

A Phase-based Account to t-liaison in Jordanian Arabic

*Abdulazeez Jaradat*¹, *Najah A. Alzoubi*²

ABSTRACT

This paper focuses on a phonological process in Jordanian Arabic, t-liaison. Two previous accounts have been offered to find out its domain of application. Abdulghani (2010) proposed that this process applies in a non-final position within a maximal syntactic projection in Modern Standard Arabic, whereas Yasin (2012) suggested that it applies in a phonological phrase non-final position in Jordanian Arabic. We will show that this prosodic account can predict the (non-application) of t-liaison in Jordanian Arabic; however, it cannot explain why prosodic variability cannot block or trigger the application of t-liaison. In this study, we present a new account based on Phase Theory (Chomsky 2001) to t-liaison. We propose that this process applies only at a spell-out domain non-final position in Jordanian Arabic. This account can actually capture the contexts in which t-liaison applies and explain why prosodic variability cannot reverse the (non-)application of t-liaison.

Keywords: t-liaison, the feminine suffix, Phase Theory, spell-out domains, Jordanian Arabic.

1. Introduction: t-liaison in Arabic

t-liaison is a phonological process that is found in Modern Standard Arabic and colloquial Arabic varieties. It can be defined as the realization of a floating segment in one or more contexts. t-liaison in Arabic is the case of the singular feminine suffix *-t*. In Modern Standard Arabic, this suffix is realized within nouns, as shown in (1), when it appears in an inflected noun-internal position.

- (1) $_{NP}[\text{\$u:ra-t-u-n}]$
Photo-F-NOM-INDEF
'A photo'.

Since Arabic is a rich inflectional language, the feminine suffix *-t* is also attached to adjectives in order to establish agreement with its modified noun. In (2), for instance, the post-modified NP, i.e. NP1, and the adjectival phrase (AP) agree in gender (beside definiteness, number and case). The suffix *-t* is realized within AP due to its distribution: it appears in an inflected adjective-internal position.

- (2) $_{NP2}[_{NP1}[\text{\$u:ra-t-u-n}] \quad _{AP}[\text{dʒami:la-t-u-n}]]$
Photo-F-NOM-INDEF beautiful-F-NOM-INDEF
'A nice photo'.

In Modern Standard Arabic, the suffix *-t* is not expected to occupy a noun-final or adjective-final position. It has to be followed by a case marker unless this marker is omitted for a certain reason, for example, when the case marker is followed by an intervening pause or it is in sentence-final position. In this case, t-liaison is optionally blocked: the suffix *-t* is either suppressed or pronounced as glottal fricative *-h*. In (3b), unlike (3a), the deletion of the nominative marker *-u* which is triggered by the adjacent full pause (#), feeds the suppression of the suffix *-t* or its production as *-h*.

¹Applied Science Private University; ²The Hashemite University
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More specifically, the deletion of the nominative marker in (3b) leaves the suffix *-t* in noun-final position where it cannot be realized.

- (3) a. NP₂[NP₁[madrasa-t-u-n] AP[kabi:ra-t-u-n]]
 school-F-NOM-INDEF big-F-NOM-INDEF
- b. NP₂[NP₁[madrasa-Ø/h] # AP[kabi:ra-Ø/h]]
 school-Ø/h big-Ø/F
- 'A big school'.

In Jordanian Arabic, the suffix *-t* is also realized when it is in a noun-internal position, as exemplified in (4a). As for noun-final position, the suffix *-t* is realized only in one case: when its containing word occupies a genitive construct-internal position. In (4b), for instance, the suffix *-t* in bold is at the end of the first word of the entire genitive construct *kta:bi-t wa:dʒib*, and therefore, it is realized.

- (4) a. NP[midrasi-t-ha] #
 School-F-3SGF.POSS.
 'Her school'.
- b. NP₂[N[kta:bi-**t**] NP₁[wa:dʒib]]
 Writing-F. assignment
 'Writing an assignment'.

The contexts of t-liaison in Jordanian Arabic will be discussed in more details in Section 3. First, we will review previous accounts that have been offered to t-liaison in Arabic in the following section.

2. Literature review: previous accounts to t-liaison in Arabic

Consonant liaison at word boundaries which is the realization of a word-final consonant exists also in some other languages, such as French. In previous studies on liaison in French, three types of contexts have been reported: obligatory, impossible and optional liaison, while liaison in Arabic is limited to the realization of the masculine sound plural *-n* and the realization of the feminine *-t* or its suppression (instead of suppression, *-t* can optionally be pronounced as *-h* especially in sentence-final position). It has been reported in previous work on liaison in French that several factors can influence the (non-)application of liaison including syntactic, prosodic, lexical and sociolinguistic factors (Selkirk 1972, 1974, 1986; Morin and Kaye 1982; Post 2000). In contrast, only two accounts, as far as I know, have been presented to diagnose the contexts in which the feminine *-t* is realized in Arabic. Abdelghani (2010) and Yasin (2012) investigated this process in Modern Standard Arabic and Jordanian Arabic, respectively.

Abdelghani (2010) offered a pure syntactic account to t-liaison. He reported that t-liaison in Modern Standard Arabic applies when the target word that has the feminine suffix on its right edge is followed by any phonetic material in the same maximal syntactic projection. In (5), for example, NP₁ and AP are marked as feminine; however, the suffix *-t* is realized only at the right edge of NP₁ due to the distribution of this suffix: it is not at the right edge of its containing maximal projection, NP₂. On the contrary, the suffix is suppressed or produced as *-h* at the right edge of AP which matches NP₂-final position and is not followed by any phonetic material in this maximal NP.

(5) NP₂[NP₁[ʃu:ra-t-u-n] AP[qadi:ma-Ø/h]] VP[iħtaraqa-t]
Photo-F-NOM-INDEF old-F burn.3SG.PST-F
'An old photo was burnt'.

This syntactic proposal provides an adequate explanation to t-liaison in Modern Standard Arabic; however, it cannot predict the suppression of the suffix *-t* in (6b) in Jordanian Arabic. In (6a&b), the suffix *-t* in bold occupies a maximal XP-internal position, i.e. NP3-internal and NP2-internal position, respectively. Following Abdelghani's (2010), the suffix *-t* should be realized within the genitive construct in (6a) and within the post-modified NP in (6b) since the feminine *-t* in each example is followed by a phonetic material in the same maximal syntactic projection. However, the suffix *-t* is realized only in the maximal syntactic projection in (6a): in a genitive construct-internal position.

(6) a. Genitive construct:

NP3[[N[**midrasi-t**] NP2[**balad-na**]]
 School-F village-1PL.POSS
 'The school of our village.'

*b. Post-modified NP:

NP2[[NP1[**midrasi-t**]_{AP}[**kabi:re-Ø/h**]]
 School-F big-F
 'A big school'

More recently, Yasin (2012) offered an alternative account to t-liaison in Jordanian Arabic which is based on syntax-prosody interface. He assumed that the suffix *-t* is realized if the target word occupies a non-final position in its prosodic domain, the phonological phrase (Φ). His proposal explains why the feminine *-t* at the right edge of a word is realized if this word is in a genitive construct-internal position and suppressed or produced as *-h* in a post-modified XP-internal position. Adopting an edge-based approach (Truckenbrodt 1995, 1999), he suggested that the genitive construct matches a single Φ in the prosodic representation. In this edge-based approach, only the right edge of an XP (e.g. NP) triggers a Φ boundary. Therefore, a Φ boundary is triggered at the right of *midrasit* in the post-modified NP in (7b) because it constitutes a NP. On the contrary, *midrasit* in the genitive construct in (7a) is a N. Hence, it does not trigger a Φ boundary at its right edge. This entails that the genitive construct matches a single Φ and the post-modified NP is parsed in two Φ s, as shown in (7a&b). Based on this proposal, the suffix *-t* is realized in (7a) due to the fact that it occupies a Φ -internal position: the suffix *-t* at the right of *midrasit* is not immediately followed by a Φ boundary. In contrast, it is suppressed or pronounced as *-h* in (7b) since it occupies a Φ -final position: it has an immediately adjacent Φ boundary.

(7) a. Genitive construct:

NP₃[[N[**midrasi-t**] NP₂[**balad-na**]]]
 ()_Φ
 School-F village-1PL.POSS
 'The school of our village.'

b. Post-modified NP:

NP2[[NP1[*midrase-Ø/h*] AP[*kabi:re-Ø/h*]]
 ()_Φ ()_Φ
 School-Ø/F big-Ø/F
 ‘A big school’.

(8) NP₂[N[*midrasi-t*] # NP₁[*balad-na*]]
 ()_i ()_i
 School-F village-1PL.POSS
 ‘The school of our village.’

***(9) Post-modified NP parsed in a Φ in fast rate of speech:**

NP2[[NP1[**midrasi-t**]_{AP}[**kabi:re-Ø/h**]]
 ()_Φ
 School-F big- Ø/F
 ‘A big school’

(10) Speaker A: midrasi-t balad-na
School-F country-1PL.POSS
'The school of our village.'

Speaker B: *fu* *gult?* *midrasi*[A1]-*t?*
 ()_i
 What say.2SG.PST school-F.
 'What did you say? School...?'

In accord with that, it seems clear that an account based on syntax-prosody interface cannot adequately explain and predict the (non-)application of *t*-liaison in Jordanian Arabic. Alternatively, a pure syntactic account is still required. In this paper, we present an account that is based on Phase Theory (Chomsky 2001) to explain and predict the (non-)application of this process. In the following section, the contexts in which the suffix *-t* is realized in Jordanian Arabic are discussed in details.

3. Contexts for *t*-liaison in Jordanian Arabic

Jordanian Arabic and several Arabic vernaculars, unlike Modern Standard Arabic, lack a case system. Therefore, the suffix *-t* is more likely to appear in word-final position in Jordanian Arabic. In the absence of any phonetic material at the end of a word, the suffix *-t* is suppressed or pronounced as *-h* in Jordanian Arabic, as exemplified in (11):

(11) *handase*-Ø/*h*¹
 Engineering-Ø/F
 'Engineering'.

Despite the fact that Jordanian Arabic lacks a case system, the suffix *-t* can be followed by a phonetic material in the same word. This can be attained by attaching a pronominal clitic to the end of the target word. The third person singular feminine pronominal clitic *-ha* in (12a) and the third person plural masculine pronominal clitic in (12b) license the realization of the suffix *-t* in both words:

(12) a. *midrasi-t-ha* #
 School-F-3SGF.POSS
 'Her school'.
 b. *mʃallmi-t-hum* #
 teacher-F-3PL.POSS
 'Their teacher'.

The suffix *-t* is also obligatorily realized in Jordanian Arabic when it occupies a genitive construct-internal position. The feminine *-t* of *midrasit* occupies a genitive construct-internal position in (13a): it is at the right edge of the first word in the genitive construct. Therefore, it must be realized. In contrast, it cannot be realized at the right of the same word in (13b) because it is in genitive construct-final position.

(13) a. Suffix *-t* in genitive construct-internal position:
 NP₂[N[*midrasi-t*] NP₁[*li-wlaad*]]
 school-F DEF-boy.PL
 'A school for males'.

¹ In the absence of the suffix *-t* and its variant, i.e. the glottal fricative *-h*, the gender specification of the target noun or adjective can be identified by the vowel at the end of the target word. In *maktabe*, for example, [e] at the end of the word indicates that the noun is specified as feminine: the morphological pattern of the word is still feminine.

b. Suffix *-t* in genitive construct-final position:

NP2[N[mudiir] NP1[il-midrase-Ø/h]]

manager DEF-school-Ø/F

'The school principle'.

As can be inferred from the previous examples, the feminine suffix *-t* must be in a noun-internal (*N-t-clitic*) or genitive construct-internal position in order to be phonetically realized in Jordanian Arabic. In the first context, the relation between the suffix *-t* and the pronominal clitic is strong. They are immediately adjacent. This adjacency is in two forms: syntactic and phonetic. Syntactic adjacency means that no intervening element can be inserted between the suffix *-t* and the clitic in Jordanian Arabic. Since these elements are syntactically adjacent, they are more likely to influence each other phonetically. In Jordanian Arabic as spoken in the northern rural areas of Jordan, for example, the glottal fricative *-h* of the pronominal clitic *-ha* in (14a) and *-hum* in (14b) is totally assimilated to the suffix *-t*:

(14) a. midrasi-t-ta #

School-F-3SGF.POSS

'Her school'.

b. mʃallmi-t-tum #

teacher-F-3PL.POSS

'Their teacher'.

The syntactic requirement can also be detected in genitive constructs. Genitive constructs do not allow intervening material. The adjective *il-gadi:me-Ø/h* that post-modifies *mirasit* in (15a) cannot occupy an intervening position between the elements of the genitive construct, as shown in the ungrammatical construct in (15b). It is worth noting that it has been reported in Altaxhaineh (2016) that some elements can occupy an intervening position between the elements of a genitive construct, such as demonstratives, in case there is an intervening syntactic position special form them.

(15) a. NP3[NP2[N[midrasi-t] NP1[il-balad]] AP[il-gadi:me-Ø/h]]

School-F DEF-country DEF-old-Ø/F

'Our old school in our village'

*b. NP2[N[midrasi-t] AP[il-gadi:me-Ø/h] NP1[il-balad]]

At the phonetic level, the elements of a genitive construct are special due to the fact that they have a metrical structure that is generally rare in Arabic. The two words of a genitive construct have uneven levels of metrical strength: both words are stressed, but the primary stress is on the first word (Al-Ani 1992; Jaradat 2018). Furthermore, it has been recently reported in an experimental study that pharyngealization of coarticulation, which has been long considered a word-domain process (Jongman et al 2007; Zawaydeh 1999; Davis 1995; Card 1983), can apply regressively and progressively across word edges within a genitive construct (Jaradat 2018). This indicates that the components of a genitive construct are strongly adjacent and they act like a single lexical word.

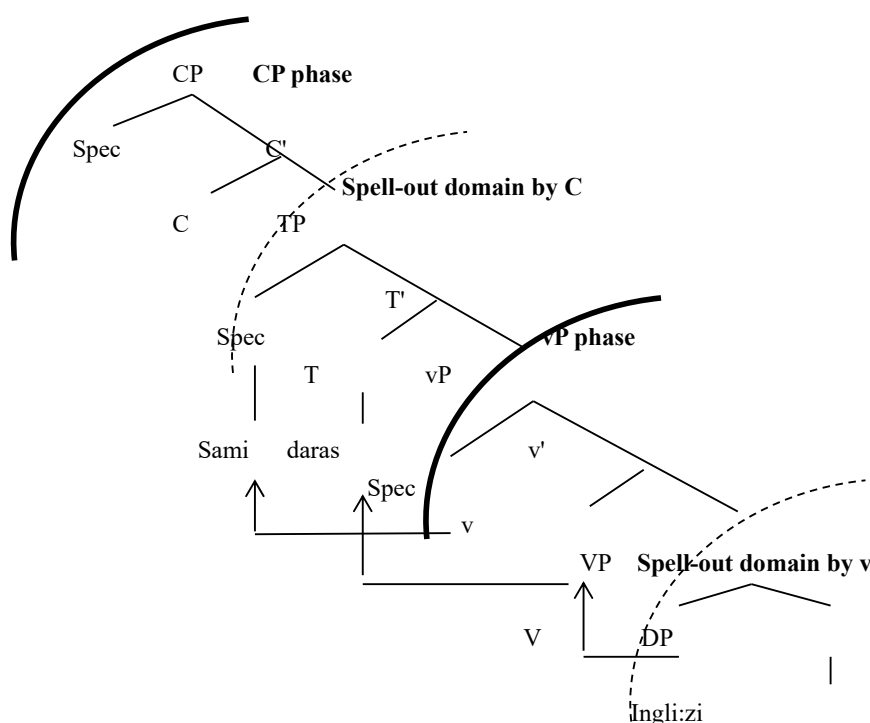
To sum up, the suffix *-t* is realized when it occupies a constituent-internal position and the elements of this constituent must be immediately adjacent syntactically and phonetically. We propose that this immediate adjacency within the application contexts of t-liaison, i.e. the genitive construct and *N-t-clitic* structure, is a consequence of

spelling out each one as an impenetrable domain to the phonological form. Before presenting a phase-based account to t-liaison, I introduce Phase Theory (Chomsky 2000, 2001, 2005) and spell-out domains in the following section.

4. Phases and Spell-out domains

Phase Theory (Chomsky 2001) basically introduces a new approach to syntactic derivation. In this theory, the syntactic structure is cyclically derived in chunks called phases. For Chomsky, phases are vP and CP. The head of each phase, i.e. v and C, can spell out its complement to interfaces, the logical form and the phonological form. In (16), vP and CP are phases (the left boundary of each phase is marked by a curved bold line). The head v and C spell out their complements, VP and TP, to interfaces. I assume that the subject *Sami* and V *daras* in the syntactic tree in (16) move up to Spec-TP and T respectively before spelling out any domain. The first spell-out domain that is transferred to interfaces by the head v is VP (the left boundary of each spell-out domain is marked by a curved dotted line). This spell-out domain contains the object DP *inglizi*. Then, TP which contains *Sami* and *daras* are spelled out by the head C.

(16) Phases and spell-out domains:



In this theory, syntactic operations apply within cycles: all possible syntactic operations on nodes that constitute the complement of little v (i.e. they are VP, V and DP) in (16) must apply first. The verb *daras*, for example, moves up cyclically out of VP in two steps before spelling it out. Once VP is spelled out to interfaces by the little v head, no more syntactic operations are allowed to apply within this spell-out domain. Then, the cyclic syntactic derivation proceeds. Since *daras* left VP before shipping it to interfaces, syntactic operations can apply on it: it may move up further in the syntactic tree for a certain reason, but before C spells out its complement. One C spells out its complement, including TP, T', vP and v', no further syntactic operations are allowed to apply on these nodes and their daughters since they constitute an impenetrable spell-out domain.

It has been proposed in several studies (e.g. Dobashi 2003; Adger 2006; Ishihara 2007; Kratzer and Selkirk 2007; Kahnemuyipour 2009) that transferring domains to interfaces, especially the phonological component, has its own

consequences on some phonological phenomena, including the metrical and prosodic representations of the transferred domains. Specifically, spell-out domains can be the basis on which the metrical and prosodic representations should be formed: parsing syntactic constituents to corresponding prosodic units and assigning non-lexical stress may take place while or after spelling out domains to interfaces. Kratzer and Selkirk (2007), for instance, formulated a condition called the Highest Phrase Condition to account for phrasal stress assignment in English. The condition requires the phrasal stress to be assigned to the highest XP in a spell-out domain. Adger (2006) also proposed that the metrical grid in Scottish Gaelic can be based on the spell-out algorithm: a stress mark in the metrical grid must be assigned to a domain once it is spelled out to interfaces.

As mentioned above, some previous studies proposed that the phonological component comes after shipping a syntactic domain to interfaces, and therefore this component is sensitive to spell-out domains. In the following section, we account for the application of t-liaison, which is a phonological process, and I propose that the realization of the feminine suffix *-t* in Jordanian Arabic is determined by referring to spell-out domains: it is realized when it occupies a spell-out domain-internal position and it is suppressed or produced as *-h* in a spell-out domain-final position.

5. Discussion: a phase-based account to t-liaison in Jordanian Arabic

In Section 3, it has been shown that there are two contexts in which t-liaison is realized in Jordanian Arabic: in genitive construct-internal position and in *word-t-clitic* environment. In this section, I will show that the suffix *-t* occupies a spell-out domain-internal position in each of these contexts. I will introduce the internal structure of the genitive construct and how it is shipped to interfaces as a spell-out domain by a D head in Jordanian Arabic. I will also explain how the distribution of the suffix *-t* within a spell-out domain determines its phonetic realization.

A theoretical issue that should be addressed first is the nature of DP in Arabic. Are DPs phasal in Arabic? Chomsky (2001) proposed that phases are essentially syntactic reflexes of the semantic notion of proposition. He argued that CPs and vPs are phases since they are syntactic reflexes of propositionhood. However, it has been raised in several studies that other phrases, such as TP and DP, can be propositional and phasal (Epstein and Seely 1999, 2006; Bošković 2002, 2014; Fox and Lasnik 2003; Fox and Pesetsky 2005; Adger 2006; Boeckx and Grohmann 2007 among others). I propose that DP is phasal in Arabic since the components of a DP is not subject to extraction. For example, the first or the second element of the genitive construct, which is a DP, in (17) cannot be extracted out of the genitive construct, as shown in the ungrammatical forms in (17) since its movement out of its containing DP violates Phase Impenetrability Condition (Chomsky 2001).

17. kutub-u rajul-in
 Book.PL-NOM man-ACC-INDEF
 'A man's books'.
 *a. ?ajju rajul-i-n₁ suriqa kutub t₁
 Which man-ACC-INDEF steal.PST.PASS.3SM book.PL
 *b. ?ajj-u kutub-i-n₁ suriq-at t₁ rajul
 Which book.PL steal.PST.PASS.3SM-F man-ACC-INDEF

This means that *kutub al-rajul* is the complement of D head, and therefore extracting one of its elements is ungrammatical.

5.1. Genitive constructs

Genitive constructs are found in Modern Standard Arabic and colloquial varieties. It consists of a head N followed by a NP. The head N is called in Arabic *al-muDa:f* "annexed" and the following NP is *al-muDa:f ilajh* "The annexed

to". The definiteness of the entire genitive construct always matches the definiteness status of the embedded NP, the annexed to. In (18), NP1 at the right of the genitive construct is definite; therefore, the entire genitive construct is definite:

- (18) NP₂[N[ba:b] NP₁[il-be:t]]
 Door DEF-house
 'The house door'.

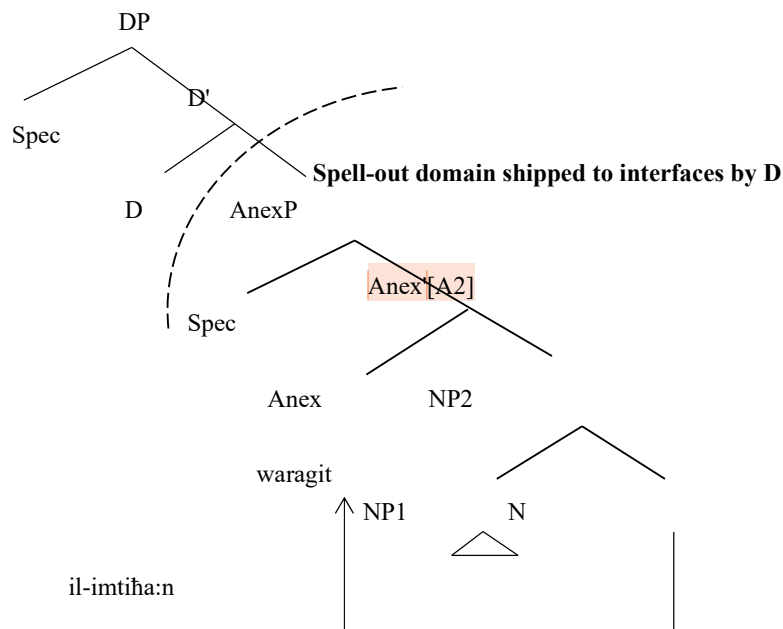
On the contrary, the entire genitive construct in (19) is indefinite due to the fact that the definite article does not show up to the left of NP1 *be:t*. Modern Standard Arabic marks a noun as indefinite by nunation, whereas Jordanian Arabic and most Arabic varieties lack nunation.

- (19) NP₂[N[ba:b] NP₁[be:t]]
 Door house
 'A house door'.

In previous studies, the genitive construct has been dealt with as either one DP (e.g. in AlQahtani 2016) or two DPs (e.g. Siloni 2002; Benmamoun 2006; Almansour 2012). In this study, we propose that it forms one DP. In the following syntactic tree of the genitive construct in (20a), genitive construct DP dominates AnexP. The head of AnexP triggers the head-to-head movement of *ktā:b* from N to Anex to have the right word order. Then, the D head transfers its complement (starting from AnexP to the bottom of the syntactic trees) to interfaces. This spell-out domain contains the entire genitive construct.

- (20) a. waragit il-imtiḥa:n
 sheet-F DEF-exam
 'The exam sheet'.

b.



One of the consequences of shipping the genitive construct as a spell-out domain is that this construct becomes inaccessible to syntactic operations such as inserting an intervening word between its elements. This is an important requirement in genitive constructs. In (21a), for instance, the post-construct adjective modifies *waragit*; however, it is ungrammatical that this adjective occupies an intervening position between the elements of the genitive construct, as shown in (21b):

(21) a. *waragi-t imtiḥan gadi:me[Ø/-h]*

Sheet-F exam old- Ø/F

'A copy of an old exam'.

* b. *waragit gadi:me-Ø/F imtiḥan*

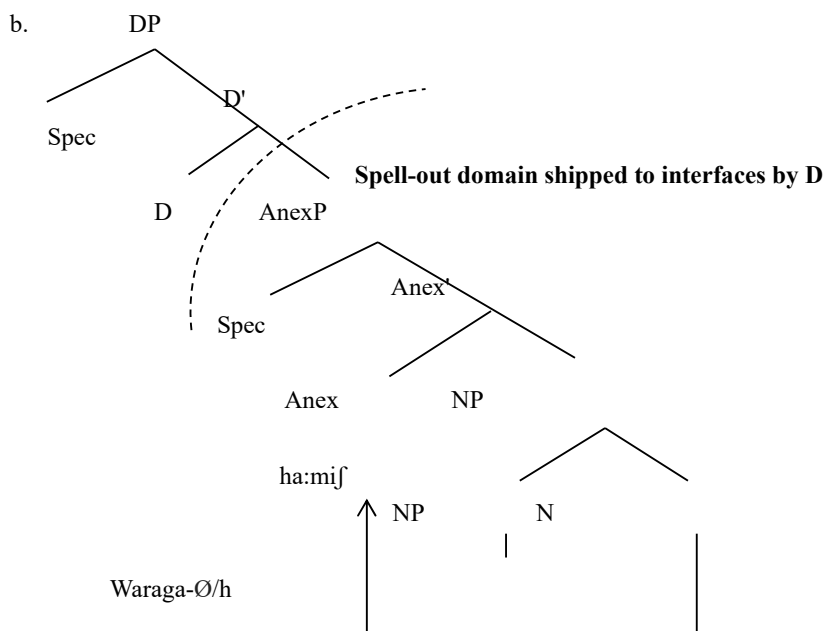
Sheet-F old-Ø/F exam

Once the genitive construct is shipped to interfaces as a spell-out domain, the phonetic variant of the feminine suffix must be determined. In (19b), the feminine suffix at the right edge of *waragit* occupies a spell-out domain-internal position: it is followed by the annexed to NP *il-imtiḥa:n* in the same spell-out domain. Therefore, the suffix must be phonetically realized. On the contrary, the feminine suffix is suppressed or produced as a fricative *-h* at the right edge of *waragit* in (22b) due to its distribution in its containing spell-out domain: it coincides with the right edge of its containing spell-out domain. It is the ultimate phonetic material in its domains.

(22) a. *ha:mif waraga-[Ø/h]*

margin sheet-Ø/F

'The margin of a sheet'.

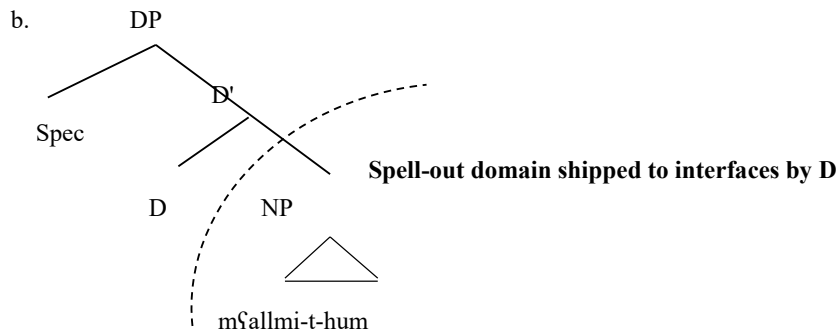


In the following subsection, I will show that the second context in which the suffix *-t* is realized, i.e. *N-t-Clitic*, is also syntactically governed: its distribution within its containing spell-out domain determines whether it is phonetically realized or not.

5.2. The suffix *-t* and pronominal clitics

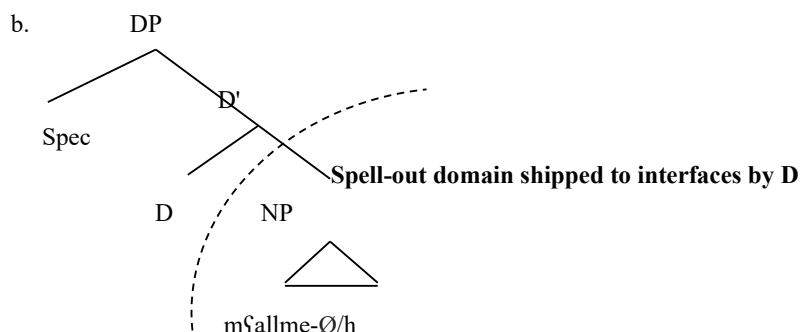
Similar to genitive constructs, a noun followed by the suffix *-t* and a pronominal clitic is a DP. Following the same lines introduced in 5.1, a DP is treated here as phase and it has a D head that can ship its complement to interfaces. In (23), *mʕallmi-t-hum*, which is under NP, is spelled-out by D. Similar to what has been proposed to account for the suffix *-t* within genitive constructs, its realization in (23) is decided by referring to its distribution in the containing spell-out domain. The suffix is in spell-out domain-internal position: it is followed by some phonetic material, i.e. the pronominal clitic *-hum*, in the same domain. Therefore, it is realized.

- (23) a. *mʕallmi-t-hum* #
 teacher-F-3PL.POSS
 'Their teacher'.



In the absence of a pronominal clitic, the suffix *-t* will automatically be in a spell-out domain-final position. Hence, it will be suppressed or pronounced as *-h*, as show in (24).

- (24) a. *mʕallme-Ø/h*#
 teacher-Ø/F
 'A teacher'.



5.3. The phase-based account and prosodic variability

This phase-based account can predict that the presence of an intervening prosodic boundary between the elements of a t-liaison context, either genitive construct or *N-t-Clitic*, will not block the application of this phonological process. The phonetic status of the suffix *-t* which is determined immediately after spelling-out its containing syntactic domain cannot be reversed at the phonological component (e.g. by intervening boundaries or pauses). In (25a&b), although a full pause is inserted immediately after the suffix *-t* within the genitive construct and *N-t-Clitic* structure, the suffix remains realized.

(25) a. waragi-**t** # il-imtiḥa:n
 sheet-F DEF-exam
 'The exam sheet'.

b. mʕallmi-**t** # -hum
 teacher-F -3PL.POSS
 'Their teacher'.

We propose that a prosodic boundary or a full pause between the elements of a genitive construct does not entail that the genitive construct is not as a single spell-out domain. It rather indicates that the process of word insertion, which comes after spelling out the genitive construct by D to the phonological level, has not done yet. This can be explained further from a perceptual perspective: when a native speaker of Jordanian Arabic perceives the first word of a genitive construct, he/she will wait to perceive the rest of this genitive construct. This indicates that the target syntactic structure (i.e. genitive construct) and the phonetic status of the suffix *-t* has been already determined although the entire genitive construct is not produced in its full form. In (26a), for example, the second word of the genitive construct has not been uttered yet; however, native speakers can rely on their intuition and guess that the coming word is the complement of a genitive construct once the suffix *-t* is realized at the right of *gra:ji-t*.

(26) a. baḥib gra:ji-t ...
 Like.1SG reading-F
 'I like reading...'.
 *b. baḥib gra:ji-[Ø/h] ...

The complement of the genitive construct in (26) could be *il-riwaja:t* "novels", *il-kutub* "books" or any other NP that can fit the internal structure of a genitive construct. On the contrary, the suppression of the suffix *-t* at the end of *gra:ji*, as shown in (26b), indicates that the structure is ungrammatical. The reason of ungrammaticality is that the phonetic realization of *-t* has been confirmed and cannot be reversed at the phonological component.

Finally, restructuring two Φ s of the post-modified NP in (27a) into one large Φ in (27b) in fast rate of speech will not trigger the application of t-liaison at the end of *il-kilme-[Ø/h]* due to the same reason that has just been proposed: the manipulation of the phonological form after spelling out a domain in which the suffix *-t* occupies the final position will never reverse the blockage of t-liaison. More specifically, *il-kilme-[Ø/h]* and *il-Tajj.be-[Ø/h]* belong to two different DPs, and therefore each one is spelled out to interfaces in a separate domain. Accordingly, t-liaison is blocked at the right of *il-kilme-[Ø/h]* since it occupies a spell-out final position. The prosodic restructuring in (27b) will not change the status of the feminine *-t* because the blockage of t-liaison has been decided at the time of spelling out *il-kilme-[Ø/h]*.

(27) a. il-kilme-[Ø/h] il-Tajj.be-[Ø/h]
 () Φ () Φ
 DEF-word-F. DEF-good-F

'A nice word'.

b. NP₂[NP₁[il-kilme-[Ø/h]] AP[il-Tajj.be-[Ø/h]]]
()_Φ

Before concluding this paper, an interesting point that needs to be discussed and has been raised by a reviewer is that the feminine suffix can be followed by a PP that is contained in the same spell-out domain, as shown in (28); however, the realization of the suffix is not permitted. As a reply to this comment, I suggest that this PP embeds a DP, which is amriikij-eh in (28). This embedded DP is also phasal. Therefore, the feminine suffix at the right of li-ktaab-ih will not be realized in this case.

(28) li-ktaa.bi-h ʕan amriikja mali: h-ih
DEF-writing about America good
"Writing about America is good (work)"

6. Conclusion

In this paper, we have shown a new account to t-liaison, the realization of the feminine suffix *-t*, in Jordanian Arabic. This account is based on the principles of Phase Theory (Chomsky 2001). We have shown that the realization of the feminine suffix *-t* is determined just before a syntactic domain is transferred to the phonological form. This suffix is realized under one condition, it must be in a spell-out domain internal position. Its suppression or pronunciation as fricative glottal *-h* is a consequence of its placement in spell-out domain final position. We have also shown that presenting t-liaison within a phase-based account explains why t-liaison is not affected by prosodic variability. We have suggested that manipulating the phonological form cannot block or trigger the application of t-liaison.

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دراسة تحليلية لظاهرة لفظ وإخفاء التاء المربوطة في اللهجة الأردنية

عبدالعزیز جردات¹، نجاح الزعبي²

ملخص

هذه الدراسة تركز على حالات إظهار وإخفاء تاء التانيث المربوطة في اللهجة الأردنية، الدراسات السابقة تشير إلى أن عملية إظهار وإخفاء هذه اللاحقة في أواخر الكلمات مبني على موقعها داخل شبة الجملة النحوية أو شبة الجملة الصوتية. عبدالغني (2010) أشار إلى أن هذه اللاحقة يجب أن تخفى إذا كانت في نهاية شبة الجملة النحوية، وتظهر في داخلها. وأما ياسين (2012) فقد افترض أنها تختفي في نهاية شبة الجملة الصوتية وتظهر في داخلها. وتبرز هذه الدراسة عدم قدرة الافتراض الصوتي على تفسير عدم تأثر تاء التانيث بعملية إعادة تشكيل شبة الجملة الصوتية. وبناء على ذلك، تقدم هذه الدراسة افتراضاً جديداً لتفسير عدم التأثر. والافتراض الجديد قائم على نظرية المرحلة (تشومسكي 2001)، وهو أن تاء التانيث تظهر داخل المرحلة النحوية وتخفى في نهايتها.

الكلمات الدالة: إظهار التاء المربوطة، نظرية المرحلة، حقول راحلة، اللهجة الأردنية.

* جامعة العلوم التطبيقية، الجامعة الهاشمية.
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