

Focus in Words with Truth Values¹

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Abstract: This article analyses the prosodic properties of words with truth values in Turkish. These are morphologically complex items that are finite predicates and that can function as declarative sentences. Researchers who have worked on morphologically complex words have generally taken the view that stress occupies a unique position and that this is a consequence of their morphophonological properties. Here we draw attention to data originally due to Sebüktekin (1984) that challenge this position. This data show that the position of stress is variable in morphologically complex words that are declarative constructions, an outcome which is natural given that prosodic prominence as the phonological correlate of focus is expected to be found in all declaratives. The variation in prominence will thus be argued to be similar to that which occurs in sentences with multiple constituents, and that which reflects the difference between presentational and contrastive focus. The investigation thus brings together two separate lines of research concerning Turkish: the location of stress in morphologically complex words, and the location of pitch in presentational and contrastive focus sentences. The findings will be discussed in the context of their implications for hierarchical views of prosodic prominence and hypotheses concerning focus-alignment.

Keywords: contrastive focus, presentational focus, prosody, word structure, word stress, information structure, Turkish.

Resumen: Este trabajo analiza las propiedades prosódicas de palabras con valores de verdad en turco. Éstas se caracterizan por ser palabras complejas

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a nivel morfológico que son predicados finitos y pueden funcionar como oraciones declarativas. Las investigaciones anteriores sobre palabras morfológicamente complejas han venido proponiendo que dichas palabras tienen posición acentual fija como consecuencia de sus mismas propiedades morfofonológicas. En este trabajo nos centramos en datos originalmente estudiados por Sebüktekin (1984), que contradicen esta teoría. Estos datos muestran que la posición del acento es variable en las palabras morfológicamente complejas que son construcciones declarativas, consecuencia natural dado que se predice que la prominencia prosódica como correlato fonológico del foco esté presente en todas las declarativas. Así, se argumenta que la variación en cuanto a la prominencia es similar a la observada en oraciones de constituyentes múltiples, y al tipo de variación que refleja el contraste semántico existente entre foco informativo y foco contrastivo. Esta investigación, por tanto, consolida dos líneas de investigación que hasta ahora habían sido independientes en los estudios sobre el turco: la posición del acento en palabras morfológicamente complejas y la posición de la altura tonal en cláusulas de foco informativo y en cláusulas de foco contrastivo. En la exposición de los resultados se enfatizarán las implicaciones del estudio en cuanto a su aportación a las perspectivas jerárquicas de la prominencia prosódica y a las hipótesis relacionadas con la alineación de focos.

Palabras clave: foco contrastivo, foco informativo, prosodia, estructura de la palabra, acento de la palabra, estructura informativa, turco.

Resumo: Este artigo analisa as propriedades prosódicas de palavras com valores de verdade em Turco. Estas são palavras morfológicamente complexas que são predicados finitos e que podem funcionar como frases declarativas. Os investigadores que têm trabalhado em palavras morfológicamente complexas assumem geralmente a visão de que o acento ocupa uma posição única nestas palavras e que tal é uma consequência das suas propriedades morfológicas. Aqui chamamos a atenção para dados, originalmente por Sebüktekin (1984), que desafiam esta posição. Estes dados mostram que a posição do acento é variável em palavras morfológicamente complexas que são construções declarativas, um resultado natural uma vez que é de esperar que a proeminência prosódica como correlata fonológica do foco esteja presente em todas as declarativas. Argumentaremos assim que a variação na proeminência é semelhante ao que ocorre em frases com múltiplos constituintes, e que reflectem a diferença semântica entre foco apresentacional e contrastivo. A investigação reúne assim duas linhas de investigação distintas relativamente ao Turco: a localização de acento em palavras morfológicamente complexas e a localização de *pitch* em frases com foco apresentacional e contrastivo. Os resultados serão discutidos no âmbito das suas implicações para visões hierárquicas de proeminência prosódica e hipóteses sobre alinhamento do foco.

Palavras-chave: foco contrastivo, foco apresentacional, prosódica, estrutura da palavra, acento de palavra, estrutura informacional, Turco.



1. Introduction

There is a considerable amount of research on the syntax, semantics and prosody of focus in various languages. The overwhelming majority of these studies is on the expression of focus in connection to the location of stress on phrasal constituents (see Büring 2007 and references in there). Similarly in Turkish, the properties of focus have been studied in terms of the position of focused phrases and the locations that can host them.

In this article I will look at the expression of presentational and contrastive focus in morphologically complex words with truth values, i.e. words that are propositions. Since major constituents in a sentence may be omitted, propositions may contain a single finite predicate composed of a stem and multiple affixes. These morphologically complex words can be propositions of various sorts, e.g. declarative sentences, interrogative sentences, negative sentences, etc. In this article I limit the inquiry to propositions that are declarative constructions, examples of which are given below:²

- (1) Yürü-yor-lar-dı.
walk-IMPF-3PL-PST
'They were walking.'
- (2) Konuş-ma-yacak-lar-mış.³
speak-NEG-FUT-3PL-EV
'It seems that they will not talk.'

² The abbreviations used in this paper are the following; AGR: subject agreement; AOR: aorist; COMP: complementizer; CL: Clitic Group ; COND: conditional; CONT.F: contrastive focus; COP: copula; DAT: dative; DER: derivational suffix; DLP; declarative sentence where the string contains more than one word (which, in this case means more than one lexical phrase); DMW: declarative sentence where the string contains a single morphologically complex word; EV: evidential; FUT: future; GEN: genitive; IMPF: imperfective; INT: interrogative; LOC: locative; NEG: negative; OBL: obligative; OPT: optative; PL: plural; POSS: possessive; PRES.F: presentational focus; PRF: perfective; PST: past; PW: phonological word; REL: relativiser; SG: singular; TAM: tense/aspect/modality. Capital letters in the suffixes stand for the vowels and consonants which vary due to phonological processes.

³ By presentational focus I refer to utterances in which no particular part carries a p-set in the sense of Rooth (1992), but rather the whole of the proposition has a p-set associated with it, see Göksel & Özsoy (2003).



I henceforth refer to these items as DMWs, declarative sentences composed of a single morphologically complex word. These items should be expected to express contrastive focus, on a par with sentences that are made up of more than one lexical phrase. Indeed, as first observed by Sebüktekin (1984), DMWs in Turkish have more than one location which is stressable, depending on the presence of certain morphemes:

- (3) a. Geleceklérdi.
 (i) 'They were going to come.'
 (ii) 'They WERE going to come.'
 b. Gelecéklerdi.
 '(But) they WERE going to come.'

The topic of this article is the conditions on the expression of contrastive and presentational focus in DMWs. The aims of the investigation are the following (i) to have a fresh look at the morpho-phonological properties of DMWs once the data on contrastive stress are taken into consideration, (ii) to step out of the widely-accepted view that DMWs are unambiguously sensitive to the lower levels of the prosodic hierarchy, and (iii) to understand whether they have a common source with sentences composed of multiple lexical phrase.

I begin with a presentation of the background concerning the stress-related properties of DMWs as they have been discussed in the literature, together with the variable position of a particular affix which is crucial to the main topic of this paper, the 3rd person plural subject agreement marker. In section 3, I present the data on contrastive focus in DMWs in Turkish, followed by the introduction of the main characteristics of presentational and contrastive focus in sentences with multiple constituents. In section 5, I compare the structure of DMWs with sentences composed of multiple constituents in terms of the expression of focus and lay out the similarities and differences between the two types of item. Section 6 discusses the implications of contrastive stress in DMWs for the prosodic hierarchy and focus-alignment. The article concludes with potential questions for future studies.



2. Background

2.1. 'Word' Level Stress

In Turkish, a nominal or a verbal stem can have several suffixes on it. The presence of certain morphemes in morphologically complex words is assumed to correlate with certain suffixes and clitics, among which are the interrogative particle (4a), the negative marker (4b), and the copula (4c, d). When these markers are present, the syllable before them is stressed:

- (4) a. iyí-mi-sin⁴
good-INT-2SG
'Are you well?'
- b. konúş-ma-yacak
talk-NEG-FUT
'S/he won't talk.'
- c. bekle-melí-y-miş-im
wait-OBL-COP-EV-1SG
'Apparently, I should have waited'
- d. oda-dá-y-dı
room-LOC-COP-PST
'S/he was in room.'

I refer to this prosodic pattern as Pattern 1.

In the absence of the markers in (4), stress falls on the final syllable irrespective of the syntactic complexity of the DMW:

- (5) a. yaz-lık-lar-ımíz
summer-DER-PL-1POSS.PL
'our summer clothes'
- b. git-ti-ğ-í
go-PST-COMP-3POSS.SG
'that s/he went'
- c. al-dí-m
take-PST-1SG
'I've taken it.'
- d. kutú
box

⁴ The interrogative clitic *mi* is written separately, but this and other orthographical conventions relating to DMWs will be overlooked in this paper for practical reasons.



The difference between the stress patterns in (4) and (5) has been one of the most studied aspects of affixation related stress in Turkish. There are two types of analysis that aim to explain these differences. One of these attributes the stress in (4) to the lexical properties of the particular suffixes and clitics that occur in these DMWs (Kaisse 1986, Lees 1961, Inkelas 1999, Inkelas & Orgun 2003). For example, according to Inkelas 1999, Inkelas & Orgun 2003, various suffixes and clitics are lexically associated with a trochaic foot. The position of stress in (4) is thus an outcome of this lexical specification. According to this claim the interrogative clitic in (4a), the negative marker in (4b) and the copula in (4c, d) have the structure below, where AFF stands for the segmental material associated with any suffix or clitic that induces a trochaic foot, hence stress falls on the syllable before it:

(6) (x .)
AFF

According to this view, Pattern 1 can be illustrated as follows:

(7) (x .)
AFF

- | | | |
|----|------------------------------|-------------------------------------|
| a. | iyí- <i>mi</i> -sin | 'Are you well?' |
| b. | konúş- <i>ma</i> -yacak | 'S/he won't talk.' |
| c. | bekle-melí- <i>y</i> -miş-im | 'Apparently, I should have waited.' |
| d. | odadá- <i>y</i> -di. | 'S/he was in the room.' |

Where there is no trochaic foot inducing morpheme in a DMW, stress occurs on the final syllable, hence the stress pattern in (5).⁵

The other approach regarding the difference in the prosodic structure of the DMWs in (4) and (5) analyses them as constructions of different levels where segmental material intersects with prosody. In the strata-based analysis proposed by Kaisse (1986) morphemes belong to different layers as reflected by their order, and stress is assigned at different levels accordingly. In the domain-based analysis proposed by Kabak & Vogel (2001) and Kabak & Revithiadou

⁵ Charette (2008) presents the only analysis which addresses the issue of why the default position of stress is word final in Turkish, analysing 'final stress' as a structural condition associated with a trochaic foot at the end of the word. We will not go into details here as this analysis is not directly relevant to the issues discussed here.

(2006) the objects in (4) and (5) belong to different levels of the Prosodic Hierarchy.⁶

- (8) a. [[iyí]_{PW} -mi-sin]_{CI} 'Are you well?'
b. [[konúş]_{PW} -ma-yacak]_{CI} 'S/he won't talk.'
c. [[bekle-melí]_{PW-Y} -miş-im]_{CI} 'Apparently, I should have waited.'
d. [[odadá]_{PW} -y-dí]_{CI} 'S/he was in the room.'

To summarise, both of the approaches above assume a single prosodic structure for each such DMW, i.e. Pattern 1, associated with the following items:⁷

- (9) a. copula: -y-, i-, -Ø-
b. interrogative: -mI
c. negative: -mA

However, DMWs containing these items may have another prosodic pattern which, to my knowledge, was first observed by Sebüktekin (1984). I shall call these Pattern 2, and discuss their properties in section 3. I shall confine the discussion to those that contain the copula, which, as can be seen from the above, has various forms (see Kornfilt 1996, Kelepir 2007 among others). But before that another piece of data relevant to the discussion will be presented. These are DMWs with an alternative morpheme order.

2.2. Variable Position of the 3rd Person Plural Agreement Marker

The position of the morphemes within a DMW is fairly rigid in Standard Turkish except for the 3rd person plural morpheme *-lAr* (see Good and Yu 2005, among others). While the position of other person markers is fixed within the DMW, the position of the 3rd person plural form is variable.⁸

⁶ See Sebüktekin (1984) for the precursors of these analyses.

⁷ This list does not exhaust all such items. For a full list see Göksel & Kerslake (2005).

⁸ The descriptions in this paper are based on Standard Turkish. Person markers have different exponents in various dialects and they also differ in terms of the placement of these morphemes. The examples below illustrate this point with respect to the 2nd person singular morpheme and the interrogative particle:



Person markers occur after the tense/aspect/modality morphemes that follow the copula. The copula is expressed by one of the forms in (9a). The examples below contain the phonologically null form, the position of which is uncontroversial, given that it can alternate with the (obsolescent) form *i-* (as in *gelecek imişiz*, *gelecek imişler* etc., cf. (10)-(11)):

Future-Evidential

- (10) gel-ecék-Ø-miş-iz
 come-FUT-COP-EV-1PL
 (i) 'We are supposed to come.'
 (ii) 'We ARE supposed to come.'
- (11) gel-ecék-Ø-miş-ler
 come-FUT-COP-EV-3PL
 (i) 'They were going to come.'
 (ii) 'They WERE going to come.'

Alternatively, the 3rd person form can occupy the precopular position:

- (12) a.gel-ecék-lér-Ø-miş
 come-FUT-3PL-COP-EV
 'They are supposed to come.'⁹

The same shift in the position of the 3rd person plural agreement occurs in the environment of other tense/aspect/modality morphemes as well:¹⁰

<i>Standard dialect</i>	<i>Non-standard dialects</i>	
(i) gid-iyor-mu-sun go-IMPF-INT-2SG 'Are you going?'	(ii) gid-iyor-ı-mu / go-IMPF-2SG-INT 'Are you going?'	(iii) gid-iyor-ı-mı go-IMPF-2SG-INT 'Are you going?'

⁹ Turkish has two agreement paradigms relevant to the topic in question but since the facts regarding the 3rd person plural marker converge in the two paradigms I shall not go into the details here.

¹⁰ Some of these forms are more widespread and/or acceptable than others while in some forms the placement of the plural marker at the end is more acceptable than its placement otherwise. Moreover, some forms have various other interpretations associated with tense/aspect/modality, and some forms do not allow the shift of the plural morpheme to the precopular area. The reasons for these require an in-depth analysis of the morphological alignment properties of DMWs which is beyond the scope of this paper and which I leave to future work. My purpose here to give a brief sketch of the most salient characteristics of the constructions in question.

Past-Imperfective

- (13) a. gel-ír-Ø-di-ler
come-AOR-COP-PST-3PL
(i) 'They used to come.'
(ii) 'They USED TO come.'
- b. gel-ir-lér-Ø-di
come-AOR-3PL-COP-PST
'They used to come.'

Past-Perfective

- (14) a. gel-miş-Ø-ti-ler
come-PRF-COP-PST-3PL
(i) 'They had come.'
(ii) 'They HAD come.'
- b. gel-miş-lér-Ø-di
come-PRF-3PL-COP-PST
'They had come.'

As can be seen, the forms in (a) are ambiguous, whereas those in (b) are not. The presence of the ambiguity in these patterns already highlights the fact that these DMWs are amenable to an analysis relevant to propositions, although these propositions are shaped as words.

Note that in all of the forms above, stress occurs on whichever morpheme happens to be left-adjacent to the copula:

- (15) **stress** – copula

This pattern is in line with the predictions of the models summarised in section 2.1.

There is, however, an alternative prosodic pattern in which stress does not fall on the precopular morpheme.. I turn to this below.

3. Pattern 2: Focal Stress and DMWs

As observed by Sebüktekin (1984) there is no unique position for stress in DMWs and stress may occur elsewhere. In the pattern relevant to the topic of this paper, Pattern 2, the neighbour of the suffix left-adjacent to the copula can receive stress. When this happens, the interpretation is that of contrastive focus:



(18c)-(20c)) the position of stress is inexplicable and violates the conditions for stress as described in all current analyses. In particular:

- (i) it overrides the stress-related properties of the copula (contra Kaisse 1986, Inkelas 1999, Inkelas & Orgun 2003)
- (ii) the same suffix (*-lAr*) is stressed in Pattern 1 but not in Pattern 2, hence must be inside the Phonological Word in one case and outside of it in another (contra Kabak & Vogel 2001)¹²
- (iii) there is no morphophonological source for Pattern 2, i.e. no apparent ‘stress-assigner’
- (iv) there is no obvious reason for the contrastive and presentational focus readings to follow from the position of stress

Thus the facts here require an alternative explanation. We therefore turn to the properties of presentational and contrastive focus in propositions which contain more than one word (DLPs). I will claim that whatever induces the placement of stress and the corresponding readings in DLPs can be extended to cover the cases of DMWs as well.

4. Focus in Propositions with Lexical Phrases

Up to now we have been looking at the properties of stress in DMWs. In this section we turn to the second line of research that is relevant to this article, the description of presentational and contrastive focus in declarative sentences that contain lexical phrases and are therefore composed of more than a single word. I henceforth refer to these as DLPs.

It is well known that in Turkish, DLPs with presentational focus are stressed either on the immediately preverbal constituent as in (24a) or on the predicate as in (24b), indicated by capital letters (see Nakipoğlu 2009 for the sources of the difference in the location of stress).

- (24) a. Semra ADANA-YA gid-ecek-Ø-ti.
 Semra Adana-DAT go-FUT-COP-PST
 ‘Semra was going to go to Adana.’

¹² There are cases where stress falls on other positions but where this does not induce a contrastive focus reading. See Fn.s 14 and 16.

- b. Yemek ISIN-MIŞ-Ø-TI.
food warm-PRF-COP-PST

'The food had been warmed up.'¹³

A contrastively focused constituent, on the other hand, is expressed in any of the preverbal position(s) (Erguvanlı 1984, Kural 1994, Göksel 1998, Göksel & Özsoy 2000, 2003, Kılıçaslan 2004, Özge 2003, Özge and Bozşahin 2010, among others):

- (25) a. Masa-nın alt-in-da-ki halı-yı SEMRA al-acak-Ø-ti.
table-GEN underneath-3POSS.SG.-LOC-REL Semra take-FUT-COP-PST
'SEMRA was supposed to take the carpet which is under the table.'
b. HALI-YI ben bura-ya ser-ecek-sin san-ıyor-Ø-du-m.
carpet-ACC I here-LOC lay.down-FUT-2SG think-IMPF-PST-1SG
'I thought you were going to lay down THE CARPET here.'

The availability of any of the preverbal positions for the expression of contrastive focus trivially means that the sentences in (24) are ambiguous between a presentational focus reading and a contrastive focus reading. The contexts are provided below:

- (26) A. Semra belgeleri Ankara'ya götürebildi mi?
'Has Semra managed to take the documents to Ankara?'
B. Semra ADANA-YA gid-ecek-Ø-ti.
Semra Adana-DAT go-FUT-COP-PST
'Semra was going to go to ADANA.'

- (27) A. Yemeği soğuk yiyemem.
'I can't eat food when it's cold.'
B. Yemek ISIN-MIŞ-Ø-TI.
food warm-PRF-COP-PST
'The food had been warmed up.'

This data present us the first clue towards the parallelism between the focus related properties of DMWs and declarative sentences with lexical phrases. We elaborate on this below.

¹³ The conditions for presentational focus in Turkish are not restricted to the location of the stressed constituent, see Göksel (forthcoming) for details.



Although stress may appear in these positions in some construction types, the reading associated with them is not semantic focus,¹⁴ supplying another symmetry between the two types of construction.

These observations call for a redescription of the facts. Firstly, what we have been referring to as stress is better described as H* alignment with a stressed syllable given that the constructions in question are declarative sentences which are visible for information structural interpretations. Aligning H* with stress allows us to describe other intonation related signals relevant to the interpretation of contrastive and presentational focus. This will be elaborated in 5.1. Secondly, notice that up to now we have used the term pre/postcopular for DMWs and pre/postverbal for DLPs. The data at hand force us to look at whether the verb and copula converge. I discuss this in 5.2.

5.1 The Prosodic Contour of DMWs and DLPs

What DMWs and DLPs share is that they are declarative sentences, albeit of different segmental size. Declarative sentences in Turkish are associated with a particular tune:¹⁵

(32) (L-) H* L- L%

This pattern is exemplified below for the DLPs in (24a) and (25a), repeated below as (33a) and (33b) respectively:

¹⁴In both cases, such constituents can be stressed but these do not induce a focal reading as the term is used in the literature on the semantics of focus (see Rooth 1992). Proverbs and afterthoughts (cf. Demircan 2001) are given as examples for DLPs with postverbal focal stress. Why these cannot be analysed as such is discussed in Göksel (forthcoming). As for DMWs, there are cases of clitics which induce stress on the morpheme before them, even if this morpheme may be in the postcopular position (Sebüktekin 1984, Göksel & Kerlake 2005).

¹⁵In Özge 2003, Özge & Bozşahin 2010 this tune is a pitch accent followed by downstep, and a low boundary tone at the end (Pierrehumbert 1980, Gussenhoven 2004). Göksel et al. (2009) revises this description in the light of their distinctive characteristics when compared to questions. This tune separates them from other types of utterance even in the absence of any lexical item. See also Kan (2009) for an analysis of the prosodic properties of declaratives.



(33) a. Semra Adana-ya gid-ecek-Ø-ti.
 L- H* L- L%
 Semra Adana-DAT go-FUT-COP-PST
 ‘Semra was going to go to Adana.’

b. Masa-nın alt-ın-da-ki halı-yı Semra al-acak-Ø-ti.
 L- H* L- L%
 table-GEN underneath-3POSS.SG.-LOC-REL carpet-ACC Semra take-FUT-COP-PST
 ‘SEMRA was supposed to take the carpet which is under the table.’

One crucial aspect of this prosodic contour is that it has to comply with a particular condition: that H* must be located in a position before the verb if it is to be associated with focus. Note that this is mirrored in DMWs with respect to the copula such that H* must occur before it. This is so not only in the ones with Pattern 2, but also those which have Pattern 1. This is shown below for (19) above:

(34) a. gel-ecék-Ø-miş-ler
 L- H* L- L%
 come-FUT-COP-EV-3PL
 (i) ‘They were going to come.’
 (ii) ‘They WERE going to come.’

b. gel-ecek-lér-Ø-miş
 L- H* L-L%
 come-FUT-3PL-COP-EV
 ‘They are supposed to come.’

c. gel-ecék-ler-Ø-miş
 L- H* L- L%
 come-FUT-3PL-COP-EV
 ‘They WERE going to come.’

We can therefore conclude that there is a single tune associated with declaratives irrespective of the size of the segmental material, in other words, irrespective of whether they are DMWs or DLPs, summarised below:

(35)

Presentational focus		Contrastive focus	
<i>DMW</i>	<i>DLP</i>	<i>DMW</i>	<i>DLP</i>
H*-copula-	H*-verb-	H*-copula-	H*-verb-
		H*-....-copula-	H*-....-verb-



with (36a), and (37c) is problematic as it would be expected to mirror (36a), since this latter is the pattern associated with ambiguity.

Starting with (37c), we can attribute the alignment of H* directly to left-prominence in Turkish. In Turkish when there are two items associated with stress, the leftmost/inmost one wins. This has been discussed in Inkelas (1996) and Inkelas & Orgun (2004) with respect to word internal constituents and in Göksel & Özsoy (2000) with respect to clitics occurring on words in sequences. Within the context of the present article H* is aligned with the preverbal constituent which, out of two stress related items (the lexical verb and the copula), is the leftmost one.

The interpretation of (36a) as a construction lacking a presentational focus reading is more difficult to assess. The precopular position should induce a presentational focus reading, which is lacking in this case. Here I can only suggest that what I have been calling presentational focus in DMWs is simply a non-contrastive reading, since it would be odd for an out-of-the-blue sentence to have elided constituents (cf. Ido 2003). At this point I also do not have an answer as to why the lexical verb cannot receive stress in either of the above constructions. These points remain to be investigated in future work.¹⁶

6. Further implications

The presence of Pattern 1 and Pattern 2 has certain implications for the characterisation of prosodic prominence in terms of the links between the members of a finite set of hierarchically organised items. Firstly both patterns challenge models which posit a hierarchy of prosodic items where a particular item with a prosodic structure is contained within another at a superordinate level. Let us begin with Pattern 1 which has been analysed as belonging to the Clitic Group (Kabak & Vogel 2001, Kabak & Revithiadou 2006) within the Prosodic Hierarchy (Selkirk 1984, Nespor & Vogel 1986). Pattern 1 is taken to be

¹⁶ The verb may be stressed in Turkish but it is not clear whether this induces focal stress, as in the example below:

- (i) Yáslan-ın.
lean.back-2imp
'Lean back!'

identical in terms of its stress properties with items containing other clitics, which places it in a lower level of the Prosodic Hierarchy (above the Phonological Word). However, as discussed above, this pattern belongs to the prosodic level of the Utterance as it is a declarative sentence. We therefore have to abandon the idea that Pattern 1 items belong to the Clitic Group. However, assuming that they are Utterance level prosodic objects, on the other hand, challenges the bottom-up modelling of prosodic units, as this time, DMWs cannot be traced back to items in the lower levels of the hierarchy. Such DMWs do not contain objects of the lower levels, which challenges one of the core assumptions of the Prosodic Hierarchy. For example, it is not clear how DMWs could contain Phonological Phrases.

What has so far been said for Pattern 1 also applies to Pattern 2. Here too, there is no source for the position of prosodic prominence that can be linked to a lower level item. But one might think that Pattern 2 items would conform to some version of focus-alignment operations, since they are contrastive focus sentences. For example, one might assume that some type of algorithm similar to that which has been discussed with respect to the effects of focus on phonological phrasing (see e.g. Hayes & Lahiri 1991, Selkirk 1996, 2000, Truckenbrodt 1999) is at work here. DMWs do not contain phrases headed by lexical categories, but they contain functional heads. For example, the syntactic representation of (19), repeated in (38) below, contains two VPs, an AspP, a TP and AgrP as represented in (39) and (40) (cf. Kelepir 2003, 2007, Enç 2004):

(38) a. gel-ecek-Ø-miş-ler

L- H* L- L%
come-FUT-COP-EV-3PL

(i) 'They were going to come.'

(ii) 'They WERE going to come.'

b. gel-ecek-ler-Ø-miş

L- H* L-L%
come-fut-3PL-COP-EV

'They are supposed to come.'

c. gel-ecek-ler-Ø-miş

L- H* L- L%
come-FUT-3PL-COP-EV

'They WERE going to come.'

(39) [AgrP [AspP [VP [AspP [VP gel] ecek] Ø] miş] ler] (for (38a))



(40) [_{AspP} [_{VP} [_{AgpP} [_{AspP} [_{VP} gel] ecek] ler] Ø] miş] (for (38b, c))

One might then be tempted to say that focus induces a deviation from the ‘default’ pattern in (38b) which results in the realignment of H* (with the head of the AspP *-ecek* in (38a, c)). However, this move would be unsatisfactory on two grounds. It would firstly fail to assign a contrastive-focal interpretation to the ambiguous (38a). Secondly it would fail to yield an interpretation whereby the stressed item is semantically focused.¹⁷ DMWs with verbal stems disguise this fact and we therefore turn to DMWs with nominal stems which show this point more clearly.

Consider the sentences below:

(41) a. doktor-Ø-du-lar

H*

doctor-COP-PST-3PL

(i) ‘They used to be doctors.’ (PRES.F)

(ii) ‘They USED TO BE doctors.’ (CONT.F)

(iii) ‘They used to be DOCTORS. (CONT.F)¹⁸

b. doktor-lar-Ø-dı

H*

doctor-3PL-COP-PST

(i) ‘They USED TO BE / WERE doctors.’

(ii) ‘They used to be DOCTORS.’

c. doktor-lar-Ø-di.

H*

doctor-PL-COP-PST

‘It was the doctors.’

In (41a) the syllable before the copula is aligned with H* and these DMWs can be interpreted as presentational or contrastive focus sentences, as expected. But how can we explain the interpretation in (41b)? Here a segment of

¹⁷ Although it has been mentioned that H* might not correspond to the semantically focused constituent (cf. Büring 2007), the generalization applies to syntactic phrase internal constituents and vertical focus projection, which cannot be compared with the cases here.

¹⁸The fact that stressing the stem contrasts the denotation of that stem with another item is also mentioned in Sebüktekin (1984):

(i) dépo-la-ma-dı

storeage-der-neg-p

‘S/he didn’t STORE it.’

[Sebüktekin 1984: 299]



the root is stressed, but one of the interpretations is that of contrastive focus with respect to the event, not necessarily the NP *doktorlar* 'doctors'. It therefore seems that there is no straightforward way of aligning focus with particular syntactic nodes, at least not without losing the interpretation that it is assumed to induce. Based on these observations, I suggest that the alignment between H* and syntax is only sensitive to the position of the copula.

7. Conclusion

The observations above show that words with truth values have the prosodic structure of utterances. Thus, declarative sentences, irrespective of their segmental size, map on to one and the same prosodic contour. I argued above that bottom-up hierarchical approaches fail to capture this, as morphological words and utterances are assumed to be at different ends of the hierarchical organisation of prosodic units. One line of future research would be to investigate whether top-down models are better suited for representing prosody. As noted by Elordieta (2007), the least investigated item within a hierarchy of prosodic units is the utterance. On the other hand, a considerable amount of work has been carried out on the pragmatic function of intonational units (Ladd 1990, 1996, Liberman & Sag 1974, Liberman 1979, Ward & Hirschberg 1985, Pierrehumbert & Hirschberg 1990, Göksel et al. 2009) where designated prosodic contours signal different types of functional and discourse-related meanings. If such intonational contours are shown to operate in a top-down manner, then this would suggest that tunes are listed in the lexicon. A top-down prosodic model could then be evaluated in terms of how these tunes are aligned with morphosyntactic information.

REFERENCES

- Büring, Daniel. 2007. Semantics, intonation and information structure. In Ramchand & Reiss (eds.), 445–473.
- Charette, Monik. 2008. The vital role of the trochaic foot in explaining Turkish word endings, *Lingua* 118, 46–65.
- Demircan, Ömer. 2001. *Türkçe'nin Ezgisi* [The Intonation of Turkish]. İstanbul: Yıldız Technical University Press.
- Elordieta, Gorka. 2007. Segmental phonology and syntactic structure. In Ramchand & Reiss (eds.), 125–177.



- Enç, Mürvet. 2004. Functional categories in Turkish. In Aniko Csirmaz, Youngjoo Lee, & Mary Ann Walter (eds.), *Proceedings of the Workshop on Altaic Formal Linguistics I. MIT Working Papers in Linguistics* 46, 208–226.
- Erguvanlı, Eser. 1984. *The Function of Word Order in Turkish Grammar*. CA: University of California Press.
- Göksel, Aslı. 1998. Linearity, focus and the postverbal position in Turkish. In Lars Johanson, Éva Ágnes Csató, Vanessa Locke, Astrid Menz & Deborah Winterling (eds.), *The Mainz Meeting*. 85–106. Wiesbaden: Harrassowitz.
- Göksel, Aslı (forthcoming) A phono-syntactic template for Turkish: Base-generating free word order.
- Göksel, Aslı & A. Sumru Özsoy. 2000. Is there a focus position in Turkish? In Aslı Göksel & Celia Kerslake (eds.), *Studies on Turkish and Turkic languages*. 219–228. Wiesbaden: Harrassowitz.
- Göksel, Aslı & A. Sumru Özsoy. 2003. dA, a focus/topic associated clitic in Turkish, *Lingua* 113, 1143–1167.
- Göksel, Aslı, & Celia Kerslake. 2005. *Turkish, A Comprehensive Grammar*. London: Routledge.
- Göksel, Aslı, Meltem Kelepir & Aslı Üntak-Tarhan. 2009. Decomposition of question intonation: The structure of response seeking utterances. In Kabak, Barış and Janet Grijzenhout (eds.) *Phonological Domains; Universals and Deviations*. 249–286. Dordrecht: Mouton de Gruyter.
- Good, Jeff & Alan C. L. Yu. 2005. Morphosyntax of two Turkish subject pronominal paradigms. In Lorie Heggie & Francisco Ordóñez (eds.), *Clitic and Affix Combinations*. 315–341. Amsterdam: John Benjamins.
- Gussenhoven, Carlos. 2004. *The Phonology of Tone and Intonation*. Cambridge: Cambridge University Press.
- Hayes, Bruce & Aditi Lahiri. 1991. Bengali intonational phonology, *Natural Language and Linuistic Theory* 9, 47–96.
- Ido, Shinji. 2003. *Agglutinative Information: A study of Turkish Incomplete Sentences*. Wiesbaden: Harrassowitz
- Inkelas, Sharon. 1996. The interaction of phrase and word rules in Turkish: An apparent paradox, *The Linguistic Review* 13, 193–217.
- Inkelas, Sharon. 1999. Exceptional-stress attracting suffixes in Turkish: representations vs the grammar. In Kager, René, Harry van der Hulst and Wim Zonneveld (eds.), *The Prosody-Morphology Interface*. 134–187. Cambridge: Cambridge University Press.
- Inkelas, Sharon & Orgun, C. Orhan. 2003. Turkish stress: a review, *Phonology* 20, 139–161.



- Inkelas, Sharon & Orhan Orgun. 2004. Inmost wins in Turkish stress. In Aniko Csirmaz, Youngjoo Lee & Mary Ann Walter (eds.), *Proceedings of the Workshop on Altaic Formal Linguistics I, MIT Working Papers in Linguistics*, 46, 137-148.
- Kabak, Barış & Irene Vogel. 2001. Phonological word and stress assignment in Turkish, *Phonology* 18, 315–360.
- Kabak, Barış & Anthi Revithiadou. 2006. The phonology of clitic groups: Prosodic recursivity revisited. Paper presented at the 13th International Conference on Turkish Linguistics. Uppsala University.
- Kan, Seda. 2009. Prosodic domains and the syntax-phonology mapping in Turkish. MA dissertation, Boğaziçi University.
- Kaisse, Ellen. 1986. Towards a lexical phonology of Turkish. In Michael Brame, Heles Contreras & Frederick J. Newmeyer (eds.), *A Festschrift for Sol Saporta*. 231–239. Seattle: Noit Amrofer.
- Kelepir, Meltem. 2003. Olmak, değil, var ve yok. In Güray König, Nalan Büyükkantarcıoğlu, Firdevs Karahan (eds.), *16. Dilbilim Kurultayı Bildirileri*. 70–81. Hacettepe Üniversitesi, Ankara.
- Kelepir, Meltem. 2007. Copular forms in Turkish, Turkmen and Nogay. In Meltem Kelepir & Balkız Öztürk (eds.), *Proceedings of the 2nd Workshop on Altaic Formal Linguistics* 54, 83–100 Distributed by MIT Working Papers in Linguistics.
- Kılıçaslan, Yılmaz. 2004. Syntax of information structure in Turkish, *Linguistics* 42, 717–65.
- Kornfilt, Jaklin. 1996. On copular clitic forms in Turkish. In Artemis Alexiadou, Nina Fuhrkop, P. Law & S. Löhken (eds.), *ZAS Papers in Linguistics* 6, 96–114. Berlin: Zentrum für Allgemeine Sprachwissenschaft.
- Kural, Murat. 1994. Properties of scrambling in Turkish. Manuscript, UCLA.
- Ladd, D. Robert. 1990. Intonation: emotion vs. grammar (Review of Bolinger, Dwight (1989) *Intonation and its Uses*, Palo Alto: Stanford University Press). *Language* 66, 806–816.
- Ladd, D. Robert. 1996. *Intonational Phonology*. Cambridge: Cambridge University Press.
- Lees, Robert B. 1961. *The Phonology of Modern Standard Turkish*. Indiana University Uralic and Altaic Series. Bloomington: Indiana University Publications.
- Liberman, Mark. 1979. *The Intonational System of English*. New York: Garland Publishing.
- Liberman, Mark & Ivan Sag. 1974. Prosodic form and discourse function. *Papers from the Tenth Annual Meeting of the Chicago Linguistic Society*, 416–427.



- Nakipoğlu, Mine 2009. The semantics of the Turkish accusative marked definites and the relation between prosodic structure and information structure, *Lingua* 119, 1253–1280.
- Nespor, Marina & Irene Vogel. 1986. *Prosodic Phonology*. Dordrecht: Foris.
- Özge, Umut. 2003. *A tune-based account of Turkish information-structure*. MSc dissertation, METU.
- Özge, Umut & Cem Bozşahin. 2010. Intonation in the grammar of Turkish, *Lingua*, 120, 132–175.
- Pierrehumbert, Janet. 1980. The Phonology and Phonetics of English Intonation. Ph. D. dissertation, MIT.
- Pierrehumbert, Janet & Julia Hirschberg. 1990. The meaning of intonational contours in the interpretation of discourse. In Philip R. Cohen, Jerry Morgan, & Martha E. Pollack (eds.), *Intentions in Communication*. 271–311. Cambridge, MA: MIT Press.
- Ramchand, Gillian & Charles Reiss (eds.) *The Oxford Handbook of Linguistic Interfaces*. Oxford: Oxford University Press.
- Rooth, Mats. 1992. A theory of focus interpretation, *Natural Language Semantics* 1 (1), 75–116.
- Sebüktekin, Hikmet. 1984. Turkish word stress: Some observations. In Eser Erguvanlı-Taylan & Ayhan Aksu-Koç (eds.), *Proceedings of the Turkish Linguistics Conference*. 295–307. Istanbul: Boğaziçi University Publications.
- Sebüktekin, Hikmet. 1995. *Turkish for Foreigners* (Vols. I-II). Istanbul: Boğaziçi University Press.
- Selkirk, Elisabeth. 1984. *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, MA: MIT Press.
- Selkirk, Elisabeth O. 1996. Sentence Prosody: Intonation, Stress, and Phrasing. In John A. Goldsmith (ed.), *The Handbook of Phonological Theory*. 550–569. Oxford: Blackwell Publishing.
- Selkirk, Elisabeth O. 2000. The interaction of constraints on prosodic phrasing. In Gösta Bruce & Merle Horne (eds.), *Prosody: Theory and experiment. Studies presented to Gösta Bruce*. 231–261. Dordrecht: Kluwer Academic Publishers.
- Truckenbrodt, Hubert. 1999. On the relation between syntactic phrases and phonological phrases, *Linguistic Inquiry* 30, 219–255.
- Ward, Gregory & Julia Hirschberg. 1985. Implicating uncertainty: the pragmatics of Fall-Rise intonation, *Language* 61, 747–776.

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