Lowering from complex heads comes in two types and prosody knows this

Background. In Turkish, when certain morphosyntactic requirements are met and when the verb is focused, the verb and its affixes – henceforth, the *Turkish verbal domain* (TVD) – can be prosodically realized as two independent prosodic words (ωs) (Sebüktekin 1984, Göksel 2010) (1). Adopting the canonical view that TVDs are derived by roll-up head-raising (Kelepir 2001, Newell 2005, 2008, Zanon 2014, Shwayder 2015), previous analyses of this phenomenon stipulate that head-raising is blocked by certain heads (such as the copula) that are specified to disallow head-raising into them (Newell 2005, 2008, Shwayder 2015). If these blocking heads are phase heads, as Newell (2005, 2008) proposes, then the Turkish data exemplified by (1) support the idea that prosodic units correspond directly to syntactic phasal Spell-Out domains, as the two ωs in (1) correspond directly to separate syntactic Spell-Out domains.

(1) (Gir-miş)$_{\omega}$ (-i-di-ler)$_{\omega}$
enter-PERF -COP-PST-3PL
'(They) had entered.'

Problem. No previous analysis takes into consideration the fact that, under the same information-structural conditions, the TVD can display variable prosodic grouping. For instance, the subject agreement morpheme (AGR) in (2) can be optionally parsed inside or outside of the prosodically prominent part of the TVD. The same variability of prosodic grouping is observed in certain TVDs in which AGR arises in a linearly medial position, between tense/aspect/modality (TAM) morphemes, see (3) and (4). (Note that medial AGR is limited to certain nonstandard Turkish dialects, some historical varieties, and colloquial forms of standard Turkish; see Güneş 2020.)

(2) a. (Gir-di-**ler**)$_{\omega}$
enter-PST-3PL
b. (Gir-di)$_{\omega}$ (-**ler**)$_{\omega}$
enter-PST -3PL
'(They) entered.'

(3) Medial AGR
a. (gör-dü-**nüz**)$_{\omega}$ (-Ø-se)$_{\omega}$
see-PST-2PL -COP-COND
b. (gör-dü)$_{\omega}$ (-**nüz**-Ø-se)$_{\omega}$
see-PST -2PL-COP-COND
'if (you all) saw'

(4) Medial and final AGR
a. (gör-dü-**nüz**)$_{\omega}$ (-Ø-se-**niz**)$_{\omega}$
see-PST-2PL -COP-COND-2PL
b. (gör-dü)$_{\omega}$ (-**nüz**-Ø-se-**niz**)$_{\omega}$
see-PST -2PL-COP-COND-2PL
'if (you all) saw'

Such facts are problematic for the extant 'blocking head-raising' analyses. Explaining this variability requires one to either stipulate the existence of null blocking heads (e.g., a null copula between *di* and *ler* in (2b)) despite there being no evidence for them, or suppose that AGR heads a phase whose complement or maximal projection can be Spelled-Out (adopting ideas from Bošković 2014). For this latter analysis to work, one must treat AGR as realizing a phase head, despite there being no independent evidence for this, either from within Turkish or from other languages. And given that other purported phase heads, such as the copula, do not exhibit prosodic variability (compare (1) and (5)), a proponent of the extant analyses must also suppose – again, without justification – that only AGR permits variable Spell-Out.

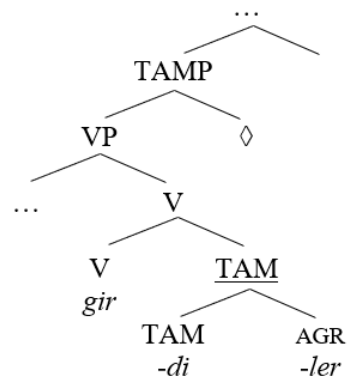
(5) *(Gir-miş-i)$_{\omega}$ (-di-ler)$_{\omega}$
enter-PERF-COP -PST-3PL
'(They) had entered.'

New analysis. Given that the extant head-raising approaches to the TVD face insurmountable problems, I pursue a different approach, one which treats the observed prosodic variability as a direct reflex of morphosyntactic variability in how complex morphosyntactic heads are derived in the TVD.

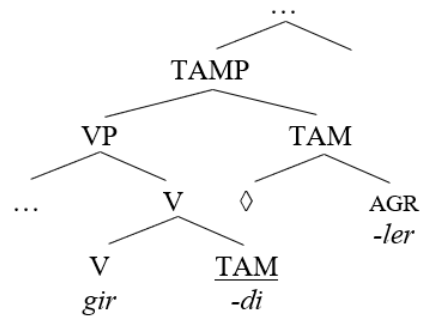
On the morphosyntactic side, I adopt the crosslinguistically well-supported claim that AGR is a *dissociated morpheme* (see Embick 2015:65 and references therein), which is post-syntactically added to TAM heads. This captures the observation that the variable realization of AGR in the TVD – either finally, medially, or doubled – has no semantic repercussions (however, for interpretative reasons, at least one AGR morpheme must be present in every TVD). I also propose that TVDs are derived by post-syntactic head-**lowering** of TAM morphemes onto verbs (either onto the lexical verbs or copulas), not by roll-up head-raising. The most innovative aspect of my analysis is its exploitation of the possibility that lowering can target either the entire complex head (*full lowering*), or a subpart thereof (*partial lowering*). Thus, after having been added to a TAM head, an AGR morpheme either accompanies TAM when it lowers onto the next lower head (the full lowering scenario), or AGR is stranded in its original adjunction position (the partial lowering scenario). These two possibilities

are depicted in the simplified phrase marker diagrams in (6) and (7), for the TVD *gir-di-ler* from (2) above (where underlining denotes the lowered constituent, and ◊ shows the position it has lowered from).

(6) *Full lowering*



(7) *Partial lowering*



As (6) and (7) show, whether full or partial lowering is deployed affects the morphosyntactic constitution of the TVD. In (6), *gir-di-ler* is a single M-word (where *M-word* refers to a (potentially complex) head not immediately dominated by a head; Embick & Noyer 2001), whereas the TVD in (7) is composed of two M-Words, namely *gir-di* and *-ler*.

Adopting the *prosodic structure hypothesis* (Nespor & Vogel 1986, Selkirk 1984, among others) and *Match Theory* (Selkirk 2005, 2011), according to which every morphosyntactic constituent has a corresponding prosodic constituent, I follow Shwayder (2015) in proposing that, at least for Turkish, morphosyntactic M-words are mapped to prosodic words. Once this proposal about the syntax-prosody correspondence in Turkish is coupled with the morphosyntactic analysis exemplified in (6) and (7), the morphological and prosodic variability observed in the TVD falls out naturally: AGR belongs to the M-word containing the lexical V in the full lowering scenario, and is therefore parsed in the same ω as V (yielding (2a)), whereas AGR belongs to a different M-word than the lexical V in the partial lowering scenario, and is therefore parsed in a separate ω (yielding (2b)).

Syntax-prosody mismatches in TVDs. Finally, it must be mentioned that a more articulated TVD such as (8) is analyzed as displaying a tripartite structure according to both my analysis (three M-words) and Newell's analysis (three Spell-Out domains) (8a). This tripartite structure is not reflected in the TVD's prosody, however: TVDs can maximally be parsed as two separate ωs, regardless of the TVD's morphosyntactic complexity (8b). This syntax-prosody mismatch is straightforwardly explained by appealing to [BINMAX, φ], a prosodic grammar constraint that is already known to be operative elsewhere in Turkish (Güneş 2015). [BINMAX, φ] favours phonological phrases (φs) containing 1 or 2 ωs over φs containing 3 or more ωs. Because [BINMAX, φ] outranks Match constraints in Turkish, this yields the syntax-prosody mismatch exemplified in (8).

(8) a. [Gel-ecek] [-i-di] [-y-se-ler]
b. (Gel-ecek)$_{\omega}$ (-i-di -y-se-ler)$_{\omega}$
come-FUT -COP-PST -COP-COND-3PL
'if it were the case that they would come'

Theoretical contribution. In addition to capturing the extended Turkish dataset in straightforward manner, this analysis makes three relevant theoretical contributions: (i) it demonstrates the utility of post-syntactic lowering as an analytical tool, (ii) it supports the idea that prosody corresponds to morphosyntactic structures (i.e., the structures derived through the application of both narrow syntactic and certain post-syntactic operations) rather than simply phasal Spell-Out domains, and (iii) it supports the view that some syntax-prosody mismatches arise via the mediating influence of the prosodic grammar.

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