

Arabic “Raa” between Plosiveness and Friction

Tareq Ibrahim Al-Ziyadat*

Arabic Department, Isra University, Jordan

Corresponding Author: Tareq Ibrahim Al-Ziyadat, E-mail: wesam_198221@yahoo.com

ARTICLE INFO

Article history

Received: March 26, 2019

Accepted: May 18, 2019

Published: July 31, 2019

Volume: 8 Issue: 4

Advance access: June 2019

Conflicts of interest: None

Funding: None

ABSTRACT

The study aims to elucidate plosiveness and friction in the “Raa”, (the tenth alphabet in Arabic) benefiting from what the ancient and modern scholars said on the issue. The core issue of the study is Sibaway’s classification of the “Raa” a tense phoneme in whose articulation the sound repeatedly flows leaning toward the articulation of “Lam” (23 Arabic alphabet) avoiding laxity. Had not the sound repeated, we wouldn’t have had the “Raa”. Tensity (plosiveness) and friction are two contradictory features which can never have the same place of articulation. The sound is articulated at stages, each of which has its own features. After analysis, it was found that the articulation of “Raa” passes through three stages. In the second, in the space between vocal cords and top of the tongue the “Raa” is fricative, while in the third, the closure stage between top of the tongue and hard palate, the “Raa” is plosive but this plosiveness is less in intensity than that of plosive phonemes. Therefore the “Raa” can be neither plosive, nor fricative, but in between “medial”.

Key words: Raa Phoneme, Plosiveness, Friction, Release, Beats

INTRODUCTION

Undoubtedly, the phonemic system of any language is the basic structure upon which other structures of the language rest. It is through which it becomes complete enabling people to communicate with each other. Due to the significance of this system, scholars, since ancient times, examined it through study, analysis, and description. The results were never the same because the nature of handling it varied from one age to another. Whoever knows phonology can notice the apparent difference as seen in the “Raa” phoneme. Scholars considered it to be tense (plosive), but through articulation, it becomes close to laxity (friction). Makky (1996) stated: “the “Raa” is a tense phoneme, due to its repetitive feature which is also tense”. The sound, when uttered, is repetitive and leans toward the articulation of “Lam” (the 23 Arabic alphabet), thus becoming lax-like” p. 131.

QUESTIONS OF THE STUDY

Through answering the following questions:

- 1- Is the “Raa” phoneme fricative, plosive, or medial?
- 2- Can the “Raa” be tense (plosive and fricative at the same time as described by Sibaway?
- 3- What is the stage of articulation of “Raa” and what are the features of each stage?

He idea of this research is to unravel the way the “Raa” is articulated in Arabic, the study uses the descriptive analytical method to come up with expected results. Thus, the research

comprises two sub-studies: First, “Raa” and explosiveness; second, “Raa” and friction.

SIGNIFICANCE OF THE STUDY

The significance lies in the study’s attempt to clarify whether the “Raa” is a fricative phoneme or a tense one, or in between. This is based on the scholars’ description of the mechanism of articulating this phoneme by tracing air movement in oral cavity.

METHODOLOGY

The study adopts the descriptive analytical method to describe the mechanism of articulating the “Raa” to determine its features that help to explain stages of its articulation and the characteristics of each stage.

LITERATURE REVIEW

Omar Al-Daqaq (2006) in his study entitled “The Alphabet “Raa”: A comparative phonemic study” compares the articulation of “Raa” in Arabic to that in Spanish, French, and English. He also discussed the phenomenon of diphthongization and articulatory flaws of the “Raa”, but never discussed the mechanism of friction and plosiveness in the articulation of the phoneme. This study will be concerned with this issue in an attempt to clarify stages of articulation of the phoneme “Raa” in Arabic. (3), p. 131.

The first topic: “Raa” as a plosive phoneme, there is no doubt that every phoneme in Arabic and in other languages has its own specific articulatory features as the difference observed in the articulatory system when air rushes out of the lungs to the mouth forming a phonemic tone which distinguishes it from other phonemes. Thus, there won’t be an overlapping or blending of sounds.

The Arabic phoneme is distinguished for being tense, with a sound that strongly affects hearing. In order to know more about it, one needs to review what the ancients and the modernists said regarding this phoneme, then discuss its distinctive features pertaining the articulatory manner with which it is singled out from manners of articulation in other languages. Therefore, one needs to discuss the meaning of friction and plosiveness to come up to the meaning of mediacy.

The modernists like Ibrahim (1975) point out that Plosiveness, as a sound quality, is caused by the air release from the lungs after being obstructed when the two articulators meet. As for the ancients, they gave plosives a different name, tense phonemes. Al-Anbari (1995) said “the tense phonemes are eight combined in the following two coined words: “Ajdt”, “Tbqk”, “Tabqk”. This combination stands for the following Arabic alphabets respectively: hamza, jeem, dal, ta, tt, b, q, t, k. (1), p. 361. Naser, (1992) combined them in the following line of verse: Mahmusa fahathahu shaksun sakat shadeeduha lafth Ajed qat bakat p. (91). This means that the voiceless alphabets in Arabic are:

Fah, ha, tha, haa, sha, kha, saa, sa, ka, ta. As for the tense, they are: hamza, ja, da, a, tta, ba, k, ta.

Dr. Kamal Bishr called them stop plosives. When discussing plosives, he says because of the stop, we might call them stops, and because of the explosion, we call them plosives, thus the two features have to be taken into consideration. Therefore, we call them stop plosives. (2000), p. 247. This study objects to Dr. Bishr’s calling them “stop plosives”, as plosiveness necessitates a pre-obstruction of the air before it explodes. Thus, they are two inseparable processes. Obstruction then is a pre-stage that results in explosion. The result of the stops is also explosion. Therefore, calling these phonemes plosives does not negate obstruction or a pre-pause. Dr. Mahmood Saaran sees that the plosive phoneme undergoes three stages necessary for plosiveness which are: Air obstruction, air release, and the sound follows the release. (1997), p. 153. Whoever traces air movement finds that there are two stages Al- Saaran never referred to: meeting of the two articulators before obstruction occurs, after which a release follows. This implies that the plosive phoneme undergoes four stages:

First, articulators meeting, second, air obstruction, a complete closure, third articulators release, and fourth an audible plosive sound occurs. All plosives or tense phonemes pass through these four stages. Ibrahim Anees (1975) said “the common feature between them is complete air closure which doesn’t allow air release till the two articulators suddenly separate causing a plosive sound which differs in form and power of explosion p. 153. If the articulators release was slow, the sound would be plosive only, but if quick,

the explosion would be weak. In this case the phoneme is labelled plosive fricative.

Al-Saaran (1997) added that the separation of articulators of plosive consonants varies in quickness or slowness; if the separation occurs slowly without any clear explosion but audible at the release of the stop fricative consonant, then phoneme is the “plosive fricative”, a type of explosion. p. 166.

Kamal Bishr (2000) called it stop fricative or the compound sound. This applies only to the “jeem” phoneme. He adds that in our Arabic language it is the only phoneme “the jeem” better known as “formal jeem”. p. 310. If we consider the cluster of Arabic phonemes in the terms “Ajdat Tabqak” or “Ajed qat”, “bakt”, we find that air obstruction and articulators movement create vocal resonance different from that of articulating the “Raa”.

Ibrahim Anees (1975) said “the Raa” is a repetitive phoneme because in its articulation the ridge of the tongue touches the palate two or three times to create the Arabic “Raa”. Tamam Hassan (1990) Said “it is a repetitive voiced alveolar phoneme uttered when the tongue is left lax in the way of the air coming out of the lungs so the tongue flaps touching the alveolar repetitively, this is what is meant by the repetitive feature. p. 104. As for Sibaway’s opinion of the “Raa” (435), it needs more attention, for he says, “some of them (Arabic phonemes) are repetitive, among which is the tense alphabet in whose articulation the sound is repeated switching toward the “Lam” (L) becoming more of lax. Had the phoneme the “Raa” not been repetitive, the sound wouldn’t have moved.

This indicates that modernists disagreed with Sibaway’s opinion that the “Raa” is a tense phoneme though tense is the quality of the phoneme “Ba” (B), as the sound flows without which the phoneme won’t been tense. The flow of breath leading to the sound flow is what Sibaway meant. Air doesn’t stop at a certain point, meaning that this phoneme combines two elements: tensity caused by sound compression, due to the articulator and its movement. Al-Mubarrid (2004) seems to say that medial sounds, the lax, which were originally tense, but when breath moves affected by adjacent lax ones like “gheen” (an alphabet) this helps the speaker in uttering “haa” in which the sound moves continuously. Among the previously mentioned alphabets is the “noon” (n) which makes use of the nostrils, being nasal, and the long and lax alphabets in which the sound moves, due to laxity. All these are geminated and make use of adjacent sounds. The “Raa” is a tense phoneme, but a retroflexive alphabet, in which the sound moves repetitively. (1) 196. From Al- Mubarrid’s discussion we understand that medial phonemes are tense in origin, but because the air was not obstructed through escape, it switched from tensity to another state close to laxity as every phoneme is affected by the neighboring lax escape. “Ain” (an alphabet), for example, is influenced by the “haa” escape as it allows air to pass easily and smoothly.

This means that the phonemes whose escapes are close influence each other. The “Raa” phoneme incorporates two processes: resonance about which Al-Khawarizmi (n.d) said “Sound resonance which is the resonance and repetition of its parts.” (15) This resonance is the result of the repeated beats

of the tip of the tongue against the hard palate. The second is the escape of puffs of air after each beat which makes the phoneme move from tensity to semi laxity. It doesn't totally become lax because the tip of the tongue closely touches the hard palate for a short time and that prevents the "Raa" from being a tense phoneme like (ba) (B), for example. In the "ba" air passes freely without any closure except for intermittent stops by the tip of the tongue touching the gum. (2), p. 25. The difference between the "Raa" and tense phoneme is in the following: -

Amount of Air

The amount of air coming out of the lungs in the tense phoneme is less, but it gains its plosive power by being obstructed by the two articulators after a complete closure. As for the "Raa", the amount of air is more and easier to escape because the two articulators are never completely closed, so the air escapes intermittently.

Air Tensity

Air in the tense phoneme is more powerful as closure unifies the air dispersed in the way from the lungs to the oral cavity, where it is completely obstructed behind the two articulators. When these articulators separate, air explodes producing an audible resonance. In the case of "Raa" the short closure lessens air intensity because it has never been complete to produce minor explosion.

Frequency of Explosions

In the tense phone air closure happens once when the two articulators meet. For example, when we articulate "Baa" (b) the two lips meet once so it is a mono-plosive. In case of the "Raa" the tip of the tongue touches the hard palate more than once. Abdul Rahman Ayyoub (1968) pointed out that in articulating the phoneme the tip of the tongue touches the gum several times with the stream of air coming out of the lungs making the vocal cords to vibrate; the air is then obstructed once the tip of the tongue touches the gum, then released, then obstructed again. As a result of this repeated process, a sound of short stops and explosions is heard. (2), pp. 203-204.

Duration of Air Closure

In the tense phoneme, the duration of closure of the two meeting articulators is longer. For example, when articulating the "ta", we notice that the tip of the tongue touching the palate stays longer till the air from the lungs accumulates. Right after the separation of the articulators, we hear a loud resonant explosion. Ibrahim Anees said that in the articulation of the "ta" the vocal cords don't vibrate for the air runs through pharynx and mouth till it is obstructed when the tip of the tongue touches alveolar. At the sudden separation, we hear an audible plosive sound. Regarding the "Raa", time duration is very short and is inadequate to allow air to completely stop and become forceful. p. 53.

According to what has been discussed, Sebawiye's description of the "Raa" being tense with air flow, is because of the beats the hard palate receives from the tip of the tongue. Such beats were quick to the extent that they didn't obstruct air; therefore, they can never be regarded tense since this tensity is different from others. Tensity dictates complete obstruction of the air and it is the same with the tense phonemes (Hamza, Jeem, dal, q, tt, ba, k, and ta). Al-Marashi (2008) said: "the sound of the alphabet with its air flow is either completely obstructed producing strong puff of air, as the case in tense phonemes, or is never obstructed so the air flows freely as in lax phonemes (2), p. 67. As for the "Raa", the obstruction is never complete and the minor explosions resulting from the tip of the tongue touching the gum never produces resonance except through its intermittent quick beats which are close to air filtration process that narrows its escape.

Second topic, "Raa" and friction:

Friction is one of the features that accompanies narrowing the escape when air touches the pharyngeal or oral wall. Kamal Bisher pointed out that in "fricative phonemes when air passage narrows down at a certain position for the air coming out of the lungs and passes through a relatively narrow outlet produces audible friction as in the Arabic alphabets (fa,tha, thaa, seen, zay, saad, sheen, kha, ghein, haa, ein, and haa). p. 297. To the ancients, like Sibaweh, (435) they were thirteen alphabets adding to them the old "dad" excluding the "ein" phoneme. Vol. (1) regarding the modern "saad", it is a tense phoneme, though controversial for scholars for whom the "ein" is a phoneme between tensity and laxity. Ibraheem Anees (1975) pointed out that "the ancients added to these four medial phonemes the "ein" as they considered it medial, though the experiments conducted at pharyngeal phonemes never confirm such a feature of the "ein", but this can be confirmed through future experiments. Kamal Bisher said that "in fact "ein" mechanism of articulation is still ambiguous and it is the least fricative among fricatives." p. 121.

But Mohmood Saaran (1997) regarded it fricative." p. 78. Friction is the absence of complete closure when articulating a phoneme as the escape becomes very narrow and that allows air to pass causing a sort of whistling or hissing sound in ratio to narrowness of the passage. This for the ancients was called laxity. Ibrahim Anees (1975) pointed out that: "every phoneme produced this way was called by the ancients a lax phoneme, but for the modernists they are known as fricatives. p. 25. As for the mechanism of articulation of phonemes, which scholars agreed to call fricatives, has something in common with the "Raa", but differs in the following:

A. Fricative phoneme need more air than others: the narrow escape passage doesn't create a plosive force to create resonance with a few amounts of air, but leave it to move forward, being restricted by the surrounding articulators. Al-Marashi (2008) said: "laxity implies air flow from the lungs till articulation of the phoneme; this happens when the phoneme is produced by narrowing air passage at the point of articulation. Narrowing doesn't obstruct air, i.e. it doesn't allow it to pass through the narrow passage but allows it to

pass through friction with walls of the narrowed passage. p. 58. Articulation of “Raa” needs less air than needed for the fricative phoneme. Here air passes through three stages:

First, from lungs to the vocal cords, i.e. from the onset of air release to the first obstruction in which the vocal cords become narrower to create voicedness.

Second, At the release from vocal cords till the tip of the tongue touches the hard palate intermittently. Here the air is released causing friction, due to the width of oral cavity and flat tongue.

Third, the area in which the tip of the tongue touches the hard palate compressing air repeatedly producing the resonance of “Raa” caused by the intermittent beats of the second stage. This indicates the “Raa” is fricative through air passage at the second stage and semi-fricative in the third for the quick beats never obstruct air. The produced hissing sound is similar to that of the “seen” or “saad” (Arabic alphabets). Continuity of air release is known to be a feature of the fricative phoneme. Malbridge (1984) noted that laxity or friction is the constant flow of air causing friction through the escape as the case in the articulation of the “thaa”, “Haa” and “Zay”. (1984), p. 113.

The “Raa” has this feature for the sound combines many of these features as Abdul Rahman Ayyoub (1968) points out. “the plosive lax voiceless phoneme in Arabic is the “kaf” p. 212. It seems that he described the “kaf”, being lax because it forms its resonance through the soft palate, not because the air escape is wide as the case is in articulating lax phonemes. About the “kaf” he says “in its articulation the back of the tongue and the epiglottis move up to close the nasal cavity. Air is released from the lungs passing through the vocal cords without making them to vibrate occupying the empty region between back of the tongue: and upper larynx. Air pressure continues till the tongue leaves the soft palate causing an audible friction. Ibid, p, 213.

B. In the articulation of a plosive phoneme, air doesn't stop when released from the lungs till it escapes from the mouth. What happens is that air is filtered causing it to be loose and that creates a hissing or a whistling sound when it touches the point of articulation through filtration. In the “Raa” air passes freely through the oral cavity till it undergoes minor closures caused by the tip of the tongue touching the hard palate. Thus, in the articulation of the “Raa” air flows freely before the stage of beating and hissing, but at that stage the flow doesn't stop completely because of the weak beat of the tip of the tongue against the gum.

C. Therefore, it needs several minor explosions to create resonance. Had the beats been more, the “Raa” could have no more been articulated in the formal Arabic manner. Makki (1996) pointed out that “in reading, repetition should be hidden. Repetition in the “Raa” is one of the features that strengthens it. One of the dictates of sound reading is to avoid exaggeration of repetition in the “Raa” by allowing the tip of the tongue to rely more on the hard palate. p. 13. Now we understand what the medial sound of the phoneme “Raa” means. It is the phoneme in whose articulation air is obstructed and released. This implies that air is not completely obstructed but has an escape for release. Ibrahim

Anees described the phonemes associated with the tip of the tongue (Lam, Noon, and Raa) “not tensed as explosion is never heard in their articulation, they are also not lax, as hissing, the feature of lax sounds is not heard. Therefore, the ancients regarded “Raa” medial, between tensity and laxity.

The differences between the “Raa” and other medial acknowledged phonemes. (meem, noon, and lam) are as follows:

First, escape closure: in these three phonemes the escape is completely obstructed and keeping air behind, but in the “Raa” the closure is never complete as air escapes from the point of closure intermittently and flows moving the tip of the tongue away from the place of articulation, due to absence of complete closure.

Second, Place of air release: in the articulation of “meem” and “noon” the flow of air changes direction to the nasal cavity, but in the articulation of “lam” air escapes laterally, with regard to the “Raa” air doesn't change direction but moves ahead.

CONCLUSION

The study analytically discussed the “Raa” phoneme in an attempt to find out: why it is labelled medial, its fricative feature, and its tensity by following the stages of articulation, and air movement. It was noted that: First, the articulation of the phoneme “Raa” passes through three stages each of which has its own features. First stage: begins as air is released from the lungs to the vocal cords which are made to vibrate and thus the “Raa” is voiced.

Second stage: is the stage of articulation beyond the vocal cords where the phoneme becomes lax fricative as articulators allow air to pass without any friction or any audible resonance.

Third Stage: is the stage where the tip of the tongue touches the hard palate and the air is tense for being obstructed intermittently, due to the beats of the tip of the tongue against the hard palate. Air at this stage produces few minor repeated explosions creating resonance. Second, the “Raa” can't be described as fricative (lax) because it is different from other fricatives in manner, in fricatives like: “seen” and “sheen” friction is audible. As for “Raa”, friction of the second stage is inaudible which can't be labeled plosive (tense) because it differs from plosives as it needs repetitive explosions to be audible. As for other plosives like “ba” (b) and “qaf” (K), they don't need more than one explosion due to the complete closure of air. Thus, we conclude that the “Raa” is a medial sound.

REFERENCES

- Al-Anbari, A. A. (1995). *Secrets of Arabic*, ed. Fakhr Eddin Qaddara. Beirut: Dar Al-Jabal, vol. (1).
- Al-khawarizmi, M. (1930). *Keys to sciences*. ed. Ibrahim Al-Abari. Dar Al-kitab Al-Arabi, vol. (2).
- Al-Mubarrid, M. B. (2004). Al-Muqtadab. ed. Mohammed Abdel-Khaliq Atheemah. Beirut: Alam Al Kutub.
- Al-Murishi, M. B. (2008). *Juhd Al-Muqal*. ed. Salem Qaduri Al-Hamad. Amman: Dar Amman.

- Al-Saaran, M. (1997). *Linguistics: an introduction to Arab readers*. Beirut: Arab Nahda Library.
- Anees, I. (1975). *Language phonemes*. Cairo: Egypt Nahda Library.
- Ayoub, A. R. (1968). *Language phonemes*. Cairo: Al-Kilani printing press, vol. (2).
- Bishir, K. (2000). *Phonology* Cairo: Dar Ghareeb, Ibid, General Linguistics. Cairo: Dar Al-Maarif, vol. (7).
- Hassan, T. (1990). *Language research methods*. Cairo: Anglo Egyptian library.
- Ibin Abee-Talib, M. (1996). *Guided reading to achieve correct recitation*. (1996). ed. Ahmed Hasan Farhat. Amman: Dar Freihah, vol. (3).
- Malbridge, B. (1984). *Phonology*. Trans. Abdel Saboor Shaheen. Cairo: Al-Shabab library.
- Nassar, Z. (1992). *Interpretation of Al-Jazrieh's Introduction to recitation*. Rev. Abdul Al-Hassan Al-Kurdi. Syria: The Levant printing press.
- Sibaway, A. O. (1988). *The Book*. Ed. by Abdel Salam Haroon. Beirut: Dar Al-Jeel.