

Elision of the Lateral Sound Sun Laam in Definite Article in Arabic (AL)

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Abstract—This study investigates: what kind of sound change in the lateral sound (sun laam) before the coronal sound of Arabic (/ʃ/, /ð/, /ð̣/, /s/, /ṣ/, /d/, /ḍ/, /n/, /z/, /ẓ/, /θ/, /t/, /ṭ/, and /r/); the extent to which the coronal and the vowel sound cause the elision of the lateral sound and whether the elision of sun laam is the main indicator of geminate the coronal sound. The sample of the study is a list of Arabic words containing the coronal sound of Arabic initially and preceded by a definite article. The significance of this study shows the benefit of describing and analyzing the distinctive features of the immediate sounds within continuant speech for finding out what exactly causes changes in a phoneme in such speech. A descriptive analytic approach is used to describe the distinctive features of the sun laam and the coronal sounds, as well as to analyze the linguistic environment (the sound pattern including the definite article /ʔ/ /al/ before the coronal sound). The most important results are: the sun laam is completely elided before the coronal sounds. The elision of Sun Laam and the intensity of the vowel sound shape the geminate of the coronal sound.

Index Terms—elision, assimilation, consonant sounds, distinctive features, vowel sounds, Arabic language, sun laam

I. INTRODUCTION

In Arabic, pronunciation often conforms to the spelling, but in connected speech, one sound may influence or be influenced by the preceding or following sounds. Some oral sounds are changed to nasal sounds because of /n/ or /m/ occurring before or after the oral sounds. A voiced sound is changed to voiceless, or a tense sound is changed to a lax sound. These changes occur to these sounds because they lose some of their phonological distinctive features. This phenomenon is also common in English and is called by different terms due to the nature of the sound change, such as assimilation and elision (Ofulue et al., 2010).

Assimilation is a phonological process in which two neighbouring sounds one is changed to another because of some degree of similarity between their distinctive features. Elision is viewed by Roach (2009) as a phonological process that leads to producing zero vowel or consonant sounds. Rishidi and Shokrollahi (2010) report that the occurrence of elision is conditioned by the intervocalic position, coda position, and final position. Elision involves blocking or fortition environments of word-initial position or onset of stressed syllables where a consonantal change increases the degree of stricture.

A. Research Problem

Many Arabic studies have indicated that the lateral sound *sun laam* in a definite article in Arabic is completely assimilated by the coronal sounds after thoroughly reading many questions that have been raised about this phenomenon. The answers to these questions may show what kind of sound changes occur to the *sun laam* in a definite article and what causes motivate speakers of Arabic to change these sounds.

B. Research Questions

In the light of the above results from different related studies, many questions must be addressed to find the reasons why the *sun laam* is changed before the coronal sounds.

- (1) Why is the *sun laam* in the Arabic definite article *Al* /ʔ/ not assimilated by a coronal sound?
- (2) Why is the *sun laam* in the article *Al* /ʔ/ elided before a coronal sound?
- (3) Do the stressed coronal consonants of Arabic after the *sun laam* indicate any essential evidence of the *sun laam* being elided before them?

II. REVIEW OF RELATED LITERATURE

The *sun laam* sound /l/ in the definite article /ʔ/ in Arabic has two different pronunciations: one prominent and one assimilated by the neighbouring coronal sounds. According to ALmusawee (2007), the sound /l/ will be assimilated if the *sun laam* sound /l/ in the definite article /al/ precedes one of the coronal sounds (/ʃ/, /ð/, /ð̣/, /s/, /ṣ/, /d/, /ḍ/, n, /z/, /ẓ/, /θ/, /t/, /ṭ/, and /r/). This occurs because both sounds are very close in articulation. Here, *laam* is called the *sun laam*. Hall (1997) claims that such assimilation happens completely when the *sun laam* is before one of the coronal

consonants.

On the other hand, Heselwood and Watson (2013) reject the kind of assimilation of *sun laam* before coronal consonants of Arabic. To support their claim, they use illustrative acoustic and electropalatographic data. The results show there is not any evidence that Arabic speakers assimilate the *sun laam* to /z/, as in *al-zaffa*. They conclude that the articulation of the *sun laam* in the definite article before a coronal sound does not have the *sun laam* /l/, claiming that the existence of the *sun laam* /l/ is orthographically based and that it is risky to base any phonological analysis on orthographic evidence. Interestingly, they argue that the *sun laam* is not assimilated by the following coronal consonant. They conclude that the *sun laam* sound is elided and is not pronounced when followed by coronal consonants. They claim that the stress that occurs in a definite article plus a coronal consonant is not the result of simultaneous assimilation and that they should be considered as ‘true’ geminates, not assimilatory geminates.

Many questions have been addressed after reviewing the different conclusions by ALmusawee (2007) and Hall (1997). They do not base their claims on phonological analysis but on Sibawayh’s assumption, which states that in the production of coronal sounds, one or both of the two rims of the tongue glide and touches the point of articulating the *sun laam* /l/ and mixes with it. This phonological description neglects the different distinctive features of both the coronal and the *sun laam* sounds of Arabic. The two rims of the tongue take different shapes while articulating either *sun laam* or the different coronal sounds of Arabic. Heselwood and Watson (2013) reject the assimilation of *sun laam* because their study shows that there is no *sun laam* before articulating a coronal sound. They confirm that the *sun laam* in the definite article /l/ is assimilated by the coronal sound, as in word *alzam* /alzam/ (‘most necessary’), as well as the optional assimilation of word-final /l/ and in the word-initial /r/ in *ħabil raft* (‘a thin rope’).

III. METHODOLOGY

The sample examined in this study is a list of words that start with coronal sounds and are preceded by the definite Arabic article *al* (/l/). The study procedures are mainly based on the description of the distinctive features of the sound pattern of /al/ + coronal sound individually and in the articulation of continuant speech. All conclusions are obtained by means of a description comparison and analysis (a descriptive analytical method). To answer the research questions, a descriptive analytical approach must be used to:

- Describe the distinctive features of the lateral sound the *sun laam* /l/ and the coronal sounds to determine whether the lateral sound shares some of the distinctive features of the coronal sounds
- Compare the distinctive features of the coronal sounds of Arabic to the distinctive features of the lateral sound *sun laam* /l/ so as to find out what reason makes speakers change the sound before the coronal sounds of Arabic
- Describe the components of the linguistic environment where the sound /l/ is changed from *sun laam* /l/ to another sound
- Describe the articulation of each sound pattern including the definite article *al* / l/ + a coronal sound in continuant speech
- Analyse the continuant articulation of the whole sound pattern including the definite article *al* / l/ + the coronal sound to describe how the *sun laam* changes the articulation of the whole pattern
- Introduce the precise causes that lead the *sun laam* to lose its quality in its continuant articulation in the sound pattern of definite article + coronal sound

IV. RESULTS AND DISCUSSION

Assimilation is defined as replacing a sound by an adjacent sound because of the degree of similarity between them. To arrive at concrete answer, we should review the different distinctive features of the sounds *al* + coronal sounds individually. Furthermore, we must examine the different distinctive features of the *sun laam* in *al* / l/ to know whether there is similarity between them or not and to verify or reject the claim that /l/ is completely assimilated by the succeeding coronal sound.

A. Description, Analysis, and Discussion of the Result of Question 1

Table 1 presents the different distinctive features of the coronal sounds and lateral sounds in Arabic (the *sun laam*). The table shows that the different distinctive features of the coronal sounds /t/ and /t̤/ are alveolar stops, as are /d/ and /d̤/. /s/ and /s̤/ are alveolar fricative. /ʃ/ is palate-elveolar. /z/ and /z̤/ are alveolar fricative. /θ/ and /ð/ are dental fricative, and /n/ is alveolar nasal.

TABLE 1.

Group	Consonant sounds	Place of articulation			Manner of articulation				Voicing		Resonance		
		Dental	Alveolar	Palato-alveolar	Complete (stop) closure	Partial closure (affricate)	Narrow passage (fricative)	Lateral Sound		Voiced	Voice less	Oral	Nasal
								Lateral /liquid	Non-liquid latera				
A	/ʌ/		+		+						-	+	
	/ʌ/		+		+						-	+	
	/d/		+		+					+		+	
	/d/		+		+					+		+	
	/s/		+				+				-	+	
	/s/		+				+				-	+	
	/ʃ/			+			+				-	+	
	/θ/	+					+				-	+	
	/z/		+				+			+		+	
	/ð/	+					+			+		+	
	/z/		+				+			+		+	
B	/ʌ/		+					+	-	+		+	
	/r/		+					-	+	+		+	

The first group of sounds shows no similarity in their manner of articulation, place of articulation, and voicing features. The second group are the *sun laam* /ʌ/ and /r/, which are alveolar and lateral. The *sun laam* sounds /ʌ/ and /r/ show similarity in their place, manner, and voicing features, so the first kind of assimilation to the *sun laam* is caused by /r/ because this coronal sound has the same manner of articulation as the lateral sound /ʌ/.

The comparison shows big differences between the distinctive features of the first group of coronal sounds and the second group of lateral coronal sounds. Therefore, if the *sun laam* sound /ʌ/ in the definite article /al/ /ال/ is followed by coronal sounds, it will not be assimilated by them in continuant speech because assimilation occurs when two sounds have the same manner of articulation. Examples include as in the Arabic words /التمر/ (/altamr/ (date)), الطير (al-teir (birds)), الديك (al-deek (rooster)), الضب (aldhb (lizard)), السماء (alsama (sky)), الصبر (alsaber (patience)), الشهد (alshahd (honey)), الثمن (althaman (price)), الزمن (alzaman ((time)), الذئب (althib (wolf)), الظرف (aldharf (circumstance)).

These results are in agreement with those of Heselwood and Watson (2013) in that no assimilation occurs for the *sun laam* /ʌ/ in the definite article before the coronal sound. But the *sun laam* /ʌ/ is assimilated by the coronal sound /r/ only because the two sounds have the same place and manner of articulation, as in the example used by Heselwood and Watson (2013) in *habil raft* (a thin rope). Heselwood and Watson (2013) claimed that the *sun laam* sound /ʌ/ disappears when followed by a coronal sound in Arabic. It seems there that a complete elision occurs to the *sun laam* before the coronal sounds. The question arises of what causes the *sun laam* disappear after the coronal sounds. The cause does not concern the orthographical system of Arabic because almost Arabic spelling conforms to Arabic pronunciation. To arrive at concrete causes, the sound patterns of the *sun laam* + the coronal sounds must be analysed in the definite article in Arabic.

The phonological analysis focuses on the distinctive features of the *sun laam* and the coronal sound. The following table shows the environment and circumstances where the *sun laam* is elided before coronal, alveolar, or stop sounds. The same results are not confirmed by the results of Amusawee (2007), who states that the *sun laam* is assimilated by the coronal sound because it is the sound adjacent to /ʌ/.

B. Description and Analysis of the Result of Question 2

The following table presents a description of a continuant articulation of the sound pattern /al/ + coronal sound. It also shows how the *sun laam* /ʌ/ loses its distinctive features when preceding a coronal sound and how the coronal sounds influence the preceding /ʌ/ regressively.

TABLE 2.

/l/	The lateral sound
Alveolar	Place of articulation
Lateral/ Continuants	Manner of articulation
Lenis	Force of articulation
The side rims of the tongue do not lower for making a hole for air to escape through it because the succeeded sounds need great amount of air to be blocked behind for sudden	The mood of the tongue
Elision	Sound change
The air stream for producing the lateral sound is blocked by the two lips because the stop sounds are stronger than the lateral sound.	The reason for the sound change
Air is completely blocked by the two lips	The flow of air stream
Intervocalic and blocked by stop sound	Linguistic environment
/d/ /t/ /d/ /t/	Consonant sounds
Alveolar	Place of articulation
Stop	Manner of articulation
Explosion with sudden release	Force of articulation
The stop sounds are geminated	Sound change
Intervocalic after the elision of the lateral sound	Linguistic environment

Referring to table 2, in the patterns /al+t/, /alt/, /ald/, and /ald/, /t/, /t/, /d/, and /d/ are described as stops and alveolar sounds, and the *sun laam* /l/ is a lateral, alveolar, or voiced sound. In the production of these patterns, the tip of the tongue touches the alveolar ridge firmly, but here, the air stream either escapes from one or both holes made by the two sides of the rims of the tongue and the upper molars to produce the *sun laam*. Otherwise, it will be completely blocked by the closure made by the two lips before the expected sudden release for producing the stop sounds /t/, /t/, /d/, and /d/.

If the air stream escapes through the hole between the upper molars and side rims of the tongue, the vocal tract will produce /l/, and there must be a vowel sound before producing the stop sounds because the production of the stop sound requires a great amount of air to be blocked by the two lips. To articulate the same alveolar stops and alveolar lateral sounds, /i/ is inserted. This kind of insertion may lead to a change in the meaning of the word or a strange word. To avoid such a vowel insertion between the *sun laam* /l/ and the stop sounds, we need to compare the resistance feature (the force of articulation) of the *sun laam* /l/ and stop sounds.

Stop sounds need a great amount of air and muscular tension to block air behind the closure for sudden release (explosion), while the lateral sound does not need such energy to release air through the hole made by the upper molar and the side rims of the tongue. Thus, in terms of the force of articulation, the priority of the sound production will be for the stops, and the lateral sound will be elided to avoid inserting any kind of a vowel sound.

The following table shows the linguistic environment where the *sun laam* is changed because of the succeeded sound in an Arabic word starts with the definite article followed by /s/, /z/, /ð/, or /θ/. For the production of the *sun laam* before /s/, /z/, /ð/, or /θ/, the tip of the tongue touches the alveolar ridge firmly, making holes between the upper molars and the two side rims of the tongue, and air stream escapes through them.

TABLE 3

/l/	The lateral sound
Alveolar	Place of articulation
Lateral/ Continuants	Manner of articulation
Lenis	Force of articulation
The side rims of the tongue do not lower for making a hole for air to escape through it because the succeeded sounds needs great amount of air to be escaped through a narrow passage with audible friction. Tip of the tongue touches the upper teeth making the same narrow. For the production of tip of the tongue comes in contact with above the hard palate making a narrow passage and air escapes with friction while articulating this sound	The mood of the tongue
Elision	Sound change
The air stream for producing the lateral sound escaped through a narrow passage formed by either tip of the tongue with alveolar ridge or with upper teeth with audible friction.	The reason for the sound change
Air is completely blocked by the two lips	The flow of air stream
Intervocalic and blocked by stop sound	Linguistic environment
/s/	Consonant sounds
/z/	
/ð/	
/θ/	
/ʃ/	
Alveolar	Place of articulation
Fricative	Manner of articulation
Audible friction	Force of articulation
The alveolar and dental sounds are geminated	Sound change
Intervocalic after the elision of the lateral sound	Linguistic environment

The coronal sounds /s/, /z/, /ð/, and /θ/, are described as alveolar fricative, and during their production, the tip of the tongue comes in contact with either alveolar, making a narrow passage for the production of /s/, /z/, and /ð/, or with the upper teeth to produce /θ/. If the air stream escapes through these narrow passages, the sound /l/ must be elided because the sounds /s/, /z/, /ð/, and /θ/ are more fortis and articulated and are parts of words, while *al* /ʌ/ is considered as a prefix. The tip of the tongue plays an essential role in the production of *sun laam* and the coronal sounds /s/, /z/, /ð/, and /θ/.

The problem is that if the air stream escapes through the hole for producing the *sun laam* /l/, the speaker is not immediately able to produce the *sun laam* + one of the coronal unless /l/ is inserted between the consonants (the *sun laam* /l/ + coronal sound). This insertion makes another phonological problem. The *sun laam* in this combination of sounds must be elided to ease the pronunciation of the succeeded sound. As reported by Rishidi and Shokrollahi (2010), the entire linguistic environment where the *sun laam* is elided is conditioned by the intervocalic position 'Al + coronal = (a) V + elided /l/ + coronal consonant' (blocked by fortition environment).

C. Description and Analysis of the Results of Question 3

TABLE 4.

Sound pattern	Sound pattern after the elision of the <i>sun laam</i>	Arabic word written in English	Words written in Arabic	Meaning of Arabic words in English
Alt	الت	atmr	التمر	Date
Alt	الظ	ateir	الطير	Birds
Ald	الد	adeek	الديك	Rooster
Ald	الض	adab	الضب	Lizard
Als	الس	asama	السماء	Sky
Als	الص	asaber	الصبر	Patience
Alz	الز	azaman	الزمن	Time
al ð	الد	azeb	الذئب	Wolf
al Z	الظ	azarf	الظرف	circumstance
al θ	الث	athaman	الثمن	Price
alʃ	الش	ashahd	الشهد	Honey

After the elision of the *sun laam* before a coronal sound, the coronal sound is geminated in comparison to an uncoronal sound after the *moon laam*. Does the elision of the *sun laam* have any influence in geminating the coronal sound in the definite article of Arabic (ال)? The sound pattern 'alt' was analysed in its immediate sound in the word

'altmar' (date) in the presence and absence of the *sun laam* to determine the extent that the elision of the *sun laam* influences germination of the coronal sounds.

If a speaker of Arabic makes the *sun laam*, the sound /i/ is inserted to ease the pronunciation of the two consonant sounds /l/ + coronal sound. The pronunciation of the pattern a+l+t in altamar will be ALtimer. This occurs because in Arabic phonology, there is a rule that governs this sequence of two consonants by inserting the front half close vowel /i/, as mentioned before, and such an insertion leads to a change in the meaning of the word. Is there evidence that the *sun laam* is elided before them? The condition of the coronal sound /t/ after the elision of the *sun laam* is that the coronal sound /t/ is under the influence of the vowel sound. The sound pattern of the a+Ø (elided sound) + t was analysed using the following table.

TABLE 5.

Vowel sound	Distinctive feature	The elided /l/	The coronal stop sounds	Distinctive feature	Geminated stop sound
/a/	Continuant tense	Ø	/t/	Stop, fortis	The intensity of the vowel extends to the stop /t/ because of the elision of /l/

In the production of a vowel sound, the air stream passes freely in the oral cavity without any obstruction, but this amount of air passes without escaping through the hole that is made by the rims of the tongue and the upper molars because the lateral sound is elided. The immediate blockage that is made by the two lips already blocks an amount of air. The extension of scraping air for producing the vowel /a/ before the elided *sun laam* /l/ adds force to the articulation feature to the stop sound /t/ and makes it more intense than the articulation of a normal stop. The result of this analysis was confirmed by O'Leary (1963), who states that the elided sound loses its diacritical mark, it becomes 'silent', and the second sound (the coronal sound) becomes geminated.

V. CONCLUSION

The main findings of the study are as follows:

- (1) The *sun laam* is assimilated by the coronal sound /r/ because the two sounds have the same manner and place of articulation, as well as being located in the pattern /alrajul/ (man) as adjacent sounds.
- (2) The disappearance of the *sun laam* in the definite article of Arabic before an Arabic word that starts with one of the coronal sounds /j/, /ð/, /ð / /s/ /s/, /d/ /d/, n, /z/, /z/, /θ/, /t/, or /t/ does not belong to any kind of assimilation.
- (3) The loss of the *sun laam* in the definite article of Arabic before words that start with one of the coronal sounds is a process of sound elision. This occurs because of the influence of the distinctive features of the coronal sound after the *sun laam* because they are stronger than the *sun laam*. An Arabic speaker needs to use more muscular tension to pronounce them.
- (4) The geminated coronal sound appears after the elision of the *sun laam* in the definite article because the extension of the vowel sound's intensity adds more force to the coronal sound. Furthermore, it makes the sound more intensive (the geminated sound) than the normal coronal sound.

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REFERENCES

- [1] Almusawe, Manaf Mahadee. (2007). Phonetics. Bagdad, House of Scientific Books.
- [2] Hall, T. (1997). The Phonology of Coronals. Amsterdam: John Benjamins Publishing.
- [3] Heselwood, H., & Watson, J. (2013). The Arabic Definite Article Does Not Assimilate. *LWPLP*, (18), 34-53
- [4] Odeen, David. (2005). Introducing Phonology. Cambridge: Cambridge University Press.
- [5] Ofulue, Ch. & Urua, E., & Egbokhare, F. (2010). Introduction to Linguistics II. Nigeria: National Open University of Nigeria.
- [6] O'leary, D.(1963).Colloquial Arabic. New York: Dover Publications Ltd.
- [7] Rishidi, N. & Shokrollahi, M. (2010). "Elision of /h,ʔ/ in the Shirazi Dialect of Persian", in *Rasprave Instituta za hrvatski jezik i jezikoslovlje*. 36/1.pp.135-162.



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