Velarization in English and Arabic

A B S T R A C T

The current study tackles the phenomenon of velarization both in English and Arabic. Velarization means raising the back of the tongue towards the soft palate in which the mouth becomes full of resonance of the sound. Velarization or (Al-Tafkheem) is one of Al-Tajweed rules which requires specific performance. The problem of this study is the multiple letters of Arabic velarization with various features and exits which are not like English.

This study aims at making a comparison between English and Arabic, presenting the definitions, the means of occurring of this process, the organs of speech used to perform it and to search the degree of similarity and difference between the two languages. This study hypothesizes that the properties of velarization in both languages are different, the sounds of velarization in English and Arabic have different places of articulation and there are aspects totally dissimilar.

The data are collected from various English and Arabic references. This study includes two figures of dark and light /l/ in both languages, examples to clarify the explanation and a diagram which summarizes the phenomenon of Al-Tafkheem in Arabic.

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Introduction

This study seeks to investigate the phenomenon of velarization in English and Arabic. At the beginning, this phenomenon is presented in English and divided into sections including the definitions, description of this phenomenon and velarization as a type of secondary articulation.

Secondly, It elucidates this topic with reference to Tajweed of the Glorious Qur'an. It discerns the meaning of Tajweed, definitions of Al-Tafkheem, explaining the meaning of Tafkheem and Tarqeeq, the letters that have Tafkheem and sometimes Tarqeeq according to the neighbouring letters or diacritics, findings and discussions and finally the conclusions of this paper are presented.

1-Velarization in English

1-1 Definitions of Velarization

Ladefoged and Maddieson (1996: 365) state that velarization is a secondary articulation where the tongue is raised in the direction of the soft palate. Crystal (2008:509) clarifies that this expression refers to any secondary articulation that requires a movement of the back portion of the tongue towards the soft palate. This phenomenon involves a special place of articulation which is the mouth.

Litvin (2009:10) and Ladefoged and Johnson (2011:234) confirm that velarization is characterized by raising the back part of the tongue towards the
1-2 Description the Phenomenon of Velarization

O’connor (1973: 148) claims that through the process of velarization, the sides of the tongue are not in touch with the sides of the palate along all their length and air passes freely over the sides of the tongue.

Gimson (1980: 202) describes the phenomenon of velarization as follows: the articulation of the dark [ɫ] occurs when the tip of the tongue touches the teeth ridge, and the front and back of the tongue are in different positions. The front of the tongue is low and the back of the tongue is raised across the soft palate giving a back vowel and causing a velarized resonance. Figure (1) displays velarized /l/ and clear /l/.

The pronunciation of [ɫ] by some speakers is always a propensity to lip rounding. The effective point of touching the tongue for the sound [ɫ] depends on the place of articulation of the following consonant, thus, in the words (health, will they) the dark [ɫ] has a dental touch to a lesser extension. Velarized [ɫ]
includes the influence of regress and lowering slightly the articulation of the prior front vowel, as in (feel, fill, fell).

Crystal (2008:509-510) states that in English, the phenomenon of velarization is dependent upon the context. If the word ends with syllable-final (l) as in the word pool, it is given a velar resonance that can be compared with syllable-initial (l) as in 'lead', where the position of the back of the tongue is much further forward in the mouth towards the palate. The usual sign for velarized consonant sounds is [ʁ] placed through the letters. The normal position of [z] is the alveolar, but it can be velarized if the back of the tongue is raised towards the velum during its articulation. The position of articulation would give the sound a peculiar back (or 'dark') resonance. The application of this expression is usually to consonants other than velar consonants. It can be used with cue to vowels.

There are various expressions for the variations in the articulation of the vowel, such as: ('retracted', 'centralized', etc.). Velarization may be a basic characteristic of the sound identification, contradiction with sounds which are non-velarized, like the distinction between velarized and non-velarized (S) in Arabic, transcribed [specifier] and [S].

Gimson (1980: 200-201) notes that the English lateral phoneme /l/ is only one, alveolar, lateral phoneme that happens in English, there being no dissent between fortis and lenis, voiceless and voiced, or fricative and non-fricative. The three allophones occur within the /l/ phoneme:

- Clear [l]: this phoneme occurs before vowels, /j/ and with a comparatively front vowel resonance, as in (look, loud, lewd).
- Dark [ɻ]: the position of this phoneme is after a vowel in a pre junctual position, before a consonant and as a syllabic sound following a
consonant, for example (middle, easel).

- Voiceless [l]: this phoneme follows accented (aspirated) /p, k/. A minimum great devoicing occurs after (S, f, f, f, f) or weakly accented (p, t, k) – with the marked sign ( * ) as in (couplet, simplest).

Ladefoged and Johnson (2011:234-235) show that velarization deems the addendum of the sound [u] as the tongue position, but with no lips rounding which occurs in the utterance of the sound [u]. In many English words, dark /l/ appears at the end of words as velarized and written as[l].

Roach (2010:48-49) claims that the classification of /l/ is not limited in (BBC.) pronunciation. There is only one prodigious feature, in which clear /l/ is found before vowel sounds, while with dark /l/ the vowel sound is before it. In clear /l/, the front of the tongue is raised without a distinctive symbol.

The so called "dark l" includes a species identical to an [u] vowel, with raising the back of the tongue. The phonetic symbol for this sound is /l/. The position of this sound is before a consonant sound, as in 'eels' /l:ls/.

A distinctive context is a clue for the realization of (clear or dark l). Clear /l/ does not occur before consonant sounds or before a pause, but only before vowels. Dark /l/ never occurs before vowels. Most English speakers do not consciously know about the distinction between clear and dark /l/. They can recognize the diversity when they hear English speakers with various accents, or during their hearing of foreign learners who have not learned the right pronunciation.

Gimson (1980:203) notes that RP classification of [l] and [l] be as follows: [l] occurs when a vowel or /j/ follows it; the occurrence of [l] in other locations includes some cases where syllabic [l] precedes a vowel.

Baldon and Al-Bamerni (1976:137) claim that dark /l/ is more co -
articulatory resistant than light /l/. The articulatory influences are reduced with the accretion of velarization. The recognition of dark /l/ is known as velarized or pharyngealized /l/, while light /l/ is known as non–velarized or clear /l/. The two have been classified as allophones of the same phoneme.

Recasens and Esipnosa (2005: 35) point out that velarization degree is affected by the vowel context, for example, in the context of a high front vowel such as /I/ dark /l/ becomes less dark. In the context of a high and back vowel such as /u/, light /l/ may become less light.

Gimson (1980: 204) states that the basic characteristic of [ɿ] is the accompanying weakly rounded [O] or [ɔ] kind. In words such as (bubble, people, awful), learners should start by pronouncing the vowel [O] for the syllabic [ɿ], where a labial consonant forgoes [ɿ] as in, [bʌbo], [pi: po], [ɔ:fo]. In their own language, this pure vowel is likely to occur. The similar succession of the sound should be attempted with the tongue–tip contacting the upper teeth ridge, so a lateral sound with the right velarized kind is produced. The relevance of [ɿ] and [O] can further be made by practicing the rotation of [O]–[ɿ]–[O]–[ɿ], just the tongue–tip moving and [O] reverberation going on.

1-3 Velarization as a Type of Secondary Articulation

Ladefoged (1971:59) and Anderson (1975:17-19) clarify that velarization is a type of secondary articulation. The occurrence of two equal articulatory constructions at the same time and at different regions of articulation consist of primary articulation that is near the glottis, while secondary articulation is further away from it. The sounds of secondary articulation require more than one articulation which is approximately the same degree of closure. It is usually supposed that the distinction between primary and secondary articulation can be recognized by a relative degree of occlusion.
Deweijer (2011:307) admits that the most common kinds of secondary articulation are: palatalization, velarization, labialization, pharyngealization and combined secondary articulation kinds like (labio-velarization) that is very anecdotic.

Crystal (2008: 425) explains secondary articulation as follows: 'in the production of a sound with two marks of articulation, this expression indicates the point of articulation demanding the minimum degree of stricture, for example, Labialization & Palatalization; the opposite of primary articulation'.

Ladefoged and Johnson (2011:235) explain the meaning of secondary articulation where the apparition of gesture with a minimal degree of closure happens at approximately the equal time as another principal gesture. Secondary articulation includes: palatalization, velarization, pharyngealization and labialization.

Deweijer (2011: 695) claims that velarization is a type of secondary articulation [γ] which is identically concluded by back vowels. In velarization, the diversity between clear [l] and dark /l/ is allophonic in English which is surely indicated not by the feature vowel but mostly by syllabic position. In this language, dark /l/ occurs in the coda and clear /l/ occurs in the onset.

2- Velarization (Al-Tafkheem) in Arabic

2-1 Meaning of Al-Tajweed

Tajweed of the Glorious Qur'an means the knowledge and application of the suitable rules during recitation of the Glorious Qur'an. It means uttering each letter from its correct articulation place and giving its rights and dues. The rights of the letter mean its required feature which accompanies it all the time. The dues of the letter refer to its presented traits that do not appear all the time. These traits depend on the context like, Idgham (assimilation), Madd
Al-Tajweed refers to the amendment of the pronunciation of the letters. It means recititating of each letter in a correct way of pronunciation together with the traits of its accompanying letters. (Jamiatul Ulmaa, 2010: 1)

Al-Tajweed is the science which explains the correct way of the pronouncing of the words. It refers to the beautification of the words and uttering each letter from its correct place of articulation and includes (Al-Tafkheem velarization), Al-Tarqeeq attenuation), (Isti’fal shortening) etc. (Salam, 2020: 463).

2-2-Definitions of Al-Tafkheem

Ibn Mandhur (1997:81) states that the linguistic meaning of Al-Tafkheem refers to the process of amplifying the sound, or making it more velarized than usual. It is the process of magnifying the sound during its pronunciation.

Jumma’a (2000:426) and Czerepinski (2003:19) define the phenomenon of Al-Tafkheem as a gravity or strength that enters the tongue organ, so that the mouth is filled with its resonance.

Al-Hammad (2012:189) assures that Al-Tafkheem is a state of intensification which covers special sounds during uttering them, resulting in the mouth being filled with the resonance of the sounds.

Hussein (2012:890) defines (Al-Tafkheem) as filling the mouth with echo, so the produced sound is velarized and strengthened.

Al-Tafkheem is the entrance of heaviness or fattening of the letter, so that the mouth is full of its resonance. (Al-Surf, 2012: 91) & (Ali and Hafar, 2012: 15)

Hashemi (2014:227) gives a definition of Al-Tafkheem as a constriction of pharynx and rising of the tongue that occurs in the laminal consonants [ض - ص - ط]. (Taa, saad, dhad, dhaa).

2-3 Velarization (Al-Tafkheem) and Attenuation
Al-Tafkheem and Al-Tarqeeq are samples of Al-Tajweed rules. They are always mentioned together, but this study particularly deals with Al-Tafkheem.

The following letters (ق-ظ–خ–ص–ض–غ–ط) (kaaf, dhaa, khaa, saad, dhad, ghain, taa) always have Tafkheem. They are called (Mufakhamma) (amplified letters). The degree of Al-Tafkheem differs according to the features of the letter and the strength or weakness of these features (Nassir, 1994: 117).

The phenomenon that represents the contrast of Al-Tafkheem is reduction or (Al-Tarqeeq). It can be defined as softening the sound of the letter during its pronunciation (Ibn-Mandhur, 1997: 81).

Zuhair (no date:5) states that Al-Tafkheem is one of the qualities of the letters that has an opposite. The opposite quality of it is Al-Tarqeeq.

Ladefoged and Maddieson (1996: 363) claim that there is a variation among the Arabic dialects whether they have the phenomenon of pharyngealization or velarization. The acoustic distinction between them is very little; both phenomena are marked by lowering the second formant. The term (mufaxxam) is understood to comprise the uvular consonants. Uvular and velarized consonants are articulated by the tongue organ raised in the direction of the back of the soft palate; the velarized consonant is a secondary articulation, which attaches the primary contact in the dental position. Uvular consonant is made by raising the tongue which is primary articulated.

The letter (ط) (Taa) has the property of Al-Tafkheem. It is the strongest letter in this phenomenon, then come the letters (ض–ص–ظ–خ) (dhad, saad, dhaa kaaf, ghain, khaa) (Al-Hammad, 2007: 249).

Al-Maraashi (2008: 154) and Hussein (2012: 891) state that there are different terms for Al-Tafkheem, such as: (Tasmeen (fattening), Tajseem,
Tagleedh (thickening), strength and alrabo).

Al-Surf (2012: 91) and Sabir and Saeed (2014:186) name the process of 'Tafxim' as 'pharngealization'. They state that most of the classical essays of Tajweed explain the meaning of Al-Tafkheem. The sounds of this phenomenon are (خ – ص – ض – غ – ط – ظ) (khaa, saad, dhad, ghain, taa, kaaf, dhaa). Specialists of Al-Tajweed have particular terms for describing the phonological features. (These terms will be explained in section 2-5).

The way of making a letter that has the feature of Al-Tafkheem is by raising the back of the tongue to the roof of the mouth (soft palate), resulting in more space between the roof of the mouth and the bottom of the mouth pressure of the letter concentrates on the roof of the mouth. Al-Tafkheem has its influence on the neighbouring sounds (Hussein, 2012: 888-889).

Moreover, Al-Surf (2012:92) refers that the sounds of Al-Tafkheem are described as (dark, thickened and heavy emphatic) sounds. These terms have been suggested by common phonetic studies. The specific studies have suggested the following terms such as: velarized, uvularized and pharyngealized sounds.

Yoob and Shwan (2016: 96) claim that the tongue is the basic organ in the application of the velarization (Tafkheem) and attenuation (Tarqeeq) phenomena.

Al-Mousa and Al-Mohana (2021: 126) note that pharyngealization is one of the multi-processes of Tajweed. Traditionally, this process is known as emphasis. It is a secondary articulation that requires the constriction of the pharynx. Classical treatises of Arabic have characterized pharyngealization as (Tafkheem).

Hashemi (2014:227) points out that in Arabic, velarization or pharyngealization is a secondary articulation. The application of this expression
is on the consonants that are articulated with the back of the tongue to be in contact or near the velum (soft palate). It is touching the soft palate in consonants that have an articulation position which is not the soft palate. There is a consideration of occurrence this phenomenon in laminal (coronal) consonants. The following consonants [ , t, Ş, Z ŏ ] are equivalent to the following letters: (ظ - ح - ص - ﺪ - ط) (dhaa, dhad, saad, taa).

Al-Shaikhkhalil (2018: 8-10) claims that velarization and attenuation are types of Tajweed rules. The following rules depend on their effects. The pronunciation effects of Tajweed rules include three types which are:
1-Phone level rules.
2-Durational rules.
3-Allophone level rules. These rules include:
a-Al-Qalqalah
b-Al-Ikhfaa
c-Velarization and attenuation.
d-The whisper

According to Al-Tafkheem and Al-Tarqeeq phenomena, letters can be classified into three types:
a- The letters (خ - ص - ظ - غ - ق - ض) (khaa, saad, dhaa, ghain, taa, kaaf, dhad) which are always velarized (Mufakhamma).
b -A group of letters which is either velarized(Mufakhamma) or reduced(Muraqaqa) . This group includes three letters which are:
1-the letter (Laam) in the name of Allah (Allah)
2-the letter Raa (ر)
3-the extended Alif (א)
c -the letters which are not within the previous types representing the
phenomenon of attenuation (Tarqeeq).

2-4 Tafkheem and Tarqeeq Letters

The letters (Laam, Raa and Alif) include either Tafkheem or Tarqeeq according to specific conditions:

a-The letter (Laam) in the word Allah (الله) can be pronounced in two ways:
-If there is fatha ( او ) or dhamma ( او ) on the letter before the word (الله), the letter (laam) will be uttered heavily with a full mouth, for example (رسول الله) (Rasulu Allah) - (رحمة الله) (Rahmata Allah).
-The letter laam is pronounced (lightly) muraqaq with an empty mouth when there is the sign kasra ( و ) before the word (الله) (Allah) as in (بسم الله) (Biami Allah).

Figure (2) displays velarized Arabic /ل/ /ل/.

b- The lengthened Alif (الأنف انمدية). This (alif) follows the previous letter as
to be Mufakhamma or Muraqaqa. If there is a velarized letter before alif, this alif will be velarized as in (Wala al-dhalin).

If there is a reduced letter before alif, it will be reduced as in:
(Alhakum Al-takathur).

c -The letter (Raa) is velarized(Mufakham) in the following states:
1- If there is kasra before Raa and the letter Raa is not repeated in the word, as in (Al-akhira).

2- If there is sukoon on the letter (ز) and before it attaching (hamzat wasil), as in (Arkudh- Ertadha).

3- Raa is pronounced with a full mouth (Tafkheem) when there is (fatha)on it as in (Rasoolu) or dhamma as in (Ruziqna).

4- If there is (shadda) with (fatha) or (dhamma), the letter (Raa) is pronounced mufakham, as in (Al-rahman).

5- The letter (Raa) accompanied with the mark (sukun), and there is fatha or dhamma before it, this letter will be pronounced with a full mouth (Tafkheem) as in (Fatharhum, Tarjoun).

6- The letter (Raa) is pronounced muraqaq (light) with a flatulent mouth in the following states.

7- If the letter (Raa) is at the end of the word with sukoon, before Raa is sukoon and before it is kasra. For example, (Al-thikir).

8- If there is original kasra with the letter Raa. It is with the speech and writing, as in (Rihla).

9- It is (Muraqaqa), if the letter Raa is accompanied with (kasra) at the beginning, middle or final of the word, such as (Walfajiri)

10- If there is letter (Yaa) before (Raa), like (Ala kuli shaien
khadeer).
(Yoob and Shwan, 2016:8-11), (Al-Fadhli, 78-79), (Al-Qarash, 2012: 115) and (Al-Khatib, 2003:35).

Al-Aani (1983:78) and Al-Mousa and Al-Mohana (2021: 126) classify the letter (Laam) as a velarized and independent phoneme. It is exceptional because the alphabetical system does not put independent letter for it. In many dialects, it is the most common phoneme, especially in the Exalted name of Allah.

2-5 Attributes of letters

The letters of Al-Tafkheem with the rest of the letters have certain traits, which are as follows:

- Elevation (Istil'aa) (الأستعلَء): it means uttering these letters (خص)(ضغط) (khasa-dhagtun-kadh) with the raising of the tongue towards the roof of the mouth (Al-Qaisi, 1996:123).

1-Rising (Ist'laa) during pronouncing the letters: the movement of the pressure of the letters rises to the upper jaw, so the jaw is more open when uttering them. These are (خص-ضغط-قط) (khasa-dhagtun-kadh) (Jumma, 2000:28).

- Closing (Al-Itbak): the letters of this phenomenon are (ص-ض-ظ) (sad-dhad-taa-dhaa). The tongue organ is close to the roof of the mouth and a part of it links to the ceiling of the mouth (Hussein, 2012: 890).

- Opening (Al-Enfitah): the rest of the letters carry this property. At the moment of pronouncing these letters, there is a gap between the tongue and the upper jaw. The tongue is far from the roof of the mouth.

- Lowness (Istifal): the letters of lowness are the rest of the letters except the letters (ل-ر) (laam-raa). This feature represents the opposite feature of elevation (Ist'laa). These letters are (muraqaqa) which are pronounced with the tongue is in
a lowered location towards the floor of the mouth during their pronunciation.

-Flowing (Al-Ithlaq) : these letters are easy to be pronounced because they exit from the tip of the tongue or lips. They are (ف‏ر- م‌ن- ل‌ب) (fara min lub).

-Prevention( Al-Ismat) : during uttering the letters :there is heaviness , so the flow is prevented .These remaining of the letters. (Al-Qarash, 2012:150- 164).

Diagram (1) summarizes the process of Al-Tafkeem (Hussein, 2012: 891).

Al-Mara'shi (2008:78)and Al-Surf (2012: 91) point out that Al-Itbaq occurs during pronouncing of the sound with raising of the tongue up to the palate. The letters of Al-Itbaq are (ص- ر- ض) (saad, dhaa, dhad). The sounds of Al-
Itbaq are more velarized than Al-Isti’laa. The sounds of Isti’laa occur when the tongue body comes up to the palate but not near to it.

As for Hussein (2012:889), he claims that Al-Itbaq is a physiological process through utterance. Isit’laa and Itbaq are equivalent to Al-Tafkheem. Isi;laa is the opposite of Istifaal. Isti’laa is a feature of strength. The letters of isti;laa are the letters of Tafkheem. Some specialists say that the letters of Al-Tafkheem are the letters of Al-Itbaq.

3- Findings and Discussions

In English and Arabic, velarization includes difference and similarity. In both languages, velarization requires two places of articulation at the same time and at the different regions. Velarization is performed by raising the back of the tongue towards the soft palate in which the mouth becomes full of resonance of the sound. The sounds of velarization are recognized by the preceding and following letters.

In English, the letter of velarization is the dark /l/ and velarization requires the addendum of the sound /u/ as the tongue tip position, but with no lips rounding which occurs in the utterance of the sound /u/. In Arabic, there are multiple letters for this phenomenon which are (قظ-خص-ضغط- قظ، khasa- dhagtun- kadh) in addition to (Laam, Raa, and extended Alif).

In Tajweed, the phenomenon of Al-Tafkheem and Al-Tarqeeq are always mentioned together though they are different. So as dark and light / l/ in English.

4-CONCLUSIONS

This study concludes the following points:

1-In spite of the difference between the two languages, there are relative
similarities. For example, in both languages:

2- Velarization is a secondary articulation.

3- The basic organ of velarization is the tongue.

4- Velarization occurs by raising the back of the tongue towards the soft palate.

5- During uttering the letters of velarization the mouth becomes full of resonance of the sound.

6- The shared letter is (Laam) /l/.

7- There are dark (velarized, mufakham) (Laam) /ɫ/ and light (Muraqaq) (Laam) /l/. It means that the both languages have an opposite for this process.

8- According to point(7), in Arabic, the letter (Laaam) /郞/ is (mufakham and muraqaq) and in English, (dark and light) /l/. It indicates a combined allophonic relation between the two languages.

9- In Arabic, Tafkeem and Tarqeeq the letters (Laam), (Raa) and (Alif) are affected by the neighbouring letters or diacritics. In English, the dark and light /l/ are also affected by the followed vowel or consonant letters. It means that in both languages, this phenomenon depends upon the context.

10- In English, velarization requires the addition of the sound /u/ as the tongue position, while in Arabic, there is no such requirement.

11- In Arabic, the letters of this process are more than English.
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