M-word vs. o WORD: Top down prosody vs. bottom up syntax

THE ISSUE: A set of so-called pre-stressing morphemes (e.g. the copula in 1c), in a language like Turkish which exhibits regular final stress (1a,b), have generated much debate, given the anomalous stress patterns they create. (Hereafter, prominence is denoted by capital letters.)

1. a. [kitAp] b. [gör-dÜ-m] c. [gör-ecEk-i-di-m]
   book see-PST-1SG see-FUT- COP-PST-1SG
   ‘book’ ‘I saw (it).’ ‘I was going to see (it).’

The fact that the domain that receives stress (i.e. the string that immediately precedes the so-called pre-stressing morphemes) is a unit that is identifiable in syntax suggests that the issue is not about non-canonical stress assignment, but rather a phenomenon of a partial domain mismatch, in which only a portion of a larger morphosyntactic domain (i.e. the entirety of 1c) corresponds to a prosodic domain. This issue poses problems for the theories of morphological and prosodic constituency that assume that M(orphosyntactic)-words are the units that correspond to prosodic words (\(\omega\)) (e.g. Selkirk 2009).

In this paper we argue that such morphemes are not problematic after all. We claim that the phenomenon in (1c) arises not from a mismatch of domains, but from a mismatch in the timing and direction of the formation of morphosyntactic and prosodic constituents.

PREVIOUS ACCOUNTS: The copula in Turkish has been extensively studied (Sağ 2013 and the references in there). Among these, Newell 2008, Zanon 2014, and Shwayder 2015 suggest that the copula’s presence blocks the lower verbal domain (participle) from undergoing syntactic head-movement. Thus, the participle forms its own M-word when in-situ. Assuming that a \(\omega\) is generated for each M-word (cf. Shwayder 2015), the participle is therefore predicted to be parsed as a \(\omega\) when in-situ. Observing the \(\omega\)-stress rule of Turkish, the material before the copula in (1c) has final stress. These accounts provide a unified theory of the M-word-related stress distribution. When the copula is present, the participle (‘verb+fut’ in 2a) stays in-situ, forming an M/\(\omega\)-word of its own. When it is absent (2b), the entire string is an M/\(\omega\)-word. Similarly, no mismatch occurs in morphologically simplex forms (2c).

2. a. [(gör-ecEk)\(_{M/\omega}\) -i-di-m] b. [(gör-dÜ-m)\(_{M/\omega}\)] c. [(kitAp)\(_{M/\omega}\)]

PROBLEMATIC DATA: Empirically, the abovementioned analyses concentrate on utterances in which the “verbal complex + copula” domain bears FOCUS, such as the responses in (3).

3. a. A: [Were you going to call him or see him?] b. A: [What was your plan with the house?] B: [(gör-ecEk)\(_{M/\omega}\) -i-di-m] B: Ben ev-i [(gör-ecEk)\(_{M/\omega}\) -i-di-m]
   see-FUT- COP-PST-1SG I home-ACC see-FUT -COP-PST-1SG
   ‘I was going to see him.’ ‘I was going to SEE the house.’

When the empirical scope is widened, a different pattern emerges. Crucially, the copula does not trigger stress to its immediate left when the “verbal complex + copula” domain is not focused (4). In such cases, the entire string is (part of) a larger prosodic domain: e.g. the non-head part of a phonological phrase (\(\phi\)) (compare (3b) to (4a)), or part of an intonational phrase (i) (4b). Thus, the M-word of the participle does not correspond to a \(\omega\).

4. a. A: [What were you going to see?] b. %HL H%
   B: Ben ((ev-I)\(_{M/\omega}\) (gör-ecEk)\(_{M/\omega}\) -i-di-m)\(_{\phi}\) ((yAslan-miş)\(_{M}\) -i-dl-m)\(_{\phi}\), kırıldı.
   I home-ACC see-FUT-COP-PST-1SG lean.back-PRF -COP-PST-1SG broke
   ‘I was going to see the HOUSE.’ ‘(Just as) I leaned back, (it) BROKE.’
In (4b), the initial clause is decorated with a *tune* (a fixed set of tones) to mark a particular discursive setting (Féry 2015); here, the *continuation* tune. The left-edge t-boundary tone (%HL) of the initial clause is *anchored* to the right-edge (H%). Notice that in (4b), the H(igh) tones mark t edges, not prominence. Additionally, the initial clause in (4b) is *not* focused, similarly to (4aB). The M-word of the verbal complex corresponds to a ω in neither (4a) nor (4b).

**Our Account:** We claim that M-words cannot be strictly equated with ωs, as they are generated at different times in the derivation. Maintaining the premises of the accounts such as Shwayder (2015) for M-word formation, we conclude that ω status of a string is strictly contingent upon its clause-level distribution (a point implied but not pursued in Shwayder 2015:178, fn.52). Given this conclusion, ωs must be generated after the entire syntactic structure is transferred and all the vocabulary items (VI) are inserted. Only then does the prosodic parser generate ωs, φs, and ωs, respectively. Thus, we claim that (unlike the merger) the parser applies in a *top-down* fashion. We suggest that the order of the timing of operations depicted in (5) and the markedness condition in (6) capture (3) and (4), without any recourse to morpheme-specific characterizations.

5. Apply the prosodic parser after the last cycle of the clause formation.

6. On the VI-inserted structure, M-words that do *not* branch correspond to ωs.

   (An M-word α does not *branch* if α is the only exponent of its maximal projection)

The rule in (6) predicts that, in Turkish, if an M-word with an exponent bears another exponent as its sister, then that M-word does not match a ω. Therefore, (5) and (6) capture naturally the distribution of ωs (and stress), which only occasionally overlap with M-words. For instance, when the participle is an isolated fragment (3a), the M-word that corresponds to the participle does not branch (i.e. it does not have another exponent in its maximal projection). Similarly, when the participle is focused (3b), again, it does not branch. This is because, in Turkish, discourse-given arguments move to the peripheries and focused constituents (in this case the participle) remain inside the VP (Şener 2010). Thus, the focused participle in (3b) is rendered as the only exponent within that VP. When a constituent other than the participle is focused (4a), then more than one exponent remain inside the VP, (i) the participle, and (ii) the focused constituent (in 4a, the focused constituent is the direct object). In such a syntactic distribution, the parser does not match the M-word of the participle with a ω, as the participle *does* branch to the other exponent of that VP. Although (4b) is not in the scope of (6), it is easily accommodated in our account. If prosodic parser applies in a top-down fashion, it is not surprising to observe that tunes, which operate at the t-level (via the anchoring of t-boundary tones), override syntax-mediated prosodic constituency. In such cases, the morpho-syntax-oriented navigation mechanisms of the prosodic parser (such as branchingness, cyclicity, etc.), which mediate φ and ω formation, are bypassed by the virtue of the fact that they are formed only after ωs are parsed.

**Conclusion:** Discussing the non-canonical distribution of stress in Turkish, we conclude that M-words correspond to ωs only when certain prosodic and morpho-syntactic conditions are met. Words of prosody can be informative for our understanding of words in morphology only when the timing of the formation of the two is considered. Time allowing, we will provide further independent evidence in support of (5) and (6).