

Post-Syntactic Linearization of Yes/No-Question Particle in Turkish

Young-Hoon Kim*

Abstract. This study focuses on the linear order of the yes/no-question particle *mi* in Turkish. The distribution of *mi* is intriguing, since it must reverse the linear order with the immediately adjacent morpheme unless the morpheme immediately follows the verb root. To account for such a distribution, the linear order of *mi* is attributed to the interaction between two post-syntactic concatenation statements under adjacency (Local Dislocation in Embick 2007). Assuming that the question particle spells out the $C_{[+Q]}$ head, two ordered Local Dislocation statements account for the distribution of *mi*: the first statement holds between the verb root and its immediately adjacent inflectional morpheme; and the second statement is particular to T and $C_{[+Q]}$.

Keywords. Turkish; yes/no-question; post-syntactic linearization; Local Dislocation

1. Introduction. In Turkish, yes/no-question is marked with the overt question particle *mi*, whose realization varies among *mi/mi/mu/mü* depending on the vowel harmony pattern. This particle typically appears at the final position of a verb complex, and serves as a clause-typing morpheme in that it renders a declarative sentence into an interrogative sentence.

(1) *Forming a yes/no-question in Turkish*

- | | |
|---|--|
| a. Sinema-ya git-ti-n.
cinema-DAT go-PAST-2SG
“You went to the cinema.” | b. Sinema-ya git-ti-n mi ?
cinema-DAT go-PAST-2SG Q
“Did you go to the cinema?” |
|---|--|

As shown in (1), the interrogative sentence (1b) can be formed by adding the sentence final question particle *mi* to the declarative sentence (1a). However, the linear order of this question particle changes when the verb complex contains more inflectional morphemes, in which case the same question particle appears *inside* of the verb complex, intervening between inflectional morphemes. An exemplary case can be demonstrated with the relative order of the Q-particle with respect to the past tense morpheme.

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|---|---|
| (2) a. Q-particle follows PAST
Sinema-ya git-ti-n mi ?
cinema-DAT go-PAST-2SG Q
“Did you go to the cinema?” | b. Q-particle precedes PAST
Sinema-ya gid-iyor mu-ydu-n ?
cinema-DAT go-PROG Q-PAST-2SG
“Were you going to the cinema?” |
|---|---|

In the simple past case (2a), the question particle *mi* follows the past tense morpheme *ti*. In the past progressive case (2b), however, the same question particle *mu* precedes the past tense morpheme *du*. At first glance, this difference in the linear order seems to be related to the presence of the additional progressive aspect morpheme *iyor* which is immediately adjacent

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to the verb root. Such difference in the linear order of functional morphemes is not expected given the highly regular nature of concatenative morphology in Turkish, since two functional morphemes (*e.g.*, PAST and Q) are expected to appear in a fixed order. Such being the case, the present study suggests a post-syntactic solution in order to account for this asymmetric pattern regarding the question particle. First, I argue that the question particle *mi* uniformly spells out the $C_{[+Q]}$ head, and it functions as a clause-typing morpheme for interrogatives. With this, the unexpected linear order of the question particle (*i.e.*, (1b)) is accounted for with the interaction of two different post-syntactic operations which mandate specific concatenation statements under adjacency – Local Dislocation (Embick 2007). The initial concatenation statement holds between a verb root and its immediately adjacent inflectional morpheme. Later in the derivation, the second concatenation statement holds specifically for T and $C_{[+Q]}$ which renders the reversed linearization thereof. The different order of *mi* with respect to PAST is derived by the interaction of these two Local Dislocation statements.

This paper is organized as follows: Section 2 covers some previous analyses attempted to capture the distribution of the question particle, and lays out a generalization of relevant data; Section 3 introduces the main proposal, providing the analysis based on post-syntactic linearization and testing some predictions; Section 4 discusses a remaining issue between the yes/no-question *mi* and the cleft-question *mi*; and Section 5 concludes.

2. The Linearization Puzzle. As introduced in the previous section, the question particle *mi* is expected to appear in a sentence final position. Yet it is not always the case, since *mi* can linearize either before or after PAST depending on the configuration of functional morphemes in the verb complex. In this section, I present some previous analyses for the distributional patterns of the Q-particle, and provide a generalization for the distribution of the Q-particle with respect to other types of functional morphemes.

2.1. PREVIOUS ANALYSES. Given the peculiar distribution of *mi*, some previous researches argued that this question particle is an interrogative clitic that can attach to different syntactic domains. Kornfilt (1996), for example, argues that *mi* in (3a) attaches to the true finite form *ti*, whereas *mu* in (3b) attaches to *iyor* which is the participle form that allows cliticization. That is, the interrogative enclitic *mi* cliticizes to different domains, yielding the different pattern.

- (3) *Cliticization of Q-particle to different domains* (à la Kornfilt 1996)
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|--------------------------|--------------------------------|
| a. git-ti-n= mi ? | b. gid-iyor= mu -ydu-n? |
| go-PAST-2SG=Q | go-PROG=Q-PAST-2SG |
| “Did you go?” | “Were you going?” |

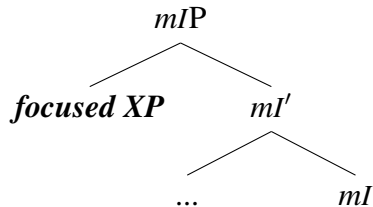
This can account for the pattern observed in (2), yet a question remains: why does *mi* necessarily have to cliticize to PROG, but not to PAST when both morphemes are present? That is, the ungrammaticality of (4) has to receive another explanation¹.

- (4) *Q-particle cannot attach to the finite form in the presence of the participle form*
- *gid-iyor-du-n=**mu**?
- go-PROG-PAST-2SG=Q
- (intended) “Were you going?”

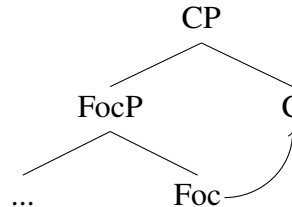
¹ Sezer (2001) argues for a generalized clitic theory for Turkish along the line of Kornfilt (1996), yet a similar question remains: why only one option is grammatical when there are multiple possibilities for cliticization?

More recently, some researches analyzed *ml* as a functional head, and accounted for its distribution with movement. Özyıldız (2015), for example, argues that *ml* is the head of *mIP* and it attracts the focused element in its specifier, yielding the surface order and the relevant interpretation as well². From a different perspective, on the other hand, Kesici (2019) argues that *ml* is the head of FocP, which raises to C for yes/no-question.

(5) a. *Structure à la Özyıldız (2015)*



b. *Structure à la Kesici (2019)*



Their analyses have one core property in common: the question particle *ml* occupies a designated syntactic head position in a higher domain of the verbal spine, serving the locus of focus interpretation expected for yes/no-question in general. This line of account can explain the simple past tense case in (2a): in (5a) the entire sentence (presumably TP) can be the focused XP, while in (5b) the entire sentence would be under the scope of the C head (moved from the Foc head) to render the typical yes/no-question. Yet again, a similar question arises for the past progressive case in (2b): how can these analyses account for *mu-ydu-n*, where the question particle precedes the past tense morpheme? Even though they didn't specifically mention about such a peculiar order, this problematic case may be circumvented by positing either moving only a part of the verb complex (only *gid-iyor* moves to the specifier of *mIP*, for example) for Özyıldız (2015)³, or by raising the past tense morpheme together with *ml* to C (*mu + ydu* raises to C together to derive the observed order) for Kesici (2019). Yet, these would require an additional assumption to embrace exceptional cases like (2b). In this study, as an alternative, the question particle is uniformly treated as the $C_{[+Q]}$ head, and its peculiar surface order with respect to the past tense morpheme is derived by post-syntactic operations that affect only the linear order, not their syntactic profile.

2.2. GENERALIZATION OF DATA. Before moving onto the main proposal to account for the linearization puzzle, I shall provide some additional data and establish a generalization that will be fundamental for the proposal. Repeating the linearization puzzle, it was shown that *ml* and the past tense morpheme are reversely linearized in the presence of the progressive *iyor*, which is unexpected given that *ml* typically occurs at the final position of a verb complex.

(6) *Q-particle either follows or precedes PAST*

(=(2))

a. Sinema-ya git-ti-n mi?
cinema-DAT go-PAST-2SG Q
“Did you go to the cinema?”

b. Sinema-ya gid-iyor mu-ydu-n?
cinema-DAT go-PROG Q-PAST-2SG
“Were you going to the cinema?”

² This follows from the fact that *ml* is used not only for polar yes/no-question but also for cleft-question. I will revisit this issue in Section 4, but for now, I will focus only on the yes/no-question *ml* as a clause-typing morpheme.

³ Özyıldız (2015) mentions a particular case of the question particle intervening between predicates, where *ml* splits an adjectival predicate and following functional morphemes. This was analyzed as small clause movement. The case of adjectival predicates from the present perspective will be discussed in Section 3.2.

This observation is not particular for the progressive aspect *iyor*, but rather more general, being the case as well with other kinds of inflectional morphemes in the same domain. For example, the prospective aspect *ecek* and the necessitative modality *meli* also show a parallel observation with the progressive aspect *iyor*, suggesting that what matters for the peculiarity of the *mI* particle is the structural configuration and the linear concatenation, not a specific type of inflectional morphemes.

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|---------------------------------|-------------------------------|
| (7) a. <i>Past prospectives</i> | b. <i>Past necessitatives</i> |
| gid-ecek mi-ydi -n? | git-meli mi-ydi -n? |
| go-PROS Q-PAST-2SG | go-NECE Q-PAST-2SG |
| “Were you going to go?” | “Should you have gone?” |

In (7), the progressive *iyor* in (6b) is substituted with the prospective *ecek* in (7a) and with the necessitative *meli* in (7b), all of which are argued to be in the same domain of aspect and modality (Göksel 2001; Kabak 2007). Hence the first generalization: the question particle *mI* linearizes before PAST in the presence of an additional aspect or modality morpheme. Next, when a sentence lacks the past tense morpheme and is intended to refer to a present (non-past) event which is morphologically null in Turkish, φ -agreement marking is linearized after *mI*⁴.

- | | |
|-----------------------------------|---------------------------------|
| (8) a. <i>Simple progressives</i> | b. <i>Simple necessitatives</i> |
| gid-iyor mu -sun? | git-meli mi -sin? |
| go-PROG Q-2SG | go-NECE Q-2SG |
| “Are you going?” | “Should you go?” |

If PROG or NECE is the only inflectional morpheme present in the verb complex as in (8), *mI* precedes the φ -agreement marking. The configuration where *mI* follows the φ -agreement is ungrammatical, as shown in (9). This is again surprising given that Q-particle typically appears in a sentence final position.

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|-----------------------------|-----------------------------|
| (9) a. *gid-iyor-sun mu? | b. *git-meli-sin mi? |
| go-PROG-2SG Q | go-NECE-2SG Q |
| (intended) “Are you going?” | (intended) “Should you go?” |

Note that this is in a sharp contrast with the simple past tense case demonstrated above (see (6a)), where PAST is the only inflectional morpheme in the verb complex. In such cases, rather the opposite observation holds true: *git-ti-n mi* (go-PAST-2SG Q) is grammatical, yet **git-ti mi-n* (go-PAST Q-2SG) is ungrammatical. Hence the second generalization: the question particle *mI* is linearized before the φ -agreement marking if the only inflectional morpheme is the aspect or modality one in a lower syntactic head, but not if the only inflectional morpheme is the tense one in the T head⁵.

⁴ Note that φ -agreement marking for 2SG is either *n* or *sIn*. This is because Turkish exhibits two different agreement paradigms depending on the type of inflectional morphemes: *k*-paradigm vs. *z*-paradigm (Good & Yu 2005).

⁵ Here the notion of tense is more or less concerned with the distinction between past and non-past tense. In Turkish, the non-past tense is morphologically null, and the (overt) past tense can be either direct (*ti*) or inferential (*miş*). Although the present paper illustrates the tense morpheme in T only with the direct past tense, the same line of observation and analysis can be applied to the inferential past tense as well (see Sezer (2001) for relevant data).

3. Analysis: Local Dislocation. In order to account for the linearization puzzle based on the generalization established in the previous section, I argue that the linear order of the question particle can be captured with post-syntactic operations that induce an interaction in linearizing morphemes in verb complexes. In particular, I will argue that Local Dislocation (Embick 2007) is crucial in deriving the surface order of the question particle with respect to other inflectional morphemes. I will start with the definition and implementation of Local Dislocation, and move onto the detailed analysis for the question particle *ml* with each of the cases.

3.1. LOCAL DISLOCATION. Local Dislocation refers to a post-syntactic linearization under adjacency, whereby two adjacent syntactic elements result in either linear order by the specific concatenation statement (Embick 2007). When two syntactic elements are most adjacent to each other at the point of linearization, like α and β in (10), they can be linearized in that order ($\alpha \frown \beta$: α preceding β) or in a reversed order ($\beta \frown \alpha$: β preceding α) as a result of a particular concatenation statement.

$$(10) \quad \text{Local Dislocation (LD) statement} \qquad \qquad \qquad \text{(Embick 2007)}$$

$$\text{ADJACENCY} (\alpha * \beta) \rightarrow \text{CONCATENATION} (\alpha \frown \beta) / (\beta \frown \alpha)$$

In Turkish, this adjacency relationship can be established between each syntactic terminal head in verb complexes, since each of them is immediately adjacent to one another due to the head-final configuration: V, Asp, T, C, and so on. The composition of verb complexes also reflects the agglutinative characteristics of Turkish, so that each syntactic head spells out each inflectional morpheme of the verbal spine. Then, Local Dislocation defined for syntactic terminal heads in Turkish verb complexes can naturally be a concatenation statement posited between these morphemes. Crucially, each Local Dislocation statement must be *exception-less* since it has to be applied as such whenever the condition is met. Also, it is *ordered inside-out* since it reflects the bottom-up nature of the syntactic derivation. I will shortly show that the Local Dislocation analysis for the question particle abides by these conditions as well.

In order to move onto a more detailed analysis on Local Dislocation, the position of the question particle has to be postulated. I argue that the question particle *ml* in Turkish is the overt realization of the $C_{[+Q]}$ head. This is desirable mainly in two respects. Most of all, the question particle in the $C_{[+Q]}$ head takes the entire sentence in its scope, typically occupying the final position in a verb complex. This derives the order without any further assumption since Turkish is strictly head-final. At the same time, the fact that it serves as a clause-typing morpheme (that of interrogatives) naturally follows from its position being the C head. This is also in a similar line with some previous accounts where the question particle serves as the locus of focus in the uppermost domain (*e.g.*, Özyıldız 2015; Kesici 2019; see Section 2.1.).

With this and the generalization established in the previous section, I propose the Local Dislocation statements in (11) and argue that they account for the linearization puzzle.

$$(11) \quad \text{Local Dislocation statements in Turkish}$$

- i. For verb root V, $\text{ADJACENCY} (V * x) \rightarrow \text{CONCATENATION} V \frown x$
- ii. For $C_{[+Q]}$, $\text{ADJACENCY} (T * C) \rightarrow \text{CONCATENATION} C \frown T$

Two Local Dislocation statements suggested in (11) can derive the peculiar surface order of the linearization puzzle where the unexpected pattern of the question particle was observed

with respect to the past tense morpheme. The first statement in (11i) mandates that a verb root should concatenate to the most adjacent inflectional morpheme in that order. This is in the same line with the independent observation that verb roots in Turkish are *bound*: they minimally require at least one overt TAM (*i.e.*, tense, aspect and modality) morpheme to be able to stand alone as a licit verb complex (Jendraschek 2011). This concatenation is thus not surprising, and this is completely expected from the concatenative nature of Turkish. Next, the second statement in (11ii) is the crucial factor in deriving the peculiar order of *mi*. The second statement is specific to $C_{[+Q]}$, and says that $C_{[+Q]}$ should concatenate to T in the reversed order. This can derive the order of $C_{[+Q]}$ (Q-particle – *mi*) preceding T (PAST). However, crucially, the second concatenation statement is applicable only if T has not yet concatenated to V by the first statement. That is, if T has already concatenated to V by the first statement (where T is *x*, being the most adjacent inflectional element to the verb root), it cannot be subject to the second statement, as T would not be available after the first statement is applied between V and T. This is because an already concatenated unit forms its own unit, so that a part of such unit cannot participate in a subsequent concatenation that is to be applied. In other words, the concatenated unit cannot be broken by a later concatenation: *No Escape* in Embick (2007)⁶.

(12) *No Escape* (Embick 2007: his (32a))

$$*[_M a \oplus b] \frown [_M X] \rightarrow [_M a] \frown [_M b \oplus X]$$

In the present context, the application of the first statement between V and T inevitably bleeds the application of the second statement between T and $C_{[+Q]}$, and this interaction is the source of the linearization puzzle. This can correctly derive the linear order observed for the linearization puzzle. See the simple past case in (13a) and the past progressive case in (13b):

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|--|---|
| <p>(13) a. <i>Simple past: git-ti-n mi?</i></p> <p style="margin-left: 2em;">i. $V * T \rightarrow git \frown ti-n$</p> <p style="margin-left: 2em;">ii. $T * C_{[+Q]} \rightarrow N/A$ (T is in i.) – <i>mi</i></p> | <p>b. <i>Past progressive: gid-iyor mu-ydu-n?</i></p> <p style="margin-left: 2em;">i. $V * Asp \rightarrow gid \frown iyor$</p> <p style="margin-left: 2em;">ii. $T * C_{[+Q]} \rightarrow mu \frown ydu-n$</p> |
|--|---|

In (13a), the question particle in the simple past case is linearized following the past tense morpheme. This linear order is derived since T (PAST) is the only TAM inflectional morpheme in the verb complex. By the first statement, V (the verb root) and T (PAST) concatenate in that order as in (13a-i). As (13a-ii) shows, after the first concatenation statement applies, the second concatenation between T and $C_{[+Q]}$ cannot be established since T is not adjacent to $C_{[+Q]}$ anymore: since T already concatenated to V by the previous statement, it can no longer participate in a later operation. On the other hand, in (13b), this issue does not arise since there is one additional inflectional morpheme that is adjacent to the verb root: progressive *iyor* in the Asp head. As (13b-i) shows, by the first statement V concatenates to Asp first since it is the first overt inflectional morpheme in the verb complex, being the most adjacent one

⁶ Strictly speaking, the notion Embick (2007) uses are more precise, since he distinguishes two different types of morphological unit (Subword *vs.* M-Word). The difference between these two comes from the complexity of the structure: terminal heads within a complex head correspond to Subword, and the complex head or the terminal heads on their own counts as M-Word. In the current line of inquiry, I did not postulate any complex head formation for the head-final configuration, hence no Subword. Nevertheless, in order to block the overgeneration cases, this No Escape constraint can be understood as follows in the present context: already established morphological unit by a concatenation statement cannot be broken down by a later concatenation statement.

statement applies between V and the immediately adjacent morpheme (Asp (PROG) and Mod (NECE) respectively), and this does not hamper the second concatenation of ($C_{[+Q]} \hat{\ } T$) in the reversed order. This derives the order of *ml* preceding the φ -agreement morpheme in above cases. This shows that the syntactic profile of T matters for the concatenation statement, since T still concatenates to C when the φ -agreement morpheme is the only exponent of the T head. With this, in what follows I will discuss on some of the interesting predictions and the possible implications of the current proposal.

3.2. THE WORD MINIMALITY. The first concatenation statement between the verb root (V) and the most adjacent overt inflectional morpheme (*x*) hints at a kind of *word-minimality*. Like many other agglutinative languages, verb roots in Turkish are bound, and require at least one overt inflectional morpheme from the TAM (tense, aspect and modality) domain (Jendraschek 2011). That is, a verb root only with a φ -agreement marking cannot be a licit verb complex that can stand alone. See the below paradigm:

(17) *Word minimality: a verb root requires one overt TAM suffix*

a. git-ti-m.	b. gid-iyor-um.	c. gid-er-im.	d. *gid-im.
go-PAST-1SG	go-PROG-1SG	go-AOR-1SG	go-1SG
“I went.”	“I am going.”	“I go.”	“I go.”

In (17d), the only overt functional morpheme is φ -agreement, yet this is not enough to make the verb complex stand alone. Although the non-past tense in Turkish is morphologically null, the intended habitual, non-past interpretation cannot be obtained in (17d) and it results in the ungrammaticality. In order to stand alone as a licit verb complex, the verb root has to be suffixed by at least one *overt* inflectional morpheme from the TAM domain. To yield the intended reading of (17d), additional aorist morpheme *er* ‘AOR’ has to be added as shown in (17c). Similarly, with the help of PAST and PROG, (17a) and (17b) are grammatical. These verb complexes are the minimally well-formed units. This kind of word minimality is what the first concatenation statement alludes to, as it requires the concatenation between a verb root and the most adjacent overt inflectional morpheme. Note that this constraint holds true only for *verbal* predicates, since *non-verbal* predicates do not require such word minimality. That is, they are licit on their own without any overt inflectional morpheme from the TAM domain. The composition of a root and a φ -agreement morpheme, which was ungrammatical for a verb root (see (17d)), is totally acceptable for a nominal or adjectival root as shown in (18).

(18) *Non-verbal predicates do not require word minimality*

a. Öğrenci-sin.	b. Yorgun-sun.
student-2SG	be.tired-2SG
“You are a student.”	“You are tired.”

In (18), non-verbal predicates are perfectly grammatical without any TAM morpheme and can yield the intended non-past tense interpretation. The nominal predicate *öğrenci* ‘student’ and the adjectival predicate *yorgun* ‘be tired’ are accompanied only with the φ -agreement morpheme, and this suffices. Again, this is in contrast with verbal predicates, in which cases a root with a φ -agreement morpheme only results in ungrammaticality (see (17d)). This means that the first concatenation statement (that a verb root has to concatenate to the most adjacent

overt inflectional morpheme) does not hold for non-verbal predicates. Then, an interesting prediction can be tested: in cases where the predicate is non-verbal, T and $C_{[+Q]}$ would always linearize in the reversed order in the absence of the first statement that requires the minimal concatenation with the root. This would hold either when there is no overt TAM morpheme (*i.e.* with non-past interpretation) or when T (*i.e.*, PAST) is the only TAM morpheme in the complex. This is indeed the case both for nominal and adjectival predicates:

(19) *Nominal predicates: reversed concatenation always holds*

- | | |
|---|---|
| a. Öğrenci mi -sin?
student Q-2SG
“Are you student?” | b. Öğrenci mi -ydi-n?
student Q-PAST-2SG
“Were you student?” |
|---|---|

(20) *Adjectival predicates: reversed concatenation always holds*

- | | |
|---|---|
| a. Yorgun mu -sun?
be.tired Q-2SG
“Are you tired?” | b. Yorgun mu -ydu-n?
be.tired Q-PAST-2SG
“Were you tired?” |
|---|---|

Both in (19a) and (20a) the T head (where the φ -agreement marking is the only overt exponent) is always linearized after *mI* due to the absence of the first concatenation statement. For the same reason, in (19b) and (20b) the T head (PAST and the φ -agreement marking) is linearized after *mI*, since T and $C_{[+Q]}$ is always linearized in the reversed order in the absence of the first concatenation. That is, the only concatenation statement applied in (19) and (20) is the second statement (*i.e.*, (11ii)), simply due to the fact that there is no V head to apply the first statement (*i.e.*, (11i)) to begin with. Since there would be no configuration where non-verbal predicates concatenate to T (PAST) first to bleed the second statement, the second statement always applies, reversing the linear order between T and $C_{[+Q]}$. This sharply contrasts with the verbal predicates, in which case these configurations would be ungrammatical since the first concatenation between V and *x* cannot be satisfied. Therefore, the linearization puzzle arises because of the peculiarity of verbal predicates. The first concatenation statement which holds true only for verb roots in Turkish (due to their bound nature) induces such a difference. Note again that the corresponding configurations with verbal predicates are ungrammatical, since the first concatenation has to apply for V^8 .

(21) *Verbal predicates: the first statement has to be satisfied*

- | | |
|--|--|
| a. *Çalış mi -sin?
work Q-2SG
(intended) “Do you work?” | b. *Çalış mi -ydi-n?
work Q-PAST-2SG
(intended) “Did you work?” |
|--|--|

Before summing up, one more prediction will be tested: in cases where more than two inflectional morphemes from the TAM domain are present in the same verb complex, T and

⁸ A reviewer commented whether this would have to do with the difference of monosyllabic *vs.* bisyllabic roots from a morpho-phonological perspective. Thus, here a bisyllabic verb root *çalış-* ‘to work’ is used to illustrate the point instead of the verb root *gid* ‘to go’ that has been used thus far. Of course, the same pattern holds true for the monosyllabic root *gid* ‘to go’ as well. This is to show that the alluded difference is not about the number of syllables, but about the categorial difference between verbal *vs.* non-verbal predicates.

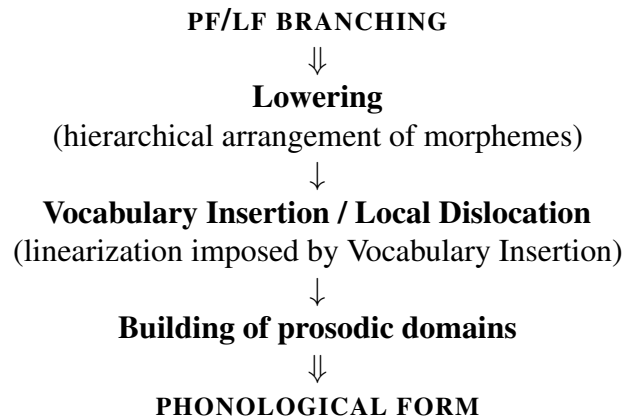
$C_{[+Q]}$ would always linearize in the reversed order. This is because T cannot be a part of the first statement in any case. Among the plausible combinations of the inflectional morphemes in Turkish, the abilitative modality combined with the progressive aspect and the past tense can be the case in point. The prediction is borne out: in forming a yes/no-question, only T and $C_{[+Q]}$ are linearized reversely in (22b).

(22) *Verb complex with multiple TAM morphemes*

- | | |
|---|--|
| <p>a. gid-ebil-iyor-du-n.
go-ABIL-PROG-PAST-2SG
(roughly) “You could be going.”</p> | <p>b. gid-ebil-iyor mu-ydu-n?
gid-ABIL-PROG Q-PAST-2SG
(roughly) “Could you be going?”</p> |
|---|--|

3.3. LOCAL DISLOCATION REVISITED. It has been shown so far that the Local Dislocation analysis can account for the data including the peculiar linearization of the question particle (and of the φ -agreement morpheme as well) in a straightforward manner. Further corroborating the current proposal, the aim of this section is to rule out a potential alternative that accounts for the distributional pattern of the question particle, namely another post-syntactic alternative that could possibly derive the same outcome. There exists a fundamental question regarding other post-syntactic operations: could the same pattern be derived through other post-syntactic operations, for example, through Lowering? Lowering from a head to another head could possibly derive a similar effect, reversing the order between two syntactic heads, which are, in the present context, T and $C_{[+Q]}$. In principle, Lowering and Local Dislocation would not make any difference at first glance since T and $C_{[+Q]}$ in this case are adjacent: they can be subject to Local Dislocation as much as they can be subject to Lowering, since T is the first head that C can lower to. However, the operation in question has to be Local Dislocation, not Lowering, since they are distinguished in the timing of application. In Embick & Noyer (2001), the different timing of distinct post-syntactic operations was dealt in depth. According to their theory, post-syntactic operations are strictly ordered with respect to each other. See (23):

(23) *The order of morphological operations* (à la Embick & Noyer 2001)



By definition, Lowering has to take place *before* Local Dislocation. With this the present analysis can be revisited from the perspective of this particular ordering. To begin with, there are two different concatenation statements. Specifically, the first one has to do with the verb root and the first overt inflectional morpheme from the TAM domain, and the second one has to

do with T and $C_{[+Q]}$. Crucially, the first concatenation statement has to take place at the level of Vocabulary Insertion, since it is sensitive to the overtness of the morpheme. For example, a verb root concatenated with [+PAST] is well-formed, yet the same verb root concatenated with [-PAST] is *morphologically* ruled out: *git-ti-m* (go-PAST-1SG) vs. **gid-Ø-im* (go-PRES-1SG)⁹. They only differ in the *overtness* of the T-level morpheme: [+PAST] is overt; yet [-PAST] is null. Before Vocabulary Insertion, the set of features present at the each head (e.g., T) does not make any difference between [+PAST] and [-PAST]. The fact that the former is grammatical and the latter is ungrammatical has to be distinguished at the level of Vocabulary Insertion, thus the concatenation between V and x has to be the instance of Local Dislocation. If that is the case, then the later concatenation statement between T and $C_{[+Q]}$ has to take place at the identical level, since the application of the first concatenation statement apparently affects the application of the second concatenation statement, as illustrated by the case of the simple past (see (13a)): $(V \frown T)$ bleeds $(C_{[+Q]} \frown T)$. If $(V \frown T)$ occurs at the Local Dislocation level, then $(C_{[+Q]} \frown T)$ has to occur at the Local Dislocation level as well.

3.4. IMPLICATION. Summarizing the pattern, the past progressive case (see (13b)) can be understood as the result of two successive applications of Local Dislocation, the first one for the verb root and the first overt inflectional TAM morpheme, and the second one for T and $C_{[+Q]}$. On the other hand, the simple past case (see (13a)) can be understood as the interaction between two Local Dislocation statements. The first statement $(V \frown x)$ has to be satisfied by T due to the adjacency. This in turn blocks $(C_{[+Q]} \frown T)$ due to their ordered, inside-out nature.

- | | | |
|------|---|---|
| (24) | i. The past progressive:
[gid-iyor] [mu-ydu-n]?
$(V \frown Asp)$ then $(C_{[+Q]} \frown T)$ | ii. The simple past:
[git-ti-n] mi?
$(V \frown T)$ strands $C_{[+Q]}$ |
|------|---|---|

The present analysis not only accounts for the observation of two different linearization patterns regarding the question particle, but also retains the syntactic structure of interrogatives in a simple manner. By definition, the syntactic position of the question particle is fixed to the $C_{[+Q]}$ head, and its peculiar distribution is attributed to the domain-specific, post-syntactic concatenation statements. That yes/no-question has to take the entire sentence in its scope (to render a whole utterance into an interrogative clause) naturally follows, since syntactically *ml* is always the highest (and final) element in the syntactic derivation, whose linear order may be possibly reversed by a specific concatenation statement. That is, the present analysis can capture the observation that *ml* scopes over the T head (PAST) even when *ml* precedes PAST in a straightforward manner.

4. Cleft-Question *ml*. So far, the present study has focused on the linearization pattern of the clause-typing *ml*, which is located at the (nearly) final position of a verb complex and functions as the interrogative-rendering morpheme. Yet, the same exponent (*ml*: *mu/mi/mu/mü*) can also attach to XP-constituents to yield the cleft-question interpretation that accompanies the (narrow) focus reading. When *ml* is attached to an argument of a sentence, for example, it focuses that argument and makes the entire sentence into a cleft-question.

⁹ Recall that in order to make the non-past tense case grammatical, additional inflectional morpheme *er* ‘AOR’ has to be added to the verb complex to make the verb complex minimally well-formed.

- (25) a. Ali-**mi** sinema-ya git-ti?
 Ali-Q cinema-DAT go-PAST
 “Is it Ali who went to the cinema?”
- b. Ali sinema-ya-**mi** git-ti?
 Ali cinema-DAT-Q go-PAST
 “Is it cinema that Ali went to?”

Two sentences in (25) differ as to the focused element, that is, where *mI* is attached. In (25a), *mi* attaches to the subject *Ali*, yielding the cleft-question interpretation focusing *Ali*. On the other hand, in (25b) *mi* attaches to the direct object *sinema-ya* ‘cinema-DAT’, yielding the cleft-question interpretation focusing *cinema*. Regarding this observation, some previous studies argue that these *mIs* are syntactically identical with the clause-typing *mI*, and their difference can be derived by distinct movements. As illustrated in Section 2.1., for example, Özyıldız (2015) argues that a focused XP moves to the specifier of the *mIP*, and Kesici (2019) argues that *mI* in the Foc head lowers to the respective positions. For Özyıldız (2015), the difference between the clause-typing *mI* and the cleft-question *mI* can be derived by different XP-movement (*e.g.*, movement of the entire TP *vs.* a relevant DP). For Kesici (2019), the difference between the clause-typing *mI* and the cleft-question *mI* can be derived by different direction of head movement (*i.e.*, raising to C *vs.* lowering to relevant XP-level).

These analyses provide a unified solution both for the cleft-question *mI* and for the simple yes/no-question where *mI* is in the sentence final position. However, as alluded to in Section 2.1., a question remains as to the peculiar order of *mI* with respect to the past tense morpheme, which I called the linearization puzzle. Both of these analyses would fall short of explaining the peculiar distribution of *mI* unless they postulate an extra assumption only to account for such a peculiar order. The post-syntactic solution proposed here can capture this linearization puzzle straightforwardly. However, it is apparent that both the yes/no-question *mI* and the cleft-question *mI* share the same morphological exponent and that they yield a subtype of the yes/no-question involving focus. As the present analysis only focused on accounting for the polar yes/no-question *mI*, such morphological and semantic parallelism between the yes/no-question *mI* and the cleft-question *mI* would remain mysterious. Although I have to leave this for future research, I will point out that there exists an interpretational difference in the yes/no-question *mI* and the cleft-question *mI*. See (26):

- (26) a. Ali sinema-ya git-ti **mi**?
 Ali cinema-DAT go-PAST Q
 ✓ “Did Ali go to the cinema?”
 * “Is it going Ali did to the cinema?”
- b. Ali-**mi** sinema-ya git-ti?
 Ali-Q cinema-DAT go-PAST
 ? “Did Ali go to the cinema?”
 ✓ “Is it Ali who went to the cinema?”

In (26a), the only reading available is the yes/no-question one, which corresponds to the verum focus of proposition. As discussed before, this *mI* takes the entire sentence in its scope, and renders a question that asks or confirms the truth value of a given proposition. The narrow focus interpretation where the verb complex ‘go-PAST’ is focused is never possible with this sentence. In (26b), the predominant reading is the cleft-question one in which the narrow focus is put on *Ali*. The polar yes/no-question interpretation is not readily possible for this sentence. In the present context, then, a question can be cast whether the cleft-question *mI* and the yes/no-question *mI* can be accounted for with the exactly same mechanism or not, given that they exhibit both similarities and differences. I will leave this question open for now.

5. Conclusion. In the present study, the linear order of the yes/no-question particle *mI* in Turkish was investigated with post-syntactic linearization. The starting point was the peculiar order between the question particle and the past tense morpheme, which is problematic given the highly regular concatenation in Turkish. It was argued that the question particle *mI* is the overt realization of the $C_{[+Q]}$ head, and that the peculiar order is derived by the interaction between two ordered Local Dislocation statements. The first statement is related to the word minimality that Turkish verb roots exhibit. The second statement is particular to T and $C_{[+Q]}$ which derives the reversed concatenation. Crucially, it was shown that the application of the former may bleed the application of the latter, which is the source of the linearization puzzle.

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