of the accented syllable of the subject, abbreviated as (subj_max_pith_accent) for ease of exposition in the graph and (ii) the peak of the boundary tone (H_boundary_tone). We aimed to find out whether focus in the nuclear domain has an effect in the initial domain. The measurements in this domain would also give us ideas as to how discourse given-new distinction is marked in Turkish. In broad focus sentences discourse-new constituents and in narrow focus sentences discourse-given constituents surface in this domain. In the nuclear domain the measurement points are (i) the maximum height of the accented syllable of the object (max_pitch_accent), (ii) the minimum pitch value of the preceding (rise_min_pitch) and following syllable (fall_min_pitch). We measured the minimum pitch value of the preceding and following syllable to find out whether there is pitch excursion or not. With finally stressed words the fall following the accented syllable is measured as the minimum pitch value at the end of the final syllable. In the post-nuclear domain the minimum pitch value at the first syllable of the verb (verb_min_pitch) is the measurement point. The aim was to find out whether there is post-focal compression or not. The sentences in the CGG condition were annotated without doing measurements.

Based on the syllable intervals, the minimum and maximum f0 measurements were extracted manually using the ‘get maximum pitch’ and ‘get minimum pitch’ commands of Praat. The f0 values were then put in an excel sheet which was used for statistical analysis.

3.3.4 Results

First we will go over the pitch tracks of the structures with narrow focus and broad focus cases to see whether there is a difference with respect to pitch accents or phonological phrasing.

As illustrated in Fig. 11, 12 and 13 for the same sentence, in the prenuclear domain there is a bump with the accented syllable of the subject and the right edge of the prenuclear domain is marked with H boundary tone. In the nuclear domain there is a slight bump with the pitch accent of the object. Finally, in the post-nuclear domain a lower reference height is retained.

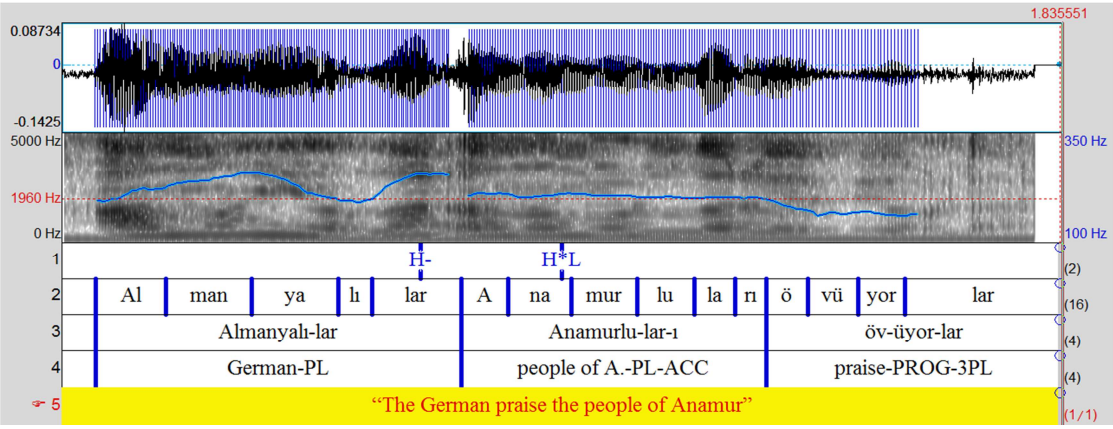


Fig. 11. Broad focus condition, speaker Nİ.

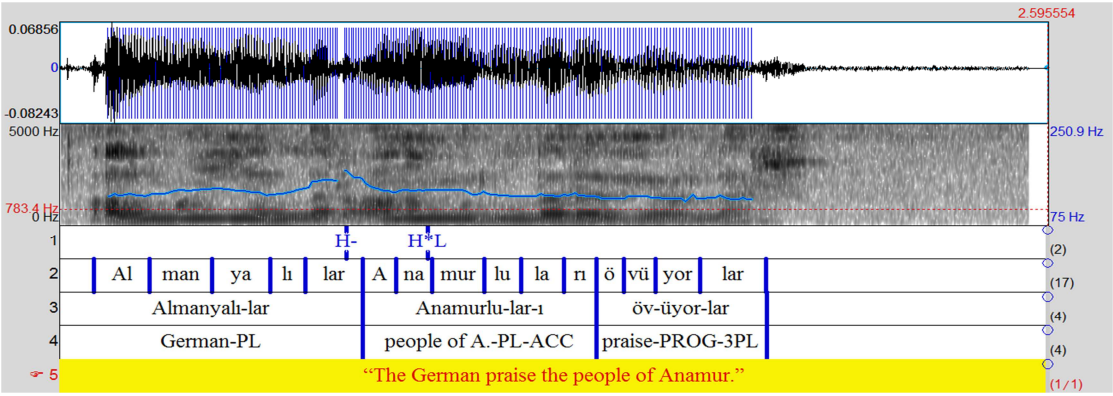


Fig. 12. GCG condition, speaker OG.

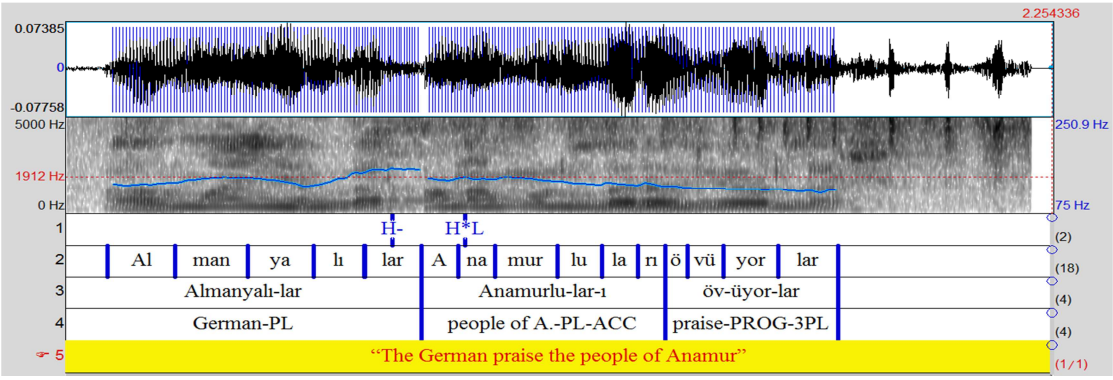


Fig. 13. GNG condition, speaker OG.

Hence we conclude that focus in the immediately preverbal position does not have an effect on pitch accents or phonological phrasing. Now let's take a look at sentences with contrastive focus in the initial domain.

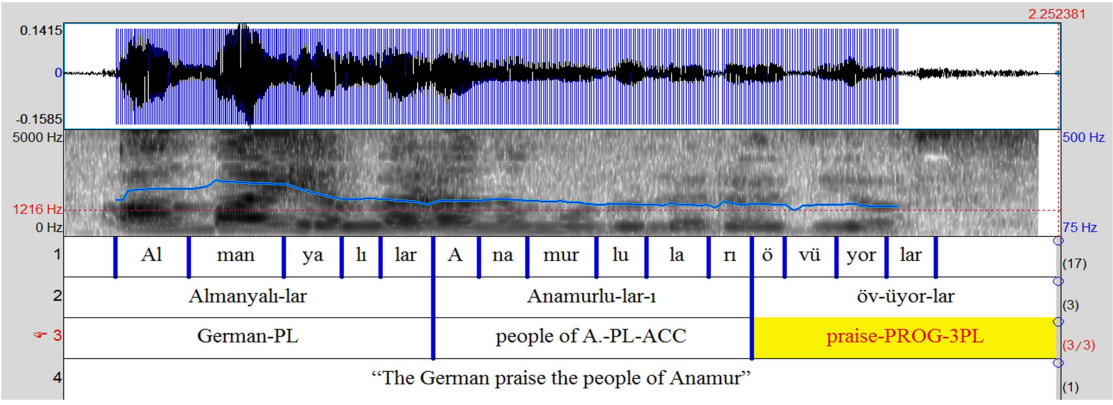


Fig. 14. CGG condition, speaker AD.

Note that the pitch track of this sentence is different from the ones in Fig. 11-13. There is a bump with the accented syllable of the subject followed by a low reference height till the end of the sentence. We did not include the CGG sentences for the statistical analysis as the same measurements points do not surface and keep the discussion of these structures to section 3.4.7.2. Now we will see whether focus makes a difference for the tonal height of pitch accents or boundary tones. Some of the speakers have a pitch span between 100 Hz and 300 Hz while some others have a pitch range between 75 Hz and 275 Hz. Although the lowest and the highest pitch values differ, the speakers have the same pitch range.[117] After the extraction of the f0 values for the target measurement points, with the aim of excluding the variation not due to focus condition but due to speaker pitch range variation, we normalized the measured f0 values for each speaker. The transformed value is measured based on the mean value of the lowest value in the post-nuclear domain and the highest value in the pre-nuclear domain.[118] We got the following plot for the 6 speakers based on these measurement points.

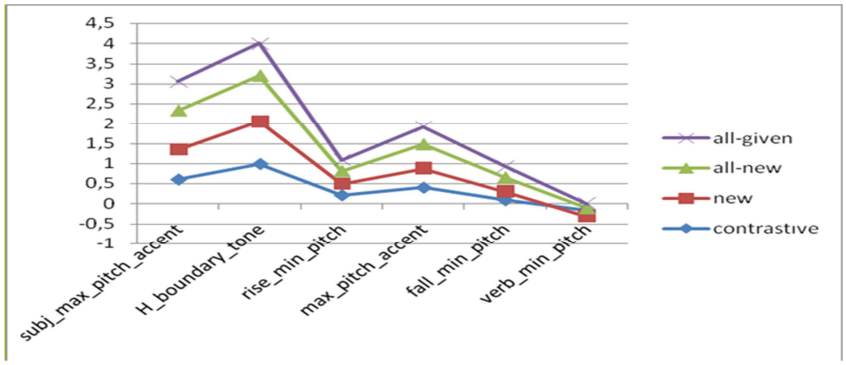


Fig. 15. Plot of the four conditions based on the transformed values of 6 speakers.

[117] Pitch span refers to the highest and lowest values for the pitch range.

[118] For each speaker the mean minimum value in the post-nuclear domain for GCG, GNG and broad cases is found which is taken as the baseline. The mean maximum value is also measured for GCG, GNG and broad focus cases based on the highest value of the boundary tone. The following formula is used to obtain the transformed results.

Transformed value = measured f0 - baseline ÷ mean of maximum height - baseline

Given constituents are prosodically non-prominent and they are destressed (Féry and Samek-Lodovici 2006). With greater speaker involvement larger pitch ranges are expected (Bolinger 1986) and hence structures with discourse new and contrastive focus phrases are predicted to have higher values than the other conditions. However, as illustrated in Fig. 15 above, the structures with contrastive focus have the lowest values while the all-given structures have the highest values at all measurement points and this is puzzling. Even all-new sentences have lower values than all-given sentences.

3.3.5 Discussion

There were a few issues that made the results of the first study inconclusive. Note that in the plot given in Fig. 15, all-given and broad focus structures have higher values than GNG and GCG condition. A closer look at the pitch tracks of all-given and broad focus structures revealed that some of these sentences did not surface with stress on the object but on the verb. This is illustrated in Fig. 16 for a broad focus sentence and in Fig. 17 for an all-given sentence.

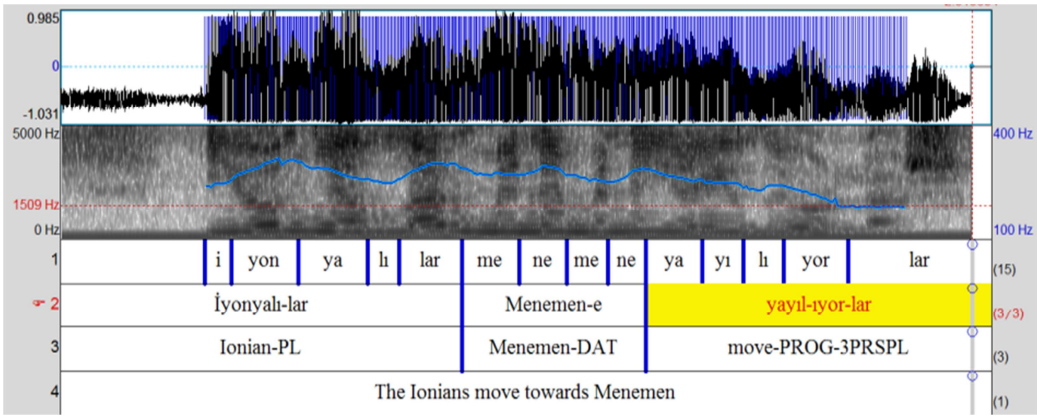


Fig. 16. Pitch track of a broad focus sentence, speaker ET.

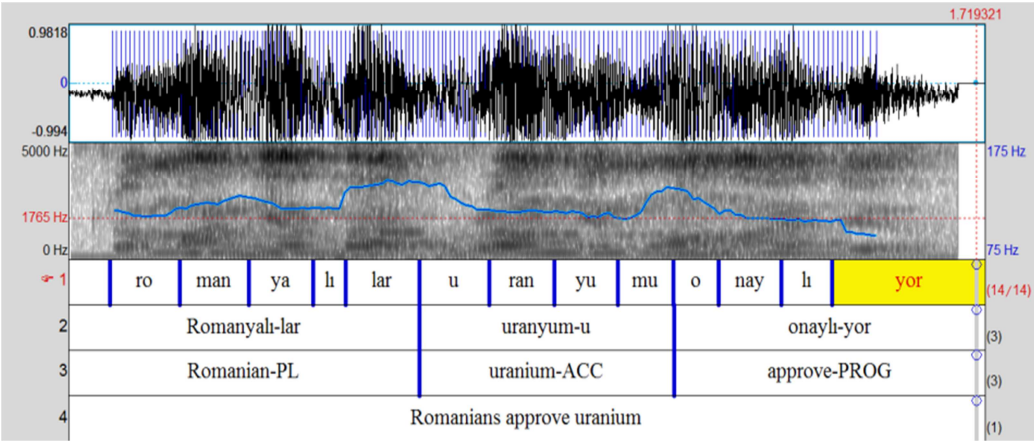


Fig. 17. Pitch track of an all-given structure, speaker ST.

Note that in both pitch tracks the H- boundary tone which marks the end of the prenuclear domain surfaces not only at the end of the initial domain but also at the end of the medial domain. In the final domain the fall starts after the accented syllable of the verb which indicates that the verb forms both the nuclear and the post-nuclear domain. The initial and medial domains show the properties of the pre-nuclear domain with a H- boundary tone marking the end of these domains.

Out of 24 all-new sentences, 13 sentences surface with stress on the verb and not on the immediately preverbal object. Nakipoğlu (2009) suggests that unaccented accusative objects trigger pragmatic presupposition while accented accusative objects trigger only existential presupposition. In our data with all-new sentences, accusative or dative marked objects were uttered by the speakers as part of the background information, triggering existential presupposition, with focus on the verb. As for all-given condition, out of 24 all-given sentences, 15 sentences surfaced with stress on the verb not on the immediately preverbal object. Most probably these sentences were not uttered as mere repetition of the previous sentence but as an assertion of the previous sentence with focus on the verb. These structures were not omitted in the statistical analysis while comparing all-given and broad focus

conditions with GNG and GCG cases and hence higher values for all-new and all-given conditions can be misleading in Fig. 15.

For the lower value of contrastive focus and discourse-new constituents, the puzzling result could be due to the nature of the target structures used in the study.[119] Remember that contrastive focus phrases were elicited via corrective statements as in (17) but in each structure we used in the experiment there were the expressions *'no'* or *'you are wrong'* preceding the target sentence. The problem is that as contrast is already signaled via these expressions, it may not only be intonation that marks focus in the structure but the expressions of denial. Similarly with the alternative questions as illustrated in (18), the speakers already know from the question which alternative is excluded via contrastive focus in the answer. Hence as is the case in corrective statements it may not only be intonation that signals the contrast but the question itself.[120]

As for the discourse-new constituents elicited via *wh*-questions, Hubert Truckenbrodt (p.c) notes that one cannot make sure that they are not exhaustive answers. The speakers can utter the answer as an exhaustive answer to the preceding *wh*-question excluding the implicit alternatives although alternatives are not given in the question. To recap, there were some confounding properties with respect to the stimuli which led us to the second experimental study the details of which are investigated in the following section.

[119] I am grateful to Hubert Truckenbrodt for pointing this out.
[120]Caroline Féry (p.c) suggests that the other possible reason for the lower values of contrastive focus can be due to downstepping. As illustrated in (19) for contrastive focus condition, there are two sentences in the same utterance. After the expressions of denial there can be a downstep with the ongoing sentence with contrastive focus constituent.

3.4 Second study

In the second study we restricted our data to GNG, GCG and broad focus sentences and we composed our target sentences taking into consideration the above mentioned confounding facts.

3.4.1 The stimuli

The structures used in the second phase of the study are illustrated in Table 2.

Table 2. The Order of the Structures Used in the Second Study

		S	O	V
(a)	GNG	given	discourse-new	given
(b)	GCG	given	contrastive focus	given
(c)	Broad Focus	discourse-new	discourse-new	discourse-new

In order to avoid perturbation and distortion in the pitch track due to obstruent sounds, lexically accented words with sonorants were chosen. For each condition we had 6 target structures all of which were composed of lexically accented words. We included 24 fillers which can be grouped into three main categories. The first two groups were given as answers to the questions of *'what kind of'* and *'how'* and the final group was composed of additional comments to the previous context without triggering questions (See Appendix B for examples of structures in the second study).

Contrastive focus constituents in GCG order were triggered via corrective statements embedded in dialogues. With the aim of leaving intonation as the only cue to mark focus phrase, expressions of denial were not used in the target sentences as exemplified in (23).

(23) A: Bu programda her ili temsilen gelen yarışmacılar hünerlerini gösteriyor. Örneğin Yalovalılar elektronik cihaz onarıyorlar. Oldukça da yetenekliler.
In this program the contestants who represent each city show their skills. For instance, the people of Yalova repair the electrical devices. They are very skillful.

B: Yalovalı-lar mobilya onar-ıyor-lar.
people of Yalova-PL furniture-NOM repair-PROG-3PL
'The people of Yalova repair furniture.'

The contrastive focus constituent in the answer excludes the explicitly mentioned alternative in the preceding context. The exclusion of the alternative can be signaled only via intonation of the answer as the expressions of overt denial such as *'no'*, *'you are wrong'* are not used. In alternative questions, one of the alternatives are explicitly given in the previous discourse, and the speaker knows which alternative is excluded. Hence in this study alternative questions are not used.

As for discourse new constituents, with the aim of making sure that the answer to the question is not interpreted as an exhaustive answer, discourse-new constituents are elicited via wh- questions asking for additional information (See the discussion in section 2.5.1).

(24) A: Bu programda her ili temsilen gelen yarışmacılar hünerlerini gösteriyor. Örneğin Yalovalılar elektronik cihaz onarıyorlar. Oldukça da yetenekliler.
In this program the contestants who represent a city show their skills. For instance, the people of Yalova repair the electrical devices. They are very skillful.

B: Yalovalılar başka ne onarıyorlar?
What else do the people of Yalova repair?

A: Yalovalı-lar mobilya onar-ıyor-lar.
people of Yalova-PL furniture-NOM repair-PROG-3PL
'The people of Yalova repair furniture.'

The question elicits an additional answer which does not exclude the alternative given in the previous discourse and the answer is discourse-new.

Finally, broad focus sentences are elicited in the following context via *'what else?'* question type.

(25) A: Neler oluyor?
What is happening?
B: Öğrenciler okula başlıyor.
Students start going to school.
A: Başka?
What else?
B: Yalovalı-lar mobilya onar-ıyor-lar.
people of Yalova-PL furniture-NOM repair-PROG-3PL
'The people of Yalova repair furniture.'

In the first study speakers tended to interpret broad focus sentence as part of shared information and in nearly half of the structures the stress was realized on the verb not on the object. With the aim of avoiding this possibility, we put the target sentence as an answer asking for additional information which is not related with the first question. The next section focuses on the participants and the elicitation procedure for the second phase of the study.

3.4.2 Participants and the recording procedure

Five female speakers (BB, CT, EE, HT, KÇ) and three male speakers (EK, MA, ÜE) with the age span between 20 and 29 participated in the study. All the participants were native speakers of Turkish, and had been living in Germany for 2 weeks to 6 months at the time of the recording and none of them was fluent in German as a

second language. None of them was a linguist and they were all naïve to purpose of the study.

The recording was done in a quiet setting and in single sessions with a portable recorder (TASCAM DR-05) with 48 kHz sampling rate and 16 bit solution. The dialogues were given to the participants in a paper. Two randomization processes were applied with respect to the presentation of the data. With the aim of avoiding researcher bias, the researcher did not take active part in the elicitation process and the participants were randomly matched to rehearse the dialogues. In the first phase of the recording session the target and control dialogues were given to the participants in a paper in random order and the dialogues were rehearsed by two of the participants. One of the participants uttered the triggering contexts and the other participant uttered the target sentences. In the second phase of the study the order of the dialogues was randomized again which were rehearsed by the same speakers. During this phase the participant, who uttered the triggering contexts in the first phase of the recording procedure, uttered the target sentences. Repetition of the structures was done only for mispronunciation cases and hesitation pauses. The whole session was recorded giving a short break after the first phase and then the target and control sentences were extracted for the analysis in Praat (Boersma and Weenink 1992-2014).

3.4.3 Measurement points

The target sentences were annotated manually taking syllables as the intervals as illustrated in Fig. 18 below. We labeled the syllables based on the sound file and the spectrogram, taking the characteristic location of formants of vowels as cues (Ladefoged 2006) as in the first study.

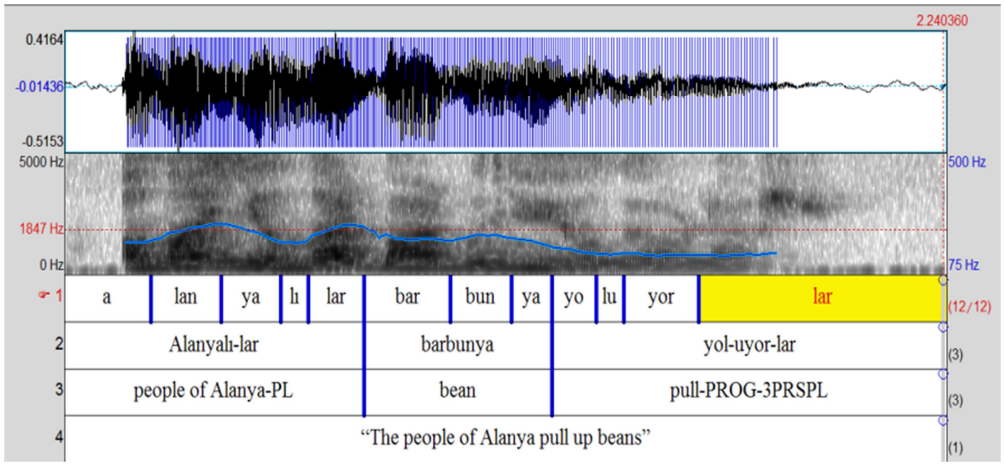


Fig. 18. Measurement points in the second study, broad focus sentence, speaker KÇ.

In the prenuclear domain we measured (i) the maximum pitch value of the accented syllable of the subject, (ii) the maximum pitch value of the boundary tone marking the end of the prenuclear domain and (iii) the minimum pitch value in between these points. The measurement points in the nuclear domain are (i) the maximum pitch value of the accented syllable of the object, (ii) the maximum pitch value of the final syllable of the object. Finally in the post-nuclear domain we measured (i) the minimum pitch value at the first syllable of the verb and (ii) the minimum pitch value at the post-nuclear domain.

The measurement points in the initial domain were chosen to test the effect of focus in this domain. The peak of the accented syllable of the object is measured to find out whether focus is marked as focal boost, namely with a higher pitch height. The peak in the final syllable of the object and the minimum value at the final domain is chosen to see whether there is post-focal compression namely whether the pitch register of the verb is compressed following the focus phrase in the nuclear domain.

In this study we also measured the duration of the focus phrases. Duration measurement was done for (i) the subject in the pre-nuclear domain, (ii) the object phrase in the nuclear domain.

Remember that for each condition we had the same 6 sentences embedded in different contexts and 8 participants. Hence in total we had 48 stimuli for each condition. However in the broad focus condition out of 48 structures, we excluded 3 structures from statistical analysis as the stress did not surface on the object but on the verb. For the 48 GCG sentences, as the majority of the sentences of two speakers (EE and HT) have a different tonal melody than the other speakers, 11 of the sentences of these speakers are excluded from the main statistical analysis. These sentences will be discussed in section 3.4.5 independently. Hence we had 37 sentences for the GCG condition. There were 48 sentences to be analyzed for the GNG order. With the aim of having the same amount of data for each condition, we omitted the counterparts of the omitted structures in broad focus and contrastive focus cases in discourse-new cases. The whole GCG data elicited from the participant HT surfaced with a different melody and hence the data of this participant is also completely excluded from statistical analysis for the other conditions. After the omissions, for each condition we had 35 structures and 105 structures in total.

In the first study, the minimum and maximum pitch heights were measured manually. In this study they were extracted from the structures via ProsodyPro (Xu 2013) semi-automatically. The script takes the syllables as the domains of measurement and lists the minimum and maximum f0 value within the syllable for each speaker. We put these data in an excel sheet for further statistical analysis.

We took the pitch range between 75-500 Hz, however for the octave mistakes, namely uneven jumps or falls in the pitch tracks, we changed the pitch

range and made a speaker based measurement for the speaker CT taking the range between 75-200 Hz. The other pitch tracks were also checked for possible octave mistakes. In the post-nuclear domain, we measured the minimum f0 value but creaky and breathy voice was realized at the end of some of the structures. Hence we discarded the last two syllables of the verb from the measurement domain. We took the minimum value before the uneven jump or fall due to creaky and breathy voices as the minimum value of the post-nuclear domain.

ProsodyPro was also used to elicit the duration measurements for each structure. The measurement domain was chosen as the word interval in this case.

3.4.4 Results

We will first take a look at the pitch tracks of the sentences in GCG, GNG and broad focus cases to see whether there is a change in pitch accent or phonological phrasing. As it is the case in the first study, there is no difference between the three conditions with respect to phonological phrasing or pitch accents.

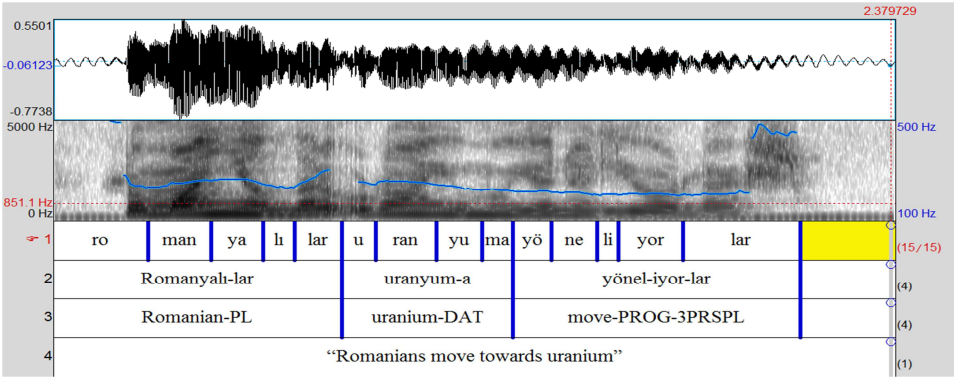


Fig. 19. Pitch track of a broad focus sentence, speaker EE.

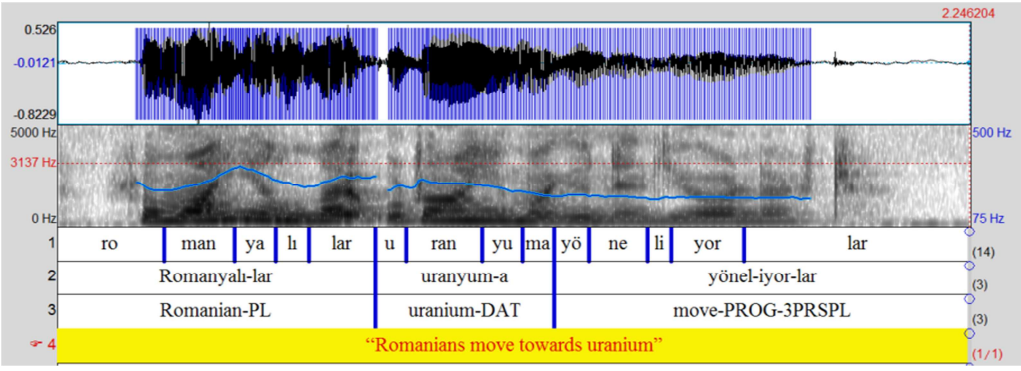


Fig. 20. Pitch track of a GNG sentence, speaker EE.

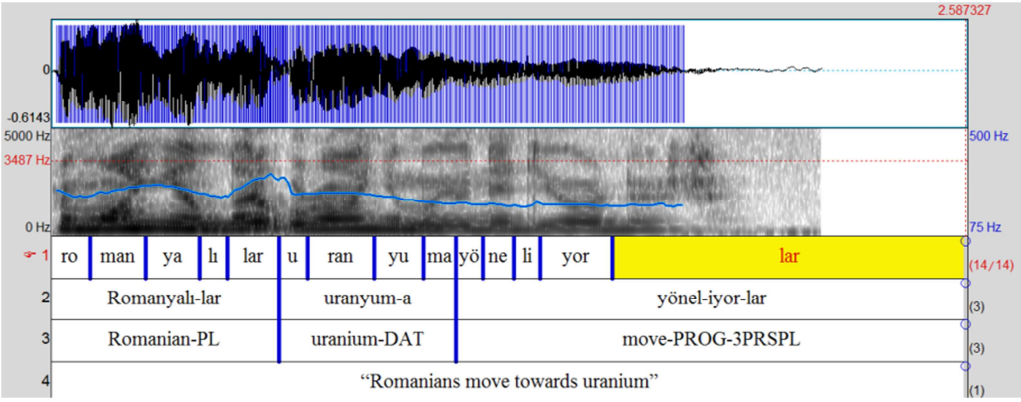


Fig. 21. Pitch track of a GCG sentence, speaker EE.

In all pitch tracks there is a bump with the accented syllable of the subject in the prenuclear domain and the object in the nuclear domain. At the right edge of the prenuclear domain, H boundary tone surfaces. In order to check whether the three focus conditions differ with respect to pitch and boundary tone height and duration we conducted an analysis. Following the extraction of the f0 values for the target measurement points via ProsodyPro, with the aim of excluding the variation not due to focus condition but due to speaker pitch span variation, we normalized the raw f0 values based on the model suggested in Pierrehumbert (1980). Based on these

transformed values we came up with the plot in Fig. 22 for GCG, GNG and broad focus conditions.[121]

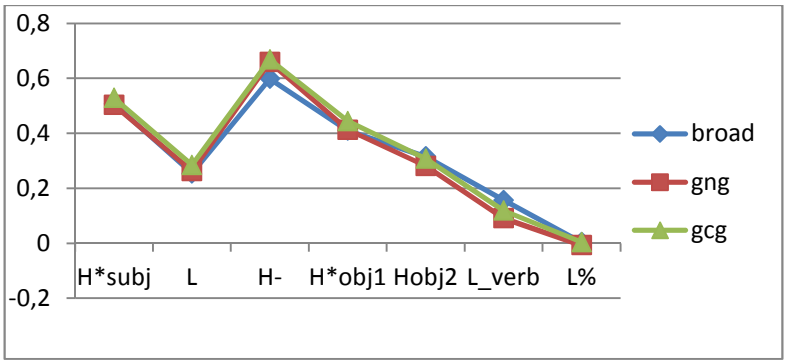


Fig. 22. Plot of the target sentences for the 7 participants, 35 structures for each condition.

The first point in the plot refers to the pitch height of the accented syllable of the subject abbreviated as (H*subj) for ease of exposition in the plot. The second point is the minimum pitch value between the accented syllable of the subject and the H- boundary tone (L). The third point is the maximum height of the H- boundary tone (H-) at the right edge of the prenuclear domain. The fourth point represents the pitch height of the accented syllable of the object (H*obj1) and the fifth point is the maximum pitch value of the last syllable of the object (Hobj2). In the sixth point we have the minimum pitch value at the beginning of the verb (L_verb) and in the last point the minimum pitch value in the whole post-nuclear domain (L%).

As illustrated in Fig. 22 above, the values for the three conditions seem to group together and we get a similar pitch track for our conditions. An initial observation is that the pitch track for the GCG condition has higher values than the pitch track for broad focus and GNG conditions almost at all measurement points,

[121]For each speaker the mean minimum value in the post-nuclear domain for GCG, GNG and broad cases is found which is taken as the baseline. We have used the following formula and obtained the transformed values for all measurement points for each sentence.

Transformed value = measured f0-baseline ÷ baseline

with the exception of the post-nuclear domain. The second observation is that the minimum pitch value at the beginning of the verb is higher with broad focus condition than GCG and GNG conditions. However, all three conditions end up at a similar point at the end of the post-nuclear domain.

With the aim of finding out whether there is a significant difference among the measurement points within each focus condition and whether there is a significant difference between GCG and the other conditions illustrated in Fig. 22, we conducted a within subjects repeated measures ANOVA.[122] For the difference among measurement points within each focus condition, Mauchly's test of sphericity has indicated that the assumption of sphericity had been violated, chi square (20) =130,376, p = 000) therefore degrees of freedom were corrected using the Greenhouse estimates of sphericity (ϵ= .39) The results indicate that overall different measurement points have a significant effect on f0 F (20, 80) =175,986, p=.000, η_p^2=.838). The result shows that within a focus condition each measurement point is significantly different from the other points.

However a pairwise comparison between the three focus conditions did not reveal a significant difference in that the three focus conditions do not differ from each other with respect to our seven measurement points. The results of the study clearly indicate that focus in the immediately preverbal position is not realized as focal boost in Turkish and hence one cannot assume that focus phrases are marked with a distinctive pitch accent in Turkish. Remember that lexically accented words are realized with H*L pitch accent irrespective of their information structural status. Moreover no post-focal compression is observed following the contrastive focus phrases or discourse new constituents and hence deaccentuated post-focal domain is

[122] Thanks to Süleyman S. Taşçı for his help with the statistical analysis.

not a distinctive property of contrastive focus phrases. The results of the study illustrate that contrastive focus and discourse new phrases are not marked distinctively with respect to f0 measurements and additionally they do not differ from broad focus sentences. Turkish is in contrast with English (Katz and Selkirk 2011) in which focus is not restricted to a specific position and prosody marks distinctively (i) the contrastive focus and discourse new constituents from broad focus condition and (ii) contrastive focus phrases from discourse new phrases. Turkish is also different from Hungarian (Genzel, Ishihara and Surányi 2014) in which narrow focus in the immediately preverbal position is realized with extended height of the fundamental frequency (f0) and longer duration when compared to broad focus sentences. In Turkish, focus phrases are not restricted to the immediately preverbal position but narrow focus structures do not differ prosodically from broad focus condition either.

We measured the duration of (i) the subject in the prenuclear domain, (ii) the object focus phrase in the nuclear domain. We extracted the duration measurements from the pitch tracks via ProsodyPro (Xu 2013); however for the pitch tracks with breaks following the pre-nuclear domain we carried out the duration measurements manually. Following the extraction of the duration measurements, we conducted another within subjects repeated measures ANOVA. No significant difference for the pairwise comparisons of focus conditions was noted. This finding further indicates that the three focus conditions do not differ from each other with respect to the criteria of duration as it is the case with f0 measurements.

The results of this study provide answers to the research questions put forth at the beginning of the discussion in that (i) in SOV order with the object as the focus marked constituent, focus phrases are not marked with a distinctive pitch accent or

show different phrasing than broad focus sentences and (ii) contrastive focus is not marked with a different prosodic strategy than discourse-new focus phrases.

3.4.5 GCG pitch tracks with a different pattern

As indicated in the preceding section, the majority of the GCG patterns of two speakers surfaced with different tonal properties than the others. These sentences were excluded from the main analysis to be discussed separately. After the extraction of the values, with the aim of excluding the variation due to speaker pitch span variation, we again normalized the raw f0 values and came up with the plot in Fig. 23.

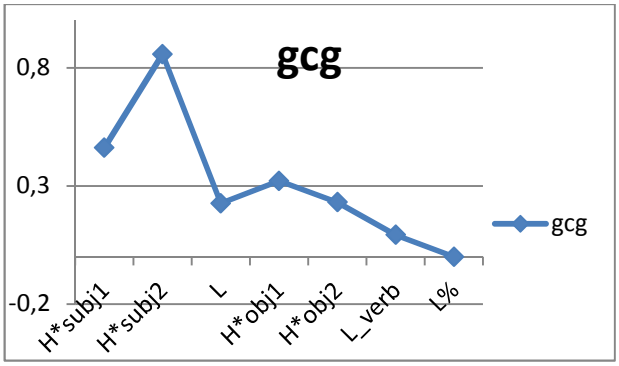


Fig. 23. Plot of the 11 GCG sentences for the speakers EE and HT.

The first point in the plot refers to the pitch height of the accented syllable of the subject abbreviated as (H*subj1). The second point is the maximum height following the accented syllable of the subject given as (H*subj2) in the plot. The lowest value between the highest point in the prenuclear domain and the highest value of the accented syllable of the object in the nuclear domain are labeled as (L) in the plot. The fourth point represents the pitch height of the accented syllable of the object (H*obj1) and the fifth point is the maximum pitch value of the last syllable of the object (Hobj2). In the sixth point we have the minimum pitch value at the beginning

of the verb (L_verb). The last point is the minimum pitch value in the whole post-nuclear domain (L%).

The first difference to be noted between the plots in (22) and (23) is that the highest value in the prenuclear domain in (22) which surfaces with the boundary tone is realized earlier in (23) with a non-final syllable of the subject. Note that the height of the non-final syllable in (23) is higher than the pitch height of the accented syllable and even higher than the peak of the boundary tone in Fig. 22. The other difference is observed with the accented syllable in the nuclear domain and the height of the accented syllable of the focus phrase is higher in Fig. 22. We suggest that the higher values observed in Fig. 23 in contrast to Fig. 22 can be due to higher degree of speaker involvement. Bolinger (1986) suggests that larger pitch range is an indication of a greater degree of involvement while smaller pitch range indicates a smaller degree of speaker involvement. Note that this different pattern is observed only with contrastive focus phrases. Gussenhoven (2004) also proposes paralinguistic intonational meaning based on 3 universal biological codes: (i) frequency code (ii) effort code and (iii) production (phase) codes which are signaled by pitch variation as illustrated in Table 3 below. When the paralinguistic intonational meaning is about the message itself it is informational. When it is about the speaker it is affective.

Of the three codes, effort code is closely related to the expression of contrastive focus as the speakers assert the importance of their message and by excluding the other alternatives, they exhaustively identify contrastive focus constituent as the correct answer. Hence the message is more emphatic. The speakers are predicted to use a higher pitch range or pitch excursion to emphasize the importance of the message.

Table 3. Universal Codes

Biological Codes	Physical sources	Universal Interpretations Informational	Affective
Frequency Code	SIZE small~big → high~low	uncertain~certain	submissive~authoritative vulnerable~protective friendly~not friendly
Effort Code	ENERGY (level) less effort~more effort →smaller excursion~larger excursion	less emphatic~more emphatic less significant~more significant	less surprised~more surprised less involved~more involved
Production Code	ENERGY (phasing) beginning~end → high~low	At beginning: New topic~continued topic At end: continuation~finality	

(Gussenhoven 2004)

The difference between the Fig. 22 and 23 further indicates that focus in the nuclear domain may have an effect on the pre-nuclear domain. The H- boundary tone that surfaces with the last syllable of the constituent in the prenuclear domain does not surface. Instead the highest pitch value surfaces on one of the non-final syllables of the subject. We suggest that this difference is particular to the contrast feature as this pattern surfaces only with contrastive focus phrases and shows not only inter-speaker but also intra-speaker variation.

3.4.6 Post focal fall pattern

Before we move onto the general discussion on the findings of the study, we will take a closer look at the fall pattern following the accented syllable of the focus phrase in the nuclear domain. Although there is no significant difference between the three focus conditions in the prenuclear, nuclear and post-nuclear domains from a statistical point of view, we have observed a difference between narrow focus and broad focus cases with respect to the fall pattern in the nuclear and post-nuclear

domains. Kamali (2011) notes that if there is a lexically accented word in the nuclear domain the fall starts earlier with the L of the H*L pitch accent of the lexically accented syllable but when there is a non-lexically accented word a plateau is observed followed by a fall starting with the onset of the verb. However in the current study the fall pattern in the nuclear domain shows some variation for each focus condition. With the aim of finding out whether these tendencies are categorical or gradient we went over the time normalized pitch tracks extracted via ProsodyPro (Xu 2013). Each pitch track has 10 interval points for the subject and the object but we included only 4 interval points for the verb due to creaky or breathy voices at the end of some utterances. In the plot *'s'* refers to the subject, *'o1'* represents the accented syllable and the preceding syllable(s), while *'o2'* refers to the remaining syllable(s) following the accented syllable and *'v'* refers to the verb.

We found a pattern in which (i) the fall starts immediately after the accented syllable in the nuclear domain and a low reference height is retained until the end of the post-nuclear domain which we labeled as 'early fall', (ii) the fall starts immediately after the accented syllable in the nuclear domain but a steeper fall is observed in the post-nuclear domain which we labeled as 'late fall'. These are illustrated in Fig. 24, 25 and 26.

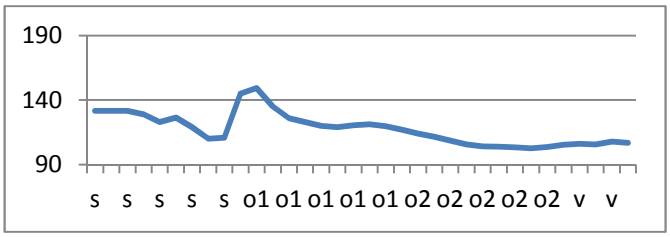


Fig. 24. 'Early fall', speaker CT, GCG condition.

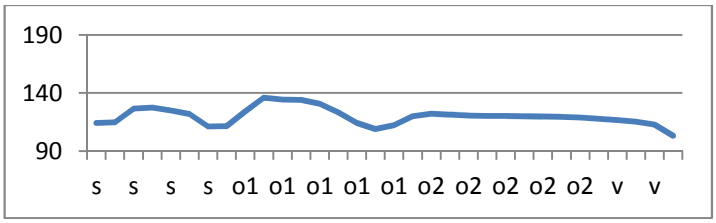


Fig. 25. ‘Late fall’, speaker ÜE, GNG condition.

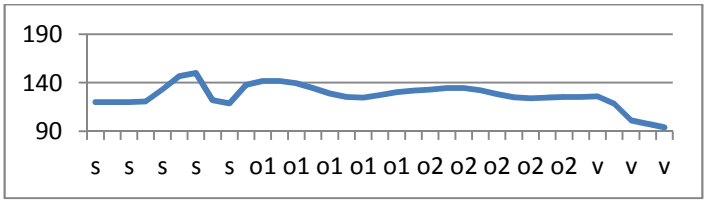


Fig. 26. ‘Late fall’ speaker ÜE, broad focus condition.

The distribution of these patterns across focus conditions has revealed the graph in Fig. 27.

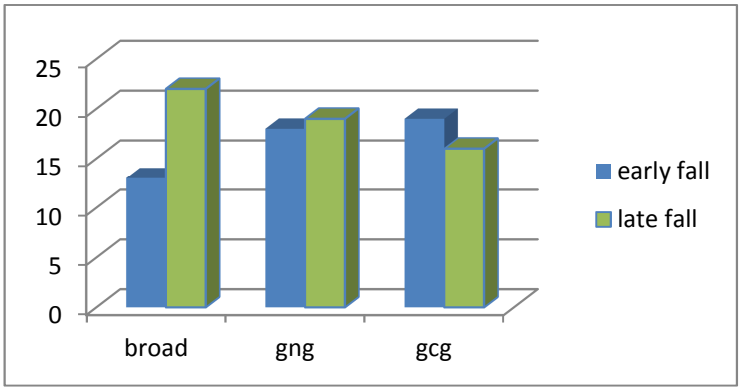


Fig. 27. Fall pattern after the accented syllable of the focus phrase in 3 focus conditions.

As illustrated in Fig. 27 above, late fall pattern is mostly observed with broad focus condition. Early fall immediately after the accented syllable is mostly observed with GCG condition, GNG condition being the second one. Hence we can suggest that narrow focus has the tendency for the early fall pattern.

Note that in Fig. 22, for the maximum value at the final syllable of the object and the minimum value at the first syllable of the verb, broad focus condition

has the highest value. At the final syllable of the object all the focus conditions tend to group together but diverge at the measurement point at the beginning of the verb indicated as L-verb in Fig. 22. This distinction can be due to the early fall pattern after the accented syllable with the narrow focus conditions which is carried over to the beginning of the verb.

An alternative analysis is that the difference in the final domain is due to the information structural status of the constituents in the final domain. In broad focus condition a discourse-new constituent occupies the post-nuclear domain. However given constituents occupy the post-nuclear domain in narrow focus conditions and hence the constituent in the post-nuclear domain of broad focus condition has higher values. In line with 'de-stress given rule' (Féry and Samek-Lodovici 2006) illustrated in (26), we expect given constituents to have lower values than discourse-new constituents.

(26) Destress Given: A given phrase is prosodically non-prominent.

The early fall pattern can be due to given status of the constituents in the post-nuclear domain. The same distinction is also observed in the initial domain in that in narrow focus conditions 'given' constituents surface in the pre-nuclear domain while 'discourse-new' constituents surface in this position in broad focus condition. However the measurement points in this domain for broad focus condition group together with the measurement points of the narrow focus conditions as illustrated in Fig. 22. Additionally, statistically there is no significant difference between the focus conditions which poses a challenge for the analysis suggesting that different fall patterns are due to different information structural status of the sentence final constituents in broad focus and narrow focus conditions.

However one can still argue that the difference between the given constituents in the pre-nuclear and post-nuclear domain can be due to being at the beginning or at the end of the utterance. At the beginning of the utterance, the speaker starts with a higher level of energy. Although in broad focus condition there is a discourse-new constituent at the initial domain and in narrow focus condition there is a given constituent, the higher level of energy at the beginning of the sentence may reduce the difference in this domain. Hence the given-discourse new distinction observed at the end of the utterance can be missing at the initial domain. As all focus conditions tend to group together at the measurement point of the highest value at the final syllable of the object and the difference is not statistically significant we suggest that this distinction is only gradient. We cannot analyze the difference as post-focal compression and the difference can be due to discourse-given, discourse-new distinction in the final domain.

Remember the focus prominence rule (Truckenbrodt 1995) according to which the highest prominence in the domain of focus will be within F. If discourse new and contrastive focus phrases do not differ significantly from broad focus condition, how prominence is realized? We suggest that focus phrases bear the highest prominence which is followed by a fall that in a way signals the prominence bearing constituent in the sentence. This is also the default strategy in broad focus condition hence we do not find any difference between these two conditions. The discussion will be elaborated in section 3.4.8.

3.4.7 Interim summary

The experimental studies conducted in this chapter illustrate that in Turkish in SOV order when f0 height and duration are the comparison points (i) broad focus,

discourse new and contrastive focus phrases do not differ significantly with respect to any of the measurement points in the pre-nuclear, nuclear and post-nuclear domains which is in clear contrast with English (Katz and Selkirk 2011) and Hungarian (Genzel, Ishihara and Surányi 2014), (ii) discourse new and contrastive focus phrases do not differ significantly with respect to any of the measurement points in contrast to English (Katz and Selkirk 2011), (iii) we cannot safely conclude that there is post-focal compression difference between broad focus and narrow focus conditions as the difference can also be suggested to be due to different information structural status of the constituent in the final domain. The next section discusses the reflection of these findings for the syntax-prosody interaction.

3.4.8 Discussion

In this section, we will investigate how focus is marked in the grammar; specifically we will discuss the mechanism that maps syntax onto prosody. First we will go over the theoretical discussion in section 3.4.8.1, followed by the discussion of Turkish facts in 3.4.8.2.

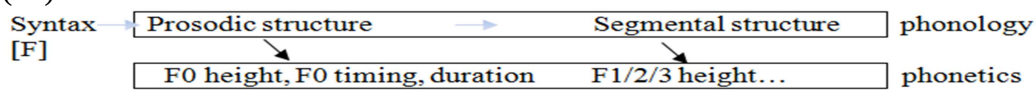
3.4.8.1 How focus affects prosody

The Italian data in section 3.1 has shown that some phonological rules make reference to syntactic constituency, which indicates the presence of an intermediary prosodic level. At this level the syntactic hierarchy from head to clause level is mapped onto a prosodic hierarchy (Pierrehumbert 1980, Inkelas 1989, Truckenbrodt 1995, Kabagema-Bilan, López-Jiménez, Truckenbrodt 2011).

The question raised at this point is how F marking is reflected from syntax to phonetics. There are two lines of analyses. According to the direct reference

hypothesis F(ocus) and G(ivennes) features have a direct effect on the phonetic realization which is encoded in the grammar (Kaisse 1985, Odden 1995). According to the indirect effect hypothesis (Inkelas 1989), elaborated as extended indirect reference hypothesis in Kabagema-Bilan et al. (2011), F and G features are syntactic features and they cannot have direct phonetic effects. The phonetic effects of F and G are mediated via the intermediary prosodic level as illustrated below.[123]

(27)



(Kabagema-Bilan et al., 2011, 1)

Kabagema-Bilan et al. (2011) provide empirical support for the indirect reference hypothesis based on double focus constructions in Mandarin Chinese. We will briefly go over their arguments. Based on an experimental study on prosodic properties of single focus phrases in Mandarin Chinese, Xu (1999) suggests that focus is realized as focal boost and post-focal compression. As illustrated in Fig. 28, when the sentence initial subject is focused, there is a bump with the focused subject followed by compression.

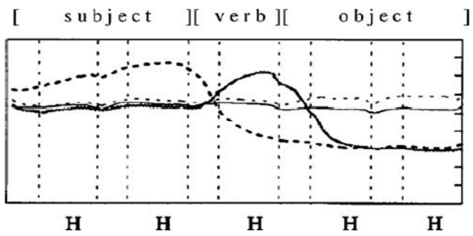


Fig. 28. No narrow focus (thin sold line), narrow focus on the subject (thick dotted line), narrow focus on the verb (thick solid line), and narrow focus on the object (thin dotted line). (Xu 1999, 64)

[123] If we do not assume these features to be marked at syntax, we cannot explain phonological and phonetic rules. If languages had designated positions for each information structural unit and there were direct mappings between syntactic hierarchies and prosodic hierarchies, these features would be redundant. However in most of the languages, including Turkish, the surface ordering of information structural units shows variation and there is not a direct map between syntactic and prosodic domains.

Kabagema-Bilan et al. (2011) on the other hand suggest that F marking in syntax cannot directly be connected to the phonetics; instead F feature attracts stress and the stress raises the tonal height. Truckenbrodt (2003) suggests that syntactic F and G features have an effect on the grid-marks in the prosody as grid mark attraction or rejection which is reflected as tonal height in the phonetics. The following rules illustrate the assumptions of the extended indirect reference hypothesis:

(28) a. Focus: Each DF must carry stress at the level of the intonation phrase on some [F] - marked constituent

b. Stress-F: Each [F] - marked constituent must carry stress at the level of the phonological phrase

(Kabagema-Bilan et al., 2011, 12)

The rule in (28b) requires each focus phrase to bear stress at the phonological phrase level. (28a) refers to the domain of focus, which is usually the sentence, in which one of the foci has the strongest stress, namely IP level stress.[124] The prediction of these rules is that if there are multiple foci in the structure, phonetic effects of F marking in the grammar can be observed only on one of the focus phrases as intonational phrase level prominence is assigned to only one constituent in the intonational phrase. The direct reference hypothesis on the other hand predicts phonetic effects of F marking

---

[124] Jackendoff (1972) suggests that '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 rules'. Truckenbrodt (1995) indicates that the domain of focus is not necessarily the clause or the sentence. This is indicated with the contrast in the following examples. In (2) the domain of focus maps onto the whole clause while in (1) it does not.

x x x x

(1) [[John's]$_F$ sister]$_{DF}$ and[[Bill's]$_F$ sister]$_{DF}$ get along well

(2) Who gets along well?
[[John and Bill]$_F$ get along well]$_{DF}$

Truckenbrodt (1995) further notes that scope domain of focus in phonology is the same with the domain of focus on semantics. In this study what we take a scope domain of focus as the domain at which background is encoded in line with Rooth (1985, 1995) which generally maps onto a sentence.

in syntax to be realized on both focus phrases as the tonal height is not mediated via prosody. Kabagema-Bilan et al. (2011) test the predictions of the rules based on multiple foci constructions in Mandarin Chinese. In the following example, both the subject and the modifier bear focus. If the assumptions of extended indirect reference hypothesis are on the right track, intonational phrase level prominence will be realized only on one of the focus phrases. If not, as indicated by direct reference hypothesis, syntax has direct effect on phonetics and both of them will attract stress.

(29) intonation phrase level stress

x x phonological phrase level stress

$[\text{Subject}]_F$ verb $[[\text{modifier}]_F$ noun$]_{\text{object}}$

Now let's take a look at the plot below showing the results for the sentence the order of which is given above. In conditions of multiple focus on the subject and the modifier indicated as (F-SU-M-q) and (F-SU-M-c), the focused subject and the modifier are triggered by wh-questions (q) and as corrective statements (c) respectively. In these conditions, only the rightmost focus phrase, the modifier, shows focal raising and post-focal lowering but not the subject. This is similar to the condition in which only the modifier is focused (F-M).

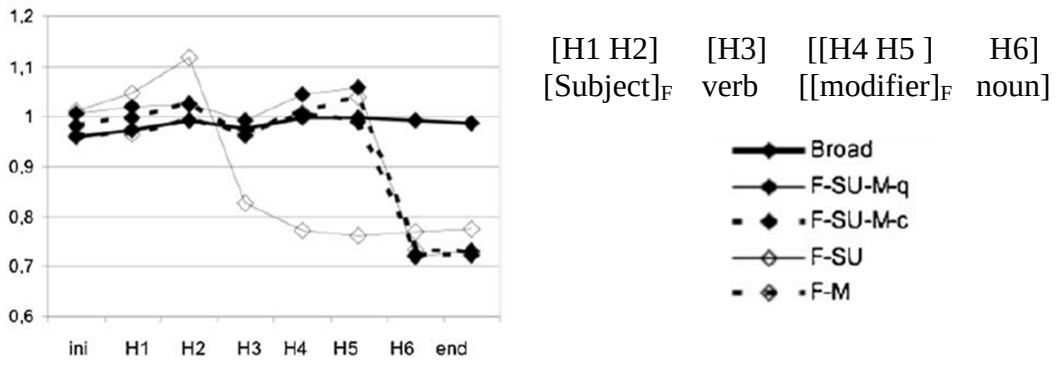


Fig. 29. Rightmost focus attracts IP level stress.

(Kabagema-Bilan et al., 2011, 3)

The findings of this study provide clear evidence for the extended indirect reference hypothesis. F phrase attracts intonation phrase stress and IP level stress cannot be carried by two foci. It is the rightmost focus phrase that wins and gets IP level stress.[125]

Another study that provides experimental evidence for the indirect reference hypothesis with a different perspective is conducted by Katz and Selkirk (2011) the details of which we discussed in section 3.1. Remember that Katz and Selkirk (2011) find out that contrastive focus constituents are more prominent than discourse-new constituents with respect to pitch range, duration and intensity based on which they suggest that contrastive focus and discourse-new constituents are marked distinctively in the grammar. In this section we will take a look at how they account for these findings.

Katz and Selkirk (2011) suggest that discourse-new constituents bear only 'default' prosodic prominence at phonological phrase level as is the case in all-new sentences. Only contrastive focus phrases bear prosodic prominence at intonation phrase level as illustrated in (30-32).

---

[125] Güneş (2012) suggests a similar argument for Turkish. She argues that in Turkish double focus constructions it is only the rightmost one that shows the properties of the nucleus and bears IP level stress. Güneş (2012) bases her arguments on the following example.

(1)

A: To whom did Emre give what?

L- H- L- H- L- L%

B: [(**Emre**)$_{\Phi}$ (**elma-lar-ı**$_{F-1}$)$_{\Phi}$ (**yeğen-ler-i-ne**$_{N/F-2}$ ver-miş)$_{\Phi}$]$_{\iota}$

E. apple-PL-ACC cousin-PL-POSS-DAT give-EVD

'Emre gave [the apples$_F$] [to his cousins$_F$].'

(Güneş 2012, 19)

As discussed in the previous chapter, we take the answers of pair list questions as partial answers. Hence, in the answer above, the accusative marked object is the contrastive topic phrase while the dative marked constituent is the focus phrase. As the structure is not a double focus construction we will not take this data as an evidence for the extended indirect reference hypothesis for Turkish. One can still argue in line with Wagner (2007, 2008) that contrastive topic phrases are in fact focus phrases and in the representation above it is the rightmost focus phrase that receives IP stress. However recall that in Turkish while contrastive topic phrases can occur in the postverbal domain focus phrases cannot and this indicates that they are not the same.

(30) Foc-new

```
(                    x                              ) Intonation Phrase
(                    x       ) (          x         ) Phonological Phrase
    (x   ) (x)  ( x      )          (  x            ) Prosodic Word
[He even took [Minnie]Foc to a   [Mariners game ] ]
      H*          H*    L-          H*            L-
```

(31) New-Foc

```
(                                   x              ) Intonation Phrase
(                    x       ) (          x         ) Phonological Phrase
    (x   ) (x)  ( x      )          (  x            ) Prosodic Word
[He even took [Minnie] to a   [Mariners game]Foc]
      H*          H*    L-          H*            L-
```

(32) New-New

```
(                                                  ) Intonation Phrase
(                     x       ) (          x         ) Phonological Phrase
                ( )  ( x      )          ( x          ) Prosodic Word
[He         took [Minnie] to a   [Mariners game]]
                     H*    L-          H*            L-
```

Katz and Selkirk (2011:42) suggest that contrastive focus is marked with F in the grammar but discourse-new constituents are not and hence "…the phonological representation of discourse-new constituents is a matter of default phonology…' as is the case in broad focus constructions. They argue that phonological phrase level prominence is not because of the information status of the constituent as such but due to phonological constraints that require a phonological phrase to be prosodically headed. Based on the discussion on Mandarin Chinese (Kabagema Bilan et.al. 2011) and English (Katz and Selkirk 2011), we assume the extended indirect reference

hypothesis according to which the phonetic effects of focus phrases are mediated by prosody.[126] The next section is a discussion of the Turkish facts.

3.4.8.2 Focus marking and prosody interaction in Turkish

The syntax-prosody interface model given in (27) assumes an indirect relation between syntax and phonetics mediated via prosody. The focus prominence rule in (28) requires each F marked constituent to bear PPh level prominence and in the domain of focus it is the F marked constituent that attracts IP level prominence. When we put all these assumptions together we get the following order.

(33)

Syntax	(F marking)
↓	
Prosody	(IP level prominence)
↓	
Phonetics	(IP stress)

Now let's take a look at Turkish data within these assumptions. In the representation in (34), the heads of the PPhs attract PPh level prominence as indicated with the grid marks. As there is no significant difference between the two focus types, as explained in section 3.4.4, we assume the same F marking strategy for contrastive focus and discourse-new constituents. It is the F marked object phrase in the rightmost phonological phrase that attracts the IP level prominence. This is reflected in phonetics as IP stress.

[126] A similar analysis is proposed for German all-new sentences. In their experimental study on German given, new and focus phrases, Féry and Kügler (2008) find out downstep and upstep patterns for the all-new sentences. There is either downstep and each tone is lower than a preceding one or there is upstep on the preverbal argument or on the verb. In narrow focus condition, on the other hand, upstep is observed consistently. Truckenbrodt (2013) explains this data via optional i-stress assignment in that when right-most strengthening does not apply and the rightmost phonological phrase does not project up to intonational phrase level and downstep is observed; when right-most strengthening applies upstep is observed. When there is a narrow focus phrase on the other hand the right-most strengthening applies and the F marked constituent receives IP level stress.

(34) (x) Intonation Phrase
(x) (x) Phonological Phrase
(x) (x) (x) Prosodic Word
[Alanyalı-lar barbunya$_{Foc}$ yol-uyor-lar]
people of A.-PL bean pull-PROG-3PL
'The people of Alanya pull up the kidney beans.'

Let's assume that in broad focus condition default phonology applies and only PPh level prominence is assigned.

(35) ( ) Intonation Phrase
(x) (x) Phonological Phrase
(x) (x) (x) Prosodic Word
[Alanyalılar barbunya yoluyorlar]

This line of analysis predicts a phonetic difference to be found between broad focus in (35) and narrow focus condition in (34). However, the experimental study has shown that there is no significant difference with regard to pitch height and duration between the focus conditions. In line with the focus prominence rules given in (28), the Turkish data clearly show that when the object is marked with F feature in syntax, the focus phrase attracts IP level prominence which is reflected in the phonetics as IP stress. As for broad focus condition, first the leftmost constituents in the PPhs attract PPh level prominence. Then the head of the rightmost PPh attracts IP level prominence which is realized as IP stress as in (36).

(36) (x) Intonation Phrase
(x) (x) Phonological Phrase
(x) (x) (x) Prosodic Word
[Alanyalılar barbunya yoluyorlar]

The question raised at this point is what happens when the focus is on the sentence initial constituent, as illustrated with a different pitch track in Fig. 30 below.

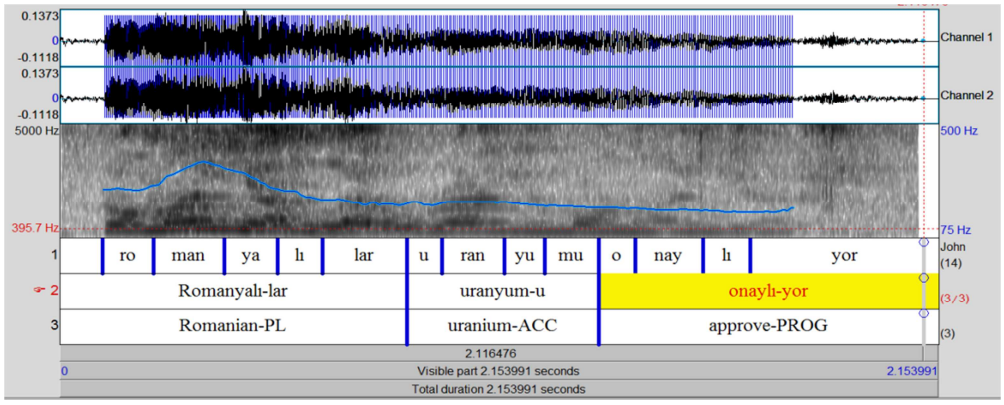


Fig. 30. CGG condition, speaker ET.

According to the first hypothesis, the phonological phrasing pattern in (36) is retained for this pattern as well in that the subject forms a separate PPh which carries IP level prominence while the object and the verb form another PPh. As the F marked constituent is expected to attract IP level prominence, the default phonology is overridden by F rule and it is not the rightmost PPh that bears IP stress but the PPh that includes an F marked constituent as illustrated in (37) below.

(37)(x) Intonation Phrase
(x) (x) Phonological Phrase
(x) (x) (x) Prosodic Word
[Romanyalı-lar]$_{Foc}$ uranyum-u onaylıyorlar]

Truckenbrodt (2013) suggests height subordination rule that also explains the Japanese post-focal compression that we went over in section 3.1. According to this rule (Truckenbrodt 2013: 9) “a grid mark on prosodic level L lowers and compresses the tonal space for following tones; the effect carries on until a tone associated to a higher prosodic level then L is reached.” The grid mark attracted by focused subject

on prosodic IP level lowers and compresses the tonal space for the following PPh level tones.

According to the second hypothesis, the default stress assignment rule on the rightmost PPh is not overridden by focus assignment rule. The boundary tones following the initial domain are deleted at the PPh level. Hence as there is only a single PPh, in the end the F marked subject gets IP level prominence.

(38) (x) Intonation Phrase
(x x) Phonological Phrase
(x) (x) (x) Prosodic Word
[Romanyalı-lar]$_{Foc}$ uranyum-u onaylıyorlar]

The third option takes the directionality of head prominence for PPh and IP levels into account. One of the reasons for Kan (2009) to suggest IP level was the different head prominence patterns for PPh and IP levels. In PPh, the leftmost constituent attracts PPh level prominence. In IP, the rightmost PPh attracts IP level prominence. Note that this is violated in (37) in that IP level prominence is on the leftmost PPh. The third option makes use of this directionality difference. According to the rules given in (28), an F marked constituent bears PPh level prominence and attract IP level prominence. Güneş (2013:120) suggests that “All intonational phrases in Turkish display a nucleus” and “Nucleus must be inside the (rightmost) narrow focus.’ In line with Güneş (2013), we suggest that F marked constituents not only attract PPh level prominence but require being the rightmost PPh. Hence, the subject, the object and the verb form a single PPh which then attracts IP level prominence as the right most PPh as illustrated below.

(39) (x) Intonation Phrase

(x) Phonological Phrase

(x) (x) (x) Prosodic Word

[Romanyalı-lar]$_{Foc}$ uranyum-u onaylıyorlar]

Out of the three options, we choose the third one because it takes head directionality of Turkish into account and also does not create a ‘look back’ problem to delete the already existing phrase boundaries as in (38). We have not measured the height of the pitch accent or the duration of the F marked subject and compared it with the F marked object in SOV order and hence we do not know at this point whether they are marked with different phonetic properties. However the representation in (39) suggest that in Turkish focus is marked phonologically and requires its right edge to be aligned as the rightmost PPh even when it is the leftmost prosodic word in the structure. As indicated in the semantics and syntax chapters, some speakers do not accept in-situ focus phrases as in (39). The reason behind this variation can be due to this exceptional phonological phrasing option. The prosodic heaviness of the phonological phrase with three prosodic words may yield unacceptability with these speakers. These speakers prefer dislocation of the object phrase which naturally allows the dislocated object phrase to form an independent PPh. The subject and the verb forms another PPh. The subject will be the head of the rightmost PPh then.

Now we will take a look at the pitch tracks in which focus surfaces on the verb as discussed in section 3.3.4 repeated below for ease of exposition. Remember that the non-final domains show the prosodic properties of the prenuclear domain in that at the right edge of these domains H boundary tones surface.

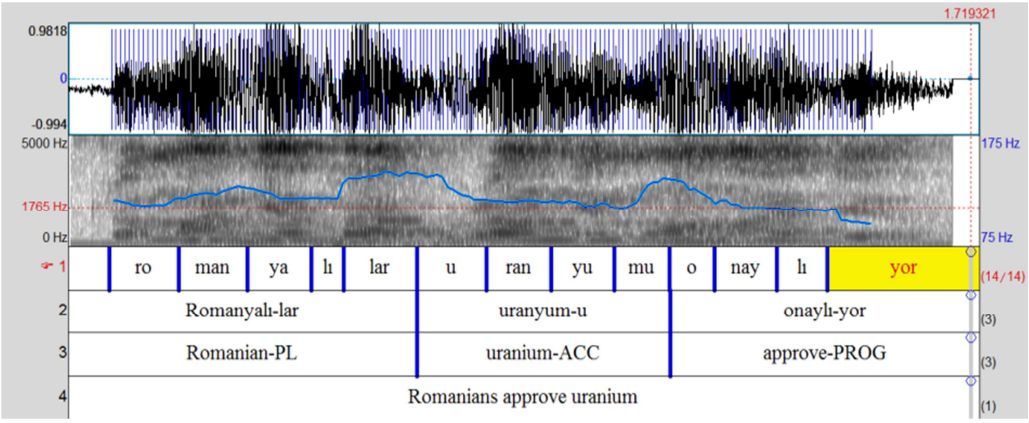


Fig. 31. Pitch track of an all-given structure, speaker ST.

Now we will take a look at the syntax-phonology interface for this structure.

(40) (x) Intonation Phrase
(x) (x) (x) Phonological Phrase
(x) (x) (x) Prosodic Word
Romanyalı-lar uranyum-u [onaylıyorlar]$_{Foc}$

In line with the assumptions of the focus prominence rule (28b), the verb which bears F marking attracts PPh level prominence. We suggest that it forms an independent PPh as the rightmost PPh. Finally, in line with (28b) the F marked verb bears IP level prominence reflected as IP stress. The H boundary tone at the right edge of non-final domains is also captured with this analysis. Being independent PPhs, their right edge is marked with H boundary tone.

Based on this data and the results, we suggest that in Turkish sentential stress and focus stress are not in fact distinct operations. Sentential stress refers to IP level stress and focus prominence is realized as IP level stress. That is why in Turkish when focus is on the preverbal object there is no significant difference between broad focus and narrow focus conditions with regard to F0 height and

duration.[127] Based on its position in the sentence, focus attracts IP level stress via grid marks in the prosody.[128]

3.5 Phase driven sentential stress and focal stress

Üntak-Tarhan (2006) explains sentential stress assignment in Turkish taking complement domains of *v*P and CP phases as stress domains. She incorporates the discourse anaphora rule of Neeleman and Reinhart (1998) to the sentential stress rule (SSR) of Kahnemuyipour (2004) and comes up with the following rules regulating sentential stress rules in Turkish.

(41) Sentential Stress Rule: Sentential stress is assigned to the highest element in the spell-out (or stress domain) (Kahnemuyipour 2004)

(42) Discourse Anaphora Generalization: a DP is de-stressed if and only if it is D-linked to an accessible discourse entity. (Neeleman and Reinhart 1998)

Both of these rules operate in tandem at PF. First SSR applies and the highest constituent in the first stress domain is assigned sentential stress. If this constituent is given, namely, if it bears D-linked feature then the stress domain is narrowed down and another constituent bears sentential stress. Now let us take a look at the stress

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[127] Kan (2009) shows that taking sentence stress as 'clause' stress is problematic as the domain that assigned IP level stress does not always map onto a 'clause' as illustrated below. The first IP cannot be taken as a clause but it receives IP level stress.

(1) [[Al*an*yalı-lar]$_{PPh}$ [ki genelde *muz* yetiştir-ir-ler]$_{PPh}$]$_{IP}$ [[*man*go-yu deni-yo-lar-mış]$_{PPh}$]$_{IP}$
Alanyalı-PL COMP generally banana grow-AOR-3PL mango-ACC try-PROG-3PL-EVI
'The people of Alanya, who generally grow bananas, are trying (growing) bananas now.'

With some embedded clauses on the other hand, the embedded clause does not get IP level stress as in (2).

(2) [[Leman]$_{PPh}$ [sen]$_{PPh}$ [uyu-du-n san-mış]$_{PPh}$]$_{IP}$
Leman you fall asleep-PAST-2SG think-EVI
'Leman thought (that) you fell asleep.' (Kan 2009, 19-20)

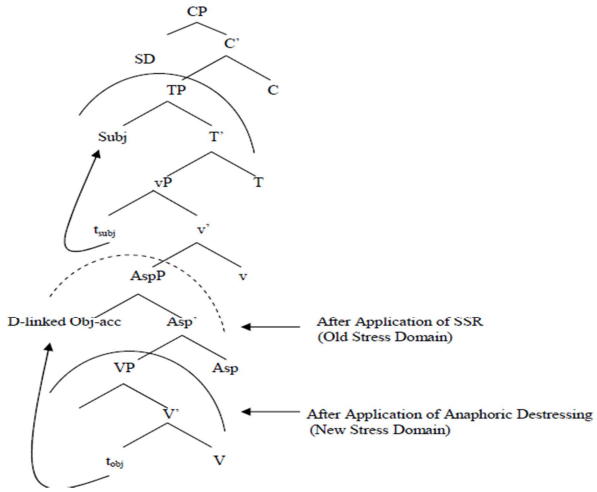
[128] We assumed a bottom-up approach for IP stress, namely, the prominent syllable of the leftmost prosodic word receives PPh level stress and the rightmost PPh is marked with IP level stress. We could also assume a top-to-bottom analysis, namely we can suggest that the F marked constituent receives IP level prominence and forms the rightmost PPh putting a boundary to its left edge. However this line of analysis cannot capture the IP stress assignment in broad focus sentences.

assignment for the following sentence. The underlined constituent is the non-D-linked one in the sentence.

(43) A: Neden yemek ye-mi-yor-uz?
why food eat-NEG-PROG-1PL
'Why aren't we eating any food?'
B: Çünkü, Ayşe yemeğ-i <u>yak-mış.</u>
because Ayşe food-ACC burn-EVI
'Because Ayşe burnt the food.'

As illustrated in the tree structure bin (44), SSR applies to the stress domain which maps onto the complement domain of the *v*P phase. The highest constituent in this domain is the object phrase; however it is D-linked. Discourse anaphora rule makes sentential stress assignment impossible and hence the stress domain is narrowed down and the next highest constituent in the stress domain is assigned sentential stress. Note that it is the verb in this example and it receives sentential stress. The subject moves to Spec TP which is part of the second stress domain, it also receives stress but the prominence on the higher stress domain is not as high as the prominence in the lower stress domain.

(44)



(Üntak-Tarhan 2006, 56b and 80)

Üntak-Tarhan (2006) suggests the following rule for sentential stress assignment in the presence of a focus phrase.

(45) Focus Stress Rule: at the phase HP, mark a focused subconstituent C to receive focus stress. At PF, the constituent marked for focus stress receives the highest prominence of the sentence.

Now we will see the stress assignment within the assumptions of FSR.

(46) A: Ali musluğ-u değiştir-iyor mu?
Ali tap-ACC change-PROG QP
'Is Ali changing the tap?'
B: Hayır, (Ali) (musluğ-u) $[_{V}\underline{\text{onar-ıyor}}]_{focus}$
No Ali tap-ACC repair-PROG
'Ali is repairing the tap.' (Üntak-Tarhan 2006, 12c)

In line with SSR, in the lower stress domain, the object is expected to bear sentential stress. However as the verb is marked as focused constituent, at PF the verb receives the stress.

First of all, the rules given in (41), (42) and (45) yield redundancy in the system as already observed with the derivations of (43) and (46). In (43), the verb receives sentential stress due to discourse anaphora generalization rule. In (46), SSR is predicted to assign stress to the object but the verb bears sentential stress due to FSR.

We suggest that a single F marking can account for both of the derivations as discussed in the previous section. The position of the F marked constituent in the complement domain of the phase does not determine stress rule assignment. The F marked constituent, be it the object or the verb, receives IP level prominence and IP stress. As the discussion in section 3.4.8.2 has illustrated there is no separate rule for

default IP stress assignment, F marking and G marking. The IP level prominence is always assigned to the rightmost phonological phrase.

The other question raised at this point is: Do we need phase domains to account for stress assignment in Turkish? Within the phase-based analysis, it is assumed that the subject moves to Spec TP and the object which is the highest constituent of the *v*P phase receives sentential stress. As illustrated in the previous section, in an all-new sentence default phonology already assigns IP level stress to the object. The subject forms an independent phonological phrase and as each phonological phrase must be headed, it receives phonological phrase level stress. The object and the verb form a single phonological phrase and the leftmost constituent receives phonological phrase level stress. Finally IP stress is assigned to the head of the rightmost phonological phrase and hence it is realized on the object. Our analysis also reaches the same conclusion without appealing to phase domains.

Üntak-Tarhan (2006) investigates stress pattern of unaccusatives, passives and unergatives. She does not take unaccusatives and passives as phases but only unergatives in line with Chomsky (2000). Üntak-Tarhan (2006) goes over stress patterns of these structures and argues that these structures provide empirical evidence for the phase based analysis of stress assignment. Üntak-Tarhan (2006) notes that with unaccusatives and passives it is the only argument of the verb that bears stress (47-48), with unergatives it is the verb that bears stress (49).

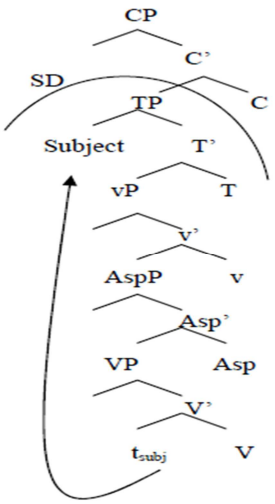
(47) A: Çok mutlu görün-üyor-sun. Ne ol-du?
very happy look-PROG-2SG what happen-PAST
'You look very happy. What happened?'
B: <u>Ali</u> gel-di.
Ali come-PAST
'Ali came.'

(48) A: Çok üzgün görün-üyor-sun. Ne ol-du?
very sad look-PROG-2SG what happen-PAST
'You look very sad. What happened?'
B: Cüzdan-ım çal-ın-dı.
Wallet-1POSS steal-PASS-PAST
'My wallet is stolen.'

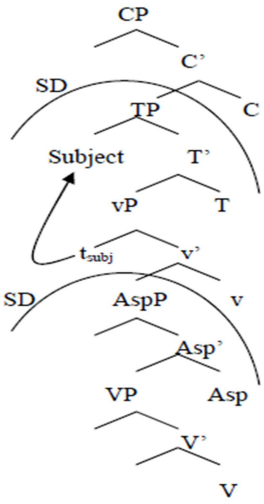
(49) A: Sabah ne ol-du?
morning what happen-PAST
'What happened in the morning?'
B: Ali koş-tu.
Ali run-PAST
'Ali ran.' (Üntak-Tarhan 2006, 34-36)

The derivations of these two different stress patters are given in the following way. In (50) with unaccusatives and passives the lower *v*P is not a phase. Following the movement of the single argument to Spec TP, sentential stress is assigned to this constituent in the higher stress domain, namely in the higher phase domain. In (51) on the other hand, the lower *v*P is a phase. Following the movement of the subject to Spec TP, sentential stress is assigned to the verb in the lower *v*P phase via SSR.

(50)



(51)



However this analysis of stress assignment based on phases runs into problems when the findings of further studies on the prosody of Turkish are taken into account. Kan (2009) investigates the prosodic properties of unaccusatives and unergatives and finds out that nearly in all of the cases with unaccusatives, single phrasing is induced namely the argument and the verb forms a single phonological phrase. The IP level stress is realized on the argument. This is in line with the derivation in (50). This is also in line with our analysis in that within a single phonological phrase the stress is realized on the leftmost constituent which in turn also bears IP level stress.

Kan (2009) further notes that with unergatives, nearly half of the data induce multiple phrasing in which both the argument and the verb receives phonological phrase level stress and the verb bears IP level stress being the rightmost phonological phrase. This is also within the predictions of the derivation in (51). However, in the other half of the data, single phrasing is observed and both the argument and verb surface in the same phonological phrase. In contrast to the derivation in (51), it is the argument not the verb that bears stress in this case. The derivation in (51) cannot predict this stress pattern. The lower stress domain is not defective and hence there is no need to move up to the higher phase for stress assignment as it is the case with unaccusatives. Additionally, the structures triggered in the study of Kan (2009) are focus neutral and hence FSR cannot apply either.

Within our analysis on the other hand, although optional phrasing is not captured, the IP level stress assignment is captured. When the argument and the verb form independent phonological phrases, the rightmost phonological phrase is expected to bear IP level stress. When there is a single phrasing on the other hand, it is the leftmost constituent in the rightmost phonological phrase that attracts IP level

stress. Hence a phase based account for sentential stress assignment will not be pursued in this study which falls short of capturing the Turkish data.

3.6 One word level propositions

Göksel (2010) notes that utterances in Turkish can surface as one-word-level propositional utterances (52) or sentence-level utterances (53). In one-word propositions, when the suffix that immediately precedes the copula bears prominence, the proposition is interpreted as presentational or contrastive focus as in (52a). When it is not the immediately pre-copula suffix that bears prominence, the proposition is interpreted as contrastive focus. Göksel (2010) suggests that this is also the case with sentence-level utterances in that only when a constituent that is not immediately preverbal bears prominence, it is interpreted as contrastive focus as in (53b).[129]

		L-	H*L		L%
(52)	a.	gid-	ecek-	ler-	Ø-	di.
		go	fut	3PL	COP	PAST

'They were going to go.'

'They WERE going to go.'

		L-	H*L		L%
	b.	gid-	ecek-	ler-	Ø-	di.

		L-		H*L		L%
(53)	a.	Semra-lar	dün	Ankara-ya	gid-ecek-ler- Ø-	di
		Semra-family	yesterday	Ankara- DAT	go-FUT-3PL-COP-PAST	

'Semras were going to Ankara yesterday.'

[129] Recall from the previous chapter that discourse-new constituents can also appear in the sentence initial position followed by discourse anaphoric constituents as long as it is explicitly marked in the structure as additional information.

L- H*L L%

b. Semra-lar dün Ankara-ya gid-ecek-ler-di

(Göksel 2010, 36-37, with my modifications)

The other similarity is that focus can only appear in the pre-copula domain. In this section, we will illustrate how one word utterances can be represented with the model we have assumed.

In (54), at the prosodic word level, it is the agreement marker that bears prominence. At the PPh level, the prominence is anchored to the prominent syllable of the leftmost constituent. As illustrated in (54), the proposition is a single word; hence the same syllable bears PPh level prominence and IP level prominence.

(54)(x) Intonation Phrase

(x) Phonological Phrase

(x) Prosodic Word

gid- ecek- ler_{Foc}- Ø- di

Now let's take a look at the following representation. Similar to (54), at the prosodic word level, the F marked affix bears prominence. At the PPh level, the prominence is anchored to the prominent syllable of the leftmost constituent. The proposition is a single word; and again the same syllable bears PPh level prominence and IP level prominence.

(55)(x) Intonation Phrase

(x) Phonological Phrase

(x) Prosodic Word

gid- $ecek_{Foc}$- ler- Ø- di

The other option is to assume that one word level propositions compose a domain including the stressed affix (underlined affixes) and the remaining affixes form another domain. This line of an analysis is pursued in Kabak and Vogel (2001) and they call the non-stress bearing affixes prosodic word adjoiners (PWA).

(56) a. [sev-il-di-<u>niz</u>]$_{PW}$
love-PASS-PAST-2PL
'You were loved.'
b. [[sev-<u>il</u>]$_{PW}$ -me$_{(PWA)}$-di-niz]
love-PASS NEG-PAST-2PL
'You were not loved.' (Kabak and Vogel 2001, 20)

Based on the parallelism between one word propositions and sentence level utterances, we suggest that the non-stress bearing affixes belong to the same domain with the F marked affix. Recall that the verb in a broad focus sentence does not bear PPh level stress but it is still in the same domain with the object which bears PPh and IP level prominence. In a sense the strayed affixes surface in the same PPh with the F marked affix and hence the F marked phrase is the rightmost PPh.

3.7 Conclusion

In this chapter we investigated the prosodic realization of (i) contrastive focus, (ii) discourse-new and (iii) broad focus constructions in Turkish based on f0 and duration measurements. The main findings of the experimental studies conducted in this chapter are that:

- In contrast to previous analyses which suggest a distinctive prosodic marking for focus phrases in Turkish (Özge and Bozşahin 2010) or distinctive marking strategies for discourse-new information and contrastive focus phrases

(İşsever 2003), the statistical analysis has shown that there is no significant difference between the three focus conditions with regard to f0 or duration at any of the measurement points in the pre-nuclear, nuclear and post-nuclear domains. As indicated in section 3.2, the analysis of İşsever (2003) is based on observational facts. Özge and Bozşahin (2010) suggest that focus phrases surface with H*L contour but contrastive focus is more highlighted than presentational focus. As is the case with the study of İşsever (2003), no measurement is done with controlled stimuli. This conclusion is based on the assumption that presentational focus can project over more than one constituent but contrastive focus is realized on a narrow constituent. However as the discussion in Chapter 2 has shown, the triggering context determines the constituent(s) that can receive focal prominence not the focus subtypes themselves. Hence the findings of our study in which the stimuli are strictly controlled for each focus condition are more reliable.

- The lack of a distinction between the three conditions is explained based on focus prominence rule which requires focus phrases to bear PPh level prominence and attract IP level prominence within their domain of focus. In Turkish, in an all-new sentence the IP level prominence is carried by the immediately preverbal object being the head of the rightmost PPh in the IP. When contrastive focus or discourse new constituents occupy the immediately preverbal position they attract IP level prominence being F marked at syntax.
- The focus phrases in initial and final domains have further shown that F marked constituents attract IP level stress. The sentence initial focus phrase forms a single phonological phrase and being the rightmost phonological

phrase, it attracts IP level prominence. If the verb bears focus then it forms an independent phonological phrase and again being the rightmost phonological phrase attracts IP level prominence.

- Phase based stress assignment analysis of Üntak-Tarhan (2006) falls short of explaining the unergative structures when the findings of Kan (2009) on phrasing of unergatives are taken into account. Üntak-Tarhan (2006) takes unergatives as phases but single phrasing is observed with unergatives. Both the argument and verb surface in the same phonological phrase and it is the argument that bears prominence not the verb.
- Assuming a prosodic level mediating between syntax and phonetics explains both the phrasing properties of unaccusatives, unergatives and passives and one word level utterances. The constituents that are F marked at syntax, require IP level prominence at prosody and IP stress at phonetics whether the utterance is word or sentence level.

The next section discusses the syntactic marking of information structural units in Turkish.

CHAPTER 4

SYNTACTIC MARKING OF INFORMATION STRUCTURAL UNITS IN TURKISH

For the representation of information structural units in syntax, many different analyses have been put forth which form a continuum as to how discourse notions are encoded in syntax. Within the strong modularity hypothesis (Horvath 2005, 2010), information structural notions cannot be encoded in syntax and what is taken as focus movement is suggested to be exhaustive identificational operator movement, which is quantificational in nature. On the other side of the continuum, within the cartographic approach (Rizzi 1997) information structural categories are represented as ordered functional projections in the left periphery.

In the Turkish linguistics literature, word order permutations have been observed to be related to discourse-pragmatics (Erguvanlı 1984, Kural 1992, Göksel 1998, 2013, Göksel and Özsoy 2000, İşsever 2003, Şener 2010 to cite a few). Şener (2010) takes a further step and suggests that in Turkish word order permutations are "fully" determined by discourse-pragmatic motives and proposes a phrase structure for Turkish based on variable binding in SOV and OSV orders. He proposes TopP, DaP, FocP projections at the left periphery that check the features of information structural categories. Topic and discourse anaphoric phrases undergo movement while focus phrases remain in-situ due to the absence of operator feature which is taken to be the trigger of movement with topic and discourse anaphoric constituents. The syntactic analysis of Şener (2010) can fully capture the binding data in SOV and OSV orders.

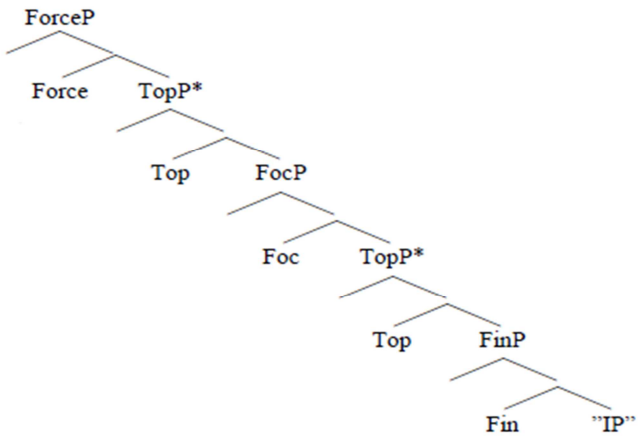
In this chapter we investigate how information structural categories interact with variable binding data, negation and quantifier scope. The question addressed in this part is how information structure and syntax are related. We discuss whether information structural categories are encoded in syntax via formal features or whether we can derive the word order variations as quantificational operations taking place at the LF domain (Bobaljik and Wurmbrand 2012, Neeleman and Vermeulen 2012).

The discussion shows that IP internal FocP analysis not only captures the tendency in Turkish that focus phrases surface in the immediately preverbal position but also the interaction of focus with different aspectual markers. The semantic compositionality of contrastive topic phrases finds a syntactic account in this chapter. We analyze the impossibility of contrastive topic phrases to appear in the c-command domain of focus phrases as a restriction on the reconstruction of contrastive topics to the scope domain of focus phrases. The scope domain of focus does not map onto the complement domain of *v*P phase but it maps onto the eventual domain as defined by Ramchand and Svenonius (2013). This makes the status of *v*P as a phase in Turkish questionable. The experimental study on scope readings reveal that in most of the cases scope can be read off the surface order. Inverse scope is possible in a few information structural orderings, which are captured via intermediary reconstruction sites within this study. The discussion on binding and scope data can be captured via information structural features to be checked, while LF based analysis falls short of explaining the whole data.

4.1 Left peripheral or IP internal functional projections

As pointed out earlier in the Introduction and elaborated in Chapter 2 with ordering restrictions, in Turkish, movement operations are triggered by interpretive purposes. The cartographic approach (Rizzi 1997) is advantageous in explaining the movement operations triggered by information structuring as semantic/pragmatic notions are directly mapped onto syntactic structure via dedicated functional projections which are rigidly ordered, as illustrated below.

(1)



Studies on different languages raise many questions about the functional projections assumed at the left periphery. Frascarelli and Hinterhölzl (2007), Neeleman and Vermeulen (2012) argue against recursive Topic projections in the cartographic approach and decompose TopP projection at the left periphery as FamiliarTopP, ContrastiveTopP and AboutnessTopP. The additional TopP projections can capture the data in a more satisfactory way than the multiple TopP versus a unique FocP requirement of the cartographic approach.

Other researchers proposed these functional projections to surface in the IP internal structure. IP internal CP projections have been used in the literature for different languages such as Malayalam and English (Jayaseelan 2001), Italian

(Belletti 2003), and Russian (Dyakonova 2009) to account for topic and focus constructions. Jayaseelan (2001) suggests that in Malayalam wh-phrases appear left adjacent to the verb due to the FocP projection above the verbal domain and extends this analysis to English gapping and cleft structures. In Russian, the verb moves to Asp and focus phrases appear to the right of the verb. Based on this property Dyakonova (2009) proposes an IP internal focus and topic phrase above *v*P domain for Russian. The verb moves to AspP and the focus phrase moves to FocP above *v*P projection. In addition to this lower FocP projection there is a higher FocP projection in the left periphery. The higher FocP is occupied by D-linked focus phrases. The lower FocP is also motivated by scope properties of quantifiers in Russian.

In Turkish there is tendency for the focus phrases to appear in the preverbal position optionally followed by the movement of the constituents to the higher projections. Remember that whether the target position of the dislocated non-focal constituents is to an A or A' position has not been resolved either and Öztürk (2005) suggests that Turkish shows a mixed strategy (see section 1.4.1). From a theoretical perspective, assuming IP internal functional projections instead of extra-sentential, left peripheral projections does not make a big difference for an analysis. However, in addition to capturing the reason behind the tendency of the focus phrase to appear in the preverbal position, IP internal focus and discourse anaphoric projections can better explain the Turkish data from an empirical point of view as well. This point will be elaborated in sections 4.4 and 4.5 with the discussion of quantifier scope data and different aspectual markers respectively. IP internal focus projection can also explain the semantic difference between topic and focus phrases in that topic phrases are utterance level constituents while focus phrases are propositional level

constituents. Hence within this study we suggest that FocP does not surface at the left periphery but above *v*P domain in Turkish.

4.2 The interaction of information structural units with negation

In this section we focus on the interaction of information structural categories with negation to find out more about their phrase structural properties of Turkish. First, we will go over some data discussed in the Turkish literature.

Kelepir (2001) suggests that accusative marked indefinites can have wide scope over negation as in (2) but in a denial context the indefinite is under the scope of negation as in (3).

(2) Hasan iki kapı-yı cilala-ma-dı.
Hasan two door-ACC polish-NEG-PAST
'Hasan didn't polish two doors.' (Hasan didn't polish two of the doors)

(3) A: Hasan iki kapıyı cilalamış, sen hala oturuyorsun.
Hasan polished two of the doors, you are still sitting (here).
B: Hasan iki kapı-yı cilala-ma-dı, sadece bir kapıyı cilaladı.
Hasan two door-ACC polish-NEG-PAST
'Hasan didn't polish two of the doors, (he) only polished one of the doors.'
(Kelepir 2001, 132-133)

What is clear from the context given in (3) is that focus is on the verb which is pointed out with the denial context explanation. In (2) on the other hand, focus is on the object. This becomes clearer when we put this sentence in a context.

(4) A: Hasan-a cilala-ma-sı için 5 tane kapı bırak-mış-tı-m.
Hasan-DAT polish-NOML-POSS for five piece door leave-EVI-PAST-1SG
Sadece birini cilalamamış.
'I had left Hasan 5 doors to be polished. He hasn't polished only one of them.'

B: Yo, hayır. Hasan iki kapı-y$ı_F$ cilala-ma-mış.
No Hasan two door-ACC polish-NEG-PAST
'No, Hasan didn't polish two of the doors.'

In (4) we get the interpretation that there are two doors that Hasan did not polish. In a sense, in both (3) and (4) there is a denial of the previous context. In (3), we deny the proposition that Hasan polished two of the doors, in (4) we deny the proposition that Hasan didn't polish one of the doors. Öztürk (2005) also suggests that scope possibilities may change in the presence of negation, within the investigation of the position of subjects.

(5) a. [$_{TP}$ [$_{NEG}$ [$_{AgentP}$ bütün çocuklar [$_{ThemeP}$ o test-e [$_{VP}$ gir-me-di]]]
all children that test-DAT take-NEG-PAST
'All children did not take that test.' neg > all, *all > neg
b. [$_{TP}$ bütün çocuklar$_i$ [$_{NEG}$ [$_{AgentP}$ t_i [$_{ThemeP}$ o test-e [$_{VP}$ gir-me-di-ler]]]
all children that test-DAT take-NEG-PAST
'All children did not take that test.' all > neg, *neg > all
(Öztürk 2005, 70)

Öztürk suggests that in (5a), the subject does not move up to Spec TP and the movement of V to T head checks the EPP feature of the T head. Negation is above the subject. In (5b) on the other hand the subject moves to Spec TP, which is also indicated via overt agreement markers on the verb. The negation is below TP projection and the subject quantifier takes wide scope over negation.

As the contrast in (2-4) indicates the scope possibilities depend on where we put the focus. Now we will take a look at the structures in 5(a-b) by putting them within a context that will force certain information structural interpretations for the constituents. Öztürk (2005) already gives a context for the structure in (5b) as in (7). We provide a context for (5a) in (6) below.

(6) A: Dershanede yapılan teste yoğun bir ilgi vardı. Bütün çocuklar girmişler teste.
'The test at the training center drew intense interest. All children took the test.'
B: Yanlış duy-muş-sun, bütün çocuk-lar o test-e [gir-me-di-ler]$_F$[130]
wrong hear-PAST-2SG all child-PL that test-DAT take-NEG-PAST-3PL
'You have misheard; all children did not take that test.' not > all

(7) O test-e [bütün çocuklar]$_F$ gir-me-di, [bütün büyükler]$_F$ gir-di[131]
that test-DAT all children take-NEG-PAST all adults take-PAST
'All the children did not take the test, all the adults took it.' all > not
(Öztürk 2005, 151 with my modifications)

As the structures in (6-7), illustrate the position of the focus has an effect on the interpretation. When the verb bears focus, negation takes wide scope, when the non-verbal constituents bear focus the focused constituent has wide scope. Note that the structures in (6-7) gave the same result with (2-4) and hence negation can be a good testing ground to find out the position of information structural units in the phrase structure.

Now we will test how scope facts change when we test these sentences in a more controlled way. We have four sets of data (i) universal quantifier with the focus phrase, (ii) universal quantifier with the contrastive topic, (iii) universal quantifier with the aboutness topic and (iv) universal quantifier with the discourse anaphoric constituent. In all cases the verb bears perfect marker *-mIş* and negation. The tricky issue with this test is that the scope interpretation in the preceding context can be easily transferred to the target sentence. In order to minimize this effect we prepared

[130] Öztürk (2005) takes overt agreement markers on the verb as an indication of V to T movement and gets a different interpretation. We suggest that instead of the agreement markers it is the placement of focus, namely the information structural status of the constituents that makes a difference in the position of the subject.
[131] When this sentence is interpreted as "not….but" instead of a coordinated clause as in (7) in the text, interpretation of scope changes and negation takes scope over the universal quantifier. Thanks to Meltem Kelepir and Balkız Öztürk for pointing this out to me.

short contexts to trigger the right information structure in the target sentence and we kept scope ambiguity in the preceding context as well.

I. Focus phrase with the universal quantifier

In the first set, we have argument focus phrases surfacing with the universal quantifier. Although in (9) and (10) the same order of information structural units is used, in (9) the focus is on the restriction of the focus phrase while in (10) it is on the quantifier itself.

(8) A: Yetişkinlerin hepsi o sınava girmemişler. ∀ > neg[132]

'All the adults did not take that exam.'

B: Bütün yetişkinler değil,

[bütün çocuk-lar]$_{F}$ [o sınav-a]$_{DA}$ [gir-me-miş-ler]$_{DA}$

all child-PL that exam-DAT take-NEG-PAST-3PL

'It is not all the adults, all the children did not take that exam.'

(9) A: Dershanede yapılan yarışmaların hepsini boykot eden yetişkinler yarışmalara girmemişler.

'The adults who protested all the competitions at the training center did not enter the competitions.'

B: Valla, yetişkinleri bilmiyorum ama,

[çocuk-lar]$_{CT}$ [bütün sınav-lar-a]$_{F}$ [gir-me-miş-ler]$_{DA}$ ∀ > neg

child-PL all exam-PL-DAT take-NEG-PAST-3PL

'Well, I do not know about the adults but the children did not take all the exams.'

(10) A: Dershanede yapılan sınavları boykot eden yetişkinler bazı sınavlara girmemişler.

'The adults who protested the exams at the training center did not take some of the exams.'

[132] The judgments belong to me checked with two other native speakers of Turkish.

B: Valla, yetişkinleri bilmiyorum ama,

[çocuk-lar]$_{CT}$ [bütün sınav-lar-a]$_{F}$ [gir-me-miş-ler]$_{DA}$ ∀ > neg

child-PL all exam-PL-DAT take-NEG-PAST-3PL

'Well, I don't know about the adults but, the children did not take all the exams.'

II. Contrastive topic with the universal quantifier

In the second set, contrastive topic phrases surface with the universal quantifier. Remember that contrastive topics can be given only as partial answers and hence they cannot be used with quantifiers resisting partial interpretation (see section 2.3.2.2). That's why in (11-13) we put the contrast not on the quantifier but on the restriction. Hence, in these structures we shift the topic under discussion and contrast the group of 'all the children' with the group of 'all the adults'.

(11) A: Dershanede yapılan sınava bütün yetişkinler girmemişler galiba, değil mi?

'All the adults did not take the exam done at the training center, did they?'

B: Valla, yetişkinleri bilmiyorum ama,

[bütün çocuk-lar]$_{CT}$ [sınav-a]$_{DA}$ [gir-me-miş-ler]$_{F}$ neg > ∀

all child-PL exam-DAT take-NEG-PAST-3PL

'Well, I do not know about the adults but, all the children did not take the exam.'

(12) A: Dershanede yapılan yarışmaya yetişkinlerin hepsi girmemişler.

'All the adults did not enter the competitions at the training center'

B: Valla, yetişkinleri bilmiyorum ama

[bütün çocuk-lar]$_{CT}$ [sınav-a]$_{F}$ [gir-me-miş-ler]$_{DA}$ ∀ > neg

all child-PL exam-DAT take-NEG-PAST-3PL

'Well, I do not know about the adults but, all the children did not take the exam.'

(13) A: Annen partiye Fatih'in gelmesini istemediği için onu davet etmemiş.

'Your mother has not invited Fatih to the party as she does not want him to come to the party.'

B: Valla Fatih'i bilmiyorum ama,

[bir arkadaş-ım-ı]$_{CT}$ [kimse]$_{F}$ davet et-me-miş. ∃> neg

a friend-POSS-ACC anybody invite-NEG-PAST

'Well, I don't know about Fatih but, no one has invited a friend of mine to the party.'

III. Aboutness Topic Phrases with the Universal Quantifier

In the third set, we have aboutness topic phrases occurring in sentence initial position as the object (14) or the subject of the sentence (15-16).

(14) A: Dershanedeki yetişkinler bütün sınavlara girmemişler. ∀ > neg

'The adults at the training center did not take all the exams'

B: [bütün sınav-lar-a]$_{AT}$ [çocuk-lar]$_{F}$ [gir-me-miş-ler]$_{DA}$, yetişkinler değil

all exam-PL-DAT child-PL take-NEG-PAST-3PL

'The children did not take all the students, not the adults.'

(15) A: Dershanedeki bütün yetişkinler yarışmalara katılmamışlar. neg > ∀

'*All the adults at the training center did not enter the competitions.'*

B: [Bütün yetişkin-ler]$_{AT}$ [sınav-lar-a]$_{F}$ [katıl-ma-mış]$_{DA}$, yarışmalara değil.

all adult-PL exam-PL-DAT participate-NEG-PAST

'All the adults did not participate in the exams not in the competitions.'

(16) A: Dershanede yapılan sınava bütün çocuklar girmişler. neg > ∀

'All the children took the exam done at the training center.'

B: Yoo, hayır, [bütün çocuk-lar]$_{AT}$ [sınav-a]$_{DA}$ [gir-me-miş-ler]$_{F}$

all child-PL exam-DAT take-NEG-PAST-3PL

'No, all the children did not take the exam.'

IV. Discourse anaphoric constituent with the universal quantifier

In the final set, we have discourse anaphoric constituents surfacing with the universal quantifier.

(17) A: Dershanede yapılan bütün sınavlara yetişkinler girmişler, yoğun bir katılım olmuş, değil mi?

'The adults took all the exams at the training center, there was a broad participation, wasn't there?'

B: Valla, yetişkinleri bilmiyorum ama,

[çocuk-lar]$_{CT}$ [bütün sınav-lar-a]$_{DA}$ [gir-me-miş-ler]$_{F}$ neg > ∀

child-PL all exam-PL-DAT take-NEG-PAST-3PL

'Well, I don't know about the adults but, the children did not take all the exams.'

(18) A: Dershanedeki yetişkinler bütün sınavlara girmemişler. neg > ∀

'The adults at the training center did not take all the exams'

B: Yetişkinler değil [çocuk-lar]$_{F}$ [bütün sınav-lar-a]$_{DA}$ [gir-me-miş-ler]$_{DA}$

child-PL all exam-PL-DAT take-NEG-PAST-3PL

'The children did not take all the exams, not the adults.'

(19) A: Çocuklar dershanede yapılan bütün sınavlara girmişler. neg > ∀

'The children took all the exams done at the training center.'

B: Yoo, hayır, [çocuk-lar]$_{AT}$ [bütün sınav-lar-a]$_{DA}$ [gir-me-miş-ler]$_{F}$

child-PL all exam-PL-DAT take-NEG-PAST-3PL

'No, the children did not take all the exams.'

Table 4 below illustrates the results for the four sets of data.

Table 4. The Interaction of Negation with Information Structural Units

		Focus	Contrastive topic	Aboutness topic	Discourse anaphoric
I	F_S-DA_O-DA_V	F>NEG			
	CT_S-F_O-DA_V	F>NEG			
II	CT_S-DA_O-F_V		NEG>CT		
	$CT_{S(universal)}$-F_O-DA_V		CT>NEG		
	$CT_{O(indefinite)}$-F_S-DA_V		CT>NEG		
	AT_O-F_S-DA_V			AT>NEG	
III	AT_S-F_O-DA_V			NEG>AT	
	AT_S-DA_O-F_V			NEG>AT	
	CT_S-DA_O-F_V				NEG>DA
IV	F_S-DA_O-DA_V				NEG>DA
	AT_S-DA_O-F_V				NEG>DA

The data, although limited, indicate that focus phrases take scope over negation in the absence or presence of contrastive topic phrases.

A second thing that the data shows is that contrastive topics, which cannot surface in the absence of focus phrases, can take scope above and below negation depending on the position of the focus phrase. If it is the verb that bears focus, negation takes scope over the contrastive topic. If focus is not on the verb, contrastive topic takes scope over negation. This is expected in the sense that in the absence of a contrastive topic phrase, focus phrases take negation under their scope, as contrastive topic constituents out-scope focus phrases, negation also surfaces under the scope of contrastive topics. As for aboutness topic phrases, when they are subject phrases or when the focus is on the verb they take narrow scope with respect to negation. Otherwise they take scope over negation. Finally, with discourse anaphoric constituents, when they follow focus phrases or when the focus is on the verb they take narrow scope with respect to negation. We can sum up the findings in the following way:

(i) Focus takes scope over negation

(ii) If it is the verb that bears focus, negation takes scope over all constituents.

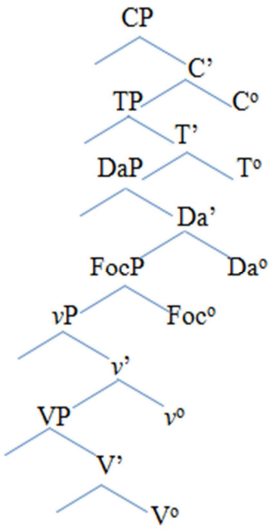
(iii) When focus is not on the verb, contrastive topic takes scope over negation, object aboutness topic takes scope over negation.

(iv) Discourse anaphoric constituents surface under the scope of negation.

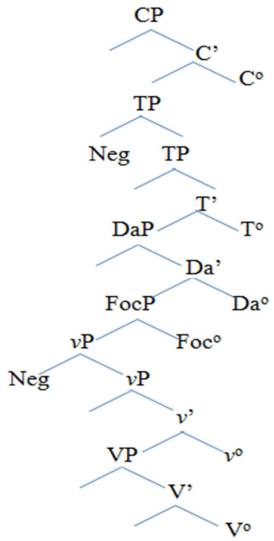
Based on these findings and the discussion in the preceding section, we propose the structure in (20a) below. FocP is generated IP internally above the *v*P projection. We tested only transitive sentences in which discourse anaphoric constituents always surface under the scope of negation. As the discussion in section 4.3 on quantifier

scope in OSV order shows, we need a DaP above FocP. Similar to focus phrases, discourse anaphoric constituents cannot surface preceding the contrastive topic phrases and hence DaP projects above FocP but not as high as the left periphery.

(20) a.



b.



Contrastive topic phrases always take scope over negation but when the verb bears focus they surface under the scope of negation. However, contrastive topics cannot surface within the scope domain of focus. Hence we assume that at LF negation can project above *v*P and TP (or even in the CP projection). This is in line with the analysis of Kelepir (2001), who suggests that negation can project above the verbal domain or the TP domain.

As pointed out above, if it is the verb that bears focus, negation takes scope over all constituents. We suggest that this is due to the presence of an assertion operator higher in the structure. When the verb bears focus, the truth value of the whole proposition is judged and the speaker emphasizes the truth value of the proposition. However, in addition to the semantic content of the verb, the whole proposition is focused. Hence we suggest that when the focused verb bears negation,

the whole clause is asserted not to be true and hence the whole clause is under the scope of negation including the contrastive topic.

Finally, the subject aboutness topic phrases and the discourse anaphoric constituents following the focus phrase always remain within the scope of negation indicating that they remain in their base generated positions.[133]

Now we will investigate the target position of the contrastive topic and object aboutness topic phrases which take scope over negation.

4.2.1 Position of contrastive topic and aboutness topic

As the interaction of topic phrases with negation illustrates, contrastive topics and object aboutness topic phrases take scope over negation. For the target position of the topic phrases there are two potential landing sites (i) the left periphery (Şener 2010) or (ii) Spec TP. In both of these alternatives, contrastive topic c-commands FocP and DaP, which is also signaled with the ordering restrictions. Spec TP as the target position is in line with some current analyses in the literature which assume discourse features of C head to be inherited by T head (Miyagawa 2010) and Spec

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[133] Based on the interaction of zero marked indefinites and negative polarity items with negation, Kelepir (2001) argues that at LF the negation operator in Turkish can adjoin to *v*P or TP. In the constructions illustrated below in (1) adapted from Kelepir (2001), the indefinite without accusative marking in (1a) remains in its base generated position and it is under the scope of negation which adjoins to the *v*P domain. In (1b), the indefinite subject is at Spec TP and above the scope of negation which licences the NPI object in the *v*P domain. In (1c), the accusative marked indefinite is bound by the existential quantifier over choice functions but is under the scope of negation which is adjoined to the TP domain. In (1c), negation above the NPI subject at Spec TP satisfies the immediate scope constraint and the indefinite cannot take wide scope since the existential quantifier over choice functions is in the scope of the negative operator.

(1) a. [$_{TP}$ Hasan [Neg-Op iki kitap oku-ma-dı]]] (sadece bir kitap okudu)
Hasan two book read-NEG-PAST
'Hasan didn't read two books. (He read only one book)

b. [$_{TP}$ ∃f [$_{TP}$ Bir arkadaşım [Neg-Op kimse-yi davet et-me-miş]]]]
a friend-1POSS anybody-ACC invite-NEG-EVI
'A friend of mine didn't invite anybody'

c. [Neg-Op [$_{TP}$ ∃f [$_{TP}$ Kimse [$_{vP}$ bir arkadaş-ım-ı davet et-me-miş]]]
anybody a friend-1SGPOSS-ACC invite-NEG-EVI
'Nobody invited any friend of mine'

TP can be filled for interpretational purposes (Öztürk 2005, Jiménez-Fernandez and İşsever 2012).

Now let us assume that we have a CT subject, an indefinite object, and focus is on the verb as illustrated below. The indefinite can take scope over the universal quantifier in these kinds of examples (Göksel 1998, 2013, Kelepir 2001).

(21) A: Öğretmenler ve öğrenciler okumak için iki kitap almışlar. Öğretmenler aldıkları kitapları okumadan geri getirmişler.
The teachers and the students took two books to read. The teachers brought the books they took without reading them.

B: Valla öğretmenleri bilmiyorum ama

her öğrenci$_{CT}$ iki kitab-ı$_{DA}$ oku-muş$_{F}$.

every student two book-ACC read-PAST

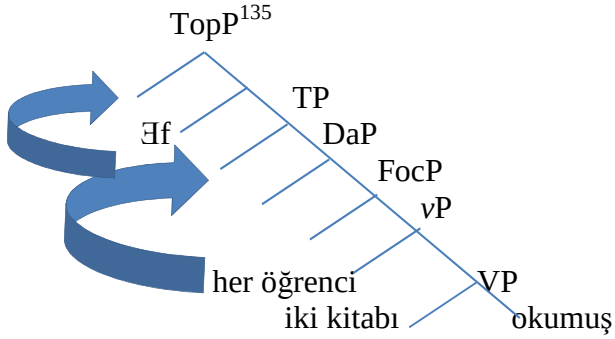
'Frankly, I don't know about the teachers, but every student read two books.'

∀∃ / ∃∀

The surface order is reflected as the wide scope of the universal quantifier over the indefinite and the existential operator from its target position. As for the inverse scope interpretation, in line with Kelepir (2001) we assume that existential operator over choice functions can adjoin to TP[134]. Let us assume that contrastive topic constituents move to Spec TopP at the left periphery, landing in a position c-commanding the indefinite discourse anaphoric constituent and the existential operator over choice functions.

[134] Kelepir (2001) suggests adjunction to a position over TP for the existential operator, based on the assumption that subjects in Turkish move up to Spec TP.

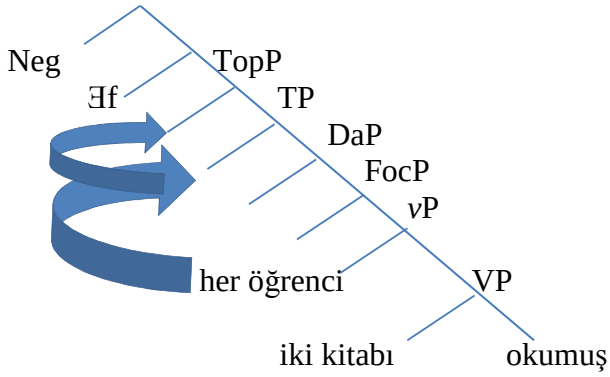
(22)



The wide scope interpretation of the indefinite object quantifier is possible only when we assume that contrastive topic moves back to the intermediary Spec TP. The universal quantifier reconstructs back to Spec TP and remains within the scope of the existential quantifier over choice functions. Then we get the inverse scope interpretation.

The second alternative is to assume that the existential quantifier is in fact an adjunction to the CP domain taking both contrastive topic and discourse anaphoric position under its scope domain. As negation takes contrastive topic under its scope, we assume that Neg can adjoin to the left periphery at LF as in (23).

(23)



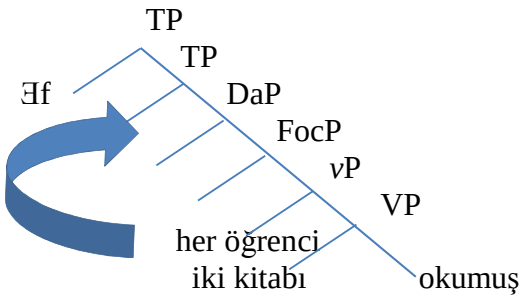
Following the movement of the contrastive topic constituent to the left periphery, surface scope interpretation is read off as the existential operator over choice functions can also surface above *v*P domain. As for the inverse scope order, we will

[135] For ease of exposition, nearly in all the representations we will show the projections with their specifiers but note that in Turkish the head projects on the right.

assume that the existential operator over choice functions above TopP and below Neg allows the indefinite to take scope over the universal quantifier.[136]

The third option is to assume that contrastive topic moves to Spec TP.

(24)



The existential quantifier over choice functions that forms a chain with the indefinite takes wide scope over the universal quantifier at Spec TP from its position over TP. The surface scope interpretation is also available via adjunction of existential operator above Spec *v*P position which is under the c-command domain of the dislocated contrastive topic phrase. The third option is also in line with the analysis in the Turkish linguistics literature in that Spec TP is filled by constituents only for scope and discourse interpretive purposes (Öztürk 1999, 2005, Jiménez-Fernandez and İşsever 2012). Hence we choose the third option.[137]

A further issue to be discussed in this section is the triggering feature of contrastive topic phrases to Spec TP. There are two main lines of analyses on syntactic marking of contrastive topic phrases. Although there are slight differences within these studies, the first line of the studies labeled as the configurational analysis indicates that there is a single F marking strategy for both focus and contrastive topic marking (Wagner 2007, 2008, Tomioka 2010, Constant 2014). The

[136] See section 4.3.2.2 for an elaborated discussion on the position of indefinites.
[137]We will elaborate and revise this analysis in chapter 5.

second line of these studies assume CT feature for contrastive topic phrases and F marking for focus phrases (Büring 2003, Dyakonova 2009).

We will first go over the studies on a contrastive topic in which a single F marking strategy is assumed for both focus and contrastive topic phrases. Wagner (2007, 2008) assumes a nested foci analysis and suggests that a contrastive topic is in fact a focus phrase bound by a higher focus operator. Contrastive topic cannot surface within the scope of the lower focus phrase because this would yield the incorrect interpretation. The ordering reflects the semantic compositionality of the sentence. In English, contrastive topic can surface following the focus phrase while this is not possible with Italian as it is the case in Turkish. [138]

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[138] Wagner (2008) further argues that the nested foci analysis for contrastive topic-focus can also be extended to overt focus operators. In languages with scope readings restricted to surface order, overt focus operators would have only surface scope. We tested this prediction with the overt focus particles '*sadece*' and '*bile*'.

(1) Ahmet hariç sınıftaki çocukların kitap okuduğu yok. Verdiğimiz kitapları okumadan geri getiriyorlar.

Except for Ahmet the students in our class do not read books. They return back the books we gave to them without reading them.

a. en eğlenceli kitab-ı bile sadece Ahmet oku-yor.
most enjoyable book-ACC even only Ahmet read-PROG
'Only Ahmet reads even the most enjoyable book.'

b. ? Sadece Ahmet en eğlenceli kitab-ı bile oku-yor.
Alternatives for only:
(i) there were some candidates who could read the book
Alternatives for only and even:
(i) least likely: The most enjoyable book is read only by Ahmet
(ii) more likely: Only Ahmet reads the book which is enjoyable to some extent

In (1) the implication is that it is not only Ahmet who read the most exciting book and hence '*sadece*' cannot take wide scope.

(2) sınıftaki çocukların kitap okuma alışkanlığı yok. Hepsi eğlenceli çizgi romanları okuyor ama daha az eğlenceli klasik kitapları okumak istemiyorlar.

'The students at the class do not have the habit of book-reading. They all read enjoyable cartoon books but they do not want to read less enjoyable classic books.'

a. Sadece Ahmet en sıkıcı kitab-ı bile oku-yor.
only Ahmet most boring book-ACC even read-PROG
'Only Ahmet reads even the most boring book.'

b. ?en sıkıcı kitab-ı bile sadece Ahmet oku-yor.
Alternatives for even:
(i) least likely: Ahmet reads the least boring book.
(ii) more likely: Ahmet reads books which are boring to some extent.
(iii) even more likely: Ahmet reads the most boring book.

In (2) the implication is that it is only Ahmet who reads even the most boring book. To sum up, in Turkish also focus phrases with overt particles take only surface scope.

Wagner (2007, 2008) suggests that different ordering restrictions are due to different scope taking properties of these languages. In the presence of two quantifiers, English allows inverse scope but this is not possible in Italian. In English, contrastive topic takes scope over the focus phrase at LF while this has to be overt in Italian where inverse scope is not possible.

In a similar vein, for Japanese, Tomioka (2010) suggests that the lower focus phrase is bound by the lower exhaustive focus operator while the higher operator binds both the contrastive topic and the lower focus phrase as illustrated in (25) below.

(25) Who ate what?

ERIKA-wa MAME-o tabe-ta (kedo)

Erika-TOP beans-ACC eat-PAST (but)

'Erika ate beans (but….)'

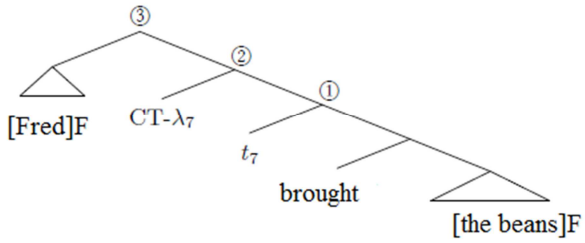
[Op $_{1\ 2}$ [$_{\text{Speech ActP}}$ Assert [$_{\text{IP}}$ Exh$_3$ [$_{\text{IP}}$ ERIka-wa$_1$ [[MAME-o] $_2$] $_3$ tabeta]]]]

(Tomioka 2010, 15, 22)

There is a single F marking strategy. The difference is that the focus value of the lower focus phrase is used up higher in the structure.

Constant (2014) suggests that contrastive topic movement can occur in syntax or at LF. He assumes a contrastive topic abstraction operator that combines the focus value of the lower focus phrase with the value of the higher focus phrase and gets a nested focus value as illustrated in (26) below.

(26) [Fred]$_{CT}$ brought [beans]$_{F}$



(Constant 2014, 52)

The higher focus phrase moves to the specifier position of the topic abstraction operator. Via the abstraction operator we get alternative sets of 'what x brought' which then combines with the alternative sets of [Fred]$_{F}$ and we get the nested focus value.

Büring (2003) also suggests that the semantic composition of contrastive topic uses the semantic value of the lower focus phrase but he assumes a CT feature independent of a focus feature. If, in line with configurational analysis, we assume a single F feature for both contrastive topic and focus phrases, syntax would be blind to which focus phrase is attracted to the higher position. Additionally, as discussed in Chapter 2 on the semantic marking of topic and focus, the distributional properties of contrastive topic and focus phrases show variation. While contrastive topic phrases can appear in the post-verbal domain devoid of their intonational properties, this is not possible for focus phrases. We take this as evidence that contrastive topic and focus phrases are not nested foci even though semantic compositionality of contrastive topic is dependent on focus phrase.[139] Hence we suggest that what attracts contrastive topic out of the domain of focus is the CT feature in line with Büring (2003).

[139] One can still argue for single F marking strategy for CT-F order. We can suggest that the ban on the lower focus phrase to appear in the post-verbal domain is due to the fact that adjunction to post-verbal domain is due to the fact that this position is higher than the preverbal adjunction sites. The dislocated focus phrase would end up in a higher position than the contrastive topic phrase which would yield unacceptability. However remember that even in the absence of a contrastive topic phrase focus phrases cannot appear in the post-verbal domain. Hence single F marking analysis cannot account for Turkish data.

To recap, based on the interaction of information structural units with negation we found out that (i) negation can surface at more than one position because contrastive topics cannot surface in the scope of focus phrases but they surface under the scope of negation when the verb bears focus (ii) subject aboutness topic phrases and discourse anaphoric constituents following the focus phrase always appear within the scope of negation indicating that they remain in their base generated positions, (iii) object aboutness topic phrases and contrastive topic phrases undergo movement to Spec TP triggered by topic feature. In SOV order, non-movement analysis except for contrastive topic phrases is expected because in Turkish word order restrictions reflect a change in semantic interpretation. If the movement operation is semantically vacuous, there is no need for movement.

The next section discusses the experimental studies we conducted to find out how information structure shapes quantifier scope. The findings of these studies will further give us ideas about the phrase structure of information structural units in Turkish.

4.3 The interaction of information structural units with quantifier scope and binding

In this section we will focus on the interaction of quantifier scope with information structural units. The interaction of information structural units with binding possibilities has been investigated by Şener (2010), the information structural units being triggered within a context. In this study, we investigate whether the match of focus, topic or discourse anaphoric constituents with the universal quantifier and the indefinite yields a special interpretation or not. Scope interactions of the universal quantifier and the indefinite have been under discussion by various researchers

(Kural 1992, Göksel 1998, 2013, Kelepir 2001, Kennelly 2003, Öztürk 2005, Özge 2010, to cite a few).

We needed to conduct a further experimental study to check scope interpretations because firstly, in these studies the structures are not given in a context. Although the place of focus is indicated in some of these studies, when presented out of context, the judgments may depend on how information structural units are encoded by the speaker who interprets the scope interaction in that sentence. Secondly, a general conclusion with respect to scope interpretation for universal quantifier and indefinites cannot be drawn out of these studies because either the judgments vary or the tense marker on the verb or the case marker on the quantifier varies.

For example, in the following pairs of examples both of the researchers suggest that both surface and inverse scope is possible.

(27) Her hasta-ya bir doktor bak-ıyor. ∀∃ / ∃∀
every patient-DAT a doctor examine-PROG
'Every doctor is examining a patient.' (Özge 2010, 41)

(28) Her doktor-a bir hasta gid-iyor. ∀∃ / ∃∀
every doctor-DAT a patient go-PROG
'A patient goes to every doctor.' (Göksel 1998, 8)

Göksel (1998) suggests that the focus is on the preverbal subject; however, Özge (2010) does not point out the placement of focus. Özge (2010) further gives the following example, which differs from the example given in (27) with respect to case marker on the object and suggests that the surface scope which indicates distributive reading is not available in (29), but again he does not indicate the position of focus.

(29) Her hasta-yı bir doktor tedavi ed-iyor. ∀∃ / *∃∀
every patient-ACC a doctor treat-PROG
'Every doctor is treating a patient.' (Özge 2010, 41)

Finally, different inflectional markers on the verb yield confounding results. Özge (2010) suggests that the past tense marker on the verb makes wide scope for the indefinite impossible as in (30a), while this is possible when the verb bears progressive marker as in (30b).

(30) a. Her doktor bir hasta muayene et-ti. ∀∃ / *∃∀
every doctor a patient examine-PAST
'Every doctor examined a patient.'
b. Her doktor bir hasta-yı muayene ed-iyor. ∀∃ / ∃∀
every doctor a patient-ACC examine-PROG
'Every doctor is examining a patient.' (Özge 2010, 47)

However, Göksel (1998) suggest that inverse scope is still possible when the verb bears past marker as illustrated in (31).

(31) Her çocuk bir öğretmen-e çiçek ver-di. ∀∃ / ∃∀
every child a teacher-DAT flower give-PAST
'Every child gave flowers to a teacher.' (Göksel 1998, 1)

Note that in these examples there is either a bare indefinite object as in (30a) or the object phrases bear a different case marker as in (30b) and (31) which may have an effect on the judgments. Hence we conducted a more systematic study to find out the scope pattern and its interaction with information structural notions in Turkish. The next section takes a look at the details of the experimental study.

4.3.1 First study

With the aim of investigating how information structural notions shape the scope interactions of the universal quantifier *'her'* and the indefinite *'bir'*, we conducted a study restricting the data to SOV and OSV orders.

4.3.1.1 Participants and the judgment procedure

Eight informants took part in this experimental study. Five of them were male and three of them were female. All the informants were native speakers of Turkish living in İstanbul for at least 3 years. All the informants were naïve to the purpose of the study and none of them was a linguist. The age span for the speakers was between 22 and 60 at the time of the study.

In order to make sure that the participants understood what they were expected to do, at the beginning of the session a short practice session with 3 questions was done with each participant. The practice session included examples similar to the ones used in the experiment. The participants first read the context. Then they listened to the sound file for the target sentence, which was also given in written form on the computer screen. The participants could listen to the sound file as many times as they wanted. Finally, based on the context and the target sentence, they chose one and/or two of the options presented again in written form illustrated with pictures. In the presence of the researcher, the participants answered 51 questions in total. They were presented the data on a computer and they marked the option(s) they chose. The judgments were collected in a single session in a quiet place that the participants chose. The informants took breaks whenever they needed.

4.3.1.2 The stimuli

As illustrated with the examples in section 4.3, the progressive marker can yield inverse scope which is not possible with other inflectional markers for some speakers. Hence we used only the perfective marker *–mIş* on the verb. We did not use the inflectional marker *–DI* with the aim of having a more natural dialogue with hearsay functions which –mIş imparts. The objects bear either dative or accusative case and hence we can check whether case marking on the object affects scope relations or not.

For the SOV and OSV orders, we listed the following possible orders. The orders in Table 5 and 6 are based on the discussion in Chapter 2. The sentence initial constituents, which tell us what the rest of the sentence is about without marking contrast, are aboutness topic phrases. Contrastive topic phrases cannot follow focus phrases and focus phrases do not undergo movement and we get the list in Table 5 and 6. The only possible order which is not included in the list is the order of AT-CT-F.

The constituents bear a different information structural function in each case. The subject is the indefinite determiner *'bir'* and the object is the universal quantifier *'her'* in both SOV and OSV orders.

Table 5. SOV with *'bir'* – *'her'* Order

	S	O	V
a	[indefinite]AT	FOC[universal]acc/dat	[mış]DA
b	[indefinite]CT	DA [universal] acc/dat	[mış]FOC
c	[indefinite]AT	DA [universal] acc/dat	[mış]FOC
d	[indefinite]CT	FOC[universal]acc/dat	[mış]DA
e	[indefinite]CT	FOC[universal] acc/dat	[mış]FOC[140]
f	[indefinite]FOC	DA [universal] acc/dat	[mış]DA
g	[indefinite]FOC	FOC[universal] acc/dat	[mış]FOC

Table 6. OSV with *'her'*– *'bir'* Order

	O	S	V
a	CT[universal]acc/dat	[indefinite]FOC	[mış]DA
b	AT[universal]acc/dat	[indefinite]FOC	[mış]DA
c	CT[universal]acc/dat	[indefinite]DA	[mış]FOC
d	AT[universal]acc/dat	[indefinite]DA	[mış]FOC
e	CT[universal]acc/dat	[indefinite]FOC	[mış]FOC

We used the subtype of contrastive focus as the focus phrases in all sentences because it is easier to trigger contrastive focus in different contexts. Additionally, remember that in certain contexts, discourse-new constituents can be confused with contrastive topic phrases if additional information function of discourse-new constituents is not explicitly specified. Note that in our data non-verbal focus phrases are not restricted to the immediately preverbal position in SOV order. None of the participants in our study group found the structures in which non-verbal focus phrases appear in-situ to be unacceptable. However, in our study, we included data in which focus phrases also appear in the immediately preverbal position. Hence the results of the study can be generalized to the whole SOV and OSV data.

For each word order possibility we prepared three contexts. Two of these contexts were presented to the informants with two choices indicating surface and inverse

[140] Instead of assuming two independent focus projections we assume that in this word order and the order in (e) with OSV order the VP is marked with focus. The order in OSV (e) is an example of discontinuous focus projection.

scope interpretations as in (32-33). Each context was accompanied by pictures to make comprehension easier for the informants. The informants could choose one or both of the options. However, only surface scope could be chosen, even when inverse scope was possible, as surface scope is easier to comprehend. Hence with the third context, we forced the inverse scope interpretation and asked the informants whether the final sentence including the indefinite and universal quantifier was compatible with the context illustrated with the pictures as in (34).

In order to make sure that the informants got the right information structural units with the correct intonation, we recorded the target sentence. The informants listened to the target sentence after reading the context before making a choice. A few examples are given in (32-34) for OSV and SOV orders.

(32) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Bir de kumandayla çalışan oyuncak helikopter götürmüşler. Sen biliyor musun, piknikten sonra uçurtmaları öğretmenler mi yoksa öğrenciler mi uçurmuş?* *'Some of the teachers at our school went on a picnic with three students after school. The students who took advantage of the wind brought kites with them to fly. Additionally they brought helicopters that work with remote controllers. Do you know, which ones, the students or the teachers flew the kites?'*

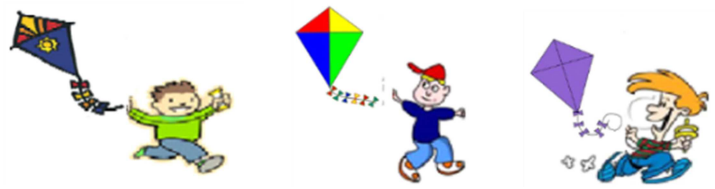
1.wav

	universal_object$_{AT}$		indefinite_subject$_{F}$		verb$_{DA}$
B: *Valla, duyduğum kadarıyla*	*her*	*uçurtma-yı*	*bir*	*öğrenci*	*uçur-muş.*
	every	kite-ACC	a	student	fly-PAST

'Well, from what I heard, a student flew every kite.'

(a) Her öğrenci bir uçurtma uçurmuş.

'Every student flew a kite.'



(b) Sadece bir öğrenci her uçurtmayı uçurmuş.

'Only a student flew every kite.'

As illustrated in (32) above, the focus is on the preverbal subject and it is triggered by an alternative question. Within the subject phrase it is the restriction not the quantifier that bears contrast and the students are contrasted with the teachers mentioned in the previous sentence. The option (a) represents the surface scope interpretation, with the distributive reading. The option (b) is the inverse scope interpretation with non-distributive reading. Following the introductory text, the informants listened to the audio file. Then they read the target sentence and chose one or both of the options for the given context.

The example in (33) is similar to (32) in that both the inverse and surface scope readings are illustrated with pictures as (a) and (b) options.

(33) A: *10 kişilik Anamurlu ve Antalyalı gruplar, yurt dışına çalışmaya gitmişti. Çalışanların iş performansına önem veren patron her işçiyi denetlemesi için amirler görevlendirmiş. Amirler işçilerin çalışmasını kontrol ediyor ve puan veriyormuş. İşçilerimiz çalıştıkları fabrikadaki Almanyalı ve Hollandalı amirlerden farklı tepkiler almışlar. Kimi amir çalışmalarını beğenmiş kimisi beğenmemiş. Sen biliyor musun, Hollandalı amirler Antalyalı mı yoksa Anamurlu işçileri mi övmüş mesela?*

‘Groups of ten from Anamur and Antalya went abroad to work. The boss, who considered the performance of the workers important, gave responsibility to the directors to supervise each of the workers. The directors checked the workers and gave them points. Our workers got different reactions from the directors from Germany and Holland. Some of the directors appreciated their work some did not. Do you know, which ones, the Dutch directors praised the workers from Antalya or from Anamur for instance?’

1.wav

B: *Valla Hollandalıları bilmem, ama*

indefinite_subject$_{CT}$	universal_object$_{FOC}$	verb$_{DA}$
bir Almanyalı amir	*her Anamurlu-yu*	*öv-müş.*
a German director	every person.from.A.-ACC	praise-PAST

‘Well, I do not know about the Dutch but, a German director praised every people of Anamur.’

(a) Böylece her Almanyalı amir farklı bir Anamurlu işçiyi övmüş oldu.

‘So in this way, every German director praised a different worker from Anamur’

(b) Tüm Anamurlu işçileri tek bir Almanyalı amir övmüş oldu.

‘Only one German director praised all the workers from Anamur.’

In (33), the focus phrase is triggered by an alternative question while the subject contrastive topic marks a topic shift. Within the indefinite subject phrase and the universal object phrase, it is again the restriction that bears contrast not the quantifiers. The option in (a) gives us the inverse scope interpretation making distributive reading available. The option in (b) is the representation of surface scope for the indefinite determiner-universal quantifier order. Again the informants could choose one or both of the options.

Now let us take a look at last type of the context we prepared for this study illustrated in (34) below. The subject contrastive topic marks a shift in conversation, the object is a discourse anaphoric constituent and the verb is a corrective focus. Following the introductory text and the target sentence the surface scope interpretation is easy to get. Hence we forced the inverse scope with the pictures following the target sentence.

(34) A: *İzmir'de düzenlenecek konferans için Ankara'dan 5 bakan gelmiş. İstanbul ve Ankara'dan getirilen 10 kişilik güvenlik ekibi yoğun güvenlik önlemleri almış. Bakanların her biri kendi özel arabasını kullanmış. Güvenlik için saat tam 9'da her biri binaya farklı kapılardan giriş yapmışlar. Duyduğum kadarıyla, İstanbullu güvenlik görevlileri bakanlara hiç yardımcı olmamışlar.*

'For the conference to be held in İzmir, 5 ministers came from Ankara. The security guard crew who came from İstanbul and Ankara took security precautions. Each of the ministers used their own cars. For security purposes, they entered the building at 9 o'clock sharp but from different doors. From what I heard, the security guards from İstanbul did not help the ministers.'

1.wav

B: *İstanbullu güvenlik görevlilerini bilmiyorum ama saat tam 9'da*

indefinite_subject$_{CT}$				universal_object$_{DA}$	verb$_{FOC}$
bir	*Ankaralı*	*güvenlik*	*görevlisi*	*her*	*bakan-a*	*eskortluk et-miş.*
a	person from A.	security	guard	every	minister-DAT	escort-PAST

'I do not know about the security guards from İstanbul but at 9 o'clock sharp a security guard from Ankara escorted every minister.'

A kapısı
'door A'
Savunma bakanı
'defense minister'

Güvenlik görevlisi:
'security guard'
Sadık Şen

B kapısı
'door B'
Dış İşleri bakanı
'foreign affairs minister'

Güvenlik görevlisi:
'security guard'
İbrahim Mutlu

C kapısı
'door C'
Sağlık bakanı
'health minister'

Güvenlik görevlisi:
'security guard'
Şenol Terzi

D kapısı
'door D'
Bilişim ve teknoloji bakanı
'informatics and technology minister'

Güvenlik Görevlisi:
'security guard'
Mustafa Biçer

E kapısı
'door E'
İç İşleri bakanı:
'minister of internal affairs'

Güvenlik Görevlisi:
'security guard'
Polat Uslu

duruma uygun [ ]
'appropriate to the context'

duruma uygun değil [ ]
'not appropriate to the context'

The ministers enter the building at the same time but from different doors and a single security guard cannot escort each minister. As illustrated in the pictures, for each minister a different security guard should wait. We asked the informants whether the pictures were appropriate for the given context or not.

For each order indicated in Table 5 and 6, these three contexts were prepared. We had 21 contexts for SOV order and 15 contexts for OSV order. The

contexts were presented in random order with additional 15 filler contexts (see Appendix C for further examples from the structures used in the first study).

4.3.1.3 Results

In SOV order, we had 168 contexts in total collected from 8 informants. We found that in SOV order, irrespective of the position of the focus phrase, even when the inverse scope reading is forced as in (34), only surface scope was preferred in 167 contexts out of 168 contexts. As inverse scope interpretation is restricted to a single instance and no other informant reported inverse scope reading for any of the other structures we do not count on this single instance in (f) as inverse scope interpretation.

Table 7. Judgments for SOV Order When the Contrast is on the Restriction

	S	O	V	
a	[indefinite]AT	FOC[universal]acc/dat	[mış]DA	24 surface scope
b	[indefinite]CT	DA [universal] acc/dat	[mış]FOC	24 surface scope
c	[indefinite]AT	DA [universal] acc/dat	[mış]FOC	24 surface scope
d	[indefinite]CT	FOC[universal]acc/dat	[mış]DA	24 surface scope
e	[indefinite]CT	FOC[universal] acc/dat	[mış]FOC	24 surface scope
f	[indefinite]FOC	DA [universal] acc/dat	[mış]DA	23 surface scope
g	[indefinite]FOC	FOC[universal] acc/dat	[mış]FOC	24 surface scope

In OSV order, scope can be read off the surface ordering of the quantificational elements and the universal quantifier can take scope over the indefinite. In contrast to SOV order, inverse scope is also possible with OSV order. Even with the contexts in which inverse scope is not forced, the indefinite can take scope over the universal quantifier. Out of 120 contexts, in 51 cases inverse scope was reported.[141] However,

[141] We observed that male speakers in our group tend to allow inverse scope more often than female speakers. In the second and third studies however this distinction is not observed.

there is no coherent relation between the position of focus and the cases in which inverse scope is possible. Each order illustrated in Table 8 below has been interpreted as allowing inverse scope without an exception.

Table 8. Judgments for OSV Order When the Contrast is on the Restriction

	O	S	V	
a	$_{CT}$[$_{universal}$]$_{acc/dat}$	[$_{indefinite}$]$_{FOC}$	[$_{mış}$]$_{DA}$	11 inverse scope
b	$_{AT}$[$_{universal}$]$_{acc/dat}$	[$_{indefinite}$]$_{FOC}$	[$_{mış}$]$_{DA}$	12 inverse scope
c	$_{CT}$[$_{universal}$]$_{acc/dat}$	[$_{indefinite}$]$_{DA}$	[$_{mış}$]$_{FOC}$	8 inverse scope
d	$_{AT}$[$_{universal}$]$_{acc/dat}$	[$_{indefinite}$]$_{DA}$	[$_{mış}$]$_{FOC}$	10 inverse scope
e	$_{CT}$[$_{universal}$]$_{acc/dat}$	[$_{indefinite}$]$_{FOC}$	[$_{mış}$]$_{FOC}$	10 inverse scope

As pointed out earlier, in all the contexts within the focus phrase the contrast is on the restriction not on the quantifier itself. With the aim of making sure that the position of 'contrast' within the focus phrase does not have an effect on the results, we conducted a follow up study with the same group which is elaborated in the next section.

4.3.2 Second study

For this follow up study, we used only the *'kite'* and *'worker'* context as the multiple choice question type. Hence we had 14 SOV, 10 OSV, and 8 filler contexts for the second step of the study. The participants and the recording procedure were the same as those in the first study.

4.3.2.1 The stimuli

As illustrated in (35-36), within the focus phrase the contrast is put on the quantifier itself rather than on the restriction. The object contrastive topic with the universal quantifier marks a shift. The subject phrase bears focus and the contrast is on the

indefinite *'bir'* not on the restriction. The verb is discourse anaphoric, given in the previous context.

(35) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Bazıları da kumandayla çalışan oyuncak helikopter götürmüşler. Piknikten sonra öğretmenler de çocuklarla birlikte eğlenmişler. Helikopterleri bütün öğrenciler sırayla uçurmuşlar. Böylece helikopterlerin her birini 3 öğrenci de uçurmuş.*

'Some of the teachers at our school went on a picnic with three students after school. Taking advantage of the wind, the students brought their kites with them. Some of them brought helicopters that work with remote controllers. After the picnic, the teachers also had fun with the students. The students all flew the helicopters one by one. And hence all three students flew each of the helicopters.'

6.wav

B: *Valla helikopterleri bilmiyorum ama,*

universal_object$_{CT}$		indefinite_subject$_{FOC}$	verb$_{DA}$
her	*uçurtma-yı*	*bir öğrenci*	*uçur-muş.*
every	kite-ACC	a student	fly-PAST

'Well, I don't know about the helicopters but, a student flew every kite.'

(a) Her öğrenci bir uçurtma uçurmuş.

'Every student flew a kite.'

(b) Sadece bir öğrenci her uçurtmayı uçurmuş.

'Only a student flew every kite.'

In the following example, in the target sentence, the sentence initial constituent tells us what the rest of the sentence is about without marking a shift and hence it is an aboutness topic phrase which is discourse-given. The object focus phrase surfaces with the universal quantifier which contrasts with the indefinite *'bir'* in the previous context.

(36) A: *10 kişilik Anamurlu grup Almanya'ya çalışmaya gitmişti. Çalışanların iş performansına önem veren patron her işçiyi denetlemesi için amirler görevlendirmiş. Amirler işçilerin çalışmasını kontrol ediyor ve puan veriyormuş. Anamurlular gece gündüz çalışmışlar. Bir Anamurlu olarak Anamurlu işçilerin övülmesini çok isterdim ama duyduğum kadarıyla bir Almanyalı amir sadece bir Anamurlu işçiyi övmüş.*
'A group of ten people from Anamur had gone to Germany to work. The boss, who considered the performance of the workers important, gave responsibility to the directors to supervise each of the workers. The directors checked the workers and gave them points. The people of Anamur worked day and night. As I am from Anamur, I would have liked the workers from Anamur to be praised but as far as I have heard a German director praised only one of the workers from Anamur.'

13.wav

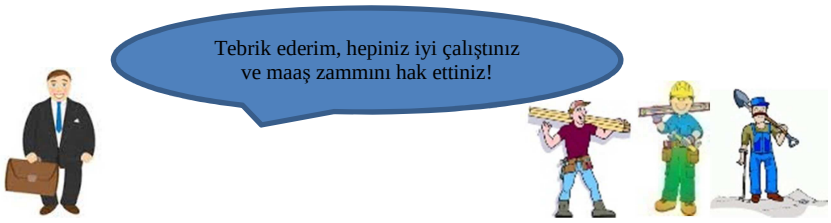
	indefinite_Subject$_{AT}$	universal_Object$_{FOC}$	verb$_{DA}$
B: *Yoo hayır,*	*bir Almanyalı amir*	*her Anamurlu-yu*	*öv-müş.*
	a German director	every person.from.A.-ACC	praise-PAST

'No, a German director praised every people of Anamur.'

(a) Böylece her Almanyalı amir farklı bir Anamurlu işçiyi övmüş oldu.
'In this way, every German director praised a different worker from Anamur'

(b) Tüm Anamurlu işçileri tek bir Almanyalı amir övmüş oldu.

'Only one German director praised all the workers from Anamur.'



The next section illustrates the results of this follow up study.

4.3.2.2 Results and discussion

The results of the study indicated the same results with the first study. In SOV order out of 112 contexts, in none of the cases is inverse scope realized and the indefinite subject takes scope over the universal object without an exception.

In OSV order, the universal object takes scope over the indefinite subject yielding surface scope. In contrast to SOV order, out of 80 contexts, in 47 cases inverse scope is also realized in OSV order.

Table 9. Judgments for OSV Order When the Contrast is on the Quantifier

	O	S	V	
a	$_{CT}$[universal]$_{acc/dat}$	[indefinite]$_{FOC}$	[mış]$_{DA}$	12 inverse scope
b	$_{AT}$[universal]$_{acc/dat}$	[indefinite]$_{FOC}$	[mış]$_{DA}$	10 inverse scope
c	$_{CT}$[universal]$_{acc/dat}$	[indefinite]$_{DA}$	[mış]$_{FOC}$	8 inverse scope
d	$_{AT}$[universal]$_{acc/dat}$	[indefinite]$_{DA}$	[mış]$_{FOC}$	9 inverse scope
e	$_{CT}$[universal]$_{acc/dat}$	[indefinite]$_{FOC}$	[mış]$_{FOC}$	8 inverse scope

However, as illustrated in the table above, there is still no coherent mapping between the position of information structural units and the inverse scope interpretation. Each case illustrated in Table 9 has been marked as allowing inverse scope.[142]

[142] The two studies have shown that there is not a big difference when we put the contrast on the quantifier or on the restriction within a focus phrase. We suggest that this can be due to focus projection as proposed by Selkirk (1995).

In the Turkish linguistics literature, restricting the data to SOV and OSV orders, it has been noted that scope can be read off the surface order of the quantified expressions (Kural 1992, Göksel 1998, Kelepir 2001, Özge 2010) based on which we can categorize Turkish as a scope rigid language. We can briefly summarize the findings of our study in the following way:

(37) a. *bir* ‘a’ > *her* ‘every’ : ∃∀/*∀∃
b. *her* ‘every’ > *bir* ‘a’ : ∀∃ / ∃∀

When the indefinite *‘bir’* precedes the universal quantifier as in (37a) only surface scope is possible. The universal quantifier takes scope over the indefinite *‘bir’* only when it surfaces in a preceding position in the sentence. This behavior of Turkish is in contrast to English type languages in which the linear order of the quantified expressions does not always mark the scope possibilities as in (38) below.

(38) Someone loved every girl. ∃∀ / ∀∃

The wide scope of the indefinite over the universal quantifier is predicted based on the linear ordering of the subject and object phrases. As for the inverse scope, where the object universal quantifier takes wide scope over the subject indefinite, LF raising analysis is suggested.

The difference between Turkish and English is in line with the observation of Wurmbrand (2008:5), who suggests that “free word order entails rigid scope, rigid word order entails flexible scope.” The surface scope in (37a-b) is expected but wide scope interpretation of the indefinite over the universal is not expected in (37b). The question raised at this point is whether we can analyze the wide scope interpretation

(1) a. F-marking of the head of a phrase licenses F-marking of the phrase (vertical focus projection)
b. F-marking of an internal argument of a head licenses the F-marking of the head (horizontal focus projection)

of the indefinite over the universal as an instance of quantifier raising at LF in line with English type languages or not. In the literature indefinites have been noted to have the exceptional behavior of taking scope out of islands such as complex noun phrases (39) and conditional clauses (40), which is not possible with other quantifiers (Fodor and Sag 1982).

(39) a. John overheard the rumor that each student of mine had been called before the dean.
b. John overheard the rumor that a student of mine had been called before the dean.
(Fodor and Sag 1982, pg. 369)

In (39a) it is not possible for the universal quantifier to take scope over the head noun and hence we cannot interpret that 'for each student of mine John overheard the rumor that s/he had been called before the dean.' In (39b) on the other hand, the indefinite can take scope over the head noun and the interpretation is that 'there is a student of mine and John overheard that s/he had been called before the dean.'

(40) a. If each friend of mine from Texas died in the fire, I would have inherited a fortune.
b. If a friend of mine from Texas died in the fire, I would have inherited a fortune.
(Fodor and Sag 1982, pg. 369-370)

Only the indefinite in (40b) can take scope out of the antecedent of the conditional and we get the interpretation that 'there is a friend of mine from Texas and if he died in the fire, I would have inherited a fortune.'

Reinhart (1997) suggests that this is not an exceptional scope data but inverse scope interpretation is available due to the existential operator over choice

functions, which is above the island domains.[143] When the operator variable chain is formed with the indefinite variable in the island domain, the indefinite is interpreted to have wide scope over the island domain. The indefinite does not move out of the island domain, the choice-function existential operator can take scope in more than one position and due to this operator indefinites, can take scope even out of island domains.[144]

Based on this analysis, Kelepir (2001) suggests that in Turkish accusative marked indefinites can have wide scope over some other quantifiers because the existential operator over choice functions can project over the other operators. There is not a movement operation; instead, the operator-variable chain allows the indefinite to be interpreted higher in the structure. With non-marked indefinites on the other hand, the existential operator is projected lower in the structure and hence non-marked indefinites cannot take scope over the other quantificational elements. For accusative marked indefinites, the existential operator is proposed to be over *v*P or TP, and for non-marked indefinites it is proposed to be over *v*P domain.

The question is whether we have a similar case with indefinites in (34b) and whether the indefinite subject is also interpreted to have wide scope over the dislocated universal object due to existential operator over choice functions. Meltem Kelepir (p.c) suggested that in order to make sure that inverse scope in (37b) is really

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[143] With indefinites there is a set over which a choice is made and this creates a function. One of the members in the set is chosen and hence the name choice-function is given. There is special existential operator over choice functions as ∃f. In the structure where you can insert ∃f is flexible.
(1) a. ∃f > conditional operator = wide scope for the indefinite
b. conditional operator > ∃f = narrow scope for indefinite
In (a), when the existential operator is above the conditional operator, the indefinite takes wide scope, otherwise it takes narrow scope as in (b).

[144] Kratzer (1998) and Matthewson (1999) on the other hand suggest that indefinites are ambiguous between a choice function interpretation and a quantificational interpretation. Existential quantifier over choice functions (∃f) is introduced into the structure at the top level and has wide scope over the other quantificational elements. On the other hand, the existential quantifier (∃) is introduced at lower levels and hence it takes lower scope under the other quantificational elements.

not due to operator generated high in the structure one should check the scope relations in OSV order when the dislocated object is the indefinite and the subject is the universal quantifier. If the universal subject can take scope over the indefinite object, we can talk about inverse scope for Turkish as well. However, if the universal scope cannot take wide scope we can safely conclude that Turkish is a scope rigid language. We conducted a third experimental study to answer these questions.

4.3.3 Third study

4.3.3.1 The stimuli

For this last study, we used only the *'kite'* context as the multiple choice question type and the *'security guard'* context to force the inverse scope. Hence we had 10 OSV contexts for the last step of the study and 5 filler contexts. The participants and the recording procedure were the same as those in the first two studies. The order of the information structural units is given in Table 10 below.

Table 10. OSV with *'bir'* – *'her'* Order

	O	S	V
a	$_{CT}$[$_{indefinite}$]$_{acc/dat}$	[$_{universal}$]$_{FOC}$	[$_{mış}$]$_{DA}$
b	$_{AT}$[$_{indefinite}$]$_{acc/dat}$	[$_{universal}$]$_{FOC}$	[$_{mış}$]$_{DA}$
c	$_{CT}$[$_{indefinite}$]$_{acc/dat}$	[$_{universal}$]$_{DA}$	[$_{mış}$]$_{FOC}$
d	$_{AT}$[$_{indefinite}$]$_{acc/dat}$	[$_{universal}$]$_{DA}$	[$_{mış}$]$_{FOC}$
e	$_{CT}$[$_{indefinite}$]$_{acc/dat}$	[$_{universal}$]$_{FOC}$	[$_{mış}$]$_{FOC}$

The following examples illustrate how the contexts were presented to the informants. In (41), the contrastive topic with the indefinite *'bir'* marks a shift in conversation. The universal quantifier that surfaces with the focused subject phrase contrasts with the indefinite *'bir'* given in the previous context.

(41) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Bir de kumandayla çalışan oyuncak helikopter götürmüşler. Piknikten sonra sadece bir öğrenci helikopter uçurmuş.*

'Some of the teachers at our school went on a picnic with three students after school. Taking advantage of the wind, the students brought their kites with them. They also brought helicopters that work with remote controllers. After the picnic, only one of the students flew the helicopter.'

2.wav

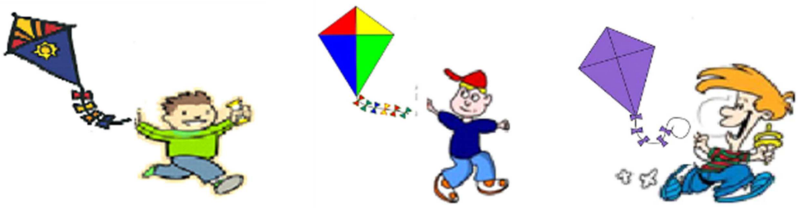
B: *Valla helikopterleri bilmiyorum ama,*

indefinite_object$_{CT}$	universal_subject$_{FOC}$	verb$_{_DA}$
bir uçurtma-yı	*her öğrenci*	*uçur-muş.*
a kite-ACC	every student	fly-PAST

'Well, I don't know about the helicopters but every student flew a kite.'

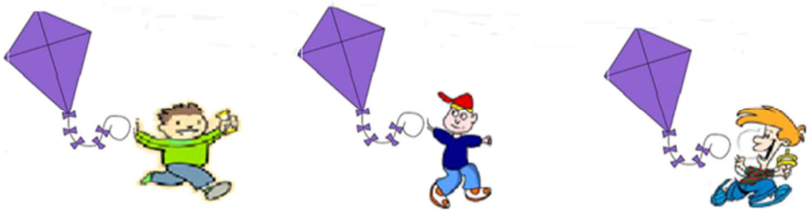
(a) Her öğrenci farklı bir uçurtmayı uçurmuş.

'Every student flew a different kite.'



(b) Sadece bir uçurtmayı bütün öğrenciler uçurmuş.

'All the students flew only one of the kites.'



In (42), the object contrastive topic marks a shift for the topic under discussion. The universal quantifier surfaces with the focused subject and again contrasts with the indefinite *'bir'* in the previous context. In this example, the verb also bears focus. In order to force inverse scope, we pointed out in the context that a security guard was

responsible for each minister who entered the building at the same time but from different doors.

(42) A: *Başbakan konferansın yapılacağı binaya 3 bakanla birlikte gelmiş. 2 tane İstanbul'dan 2 tane de Ankara'dan ek güvenlik görevlisi getirmişler güvenlik önlemi almak için. Başbakan makam aracıyla gelmiş ve D kapısından giriş yapmış. Bakanların her biri ise kendi özel arabasını kullanmış. Bakanların her birinden bir güvenlik görevlisi sorumluymuş. Bakanların hepsi binaya saat tam 09.00'da ve farklı farklı kapılardan giriş yapmışlar. Başbakana bir tane bile güvenlik görevlisi eskortluk etmemiş.*

'The president came to the building in which the conference was to be held with three ministers. They had brought two additional security guards from Istanbul and two security guards from Ankara for safety. The president came with his official car and entered the building from the door D. As for the ministers they used their private cars. A security guard was responsible for each of the ministers. All the ministers entered the building at 9 o'clock sharp and from different doors. Not even one of the security guards escorted the president.'

8.wav

	indefinite_obj$_{CT}$	universal_subject$_{FOC}$	verb$_{FOC}$
B: *Başbakanı bilmem ama*	*bir bakan-a*	*her güvenlik görevlisi*	*eskortluk et-miş.*
	a minister-DAT	every security guard	escort make-PAST

'I do not know about the president but every security guard escorted a minister.'

A kapısı	*B kapısı*	*C kapısı*
'door A'	'door B'	'door C'
Savunma bakanı	*Dış İşleri bakanı*	*Sağlık bakanı*
'defense minister'	'foreign affairs minister'	'health minister'
		
Güvenlik görevlisi:	*Güvenlik görevlisi:*	*Güvenlik görevlisi:*
'security guard'	*'security guard'*	*'security guard'*
Sadık Şen	*İbrahim Mutlu*	*Şenol Terzi*

duruma uygun [ ]
'appropriate to the context'

duruma uygun değil [ ]
'not appropriate to the context'

The next section illustrates the results of the study.

4.3.3.2 Results

There were 16 judgments per order and 80 orders in total. Only the orders in (b-c-d) in Table 11 were found to allow inverse scope interpretation. Inverse scope for the order in (c) was reported in 3 contexts with accusative marked objects and in 2 contexts with dative marked objects. The order in (d) in was reported as allowing inverse scope in 2 contexts with accusative marked objects and in 3 contexts with dative marked contexts.[145] The order in (b) was reported to allow inverse scope with an accusative marked object only in 1 context. Although only one of the informants found this structure to be ambiguous between distributive and non-distributive reading, we take this single instance as significant because there are some other instances that are found to allow inverse scope interpretation.

Table 11. OSV *'bir'* > *'her'* Order When the Contrast is on the Quantifier

	O	S	V	
a	CT[indefinite]acc/dat	[universal]FOC	[mış]DA	16 surface scope
b	DA[indefinite]acc/dat	[universal]FOC	[mış]DA	1 inverse scope
c	CT[indefinite]acc/dat	[universal]DA	[mış]FOC	5 inverse scope
d	DA[indefinite]acc/dat	[universal]DA	[mış]FOC	5 inverse scope
e	CT[indefinite]acc/dat	[universal]FOC	[mış]FOC	16 surface scope

Note that there are not as many inverse scope judgments as in Table 8 and 9. Additionally, inverse scope interpretation is restricted to three of the orders only. In the next section, we will try to find a syntactic account that will capture not only the scope data in the current study but also the anaphor-binding data in Şener (2010). Each experimental study will be discussed in detail.

[145] Based on these results we conclude that different case markings on the object do not have an effect on scope interpretation.

4.4 The syntactic mechanism

4.4.1 Quantifier scope and binding in SOV with indefinite-universal quantifier order

Taking the discussion on negation which led to the structure given in (20) as the background, we will try to explain the syntactic representation of information structural units in Turkish. We will start with the binding data proposed by Şener (2010) as illustrated in 43(a-c) with our addition of (d).

(43) a.* [[…vbl…]$_{subj}$]$_{DA}$ >> [QP$_{obj}$]$_{FOC}$ >> V

A: Dünkü partide yalnızca Pelin'in annesi öpmüş Pelin'i. Doğru mu?

'I hear that at the party yesterday only Pelin's mother kissed Pelin. Is that right?'

B: Valla bildiğim kadarıyla…

'frankly, as far as I know……

*[pro$_i$ anne-si] herkes-i$_i$ öp-tü

mother-3SGPOSS-NOM everybody-ACC kiss-PAST

'Literally: Everyone, his/her mother kissed.'

b. * [[…vbl…]$_{subj}$]$_{CT}$ >> [QP$_{obj}$]$_{DA}$ >> [V]$_{FOC}$

A: Dünkü törende öğretmenler her öğrenciyi azarlamış. Doğru mu?

'I hear that at the ceremony yesterday, the teachers scolded every student. Is that right?'

B: Valla öğretmenlerden haberim yok ama…

'Frankly I do not know about the teachers but….

*[*pro*$_i$ danışman-ı] *herkes-i$_i$* tebrik et-ti

mentor-3SGPOSS-NOM everybody-ACC congratulate do-PAST

tören-de

ceremony-LOC

'Literally: Everyone$_i$ was congratulated by his/her mentor$_i$ at the ceremony.'

c. [[…vbl…]$_{subj}$]$_{DA}$ >> [QP$_{obj}$]$_{DA}$ >> [V]$_{FOC}$

A: Dünkü törende öğretmenler her öğrenciyi azarlamış. Doğru mu?

'I hear that at the ceremony yesterday, the teachers scolded every student. Is that right?'

B: Hayır azarlamadı. Tam tersine…

'No they did not. On the contrary……

[*pro*$_i$ öğretmen-i] her öğrenci-yi$_i$ tebrik et-ti

teacher-3SGPOSS-NOM every student-ACC congratulate do-PAST

tören-de

ceremony-LOC

'Literally: Every student$_i$ was congratulated by his/her teacher$_i$ at the ceremony.'

d. * [[…vbl…]$_{subj}$]$_{CT}$ >> [QP$_{obj}$]$_{FOC}$ >> V

A: Dünkü törende öğretmenler sadece bazı öğrencileri tebrik etmişler. Doğru mu?

'I hear that at the ceremony yesterday, the teachers congratulated only some of the students. Is that right?'

B: Valla öğretmenlerden haberim yok ama…

'Frankly I do not know about the teachers but….

*[*pro*$_i$ danışman-ı] herkes-i$_i$ tebrik et-ti.

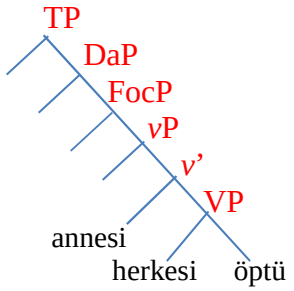
mentor-3SGPOSS-NOM everybody-ACC congratulate do-PAST

'Literally: Everyone$_i$ was congratulated by his/her mentor$_i$.'

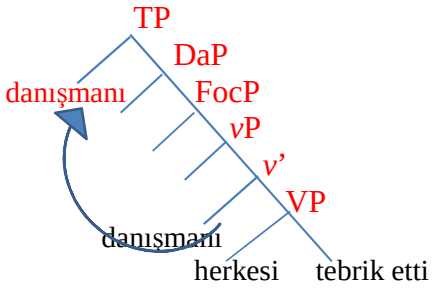
Out of four possibilities only (43c) yields a grammatical output and the object antecedent can bind the subject variable.

Firstly, we suggest that in SOV order in Turkish, except for the movement of the contrastive topic phrases, the constituents do not move up to higher projections as these movements will be semantically vacuous, giving us the same word order with no semantic import. We suggest that movement applies when it is not otherwise possible to convey a semantic interpretation. Information structural units form an Agree relation with the relevant heads via long distance Agree. The interaction of information structural units with negation also gives support to this analysis in that subject aboutness topic phrases and the discourse anaphoric constituents following the focus phrase always remain within the scope of negation.

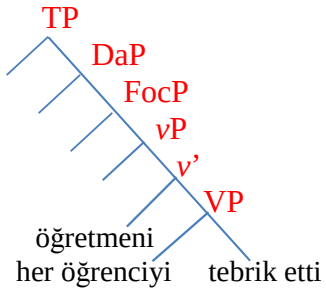
(43a) * $[[vbl]_{subj}]_{DA} >> [QP_{obj}]_{FOC} >> V$



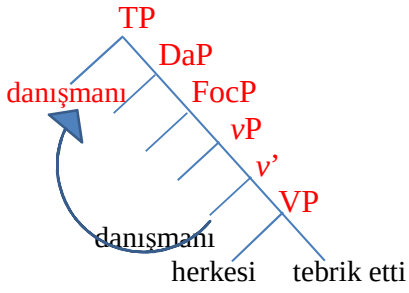
(43b) $*[[vbl]_{subj}]_{CT} >> [QP_{obj}]_{DA} >> [V]_{FOC}$



(43c) $[[vbl]_{subj}]_{DA} >> [QP_{obj}]_{DA} >> [V]_{FOC}$



(43d) * $[[vbl]_{subj}]_{CT} >> [QP_{obj}]_{FOC} >> V$



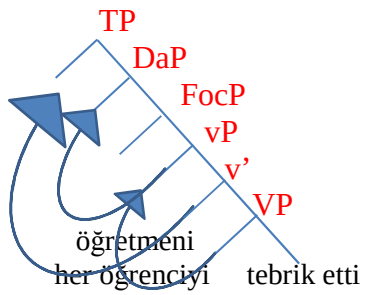
In (43a) the discourse anaphoric constituent *annesi 'mother.poss'* remains in-situ. The discourse anaphoric constituent and the focus phrase *herkesi 'everybody'* Agree with the Da^{o} and Foc^{o} respectively and check the uninterpretable features of these heads. As the constituents remain in-situ, binding is impossible. In (43b) and (43d), the contrastive topic phrase *danışmanı 'mentor.poss'* Agrees with the T^{o} and checks its uninterpretable topic and contrast features and moves to Spec TP in one fell swoop. The discourse anaphoric and focus constituents check the uninterpretable features of the Da^{o} and Foc^{o} via Agree and they remain in-situ. Hence, the discourse anaphoric constituent in (43b) and the focus constituent in (43d) cannot bind the contrastive topic phrase *danışmanı 'mentor.poss'* as they are under the c-command domain of the contrastive topic.

The grammatical structure in (43c) then poses a problem for this analysis. If both of the discourse anaphoric constituents check the uninterpretable features of the higher projections via Agree and remain in-situ, how is the subject anaphor

öğretmeni 'teacher.poss' bound by the object antecedent *her öğrenciyi 'every student'*?

Now we will try another alternative derivation. Firstly, within our analysis the sentence initial discourse anaphoric constituent in (43c) is the aboutness topic, which does not mark a shift for the discussion under question. Let us assume that except for focus phrases, all the information structural units, the contrastive topic, aboutness topic phrases and discourse anaphoric phrases, move to the related functional projections. Although we propose a different internal structure, this line of a movement analysis is similar to the analysis of Şener (2010) and it can capture the data in (43c). The aboutness topic phrase *öğretmeni 'teacher.poss'* moves to Spec TP from where it can reconstruct back to its base generated position as the movement is not a scope taking operation in contrast to the movement of a contrastive topic movement. The discourse anaphoric constituent *her öğrenciyi 'every student'* also moves to Spec DA and from this position it can c-command the lowest copy of the subject.

(43c) $[\ [vbl]_{subj}]_{AT\ >>}\ [\ QP_{obj}\ ]_{DA\ >>}\ [V]_{FOC}$

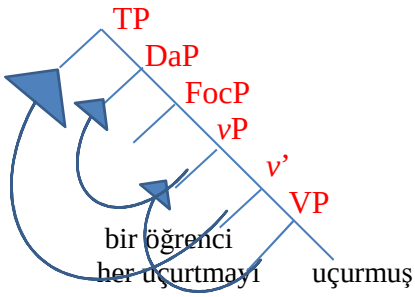


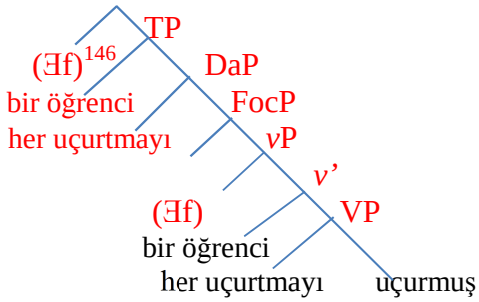
The advantage of this analysis is that we can account for the whole variable binding data. In (43b), both the contrastive topic and the discourse anaphoric constituent move to the relevant functional projections. However, binding is not possible, which indicates that contrastive topic cannot reconstruct back to its base generated position

as already noted by Şener (2010). Recall that the semantic compositionality of contrastive topic is dependent on focus phrases. Hence we suggest that the movement of contrastive topic over focus phrase is a scope taking operation with a semantic import and reconstruction is not expected. In (43a) and (43d), the focus phrase which does not move to FocP following the feature checking mechanism cannot take the dislocated discourse anaphoric *annesi 'mother.poss'* and contrastive topic phrase *danışmanı 'mentor.poss'* under it is c-command domain.

However, this analysis runs into problems with scope data as illustrated in (44c) below. As is the case in (43c), the aboutness topic *bir öğrenci 'every student'* moves to Spec TP and it is also bound by the existential operator over choice functions over TP projection as illustrated in the second representation. The discourse anaphoric constituent *her uçurtmayı 'every kite'* moves to Spec DA as illustrated in the first representation. As both of the operations are not scope taking operations, they can reconstruct back to their base generated positions, as illustrated in the second representation. The existential operator over choice functions can adjoin to *v*P projection. If the indefinite subject can reconstruct back to its base generated position and it is c-commanded by the discourse anaphoric constituent in Spec DaP, why is inverse scope not possible in (44c)?

(44c) bir öğrenci$_{AT}$ her uçurtma-yı$_{DA}$ uçur-muş$_{F}$
a student every kite-ACC flew-PAST
'A student flew every kite.'





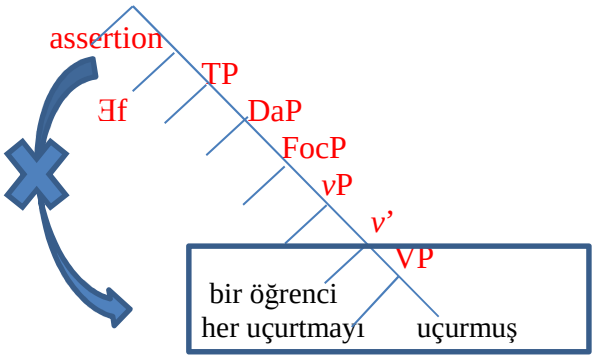
To solve this problem we turn to our first suggestion. As both the quantifier scope and binding data reveal, there is no movement in SOV order except for contrastive topic movement, which cannot surface within the c-command domain of focus. As for the contrast between (43c) binding data and (44c) quantifier scope data, note that in both cases it is the verb that bears focus. With quantifier scope data in (44c) there is an additional existential operator over choice functions above TP projection. We suggest that when the verb bears focus the whole clause is under the scope of an assertion operator above the existential operator, which emphasizes the truth value of the whole proposition. In the binding data in (43c), there is no movement and via the assertion operator there is a flattening effect in the *v*P domain which makes the constituents in this domain have mutual c-command over each other.[147] Hence binding becomes possible.[148]

[146] In order to show the ambiguity for LF representations, we do not draw the same tree structure twice with the existential operator over choice functions adjoining either over *v*P or TP projections. Instead we indicate the existential operators over choice functions at possible adjunction sites with parenthesis indicating that for one LF structure it is over *v*P and in the other possible derivation it is over TP.

[147] The assertion operator surfaces when focus is on the verb and has a flattening effect on the *v*P domain. Hence one can suggest *v*P not TP as the attachment site for this operator. This operator does not have a direct effect on the TP domain but the interpretation of the constituents is also based on the situational TP domain and hence we propose TP as the attachment site of this operator.

[148] Kiss (2008) makes a similar analysis for Hungarian post-verbal constituents. Although the word order is fixed in the preverbal domain it is not so in the post-verbal domain. Binding and scope interpretations which are not possible in the preverbal domain are licit in the post-verbal domain in Hungarian.

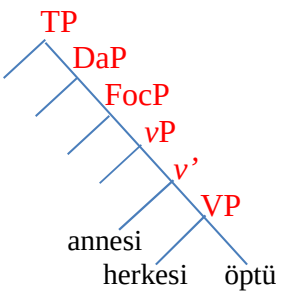
(44c) bir öğrenci$_{AT}$ her uçurtma-yı$_{DA}$ uçur-muş$_{F}$
a student every kite-ACC flew-PAST
'A student flew every kite.'



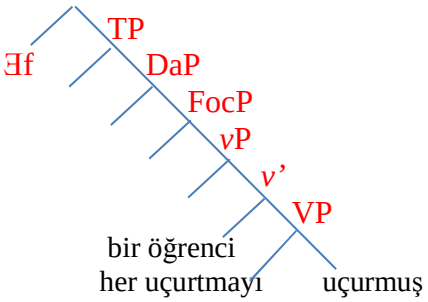
As illustrated in (44c) above, in quantifier scope data, the existential operator creates an intervention effect for the assertion operator and the same flattening effect is not observed and hence only surface scope is possible.

Now we will take a look at the remaining scope and binding data to see whether this account can capture these structures or not.

(43a) * [[vbl]$_{subj}$]$_{AT}$ >>[QP$_{obj}$]$_{FOC}$ >>V



(44a) bir öğrenci$_{AT}$ her uçurtmayı$_{F}$ uçurmuş$_{DA}$
a student every kite-ACC flew-PAST
'A student flew every kite.

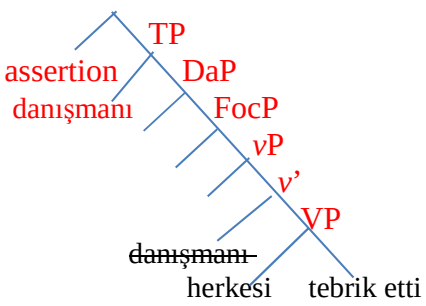


In both of the representations, the aboutness topic and the focus phrases remain in-situ. The aboutness topic phrases check the uninterpretable topic feature of T^{o} and the contrastive focus phrase checks the contrast and focus feature of Foc^{o} via Agree. In (44a), the indefinite is also bound by the existential operator above TP projection. Binding is not possible in (43a) even when we assume movement and reconstruction

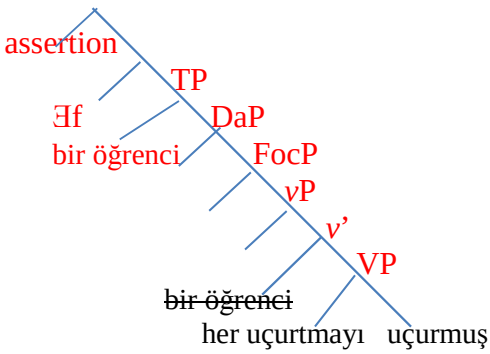
to the base generated position for the aboutness topic phrase as focus constituent *herkesi 'everybody'* cannot take the aboutness topic *annesi 'mother.poss'* under its c-command domain. In (44a), only the indefinite takes wide scope over the universal quantifier because the universal focus quantifier *her uçurtmayı 'every kite'* cannot take the indefinite subject *bir öğrenci 'a student'* and the existential operator over TP under its scope.

In derivations (43b) and (44b) below, the contrastive topic moves out of the scope domain of focus in one fell swoop to Spec TP. Note that there is an assertion operator and hence within the scope domain of focus we predict flattening effect. However, contrastive topic cannot move back to its base generated position and hence binding is not possible in (43b). In (44b), the existential operator creates an intervention effect for the assertion operator and the flattening effect is not observed. As contrastive topic cannot reconstruct back to its base generated position, only surface scope is available.

(43b)*[[vbl]$_{subj}$]$_{CT}$ >>[QP$_{obj}$]$_{DA}$ >>[V]$_{FOC}$



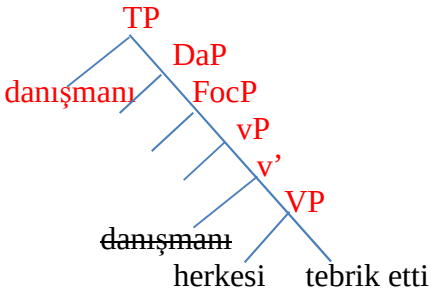
(44b) bir öğrenci$_{CT}$ her uçurtmayı$_{DA}$ uçurmuş$_{F}$
a student every kite-ACC flew-PAST
'A student flew every kite.



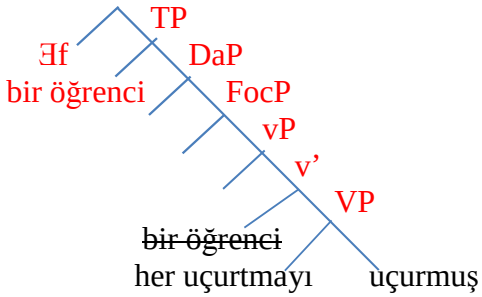
The derivation of (43c) and (44c) was discussed above and hence we move on to the discussion of (43d) and (44d). In both of the representations, attracted by the edge feature of T, the contrastive topic moves to Spec TP following the feature checking

mechanism. The focus phrase agrees with the FocP in-situ and hence binding is not possible in (43d). In (44d), contrastive topic is bound further by the existential operator. As the lower focus phrase agrees with the FocP in-situ, there is no way for it to take the existential operator under its c-command domain and hence inverse scope is not possible.

(43d)*[[vbl]$_{subj}$]$_{CT}$ >> [QP$_{obj}$]$_{FOC}$ >>V

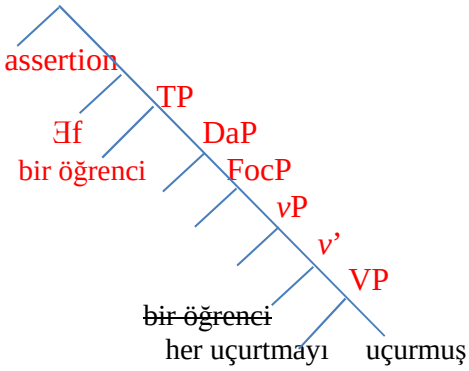


(44d) bir öğrenci$_{CT}$ her uçurtmayı$_{F}$ uçurmuş$_{DA}$
a student every kite-ACC flew-PAST
'A student flew every kite.'

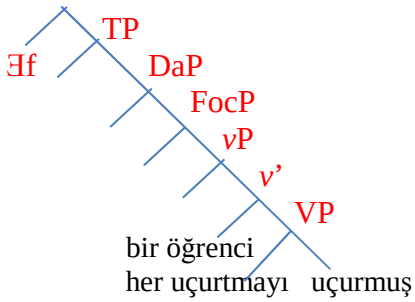


Up to this point, we can account for the derivation of both quantifier scope and binding data, assuming no movement for the information structural units in SOV order except for contrastive topic phrases. Now we will go on with the remaining quantifier scope data.

(44e) bir öğrenci$_{CT}$ her uçurtmayı$_{F}$ uçurmuş$_{F}$
a student every kite-ACC flew-PAST
'A student flew every kite.



(44f) bir öğrenci$_{F}$her uçurtmayı$_{DA}$uçurmuş$_{DA}$



In (44e) the contrastive topic *bir öğrenci 'a student'* moves out of the base generated position to Spec TP. Although there is an assertion operator that can yield flattening effect in the *v*P domain, as contrastive topic cannot move back to its base generated position only surface scope is possible. The other factor that rules out flattening effect of assertion operator is the presence of the existential operator that surfaces over TP. In (44f), the focus phrase *bir öğrenci 'a student'* agrees with FocP in-situ and it is further bound by the existential operator. The discourse anaphoric constituent *her uçurtmayı 'every kite'* also agrees with DA^{o} in-situ and checks its uninterpretable discourse anaphoric features. Hence only surface scope is observed in (44f).

To recap, (i) in SOV order only contrastive undergoes movement for scope purposes, (ii) aboutness topic, discourse anaphoric and focus phrases remain in-situ and form long distance Agree with the relevant heads which is also in line with the findings of the data on the interaction of negation with these constituents, (iii) when the verb bears focus there is an assertion operator that yields flattening effect in the *v*P domain, (iv) existential operator over choice functions creates an intervention effect for the assertion operator. The next section focuses on the derivation of binding and scope data in OSV order.

4.4.2 Quantifier scope and binding in OSV with universal-indefinite quantifier order

For SOV order we assumed that except for contrastive topic, all the constituents remain in-situ. The binding and scope data illustrate that in OSV order both the object and the subject move to higher TP and DaP projections excluding the focus phrase which checks the uninterpretable feature of Foc^{o} via agree and remains in-situ. First we will start with the OSV binding data of Şener (2010).

(45) a. *[[…vbl…]$_{obj}$]$_{CT}$ >> [QP$_{subj}$]$_{FOC}$ >> V

A: Dünkü mezuniyet töreninden sonra bazı çocuklar önce babalarını öptü.

'After the graduation ceremony yesterday some kids kissed their fathers first.'

B: ?*[pro$_i$ anne-si]-ni-yse herkes$_i$ *t*$_{[pro\ anne\text{--}si]\text{—}ni\text{-}yse}$ öp-tü.

mother-3SGPOSS-ACC everybody kiss-PAST

'Literally: His/her mother everyone kissed.'

b. [[…vbl…]$_{obj}$]$_{DA}$ >> [QP$_{subj}$]$_{FOC}$ >> V

A: Mezuniyet töreninden sonra kim annesini öptü, haberin var mı?

'Do you know who kissed his mother after the graduation ceremony? Do you know anything about that?'

B: Duyduğum kadarıyla…

'As far as I have heard…

[pro$_i$ anne-si]-ni herkes$_i$ *t*[$_{pro\ anne\text{--}si\text{-}ni}$] öp-müş.

mother-3SGPOSS-ACC everybody kiss-PAST

'Literally: His/her mother everyone kissed.'

c. [[…vbl…]$_{obj}$]$_{CT}$ >> [QP$_{subj}$]$_{DA}$ >> [V]$_{FOCUS}$

A: Dünkü törende her öğretmen bir öğrencisini tebrik etmiş. Doğru mu?

'I hear that at the ceremony yesterday every teacher congratulated a student of her. Is that right?'

B: Valla, öğrencilerden haberim yok ama…

'Frankly, I do not know about the students but…..

[*pro*$_i$ bir arkadaş-ı]-nı her öğretmen$_i$ *t*[$_{pro\ bir\ arkadaş\text{-}ı\text{-}nı}$] azarla-dı

a friend-3SGPOSS-ACC every teacher scold-PAST

sert bir şekilde.

in a harsh manner

'Every teacher scolded a friend of her in a harsh way.'

d. [[…vbl…]$_{obj}$]$_{DA}$ >> [QP$_{subj}$]$_{DA}$ >> [V]$_{FOCUS}$

A: Dünkü törende her öğretmen bir öğrencisini tebrik etmiş. Doğru mu?

'I hear that at the ceremony yesterday every teacher congratulated a student of her. Is that right?'

B: Valla, tebrikten haberim yok ama…

‘Frankly, I do not know about the congratulations but…..

[*pro*$_i$ bir öğrenci-si]-ni her öğretmen$_i$ $t_{[\text{pro bir öğrenci-si-ni}]}$ azarla-dı

a student-3SGPOSS-ACC every teacher cold-PAST

sert bir şekilde.

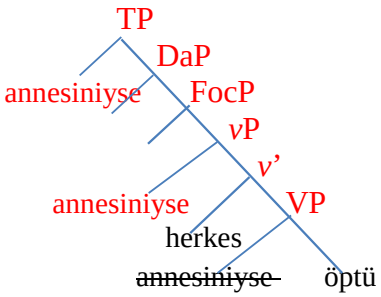
in a harsh manner

‘Every teacher scolded a student of her in a harsh way.’

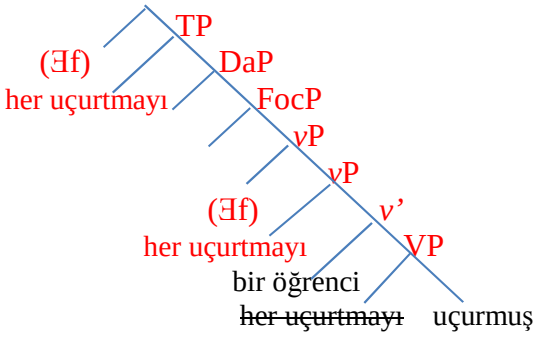
We will discuss the derivation of the binding and scope data with the same information structural ordering.

In (45a), the object contrastive topic *annesiniyse ‘mother.poss’* moves from its base generated position to the outmost Spec *v*P to Spec TP. The focus phrase *herkes ‘everybody’* Agrees with the FocP and remains in-situ. Hence the in-situ subject antecedent cannot bind the dislocated object anaphor. In (46a), again the contrastive topic moves from its base generated position to outmost Spec *v*P to Spec TP. From this position, the universal quantifier can take the existential quantifier over choice functions, which surfaces at Spec *v*P under its scope and surface scope interpretation becomes available. The in-situ focus phrase cannot take the universal quantifier under its scope. However, the existential operator over choice functions can adjoin above the TP projection and bind the indefinite variable. Hence the indefinite is interpreted above the universal quantifier at Spec TP, which makes the inverse scope interpretation possible without movement.

(45a)*[[vbl]$_{obj}$]$_{CT}$ >> [QP$_{subj}$]$_{FOC}$ >>V

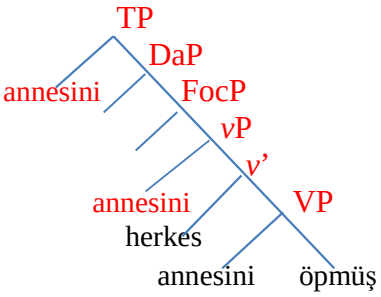


(46a) her uçurtmayı$_{CT}$ bir öğrenci$_{F}$ uçurmuş$_{DA}$
every kite-ACC a student flew-PAST
'A student flew every kite.'

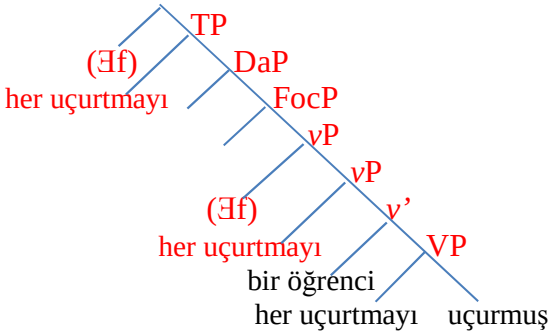


In (45b) and (46b) the sentence initial constituent, aboutness topic checks the uninterpretable topic feature of T^{o} and it is attracted to Spec TP via edge feature. The subject focus phrases remain in-situ but both binding and inverse scope interpretation are possible. This indicates that the aboutness topic phrases can move back to their base generated positions as their movement to Spec TP is not a scope taking operation. As illustrated in (46b), the universal quantifier takes scope over the existential operator over choice functions at Spec *v*P, which yields surface scope interpretation. The universal quantifier can reconstruct back to its base generated position through which the existential operator over choice functions can take scope over the universal quantifier.

(45b) [[vbl]$_{obj}$]$_{DA}$ >>[QP$_{subj}$]$_{FOC}$ >>V



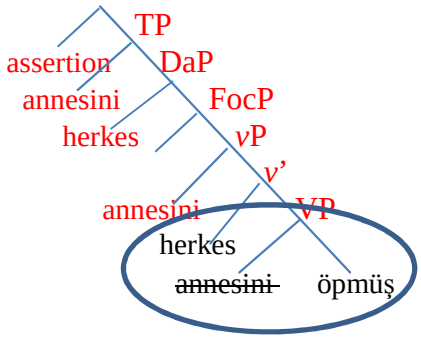
(46b) her uçurtmayı$_{AT}$ bir öğrenci$_{F}$ uçurmuş$_{DA}$
every kite-ACC a student flew-PAST
'A student flew every kite.'



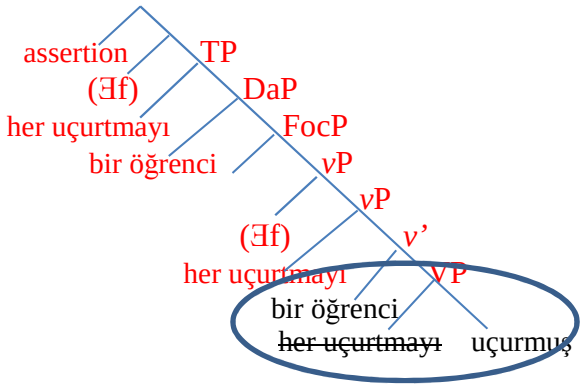
Note that even in the absence of reconstruction either to the base generated position or to the outmost Spec *v*P, inverse scope interpretation is possible in (46b) due to the existential operator that can adjoin above TP which allows the indefinite object to be interpreted above the universal quantifier.[149]

As illustrated in (45c) and (46c) below, contrastive topic object phrases move from outmost Spec *v*P to Spec TP. The discourse anaphoric constituent moves to Spec DaP. Note that in (45c), binding is possible. Let us compare the derivation in (45c) with the one in (45a). The derivation in (45a) has shown that binding is not possible as contrastive topic cannot reconstruct back to its base generated position. The grammaticality of (45c) indicates that contrastive topic can reconstruct back to the intermediary position of outmost Spec *v*P. We show the domain to which reconstruction of the contrastive topic is illicit with an ellipse. Note that the outmost specifier of *v*P is out of this domain, as indicated in (45c). This domain does not map onto the complement domain of *v*P phase. We label it the scope domain of focus, as contrastive topic phrases cannot surface in the scope domain of focus phrases.

(45c) $[[\text{vbl}]_{\text{obj}}]_{\text{CT}} >> [\text{QP}_{\text{subj}}]_{\text{DA}} > [\text{V}]_{\text{FOCUS}}$



(46c) her uçurtmayı$_{\text{CT}}$ bir öğrenci$_{\text{DA}}$ uçurmuş$_{\text{F}}$
every kite-ACC a student flew-PAST
'A student flew every kite.'

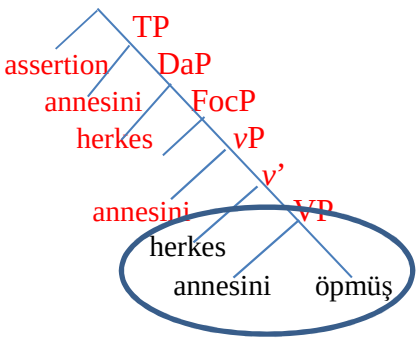


[149] Note that focus phrases in Turkish can take scope over other constituents only when they are accompanied by another quantificational element. As the discussion on semantic properties of information structural units in Chapter 2 has shown, focus phrases have quantificational properties in that they denote a relationship between two sets. They have quantificational force when they surface with another quantificational element showing that Turkish focus phrases differ from focus phrases with quantificational force in other languages such as Hungarian.

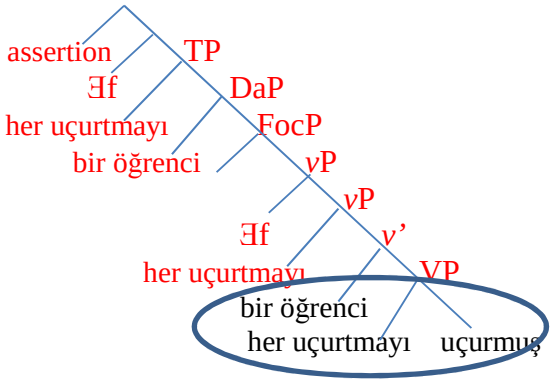
In (46c), the universal quantifier takes scope over the indefinite as following its movement to Spec TP for discourse interpretational purposes; the universal quantifier surfaces above the existential operator at Spec *v*P. For the same structure, inverse scope interpretation is available due to the existential operator generated above TP, taking the universal quantifier under its scope. There is an assertion operator above the existential operator. However, the movements of the constituents to higher projections in (45c) and the presence of the existential operator in (46c) obviate flattening effects in the lower focus domain.

Now we move onto the derivations of (45d) and (46d). The derivation of (45d) and (46d) is similar to the derivation of (45c) and (46c). The sentence initial aboutness topic moves from outmost Spec *v*P to Spec TP. The flattening effect of the assertion operator is not possible as the constituents move out of the scope domain of focus phrase.

(45d)$[[vbl]_{obj}]_{DA} >> [QP_{subj}]_{DA} >> [V]_{FOCUS}$



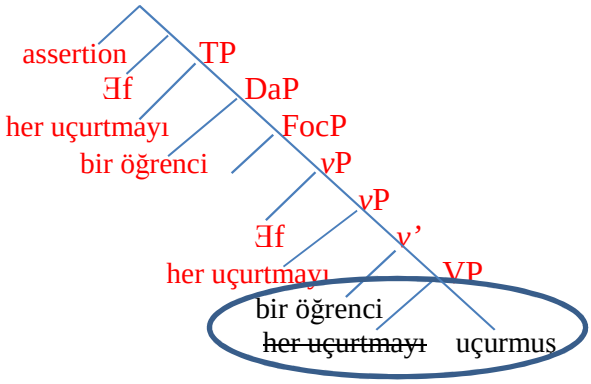
(46d) her uçurtmayı$_{AT}$ bir öğrenci$_{DA}$ uçurmuş$_{F}$
every kite-ACC a student flew-PAST
'A student flew every kite.'



Additionally, in (46d) the existential operator creates an intervention effect. In (45d) the lower copy of the aboutness topic *bir öğrencisini 'a student.poss'* can be bound by the discourse anaphoric constituent her öğretmen *'every teacher'* at Spec Da. In (46d), surface scope is possible, as the dislocated universal quantifier can take scope

over the existential quantifier at Spec *v*P. As for inverse scope interpretation, the existential quantifier above Spec TP can take the universal quantifier under its scope, yielding inverse scope interpretation. Finally, we will look at the derivation of the final OSV scope data.

(46e) her uçurtmayı$_{CT}$ bir öğrenci $_{F}$ uçurmuş $_{F}$
every kite-ACC a student flew-PAST
'A student flew every kite.'



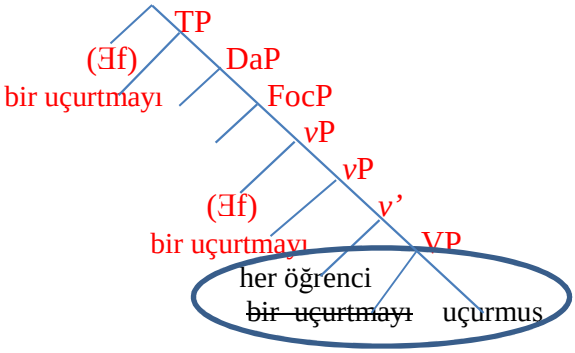
The contrastive topic object phrase *her uçurtmayı 'every kite'* moves out of the scope domain of focus phrase to Spec TP attracted by the edge feature. The indefinite focus phrase *bir öğrenci 'a student'* agrees with the FocP checks its feature and remains in-situ. The indefinite focus phrase is interpreted to have wide scope over the dislocated contrastive topic via the existential operator over choice functions above TP. Additionally, via the existential operator at Spec *v*P, the universal quantifier can take scope over the indefinite, yielding surface scope interpretation. The next section focuses on OSV order with the indefinite-universal quantifier order.

4.4.3 Quantifier scope in OSV with indefinite-universal quantifier order

In this section we focus on the derivation of OSV order when the object is indefinite and the subject is the universal quantifier. In the previous section, in some of the examples inverse scope interpretation was possible not only because of the

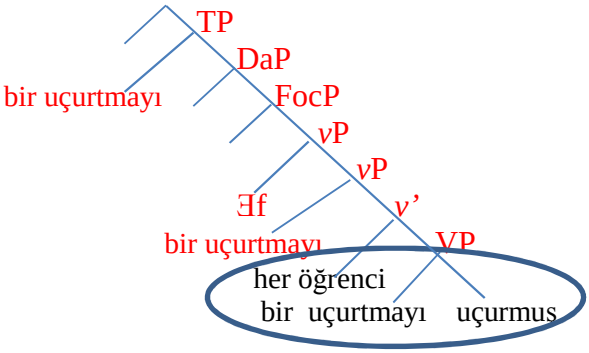
intermediary copies available for scope but also due to the existential operator. The examples in this section will also show whether inverse scope interpretation is possible in Turkish, independent of the existential operator over choice functions. As illustrated in (47a), the contrastive topic object *bir uçurtmayı 'a kite'* moves from outmost Spec *v*P to Spec TP. The universal focused subject *her öğrenci 'every student'* agrees with the FocP and checks its features in-situ. There is no way for the in-situ focus phrase to take the existential operator and the indefinite contrastive topic under its scope and hence inverse scope is not possible.

(47a) bir uçurtmayı$_{CT}$ her öğrenci$_{F}$ uçurmuş$_{DA}$
a kite-ACC every student flew-PAST
'A student flew every kite.'



Now we move on to the derivation in (47b) below. This structure is found to be ambiguous by only one speaker in one example.

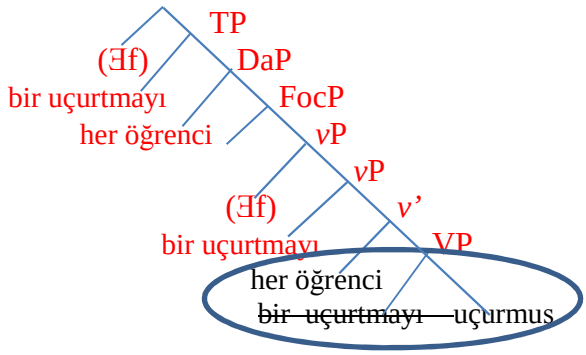
(47b) bir uçurtmayı$_{AT}$ her öğrenci$_{F}$ uçurmuş$_{DA}$
'A student flew every kite.'



The aboutness topic *bir uçurtmayı 'a kite'* moves from outmost Spec *v*P to Spec TP. The focus phrase *her öğrenci 'every student'* remains in-situ and agrees with the FocP and checks its features. The aboutness topic can surface within the scope domain of focus and hence, together with the existential operator, it reconstructs back to its base generated position which makes inverse scope interpretation possible.[150]

In (47c) below, the contrastive topic indefinite object *bir uçurtmayı 'a kite'* moves from outer Spec *v*P to Spec TP. The discourse anaphoric universal quantifier subject *her öğrenci 'every student'* moves from its base generated position to Spec DaP.

(47c) bir uçurtmayı$_{CT}$ her öğrenci$_{DA}$ uçurmuş$_{F}$
'A student flew every kite.'

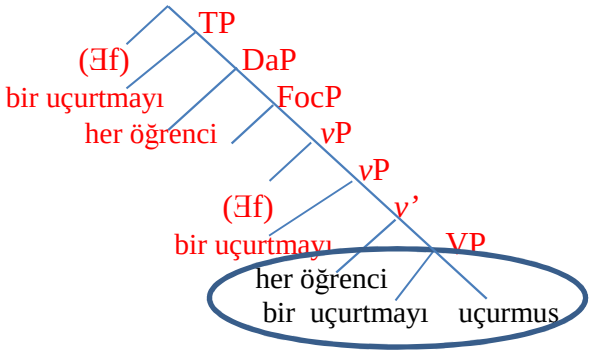


The flattening effect is not observed due to movement operations and the intervention effect of the existential operator. As the contrastive topic phrase can

[150] Another possible derivation for this structure is to assume that the indefinite is ambiguous between a choice function interpretation and a quantificational interpretation in line with Kratzer (1998) and Matthewson (1999). The advantage of the analysis that assumes different attachment sites for the existential operator over choice functions that we pursued in the text is that in Turkish the distinction between accusative marked and non-marked indefinites is captured. Kelepir (2001) suggests that in Turkish, accusative marked indefinites can take wide or narrow scope while non-marked indefinites take only narrow scope. With accusative marked indefinites, the ∃f can be higher than the other quantifiers in which case the indefinite takes wide scope, ∃f can be lower than the other quantificational elements in which case the indefinite takes narrow scope. With non-marked indefinites, the quantificational elements take scope over the ∃ operator which is at a lower level. That is why we explained the data in (47b) with the existential operator over choice functions instead of taking the indefinite as a quantifier.

reconstruct back to outer Spec *v*P position the universal quantifier at Spec DaP can take scope over the existential operator over Spec *v*P and the indefinite. The indefinite takes scope over the universal quantifier via the existential operator at Spec TP. As indicated in Table 11, this structure is found to be ambiguous in 5 of the contexts out of 16 contexts. Now we will move on to the discussion with another structure which is found to be ambiguous in 5 of the structures in the experiment as it is the case with (47c).

(47d) bir uçurtmayı$_{AT}$ her öğrenci$_{DA}$ uçurmuş$_{F}$
'A student flew every kite.'

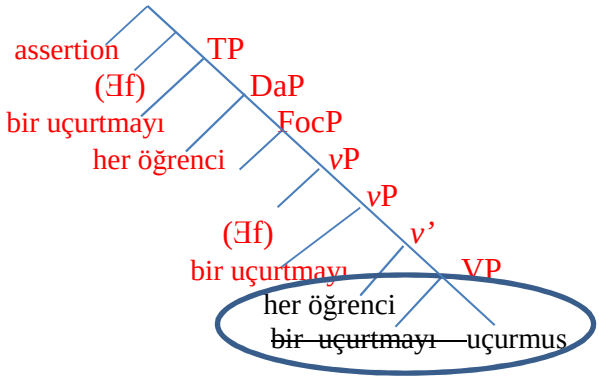


The indefinite aboutness topic *bir uçurtmayı 'a kite'* moves out of the base generated position to outmost Spec *v*P to Spec TP. The discourse anaphoric constituent *her öğrenci 'every student'* moves from its base generated position to Spec DaP. Via the intermediary position and the base generated position to where the aboutness topic can reconstruct, the universal subject can take scope over the existential operator over Spec *v*P and the indefinite object. The examples in 47(b-d) show that, in Turkish, inverse scope is possible in OSV sentences with 'indefinite-universal quantifier' order which cannot be reduced to the presence of the existential operator over choice functions as in OSV sentences with 'universal-indefinite quantifier'

order.[151] However, the inverse scope interpretations in OSV sentences with ‘indefinite-universal quantifier’ order are not as readily available as is the case in OSV sentences with ‘universal-indefinite quantifier’ order.

Finally, we will take a look at the derivation of CT-F-F order for which inverse scope judgment has not been reported. The indefinite contrastive topic object phrase moves from outmost Spec *v*P to Spec TP. Additionally, the existential operator below assertion operator creates an intervention effect and the flattening effect is ruled out. Contrastive topic cannot reconstruct back to the scope domain of the focus phrase. The universal focused subject being in-situ cannot take the existential quantifier and the indefinite under its scope and hence inverse scope is not possible.

(47e) bir uçurtmayı$_{CT}$ her öğrenci$_{F}$ uçurmuş$_{F}$
‘A student flew every kite.’



As the discussion illustrates, with the IP internal functional projections, Spec TP as the target position of topic phrases in general and scope domain of focus, we can account not only for the binding data but also for the quantifier scope data in SOV and OSV orders.

[151] There are three constructions that are found to allow inverse scope, however the structure in (47b) has been found to be ambiguous by only one of the speakers. The difference can be due to the copy that is taken under its scope by the universal quantifier. In 47(c-d), the universal quantifier takes under its scope the intermediary copy of the indefinite quantifier which is outside the scope of domain of focus. In (47) on the other hand the universal quantifier takes the lowest copy of the indefinite with the existential operator under its scope and this may yield a difference in judgments.

To sum up, the interaction of the quantifier scope and binding data with information structural units in OSV order shows that (i) except for focus phrases all information structural constituents undergo movement, (ii) contrastive topic cannot reconstruct back to the scope domain of focus which maps on to *v*P domain excluding the specifier of *v*P which serves as the escape hatch for the object phrases, (iii) aboutness topic phrases and discourse anaphoric constituents can reconstruct back to the scope domain of focus, as these movements are not scope taking operations, (iv) although restricted, inverse scope is possible in Turkish, independent of the exceptional scope taking properties of the existential operator over choice functions, (v) focus does not have a direct effect on scope interpretation and inverse scope cases can be explained via restrictions on movement operations.[152] In the next section we discuss the scope domain of focus.

4.5 Scope domain of focus

In this section, we take a closer look at the scope domain of focus, which is illicit for the reconstruction of the contrastive topic phrases as illustrated in the preceding section. From a semantic point of view the alternative set of the focus phrase is determined based on the constituents in this domain as all the constituents are base generated in this domain.

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[152] This analysis can also account for the data given in the Chapter 1 which is repeated below for ease of exposition.

(1) Bir kitab-ı her çocuk dün$_{FOC}$ oku-du
one book-ACC every child yesterday read-PAST
i. 'Every child read a specific book yesterday.'
ii. 'Every child read a different book out of a definite set yesterday.'

In the presence of a focus phrase, the dislocated constituents are either topic or discourse anaphoric constituents. Even if we assume that the indefinite object phrase is the contrastive topic, as reconstruction to the outer specifier of *v*P is possible, the universal subject quantifier can take scope over the existential operator and the indefinite object.

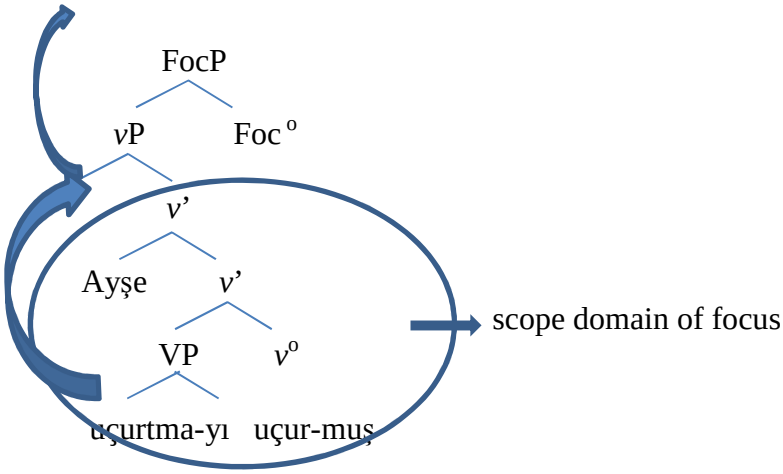
(48) A: Balonu kim uçurmuş?

'Who flew the balloon?'

B: Balon-u bil-mi-yor-um ama [uçurtma-yı]$_{CT}$ [Ayşe]$_{F}$ uçur-muş.

balloon-ACC know-NEG-PROG-1SG but kite-ACC Ayşe fly-PAST

'I don't know about the balloon but Ayşe flew the kite.'



Contrastive topic phrases evoke alternatives and the alternative propositions of the focus phrase also form a part of this alternative set. Hence for the contrastive topic to evoke alternative sets in (48), it has to move out of the scope domain of the focus phrase otherwise it will be like a discourse anaphoric constituent, which cannot evoke alternatives. The alternative set of focus phrases within the scope domain of focus becomes a referential unit to be used as a part of the alternative set of sets of propositions evoked by contrastive topic. Hence contrastive topic moves out of the focus domain, from the *v*P domain, for scope taking purposes. We labeled this domain the scope domain of focus phrase. The derivation of binding and scope data has further shown that scope domain of focus includes the whole *v*P domain excluding the outer specifier position of the *v*P which serves as the escape hatch for the movement of the object phrase to the higher projections. Now we will investigate the exact function of this domain.

The first hypothesis is that this is due to the phase impenetrability condition, namely, once the higher phase is introduced, the complement domain of the lower *v*P phase is not accessible for further operations. But this analysis leads to some other problems. Firstly, discourse anaphoric and aboutness topic phrases can reconstruct back to this domain but contrastive topic phrases cannot. According to this hypothesis, the same domain is accessible to one information structural unit but not to the other one which is contradictory. The other problem with this hypothesis is that this scope domain of focus does not directly map on to the complement domain of the lower *v*P phase in that the base position of the external argument is also within this domain. However, we expect this position to be accessible to further operations according to the phase impenetrability condition. In Chapter 3, the discussion on IP level stress assignment has further shown that taking *v*P phase as a stress assignment domain for Turkish also yields problems for the stress assignment in unaccusative and unergative sentences. These facts make the status of *v*P as a phase in Turkish untenable.

Öztürk (2005) further notes that *v*P and VP partitioning is not observed in Turkish which is expected if VP is the complement domain of the *v*P phase. The empirical evidence comes from restrictions on idiom formation. Idiom test is a conclusive test because if an argument is close to the lexical verb in the syntactic structure it is easier to find idioms containing the verb and that argument (Marantz 1984). The object argument is merged immediately adjacent to the verb while the external argument is merged at the specifier position of the phase edge. Hence idiom formation is expected to be found with the verb and the internal argument. Öztürk (2005) shows that in Turkish the verb not only forms an idiom with the object to the exclusion of the subject (49a) but also with the subject to the exclusion of the direct object (49b).

(49) a. Ali surat as-tı. (theme)
Ali face hang-PAST
'Ali made a sour face.'
b. Ali-yi kurt kap-tı. (agent)
Ali-ACC wolf snatch-PAST
'Ali got hurt' (Öztürk 2005, 88)

If there were a partitioning between *v*P and VP, VP being the complement domain of *v*P phase, (49b) could not be possible. Based on these problems, we suggest that *v*P does not show phasehood properties in Turkish.

Now we have to reveal the function of this domain. Note that the scope domain of focus includes not only the internal argument but also the external argument. We suggest that this is the event structure domain proposed by Ramchand and Svenonius (2013), which is defined as the domain where all the arguments of the verb are introduced.

Ramchand and Svenonius (2013) decompose the clause structure into three domains that have semantic grounds.[153] The first domain is the timeless, eventual zone of VP in which the relation between individuals and events are formed. The TP domain, the situational domain, is the time-anchored zone, which is taken as an elaboration of the eventuality domain. Finally the CP domain, the propositional domain anchored to a discourse context, is an elaboration of the situational zone. The empirical evidence comes from (i) the perfect and progressive participles and (ii) adverb placement.

(50) a. There could have been <u>a truck</u> being loaded.
b. *There could have <u>a truck</u> been being loaded.

[153] For a similar analysis see Grohmann (2003) who explains movement operations without appealing to phases by dividing the structure into three prolific domains as VP, TP and CP.

(51) a. If Mary says that the cakes will have been being eaten, then…

…. [being eaten], they will have been.

b. *…. [been being eaten], they will have.

(52) a. John has left and Mary has done also.

b. *John is leaving and Mary is (*doing) also.

(Ramchand and Svenonius 2013, 4-7-13)

The thematic subject of the clause can never surface to the left of the perfect participle but it can appear to the left of the progressive participle (50). VP fronting is possible only when the progressive is not accompanied by the perfect participle (51). Finally, do substitution is possible only with the perfect participle but not with the progressive participle (52).

Based on the data given above, Ramchand and Svenonius (2013) suggest that the differences between the perfect and progressive participle is due to different attachment domains of these participles. The progressive participle attaches to the timeless, eventual zone of VP as temporal information is irrelevant for the progressive. The perfect participle, for which temporal information is relevant, attaches to the temporally anchored situational TP domain.

If our analysis is on the right track and what we called the scope domain of focus is in fact the eventual zone of VP, we would expect to find differences with respect to scope interactions of focus, based on the progressive and perfective marking on the verb. As the contrast below in (53-54) indicates, scope interpretations in Turkish differ depending on the aspectual marker on the verb.

(53) a. Bir öğrenci her uçurtma-yı uçur-muş *∀∃ / ∃∀

a student every kite-ACC fly-PERF

'A student flew every kite.'

(54) a. Bir doktor her hasta-ya bak-ıyor. ?∀∃ / ∃∀

a doctor every patient-DAT examine-PROG

'A doctor is examining every patient'

b. Bir doktor her hasta-yı tedavi ed-iyor ∀∃ / ∃∀

a doctor every patient-ACC treat-PROG

'A doctor is treating every patient' (Özge 2010, 41-42d)

The placement of focus is not indicated but the structures in (53) and (54b) differ only with respect to the perfect or progressive markers on the verb. Hence the inverse scope in (54b) can only be due to interaction of focus with the progressive marker. The progressive is in the VP domain while perfect is at the situational TP domain. The perfective participle is in the TP domain and hence it does not interact with FP above *v*P, while the progressive is within the c-command domain of FocP and has an effect on scope interpretations.[154] This difference also provides further empirical evidence for the Focus projection above *v*P domain in the IP internal structure. Otherwise, FocP in the left periphery is predicted to take both progressive and perfective projections under its c-command domain.

The other prediction of this line of an analysis is that event modifying adverbs will be restricted to the eventuality domain while situation modifying adverbs will be restricted to the situational domain. If an adverb is licit in both domains, either (i) additional interpretation is available or (ii) another extrinsic factor is at play (Ramchand and Svenonius 2013).

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[154] Cinque (2001) notes the following order of Aspectual heads for Turkish which is also in line with our analysis.

Fut > $Mod_{Alethic}$ > $Asp_{Perfect}$ > $Asp_{Progressive}$ > Neg > $Mod_{Ability}$ (> V)

$Asp_{Resultative}$

Based on the following example noted by Kornfilt (1997), Cinque suggests that $Asp_{Resultative}$ is lower than $Asp_{Perfect}$ and $Asp_{Progressive}$

(1) Hasan böylelikle yarış-ı kazan-mış ol-uyor-du

Hasan thus competititon-ACC win-PERF be-PROG-PAST

"Hasan was thus being the winner of the competition" (Kornfilt 1997, 363)

The adverb placement has in fact been used in the Turkish linguistics literature to mark the edge of VP via manner adverbs and the edge of TP via sentential adverbs. Aygen (1999) investigates the subject and object positions with the following examples.

(55) a. *Ben hızlı kitab-ı oku-du-m
I fast book-ACC read-PAST-1SG
'I read the book fast'
b. Ben kitab-ı hızlı oku-du-m.
I book-ACC fast read-PAST-1SG
'I read the book fast'

(56) a. Çok şükür bu fareler bozuk peynir-i yedi.
fortunately this mice spoiled cheese-ACC ate
'Fortunately these mice ate the spoiled cheese'
b. Bu fareler çok şükür bozuk peynir-i yedi. (ambiguous)
this mice fortunately spoiled cheese-ACC ate
Fortunately, these mice ate the spoiled cheese.
Fortunately, these mice ate the spoiled cheese not the nice cake, etc.
(Aygen 1999, 1-3)

Aygen (1999) suggests that in (55b) the object moves to the case checking position for the objects, while the lack of this movement yields ungrammaticality in (55a) as the VP edge marking adverb indicates. The subject on the other hand can remain in-situ or move to Spec TP as TP edge marking adverb indicates in (56). In Aygen (2002) on the other, in a footnote, she suggests that Turkish being a free word order language, adverb placement is not a conclusive test and the unacceptability of (55a) above can be due to ambiguity of *'hızlı'* as being interpreted as an adjective or an adverb. In the immediately preverbal focus position, reduplication yields the adverb interpretation.

(57) Ben hızlı hızlı kitab-ı oku-r-um
I fast book-ACC read-AOR-1SG
'I read the book fast' (Aygen 2002, pg. 3)

Note that, even without reduplication, the structure in (55a) becomes more acceptable when we put focus on another constituent.

(58) Ben hızlı bir tek kitab-ı oku-r-um, dergi-ler-i değil.
I fast only book-ACC read-AOR-1SG magazine-PL-ACC not
'I only read books in a fast way not the magazines.'

Hence adverb placement in Turkish is closely related to focus. In the following examples we use *'neyseki'* and *'henüz'* as situational domain adverbs and *'gizlice'* and *'doğru düzgün'* as eventual domain adverbs.

(59) Ne var ne yok?
How is it going?
A: Ali henüz doğru düzgün ödev-ler-in-i yap-ma-mış,
Ali yet properly homework-PL-POSS-ACC do-NEG-PAST
'Ali hasn't done his homework properly yet,
biz de dışarı çıkmak için onu bekliyoruz.
and we are waiting for him to go out.
B: Ali doğru düzgün henüz ödevlerini yapmamış, biz de dışarı çıkmak için onu bekliyoruz.

As illustrated in (59), the situational domain adverb *'henüz'* and the eventual domain adverb *'doğru düzgün'* can occur in either order. Now we will test the situational domain adverb *'neyseki'* and the eventual domain adverb *'gizlice'*.

(60) Soygunla ilgili bir gelişme var mı?

Is there anything new about the robbery?

A: Neyseki Ali gizlice$_F$ gir-miş içeri.

fortunately Ali secretly enter-PAST inside

Herkes Hakan'dan şüpheleniyor.

Everybody suspects Hakan

'Fortunately, Ali sneaked (into the building). Everybody suspects Hakan of the robbery'

B: Neyseki$_F$ Ali gizlice girmiş içeri. Herkes Hakan'dan şüpheleniyor.

(61) Soygunla ilgili bir gelişme var mı?

Is there anything new with the robbery?

A:(?)Gizlice$_F$ Ali neyseki girmiş içeri. Herkes Hakan'dan şüpheleniyor.

B:(?)Gizlice$_F$ Ali neyseki gir-miş içeri. Ya biri görseydi onu?

secretly Ali fortunately enter-PAST inside *What if someone had seen him?*

'Fortunately, Ali sneaked (into the building). What if someone had seen him?'

Although not completely ungrammatical, the sentences are judged to be better when the eventual domain adverb follows the situational domain adverb.[155]

Based on these examples we conclude that the domain which contrastive topic leaves is in fact the event structure domain where all the arguments of the verb are realized. We suggest that the movement of the contrastive topic is a scope taking operation as the semantic value of the focus phrase is used up by the semantic composition of the contrastive topic phrase.

[155] In Turkish the placement of adverbs needs further research which is beyond the scope of this study. Ramchand and Svenonius (2013) give the following example as an example of ordering restriction which is out due to pragmatic anomaly.

(1) a. John was probably once married.

b. *John was once probably married.

However the equivalents of these sentences are acceptable in Turkish.

(2) a. John belki bir zamanlar evliydi.

John probably once married

b. John bir zamanlar belki evliydi.

John once probably married

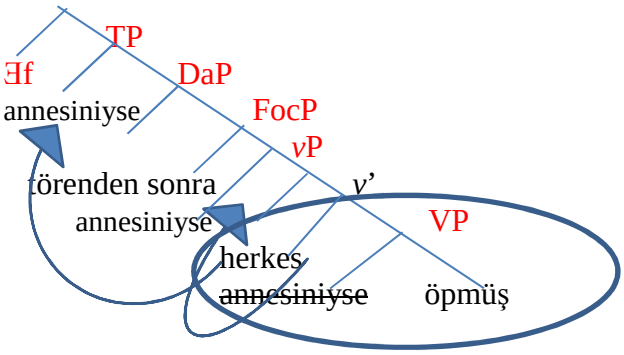
The final issue to be discussed in this section is the restriction on the reconstruction of contrastive topics. As the discussion so far indicates, we have analyzed this property as a restriction on reconstruction to the eventual domain/scope domain of focus phrases. In line with Wagner (2007, 2008), we suggest that the movement of the contrastive topic is a scope taking operation. The semantic composition of contrastive topic is dependent on the lower focus phrase and hence they cannot surface within the same domain. We leave aboutness topics outside the discussion as they can reconstruct back to the scope domain of focus, since this is not a scope taking movement operation. Şener (2010), on the other hand, suggests that this restriction is due to the requirement that topic phrases cannot reconstruct back to their base generated positions, labeled no-reconstruction-to-base-position. He gives the following example with a focused time adverbial as an evidence for this suggestion. Şener (2010) suggests that no-reconstruction-below-focus analysis cannot account for this example even if the adverb is proposed to be generated at *v*P or TP levels. The object with the variable is the contrastive topic while the antecedent subject is discourse anaphoric and finally the adverbial bears focus.

(62) A: Herkes babasını mezuniyet töreninden sonra$_F$ öptü.
'Everyone kissed their father after the graduation ceremony.'
B: [pro^i anne-si-ni-yse] herkes^i tören-den önce$_F$ öp-müş.
mother-3SGPOSS-CT everybody ceremony-ABL before kiss-PAST
'Literally: As for his/her mother, reportedly, everyone kissed her before the ceremony.' (Şener 2010, 78)

Now we will take a look at the derivation of this structure in (63) within the assumptions of our analysis. The contrastive topic moves to Spec *v*P and then moves up to Spec TP. The discourse anaphoric constituent moves to Spec Da. Let us assume

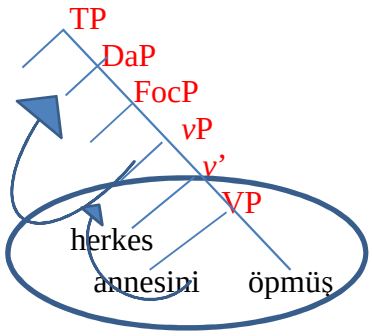
that the adverbial is adjoined to Spec FocP or *v*P. Then movement of the contrastive topic to the specifier of the *v*P is not a problem, as the eventual domain/scope domain of focus indicated with an ellipse is still lower than the intermediary copy of the contrastive topic phrase.

(63)



We can label this restriction no-reconstruction-to-scope-domain-of-focus. The other issue is that if we take this restriction on movement as a general ban on movements of topics to their base generated positions, the binding data with sentence initial discourse anaphoric constituents pose a problem. Şener (2010) analyzes these phrases as discourse anaphoric constituents but if we take them as aboutness topics moving to the left periphery, to the same target position as the contrastive topic phrases, we do not expect them to reconstruct back to their base generated position. This poses a problem as illustrated in (64) below.

(64) pro annesini$_{DA}$ herkes$_{F}$ öpmüş$_{DA}$
mother-3SG.POSS-ACC everybody kiss-PAST
'Literally: His/her mother everyone kissed.'



If we take the sentence initial discourse anaphoric constituent as aboutness topic moving to a higher projection, with the no-reconstruction-to-the-base restriction as Şener (2010) suggests, the binding possibility in (64) remains unsolved.

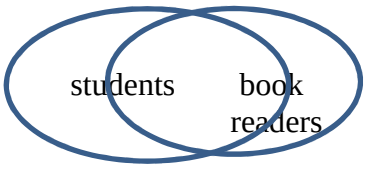
4.6 Derivation of information structural units at LF

Bobaljik and Wurmbrand (2012) and Neeleman and Vermeulen (2012) suggest that the distribution of contrastive topic and focus can be captured via restrictions at the LF domain. Within this line of an analysis, there is no designated position at the left periphery for the information structural units. Movement operations of these units are derived via other restrictions on movement such as quantifier movement.

Neeleman and Vermeulen (2012) suggest that contrastive topic and focus are quantificational in nature in that they mark contrast and they can be analyzed on a par with quantifiers. Quantifiers give information about the relationship between two sets in the universe of discourse. Contrast also gives information about the relation between two sets as illustrated in (65) below with our examples.

Quantifier

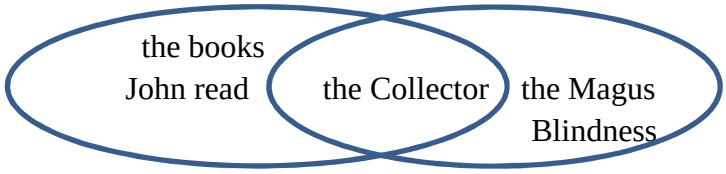
(65) a. Most students read books.



Contrastive Focus

b. A: John read The Magus.

B: No, John read The Collector.



Contrastive Topic

c. A: Did John read The Magus, The Collector and Blindness?

B: He read The Collector.

In (65a) the quantifier expresses the overlapping part of the two sets; in (65b) the focused phrase is the overlapping part and the rest of the set of the books are excluded. Finally in (65c), the speaker B mentions only the overlapping part of the two sets; however, it is not exhaustively identified as the correct answer. The speaker does not make an assertion about the other members of the set of books.

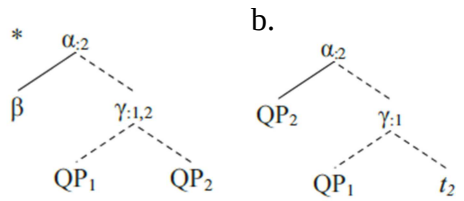
Based on these similarities, Neeleman and Vermeulen (2012) suggest that the derivation of contrastive topic and focus is on a par with quantifier scope. They further suggest that quantifier movement applies only when a quantifier must take scope over another quantifier c-commanding it. Hence a topic phrase can move over a focus phrase that is in a c-commanding position only when the topic phrase must take scope over the focus phrase. Topics are utterance level constituents while focus

phrases are propositional level. Based on the assumption that this is a universal restriction which requires topics to be interpreted outside the scope domain of focus phrases, they try to capture the possible orderings of topic-focus constructions via restrictions on movements. They do not appeal to fixed hierarchical functional projections. They suggest the following rules:

(66) Condition on Scope Shift (CSS): no node may inherit two indices
Scope Extension: If a Q percolates its index to a dominating node, then its scope coincides with that node minus the Q itself.
Economy: Scope extension must give rise to an otherwise unavailable interpretation.
Default Scope Rule: If a Q doesn't percolate its index, it takes scope over its scope domain (Neeleman and Vermeulen 2012, 5-6)

We can explain how these rules work based on the following representations.

(67) a. b.



(Neeleman and Vermeulen 2012, 7)

If the QP_1 percolates its index to a dominating node [γ], the rule CSS rules out the indexation of the same node by QP_2 as in (67a). The scope domain of QP2 can extend over QP1via overt movement as in (67b). However, in (67b), QP_1 cannot further extend its indexation to the node [α] as both [γ] and [α] would bear two indices which leads to the violation of CSS. These two representations indicate that if there is no movement, surface scope is observed and in (67) QP_1 takes scope over QP_2 without movement or scope extension.

Out of four possible LF and PF matches, based on topic and focus order variations in Dutch, Neeleman and Vermeulen (2012) come up with the following orderings.

Table 12. Possible LF and PF Orderings

	LF	PF		
A	A[TOP]>B[FOC]	A[TOP]>B[FOC]	+	LF represents surface scope, no index percolation
B	A[TOP]>B[FOC]	B[FOC]>A[TOP]	*	Violation of CSS, the index of topic cannot be carried by the node which also bears the index of focus which has undergone movement
C	B[TOP]>A[FOC]	A[FOC]>B[TOP]	+	Index percolation is possible
D	B[TOP]>A[FOC]	B[TOP]>A[FOC]	+	Via overt movement topic takes scope over focus

Remember that topic phrases cannot surface within the c-command domain of focus phrases. Only option B is out because topic phrases cannot surface following the focus phrase but CSS does not allow scope extension of the topic phrase over the dislocated focus phrase.

In a similar vein, Bobaljik and Wurmbrand (2012) suggest that LF determines PF, which is labeled scope transparency (ScoT). ScoT is respected when the LF and PF match, violation of ScoT is allowed when it is not otherwise possible for word order to reflect the scope relation.

Bobaljik and Wurmbrand (2012) suggest that if the order of two elements at LF is A>B the order at PF is A>B, if the order is B>A at LF, PF can be B>A or A>B. Similar to Neeleman and Vermeulen (2012), they suggest that there is universal restriction which requires topics to precede focus phrases, because topics are utterance level constituents while focus phrases are propositional level. Out of four possible orders given in Table 13, the unacceptability of (B) is predicted as LF and PF do not match violating ScoT. Additionally, overt movement in syntax is a costly operation and hence movement of the focus phrase violates Move.

Table 13. Possible LF and PF Orderings

	LF	PF	ScoT	Move	
A	A[TOP]>B[FOC]	A[TOP]>B[FOC]	+	+	LF and PF match
B	A[TOP]>B[FOC]	B[FOC]>A[TOP]	*	*	Movement is costly, LF and PF do not match
C	B[TOP]>A[FOC]	A[FOC]>B[TOP]	*	+	No overt movement but LF and PF do not match
D	B[TOP]>A[FOC]	B[TOP]>A[FOC]	+	*	LF and PF match but overt movement is costly

As is the case in Table 12, except for the order in B, the other three orders are found to be acceptable as they satisfy either ScoT or Move.

Now we will turn to Turkish data to find out how this line of an analysis captures the Turkish data. As the discussion in section 3 has shown, out of four possible LF and PF orders only A and D are observed in Turkish while the orders in (B-C) are not possible. We can conclude that Turkish is much more restrictive than the sets given above. The unacceptability of B is universal and it is predictable. The unavailability of the order in C shows that Turkish is a scope rigid language to a great extent although exceptions can be found as illustrated in section 4.6 with OSV indefinite-universal order.

When the order is *bir>her* in SOV order and as the topic precedes focus phrases, only surface scope is possible. Within the assumptions of the analysis of Neeleman and Vermeulen (2012), it is predicted that no quantifier raising will apply when surface scope is observed. If scope extension does not result in an otherwise unavailable scope relation, quantifiers do not percolate their index or move at LF. In our data, the indefinite quantifier takes scope over its scope domain as there is no scope index percolation. For the same order, the analysis of Bobaljik and Wurmbrand (2012) predict that for the CT>CF LF order, the only possible PF realization is CT>CF because CF>CT order violates both ScoT and Move. It violates

ScoT because there is a mismatch between PF and LF representations. It violates Move because overt movement is a costly operation.

Now let's see the predictions of the two analyses for OSV order. Remember that in Turkish OSV order two patterns are observed. For the OSV order with *her>bir* pattern both surface and inverse scope is possible due to the high attachment site of the existential operator that binds the indefinite quantifier. We have to add an additional rule that allows contrastive focus to be interpreted to take scope over the contrastive topic in the presence of the existential operator.

Additionally, for the OSV order with *bir>her* order inverse scope is restricted to a few cases in which it is the discourse anaphoric constituent and not the contrastive focus, which takes scope over the contrastive topic. Discourse anaphoric constituents are not a part of either of the analyses. However, based on the data discussion in section 3, we can conclude that similar to contrastive topic and contrastive focus order only contrastive topic can precede discourse anaphoric constituents at PF. In contrast to contrastive focus phrases discourse anaphoric constituents can take scope over contrastive topic phrases in *bir>her* order via the existential operator and in *her>bir* order due to intermediary reconstruction sites.

Table 14. Possible LF and PF Orderings for CT and DA Constituents

	LF	PF	ScoT	Move	
A	A[TOP]>B[DA]	A[TOP]>B[DA]	+	+	LF and PF match
B	B[DA]>A[TOP]	A[TOP]>B[DA]	*	+	LF and PF do not match
C	B[TOP]>A[DA]	B[TOP]>A[DA]	+	*	overt movement but LF and PF match

This seems to work out the problem with discourse anaphoric constituents but some of the binding data discussed in section 3 give contradictory results for SOV and OSV orders.

(68) * [[…vbl…]$_{subj}$]$_{CT}$ >> [QP$_{obj}$]$_{DA}$ >> [V]$_{FOC}$

A: Dünkü törende öğretmenler her öğrenciyi azarlamış. Doğru mu?

'I hear that at the ceremony yesterday, the teachers scolded every student. Is that right?'

B: Valla öğretmenlerden haberim yok ama…

'Frankly I do not know about the teachers but….

*[*pro*$_i$ danışman-ı]	*herkes-i*$_i$	tebrik	et-ti
mentor-3SGPOSS-NOM	everybody-ACC	congratulate	do-PAST
tören-de			
ceremony-LOC			

'Literally: Everyone$_i$ was congratulated by his/her mentor$_i$ at the ceremony.'

(Şener 2010, 68)

As illustrated in (68) when the order is SOV, LF and PF do not match. The LF and PF ordering is indicated in table 14 above as the B option. This ordering violates ScoT, however Move is not violated as there is not an overt movement. We expect this order to be acceptable but it is not. The discourse anaphoric constituent can extend its index without violating CSS; however, the structure is out. Now let's take a look at the same information structural order in OSV.

(69) [[…vbl…]$_{obj}$]$_{CT}$ >> [QP$_{subj}$]$_{DA}$ >> [V]$_{FOCUS}$

A: Dünkü törende her öğretmen bir öğrencisini tebrik etmiş. Doğru mu?

'I hear that at the ceremony yesterday every teacher congratulated a student of her. Is that right?'

B: Valla, öğrencilerden haberim yok ama…

'Frankly, I do not know about the students but…..

[*pro*$_i$ bir arkadaş-ı]-nı	her öğretmen$_i$	*t*[$_{pro\ bir\ arkadaşını}$]	azarla-dı
a friend-3SGPOSS-ACC	every teacher		scold-PAST
sert bir şekilde.			
in a harsh manner			

'Every teacher scolded a friend of her in a harsh way.' (Şener 2010, 81)

The LF representation of this acceptable structure is A[DA] > B[CT] and the PF representation is B[CT] > A[DA]. Within the assumptions of Bobaljik and Wurmbrand (2012) both ScoT and Move are violated as LF and PF do not match and there is overt movement of the contrastive topic over the discourse anaphoric constituent. Within the assumptions of Neeleman and Vermeulen (2012), the scope extension of the discourse anaphoric constituent violates CSS as the index of this constituent moves to the node, which also carries the index of the dislocated contrastive topic. However, the structure is fully acceptable. If we propose that the unacceptability of (68) is due to another well formedness condition which states that discourse anaphoric constituents cannot take contrastive topics under their scope then the structure in (69) still remains a puzzle. These contradictory results show that the quantificational LF analysis falls short of explaining scope and binding data of information structural units in Turkish.

4.7 Multiple focus projections

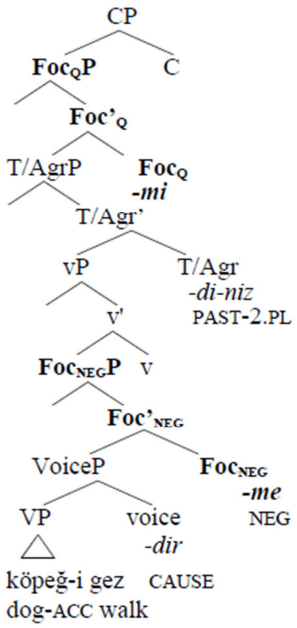
The syntactic analysis pursued in this study assumes an IP internal FocP. Quantifier scope and binding data has shown that there is no need for an additional FocP at the left periphery. In the Turkish linguistics literature, an IP internal and a CP level FocP have been proposed to account for the distribution of the question particle and the negation marker (Kahnemuyipour and Kornfilt 2011), or the question particle and multiple foci constructions (Su 2012). In this section we will take a look at these analyses and see whether the data discussed in these studies can be captured within the syntactic mechanism used in this study.

Kahnemuyipour and Kornfilt (2011) suggest the phrase structure in (71) for the structure given below.

(70) köpeğ-i gez-dir-me-di-niz-mi?
dog-ACC walk-CAUSE-NEG-PAST-2PL-QP
'Didn't you walk the dog?'

The stress domain maps onto the syntactic domain containing Tense/Aspect/Modality projection and FocP is above this projection. Hence in (71) there are two FocP projections, the head projections of which are filled by negation and the question particle.

(71)



Kamali and Samuels (2008) and Kamali (2010) argue against the analysis of taking NegP as a FocP based on the distinctions between negation and the question particle in that (i) only the question particle follows the constituent bearing focus while negation always attracts stress to the verb, (ii) the position of focus is important for the question particle but irrelevant for negation.

The data with yes/no questions in sections 2.3.1.2 and 2.3.2.2 have also shown that although yes/no questions can trigger both contrastive focus and topic phrases, the question particle *–mI* always follows the focus phrase. The other

distinction is that every constituent in a sentence can bear focus and can be followed by the *–mI* question particle. However, only verbal predicates can bear the negation marker *–mA*. The following examples also support the analysis that negation and the question particle are not of the same nature. In the presence of a contrastive topic phrase the verb bears focus in (72) and note that the verb is followed by the question particle.

(72) A: Almanya ve Hollanda'ya çalışmaya giden Alanyalılar büyük beğeni toplamışlar. Hollandalılar da onları öven bir konuşma yapıyor.
One of the groups that went from Alanya to Dutch and Germany won recognition with their work. Now the Dutch people give a vote of thanks.
B: [Almanyalı-lar]$_{CT}$ Alanyalı-lar-ı [öv-üyor]$_{F}$ mu?
German-PL people of Alanya-ACC praise-PROG QP
Do the German people praise the people from Alanya?

It is not possible to add another focus constituent to this sentence as the following example illustrates.

(73) A: Almanya ve Hollanda'ya çalışmaya giden Alanyalılar ve Anamurlular büyük beğeni toplamışlar. Hollandalılar da onları öven bir konuşma yapıyor.
One of the groups that went from Alanya to Dutch and Germany won recognition with their work. Now the Dutch people give a vote of thanks.
B: #[Almanyalı-lar]$_{CT}$ [sadece Alanyalı-lar-ı]$_{F}$ [öv-üyor]$_{F}$ mu?
German-PL only people of Alanya-ACC praise-PROG QP
Intended reading: Do the German people praise only the people from Alanya?

However, negation on the verb can surface in a similar context.

(74) A: Alanyalılar ve Anamurlular Almanya ve Hollanda'ya çalışmaya gitmişti. Hollandalılar iki grubu da beğenmemiş. Konuşmalarında iki grubu da övmediler.

People from Alanya and Anamur went to Germany and Holland to work. The Dutch did not like either of the two groups. They did not praise the two groups in their speech.

B: [Almanyalı-lar]$_{CT}$ ise [sadece Alanyalı-lar-ı]$_{F}$ öv-mü-yor
German-PL on the other hand only people of A.-ACC praise-NEG-PROG
'The German people on the other hand do not praise only the people from Alanya.'

In the presence of a focus phrase in (73) an additional focus phrase with an overt particle is not licit. However, this restriction is not observed with negation as illustrated in (74).[156] Hence we also suggest that there is no clear reason to take negation as focus projection. Within our analysis, in (70) it is the verb that bears focus and it agrees with the FocP in-situ.

Su (2012) also suggest an IP internal and a CP level FocP. However, based on the arguments of Kamali and Samuels (2008) and Kamali (2010), Su (2012) also suggests that negation does not project a FocP. Su (2012) bases the arguments for an inner and an outer FocP based on the following examples.

(75) a. Kim ney-i gör-müş?
who what-ACC see-PAST
'Who saw what?'

b. Okul-a ne zaman gid-ecek-sin?
school-DAT when go-FUT-2SG
'When will you go to school?' (Su 2012, 27, 30)

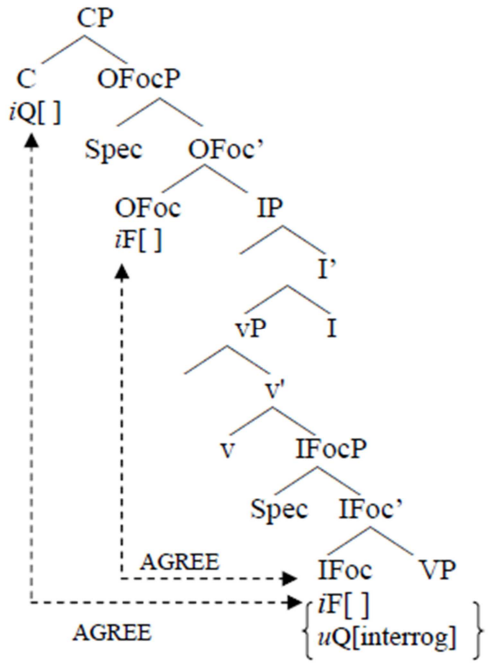
[156] Recall that with contrastive topic phrases, it is possible to interpret the discourse-given verb as the focus phrase although none of the inflectional markers contrast with another marker given in the previous context. The relevant example is repeated below for ease of exposition.

(1) A: Parti-ye kaç kişi gel-ecek?
party-DAT how many person come-FUT
'How many people will come to the party?'

B: Bildiğim kadarıyla, üç kişi$_{CT}$ gel-ecek, diğer-ler-in-den haber-im yok.
As far as I know three person come-FUT other-PL-GEN-LOC news-POSS absent
'As far as I know, three people will come, I don't know anything about the others.'

Su (2012) suggests the following structure for these constructions but notes that the question particle can also attach to the outer FocP. In (76) below, the F feature of inner FocP is valued by the focused phrase in its Spec position. The outer FocP Agrees with the inner FocP and the F feature is valued. The interrogative feature is valued with the C head via long distance Agree.

(76)



Now we will see whether our analysis can account for this set of data without appealing to an additional FocP projection at the left periphery. Remember that we assume that negation can surface above *v*P and TP domains and hence we do not need an additional FocP for negation in contrast to the analysis of Kahnemuyipour and Kornfilt (2011). As for the multiple focus phrases given in (75) above, remember that we have already suggested that the initial constituent is not a focus phrase but a contrastive topic phrase occupying Spec TP position above FocP. Additionally, focus phrases in Turkish do not undergo movement, as already noted in the literature (Şener 2010). As for the position of the question particle in the phrase structure we

can assume that it is the Foc^{o} position as it always follows the focus phrase. The other option is that the question particle heads its own projection above FocP. We will discuss these two alternative analyses in section 5.4.2.1. However, based on the discussion so far, we can safely conclude that there is only one FocP in the phrase structure of Turkish.

4.8 Conclusion

In this chapter we investigated negation, quantifier scope, and binding data in SOV and OSV orders. The data show that;

- IP internal FocP, DaP and Spec TP as the target position of topic phrases account for Turkish facts. The interaction of focus with different aspectual markers also supports the analysis of IP internal FocP.
- An additional FocP at the left periphery (Kahnemuyipour and Kornfilt 2011, Su 2012) is not necessary; analyzing multiple focus phrases as contrastive topic-focus phrases makes the left peripheral FocP redundant.
- In Turkish, *v*P does not show the phasehood properties in that only outer specifier of vP serves as an escape hatch[157] and the complement domain of *v*P does not allow reconstruction for contrastive topic phrases but reconstruction is licit for the aboutness topics and the discourse anaphoric constituents.
- The scope domain of focus does not map onto *v*P phase but it maps onto the eventual domain (Ramchand and Svenonius 2013). The scope domain of focus phrase is used as a referential unit as part of the alternative set of the contrastive topic and hence we concluded that although both the aboutness topic and the contrastive topic move to Spec TP, the movement of contrastive

[157] The term escape hatch is used for edges of phase domains but we have suggested that *v*P is not a phase in Turkish. We will use the term 'escape hatch' to identify the position to which reconstruction for contrastive topic is possible.

topic is a scope taking movement operation. Hence contrastive topic cannot reconstruct back to this domain.

- In SOV order, only the contrastive topic moves out of the eventual domain but in OSV order, except for the focus phrase, the subject and the object move out of their base generated positions.
- In both SOV and OSV orders, the information structural status of the constituents does not directly shape scope interpretations. We can account for the inverse scope interpretations in Turkish via the exceptional scope taking properties of the existential operator over choice functions and different restrictions on reconstructions sites for the information structural units.

The next chapter discusses the implications of these findings for the phrase structure of Turkish.

CHAPTER 5

REVISITING THE PHRASE STRUCTURE OF TURKISH

In this chapter, based on the findings in the previous chapter, I will entertain a few possibilities regarding the phrase structure of Turkish. The quantifier scope and binding data indicated that *v*P in Turkish does not show the properties of a phase in that, (i) in line with phase impenetrability condition, we expect the complement domain of *v*P not to be a site for reconstruction but it is so for aboutness topic and discourse anaphoric constituents, (ii) the position of the external argument is out of the complement domain of *v*P phase but the Turkish data has shown that no reconstruction is allowed to this position for contrastive topic phrases and only the outer specifier position of *v*P is a possible reconstruction site for contrastive topics.

We defined this domain as the scope domain of focus in the sense that it is composed of the constituents based on which semantic value of the focus is derived as alternative propositions. Interaction of this domain with im/perfective morphology and adverbs has shown that this domain is the event structure domain as defined by Ramchand and Svenonius (2013). In this domain, all the arguments of the verb are introduced. Imperfective morphology attached to the event domain has an effect on scope relations but perfective morphology does not have such an effect by virtue of being attached to a higher domain.

As for the representation of information structural units, IP internal functional projections can capture the Turkish data. The elimination of *v*P as a phase and taking TP as the highest position for information structural units in Turkish raised the question whether CP exists in the inventory of functional projections of Turkish. Turkish is interesting in that the existence of DP has also been questioned.

Based on the assumption that there is CP/DP parallelism (Abney 1987, Svenonius 2004, Hiraiwa 2005) the first question that is under investigation in this chapter is whether we have conclusive evidence for the phase status or presence of a CP level in Turkish.

Turkish does not have overt definite articles and complementizers, with the exception of *–ki* borrowed from Persian and the subordinator *'diye'*, and there are two possible alternatives: (i) DP and CP projections are part of the functional inventory of Turkish but they are not realized phonologically or (ii) the absence of overt determiners and complementizers indicate the absence of these projections for Turkish.[158] It has been observed that there are structural similarities between CP/DP and TP/PossP (Hiraiwa 2005), and Despić (2011) shows that in the absence of PossP, DP loses its phasehood properties. Bošković (2012) and Kang (2014) also argue that the absence of DP in a language signals the absence of TP. With these studies we shift our focus on TP/DP parallelism. Hence the second issue investigated in this chapter is the presence or absence of TP in Turkish in the absence of DP, which is expected to have an effect on the phasehood properties of CP. The discussion of the data on (i) subject reflexives, (ii) ECM clauses, (iii) bounding nodes, (iii) subject-object extraction, (iv) the absence of expletives, (v) sequence of tense, (vi) suspended affixation (Zanon 2014) show that, in addition to *v*P, CP also lacks phasehood properties which can be taken as an indication of the absence of TP. The discussion on the T(ense)/A(spect)/M(ood) markers of Turkish reveal that temporal interpretation in Turkish is dependent on Mood markers and we do not need a Tense projection. In the next section we begin with the arguments raised for and against the presence of DP in Turkish in the literature.

[158] Göksel and Kerslake (2005:462) list the functions of *'diye'* as expressing "…reason, purpose, precaution or understanding…"

5.1 Determiner phrase in Turkish

D head assigns referentiality to an NP and type shifts it into an argument (Longobardi 1994). In English, NPs are predicative in nature and when they are merged under DP projection they are type shifted into arguments. The fact that Turkish lacks overt definite determiners puts the nature of referentiality assignment for Turkish NPs to question.

5.1.1 Arguments against DP

Öztürk (2005) suggests that there is strict correlation between referentiality and case assignment in that the same functional head is responsible for these functions. Subject is merged at spec AgentP and gets its referentiality and case feature checked in the same position, making movement to Spec TP redundant. ThemeP checks referentiality and case feature of the object phrase.

Nominals surfacing without overt case morphology serves as the testing ground for this analysis. Öztürk (2005) investigates bare nominals in Turkish and shows that these non-case marked nominals are non-referential.

(1) a. *Ali kitap oku-du. Reng-i kırmızı-ydı.
Ali book read-PAST color-POSS red-PAST
'Ali did book reading. It was red.

b. Ali kitab-ı oku-du. Reng-i kırmızı-ydı.
Ali book-ACC read-PAST color-POSS red-PAST
'Ali read the book. It was red.

(2) a. Köpek bahçe-de havlıyor. Reng-i siyah.
dog garden-LOC barking color-3SG black
'The dog is barking in the garden. It is black.'

b. *Bahçe-de köpek havlıyor. Reng-i siyah.
garden-LOC dog barking color-3SG black
'There is dog barking in the garden. It is black.'
(Öztürk 2005, 101-102)

In (1a) and (2b), the immediately preverbal object and the subject are non-case marked and hence referentiality is not possible. Öztürk (2005) suggests that bare nominals are pseudo-incorporated to the verb and, as they are part of the verbal complex, they are predicative in nature. Hence these nominals do not show properties of syntactic arguments. For example, under passivization, in contrast to a case marked nominal (3a), only an impersonal passive reading is possible with bare nominals (3b).[159]

(3) a. Kitap oda-da oku-n-du
book room-LOC read-PASS-PAST
'The book was read in the room.'
b. Oda-da kitap oku-n-du.
room-LOC book read-PASS-PAST
'Book-reading was done in the room.' (Öztürk 2005, 72-73)

Case assignment at AgentP and ThemeP type shifts predicative NPs into arguments and leads to kinds, generic or definite readings as illustrated below.

[159] Bare nominals also surface with idioms (1a) and with the light verb *–et* (1b) and in all these cases they form [NP+V] complex predicate structure with the verb. The NP forms are not head incorporated into the verb as some particles can surface between the NP and the verb (Öztürk 2005). This is indicated in the following examples with the insertion of question particle.
(1) a. Ali bu problem-e kafa mı patlat-tı?
Ali this problem-DAT head QP burst-PAST
'Did Ali spend mental energy on this problem?' Literally: to burst the head
b. Meclis yasa-yı [$_{NP}$redd] mi et-ti?
assembly law-ACC reject QP do-PAST
'Did the assembly reject the law?' (Öztürk 2005, 89, 94)

(4) a. Ali kitab-ı oku-du. (definite)
Ali book-ACC read-PAST
'Ali read the book.
b. Edison ampül-ü icat et-ti (kind)
Edison light bulb-ACC invent-PAST
'Edison invented the light bulb.'
c. Ali köpek-ler-i/dondurma-yı sev-er. (generic)
Ali dog-PL-ACC/ice-cream-ACC like-AOR
'Ali likes dogs/ice-cream' (Öztürk 2005, 1-3)

Öztürk (2005) concludes that there is not an overt definite determiner that is the equivalent of 'the' in English. It is case assignment that type shifts predicative NPs into arguments.

Bošković and Şener (2014) also suggest that Turkish is similar to traditional NP languages not DP languages based on a set of syntactic and semantic diagnostics.[160] We will briefly go over these tests with their examples.

(a) Negative raising is disallowed: the negative polarity item in the embedded clause cannot be licensed by negation in the matrix clause.

(5) Mete [Pelin-ø/-i (*en az iki yıldır) Timbuktu-ya git-ti]
Mete Pelin-NOM/ACC at least two years-for T.-DAT go-PAST
san-mı-yor.
think-NEG-PRES
'Mete doesn't think Pelin went to Timbuktu in at least two years.'

(b) Transitive nominals with two lexical genitives are disallowed: the external and the internal argument cannot bear genitive case at the same time.

[160] The observation that a language does not have a phonologically realized definite determiner may not necessarily indicate the absence of the DP projection. These tests have been found to be closely related with the presence of an article. For instance in literary Finnish there is no phonologically realized definite determiner and left branch extraction is disallowed. In colloquial Finnish, in which a definite article has developed, left branch extraction is possible. I refer readers to Bošković (2008, 2010) for further arguments.

(6) *Osmanlılar-ın İstanbul-un feth-i
Ottomans-GEN İstanbul-GEN conquest-3SGPOSS
'Ottoman's conquest of Istanbul.'

(c) Article-less languages allow scrambling: as illustrated in detail in Chapter 4 scrambling for discourse-interpretational purposes is observed in Turkish.

(d) Radical pro-drop is possible in article-less languages: Turkish allows both subject and object drop.

(e) Double negation reading may be absent in article-less languages:

(7) Hiçbir çocuk hiçbir kitab-ı oku-ma-dı
no child no book-ACC read-NEG-PAST
'No child read any book.' (negative concord/*double negation)

(f) Possessors may induce an exhaustivity presupposition only in article languages: In the following sentence we do not get the reading that John has only three bicycles.

(8) Can-ın üç bisiklet-i
John-GEN three bicycle-3SGPOSS
'John's three bicycles.'

(g) Only article-less languages allow left branch extraction: This property is checked with postposing of non-contrastive constituents as in (9).

(9) Pelin [t_i kitap oku-du] kalın$_i$
Pelin book read-PAST thick
'Pelin read a thick book.'

(h) only article languages allow majority superlative reading: In the following example the event of beer drinking outnumbers the drinking of any other beverages,

giving plurality reading only. The majority reading of ‘more than half the people drank beer’ is not possible.

(10) İnsanlar en çok bira iç-ti
people most beer drink-PAST
‘People drank beer the most.’

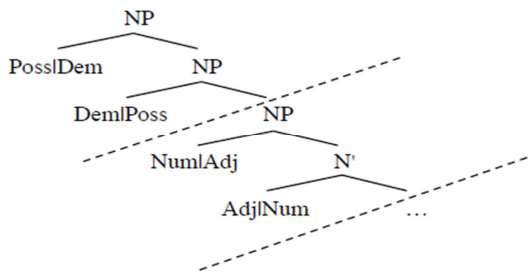
(i) Inverse scope is unavailable in article-less languages: the discussion in section 4.3.3 has shown that although inverse scope is available in a few cases, in the majority of the data scope can be read off the surface order.

(j) Number morphology may not be obligatory only in article-less languages. The NP in the following example can be interpreted as singular or plural.

(11) Can (kalın) kitap oku-muş
John thick book read-PAST
‘John read a (long) book/ (long) books.’

Bošković and Şener (2014) propose the following representation for Turkish NPs. The possessor and the demonstrative are adjoined to the NP while the adjective and the numerical occupy specifier positions. [161]

(12)



(Bošković and Şener 2014, 28)

They further propose the following example to indicate that in Turkish DP level is missing.

[161] Bošković and Şener (2014) then modify this phrase structure adding a further possessor projection below NumP.

(13) a.*[Şu Özpetek^{i}-in film-i] o-nu^{i} hayal kırıklığına uğrat-tı.
that Özpetek-GEN film-ACC he-ACC disappoint-PAST
'That movie of Özpetek's disappointed him.'
b.*[Şu o-nun^{i} film-i] Özpetek^{i}-i hayal kırıklığına uğrat-tı.
that he-GEN film-ACC Özpetek-ACC disappoint-PAST
'That movie of him disappointed Özpetek.'
(Bošković and Şener 2014, 29)

Both the demonstrative and the possessor are adjunction to the NP projection and they can c-command out of the subject NP. In the absence of a DP projection to close off the binding domain, co-indexation is possible yielding condition B and C violations in (13a-b).[162]

While discussing the presence of DP projection in a language, Bošković (2008, 2010) bases his arguments on the presence/absence of definite determiners. In the following section we will briefly go over what is suggested for indefinite noun phrases in Turkish.

5.1.1.1 Indefinite noun phrases

Indefinite noun phrases in Turkish can surface as accusative marked or without a case marker. Accusative case marked forms are referred to as 'specific' indefinites, while the zero marked ones are referred to as 'non-specific' indefinites. Specificity has been used to denote partitivity, referentiality, presuppositionality. Kelepir (2001) suggests that in the contexts where accusative marked indefinites appear, the semantic property that captures all the data is not partitivity or referentiality but

[162] Ellipsis and stranding are possible with phrases but not with segments and bar level constituents. Bošković and Şener (2014) further show that (i) possessor stranding is not possible, (i) ellipsis inside bare nominals with adjectives and numerals is not possible; (iii) numerals inside bare numerals can be stranded only in the presence of classifier-like elements. This indicates that numerals, possessors, and adjectives are not phrases.

presuppositionality. General presuppositionality means that the set denoted by the restrictor is not empty. The following examples illustrate the difference between accusative and zero marked indefinites. In an intensional context, only accusative marked indefinite has 'de re' reading, while this reading with the zero marked indefinite is illicit in the same context as in (14).[163]

(14) Hasan bugünlerde ne yapıyor?
What is Hasan doing these days?
a. Hasan Cambridge-de bir sokağ-ı arıyor
Hasan Cambridge-LOC a street-ACC looking.for
'Hasan is looking for a street in Cambridge.'
b.#/*Hasan Cambridge-de bir sokak arıyor
Hasan Cambridge-LOC a street looking.for
'Hasan is looking for a street in Cambridge.'
(Kelepir 2001, 120)

[163] We suggest that in some cases, zero marked indefinites can also be interpreted as having wide scope over intensional verbs or partitive interpretation. In (1-2) the set is mentioned earlier in the context and the speaker refers to a member of the set, which is not definite. However, partitive interpretation is possible.
(1) …Kutuda bir sürü kitap ve defter vardı. Hasan bir kitap alıp çantası-na koydu
Hasan a book took his bag-DAT put
'…There were lots of books and notebooks in the box. Hasan took one of them and put it in his bag.' (see the example (23) in the text)
(2) A: *Some of the teachers at our school went on a picnic with three students after school. The students who took advantage of the wind brought kites with them to fly. Additionally they brought helicopters that work with remote controller. Did the students fly the kites after the picnic?*
B: Valla, duyduğum kadarıyla her öğrenci bir uçurtma uçur-muş.
every student one kite fly-PAST
'Frankly, from what I heard, every student flew a kite.'
In the following contexts with intensional verbs, the zero marked indefinite can have a referential reading.
(3) Bir sokak arı-yor-um. Adres kağıtta yazılı. Yardımcı olur musunuz?
A street look for-PROG-1SG
'I am looking for a street. The address is written on the paper. Can you help me?'
(4) Bir çocuk arı-yor-um. 5 yaşlarında. Kırmızı mont giyinmiş. Gördünüz mü?
A child look for-PROG-1SG
'I am looking for a child. He is around 5. He had a red coat. Did you see him?'
In these contexts zero-marked indefinites have the same interpretation with the accusative marked indefinites making the distinction between the two groups blurred. Thus, it is not always accusative marking that makes a constituent have existential presupposition reading. This issue needs further research.

In (15), the context does not trigger existential presupposition; hence only the zero marked indefinite is possible within this context.

(15) Bu yazı kontrol edildi mi bilmiyorum.
I don't know whether this text has been edited.
a.#Bir hata-yı bul-ur-sa-n bana haber ver.
a mistake-ACC find-AOR-COND-2SG let me know
'If you find one of the mistakes, let me know.'
b. Bir hata bul-ur-sa-n bana haber ver.
a mistake find-AOR-COND-2SG let me know
'If you find a mistake, let me know.' (Kelepir 2001, 101)

Finally, in (16), only the accusative marked indefinite can take scope over the negation operator.

(16) a. Hasan Ali-ye bir hediye al-ma-dı.
Hasan Ali-DAT a present buy-NEG-PAST
'Hasan did not buy Ali a present.'
b. Hasan bir ödev-i yap-ma-dı
Hasan a homework-ACC do-NEG-PAST
'Hasan didn't do a homework.' ('Hasan didn't do one of the homeworks.)
(Kelepir 2001, 131-132)

Now we will see how 'case' as referentiality assignor analysis works for Turkish indefinites. Öztürk (2005) takes zero marked indefinites in line with pseudo incorporated bare nominals. She bases her arguments on scope data and suggests that zero marked constructions always take narrow scope, as is the case with bare nominals.

(17) a. Her çocuk bir kitab-ı oku-du ∀∃ / ∃∀
every child one book-ACC read-PAST
'Every child read a book.'

b. Her çocuk bir kitap oku-du ∀∃ / * ∃∀
every child one book read-PAST
'Every child read a book.'

c. Her çocuk kitap oku-du ∀∃ / * ∃∀[164]
every child book read-PAST
'Every child did book-reading.' (Öztürk 2005, 19-20)

Öztürk (2005) makes a further distinction for zero marked indefinites as stressed *'bir'* and stress-less *'bir'*. Stressed *'bir'* is an adverbial modifying the whole event. Similar to an adverbial, *'bir'* measures out the event.

(18) a. Ali [BİR [CompPred [kırmızı kitap aldı]]
Ali one red book bought
'Ali bought one red book.'

b. Ali [bir tane [CompPred [kırmızı kitap okudu]][165]
Ali one CL red book read
'Ali did book reading for one unit of red book.' (Öztürk 2005, 19-20)

Stress-less *'bir'* is a predicate modifier and similar to an adjective, modifies the pseudo incorporated NP.

(19) Ali [CompPred bir kitap okudu]
Ali one book read
'Ali read a book.'

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[164] Although wide scope is not possible with zero marked indefinites, I think scope interpretation with bare nominals is not possible either. Hence they cannot be compared in terms of scope interpretation.

[165] Bošković and Şener (2014) propose a classifier-like projection (CLLP) for *'tane'* constructions based on ellipsis constructions.

(1) Pelin her gün [beş elma] ye-r, Can-sa [iki ~~elma~~] ye-r.
Pelin every day five apple eat-AOR John-however two eat-AOR
'Pelin eats five apples every day, while John eats two.'

(2) Pelin her gün [üç tane elma] ye-r, Can-sa [iki tane ~~elma~~] ye-r.
Pelin every day three CL apple eat-AOR John-however two CL eat-AOR
'Pelin eats three apples every day, while John eats two.' (Bošković and Şener 2014, 41, 46)

NP internal ellipsis is not possible with bare nominals indicating that numerical does not occupy a phrasal position but a specifier position as illustrated in (1). In (2) on the other hand, the numerical expression moves from its base generated position to CLLP, hence ellipsis is possible.

Furthermore, indefinite is not a functional projection in that it cannot close a projection (20) and it does not obey the head final properties of other functional projections in Turkish (21).

(20) a. kırmızı bir kitap b. bir kırmızı kitap
red one book
'a/one red book.'

(21) a. bu kitap b. *kitap bu
this book book this (Öztürk 2005, 7, 10)

Recall that Öztürk (2005) suggests that 'case' type-shifts predicative NPs into arguments and leads to generic, kind or definite readings. As for case marked indefinites, the analysis of Öztürk (2005) predicts them to be referential as they are marked for case. Specific indefinites have neither kind nor definite reading.

Additionally, as pointed out by Kelepir (2001), accusative marked indefinites are not always referential as they do not take the widest scope in all cases. Öztürk (2005) adapts the analysis of Schwarzschild (2002) according to whom indefinites encode existential quantification but wide scope reading is available when its domain is singleton, as indicated with the example in (22) from Schwarzschild (2002).

(22) a. Everyone at the party voted to watch a movie that Phil liked.
b. A movie that Phil liked was such that everyone at the party voted to watch it.

The specific indefinite is interpreted to be referential because it has a singleton domain and the indefinite has an 'almost definite' reading. However, the following example cannot be analyzed within a singleton domain.

(23) Kitap-lar-ın iki-si-ni al geri-si-ni
book-PL-GEN two-3SGPOSS-ACC take remainder-3SGPOSS-ACC
kutu-da bırak.
box-LOC leave
'Take (any) two of the books and leave the remainder (of the books) in the box.'
(Kornfilt 2000, cited in Kelepir 2001, 126)

In this context, partitive reading or presuppositionality is easier to get than referentiality reading. 'Almost definite' reading is not possible as we are talking about 'any two of the books'. Hence we suggest that if it is 'case' that type shifts predicative NPs into arguments leading to definite, kind or generic reading as indicated by Öztürk (2005), then the existential presupposition reading should also be included in this list. With the addition of presuppositionality, all the semantic instances of accusative marked indefinites can be captured. However, as exemplified in footnote 163, zero marked indefinites can also trigger existential presuppositionality in certain contexts. If case marking is suggested to be the sole type shifter in Turkish leading to kind, generic, definite, and existential presuppositionality readings, existential presuppositionality interpretation with zero marked indefinites yields a problem. As this issue is beyond the scope of this study, we leave it for further research.

5.1.2 Arguments for DP

Arslan-Kechriotis (2006) argues for the presence of a DP projection, which establishes the referentiality of the NP complement. Contra Öztürk (2005), Arslan-Kechriotis (2006) suggests that zero marked indefinites in Turkish are referential, similar to the referentiality interpretation of Fodor and Sag (1982) in that there is a referent in mind that exists in the real or imaginary world. She suggests that zero

marked indefinites are different from bare nominals. In the following example, the zero marked indefinite object can take wide scope and be interpreted as being referential.

(24) a. Üç çocuk bir araba al-mış
three child one car buy-EVI
'a car is such that three children bought it.'
*'each of the three children bought a new car.'
b. Üç çocuk araba al-mış
three child car buy-EVI
'a car is such that three children bought it.'
'each of the three children bought a new car.'
(Arslan-Kechriotis 2006, 6-7, adapted from Kennelly 1996)

However, as Arslan-Kechriotis (2006:26) herself also points out in a footnote, the group denoting subject can also be the source for this scope interpretation. Note that the same reading is not possible in (17b).

Aydemir (2004) and Arslan-Kechriotis (2006) further argue against analyzing zero marked indefinites on a par with bare nominals based on the following tests.

(25) a. *Ali kitap oku-du. Reng-i kırmızı-ydı
Ali book read-PAST color-POSS red-PAST
'Ali did book reading. It was red.' (Öztürk 2005, 68)
b. Ali bir kitap oku-du. Reng-i kırmızı-ydı.
Ali one book read-PAST color-POSS red-PAST
'Ali read the book. It was red. (Arslan-Kechriotis 2006, 13b)

(26) a. Bütün gün kitap oku-du-m, *san-a da
all day book read-PAST-1SG you-DAT too
oku-ma-n-ı tavsiye ed-er-im
read-NOML-2SGPOSS-ACC recommend-AOR-1SG
Intended reading: 'I did book reading the whole day. I recommend you to read (it) too.'

b. Dün bir kitap oku-du-m, san-a da
yesterday one book read-PAST1SG you-DAT too
oku-ma-n-ı tavsiye ed-er-im
read-NOML-2SGPOSS-ACC recommend-AOR-1SG
'I read a book yesterday. I recommend you to read (it) too.'

(Aydemir 2004, 7a-c)

In (25a), the bare nominal cannot be referential as indicated with the following sentence but referential interpretation is possible in (25b). As illustrated in (26), elliptical constructions are possible with zero marked indefinites (26b) but not with bare nominals (26a).

Öztürk (2005) suggests that an elliptical clause is not possible with bare nominals because *pro* in the second clause needs a referential antecedent with number specification but this is not possible with bare nominals. The grammaticality of (26b) is not due to referential status of the zero marked indefinite. It is the number interpretation of *'bir'* that makes ellipsis possible. This analysis can be extended to (25a) in that pro in the second clause needs an antecedent with number specification and this is not possible with pseudo incorporated bare nominals.

Arslan-Kechriotis (2006) suggests that zero marked indefinites and bare nominals do not behave the same with respect to adverbial modification and relativization.

(27) a. Mehmet kötü araba kullan-ıyor
Mehmet bad car use-IMPRF
'Mehmet drives badly.'
b. Mehmet kötü bir araba kullan-ıyor
Mehmet bad one car use-IMPRF
'Mehmet drives a bad car.' (Aydemir 2004, 5)

Öztürk (2005), on the other hand, suggests that adverbial modification is possible with (27b) when the zero marked indefinite is contrastively focused.

(28) Mehmet hızlı kırmızı bir araba kullan-ıyor, (yeşil bir motosiklet değil)
Mehmet fast red one car use-IMPRF green one motorcycle not
'Mehmet drives a red car fast, (not a green motorcycle).' (Öztürk 2005, 27)

Aydemir (2004) notes another difference between zero marked indefinites and bare nominals as illustrated below with different telic expressions.

(29) a. Ali bir saat boyunca/*bir saatte çay iç-ti
Ali one hour long/one hour-LOC tea drink-PAST
'Ali drank tea for an hour/*in an hour'
b. Ali bir saatte bir (bardak) çay iç-ti
Ali one hour-LOC one (glass) tea drink-PAST
'Ali drank (a glass of) tea in an hour' (Aydemir 2004, 9)

With the following example, Öztürk (2005) suggests that telicity cannot be due only to the presence of an event measuring object. Zero marked indefinites can also be used with atelic expressions.

(30) Ali (bir saat boyunca) bir (bardak) çay içt-ti.
Ali one hour long one (glass of) tea drink-PAST
'Ali drank a (glass of) tea in an hour'

Arslan-Kechriotis (2006) further notes that zero marked indefinites and bare nominals also differ with respect to passivization. As illustrated in (31), only impersonal passivization is possible with bare nominals but this is not the case with zero marked indefinites.

(31) a. Hasan tarafından bir pasta ye-n-di.
Hasan by one cake eat-PASS-PAST
'A cake was eaten by Hasan.'
b. *Hasan tarafından pasta ye-n-di.
Hasan by cake eat-PASS-PAST
Intended reading: 'cake was eaten by Hasan.' (Kornfilt 1984, fn27, 63)

The shortcoming of this test is that in (31a), we cannot make sure whether it is the passive form of a zero marked indefinite or accusative marked indefinite. Based on this set of data in line with Öztürk (2005) and Bošković and Şener (2014), we suggest that Turkish does not have a DP projection. The next section discusses the complementizer phrase in Turkish.

5.2 Complementizer phrase in Turkish

The overt complementizers in Turkish is *–ki* which is borrowed from Persian (Kornfilt 1997, Göksel and Kerslake 2005) and *'diye'* (Göksel and Kerslake 2005). The clause following the complementizer *–ki* shows the syntactic properties of a root clause.

(32) a. Sanıyorum [ki iş-in-i bırak-mak isti-yor]
I think that job-3SGPOSS-ACC leave-NOML want-IMPRF
'I think [s/he wants to leave his/her job].'
(Göksel and Kerslake 2005, 21, pg. 409)

b. Sen iş-in-i bırak-mak isti-yor-sun diye bil-iyor-um.
you job-3SGPOSS-ACC leave-NOML want-IMPRF C know-PROG-1SG
'I know that you want to leave your job.'

In contrast to other functional projections in Turkish note that the verb head is not final. Kural (1993) suggests that *–k* in nominalizer *–DIK* and *–EcEK* is also of C^o category, *-DI* and *–EcEK* being past and future tense morphology, respectively. Kural (1993) takes the following binding data as evidence for *–k* being the complementizer. In (33a), the CP creates the binding domain for pronouns, while the lack of a CP level in (33b) yields binding violations.

(33) a. [Ahmet$_i$ [pro$_i$ Ankara-ya git-ti-ğ-in-i] san-ıyor]
Ahmet 3SG A.-DAT go-PAST-COMPL-AGR-ACC think-PROG-AGR
'Ahmet thinks he went to Ankara.'
b. *[Ahmet$_i$ [pro$_i$ Ankara-ya git-ti] san-ıyor]
Ahmet 3SG A.-DAT go-PAST think-PROG-AGR
'Ahmet thinks he went to Ankara.' (Kural 1993, 46)

The following data indicates that *–k*, being the complementizer, does not always create an opaque domain.

(34) a. [Ahmet [kimse-nin Ankara-ya git-tiğ-in-i] san-mı-yor]
Ahmet no one-GEN A.-DAT go-NOML-POSS-ACC think-NEG-PROG
'Ahmet does not think that anyone went to Ankara.'
b. *[Ahmet [kimse Ankara-ya git-ti] san-mı-yor]
Ahmet no one A.-DAT go-PAST think-NEG-PROG
'Ahmet does not think that anyone went to Ankara.'

In (34a), matrix negation can license negative polarity item in the embedded clause but it cannot license negative polarity item in (34b). If it is the presence of *–k* that

creates an opaque domain, we would expect the opposite pattern. The other alternative is that the CP domain headed by *–k* is not opaque but defective. Actually, there are some studies within this line of an analysis.

Kelepir (2006) classifies the studies on Turkish nominalized clauses into three categories: (i) VP selected by a nominalizer (Kornfilt 1984), (ii) nominalizers as tense markers and *–k* as the complementizer (Kural 1994, Göksel 1997), and (iii) nominalizers as aspectual markers with no TP and CP levels (Aygen 2002). Kelepir (2006) also takes *–k* of *–DIK* and *–EcEK* as complementizer suggesting that tense is defective in nominalized clauses. The next section discusses CP/DP parallelism, which sheds further light on the nature of CP in Turkish.

5.3 CP/DP parallelism

CP and DP projections bear similar properties not only with respect to their external syntax but also regarding their internal structure (Abney 1987, Svenonius 2004, Hiraiwa 2005, Despić 2011). This is illustrated below for English.

(35) a. John destroyed the spaceship
b. John's destruction of the spaceship (Abney 1987, 3)

In Turkish, nominalized complement clauses and genitive-possessive constructions surface with the same morphology.

(36) a. [Sen-in Ankara-ya git-tiğ-in]-i bil-iyor-um.
you-GEN Ankara-DAT go-DIK-2SGPOSS-ACC know-PROG-1SG
'I know that you went to Ankara.'
b. [Sen-in ev-in]-i bil-iyor-um.
you-GEN house-2SGPOSS-ACC know-PROG-1SG
'I know your house.'

The embedded subject in (36a) and the possessor in (36b) bear genitive case. The embedded verb in (36a) and the head noun in (36b) bear possessive agreement marker that agrees in person and number with the genitive case marked constituent. Recall that bare nominals in Turkish surface in the immediately preverbal position, pseudo incorporated to the verb, but they preserve their syntactic argument status, as passivization is still possible. Aygen (2002) shows that similar restrictions hold for complement clauses without a case maker. Embedded finite complement clauses (37) and factive nominalized clauses (38) cannot surface as the subject of the matrix clause, but these clauses can be passivized.

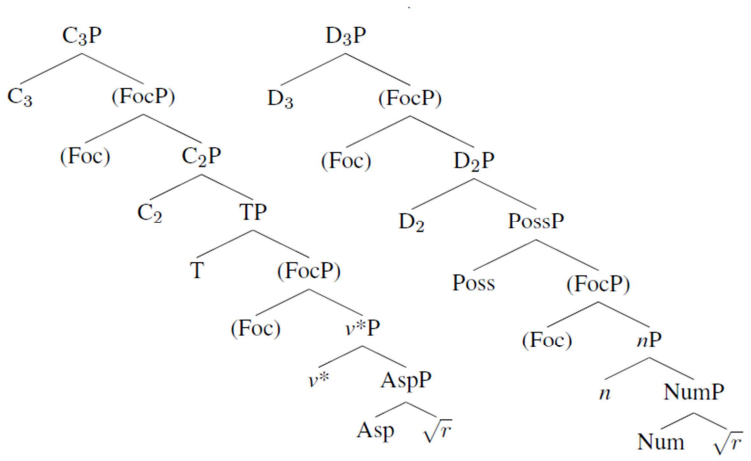
(37) a. *[Kürşat gel-di] biz-i şaşırt-tı
Kürşat come-PAST we-ACC surprise-PAST
'Intended reading: That Kürşat came surprised us.'
b. [Kürşat gel-di] san-ıl-ıyor
Kürşat come-PAST think-PASS-PROG
'It is thought that Kürşat came.'

(38) a.*[Kürşat-ın gel-diğ-i] biz-i şaşırt-tı
Kürşat-GEN come-NOML-AGR we-ACC surprise-PAST
'Intended reading: That Kürşat came surprised us.'
b. [Kürşat-ın gel-diğ-i] san-ıl-ıyor
Kürşat-GEN come-NOML-AGR think-PASS-PROG
'It is thought that Kürşat came.' (Aygen 2002, 101, 103)

The data indicates that in Turkish bare nominals and bare complement clauses have similar internal and external syntactic properties.

Hiraiwa (2005) takes a further step and suggests that CP and DP are surface variations of the same underlying structure, as illustrated in (39) below, and argues that both CP and DP are phases.

(39)



C_3 is the ForceP while D_3 is the demonstrative phrase. C_2 corresponds to Finiteness, D_2 is the definite determiner. TP in the CP projection corresponds to PossP in the DP projection.

Having concluded in section 5.2 that DP is missing in Turkish, in the next section we will discuss how the parallelism in (39) is reflected in Turkish. The discussion will also give us more ideas with regard to the structure of nominalized embedded clauses in Turkish.

5.3.1 Binding data and CP domain

Within another line of an analysis DP/TP parallelism is suggested. Bošković (2012) argues that in languages without DP, there is no TP. For Serbo-Croatian (SC), Despić (2011) suggests that DP is missing, based on the diagnostics proposed by Bošković (2008, 2010). He further argues that in SC, CP is not a phase due to the absence of a TP projection. Within the minimalist program C is the locus of all (agreement, case) features and with the percolation of these features to T head, C-T amalgamate agrees with a goal in the search domain of T. Despić (2011) suggests that CP can be a phase if there is a T head for the features to percolate and argues that in DP-less languages

there is also no TP projection. Despić (2011) bases his arguments on CP-DP and TP-PossP parallelism. When PossP is missing in the structure DP is defective, then the prediction is that when CP is defective in nature, it is due to the absence of TP projection in the structure. Now we will take a look at empirical evidence for these suggestions. In the absence of an overt possessor in the structure, binding relations change.[166]

(40) a. John$_i$ saw [$_{DP}$[$_{PossP}$Bill$_j$'s picture of himself$_{*i/j}$]]
b. John$_i$ saw [$_{DP}$ the picture of himself$_i$] (Despić 2011, 89)

Principle A requires anaphors to be bound in their domain. In the presence of a PossP, DP is not defective and serves as the binding domain. The matrix subject cannot bind an anaphor in the DP domain. In (40b), in the absence of PossP, DP is defective and hence the binding domain moves a step further and the matrix subject binds the anaphor.

Despić (2011) illustrates the absence of DP projection in SC with the following example.

(41)*[$_{NP}$ Ovaj [$_{NP}$ Kusturicin$_i$ [$_{NP}$ najnoviji [$_{NP}$ film]]]] ga$_i$ je zaista razocarao.
this Kusturica's latest film him is really disappointed
'This latest film of Kustirica$_i$ really disappointed him$_i$.' (Despić 2011, 16)

If the subject NP were a real DP projection, co-indexation with the pronoun would not be possible. However, in SC there is not a DP projection and the demonstrative and the possessor are NP adjunctions which enable them to bind the anaphor and

[166] Despić (2011) takes DP as a phase and defines the application domain of binding requirements as the phase domain.

yield Principle B violation. Recall that the same binding violation has been exemplified for Turkish in (13) by Bošković and Şener (2014).

Despić (2011) argues that if DP without PossP becomes transparent for binding, then the prediction is that CP without TP is also transparent for binding. Note that the prediction is also in line with the suggested parallelism in (39) between TP and PossP by Hiraiwa (2005).

Despić (2011) cites the following example from Aikawa (1994) for Japanese. The reflexive *'zibun-zisin'*, which is a local subject oriented anaphor, can occur in subject position and can be co-indexed with the matrix subject.

(42) John$_i$-wa [$_{CP}$ [$_{IP}$ zibun-zisin$_i$-ga Mary-o korosita] to] omotteiru.
TOP self NOM ACC killed that think
'John$_i$ thinks that zibun-zisin$_i$ killed Mary.' (Despić 2011, 91)

In the absence of a TP projection, CP is not a phase any longer. There is no local subject in the embedded clause and, in the presence of a defective CP, the matrix subject becomes a potential antecedent. Despić (2011) notes that this is only relevant for a single CP projection and binding is not possible across two CP projections as cited from Progovac (1998).

(43) John$_i$-ga Peter$_j$-ga kare$_{*i/j}$-zisin-ga Bill-o hihansita-to
J-NOM P-NOM self-NOM B-ACC criticized-COMP
ommotteiru koto-o sitteiru
think comp-ACC knows
'John$_i$ knows that Peter$_j$ thinks that self$_{*i/j}$ criticized Bill. (Despić 2011, 91)

The reflexive *'karezisin'*, which is not a strictly subject oriented reflexive, can be bound only by the embedded subject one clause up. The CP phase of the most

embedded clause is defective due to absence of TP and we move up to the higher clause. The external argument of the next *v*P phase, which is not defective, binds the anaphor. Hence the matrix subject cannot bind the anaphor.

Now we will test Turkish data. In Turkish there are two reflexive forms *'kendi'* and its inflected form with possessive marker *'kendisi'*.[167] The Turkish reflexive is not strictly subject oriented.

(44) Ahmet$_i$ Ayşe-ye$_j$ kendi$_{i/j}$ ile ilgili soru-lar sor-du.
Ahmet Ayşe-DAT self COM about question-PL ask-PAST
'Ahmet asked Ayşe questions about himself/herself.'

Göksel and Kerslake (2005) note that of the two forms *'kendi'* is more local than *'kendisi'* in that the antecedent of *'kendi'* is more likely to be in the same clausal domain with the reflexive. Hence for the tests in Turkish we will use *'kendi'* but the inflected form is also possible with the same interpretation. As is the case in (45), Turkish reflexives can occur in subject positions and can be bound by the matrix subject when the embedded clause is a finite clause (45a) or a nominalized clause with the nominalizer *–DIK* (45b) or *–mA* (45c).

(45) a. Ayşe$_i$ [kendi $_{i/*j}$ Ahmet-i$_j$ vur-du] san-ıyor.
Ayşe self Ahmet-ACC shoot-PAST think-PROG
'Ayşe$_i$ thinks that self $_{i/*j}$ shoot Ahmet $_j$.'

[167] Göksel and Kerslake (2005) suggest that *'kendi'* can be used as an adjectival modifier, while *'kendisi'* can be a marker for (i) emphatic, (ii) reflexive, (iii) pronominal, (iv) resumptive usages. Meral (2010) lists the following usage domains for the two forms:

	Anaphor	Pronominal	Resumptive	Emphatic	Logophoric	Adjectival
Kendi	Yes	Yes	No	Yes	No	Yes
Kendisi	Yes	Yes	Yes	Yes	Yes	No

b. Ayşe$_i$ Ahmet-e$_j$ [kendi$_{i/?j}$-nin yarış-ı kazan-dığ-ın] -ı
A. A.-DAT self-GEN competition-ACC win-NOML-3SGPOSS-ACC
söyle-di
tell-PAST
'Ayşe$_i$ told Ahmet$_j$ that self$_{i/?j}$ won the competition.'

c. Ayşe$_i$ [Ahmet$_j$-in kendi$_{i/j}$-ni mutlu et-me-sin]-i isti-yor
Ayşe Ahmet-GEN self-ACC happy make-NOML-3SGPOSS want-PROG
'Ayşe wants Ahmet to make self$_{i/j}$ happy.'

This property of reflexives has already been noted by Meral (2010) for nominalized clauses, ECM clauses and adjunct clauses.

(46) a. Ali$_i$ [kendi$_i$-ni İstanbul-a gid-iyor] san-ıyor
Ali self-ACC İstanbul-DAT go-PROG think-PROG
'Ali considers himself going to İstanbul.'

b. Ali$_i$ [kendi$_i$-ni ayna-da gör-ünce] şaşır-dı
Ali self-ACC mirror-LOC see-when surprise-PAST
'Ali was surprised when he saw himself in the mirror.'

(Meral 2010, 35, 36)

This test shows that, in Turkish, not only DP but also TP can be missing, which makes CP defective. Defective CP makes exceptional binding possible. Note that in (45c) the matrix subject can bind the reflexive in the presence of a potential antecedent in the embedded clause. Hence binding of the reflexive with the matrix antecedent is not due to absence of another local antecedent.

Now we will test whether binding is possible across two CP boundaries, which is not possible in Japanese. Recall that in the previous chapter, the scope data indicated that *v*P in Turkish does not show the properties of a phase with respect to reconstruction sites. If our analysis is on the right track, then we expect binding to be possible across two CP boundaries because for Japanese what blocks co-indexation

in the intermediate CP is suggested to be the presence of a *v*P phase. If *v*P is not a phase as we suggested, then binding should be possible with the matrix subject as well.

(47) [Ahmet$_i$ [Ayşe-nin$_j$ [boş yere kendi$_{i/j/*k}$-nin Mete-yi$_k$
Ahmet Ayşe-GEN without a reason self-GEN Mete-ACC
eleştir-diğ-in-i] düşün-düğ-ün-ü] bil-iyor]
criticize-NOML-3SGPOSS think-NOML-3SGPOSS-ACC know-PROG
'Ahmet$_i$ knows that Ayşe$_j$ thinks that self$_{i/j/*k}$ criticized Mete$_k$ without a reason.'

In line with our predictions, in contrast to Japanese, binding across two CP boundaries is possible in Turkish. The CP in the most embedded clause is defective and the binding domain moves a step further to the intermediary embedded clause. If the *v*P in the intermediate embedded clause were a real phase, it would have blocked binding of the reflexive by the matrix clause. But it does not. This gives further support to the claim that both *v*P and CP are not phases in Turkish.

The question raised at this point is whether we can take these exceptional anaphor binding data as pronominals. One of the usage domains of reflexives has already been suggested to be pronominalization (Göksel and Kerslake 2005, Meral 2010). However, the following example of Meral (2010) rules out this possibility.[168]

[168] Meral (2010) explains the exceptional behavior of reflexives via operator-variable chains in line with Boeckx (2003). The reflexive is merged in the structure with the operator. The operator moves to CP domain successive cyclically and relates the reflexive to a lexical antecedent as illustrated below.
(1) Ali [kendin-e bir takım elbise al-ma-m] -ı isti-yor
Ali self-DAT a suit buy-NOML-1SGPOSS-ACC want-PROG
'Ali wants me to buy himself a suit.'
[$_{C\ Domain1}$ OP$_i$ [$_{T\ Domain1}$ Ahmet$_i$… [$_{C\ Domain2}$ t$_i$ [$_{T\ Domain2}$ [t$_i$+ kendin-e$_i$]]]

(48) [Ali$_i$ [Ahmet$_k$-in kendi$_{i/k}$-ne gül-düğ-ün-ü] san-dı]
Ali Ahmet-GEN self-DAT laugh-NOML-3SGPOSS-ACC think-PAST
'Ali thought that Ali laughed at himself.' (Meral 2010, 30)

If we take *'kendi'* as an anaphor, binding with the matrix subject is explained via the defective CP projection. The embedded subject is already a potential binder for the reflexive. However, if we take the reflexive as a pronominal, then binding with the embedded subject is problematic. CP as a defective phase hypothesis can account the anaphor binding in Turkish.

As the principles for the anaphors and the pronouns are in complementary distribution, we expect the acceptable structures above to be unacceptable with pronouns. Let us check this prediction. As illustrated in (49), defective CP and *v*P violate the binding requirement of pronouns to be free in their domain. In complement and adjunct clauses, binding of the pronominal yields unacceptability.

(49) a. Ayşe$_i$ [o$_{*\ i/m}$ Ahmet-i$_j$ vur-du] san-ıyor.
Ayşe s/he Ahmet-ACC shoot-PAST think-PROG
'Ayşe$_i$ thinks that s/he$_{*\ i/m}$ shot Ahmet$_j$.'
b. Ayşe$_i$ [o$_{*i/m}$ -nun yarış-ı kazan-dığ-ın]-ı söyle-di
Ayşe s/he-GEN competition-ACC win-NOML-3SGPOSS-ACC tell-PAST
'Ayşe$_i$ told Ahmet$_j$ that s/he$_{?i/j/m}$ won the competition.'
c. Ali$_i$ [o$_{*i/m}$-nu İstanbul-a gid-iyor] san-ıyor
Ali s/he-ACC İstanbul-DAT go-PROG think-PROG
'Ali considers him/her going to İstanbul.'
d. Ali$_i$ [o$_{*i/m}$-nu ayna-da gör-ünce] şaşır-dı
Ali self-ACC mirror-LOC see-when surprise-PAST
'Ali was surprised when he saw him/her in the mirror.'

This is in line with the prediction in the sense that the embedded clauses lack a T projection which takes away the phasehood of the embedded CP and the matrix

clause becomes the binding domain of the pronoun. Binding with a local antecedent in this domain yields violation of Principle B.

There is another set of data that is suggested to be acceptable with reflexive *'kendi'*. In (50a) there is a comparative construction and in (50b) there is a post-positional phrase and they form their own projections. Our analysis predicts these structures to be unacceptable but they are not.

(50) a. Ali$_i$ [Veli$_k$-yi [kendi$_i$-den daha başarılı]] san-ıyor.
Ali Veli-ACC self-ABL more successful think-PROG
'Ali considers Veli more successful than him.'
b. Ali$_i$ [pro$_k$ [kendi$_i$-ne bağlı] ol-ma-mız]- ı isti-yor
Ali self-DAT loyal be-NOML-1PLPOSS-ACC want-PROG
'Ali wants us to be loyal to him.' (Meral 2010, 29, 47)

These forms are also acceptable with pronouns as illustrated below, which, in a sense, sheds light on the acceptability of the examples in (50).

(51) a. Ali$_i$ [Veli$_k$-yi [o$_i$-ndan daha başarılı]] san-ıyor.
Ali Veli-ACC s/he-ABL more successful think-PROG
'Ali considers Veli more successful than him.'
b. Ali$_i$ [pro$_k$ [o$_i$-na bağlı] ol-ma-mız]- ı isti-yor
Ali s/he-DAT loyal be-NOML-1PLPOSS-ACC want-PROG
'Ali wants us to be loyal to him.'

Remember that one of the usage domains of reflexives is pronominals (see footnote 77). We suggest in (50), that the reflexives are used as pronominals. If we assume an independent projection for comparative and post-positional phrases, the acceptability of (50-51) becomes apparent. The pronouns are bound by antecedents that do not surface in their local domain.

However, there is another problem noted by Meral (2010) for which CP as a defective phase analysis has to find an answer. In the following examples the pronominal elements are in the same domain with their antecedents but the structures are fully acceptable.

(52) a. Ben ben-i sev-er-im
I I-ACC love-AOR-1SG
'I love me.'
b. Sen-i san-a emanet ed-iyor-um.
you-ACC you-DAT entrust-PROG-1SG
'I entrust you to you.' (Meral 2010, 66, fn. 134)

Meral (2010) suggests that Turkish pronouns cannot occur in the subject position of the embedded clauses if they are co-indexed with the matrix subject as in (49), leaving the above mentioned structures for further research. Examples similar to the ones above are judged to be degraded or unacceptable when used with third person singular.

(53) a. $*O_i$ o_i-nu sev-er b. $?O_i$-nu o_i-na emanet ed-iyor-um.
s/he s/he-ACC love-AOR s/he-ACC s/he-DAT entrust-PROG-1SG
'S/he loves him/her.' 'I entrust her/him to herself/himself.'

(54) a. Biz biz-i sev-er-iz. b. Biz-i biz-e emanet et-ti.
we we-ACC love-AOR-1PL we-ACC we-DAT entrust-PAST
'We love ourselves.' 'S/he entrusted us to ourselves.'

The structures in (53-54) differ from the ones given in (49) in which the antecedent is a referential expression in that the antecedent is a pronominal expression. Note that this usage of the pronominals is similar to reflexives as the translation of the structures in (53-54) indicates. We suggest that, similar to reflexives with pronominal

usages, pronominals may have reflexive usages. Hence the grammatical binding data in (52) and (54) are just reflexive usage of the pronominals in Turkish. The unacceptability of (53) with the third person pronouns can be due to the fact that the referents of the third person pronouns are not as explicit as the first and second person pronouns, the degradation being independent of the reflexive usage of the pronominals.

The binding data in this section has further shown that nominalized clauses are CP level constituents. However, we suggest that the defective projection is CP not TP (Kelepir 2006). Recall that the defective nature of CP is suggested to be due to absence of TP in the structure (Bošković 2008, 2010, Despić 2011, Kang 2014). Remember that the binding data is based on the assumption that TP in the CP domain and PossP in the DP domain are parallel in nature. The absence of PossP in the DP domain makes DP defective and the prediction is that in the absence of TP, CP becomes a defective phase. The Turkish data indicates that CP is defective with respect to binding data which signals the absence of TP. However, based on this parallelism, we do not extend this analysis to PossP. We assume that PossP can surface as a functional projection or as adjunction (Bošković and Şener 2014), the discussion of which we leave for further research.

To recap, the discussion in this section has shown that in addition to *v*P, CP is not a phase in Turkish as binding data indicates. The next section presents further arguments for this proposal.

5.3.2 ECM clauses and the CP domain

In addition to the binding data, ECM clauses also indicate the status of TP and CP in the structure. If CP is defective in nature we predict the embedded subject to receive

its theta role from the embedded verb but surface with accusative case, which is the case in Turkish.

(55) Ben sen-i okul-a git-ti-(n) san-dı-m
I you-ACC school-DAT go-PAST-(2SG) think-PAST-1SG
'I thought you went to school.'

The appearance of the agreement marker on the verb is subject to variation in that for some speakers it is optional, for others its appearance is obligatory and for others its appearance yields unacceptability.

The position of the accusative marked embedded subject has been analyzed to be (i) the embedded clause (Aygen 2002, Öztürk 2005, Oded 2006, Şener 2008, Meral 2010), (ii) the matrix clause (Zidani-Eroğlu 1997, Özsoy 2001, Arslan-Kechriotis 2006), (iii) base generation in the matrix clause (İnce 2005). Whether the embedded subject moves to the matrix clause or remains in-situ, accusative marking on the subject indicates the defective nature of the embedded CP projection.

Based on adverb modification, NPI licensing and word order restrictions Zidani-Eroğlu (1997) suggests that the accusative marked subject is in the matrix clause.

(56) a. (Siz) Ali-yi sabah-tan beri öp-ül-dü san-ıyor-sunuz
you Ali-ACC morning-ABL since kiss-PASS-PAST think-PROG-2PL
'You believe Ali to have been kissed since this morning.'

b. *Siz kimse-yi bu kitab-ı oku-ma-dı san-ıyor-sunuz
you anybody-ACC this book-ACC read-NEG-PAST believe-PROG-2PL
'You believe nobody to have read this book.'

c. *Ali bu kitab-ı Banu-yu oku-du san-ıyor
Ali this book-ACC Banu-ACC read-PAST believe-PROG
'Ali believes Banu to have read this book.'

(Zidani-Eroğlu 1997, 11, 29, 37)

In (56a), the adverb which is compatible with imperfective interpretation is compatible with the matrix predicate. In (56b), negation in the embedded clause cannot license the accusative marked NPI. Finally, in (56c), scrambling of the embedded object to a position preceding the accusative marked subject is out. Zidani-Eroğlu (1997) argues that these tests indicate that the accusative marked subject is in the matrix clause.[169] Özsoy (2001) also suggests that T is defective in ECM clauses and hence the case of the embedded subject is checked in the matrix clause.[170]

Aygen (2002), on the other hand, suggests that accusative marked subject is in fact at the edge of the CP domain but not in the matrix clause based on the following adverbial test.

(57) Ben Kürşat-ı her zaman geç kal-ıyor san-ıyor-du-m
I Kürşat-ACC always be late-PROG think-PROG-PAST-1SG
'I thought Kürşat was always being late.'

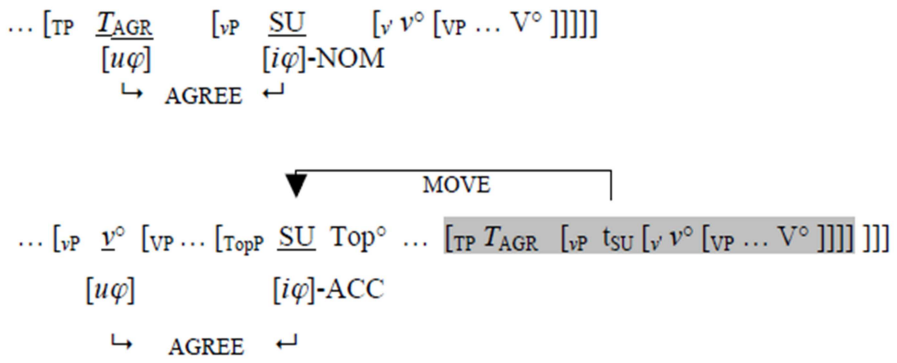
Aygen (2002) and Öztürk (2005) suggest that the adverbial modifies only the embedded verb not the matrix verb indicating that the accusative marked subject is in the embedded clause. Aygen (2002) also assumes that the embedded clause is defective in that it is an AspP.

In a similar vein, Şener (2008) suggests that movement of the accusative case marked subject is to the Spec TopP at the left periphery of the embedded clause, which is for discourse interpretational purposes and hence optional. The derivation of an ECM clause (58) with overt agreement markers on the verb is illustrated in (59).

[169] See Şener (2008) for an alternative analysis for the same set of data.
[170] Özsoy (2001) makes a further distinction for ECM clauses as (i) VP/AP and (ii) DP/PP. When the phrase following the accusative case marked subject is VP/AP, the ECM clause is like a small clause. When the phrase following the accusative case marked subject is DP/PP, the ECM clause is like a complex predicate construction.

(58) Pelin sen-i Timbuktu-ya git-ti-n diye bil-iyor-muş.
Pelin you-ACC Timbuktu-DAT go-PAST-2SG C know-PROG-EVI
'Pelin thought that you went to Timbuktu.'

(59)

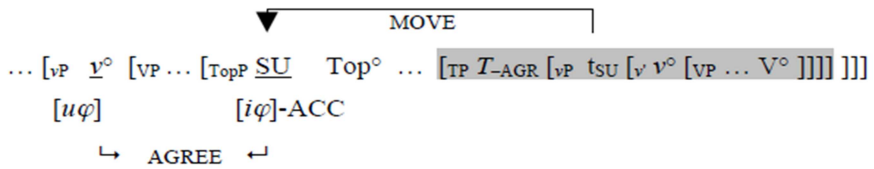


(Şener 2008, 70b, 71)

T^o forms an Agree relation with the subject in its base generated position and checks nominative case on the subject. The subject then undergoes movement to Spec TopP for discourse interpretational purposes. Case rewriting applies and another Agree relation is formed with the dislocated constituent and the matrix v^o through which accusative case is checked on this constituent.

As for ECM clauses with no overt agreement markers on the embedded predicate, Şener (2008) proposes that T^o is a non-agreeing head and cannot assign nominative case to the embedded subject.

(60) Pelin sen-i Timbuktu-ya git-ti-Ø diye bil-iyor-muş.
Pelin you-ACC Timbuktu-DAT go-PAST C know-PROG-EVI
'Pelin thought that you went to Timbuktu.'



(Şener 2008, 70a, 72)

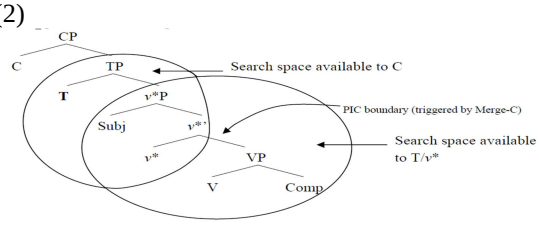
The embedded subject again moves to the left periphery for discourse interpretational purposes and gets its case checked via matrix v^o.[171]

Arslan-Kechriotis (2006) argues against the analysis that accusative case marked subject is in the embedded clause based on the following test.

(61) Ben sen-i hep Ankara-da doğ-du san-ıyor-du-m
I you-ACC always Ankara-DAT get-born-PAST think-PROG-PAST-1SG
'I always thought you were born in Ankara.'
'*I thought you were always born in Ankara.' (Arslan-Kechriotis 2006, 56)

The adverb *'hep'* cannot modify the embedded verb, which indicates that the accusative case marked subject is in the matrix clause. The third line of analysis, namely base generation in the matrix clause (İnce 2005), is based on the tests on

[171]Şener (2008) further suggests that for accusative case to be assigned to the dislocated topic constituent, it must surface in the highest specifier position of the embedded CP based on the following example.
(1) *Pelin Mert-i kim-e vur-du diye sor-du/merak et-ti.
Pelin Mert-ACC who-DAT hit-PAST C ask-PAST/wonder do-PAST.
Intended reading: 'Pelin asked/wondered who Mert hit.'
WhP, being a phase head at the highest position in the embedded CP, makes the accusative case marked topic phrase at Spec TopP inaccessible for the matrix v^o. The dislocated topic phrase surfacing at Spec TopP lower than the WhP is sent spell-out when the matrix v^o is merged into the structure. Note that this restriction itself also indicates that phase impenetrability condition given in Chapter 1 repeated below for ease of exposition should undergo refinement.
(2)



Within this representation, not only the head positions but also the specifier positions of the lower phase are a search space for the higher phase. Remember that in contrast to this representation, Turkish data show that for the contrastive topic phrases only the highest specifier position of *v*P serves as an escape hatch. It is interesting that a similar restriction holds for ECM clauses. Bošković (2015) suggests that in contrast to Phase Impenetrability Condition (Chomsky 2000, 2001) what counts as a phase edge is in fact only the outmost specifier of the phase. At this point one may question whether we can account for the Turkish data preserving the phasehood status of *v*P and CP by taking only the outmost specifier of these phases as an escape hatch in line with Bošković (2015). We will not pursue this line of an analysis in this study because as already pointed out (i) vP/VP partitioning is also not observed in Turkish as the idiom formation test of Öztürk (2005) indicates, (ii) the so-called complement domain of the vP phase allows reconstruction of the aboutness topic and discourse anaphoric constituents but not the contrastive topic phrases, and (iii) binding is possible even across two CP boundaries.

idiom interpretation. İnce (2005) suggests that under passivization the idiomatic reading is preserved but in ECM clauses idioms cannot preserve their idiomatic interpretation.

(62) a. *pro*$_1$[[Hasan-ın defter-i]-Ø dür-ül-dü-Ø]
H.-GEN notebook-3SGPOSS prepare-PASS-PAST
san-ıyor-du-m.
assume-PROG-PAST-1SG
'intended reading = I thought that Hasan's number's up.'

b. *pro*$_1$ [Hasan-ın defter-in]-i [dür-ül-dü-Ø]
H.-GEN notebook-3SG POSS prepare-PASS-PAST
san-ıyor-du-m.
assume-PROG-PAST-1SG
'intended reading = I thought that Hasan's notebook was closed.'

İnce (2005) suggests that the accusative case marked constituent is base generated in the matrix clause otherwise, the movement would be A-movement and under A-movement idiomatic interpretation is preserved. However, in (62) theta role assignment remains unsolved. Additionally Şener (2008) suggests that the base generation analysis cannot capture the fact that accusative case marking is optional in the sense that the constituent can also appear in nominative case.

Based on this discussion, we propose that, whether no-movement to the matrix clause or movement to the matrix clause analyses is pursued, defective CP analysis would account for the data. In the no-movement to the matrix clause analysis, CP is a transparent domain in that accusative case on the subject via Agree relation formed with the matrix clause. Defective CP does not block this case checking relation. In the movement to the matrix clause analysis, embedded CP is transparent domain in that movement to the matrix clause is not blocked.

5.3.3 Bounding nodes and CP domain

In the literature, relative clauses and complex noun phrases are analyzed as islands (Ross 1967) out of which movement yields unacceptability. For Turkish, Kornfilt (1984) argues that NP, S and PP are bounding nodes creating islands. However, in Turkish, constraints on movement are observed when the movement is to the right direction in which focus phrases cannot appear anyway. As the discussion in the Chapters 2 and 4 have shown and as noted by Şener (2010) and Bošković and Şener (2014), leftward movement in Turkish can be the movement of contrastive topics, aboutness topics or discourse anaphoric constituents. Rightward movement is restricted to discourse anaphoric constituents and to contrastive topics in certain instances.

Now let's take a look at the following structure. As the movement of the focus phrase is out, in (63b) the rightward movement of the wh-phrase yields unacceptability. However, the leftward movement of the genitive phrase is totally acceptable as in (64).

(63) a. [[[[kim-e [ver-eceğ-im-i [tahmin et-tiğ-in-i
who-DAT give-NOML-1SGPOSS-ACC guess-NOML-2SGPOSS-ACC
[bil-diğ-im] bu yüzük] çok değerli
know-NOML-1SGPOSS this ring very precious
'This ring which I know that you guess to whom I will give is very precious.'

b. *[[[[---- [ver-eceğ-im-i [tahmin et-tiğ-in-i kim-e [bil-diğ-im] bu yüzük] çok değerli

(64) [[[[Ahmet-in [gizlice fotoğraf-ım-ı çek-en] gazeteci-ler-e]
Ahmet-GEN secretly photo-1SGPOSS-ACC take-REL journalist-PL-DAT
----- bağır-dığ-ı] kulüp]
shout-NOML-3SGPOSS club
'The club at which Ahmet shouted at the journalists that took my photos secretly.'

Balkız Öztürk (p.c) suggests that relative clauses in Turkish can still be analyzed as island domains based on the following example.

(65) (?)Fotoğraf-ı ben [[Ali-nin --------koy-duğ-u] album-ü] gör-dü-m
photo-ACC I A.-GEN put-NOML-3SGPOSS album-ACC see-PAST-1SG
'I saw the album in which Ali put the photo.'

Adapting the analysis of Karimi (1999), Aygen (2000) accounts for extraction out of embedded clauses via the restriction that a constituent bearing the same case marking with the highest head cannot move out of that domain. This can explain the degradation for the construction in (65) but this issue needs further research. In (66), the topicalized dative marked constituent moves out of its base generated position to the left of the matrix subject but the structure is grammatical.[172]

(66) a. Ben$_F$ [[Ahmet-in Ayşe-ye evlenme teklif-i et-tiğ-i]
I Ahmet-GEN Ayşe-DAT marriage proposal make-NOML-3SGPOSS
söylenti-si-ne] inan-ma-dı-m]
rumor-3SGPOSS-DAT believe-NEG-PAST-1SG
'I didn't believe in the rumor that Ahmet made proposal of marriage to Ayşe.'
b. (?)[Ayşe-ye ben$_F$ [[Ahmet-in --- evlenme teklif-i et-tiğ-i] söylenti-si-ne]
inan-ma-dı-m]

Based on this set of data we suggest that relative clauses and complex noun phrase constructions are not strong island domains in Turkish and CP as a defective projection can account for this property.

The data on (i) binding, (ii) ECM clauses, (iii) bounding nodes have shown that CP in Turkish does not show phasehood properties in that C does not create an

[172] This sentence is totally ungrammatical for some of the speakers which indicates that for these speakers CP is an opaque domain out of which a constituent cannot move, especially if it is not the highest constituent in the CP domain.

opaque domain with respect to binding or movement operations. An objection to this proposal would be the nature of the empirical evidence we have used. The data discussed in section 5.3 is based on complement clauses of various types and hence one can suggest that defective nature of CP might be restricted to embedded clauses and not generalizable to root clauses. Embedded clauses may have some missing projections and hence CP is defective. Aygen (2002), for instance, suggests that in contrast to root clauses, in finite complement clauses indicative, subjunctive mood, epistemic modality, deontic modality is allowed but obligation is not licit. With the aim of finding out the status of CP in Turkish, in line with the discussions in sections 5.3 and 5.3.1 we will investigate the TP in Turkish. Remember that the defective nature of CP is based on the absence of TP projection (Despić 2011, Bošković 2012, Kang 2014). The next section investigates whether we have TP in Turkish which will shed light on the status of CP in matrix clauses.

5.4 Tense phrase in Turkish

The absence of PossP has been suggested to take away the phasehood properties of DP. In line with the CP-DP parallelism, the first hypothesis is that the non-phasehood status of CP can be due to lack of TP projection in the structure. In this section we will investigate the validity of this hypothesis through discussion on previous studies on Turkish. We question the presence of TP for temporal interpretation. The role of TP for case checking has already been questioned in the Turkish linguistics literature (George and Kornfilt 1981, Aygen 2002, Öztürk 2005). The next section is a brief summary of alternative projections for case checking and temporal interpretation suggested in the literature for Turkish.

5.4.1 Alternative heads for case checking and temporal interpretation

The presence of T head as a case checking head has been questioned in the Turkish linguistics literature. George and Kornfilt (1981) observe that in Turkish, tense does not create an opaque domain for movement.[173]

(67) Biz$_i$ san-a [t$_i$ içki-yi iç-ti-(k)] gibi görün-dü-k
we you-DAT alcoholic drink drink-PERF-1PL like appear-PERF-1PL
'We appeared to you to have drunk alcohol.'

George and Kornfilt (1981) suggest that in Turkish it is not T head that defines finiteness and assigns case but Agreement. As pointed out in section 5.4.2, the presence of agreement markers on the verb is subject to variation. George and Kornfilt (1981) suggest obligatory absence of agreement markers on the verb with accusative case marked subjects of ECM clauses. Hence ECM clauses serve as their empirical evidence for positing not T but Agr heads as case licenser. Aygen (2002) shows that, contrary to George and Kornfilt (1981), Agreement is not the case assigner in Turkish. She bases her arguments on ECM constructions with overt agreement marker on the verb with accusative case on the subject.

(68) Ben sen-i gel-di-n san-dı-m
I you-ACC come-PERF-2SG think-PERF-1SG
'I thought you came/have come.'

[173] Tense is 'grammaticalized expression of location in time' (Comrie 1985, pg.9). Aspects are 'different ways of viewing the internal temporal constituency of a situation' (Comrie 1976, pg. 3). Mood/modality expresses the speakers' attitude towards an utterance or event. Moods 'are expressed inflectionally, generally in distinct sets of verbal paradigms, e.g. indicative, subjunctive, optative, imperative, conditional etc., which vary from one language to another with respect to number as well as to semantics distinctions they mark. Modality, on the other hand, is the semantic domain pertaining to elements of meaning that languages express. It covers a broad range of semantic nuances –jussive, desiderative, intentive, hypothetical, potential, obligative, dubitative, hortatory, exclamative etc. (Bybee and Fleischman 1995, pg. 2).

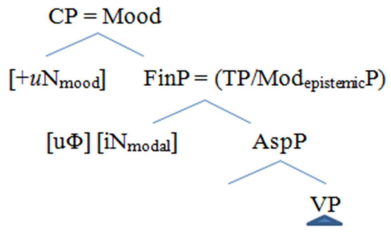
Aygen (2002) further notes that it is neither tense nor agreement that licenses nominative case. It is a combination of epistemic modality from the inflectional domain and mood from the complementizer domain that checks nominative case.[174] She takes tense as a kind of epistemic modality in line with Lyons (1977). As for agreement, which is suggested to be case licenser by George and Kornfilt (1981), Aygen (2002) suggests that agreement is the manifestation of Mood on C. She bases her arguments on ECM constructions, in which mood is present indicated with the presence of agreement markers but not the epistemic modality. The structure in (69b) is out, as epistemic modality is illicit with ECM constructions but it is acceptable with a deontic modality marker.[175]

(69) a. Ben Kürşat-ı gel-di/iyor/miş/ir/meli/ebilir (D) san-dı-m
I Kürşat-ACC come-ASP/DEON think-PAST/PERF-1SG
'I thought Kürşat to have come/to be coming/to have (to be required) to come/to be able to come.'
b. *Ben Kürşat-ı gel-ebil-ir-di san-dı-m
I Kürşat-ACC come-able-AOR-PAST think-PAST/PERF-1SG

The agreement marker on the verb is optional but this is not a problem because agreement by itself cannot check nominative case in the absence of epistemic modality. The following is a representation of a structure that can check nominative case on the subject.[176]

[174] Halliday (1970:349) defines epistemic modality as '……the speaker's assessment of probability and predictability. It is external to the content, being a part of the attitude taken up by the speaker: his attitude in this case, towards his own speech role as 'declarer'.
[175] Deontic modality expresses the speaker's will or desire according to some normative background. Simpson (1993) relates deontic modality with obligation, duty, and commitment.
[176] Recall from the introduction chapter that Öztürk (2005) also assumes different case checking heads for the subject and the object but T projection is still preserved as the landing site of the verb within her analysis.

(70)



If we take the defective nature of CP as an indication of absence of TP, how is temporal interpretation realized in Turkish? In fact, for nominalized embedded clauses, it has already been suggested that the nominalizers, which share the same morphology with *–DI* past marker and *–EcEK* future marker, are modality markers. Taylan (1988) points out that *–DIK/-(y)AcAK* express modality based on adverbial tests. *-DIK* can co-occur with past, present and future adverbials as the following examples indicate.

(71) Sen-in dün gel-diğ-in-i bil-iyor-um.
you-GEN yesterday come-DIK-3SGPOSS-ACC know-PROG-1SG
'I know that you came yesterday.'

(72) Hasan sen-in şimdi uyu-duğ-un-u düşün-ecek.
Hasan you-GEN now sleep-DIK-2SGPOSS-ACC think.will
'Hasan will think that you are sleeping now.'

(73) Sen-in yarın git-tiğ-in-e inan-a-mı-yor-um.
you-GEN tomorrow go-DIK-2SGPOSS-DAT believe-ABIL-NEG-PROG-1SG
'I can't believe you are going tomorrow.'

–(y)AcAK also expresses modality as it is possible to use it with a past adverbial.

(74) Hasan-ın dün gel-eceğ-in-i bil-iyor-du-m.
Hasan-GEN yesterday come-AcAK-3SGPOSS-ACC know-PROG-PAST-1SG
'You knew Hasan was going to come yesterday.'

(75) Engin-in dün televizyon-da konuş-acağ-ın-ı ban-a
E.-GEN yesterday TV-LOC talk-AcAK-3SGPOSS-ACC I-DAT
söyle-me-di-ler.
tell-NEG-PAST-3PL
'They didn't tell me that Engin was speaking on TV yesterday.'

If they were real tense markers, they would not be compatible with these adverbials. Recall that Kelepir (2006) also suggests that, in nominalized clauses, T is defective with no tense interpretation. The question raised at this point is whether we can suggest the same thing for matrix clauses. Do we need TP to encode temporal information in Turkish? The next section deals with this question.

5.4.2 Verbal inflectional morphology and the status of TP

Verbal inflectional morphology of Turkish has been investigated in great detail (Lewis 1967, Underhill 1976, Yavaş 1982, Slobin and Aksu 1982, Erguvanlı-Taylan 1988, 1996, Aksu-Koç 1988, Kornfilt 1997, Kelepir 2001, Sezer 2001, Cinque 2001, Aygen 2002, Göksel and Kerslake 2005, Sağ 2013, among many others). A detailed discussion of tense, aspect and modality marking in Turkish is beyond the scope of this study; hence we will take a cursory look at the Turkish facts in this section.

Tense, aspect and modality express "the temporal placement of the event relative to the speech act, the temporal contour of the event, and the attitude of the speaker towards the event" respectively (Slobin and Aksu 1982:186). While modality is a semantic notion, mood is taken as its morphological realization on the verb. For Turkish, Kornfilt (1997) makes a three way distinction for tense interpretation as past, present and future. Göksel and Kerslake (2005) make a primary tense categorization as past and non-past and add that future is a relative tense. Kornfilt

(1997) analyzes aspect as perfective, imperfective, habitual, continuous, progressive, ingressive, terminative, iterative, semelfactive, punctual and simultaneous aspect. Göksel and Kerslake (2005) classify aspect as perfective and imperfective and imperfective is further divided as habitual and progressive. Kornfilt (1997) lists indicative, conditional, imperative, optative, intentional, debitive, potential (ability), degree of certainty, authority for assertion, hortatory, monitory, consecutive, narrative as mood types in Turkish. Göksel and Kerslake (2005) list the modalized utterances in the following way: (i) a generalization, general rule, or statement of principle, (ii) an assumption or hypothesis, (iii) a statement concerning the possibility or necessity of the occurrence of an event or state, (iv) a statement based upon knowledge acquired indirectly, (v) an expression of desire or willingness for an event or state to occur: imperative, optative, conditional, and aorist forms. [177]

Cinque (1999, 2001) argues for a universal order for the functional structure of the clause as Mood >Tense >Aspect. Not only mood, tense and aspect but also subtypes of these categories are also suggested to be rigidly ordered. Based on the Mirror Principle of Baker (1985), the other assumption of this cartographic approach is that an outer suffix surfaces in the structure higher than the suffixes that are near the root. However, in Turkish a verbal inflectional morphology can be used to encode mood, tense or aspect and this makes the categorization of the affixes challenging. As indicated above, a three-way classification is suggested for tense in

[177] The following illustrates the modal system proposed by Palmer (2001).

Propositional Modality		Event Modality	
Epistemic	Evidential	Deontic	Dynamic
Speculative	Reported	Permissive	Abilitive
Deductive	Sensory	Obligative	Volitive
Assumptive		Commissive	

Corcu (2003) indicates that in studies on Turkish modality, epistemic modality is used as indicative mood making a judgment or statement about the truth value of the proposition. Deontic modality on the other hand reflects the speaker's attitude towards the proposition of the utterance.

Turkish: (i) past, (ii) non-past, (iii) future.[178] First we will see whether the morphological markers used for these functions have additional aspectual or modal functions.

Sezer (2001) suggests that *-DI* serves as past tense (73a), perfective (76b) and present (76c) marker in the following examples. For the same inflectional suffix Kornfilt (1997) suggests that in addition to past tense marking, it functions as a mood marker expressing authority for assertion in (77). Göksel and Kerslake (2005) suggest that it is ambiguous between past tense and perfective interpretation in (78).

(76) a. Dün saat beş-te gel-di-m.
yesterday clock five-LOC come-PAST-1SG
'I arrived at home at five o'clock yesterday.'

b. Yeni gel-di-m.
just arrive-PAST-1SG
'I have just arrived.'

c. Şimdi çok üzül-dü-m.
now very sadden-PAST-1SG
'I am very saddened now.' (Sezer 2001, 15)

(77) Hasan dün akşam sinema-ya git-ti.
Hasan yesterday night cinema-DAT go-PAST
'Hasan went to the cinema yesterday night.' (Kornfilt 1997, 1310)

---

[178] Sezer (2001) categorizes the inflectional morphemes in the following way:
Tense 1: -DI definite witnessed past; sE subjunctive conditional; -mIş inferential past/present perfect; -Iyor continuous; -EcEG future; -Ir/-Er aorist; -yE opt/subj; -mElI necessitative; -mEktE continuous
Tense 2: i-DI/(y)DI definite witnessed past; i-sE/-(y)sE indicative conditional; -mIş/-(y)mIş inferential.
Tense 3: i-sE/-(y)sE indicative conditional; i-mIş/-(y)mIş inferential.
Enç (2004) divides the inflectional morphemes into three zones.

V < Zone 1	< Zone 2	< Zone3
-A (perm./abil.)	-Ir/-Er (aorist)	-DI (past)
-mA (negation)	-AcAk (future)	-mIş (evidential)
-AbIl (possib.)	-Iyor (progressive)	
[+verbal]	-mAlI (necessity)	
	-mIş (perfect)	
	[-verbal]	

(78) Ev-i sat-tı-nız mı?
house-ACC sell-PERF-2PL QP
'Did/have you sold the house?' (Göksel and Kerslake 2005, pg. 327)

The same ambiguity holds for *–mIş*, to which past tense, inference, hearsay, perfect, narrative and evidential mood functions have been attributed (Johanson 1971, Banguoğlu 1974, Underhill 1976, Yavaş 1982, Slobin and Aksu 1982, Aksu-Koç 1988, Taylan 1996, Kornfilt 1997, Kelepir 2000, Johanson 2000, Taylan 2001, Göksel and Kerslake 2005, Arslan-Kechriotis 2006, among many others). Note that this suffix is compatible with adverbials with different temporal anchoring properties.

(79) Ali dün/şu anda/yarın ev-de-ymiş.
Ali yesterday/this moment/tomorrow home-LOC-INF.PAST
'It turns out that Ali was/is/will be at home yesterday/now/tomorrow.'
(Sezer 2001, 19 with my modifications)

The data indicates that *–DI* and *–mIş* are ambiguous between aspect, mood and tense interpretation. As for the future tense marker *–EcEk*, Yavaş (1982) suggests that this marker in fact expresses presumptive modality. Underhill (1976) argues that when *–EcEk* is attached to the copula *'ol'* following *–mIş*, it has future perfect interpretation.[179] Yavaş (1982) argues against this view with the following examples.

[179] Kelepir (2006) classifies the copula markers in Turkish in the following way:

'Be'	Properties	
i-	With past tense marker & evidentiality marker (zone 3)	"High copula"
Ø	In present tense (zone 3?)	"High copula"
Ol-	All tense, aspect, modality markers (zone 1 & 2)	"Low copula"

(80) a. John-a telefon et-me şimdi uyu-yor ol-acak
John-DAT telephone make-NEG now sleep-PROG be
'Don't call John, he will be sleeping now.'
b. John dün-kü sınav-ı geç-miş ol-acak ki
John yesterday-REL exam-ACC pass-PERF be COMPL
yüz-ü gül-üyor
face-3SGPOSS smile-PROG
'John must have passed yesterday's exam, that is why he looks happy.'
(Yavaş 1982, 1, 4)

In these examples, instead of a future temporal interpretation, -*EcEK* marks a presumption that the situation expressed in the utterance holds. This function of –*EcEK* is similar to epistemic modality in that the speaker makes a judgment on the truth value of the proposition. The same marker can be used to give orders or commands (Yavaş 1982) expressing volitional modality (Göksel and Kerslake 2005).

(81) şimdi doğru yatağ-a gid-ecek-sin
now straight bed-DAT go-2SG
'Now you will go straight to bed.' (Yavaş 1982, 37)

Yavaş (1982) suggests that –*EcEk* is a marker of epistemic modality and encodes presumptive mood. By using the marker –*EcEk* the speaker makes a presumption that the situation holds true which is uncertain. Gale (1968) (cited in Yavaş 1982:139) suggests that 'since past events have become present, they have already won their ontological diplomas, unlike future events which still exist in a limbo of mere possibility.' The utterances with –*EcEk* are interpreted as future tense because presumptive judgments are, in general, made about future events which have not taken place.

Now we turn to present and past tense markers. Kornfilt (1997) suggest the aorist marker –*Ir/Er* as the present tense marker. Göksel and Kerslake (2005) suggest

that present tense is indicated by *–(I)yor*, less commonly by *–mAktA* or by absence of the copula *–(y)DI*. As is the case with past and future tense markers, aspectual functions have been suggested for these markers as well. The markers *–(I)yor* and *–mAktA* express progressive (82a) and habitual aspect (82b) (Göksel and Kerslake 2005). The marker *–Ir/Er* expresses habitual aspect (Kornfilt 1997) as in (83).

(82) a. Şu sıralarda konferansımı hazırla-makta-yım
‘At the moment I am preparing my lecture.’
b. Cumartesileri Ahmet futbol oynu-yor-(du).
‘On Saturdays, Ahmet plays (used to play) football.
(Göksel and Kerslake 2005, pg. 542)

(83) Hasan piyano çalar
Hasan piano play-AOR
‘Hasan plays the piano.’ (Kornfilt 1997, 1232)

The discussion so far indicates that the markers for non-past and future tense can easily be analyzed as aspect and mood markers.

Now we will focus on the copula forms of *–(y)DI, –(y)mI*ş and *–(y)sE*. Of these three forms *–(y)mI*ş and *–(y)sE* are suggested to express evidential mood and conditional mood respectively.

(84) Her yaz Amerika-ya gid-iyor-lar-mış.
every summer America-DAT go-PROG-3PL-EVI
‘It seems they go/went to America every summer.’
(Göksel and Kerslake 2005, pg. 545)

(85) kitab-ı oku-yor-sa-m
book-ACC read-PROG-COND-1SG
‘if I am reading the book’ (Kornfilt 1997, 1267)

The translation of the sentence in (84) clearly indicates that *–(y)mIş* does not necessarily indicate past interpretation. A judgment is made on the truth value of a proposition based on sensory or reported information.

As for the marker *–(y)DI,* Göksel and Kerslake (2005) suggest that it marks past tense. Zanon (2014) suggest indicative mood function for the same marker in that the listener is making a statement referring to the real world.

(86) Hasan böylelikle yarış-ı kazan-mış-tı.
Hasan thus competition-ACC win-PERF
'Hasan had thus won the competition.' (Kornfilt 1997, 1257)

Zanon (2014) suggests in a footnote (fn. 3) that the 'past' temporal interpretation with the markers *–(y)DI* and *–(y)mIş* can be due to parasitic tense on mood markers or the marker itself is specified as [past]. We suggest that this analysis is problematic in that 'tense' is still preserved as a parasitic feature on mood.

For the past temporal interpretation of for *–(y)DI* and *–(y)mI*ş, we extend the analysis of Yavaş (1982) for the marker *–EcEk* to these markers. We suggest that *–(y)DI* marks indicative modality and the speakers make a judgment about the truth value of a proposal as authority for assertion (Kornfilt 1997). The speaker makes a presumption that the situation holds true based on direct experience. The marker *–(y)mI*ş on the other hand marks evidential mood and the speakers make a judgment about the truth value of a proposition based on reported data or sensory information. As direct experience or reported, sensory information is generally on 'events that have become present', and with these markers past tense interpretation becomes readily available. Within this analysis, past and future tense interpretations are only

secondary effects of the nature of the propositions. [180] That is why it is possible to find these markers with non-past interpretations with some time adverbials as in (76) for *–DI* and (79) and (84) for *–mIş*.

To conclude, MoodP and AspP are sufficient to encode verbal inflectional morphology for Turkish and tense interpretation is only a secondary effect of Mood and Aspect. In section 5.4.2.1 we will go over suspended affixation data that will provide further evidence for this line of analysis.

5.4.2.1 Suspended affixation

In this section, we will briefly go over a study that captures suspended affixation in Turkish in the absence of TP. Suspended affixation is a widely discussed issue in the Turkish linguistics literature (Lewis 1967, Kornfilt 1996, Good and Yu 2000, Kelepir 2001, Kabak 2007). Zanon (2014) investigates suspended affixation in Turkish to reveal whether T head exists in Turkish or not. Zanon (2014) analyzes the verbal inflectional suffixes as (i) mood/modality: *-DI* and *-Ø* (indicative), *-mIş* (inferential), *-sA* (conditional), (ii) aspectual: *-Iyor* (progressive), *-AcAk* (inceptive), *-mIş* (perfective), *-Ir* (habitual). The first group surfaces at MoodP above AspP and does not allow suspended affixation (87b), while the second group occupies AspP and allows suspended affixation (87a).

(87) a. gel-iyor ve gid-iyor-um
come-PROG and go-PROG-1SG
'I am coming and going.'

[180] This analysis is further supported by the fact that –DI cannot be followed by –DIR which turns factual statements into non-factual statements.
(1) a. Ali çoktan geldi bile. b. *Ali çoktan geldiDİR bile.
'Ali has already come.' (Sansa 1986, 9)

b. *(kitab-ı) oku-du ve anla-dı-n

book-ACC read-PAST and understand-PAST-2SG

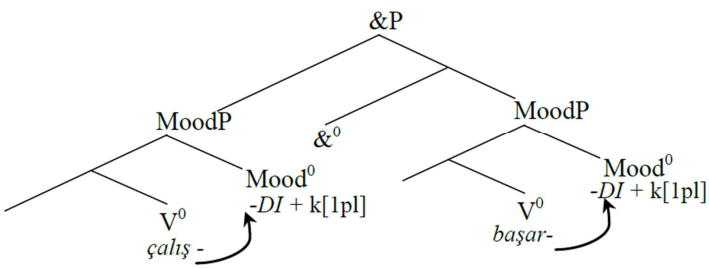
'You read and understood the book.' (Kornfilt 1996, 47, 51)

The markers of *-Iyor* (progressive), *-AcAk* (inceptive), *-mIş* (perfective), *-Ir* (habitual) can precede any of *–DI* (+indicative, -inferential), *-sA* (conditional), *-mIş* (inferential) suffixes but not vice versa. Based on the universal order of Mood >Tense >Aspect (Cinque 1999) and these ordering restrictions, Zanon (2014) analyzes *–DI*, *-mIş*, and *–sA* as mood/modality markers from which *–k* agreement suffixes cannot separate.[181] This is in line with the analysis of Aygen (2002) who takes agreement markers as realization of MoodP at the C domain. The markers of *-Iyor* (progressive), *-AcAk* (inceptive)[182], *-mIş* (perfective), *-Ir* (habitual) are taken as aspectual markers. Now we will take a look at the data within these assumptions.

(88) *çalış-tı ve başar-dı-k

work-PAST and succeed-PAST-1PL

Intended reading: 'we worked and succeeded.'



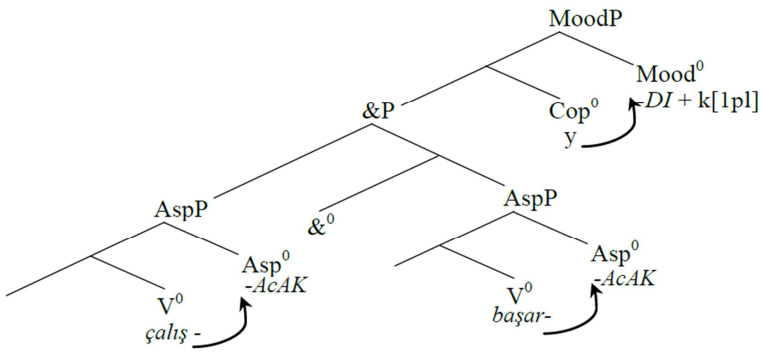
[181] Agreement markers in Turkish can be divided into two as –k and –z paradigms based on the first person plural agreement marker.

	1SG	2SG	3SG	1PL	2PL	3PL
-k	-m	-n	-	-k	nIz	-lEr
-z	-(y)Im	-sIn	-	-Iz	-sInIz	-lEr

[182] Inceptive aspectual markers are used to express the beginning of an action.

In (88) above, two Mood phrases are coordinated. The mood marker -DI heads a MoodP with agreement markers attached to it. The verb moves to MoodP. However, as the agreement markers are not separable from the Mood head, suspended affixation is out.

(89) çalış-acak ve başar-acak-ø-tı-k /başar-acak i-di-k
work-FUT and succeed-FUT-Ø-PAST-1PL/ succeed-FUT COP-PAST-1PL
'We were going to work and succeed.'



As illustrated in (89) above, the aspectual markers surface at Asp^{o}. The verb moves to Asp^{o} and as this composite head is [-verbal] in nature, there is no need for further movement. There is a copula between the MoodP and AspP that carries the remaining inflectional morphology. In (89) above, the copula moves to MoodP and at the phonology component it is realized overtly or covertly.

Zanon (2014) suggests that this analysis easily accounts for the observation that when the question particle is attached to these forms, the two groups behave differently with regard to the placement of agreement markers. The question particle surfaces between the AspP and the MoodP in (90) but it follows the MoodP, as agreement is inseparable from the mood marker in (91).

(90) a. gid-ecek-mi-siniz?
go-FUT-QP-2PL
'Will you go?'
b. */??gid-ecek-siniz-mi?

(91) a. git-ti-niz-mi?
go-PAST-2PL-QP
'Did you go?'
b. *git-ti-mi-niz?
(Kornfilt 1996, 25-28)

The question particle cannot intervene between the agreement marker and the mood marker in (91b). Now it is time to investigate an issue the discussion which we left for this section, namely, the attachment site of the question particle. Remember that yes/no questions with the question particle trigger both contrastive focus and contrastive topic phrases. However, the question particle always follows the focus phrase. Kamali (2010:153) also notes that 'the question particle attaches to the constituent that would carry the main sentence stress in a declarative.'[183] While discussing the affixes allowing suspended affixation and the ones that do not, Kornfilt (1996) notes that the affixes that allow suspended affixation do not comply with the regular stress rule. The affixes that do not allow suspended affixation, on the other hand, abide by the regular stress rule as indicated with the underlines syllables in (90-91). We suggest that as the question particle always attaches directly to the affix that bears main sentence stress, the question particle cannot be the focus phrase itself. We propose that the question particle heads its own projection above FocP. In line with Zanon (2014), we suggest that *–DI* heads MoodP in Turkish but the placement of the question particle is due to the fact that the question particle follows the main stress-bearing constituent in Turkish. We cannot suggest that the attachment site of the question particle is due to inseparability of the agreement markers from MoodP.

[183] Kamali (2010:162) then revises this generalization and concludes that 'the question particle is a second position clitic in the *v*P domain.'

To recap, the discussion so far has shown that in the absence of TP, temporal information can be encoded by MoodP, AspP and adverbials. The next section goes over the diagnostics proposed by Bošković (2012) as syntactic properties of languages without DP and TP projections.

5.4.3 No DP no TP

Bošković (2012) argues that in languages without a definite determiner, TP projection is also missing. He lists the following generalizations for languages without a TP projection: (a) in article-less languages there seem to be no subject expletives, (b) article-less languages do not exhibit subject-object asymmetries in extraction, (c) nominative case is either default case or some contextual case, (d) article-less languages do not exhibit sequence of tense, (e) only article-less languages may have subject reflexive constructions (Despić 2011). We have discussed the subject reflexive constructions in section 5.3.1. Hence we will elaborate on the remaining diagnostics for Turkish in this section.

5.4.3.1 Subject expletives

Expletives are semantically vacuous constituents that occupy the subject position. This property is closely related with TP projection because in some languages the subject position is filled with expletives to satisfy the EPP requirement as in (92).

(92) a. It seems that the fly is in my soup.
b. There seems to be a fly in my soup.

If there is no TP projection then there is no need for the subjects to move to satisfy EPP. In Turkish, there is no expletive and the requirement of EPP has been under discussion. Öztürk (2005), İşsever (2008), Şener (2010), Kamali (2011) argue against

EPP requirement for Turkish. Öztürk (2005) suggests that Spec TP is not always projected and V to T movement satisfies the EPP requirement of TP. Spec TP is filled only for discourse-interpretational purposes. Gürer (2010), on the other hand, suggests that EPP requirement exists in Turkish independent of case and agreement. The following examples are given to support this suggestion. The ungrammaticality of (93a) is suggested to be due to restriction on reconstruction in that the target position of the dislocated constituent is to an A position from which reconstruction is not possible in (93a).

(93) a. *Kimse$_i$ ban-a [t_i kitab-ı oku-ma-mış] gibi görün-üyor
nobody I-DAT book-ACC read-NEG-PAST like appear-PROG
'Nobody seems to me to have read the book.'

b. Ayşe$_i$ bana [t_i kitab-ı oku-ma-mış] gibi görün-üyor
Ayşe I-DAT book-ACC read-NEG-PAST like appear-PROG
'It seems to me that Ayşe has not read the book.'

As the discussion in Chapter 4 has shown, all movement operations are for discourse interpretational purposes and hence we have to take a look at the information structural status of the dislocated constituents. The sentence initial dislocated constituent can be a contrastive topic, as in SOV order, aboutness topics do not move. The ungrammaticality of (93a) can be due to the fact that the negative polarity item cannot be a contrastive topic in that it resolves the issue fully. Note that the structure is fully acceptable in the following context.

(94) A: *Sanırım Ahmet dergiyi okumamış.*
I think Ahmet has read the magazine.

B: *Valla Ahmet'i bilmiyorum ama Ayşe bana kitabı okumamış gibi görünüyor.*
Well, I don't know about Ahmet but it seems to me that Ayşe has not read the book.'

The referential expression is a contrastive topic and it marks a shift for the question under discussion. The comparison of the two constructions in (93a-b) is not conclusive, as they do not have the same information structural statuses, and hence they do not undergo the same restrictions on movement. The data show that it is not possible to generalize a property of a construction to another construction if they do not have the same information structural constituents.[184]

In addition, the controversial status of EPP in Turkish might be due to the discussion of different sets of data. There is no topic movement in all sentences, hence subjects in Turkish do not move to a position to fulfill the EPP requirement. In some other constructions, contrastive topic obligatorily moves out of its base generated position for scope taking purposes. As every movement is for discourse-interpretational purposes, we can account for the movement operations without appealing to EPP.

The question raised at this point is this: If TP does not exist and EPP requirement can be reduced to restrictions on movements of information structural constituents, what is the target position of topic phrases? Recall that in Chapter 4, we proposed that the target position of the aboutness topic and contrastive topic phrases is Spec TP. In the absence of a TP projection, there must be another target position for the dislocated topic phrases. In line with the other information structural units, we propose TopP position in the structure to host the topic phrases. As already indicated in the previous chapter, the advantage of this analysis is that we can easily account for the distinction between topic and focus phrases in that topic phrases are utterance

[184] Kelepir (2001) also gives a similar example with a question mark. If the focus is on the object, the subject is either the aboutness topic or the contrastive topic.

(1) ?Kimse bir arkadaş-ım-ı davet et-me-miş.
Anybody a friend-1SGPOSS-ACC invite-NEG-EVI
Only reading: 'Nobody invited any friend of mine.'
*'A friend of mine is s.t nobody invited him/her.' (Kelepir 2001, 158)

level constituents while focus phrases are not. Additionally, with this adjustment the semantic composition of the information structural units is reflected more fully in the syntactic structure.

5.4.3.2 Subject-object extraction

In English, extraction out of subject and object positions shows asymmetry in that only object extraction is possible as in (95).

(95) a. Who$_i$ do you think that John saw t$_i$?
b.*Who $_i$ do you think that t$_i$ saw John? (Bošković 2012, 95)

Bošković (2012) suggests that in languages without TP projection, subject-object extraction asymmetry that is observed in English does not occur. In Turkish wh-focus phrases do not move for interpretational purposes, only discourse-linked wh-phrases can optionally move (Şener 2010). Hence it is not easy to test subject-object extraction with wh-phrases. For Turkish, Aygen (2000) investigates subject and object extraction out of (i) nominalized complement clauses, (ii) finite complement clauses and (iii) ECM clauses and comes up with the following results.

(96) (i) Nominalized Complement Clauses: ✔ sbj ✔ obj; sbj+gen; obj+acc.
(ii) Finite Complement Clauses: * sbj ✔ obj; sbj+nom; obj+acc.
(iii) ECM Clauses: ✔ sbj * obj; sbj+acc; obj+acc.

In nominalized complement clauses both the subject and the object can be extracted out of the complement domain. In finite complement clauses the subject cannot be extracted and in ECM clauses the object cannot be extracted. Aygen (2000) suggests that this is related to the case marker of the constituent over

which the dislocated constituent moves. Finite complement clauses do not bear a case marker and hence nominative subjects cannot move out of this domain having the same morphology. In ECM clauses the accusative case marked constituents cannot move over the accusative case marked subject. As the extraction constraints are not the same with (95) as indicated in (96), we suggest that in Turkish, subject-object extraction difference is not observed.

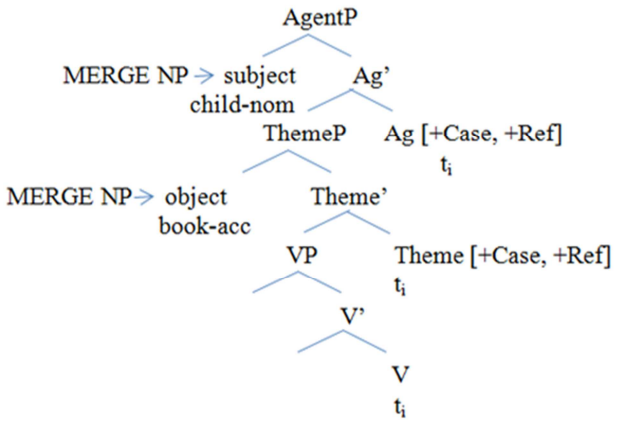
5.4.3.3 Nominative case

Bošković (2010) argues that in the absence of TP projection, nominative case is licensed by another projection or it licensed as a default case. In line with George and Kornfilt (1981), he suggests that Agr can be the case licenser in Turkish. However, as illustrated in section 5.4.1, with ECM clauses Agr cannot be the case licensing head in Turkish, so this is not an option.

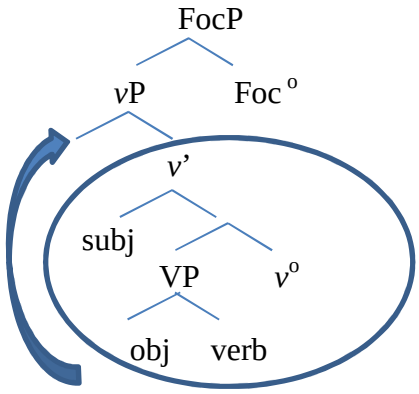
The other possibility is that nominative case is the default case licensed in the absence of a probe. Nominative case has already been suggested to be the default case (Kornfilt 2003). However, this line of an analysis runs into problems with Turkish for which we have also suggested *v*P to have non-phasehood properties. Although a phase property with respect to the reconstruction site is not observed, accusative case is checked on the object even with ECM clauses. Additionally, both accusative and nominative case cannot be default case markings in Turkish.

The other alternative is to assume different functional projections for the nominative and accusative case. Let us start with the accusative case. In line with Öztürk (2005), we can assume that object phrases are base generated in ThemeP and get accusative case checked at this position.

(97)



(98)



As the discussion in the previous chapter has shown, the specifier position of *v*P above the external argument is used as a reconstruction site by contrastive topics but this is not the case for the specifier position of the subject. However, contrastive topic cannot reconstruct back to the event structure domain indicated with the ellipse in (98) above. In (97) with an AgentP above ThemeP this position is missing which makes reconstruction of the contrastive topic unexplained. Hence we will keep *v*P as the case checking site of object phrases.

As for nominative case checking, within the assumptions of the minimalist program, C is the locus of all features which percolate down to T head. In the absence of T head, FinP/MoodP can be analyzed to be nominative case checking heads for the external arguments.[185] However, as CP does not have the general properties of a phase instead of feature percolation we can suggest that the heads enter the derivation with the relevant features. As the discussion in this section has shown we do not need TP for case checking purposes either.

[185] As the discussion so far indicates, in the absence of TP we have proposed MoodP to be the case checking head for nominative case marked subjects and the source of temporary information as a secondary effect. However we do not propose MoodP as an alternative to TP in the sense that in the presence of TP we woud expect to find MoodP as well in the structure. Hence in the absence of TP, we cannot suggest that MoodP makes CP phase defective.

5.4.3.4 Sequence of tense

Sequence of Tense (SOT) refers to the ambiguity in the interpretation of tenses in embedded clauses with attitude verbs. The possible interpretation shows variation from language to language. In English, the example in (99) is ambiguous in that the temporal interpretation of the embedded clause can be dependent on the matrix verb, yielding simultaneous reading or the past tense interpretation of the embedded clause precedes the matrix verb, yielding anteriority reading.

(99) John believed that Mary was ill.
Non-past/simultaneous reading: John's belief: Mary is ill (time of the alleged illness overlaps John's now)
Anteriority reading: John's belief: May was ill (the time of the alleged illness precedes John's now) (Bošković 2012, 113)

In Japanese on the other hand the temporal interpretation of the embedded verb is dependent on the matrix speech act. Hence in Japanese only the simultaneous reading is possible.

(100) Taroo-wa Hanako-ga byooki-da to iu-ta
TOP NOM be.sick-PRES that say-PAST
'Taroo said that Mary was sick' (simultaneous reading only)
(Ogihara 1994, 2)

As illustrated in (101a) below, in Turkish also, only simultaneous reading is possible. Anteriority reading is available only when *–mIş* is attached to the embedded verb. This is predictable as *–mIş* can be interpreted as a perfective marker.

(101) a. Ahmet Ayşe-nin hasta ol-duğ-un-u söyle-di.
Ahmet Ayşe-GEN ill be-NOML-3SGPOSS say-PAST
'Ahmet said that Ayşe was ill.'

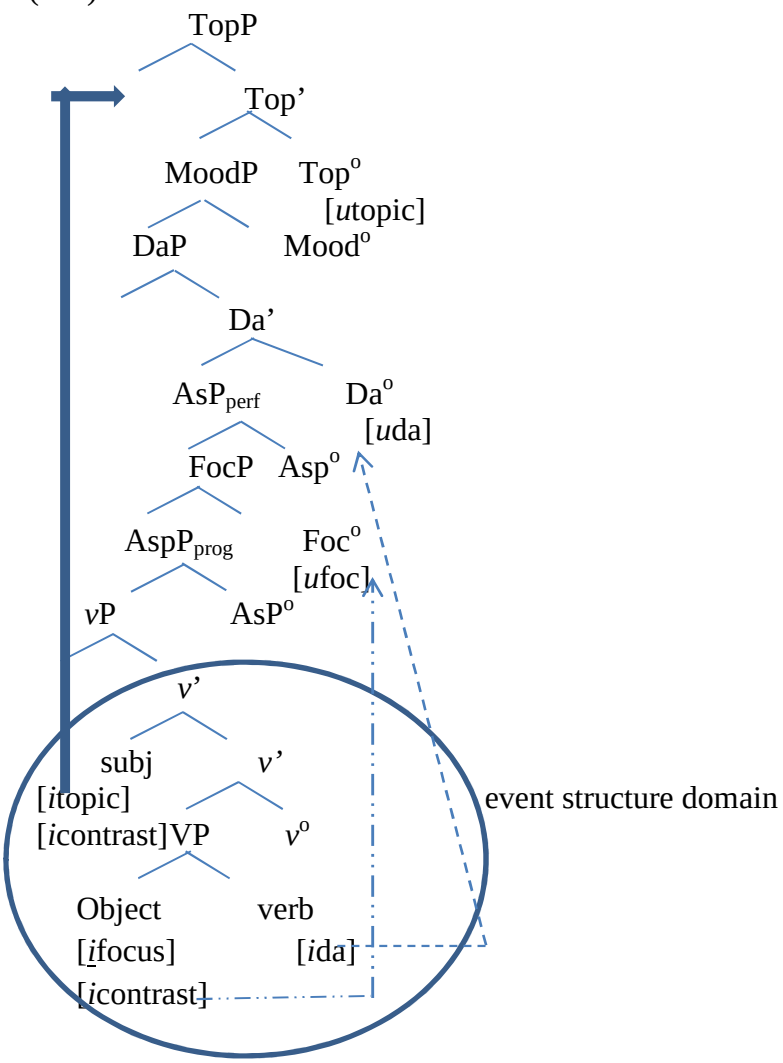
b. Ahmet Ayşe git-miş de-di.
Ahmet Ayşe go-PAST say-PAST
'Ahmet said that Ayşe was ill.'

The discussion in these subsections has shown that the properties of no DP and hence no TP proposed by Bošković (2012) holds in Turkish. Based on the discussion so far we come up with the following phrase structure in (102) for Turkish.

In the previous chapter we suggested Spec TP as the target position of contrastive and aboutness topic phrases. Now with no TP in the structure, we suggest that it is the TopP projection at the left periphery that hosts topic phrases in Turkish. One might alternatively suggest that it is the nominative case checking head, FinP/MoodP, that hosts the topic phrases. But then we would have the problem of assuming edge feature to trigger, for instance, an accusative or dative case marked topic constituent to this position. However, if we assume a TopP projection, the relevant feature would be [top] feature and this would strengthen the argument that in Turkish all the movements are triggered by discourse interpretational purposes.

It is MoodP and not TP projection that checks Nominative case for the subjects. Accusative case is checked by *v*P projection. As case checking is done in-situ, if there is a movement operation it is triggered by interpretational purposes and it cannot be semantically vacuous.

(102)



Finally, the TP domain of Ramchand and Svenonius (2013), defined as the time anchored situational domain would correspond to AspP and MoodP projections, as temporal interpretation is made possible with the markers that surface with these projections. We have not proposed specifier positions for AspP and MoodP as these projections are in fact a reflection of morphology in syntax, and in morphological representations the structure is reduced in that either complement or adjunct positions are allowed but not both (Di Sciullo 2002). In addition, in the absence of TP projection, we cannot also talk about IP internal FocP and DaP in that there is not an intermediary TP projection between *v*P and CP domain.

As the interaction of focus with progressive aspect and perfective aspect has shown in section 4.1.2, the aspectual projections have an effect on focus. While the progressive aspect marker changes scope readings, the perfective aspect marker does not. We reflected this difference in the representation above by positing the Asp_{perf} above FocP and the Asp_{prog} below FocP.

However, in Turkish the verb is more dependent on aspect, indicating that aspect can in fact be even closer to the verb. As illustrated below, we can elide (i) the verb with aspectual marker (103a), (ii) the verb and the object (103b), but we cannot negate the verb in the second conjunct and elide the verb (103c). The equivalent of this sentence with the intended reading in English illustrates that this is possible in English.

(103) a. Ayşe piyano çal-ıyor Mete de flüt (çal-ıyor)
Ayşe piano play-AOR Mete as for flute (play-AOR)
'Ayşe plays the piano and Mete does the flute.'
b. Ayşe piyano çal-ıyor Mete de (piyano çal-ıyor)/öyle
Ayşe piano play-AOR Mete too (piano play-AOR)/as such
'Ayşe plays the piano and Mete (plays the piano) too/does so'
c. *Ayşe piyano çal-ıyor ama Mete değil.
Ayşe piano play-PROG but Mete not
Intended reading: 'Ayşe plays the piano but Mete does not.'

This can be suggested to be due to the fact that aspectual markers and negation are bound morphemes in Turkish and they cannot surface in the absence of verb. However, the following example is not acceptable in Turkish, which is fully grammatical in English.

(104) a. John wants to eat ice-cream and eat ice-cream he will.

b.*Mete dondurma ye-mek isti-yor ve dondurma ye yap-acak.
Mete ice cream eat-NOML want-PROG and ice cream eat make-FUT
Intended reading: 'Mete wants to eat ice-cream and eat ice-cream he will.'

In English it is possible to use the bare form of the verb as in (104a) but this is not possible in Turkish (104b). The verb in Turkish cannot be used in its bare form without an overt or zero aspectual or a modal marker. Note that the verb following the bare verb in (104b) bears an aspectual marker, but even this does not save the structure. The representation of aspect with which the verb is closely related needs detailed investigation, which we leave for further research.

5.5 Conclusion

In this chapter, relying on the previous studies on the functional structure of Turkish, we investigated the inventory of Turkish functional projections. We can list the findings in the following way:

- Turkish is an NP language and DP does not exist (Öztürk 2005, Bošković and Şener 2014).
- Based on CP/DP parallelism (Hiraiwa 2005) we questioned the status of CP in Turkish. The observations that (i) TP in the verbal domain corresponds to PossP in the nominal domain (Hiraiwa 2005), (ii) absence of PossP makes DP defective as a phase (Despić 2011), and (iii) languages without DP projection have similar properties indicating the absence of TP (Bošković 2012, Kang 2014) put the presence of TP in Turkish under question.
- (i) binding, (ii) subject reflexives, (iii) ECM clauses, (iv) bounding nodes, (v) subject-object extraction, (vi) the absence of expletives, (vii) sequence of

tense, (viii) the data on suspended affixation (Zanon 2014) indicate that TP is missing in Turkish and in the absence of TP, CP does not show the phasehood properties. Binding data across two CP boundaries further gives support to our claim that *v*P does not show phasehood properties in Turkish.

- Although *v*P does not show phasehood properties, it is present in the inventory of functional projections in Turkish as accusative case checking site. The subject checks its case with MoodP.
- In the absence of TP, EPP becomes redundant and all the movement operations are triggered by discourse-interpretive purposes.
- The verbal inflectional morphology of Turkish illustrated that TP is not required to encode temporal interpretation and the markers that are proposed to indicate tense in Turkish can be analyzed as Aspect and Mood markers. Yavaş (1982) suggests that *–EcEk* expresses presumptive modality and that future tense interpretation is a secondary effect of this function. We suggest that *–(y)DI* marks indicative modality and *–(y)mI*ş marks evidential mood and past tense interpretation are only secondary effects of these functions. Finally, the present tense markers *–(I)yor* and *–mAktA* express progressive and habitual aspect (Göksel and Kerslake 2005) and the marker *–Ir/Er* expresses habitual aspect (Kornfilt 1997).

CHAPTER 6

CONCLUSION

This study investigated the interaction of information structure in Turkish within semantics, prosody and syntax interface. Hence one of the contributions of this study is not restricting the discussion to a single domain as information packaging has reflections at all domains of the grammar. The other important point is that the prosodic and syntactic marking of information structural units are checked via systematic experimental studies based on which we proposed a theoretical analysis.

The semantic investigation revealed that:

- the name ‘contrast’ for contrastive focus is misleading in that with both contrastive focus and discourse new constituents one of the alternatives is chosen from the set in ‘contrast’ to other alternatives.
- contrastive focus is semantically distinguished from discourse new focus with respect to exhaustive identification.
- both discourse new and contrastive focus phrases can surface in the preverbal domain not being restricted to the immediately pre-verbal position in line with Göksel and Özsoy (2000), Kılıçaslan (2004).
- sentence initial aboutness topic phrases mark what the rest of the sentence is about without marking a shift in the conversation and they are not necessarily discourse-given.
- contrastive topic phrases mark a shift in conversation or narrow down the question under discussion and give only a partial answer.

Within the literature, nested foci analyses has been suggested for contrastive topic phrases (Wagner 2007, 2008), however in Turkish, while contrastive topic phrases

can appear in the post-verbal domain, focus phrases cannot, which indicates that they are not the same. Additionally, contrastive topic phrases have been suggested to surface in the absence of a focus phrase (Constant 2014). However, the Turkish data clearly indicates that in all these structures there is an accompanying focus phrase as evidenced by pitch tracks of the relevant examples. The semantic composition of contrastive topic is dependent on focus phrases and hence contrastive topic phrases cannot surface in the absence of a focus phrase or within the scope domain of a focus phrase. Finally, in this chapter multiple focus constructions in Turkish (Göksel and Özsoy 2000, Kılıçaslan 2004, Kesen 2010, Güneş 2012, Su 2012) are re-analyzed as structures with contrastive topic-focus order. This analysis also sheds light on the exceptional behavior of focus phrases with respect to intervention effects (Kesen 2010) in that the exceptional focus phrases are in fact contrastive topic phrases.

The discussion in Chapter 3 indicates that:

- not every semantic categorization is reflected phonetically. In SOV order discourse new and contrastive focus phrases in the immediately preverbal position do not differ from broad focus sentences with respect to f0 and duration measurements. Moreover discourse new and contrastive focus phrases are not marked distinctively in the prosodic domain either.
- focus in sentence initial, medial or final domains is always marked as the rightmost phonological phrase with IP level stress, which marks the beginning of the nuclear fall.
- focus phrases require being the rightmost phonological phrase (Güneş 2012) and this requirement makes the in-situ subject focus phrase to form a single phonological phrase with the following constituents. Some speakers do not to find in-situ focus phrases as acceptable and the heaviness of this phonological phrase may be

reason for the split between the Turkish speakers with respect to the position of focus.

Taking phases as IP stress assignment domain (Üntak-Tarhan 2006) yields confounding results for the stress pattern in Turkish unergative constructions.

The investigation of the data in Chapter 4 showed that:

- all movement operations in Turkish are triggered by discourse interpretational purposes and information structural notions are encoded via discourse features at syntax.
- semantic compositionality and ordering restrictions of information structural notions are reflected in the syntactic domain via clause internal and external projections.
- the negation data further indicates that the position of focus in the sentence has a direct effect on the interpretation. Focus bearing constituents and contrastive topics always take scope over negation. However when it is the verb that bears focus, the whole is negated and all the constituents remain within the scope of negation. This indicates that negation can project at more than one position in the structure as proposed by Kelepir (2001).
- the position of focus does not directly influence quantifier scope interpretation.

The experimental studies reveal that in SOV with the indefinite *'bir'* and the universal *'her'* order, the indefinite always takes scope over the universal *'her'* irrespective of the position of focus. In OSV with the universal *'her'* and the indefinite *'bir'* order, the indefinite can easily be interpreted above the universal quantifier via existential operator over choice functions. In OSV with the indefinite *'bir'* and the universal *'her'* order, inverse scope is possible in a few constructions.

The Turkish binding, negation and quantifier scope data can be captured via eventual, situational, and propositional domains but not via phase domains. The syntactic mechanism reveals that *v*P does not show phasehood properties in that (i) the complement domain of *v*P domain is not accessible for dislocated contrastive topic phrases but not so for aboutness topic and discourse anaphoric constituents, (ii) only the outer specifier is an escape hatch and reconstruction site for contrastive topic phrases. The idiom formation diagnostic of Öztürk (2005) further indicates that in Turkish *v*P/VP partitioning is not observed which is expected if *v*P was a phase. Hence we concluded that *v*P exists in Turkish but it is not a phase. The scope domain of focus is the eventual domain. The interaction of focus with perfect and progressive aspects and adverbial tests indicated that this domain is in fact eventual domain as defined by Ramchand and Svenonius (2013). The data on quantifier scope and negation can be captured via locality restrictions on movement by appealing to the eventual domain. As for the derivation of information structural units at LF, in line with the assumptions of Bobaljik and Wurmbrand (2012) and Neeleman and Vermeulen (2012), yields confounding results when Turkish data with discourse anaphoric constituents are taken into account. Finally, there is no need for a higher focus projection for the so-called ‘multiple’ focus constructions in Turkish (Kahnemuyipour and Kornfilt 2011, Su 2012, Güneş 2012), the discussion clearly indicates that a single focus projection and contrastive topic position is sufficient to capture the data. Negation does not project a FocP in that (i) the position of focus is not important for negation (Kamali and Samuels 2008, Kamali 2011), (ii) any constituent in the preverbal domain can bear focus but negation can only attach to verbal predicates (iii) in yes/no questions with a contrastive topic-focus pair, it is not possible to add a focus phrase with an overt particle but this is possible with negation

in the same context. As for multiple focus structures, we take the data as contrastive topic-focus pair and hence there is no need for a higher focus projection.

The conclusion that *v*P does not show phasehood properties led us to question the status of CP as a phase in Turkish in Chapter 5. DP, which is parallel with respect to its internal structure to CP (Hiraiwa 2005), has already been suggested to be missing in Turkish (Öztürk 2005, Bošković and Şener 2014). In the absence of PossP, DP becomes a defective phase (Despić 2011) and another line of an analysis suggests that languages without a DP also lack TP (Bošković 2012). For Turkish the prediction was that the absence of DP signals the absence of TP and in the absence of TP, CP is a defective phase. The data on (i) binding, (ii) ECM clauses, (iii) bounding nodes indicate that CP does not create an opaque domain and extraction is possible out of the complement domain of CP which is not expected if CP was a phase. The diagnostics of (i) the absence of subject expletives, (ii) lack of asymmetry in subject-object extraction, (iii) alternative nominative case checking heads, (iv) sequence of tense data suggested by Bošković (2012) as generalizations of languages with no TP capture the Turkish data as well. In the absence of TP, temporal information is encoded via Aspect and Mood projections. The present tense marker is an aspectual marker expressing habitual or progressive aspect while the future tense marker encodes presumptive modality. The past tense interpretation is the secondary effects of indicative and evidential mood. With- *DI* and *–(y)DI*, the speaker makes a judgment about the truth value of a proposition as authority of assertion. With *–mIş* and *–(y)mIş* the speaker again makes a judgment about the truth value of a proposition based on reported or sensory data. Speakers can make these judgments for events that are realized and hence we get past tense interpretation.

Further research on phrase structure of Turkish will shed more light on the validity of the suggestions in this chapter.

In the remaining part of the chapter we will talk about the implications of this study and suggestions for further research. Firstly, we restricted the data to SOV and OSV patterns and hence the investigation of other possible four orders within this syntactic mechanism was not included in the discussion. Keeping the left periphery constant, we need right peripheral DaP and TopP for the post-verbally dislocated discourse anaphoric and contrastive topic phrases. However what triggers the movement of the constituents to the right projections needs further research.

Actually, there are a few more issues that need investigation with respect to the post-verbal domain. Firstly, this domain is not restricted to non-contrastive, given, salient constituents as post-verbal contrastive topic phrases indicate. Only aboutness topic phrases, and focus phrases cannot appear in this domain. We suggest that the restriction on aboutness topic phrases depends on semantic incompatibility in that as pointed out earlier, aboutness topic phrases mark what the rest of the sentence is about. Hence sentence final position is not relevant for this function. As for focus phrases, the discussion on the prosody of focus phrases indicates that focus phrases attract IP level stress. IP stress is not possible in the post-verbal domain and we do not expect focus phrases to appear in this domain. As already pointed out by Göksel (2013), the restriction on the appearance of focus phrases in the post-verbal domain can be due to the copula which seems to be like a pivot dividing the sentence into two parts. Focus phrases attract IP level stress and appear in the rightmost phonological phrase. However the post-verbal domain does not pose a difficulty for these properties. In fact there are languages which mark focus in the post-verbal

domain so what hinders post-verbal focus in Turkish needs further investigation. The pivot-like behavior of the copula and post-verbal domain needs further research.

In Chapter 3, we focused on the prosodic marking of focus phrases but there are some other interesting issues that will further shed light on the prosodic properties of Turkish. The prosodic properties of contrastive topic phrases was not a part of our experimental study, but with the aim of showing that even with the so called 'lone' contrastive topic phrases there is a focus phrase in the same construction we went over the pitch track of the sentences with contrastive topic phrases. Additionally, while discussing multiple focus phrases in Turkish, which we analyzed as contrastive topic-focus pair, Güneş (2012) provides a pitch track. Interestingly, all these pitch tracks indicate that from a phonological point of view contrastive topic subject phrases show exactly the same properties expected in the prenuclear domain in that there is H boundary tone at the right edge of the domain. However more systematic measurements must be done to find out whether contrastive topic phrases are phonetically marked in a distinct way or not.

The lack of distinction between given and discourse-new constituents in sentence initial and final position is also another interesting property that we have noted in the experimental study. In broad focus sentences all the constituents are discourse-new. With narrow focus constructions on the other hand the sentence initial and final constituents were given constituents. We expected given constituents to be prosodically non-prominent (Féry and Samek-Lodovici 2006) but no significant distinction has been found between discourse-given and discourse-new constituents. The lack of a distinction in the initial domain can be due to the subject's being a topic phrase with narrow focus structures; however a significant distinction is also not observed in the final domain. We suggest that in Turkish given constituents are

not phonetically distinguished from discourse-new constituents. Whether givenness has an effect on phonological phrasing would be interesting to investigate with ditransitive constructions with given and discourse new constituents. Within this condition given constituents may form a single phonological phrase.

In Chapter 5, regarding the indefinites we suggested that presuppositionality property of accusative marked indefinites hold for non-marked indefinites in certain instances and this indicates that 'case' may not be the sole assigner of referentiality. Additionally if presuppositionality does not differentiate accusative case marked and non-marked indefinites, we need to find out which property distinguishes between the two groups. We leave this interesting issue for further research.

In the absence of TP, the status of EPP in Turkish becomes untenable. Actually, EPP requirement which was stated as the requirement that all clauses should have a subject (Chomsky 1981, 1982) has been revised in different ways. Alexiadou and Anagnostopoulou (1998) suggest that in languages such as Spanish and Greek, EPP is satisfied through the move/merge of the V. The agreement markers on the predicate have a pronominal status and they satisfy EPP requirement of T head. Miyagawa (2005) suggests that in discourse prominent languages, C^o percolates discourse features to the T^o, while in agreement prominent languages such as English, C^o percolates agreement features to the T^o. In this study, we suggested that all movement operations are driven by discourse-interpretive purposes in Turkish and in the absence of TP, functional heads of Top, Foc and Da trigger movement operations. It would be interesting to see whether this analysis can capture other discourse prominent languages.

The other interesting issue that we pointed out in Chapter 5 is the representation of Aspect and Mood in the phrase structure and the discussion on

suspended affixation. The phrase structure we have proposed in the last chapter indicates that Aspect and Mood have morphological as well as syntactic reflexes. Within the terms of Ackema and Neeleman (2004), morphological representation is inserted in syntactic representation. Additionally, the interaction of different aspectual markers with focus yield different interpretations which indicate an interface with semantics as well. The attachment of the question particle also indicates interface of morphology with phonology and syntax. The question particle always follows the IP level stress. If it is a one word level utterance then the question particle attaches to the affix bearing IP level stress, if it is a sentence then the question particle attaches to the constituent bearing IP level stress. The data indicates that the modules of Syntax, Semantics and Phonology have a clear interface with morphology. It is an interesting issue to investigate the representation of morphology within these modules which we leave for further research.

APPENDIX A

SAMPLES FROM THE FIRST STUDY

ON THE PROSODY OF FOCUS PHRASES

I. Given-Contrastive Focus-Given Order with Lexically Stressed Words

(1) A: Alanya ve Anamur'dan Almanya'ya giden gurbetçilerden bir grup Almanya'da çalışmalarıyla büyük beğeni toplamış. Her iki grup da elinden geleni yapmaya çalışıyor, şimdi de Almanyalılar onları öven bir konuşma yapıyor.
One of the guest worker groups who went from Alanya and Anamur to Germany won recognition with their work. Both of the groups try to do their best and now the German people make a speech that praises them.
B: Peki Almanyalılar Alanyalıları mı yoksa Anamurluları mı övüyorlar?
Do the German people praise the people from Anamur or Alanya?
A: *Almanyalılar* Anamurluları *övüyorlar*.
The German people praise the people from Anamur.

II. Given-Discourse New-Given Order with Finally Stressed Words

(2) A: Eskiden elemanlar maaşları yüksekken ne bulurlarsa alır ve yerlerdi çünkü alacak paraları vardı. Sence bu kadar az maaş zammından sonra elemanlar neye yumulurlar?
In the past when the wages of the personnel were high they would buy and eat whatever they find because they had enough money. With so little increase in salary what do you think they will eat?
B: *Elemanlar* menemene *yumulurlar*. Domates en ucuz sebze.
The personnel will eat menemen. Tomato is the cheapest vegetable.

III. Contrastive Focus-Given-Given Order with Finally Stressed Words

(3) A: Bu bina artık kullanılamaz hale geldi. Bazı değişiklikler yapmak şart oldu ben de mimarları çağırdım. İşe avludan başlarlar ve mermerleri yenilerler.
This building became unusable. It became inevitable to make some changes and I called the architects. They will start from the yard and change the marbles.
B: İyi de bu mimarların işi değil ki. Ameleler *mermerleri yenilerler.*
But that is not the job of architects. Workers change the marbles.

IV. All-Given

(4) **A:** Sınav öncesi şu notların üzerinden geçelim. Ticaret yaptıkları için diğer medeniyetlerle etkileşim içinde bulunan İyonyalılar Menemen'e yayılıyorlar.
Let's go over the notes before the exam. The Ionians, who kept in touch with other civilizations as they traded, moved towards Menemen.

B: Bu notları okudum. İyonyalılar Menemen'e yayılıyorlar. Bu bölümü hatırlıyorum başka bölüme geçelim.
I read those noted. The Ionians move towards Menemen. I remember that part. Let's move onto another part.

V. All-New

(5) A: Ne izliyorsun, ne var televizyonda?
'What are you watching, what is on TV?'
B: Almanyalılar Anamurluları övüyorlar. Belli ki Anamurlular iyi çalışıyorlar.
'*The German people praise people from Anamur. Apparently, people from Anamur work hard.'*

VI. Filler with Finally Stressed Words

(6) A: Uzun zamandır haberleri izleyemiyorum. Neler oluyor dünyada anlatsana?
I haven't been watching the news for a long time. What is going on in the world?
B: Son haberler Almanya'dan. Amiraller mayınları yolluyorlar.
The latest news is from Germany. The admirals send the mines.

APPENDIX B

SAMPLES FROM THE SECOND STUDY

ON THE PROSODY OF FOCUS PHRASES

I. Given-Contrastive Focus-Given Order

(1) A: Bazı sebzelerde GDO'lu tohum kullanıldığı ortaya çıkmış. Sağlık bakanlığı duruma el koymuş ve sebzelerin yetiştirenler tarafından imha edilmesine karar vermiş. Alanyalılar börülce yoluyorlar.
It was found out that genetically modified seeds were used in some vegetables. The ministry of health took the issue in hand and decided that the growers would annihilate the vegetables. The people of Alanya pull up peas.
B:Alanyalılar barbunya yoluyorlar.
The people of Alanya pull up kidney beans.

II. Given-Discourse New-Given Order

(2) A: Ümraniyeliler çevre düzenlemesi yapıyorlar. İlçeyi çiçeklerle donattılar. Solmuş çiçekleri çıkarıp yeni çiçek dikiyorlar. Papatyaları yenilediler.
The people of Ümraniye make environment planning. They decorate the town with flowers. They take out the wilted flowers and plant new flowers. They renewed the daisies.
B: Ümraniyeliler başka neyi yeniliyorlar?
What else do the people of Ümraniye renew?
A: Ümraniyeliler manolyaları yeniliyorlar.
The people of Ümraniye renew the magnolias.

III. All-New

(3) A: Haberlerde ne var?
What is on the news?
B: Memurlara zam geliyor.
There is an increase for the wages of the officers.
A: Başka?
What else?
B: Romanyalılar uranyuma yöneliyorlar
Romanians turn towards uranium.

IV. Fillers

(4) A: Dün maymunlarla ilgili bir filme başladım ama filmin sonunu göremeden uyuyakaldım. Sen izledin mi o filmi, nasıl bitiyor film?
Yesterday I watched a film on monkeys but I fell asleep before watching the end of the film. Did you watch that film, how does it end?
B: Maymunlar ormanı buluyorlar.
The monkeys find the forest.
(5) A: Kasabamızda yapılacak işlere belediye yetişemeyince görev paylaşımı yaptık.
As the municipality couldn't do the things to be done for our town on its own we did task sharing.
B: Peki bu elemanlar neden burada bekliyor?
Well, why do the personnel wait in here?
A: Elemanlar yolları yenileyecekler.
The personnel will renew the roads.

(6) A: Korsanlar tarafından kaçırılan gemi mürettebatıyla birlikte ülkemize döndü.
The ship which was abducted by the pirates has returned to our country with its crew.
B: Bundan sonra ne gibi gelişmeler olur?
What kind of developments will happen from now on?
A: Amiraller anılarını yayınlarlar.
The admirals will publish their memories.

APPENDIX C

SAMPLES FROM THE STUDY ON THE INTERACTION

OF INFORMATION STRUCTURAL UNITS WITH QUANTIFIER SCOPE

I. First Study

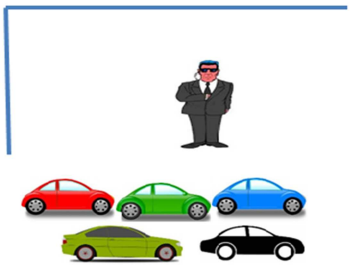
(1) A: *İstanbul'da düzenlenecek konferans için Ankara'dan 5 tane bakan gelmiş. Ankara'dan getirilen 2 kişilik güvenlik ekibi yoğun güvenlik önlemleri almış. Bakanların her biri kendi özel arabasını kullanmış. Hepsi binaya aynı anda ve B kapısından giriş yapmış ama bakanlara Ankaralı güvenlik görevlileri hiç yardımcı olmamışlar.*

For the conference to be held in Istanbul 5 ministers came from Ankara. Two security guards who came from Ankara took safety precautions. Each of the ministers used their own cars. They all entered the building at the same time and from the door B. But the security guards from Ankara did not help the ministers.

	Universal_Object$_{DA}$	Indefinite_Subject$_{DA}$	verb$_{F}$
B: Yo, hayır.	Her bakan-a	bir Ankaralı güvenlik görevlisi	eskortluk et-miş.
No.	each minister-DAT	a prsn.from.A. security guard	escort make-PAST

'No, a security guard from Ankara escorted each minister.'

B kapısı
Savunma bakanı
Sağlık bakanı
Dış İşleri bakanı
İç İşleri bakanı
Bilişim ve teknoloji bakanı



duruma uygun [ ]
'appropriate to the context'

duruma uygun değil [ ]
'not appropriate to the context'

(2) A: *10 kişilik Anamur ve Antalyalı grup Almanya'ya çalışmaya gitmişti. Çalışanların iş performansına önem veren patron her işçiyi denetlemesi için bir amir görevlendirmiş. Her amir sorumlu olduğu işçinin çalışmasını kontrol ediyor ve ona puan veriyormuş. Bir Antalyalı olarak Antalyalı işçilerin övülmesini çok isterim. Sen biliyor musun, Almanyalı amirler Anamurlu işçileri mi yoksa Antalyalı işçileri mi övmüşler?*

Groups of ten people from Anamur and Antalya went to Germany to work. The boss, who considered the performance of the workers important, gave responsibilities to the directors to supervise each of the workers. The directors checked the workers and gave them points. As I am from Antalya, I really want workers from Antalya to be praised. Do you know, which ones, the German directors praised, the workers from Anamur or Antalya?

	Indefinite_subject_DA	universal_object_FOC	verb_DA
B: *Üzgünüm ama,*	*bir Almanyalı amir*	*her Anamurlu-yu*	*öv-müş.*
	a German director	every prs.from.Anamur-ACC	praise-PAST

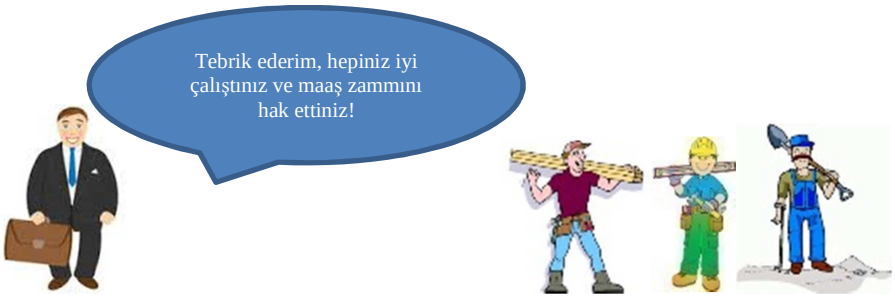
'I am sorry but, a German director praised every worker from Anamur.'

(a) Böylece her Almanyalı amir farklı bir Anamurlu işçiyi övmüş oldu.

'In this way, every German director praised a different worker from Anamur'

(b) Tüm Anamurlu işçileri tek bir Almanyalı amir övmüş oldu.

'Only one German director praised all the workers from Anamur.'



(3) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Bir de kumandayla çalışan oyuncak helikopter götürmüşler. Piknikten sonra öğretmenler de çocuklarla birlikte eğlenmişler. Sen bilirsin, helikopterleri öğretmenler mi yoksa öğrenciler mi uçurmuşlar?*

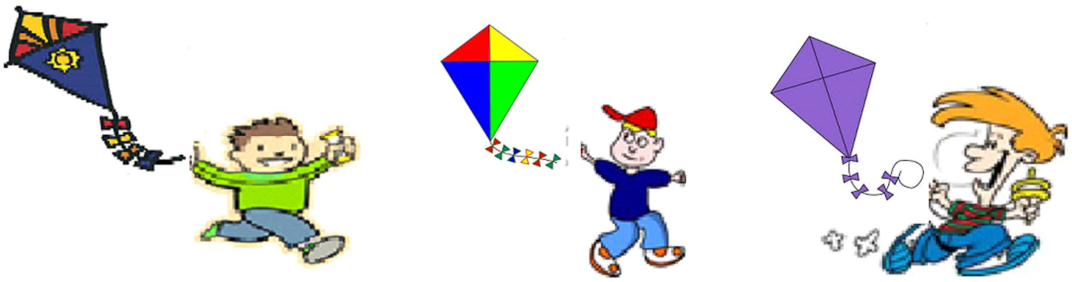
Some of the teachers from our school went on a picnic with three of the students after school. The students who took advantage of the wind took kites with them. Additionally, they brought helicopters that worked with remote controllers. After the picnic, the teachers also had fun with the students. Do you know, which ones, the teachers or the students flew the helicopters?

B: *Valla helikopterleri bilmiyorum ama,*

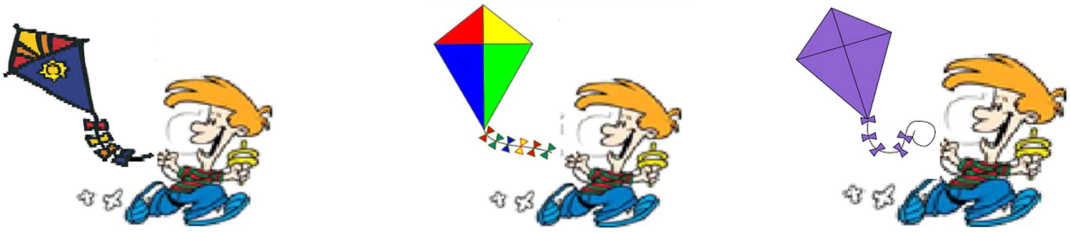
universal_object_CT	indefinite_subject_FOC	verb_DA
her uçurtma-yı	*bir öğrenci*	*uçur-muş.*

'Well, I do not know about the helicopters but a student flew every kite.'

(a) Her öğrenci bir uçurtma uçurmuş.
Every student flew a kite.



(b) Sadece bir öğrenci her uçurtmayı uçurmuş.
Only one of the students flew every kite.



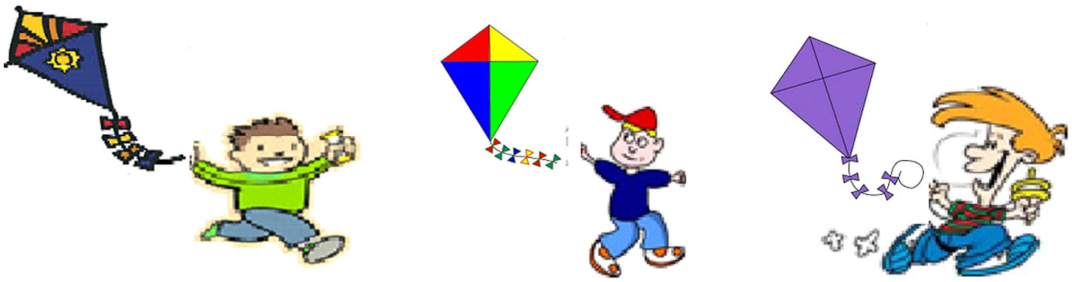
II. Second Study

(1) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Duyduğum kadarıyla bir öğrenci sadece bir uçurtmayı uçurtmuş.*
Some of the teachers from our school went on a picnic with three of the students after school. The students who took advantage of the wind took kites with them. As far as I have heard, a student flew only one of the kites.

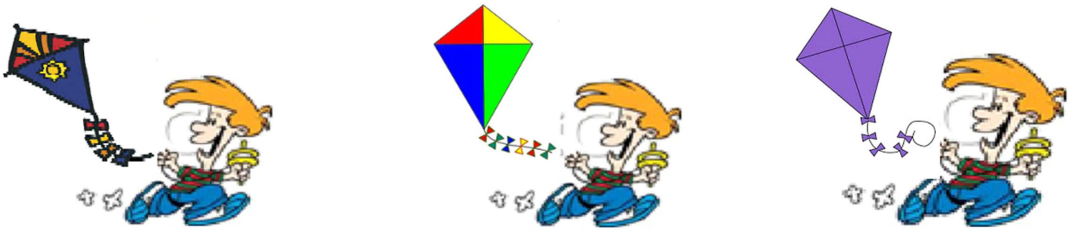
	indefinite_subject$_{AT}$	universal_object$_{F}$	verb_$_{DA}$
B: Yoo hayır,	*bir öğrenci*	*her uçurtma-yı*	*uç-ur-muş.*
	a student	every kite-ACC	fly-AOR-PAST

No, a student flew every kite.

(a) Her öğrenci bir uçurtma uçurmuş.
Every student flew a kite.



(b) Sadece bir öğrenci her uçurtmayı uçurmuş.
Only one of the students flew every kite.



(2) A: *Antalya ve Anamur'dan bir grup işçi Türkiye'den yurt dışına çalışmaya gitmiş. Patron işçileri denetlemesi için amirler görevlendirmiş. Almanyalı amirler işçilerimizin çalışmasını ay sonunda değerlendirecekmiş. Övülen her işçi ek maaş alacakmış. Sen bilirsin, Antalyalı işçilerimizi Almanyalı amirler övmüş mü yoksa eleştirmiş mi?*

A group of workers from Anamur and Antalya went abroad to work. The boss gave responsibilities to the directors to check the workers. At the end of the month, the directors were going to evaluate the workers and the ones who were praised would get extra salary. Do you know, did the German directors praise or criticize the workers from Antalya?

B: *Antalyalı işçileri bilmem ama*

Universal_object_CT	indefinite_subject_DA	verb_FOC	
her Anamurluyu işçi-yi	*bir Almanyalı amir*	*öv-müş.*	
every prs.from.A. worker-ACC	a German director	praise-PAST	

'I do not know about the workers from Antalya, but a German director praised every worker from Anamur.'

(a) Böylece her Almanyalı amir farklı bir Anamurlu işçiyi övmüş oldu.

'In this way, every German director praised a different worker from Anamur'

(b) Tüm Anamurlu işçileri tek bir Almanyalı amir övmüş oldu.

'Only one German director praised all the workers from Anamur.'

III. Third Study

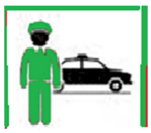
(1) A: *Başbakan konferansın yapılacağı binaya 3 bakanla birlikte gelmiş. 2 tane İstanbul'dan 2 tane de Ankara'dan ek güvenlik görevlisi getirmişler güvenlik önlemi almak için. Başbakan makam aracıyla gelmiş ve A kapısından giriş yapmış. Bakanların her biri kendi özel arabasını kullanmış. Bakanların her birinden bir güvenlik görevlisi sorumluymuş. Bakanların hepsi binaya saat tam 09.00'da ve farklı farklı kapılardan giriş yapmışlar. Duyduğum kadarıyla güvenlik görevlilerinin hepsi başka işlerle uğraşmış başbakana da eskortluk etmemişler.*

The prime minister came with three ministers to the building where the conference was to be held. Additionally, two security guards from İstanbul and two security guards from Ankara came for safety precautions. The prime minister came with his official car and entered the building from door A. The ministers used their own cars. A different security guard was responsible for each of the ministers. The ministers entered the building from different doors at 9:00 o'clock sharp. As far as I have heard, the security guards did other things and did not escort the prime minister.

B: *Başbakanı bilmem ama*
I do not about the prime minister but

indefinite_object$_{CT}$	universal_subject$_{DA}$	verb$_{F}$	
bir bakan-a	*her güvenlik görevlisi*	*eskortluk*	*et-miş.*
a minister-DAT	every security guard	escort	make-PAST

'Every security guard escorted a minister.'

A kapısı	*B kapısı*	*C kapısı*
'door A'	'door B'	'door C'
Savunma bakanı	*Dış İşleri bakanı*	*Sağlık bakanı*
'defense minister'	'foreign affairs minister'	'health minister'
		
Güvenlik görevlisi:	*Güvenlik görevlisi:*	*Güvenlik görevlisi:*
'security guard'	*'security guard'*	*'security guard'*
Sadık Şen	*İbrahim Mutlu*	*Şenol Terzi*

duruma uygun [ ]
'appropriate to the context'

duruma uygun değil [ ]
'not appropriate to the context'

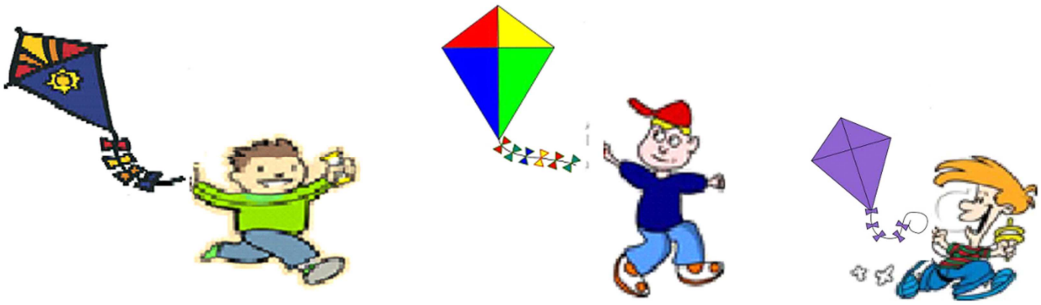
(2) A: *Okulumuz öğretmenlerinden bazıları 3 öğrenciyle birlikte ders çıkışı pikniğe gitmişler. Rüzgârı fırsat bilen öğrenciler yanlarında uçurmak için uçurtma götürmüşler. Piknikten sonra sadece bir öğrenci uçurtma uçurmuş.*

Some of the teachers from our school went on a picnic with three of the students after school. The students who took advantage of the wind took kites with them. After the picnic, only one of the students flew kites.

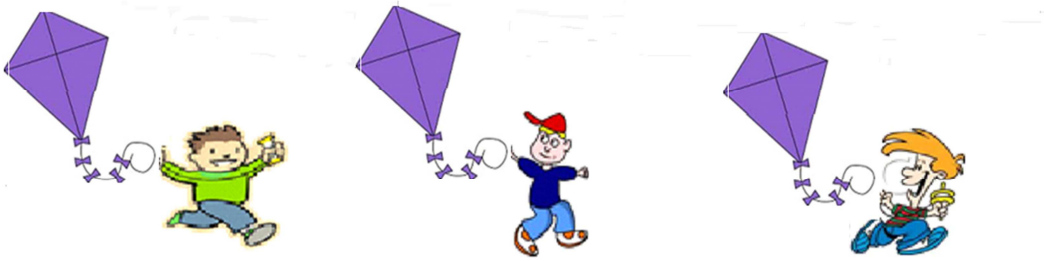
	Indefinite_Object_DA	universal_Subject_FOC	verb_DA
B: *Yoo hayır,*	*bir uçurtma-yı*	*her öğrenci*	*uçur-muş.*
	a kite-ACC	every student	fly-PAST

'No, every student flew a kite.'

(a) Her öğrenci farklı bir uçurtmayı uçurmuş.
'Each student flew a different kite.'



(b) Sadece bir uçurtmayı bütün öğrenciler uçurmuş.
'Each of the students flew only one of the kites.'



IV. Fillers

(1) A: Okul çıkışı öğretmenler 4 öğrenciyle birlikte piknik yapacaktı. Hava çok sıcak olduğu için öğretmenler çocuklardan güneş çarpmasın diye şapka takmalarını istemişti.

After school, the teachers were going on a picnic with four students. As it was very hot, he teachers told the students to wear hats against sunstroke.

B: Anlaşılan bazı çocuklar bu uyarıyı göz ardı etmişler. Hepsi şapka takmamış.
Apparently, some of the kids did not take heed of this warning. Not all the kids wore hats.

duruma uygun [ ] duruma uygun değil [ ]
'appropriate to the context' *'not appropriate to the context'*

(2) A: Tatile çıkmadan önce çiçeklerimi sulaması için komşuma emanet etmiştim. Gitmeden önce sulamayı unutmayacağını söylemişti ama maalesef sözünde durmamış.
Before going on holiday, I left my flowers to my neighbor. She told me that she would water them but unfortunately she did not keep her promise.
B: Abartma ya, çiçeklerin hepsi solmamış.
Do not exaggerate, all the flowers did not wilt.

a) Bütün çiçekler sağlam, solan çiçek yok.
'None of the flowers wilted'

b) Bazı çiçekler solmuş, bazıları solmamış.
'Some of the flowers wilted, some did not.'

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