

**LANGUAGE IN INDIA**  
**Strength for Today and Bright Hope for Tomorrow**  
**Volume 10 : 3 March 2010**  
**ISSN 1930-2940**

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**Coda Deletion in Yemeni Tihami Dialect (YTD) -  
Autosegmental Analysis**

**Abdulghani M. A. Al-Shuaibi, Ph.D.**

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**Abstract**

This paper investigates coda deletion phenomenon in Yemeni Tihami dialect (YTD). The paper presents an autosegmental analysis of coda deletion determining how the phonological process takes place.

The study is conducted theoretically and supported by practical evidence from the Yemeni Tihami context. The data were analysed and examined within the framework of the Autosegmental Phonology Theory. Methodologically, the data were elicited by employing different methods, viz. Swadesh list, the two tasks of Labovian models - word list reading and passage reading, interviews, oral phonology questionnaires, recordings and participant observations.

As a consequence of the autosegmental analysis, the findings affirmed that the postulation of Spencer (1996: 77) that says ‘the loss of a coda consonant leads to a lengthening of the nucleus of that syllable’ is not applicable to YTD. Therefore, evidence from YTD demonstrates that the postulation of Spencer (1996) is probably applicable to some, but definitely not all, languages/dialects of the world as illustrated in YTD, and thus is not a universal.

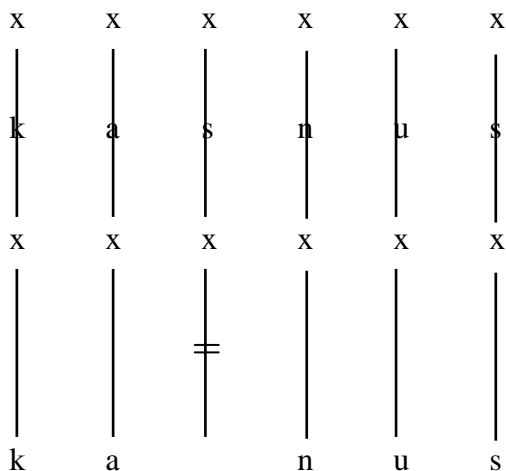
*Keywords:* Deletion phenomenon, vowel lengthening, coda deletion, syllabification, diphthongisation, Autosegmental Phonology Theory, phonological analysis.

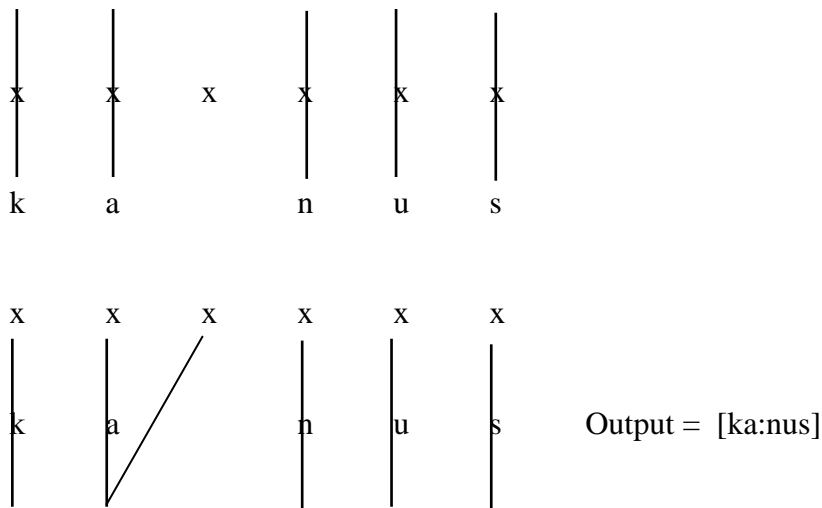
## 1. Introduction

The phonological process of deletion phenomenon in YTD takes place in the coda position. The coda [d] of the final position of the root is deleted when appended to an enclitic causing no lengthening of the nucleus of that syllable. In this regard, Spencer (1996: 77) in his explanation of syllabification states that ‘the loss of a coda consonant leads to a lengthening of the nucleus of that syllable’. The word /kasnus/ [ka:nus] from Latin language is exemplified by Spencer to underpin his postulation. Evidence from YTD, based on the framework of Autosegmental Phonology Theory, illustrates that elicited fieldwork data from the context of YTD does not come in line with the claim which assumes the loss of coda syllable usually cause a lengthening of the nucleus of that syllable as postulated by Spencer (1996) in his explanation of syllabification.

## 2. Hypothesis

It is postulated that ‘in many languages the loss of a coda consonant leads to a lengthening of the nucleus of that syllable. The two components of this process are linked rather than being just two independently operative processes which accidentally occur together, because in those languages that exhibit it we do not generally find the lengthening without the coda deletion. Moreover, compensatory lengthening is a phenomenon in the world’s languages’ (Spencer, 1996: 77 -78). Besides, Spencer (1996) represents the processes of deletion and lengthening by virtue of separating the timing tier from the melody. To underpin his postulation, he cites one example from Latin language as follows.





### 3. Review of Related Literature

Compensatory lengthening is a phonological phenomenon which takes place in world's languages/dialects. It is 'the name given to process in which the loss of a particular segment is compensated for by the lengthening of an adjacent segment in the phonological string' (Harris, 1994: 34; Spencer, 1996).

A good example can be seen in Standard Malay language (see Tajul Aripin, 2000). In Standard Malay, this phonological phenomenon occurs at the right edge of a root and at the right edge of a prefix as shown below (Ibid).

#### 3.1. a. *root-internally*

Underlying Form	Output	Meaning
/tuka(r)/	[tuka:]	change
/baka(r)/	[baka:]	burn
/sama(r)/	[sama:]	blur
/koto(r)/	[koto:]	dirty

#### 3.1. b. *PW-internal CL: root + suffix boundary*

Underlying Form	Output	Meaning
/tuka(r) + kan/	[tuka:kan]	to change
/tabo(r) + kan/	[tabo:kan]	to spread

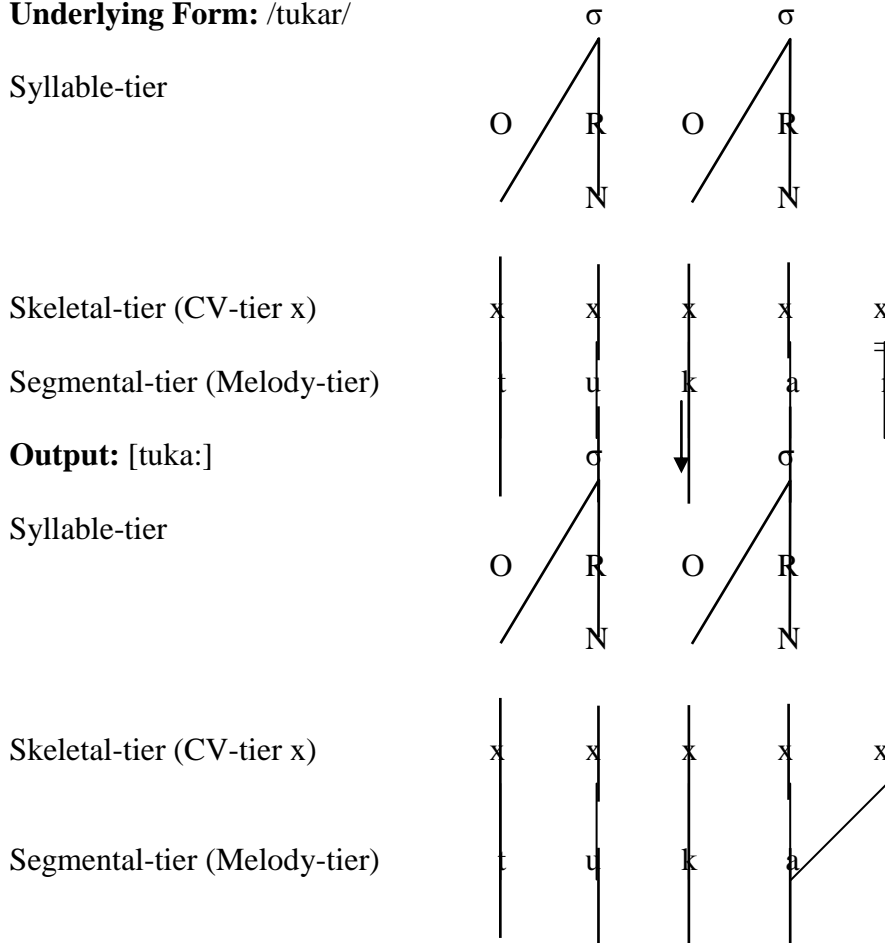
#### 3.1. c. *PW-internal CL: prefix + root boundary*

Underlying Form	Output	Meaning
/bə(r) + maen/	[bə:maen]	to play

/pə(r) + kata + an/    [pə:kataʔan]    word  
 /tə(r) + pakai/        [tə:pakai]        used

As seen in the examples above, whenever the coda /r/ is delinked the nucleus of the syllable lengthens. The deletion of the coda /r/ helps bring out the phonological process of lengthening as postulated by Spencer (1996). The assumption of vowel lengthening is also illustrated by Harris (1994) as a compensatory lengthening resulting from coda deletion. In fact, the review of these examples is apt to relate to the present phonological analysis of deletion phenomenon in YTD. The phonological process of the examples cited in 3.1.a can be diagrammed as presented in Tajul Aripin (2000) as follows:

**Underlying Form:** /tukar/

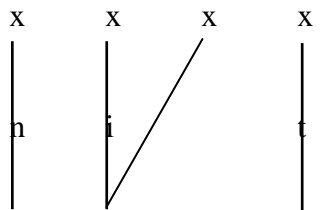
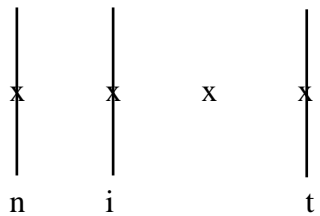
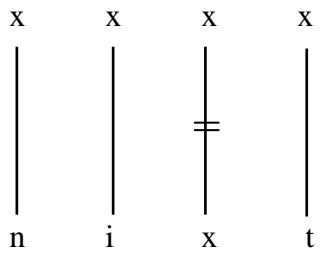
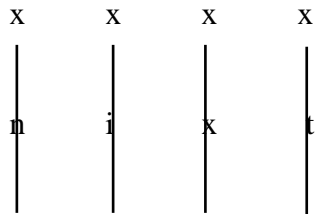


Furthermore, by way of illustration, Harris (1994) gives some examples from English as it appears in the historical sequence *ixt*, reflected in the spelling of the words ‘right, night, sight, might’; something like the original pronunciation is retained in Scots. It obviously shows that the fate of the voiceless velar fricative *x* is deleted. These examples can be laid out in 3.2 as follows:

3.2

Underlying Form	Output	Meaning
/nixt/	[ni:t]	night
/rixt/	[ri:t]	right
/mixt/	[mi:t]	might

The phonological process of the examples from Scot cited in 3.2 can be diagrammed as follows:



Output = [ni:t]

## 4. Discussion and Analysis

### 4.1 Deletion

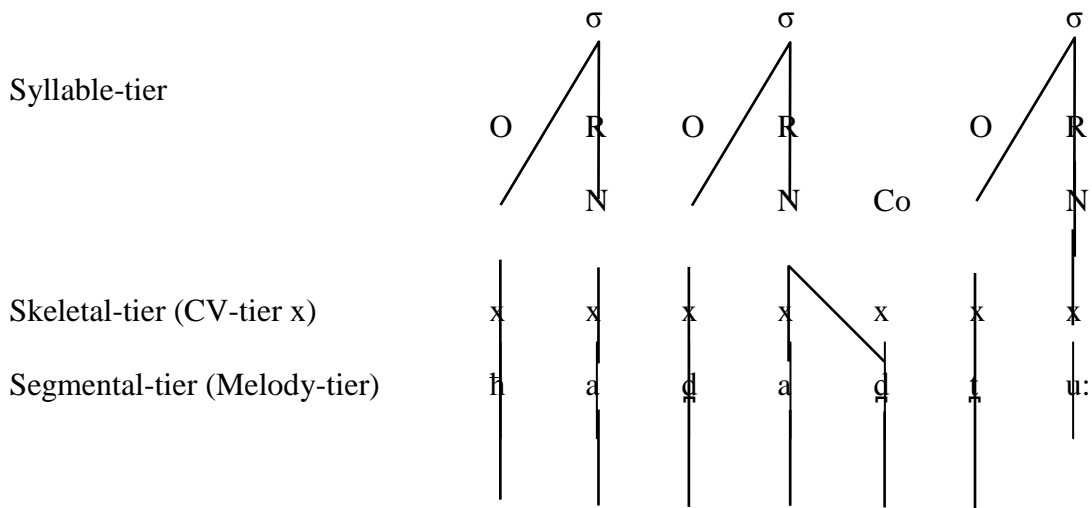
The phonological process of deletion in YTD takes place in the coda position. The coda [d̥] of the final position of the root is deleted when appended to an enclitic. In this regard, Spencer (1996: 77) in his explanation of syllabification states that ‘in many languages the loss of a coda consonant leads to a lengthening of the nucleus of that syllable’. The word /kasnus/ [ka:nus] from Latin language is exemplified by Spencer to underpin his postulation. In contrast to Spencer’s postulation, fieldwork data from the YTD context contradict with his claim.

The coda [d̥] of the penultimate syllable is deleted causing no lengthening in the nucleus of the syllable. Therefore, this evidence from YTD demonstrates that the postulation of Spencer (1996) is probably applicable to some, but definitely not all, languages/dialects of the world since it is unapplicable to YTD, and thus is not a universal. The following evidence from the context of YTD is illustrated in the examples below.

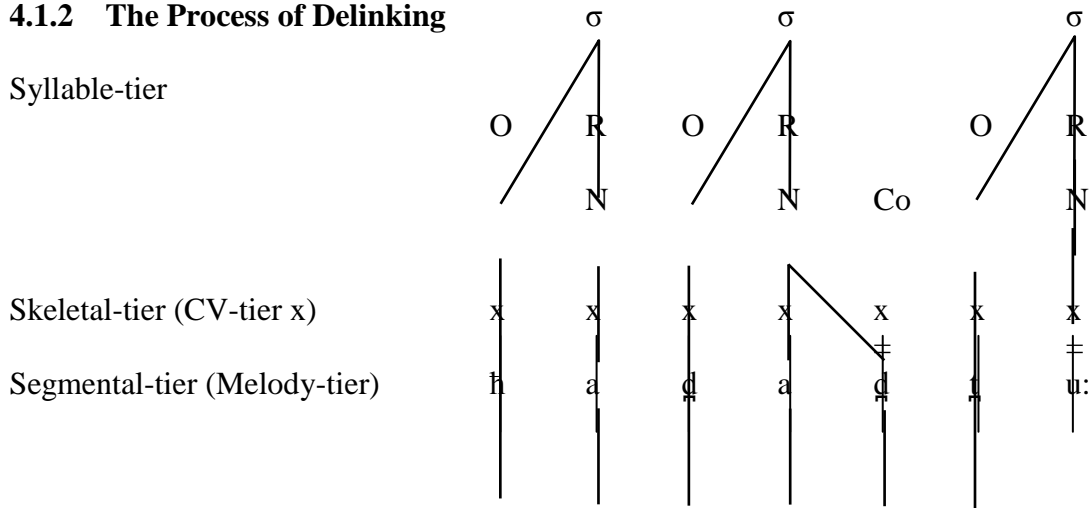
	Underlying Form	Output	Meaning	
a.	/ħaɖaɖ + t̥ u:/ حَدَدْتُ	[ħaɖaɖ̥]	حَدْتُ	I specified
b.	/ħaɖaɖ + t̥ u:/ هَدَدْتُ	[ħaɖaɖ̥]	هَدْتُ	I threatened
c.	/saɖaɖ + t̥ u:/ سَدَدْتُ	[saɖaɖ̥]	سَدْتُ	I cleared
d.	/dʒaɖaɖ + t̥ u:/ جَدَدْتُ	[gaɖaɖ̥]	جَدْتُ	I renewed
e.	/naɖaɖ + t̥ u:/ نَدَدْتُ	[naɖaɖ̥]	نَدْتُ	I denounced
f.	/ħaɖaɖ + t̥ a/ حَدَدْتَ	[ħaɖaɖ̥]	حَدْتُ	you specified
g.	/ħaɖaɖ + t̥ a/ هَدَدْتَ	[ħaɖaɖ̥]	هَدْتُ	you demolished
h.	/dʒaɖaɖ + t̥ a/ جَدَدْتَ	[gaɖaɖ̥]	جَدْتُ	you renewed
i.	/saɖaɖ + t̥ a/ سَدَدْتَ	[saɖaɖ̥]	سَدْتُ	you cleared
j.	/ʕaɖaɖ + t̥ a/ عَدَدْتَ	[ʔaɖaɖ̥]	عَدْتُ	you counted
k.	/naɖaɖ + t̥ a/ نَدَدْتَ	[naɖaɖ̥]	نَدْتُ	you denounced
l.	/ħaɖaɖ + t̥ a/ هَدَدْتَ	[ħaɖaɖ̥]	هَدْتُ	you threatened

In fact, the evidence elicited from the context of YTD above does not support the theoretical claim which assumes the loss of coda syllable usually cause a lengthening of the nucleus of that syllable as postulated by Spencer (1996) in his explanation of syllabification. Based on the framework of Autosegmental Phonology Theory, this phonological process can be clearly shown in the illustrative diagrams below.

#### 4.1.1 Underlying Form /ħaɖaɖ + t̥ u:/ ‘I specified’

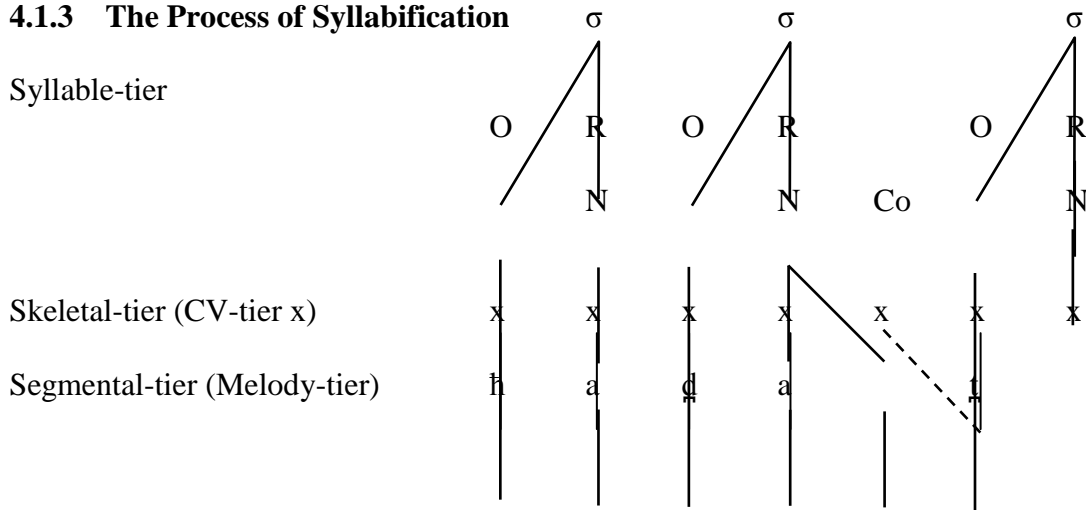


#### 4.1.2 The Process of Delinking



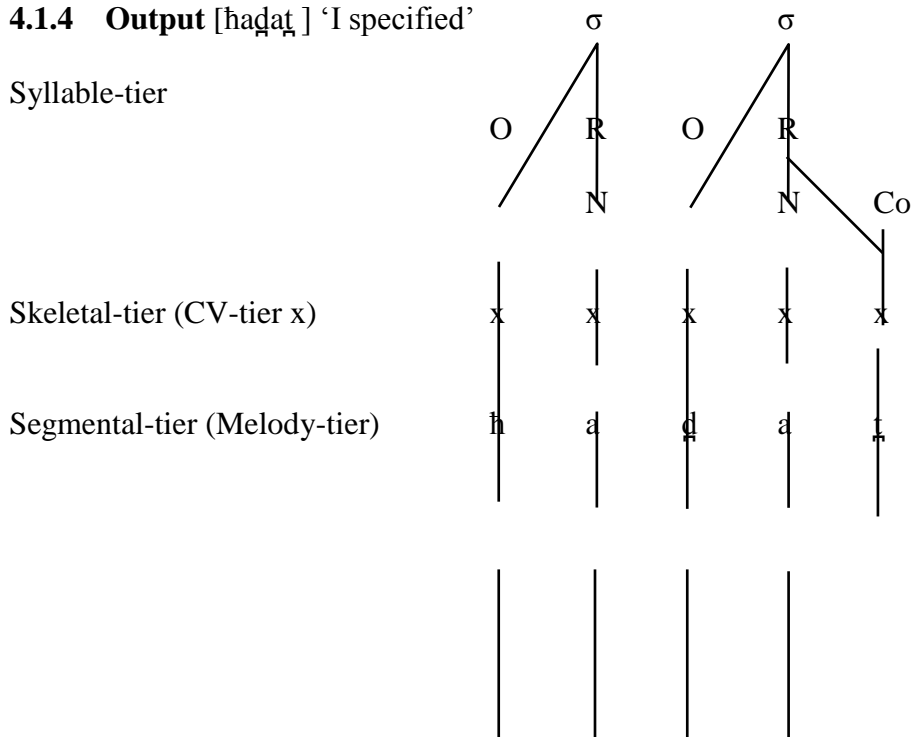
The process in **4.1.2** illustrates the delinking of the coda [d] of the second syllable and the nucleus of the final syllable. As a result of this delinking, the onset [t] of the final syllable is syllabified with the coda of the second syllable as in **4.1.3**.

### 4.1.3 The Process of Syllabification



The following diagram illustrates the output process of deletion in YTD. The word [ħad̩at̩] 'I specified' is exemplified as follows:

### 4.1.4 Output [ħad̩at̩] 'I specified'





Furthermore, Spencer (1996: 76-77) goes further on to aver in his postulation ‘since the nucleus is a subconstituent of the rhyme, if the nucleus branches, then we can also say that the rhyme of which it is a constituent branches’. This claim also contravenes with the phonological process of YTD as seen in 4.2, namely diphthongisation. It demonstrates that a subconstituent (the nucleus /a/) of the rhyme is diphthongised into [eɪ] after branching; however, Spencer claims that the nucleus is lengthened after branching as exemplified in [ka:nus]. He asserts ‘we do not generally find the lengthening without the coda deletion’ (Spencer, 1996: 78).

In other words, the lengthening is monophthongal as illustrated in [ka:nus]. However, fieldwork data from YTD demonstrate that the nucleus is diphthongal rather than monophthongal as postulated. The conclusion here may be said that the postulation of Spencer (1996) is probably applicable to some languages as in Standard Malay, Scot and Latin (see examples in literature review), but definitely not all languages/dialects of the world as the fieldwork data of YTD show in 4.2.

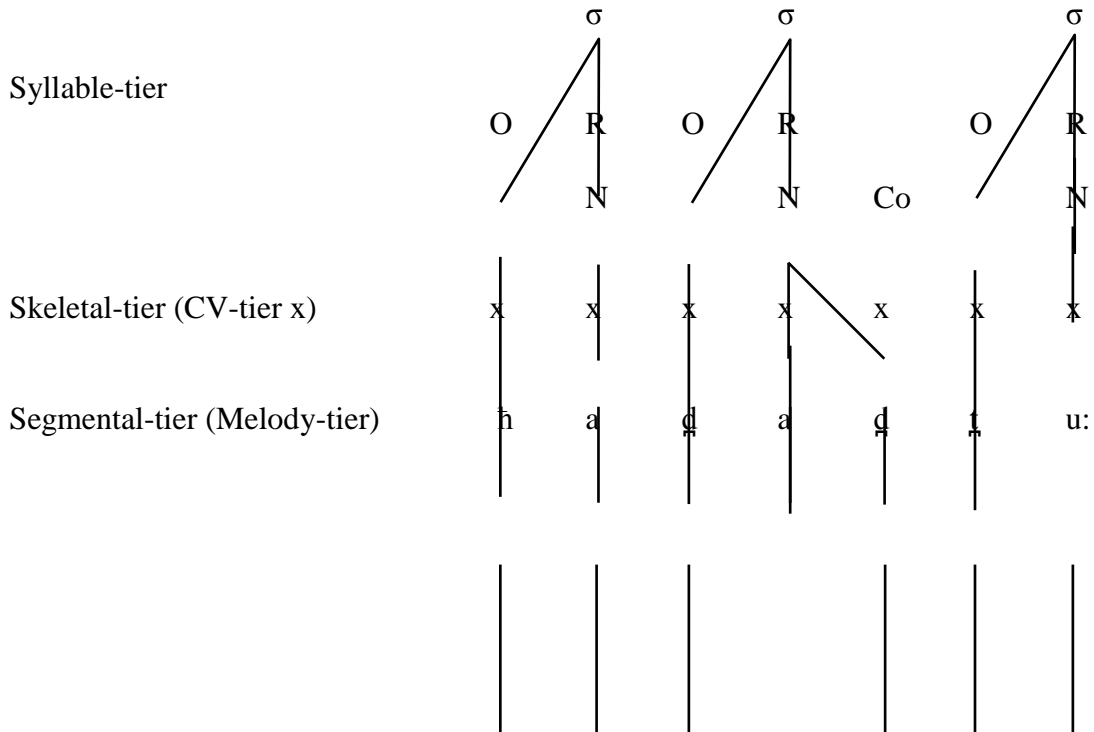
## 4.2 Diphthongisation

According to Crystal (1997: 117), diphthongisation is ‘the term used to describe a process where a monophthong has become a diphthong (has been ‘diphthongised’), as in cases of historical or DIALECT change. Diphthongs are transcribed using symbols which represent the extremes of vowel movement between the two positions, as in [ai] for the vowel in *fine*’. Similarly, YTD undergoes the process of diphthongisation as in 4.2. The following words show one of the phonological processes (diphthongisation phenomena) in YTD. This phonological process of diphthongisation is found to take place in the penultimate syllable of the word.

Underlying Form	Output	Meaning
a. /haɖaɖ + t̪ u:/ حَدَدْتُ	[hæɖeɪt̪]	حَدَيْتُ I sharpened
b. /haɖaɖ + t̪ u:/ هَدَدْتُ	[hæɖeɪt̪]	هَدَيْتُ I demolished
c. /saɖaɖ + t̪ u:/ سَدَدْتُ	[sæɖeɪt̪]	سَدَيْتُ I closed
d. /waɖaɖ + t̪ u:/ وَدَدْتُ	[wæɖeɪt̪]	وَدَيْتُ I hoped
e. /maɖaɖ + t̪ u:/ مَدَدْتُ	[mæɖeɪt̪]	مَدَيْتُ I stretched
f. /ʕaɖaɖ + t̪ u:/ عَدَدْتُ	[ʕæɖeɪt̪]	عَدَيْتُ I counted
g. /faɖaɖ + t̪ u:/ فَدَدْتُ	[fæɖeɪt̪]	فَدَيْتُ I stressed
h. /s'aɖaɖ + t̪ u:/ صَدَدْتُ	[s'æɖeɪt̪]	صَدَيْتُ I defended

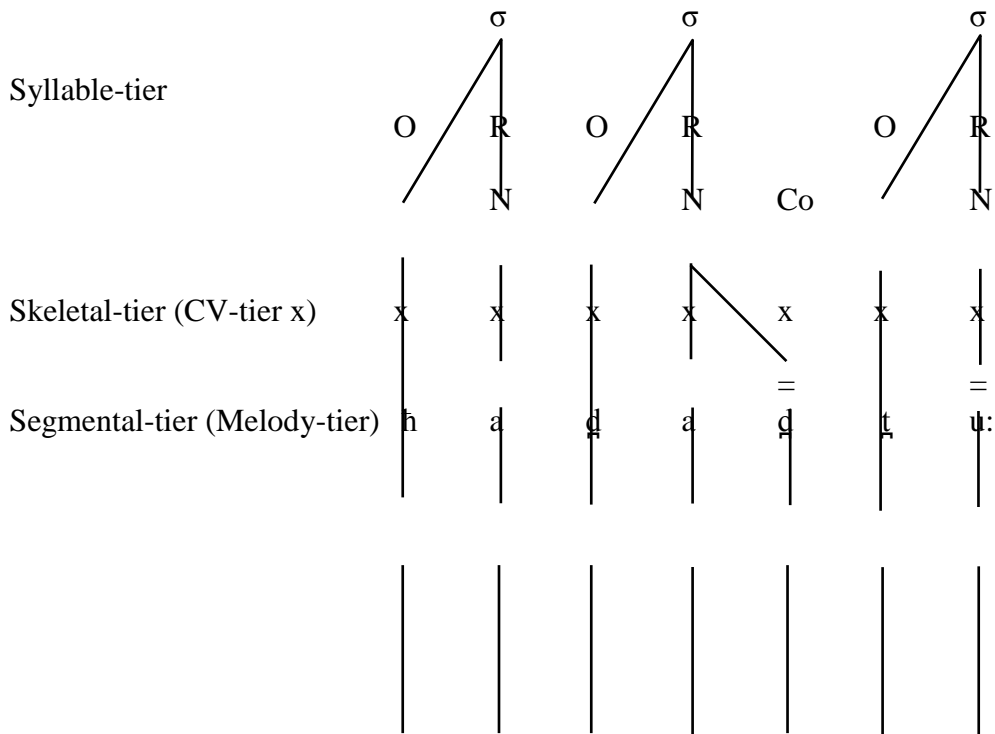
The phonological facts given in the examples 4.2 can be summarised and represented in the diagrams 4.2.1, 4.2.2, 4.2.3, 4.2.4 and 4.2.5 based on the framework of Autosegmental Phonology Theory as presented by Spencer’s (1996) as follows:

#### 4.2.1 Underlying Form /ħaḍaḍ + ʔu:/ ‘I sharpened’



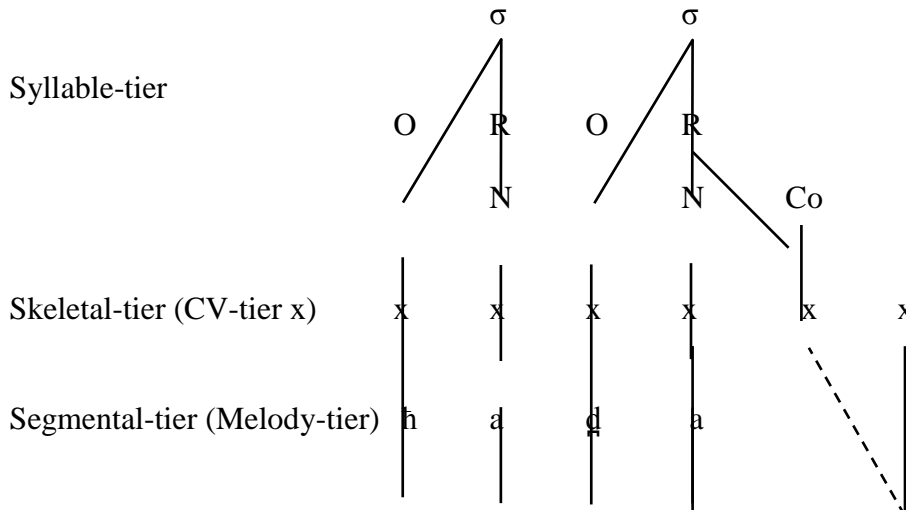
As the diagram shows above, the verb consists of three syllables in the underlying form of which the final syllable is an enclitic appended to the verb (root). The coda /ḍ/ of the penultimate syllable and the nucleus /u:/ of the final syllable are delinked simultaneously as in 4.2.2. Following that, the process of diphthongisation is resulted from meaning rather than deletion which contradicts with Spencer’s postulation, e.g., [ħaḍaḍ] ‘I specified’ and [ħaḍeḍ] ‘I sharpened’ ( see 4.1.a & 4.2.a), [ħaḍaḍ] ‘I threatened’ and [ħaḍeḍ] ‘I demolished’ (see 4.1.b & 4.2.b) and [saḍaḍ] ‘I cleared’ [saḍeḍ] ‘I closed’ (4.1.c & 4.2.c). The process of delinking is laid out in 4.2.2 as follows:

### 4.2.2 The Process of Delinking

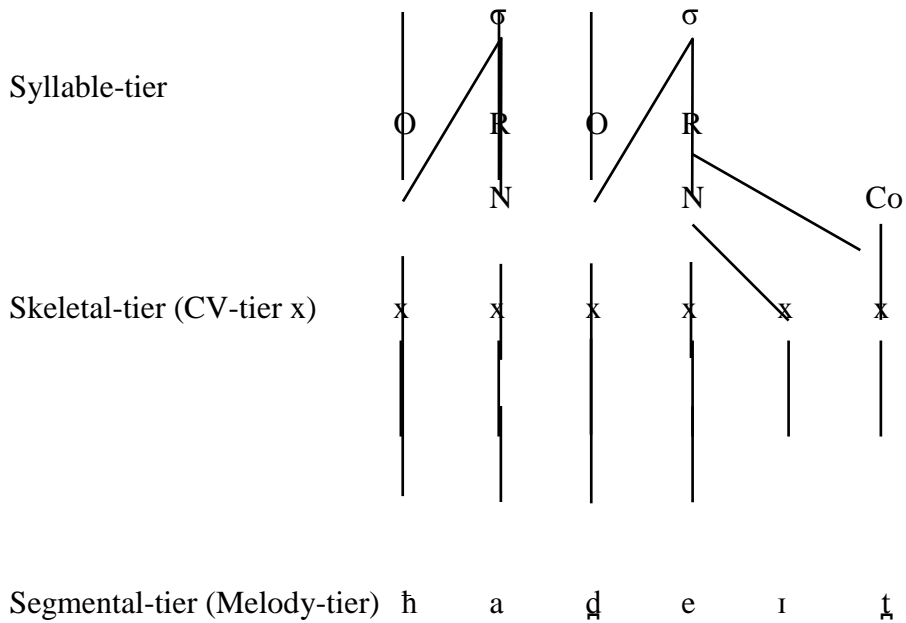


Having seen the presentation of the process of delinking in 4.2.2, following that, the onset of the final syllable syllabifies to the penultimate syllable as seen in the process of syllabification in 4.2.3 below. The diagram 4.2.3 illustrates the process of syllabification in which the onset [t] relinks to the vacated timing slot in the penultimate syllable.

### 4.2.3. The Process of Syllabification



### 4.2.4 The Process of Diphthongisation /a/ → [eɪ]

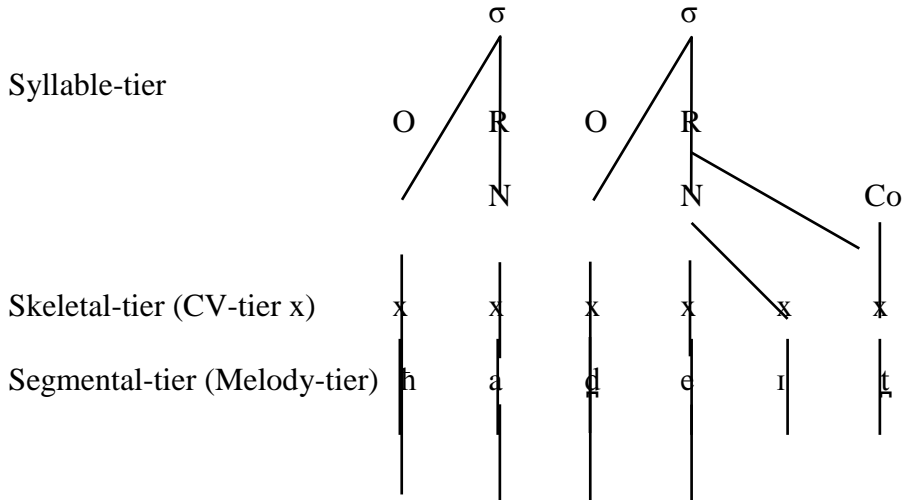


As the nucleus constituent branches, as explained in Spencer (1996), the whole of the rhyme constituent branches as well. Spencer (1996: 76-77) avers 'since the nucleus is a

subconstituent of the rhyme, if the nucleus branches, then we can also say that the rhyme of which it is a constituent branches’.

This fact can be seen in the phonological process of diphthongisation in YTD as displayed in the diagram 4.2.4. It demonstrates that a subconstituent (the nucleus /a/) of the rhyme is diphthongised into [eɪ]. Thus, the nucleus of the penultimate syllable in the underlying form becomes [eɪ] in the output which is related to meaning rather than the loss of coda as assumed by Spencer (1996). The following diagram is the output of this phonological process:

#### 4.2.5 Output [ħadɛɪt] ‘I sharpened’



### 5. Conclusion

In sum, these findings affirm that the postulation of Spencer (1996: 77) that says ‘the loss of a coda consonant leads to a lengthening of the nucleus of that syllable’ is not applicable to all languages/dialect as illustrated in YTD above. Therefore, evidence from YTD demonstrates that the postulation of Spencer (1996) is probably applicable to some, but definitely not all, languages/dialects of the world and thus is not a universal. Another conclusion can be drawn is that the words (disyllabic verbs) in YTD ends with close ended syllable as seen in the deletion phenomenon, while that of the underlying form ends with open ended syllable. Therefore, the examples demonstrate that tri-syllabic verbs in the underlying form become disyllabic ones in the output (YTD).

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