



İHYA

İhya Uluslararası İslam Araştırmaları Dergisi  
International Journal of Islamic Studies

## VOWELS AND CLASSIFICATION CRITERIA IN MODERN STANDARD ARABIC\*

MODERN STANDART ARAPÇADA ÜNLÜLER VE SINIFLANDIRILMA ÖLÇÜTLERİ

**Zeynep ÖZKANLI**

Dr. Arş.Gör. Kastamonu Üniversitesi, İlahiyat Fakültesi, Arap Dili ve Belagati,  
Kastamonu/Türkiye

zeynepozkanli@yahoo.com, orcid.org/0000-0003-1466-9592.

### Makale Bilgisi / Article Information

**Makale Türü / Article Types: Araştırma Makalesi / Research Article**

**<https://doi.org/10.5281/zenodo.7513121>**

**Geliş Tarihi / Received:** 28 Ağustos 2022 / 28 Augusts 2022

**Kabul Tarihi / Accepted:** 24 Eylül 2022 / 24 September 2022

**Yayın Tarihi / Published:** 10 Ocak 2023 / 10 January 2023

**Yayın Sezonu / Pub Date Season:** Ocak – Bahar 2023/ January-Spring 2023

**Cilt / Volume: 9, Sayı / Issue: 1, Sayfa / Pages: 1-19.**

**Cite as / Atıf:** Özkanlı, Zeynep. “Vowels and Classification Criteria in Modern Standard Arabic” [Modern Standart Arapçada Ünlüler ve Sınıflandırılma Ölçütleri]”. İhya Uluslararası İslam Araştırmaları Dergisi- İhya International Journal of Islamic Studies, 9/1 (Ocak/January 2023), 1-19.

**Plagiarism / İntihal:** This article has been reviewed by at least two referees and scanned via a plagiarism software. / Bu makale, en az iki hakem tarafından incelendi ve intihal içermediği teyit edildi.

**Etik Beyan / Ethical Statement:** Bu çalışmanın hazırlanma sürecinde bilimsel ve etik ilkelere uyulduğu ve yararlanılan tüm çalışmaların kaynakçada belirtildiği beyan olunur / It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.



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\* This article was extracted from the third section of doctorate dissertation entitled “Arap Fonetikinin Tarihsel Gelişimi (Historical Development of Arabic Phonetics)”. See; *Arap Fonetikinin Tarihsel Gelişimi* (Ankara: Ankara University, Institute of Social Science, published Ph. D. Thesis, 2022).

### Abstract

Phonemes in a language are divided into two basic groups as segmental and suprasegmental. Among them, suprasegmental phonemes are not dependent on a single sound, on the contrary they contain more than one sound piece. Segmental phonemes are special sound units that are linked to a single sound. Vowels, consonants and semi-vowels are called segmental phonemes. Many vocal organs are involved in the formation of vowels. Among those, the tongue, lips and chin have a more important place in the forming the vowels. For this reason the vowels are divided into various groups as front, back, closed, open etc. according to the condition of the tongue, lips and chin in articulation. In addition to that vowels are examined as short and long in terms of the duration of their pronunciation. The aim of this study, which was prepared using the literature review method is to analyze the vowels of Modern Standard Arabic in line with the views of the 20th and 21st century Arab phoneticians with the differences of opinion between them. In addition to that it is aimed to classify these vowels according to the criteria of the IPA with the views of the modern Arabic phoneticians.

**Keywords:** Linguistics, Phonetic, Segmental Phonemes, Vowels, Modern Standard Arabic.

### Öz

Bir dildeki ses birimler, parçalarüstü ve parçalı olmak üzere iki temel gruba ayrılmaktadır. Bunlardan parçalarüstü ses birim olarak adlandırılanları tek bir sese bağlı olmayan aksine birden fazla ses parçasını kapsayan sesletim birimleridir. Parçalı ses birimler ise tek bir sese bağlı özel ses birimlerdir. Ünlüler, ünsüzler ve yarı ünlüler parçalı ses birim olarak adlandırılmaktadır. Parçalı ses birimler arasında yer alan ünlülerin oluşumunda çok sayıda ses organı görev almaktadır. Bu ses organları arasında dil, dudak ve çene oynak olmaları sebebi ile ünlü oluşumunda durgun ses organlarına kıyasla daha önemli bir yer tutmaktadır. Bu nedenle ünlüler, boğumlanmada dil, dudak ve çene gibi oynak ses organlarının durumuna göre ön, arka, kapalı, açık, dar ve geniş olmak üzere çeşitli gruplara ayrılmaktadır. Bununla birlikte söyleniş süresi bakımından ünlüler, kısa ve uzun olmak üzere iki temel grup altında incelenmektedir. Literatür taraması yöntemi kullanılarak hazırlanan bu çalışmanın amacı, Modern Standart Arapçanın ünlülerinin, 20. ve 21. yüzyıl Arap fonetikçilerinin görüşleri doğrultusunda ve bu fonetikçiler arasındaki görüş ayrılıklarına da yer verilerek incelenmesidir. Bununla birlikte çalışmada, Modern Standart Arapçanın ünlülerinin Arap fonetikçilerinin görüşlerine ek olarak Uluslararası Fonetik Alfabe ölçütlerine göre tasnif edilmesi de hedeflenmektedir.

**Anahtar Kelimeler:** Dil Bilimi, Fonetik, Parçalarüstü Ses Birimler, Ünlüler, Modern Standart Arapça.

### Extended Abstract

The meanings of the vowels in Modern Standard Arabic and the changes they have undergone in the historical process are the first subject that this article deals with. It would be appropriate to give a brief overview of this; the vowels of the Modern Standard Arabic are divided into two groups: the short vowels and the long vowels. The short vowels of Modern Standard Arabic were first identified by Abū al-Aswad al-Du'ālī in the 7th century. Mentioned in his sources; "If I open my lips, put a dot on the letter. If I pucker my lips, put a dot next to the letter. If I make a thin [i] sound with my lips, put a dot under the letter. If I read any of these from the nose, put two dots." al-Khalīl b. 'Aḥmad created a new ḥaraka system based on Abū al-Aswad's words. This system has been used until today without any changes after al-Khalīl. As can be seen, the above-mentioned words of Abū al-Aswad have a guiding quality in determining the short vowels of Modern Standard Arabic. Based on his words, it can be concluded that he establishes a connection between the quality of the sound and the grapheme corresponding to this sound. From the same words, it is possible to infer that the short vowels called as al-ḥaraka, the lips and the chin implicitly pointed out, gain some qualities with their various movements. As a matter of fact, according to Abū al-Aswad, there must be a lip opening in order for the vowel [a] to be formed, and for the vowel [u] to be formed, the lips must protrude forward - take a shrunken shape with the expression of Abū al-Aswad-. In the modern period, it is noteworthy that the expression al-ṣāit al-qaṣīra / الصَّائِثُ الْقَصِيرَةُ, which means short vowels, is used instead of al-ḥaraka for short vowels of Modern Standard Arabic, unlike the classicists. This expression has become standardized over time as a phonetic term. The expression al-ṣāit / الصَّائِثُ in the composition of الصَّائِثُ الْقَصِيرَةُ means vowel. This concept is similar to the Arabic expression al-muṣawwita / الْمُصَوِّتَةُ, which is used by Ibn Jinnī, one of the language scholars of the classical period, to describe long vowels and means vowel. For this reason, the origin of the expression الصَّائِثُ الْقَصِيرَةُ used and conceptualized by modern phoneticists can be traced back to Ibn Jinnī. However, there are also opinions that the concept in question is of Western origin and was brought into modern Arabic phonetics by the famous orientalist Gotthelf Bergsträßer (1886-1933). Long vowels of Modern Standard Arabic; they are depicted as vowels whose pronunciation is relatively longer than other vowels. The long vowels of MSA correspond to [a:], [i:], [u:]. These sounds are represented by their grapheme in the form of ا, ي and و respectively, in the written language. Some of these letters can sometimes replace long vowels, sometimes consonants, and sometimes semi-vowels depending on the way they are used. Long vowels of Arabic for the first time discovered by al-Khalīl b. 'Aḥmad, in the end of the 8th century. After determining the number of these sounds as four, he points to the places of their formation and characterizes them with the concept of air or cavity sounds. These are ا, ي, و and ء. al-Khalīl, draws attention to the fact that these sounds produced in cavity and do not touch any speech organs. Because of that he calls them cavity sounds. What he means by cavity is the throat and oral cavity. These sounds do not have a clear origin and occur in the throat and oral cavities. Linguists who came after al-Khalīl, especially his student Sībawayh, reduced the number of these four sounds as ا, و and ي to three and named them sometimes as all-madd, sometimes al-'illeh. Considered as one of the cavity sounds by al-Khalīl, ء is included among the consonants with a more modern expression, al-ḥuruf al-ṣiḥāḥ (ar. الحُرُوفُ الصِّحَاح) by these scholars. The second topic of this article is the classification of vowels. In this context, it should be started by saying that there are two basic vowel classification systems that aim to present the vowels in all world languages universally. The first of these is the International Phonetic Alphabet. Another criteria used in the classification is Cardinal Vowel System. Although there are Arabic phoneticians who use both systems, in this article the vowels of Modern Standard Arabic are classified under four main headings, according to the International Phonetic Alphabet. These main headings were determined on the basis of the movement of the speech organs and the durations during the pronunciation of the vowels.

## Introduction

Vowels are defined as sounds that made without any obstruction or narrowing in speech organs such as larynx, throat and mouth during the formation process. During the pronunciation of vowels, the air pushed out of the lungs moves along the vocal tract by flowing without encountering any obstacles.<sup>1</sup> Calling the long vowels of Arabic as cavity sounds (ar. الحُرُوفُ الْجَوْفِيَّةُ) and air sounds (ar. الحُرُوفُ الْهَوَائِيَّةُ) in the classical period can be interpreted similarly. With the definitions of cavity sounds and air sounds, it is meant that the sound flows with the air during the pronunciation of these sounds and there is no obstacle in the vocal tract.<sup>2</sup>

The vowels of the Modern Standard Arabic (MSA) are divided into two groups: the short vowels (ar. الصَّائِتُ الْقَصِيرَةُ) and the long vowels (ar. الصَّائِتُ الطَّوِيلَةُ).<sup>3</sup> The term of short vowel was used by the language scholars of the classical period like Sībawayh (135/752 ? – 180/796) and al-Zamakhsharī (467/1075 - 538/1144) as al-ḥaraka (ar. الحَرَكَة).<sup>4</sup>

Sībawayh gives the name of al-faṭḥa (ar. الْفَتْحَةُ), which he sees as a sign of naṣb in the first volume of his book *al-Kitāb*, to al-kasra (ar. الْكَسْرَةُ), which he sees as a sign of khafdh and al-dhamma (ar. الضَّمَّةُ), which he sees as a sign of rafʿ as al-ḥaraka.<sup>5</sup> Just like Sībawayh, al-Zamakhsharī, describes these three names with the concept of al-ḥaraka in his grammar book *al-Mufaṣṣal fī Ṣanʿat al-ʿIṣṣāb*.<sup>6</sup> However, it is not just short vowels that linguists mean by the term of al-ḥaraka. For them, this term includes a large number of signs in different functions, which are seen as a sign of iʿrāb and called al-faṭḥa, al-kasra, al-dhamma, al-tanwīn or nunation (ar. التَّنْوِينُ) and al-sukūn (ar. السُّكُونُ).<sup>7</sup> An example of this is the fact that al-ḥarakāt are called iʿrāb signs (ar. حَرَكَاتُ الْإِعْرَابِ) by al-Zamakhsharī.<sup>8</sup> In this aspect, the use of these signs differs from the phonetic use. From a phonetic point of view, al-ḥaraka means vowel marks that should be considered as a concept that only represents the sounds [a], [i], [u] and is limited to the names al-faṭḥa, al-kasra and al-dhamma. In the context of phonetics, this term used by the linguists of the classical period refers to some symbols corresponding to the sounds [a], [i], [u], placed

<sup>1</sup> Ibrāhīm Anīs, *al-Aṣwātu'l-Lughawiyya* (Egypt: Maktaba al-Encilū al-Maṣrī, 1975), 30-38; Kamāl Bishr, *ʿIlm al-Aṣwāt* (Cairo: Dār Gharīb, 2000) 217; ʿAbd al-Ghaffār Ḥāmid Hilāl, *Aṣwāt al-Lughā al-ʿArabiyya* (Cairo: Maktabatu Wahba, 1996), 88; Bassām Baraka, *ʿIlm al-Aṣwāt al-ʿĀmm: Aṣwāt al-Lughā al-ʿArabiyya* (Beirut: Markaz al-Inhāʾi al-Qawmī, 1988), 79.

<sup>2</sup> al-Khalīl b. ʿAḥmad al-Farāhīdī, *Kitāb al-ʿAyn*, critical ed. Maḥdī al-Makhzūmī - Ibrāhīm al-Sāmerrāī (Beirut: Dār Maktaba al-Hilāl), 2/57-58; Abū al-Qāsim Jār Allāh Maḥmūd b. ʿUmer al-Zamakhsharī, *al-Mufaṣṣal fī Ṣanʿat al-ʿIṣṣāb*, ed. Emīl Bedīʿi Yʿakoub (Lebanon: Dār al-Kutub al-ʿIlmiyyeh, 1999), 522; Abū Bishr ʿAmr b. ʿUthmān b. Qanber al-Khārithī Sībawayh, *al-Kitāb*, critical ed. ʿAbd al-Salām Moḥamed Hārūn (Cairo: Maktaba al-Khāncī, 2009), 4/435; Muammer Sarikaya, “Araplarda Fonetik İliminin Doğuşu”, *Bilimname*, 4/1 (2004), 121.

<sup>3</sup> Bishr, *ʿIlm al-Aṣwāt*, 12-13.

<sup>4</sup> Hilāl, *Aṣwāt al-Lughā al-ʿArabiyya*, 93.

<sup>5</sup> Abū Bishr ʿAmr b. ʿUthmān b. Qanber al-Khārithī Sībawayh, *al-Kitāb*, critical ed. ʿAbd al-Salām Moḥamed Hārūn (Cairo: Maktaba al-Khāncī, 2004), 1/13-14.

<sup>6</sup> al-Zamakhsharī, *al-Mufaṣṣal*, 44.

<sup>7</sup> Sībawayh, *al-Kitāb*, 1/13-14; al-Zamakhsharī, *al-Mufaṣṣal*, 44.

<sup>8</sup> Id, *al-Mufaṣṣal*, 44.

above or below the letter according to the quality of the sound. In addition to this information, it should be noted that classical language scholars such as al-Khalīl b. ‘Aḥmad al-Farāhīdī (100/718 - 175/791), Sībawayh and even Ibn Jinnī (300/913 ? - 392/1002) tend to see these three symbols, which they call al-ḥaraka, as an extension of the madd letters (ar. حُرُوفُ الْمَدِّ). Both al-fatha, al-kasra, al-dhamma and ا, و, ي called madd letters are voiced, and there is no obstacle in the vocal tract during the pronunciation.<sup>9</sup>

If we return to the subject of symbols that correspond to the sounds [a], [i], [u], placed above or below the letter according to the quality of the sound; these symbols are still used in Modern Standard Arabic; َ for al-fatha, which corresponds to the sound [a] and is written on the letter; For the al-kasra corresponding to the sound [i] and written under the letter, ِ ; It includes ُ signs for al-dhamma, which corresponds to the sound [u] and is written on the letter.

### 1.Short Vowels

The short vowels of Modern Standard Arabic were first identified by Abū al-Aswad al-Du‘alī in the 7th century. Mentioned in his sources; “If I open my lips, put a dot on the letter. If I pucker my lips, put a dot next to the letter. If I make a thin [i] sound with my lips, put a dot under the letter. If I read any of these from the nose, put two dots.”<sup>10</sup> al-Khalīl b. ‘Aḥmad created a new ḥaraka system based on Abū al-Aswad's words.<sup>11</sup> This system has been used until today without any changes after al-Khalīl.<sup>12</sup>

As can be seen, the above-mentioned words of Abū al-Aswad have a guiding quality in determining the short vowels of Modern Standard Arabic. Based on his words, it can be concluded that he establishes a connection between the quality of the sound and the grapheme corresponding to this sound. From the same words, it is possible to infer that the short vowels called as al-ḥaraka, the lips and the chin implicitly pointed out, gain some qualities with their various movements. As a matter of fact, according to Abū al-Aswad, there must be a lip opening in order for the vowel [a] to be formed, and for the vowel [u] to be formed, the lips must protrude forward - take a shrunken shape with the expression of Abū al-Aswad-

In the modern period, it is noteworthy that the expression al-ṣā’it al-qaṣīra / الصَّائِثُ الْقَصِيرَةُ, which means short vowels, is used instead of al-ḥaraka for short vowels of Modern Standard Arabic, unlike the classicists. This expression has become standardized over

<sup>9</sup> Khalaf al-Sayyid Ridhwān, “Ṣawā’it al-Qaṣīra fī Dhaw’i Mu‘ṭiyāt ‘Ilm al-Aṣwāt Beyne al-Qudamā wa al-Muḥdathīn”, *Ḥawliyyeh Kulliyeh al-Luḡha al-‘Arabīyyeh bi Circā: Mecelle ‘Ilmiyyeh Muḥakkemeh*, 8/1 (2004), 222; Hilāl, *Aṣwāt al-Luḡha al-‘Arabīyya*, 93.

<sup>10</sup> Qāḍī Abī Sa‘īd al-Ḥassēn b. ‘Abd Allāh al-Sīrāfī, *Akhbār al-Naḥviyyīn al-Baṣriyyīn*, critical ed. Ṭaḥā Moḥamed al-Zainī - Moḥamed ‘Abd al-Mun‘im Khafācī ( Egypt: Maktaba Moṣṭafā al-Bābī al-Ḥalebī, no date), 10.

<sup>11</sup> Mahdī al-Makhzoumī, *Madrasa al-Kūfe Manḥacuhā fī Dirāse al-Luḡha wa al-Naḥv* (Egypt: Moṣṭafā al-Bābī al-Ḥalebī, 1958), 19.

<sup>12</sup> Baraka, *‘Ilm al-Aṣwāt al-‘Āmm*, 107.

time as a phonetic term. The expression al-ṣā'it / الصَّائِت in the composition of الصَّائِثُ الْقَصِيرَةُ means vowel. This concept is similar to the Arabic expression al-muṣawwita / الْمُصَوِّتَة, which is used by Ibn Jinnî, one of the language scholars of the classical period, to describe long vowels and means vowel. For this reason, the origin of the expression الصَّائِثُ الْقَصِيرَةُ used and conceptualized by modern phoneticists can be traced back to Ibn Jinnî. However, there are also opinions that the concept in question is of Western origin and was brought into modern Arabic phonetics by the famous orientalist Gotthelf Bergsträßer (1886-1933).<sup>13</sup>

## 2. Long Vowels

Long vowels of Modern Standard Arabic; they are depicted as vowels whose pronunciation is relatively longer than other vowels. The long vowels of MSA correspond to [a:], [i:], [u:]. These sounds are represented by their grapheme in the form of ي, ا and و respectively, in the written language. Some of these letters can sometimes replace long vowels, sometimes consonants, and sometimes semi-vowels depending on the way they are used.<sup>14</sup> Long vowels of Arabic for the first time discovered by al-Khalīl b. 'Aḥmad, in the end of the 8th century. After determining the number of these sounds as four, he points to the places of their formation and characterizes them with the concept of air or cavity sounds. These are ا, ي, و and ء. al-Khalīl, draws attention to the fact that these sounds produced in cavity and do not touch any speech organs. Because of that he calls them cavity sounds. What he means by cavity is the throat and oral cavity.<sup>15</sup> These sounds do not have a clear origin and occur in the throat and oral cavities. Linguists who came after al-Khalīl, especially his student Sībawayh, reduced the number of these four sounds as ا, و and ي to three and named them sometimes as all-madd, sometimes al-'illeh (ar. الحروف العلة).<sup>16</sup> Considered as one of the cavity sounds by al-Khalīl, ء is included among the consonants with a more modern expression, al-ḥurouf al-siḥāḥ (ar. الحُرُوف الصِّحَاح) by these scholars.

Sībawayh, describes ا, ي and و as cavity or air sounds like al-Khalīl. However, he separates و and ي from others in terms of pronunciation features. During the pronunciation of these two, the sound shows the characteristic of expanding and spreading in the mouth. Because of these features, و and ي are soft sounds of Arabic.<sup>17</sup> Due to their softness, these letters are described as soft or līn letters (ar. الحُرُوف اللَّيِّنَة) by language scholars such as Sībawayh and al-Zamakhsharī.<sup>18</sup>

<sup>13</sup> Hilāl, *Aṣwāt al-Luġha al-'Arabiyya*, 87.

<sup>14</sup> al-Sa'rān, *Ilm al-Luġha*, 150; Ibrāhīm Khalīl, *Muqaddime fī 'Ilm al-Aṣwāt al-Luġha al-'Arabiyya* (Amman: Emwāc, 2013, 77-78.

<sup>15</sup> al-Khalīl b. 'Aḥmad, *Kitāb al-'Ayn*, 1/48, 57-58.

<sup>16</sup> Sībawayh, *al-Kitāb*, 4/435; al-Zamakhsharī, *al-Mufaṣṣal*, 522; Abū al-'Abbās Moḥamed b. Yazīd al-Mubarrad, *al-Muqtaḍab*, critical ed. Ḥassēn Ḥamid - Rāhīl Ya'koub (Lebanon: Dār al-Kutub al-'Ilmiyyeh, 1999), 1/126, 133, 146.

<sup>17</sup> Sībawayh, *al-Kitāb*, 4/435.

<sup>18</sup> al-Zamakhsharī, *al-Mufaṣṣal*, 522; Sībawayh, *al-Kitāb*, 4/435.

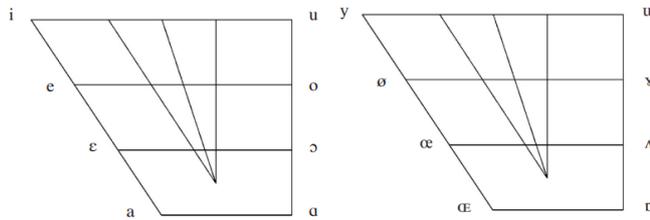
al-Mubarrad associates the vowel group consisting of ا, و, ي with a sound event called i‘lāl (ar.الإغلال) and describes these sounds as al-ḥurouf al-‘illeh (ar.الحُرُوفُ الْعِلَّةُ).<sup>19</sup> As a result of all these qualifications and naming, it is possible to say that the madd letters or līn letters were used in the classical period as the equivalent of the long vowel concept used in the modern period.<sup>20</sup>

### 3. Classification Criteria

As for the classification criteria of the vowels of Modern Standard Arabic; first of all it is necessary to give the information that there are two basic vowel classification systems that aim to present the vowels in all world languages universally. The first of these is the International Phonetic Alphabet.<sup>21</sup>

Another criteria used in the classification is Cardinal Vowel System. This system was introduced for the first time in the 20th century by British phoneticians Daniel Jones (1881 - 1967). According to this system, vowels were tried to be classified according to the vowel area represented by a four-sided shape called the vowel quadrilateral. The vowel quadrilateral associated with the various positions of the tongue in vowel production is shown in figure 1. The line in the upper corner of the shape in the figure represent the horizontal position of the tongue, and the upward line on the side of the figure represent the vertical axis of the tongue. The primary basic vowels [a], [u], [i] and [o] determined by taking the horizontal and vertical axes of the tongue as criteria, these vowels are taken as reference for the description of vowels in world languages:<sup>22</sup>

Figure 1: The Primary (left) and Secondary (right) Cardinal Vowels<sup>23</sup>



There are Arabic phoneticians who try to position the vowels of Modern Standard Arabic according to the vowel quadrilateral, as well as those who try to position them according to the vowel triangle. Arabic phoneticians such as Bassām Baraka (b.1950) first used the vowel triangle created by Germanian linguistics Christoph Friedrich Hellwag (1754 - 1835) in 1781<sup>24</sup> and positions the vowels of MSA according to the

<sup>19</sup> al-Mubarrad, *al-Muqtaḍab* 1/126, 133, 146.

<sup>20</sup> Baraka, *‘Ilm al-Aṣwāt al-‘Āmm*, 92; Hilāl, *Aṣwāt al-Luḡha al-‘Arabī*, 88, 92; Bishr, *‘Ilm al-Aṣwāt*, 164, 220, 445.

<sup>21</sup> Ashby et al., *Introducing Phonetic Science*, 2-4.

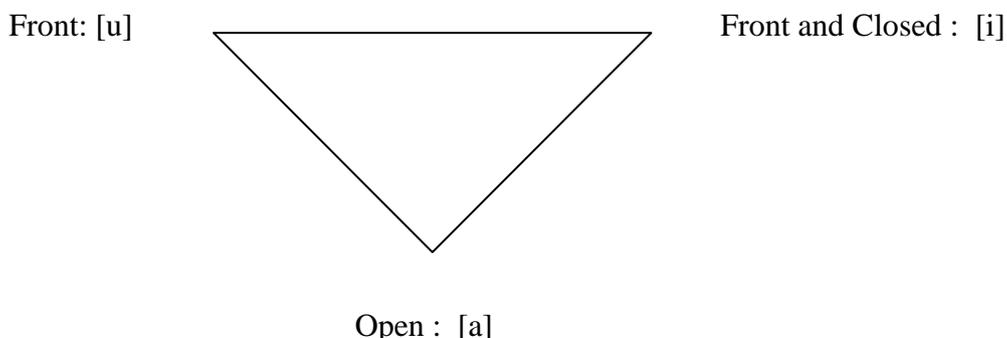
<sup>22</sup> Bishr, *‘Ilm al-Aṣwāt*, 225; ‘Aḥmad Mukhtār ‘Umer, *Dirāse al-Ṣawt al-Luḡhawīyya* (Cairo: ‘Ālem al-Kutub, 1997) 148-149.

<sup>23</sup> Ashby et al., *Introducing Phonetic Science*, 78.

<sup>24</sup> Doğan Aksan, *Her Yönüyle Dil* (Ankara: Türk Dil Kurumu Yayınları, 2009), 2/27.

primary basic vowels [a], [u] and [i] placed at each vertex of this triangle. According to this, the vowels of MSA are ordered according to their pronunciation and the mouth opening. Considering these criteria, we come across vowel groups such as front-back and open-closed: <sup>25</sup>

Figure 2: Vowel Triangle <sup>26</sup>



The vowels in all world languages are based on the vowels positioned according to the vowel quadrilateral or the vowel triangle, which is also used by Arab phoneticians. However, it should be noted here that vowels positioned at different ends of both shapes cannot be expected to include vowels in all world languages. When it is desired to symbolize the special vowels of any language according to the vowel quadrilateral or the vowel triangle, points similar to these reference points can be produced. It is the same with the International Phonetic Alphabet to the special vowels and consonants of a language. A similar new system can be introduced by taking this alphabet system as an example.

As a matter of fact, when the Cardinal Vowel System, Hellwag Vowel Triangle and the International Phonetic Alphabet are examined, it is seen that some criteria have been developed according to the various positions these three organs take during pronunciation. The vowels in Modern Standard Arabic are also under four main headings, taking into account these principles and their specific sounds as below:

### 3.1. Vowels According to the Position of Tongue

The vowels of Modern Standard Arabic are divided into two groups according to the position of tongue as front vowels and back vowels.<sup>27</sup> The front vowels (ar. الصَّوَائِثُ الأَمَامِيَّةُ) are formed by the protrusion of the blade of the tongue towards the palate.<sup>28</sup> Protrusion of the blade of tongue, narrowing the anterior part of the oral cavity.<sup>29</sup> These vowels are also called thin vowels, as a thin sound occurs during the pronunciation of front vowels. Back vowels (ar. الصَّوَائِثُ الخَلْفِيَّةُ) are formed by the protrusion of the tongue

<sup>25</sup> Baraka, *Ilm al-Aṣwāt al-‘Āmm*, 84.

<sup>26</sup> Baraka, *Ilm al-Aṣwāt al-‘Āmm*, 49.

<sup>27</sup> al-Sa‘rān, *Ilm al-Lughā*, 183; Baraka, *Ilm al-Aṣwāt al-‘Āmm*, 80.

<sup>28</sup> Günay Karaağaç, *Dil Bilimi Terimleri Sözlüğü* (Ankara: Türk Dil Kurumu Yayınları, 2013), 618.

<sup>29</sup> Mustafa Volkan Coşkun, *Türkçenin Ses Bilgisi* (İstanbul: Bilge Kültür Sanat Yayınları, 2015), 34.

towards the back, that is the hard palate. These vowels can also be described as deep vowels, as a deep voice occurs during their pronunciation.<sup>30</sup>

There are different opinions about what the front and back vowels of Modern Standard Arabic are. For example, Maḥmūd al-Sa‘rān treats short and long vowels as if they were two separate vowels in his vowel classification. According to that; back vowels of MSA as follow:

1. Long vowel ʾ, in qa:le / قَالٌ . This vowel symbolized with [a:] in the International Phonetic Alphabet.

2. Short vowel named al-dhamma in the ṣummun / صُمُّ and symbolized with [u] in the International Phonetic Alphabet.

3. The short vowel named al-faṭḥa in the word ṣabara / صَبَرَ symbolized with [a] in the International Phonetic Alphabet.

As for the front vowels of Modern Standard Arabic; these are as follow:

1. The long vowel ʾi, in the expression bi:‘un / بِيْعٌ and the sound value is shown as [i:] in the International Phonetic Alphabet.

2. The long vowel ʾa, in the word ba:‘un / بَاءٌ, sound value is shown with [a:] in the International Phonetic Alphabet.

3. The short vowel named al-kasra in the word tibnun / تِبْنٌ and the sound value shown as [i] in the International Phonetic Alphabet.<sup>31</sup>

Since al-Sa‘rān does not use any phonetic signs while describing back and short vowels and does not include an explanatory element such as thick-thin or medium, the vowels mentioned above are presented in the classical format.

‘Iṣām Nouredīn, one of the 20th century Arab phoneticians, gives the information that there are two types of vowels in Modern Standard Arabic in his work named *‘Ilm al-Aṣwāt al-Lughavī: al-Founoutīka*. Among these vowels, those that are described as short have three different allophone as thick, thin and medium. Similar to Kamāl Bishr's method, he considers these vowels together with their allophones, which he calls thick-thin and medium, and examines them under two groups as front and back according to the tongue position.<sup>32</sup>

‘Aḥmad Mukhtār ‘Umer, a contemporary of ‘Iṣām Nouredīn and Maḥmūd al-Sa‘rān, classifies the sounds that he has grouped as vowels and consonants, in his work *Dirāse Ṣawt al-Lughavī*, according to their places of articulation. He does not qualify vowels as open vowels and closed vowels, as his contemporaries do. Instead, he expresses

<sup>30</sup> Aksan, *Her Yönüyle Dil*, 2/25

<sup>31</sup> al-Sa‘rān, *‘Ilm al-Lughā*, 183-184.

<sup>32</sup> ‘Iṣām Nouredīn, *‘Ilm al-Aṣwāt al-Lughawiyya: al-Founoutīka* (Beirut: Dār al-Fikr al-Lubnānī, 1992), 279-282.

the vowel-pronoun relationship as follows: “During the pronunciation of the [i] sound called al-kasra and the long pronunciation of this sound, the [i:] sound symbolized by  $\text{ي}$ , the front tongue becomes protruding.”<sup>33</sup> He expresses the vowel and archaic relation as follows: “During the pronunciation of the short vowels [u], called al-dhamma, and [u:], symbolized by long vowels  $\text{و}$ , the back tongue rises towards the palate.”<sup>34</sup>

Bassām Baraka is of the opinion that there are only three basic vowels in Modern Standard Arabic and lists them as [i], [u] and [a]. As the leading vowel of MSA, he accepts only al-kasra, which corresponds to the sound [i]. The back vowels are [u] and [a], corresponding to al-dhamma and al-fathā. Moḥamed ‘Alī al-Khoulī, who is regarded as one of the modern phoneticians such Maḥmoud al-Sa‘rān and Baraka, also mentions this issue with only a few sentences in his work titled *Madkhal ilā ‘Ilm al-Lughā*: “What is the state of the tongue according to whether the protrusion takes place in the anterior or posterior part of the tongue? With the protruding that occurs in the front part of the tongue, front vowels such as the short vowel al-kasra occur. When it occurs in the middle part of the language, it becomes a central vowel like [a] in the English far word. When the protruding takes place on the back of the tongue, a back vowel is formed, such as the short vowel al-dhamma in the example of kutibe / كُتِبَ.”<sup>35</sup> Based on these sentences, it can be concluded that he tries to classify the vowels according to the state of the language. However, it is not clear which vowels of MSA are subject to such a classification. According to that; it is one of the front vowels [i], which he describes as the short vowel al-kasra, and the short vowel [u], which he calls al-dhamma, is one of the back vowels. Again, the fact that the group he called the central vowel chose an English word for its sample, suggesting that there is no such vowel in MSA.

In line with Bassām Baraka's views, the vowels of Modern Standard Arabic are grouped only over short vowels, front and back according to the tongue's position in articulation. However, based on the fact that Maḥmoud al-Sa‘rān and Moḥamed ‘Alī al-Khoulī considered the vowels as a whole with their allophone, these allophones were added to the three basic short vowels. Especially Bishr's giving the vowels with phonetic sign equivalents is effective on the study in this respect. After all this information, the vowels of MSA can be classified as follows according to the position of the tongue:

<sup>33</sup> ‘Umer, *Dirāse al-Ṣawt al-Lughawiyya*, 317.

<sup>34</sup> Id, *Dirāse al-Ṣawt al-Lughawiyya*, 318.

<sup>35</sup> al-Khoulī, *Madkhal ilā ‘Ilm al-Lughā*, 38.

Table 1: Vowels of Modern Standard Arabic According to the Position of Tongue

Vowels of Modern Standard Arabic According to the Position of Tongue	
Front Vowels	Back Vowels
al-Faḥa from short vowels symbolized as [æ] in the International Phonetic Alphabet. For example, al-faḥa on ب in ṣabera / صَبْر .	al-Faḥa from short vowels symbolized as [ɑ] in the International Phonetic Alphabet. For example, al-faḥa on ص in ṣabera / صَبْر .
al-Faḥa symbolized by [a] in the International Phonetic Alphabet, only when used with the consonants ق, خ, غ. al-Faḥa in the word khayrun / خَيْر is an example of this type of vowel.	al-Kasra symbolized with [ɪ] in the International Phonetic Alphabet. For example, al-kasra on ق in the word qīṭar / قِطَار .
al-Kasra symbolized by [i] in the International Phonetic Alphabet. For example, al-kasra on ب in bintun / بِنْت .	al-Dhamma symbolized with [u] in the International Phonetic Alphabet. For example, al-dhamma on ب in buka:’un / بُكَاء .
	al-Dhamma symbolized with [ʊ] in the International Phonetic Alphabet. An example of this type of vowel is al-dhamma on ص in the word ṣulḥun / صَلْح .
	It is a different type of al-dhamma, which is symbolized with [ɔ] in the International Phonetic Alphabet. al-Dhamma on the ق in the word qutḥun / قُطْب can be given as an example. Only when used with consonants ق, خ, غ it is symbolized with [ɔ].

### 3.2. Vowels According to the Lips Positioning

As previously mentioned Abū al-Aswad al-Du’alī is the first to mention the effect of various positions of the lips on the formation of vowels in the classical period.<sup>36</sup> This determination has developed over time to classify vowels according to the position of the lips. As a matter of fact, Maḥmūd al-Sa’rān, one of the modern Arab phoneticians, states that the lips are of great importance in the formation of vowels, but also deals with the vowels in a unique way according to the condition of the lips. According to that; there are three basic movements of the lips in the vowel pronunciation. The first of these is the unification movement. The lips come together to form the short vowel called al-dhamma with the sound equivalent of [u]. Another movement of the lips is to take a position giving

<sup>36</sup> al-Sīrāfī, *Akḥbār al-Naḥwiyyīn al-Baṣriyyīn*, 10.

the [i] sound. In this position, the short vowel called al-kasra, which is shown as [i], is formed. The last movement of the lips is the opening position. In this case, the short vowel called al-fatha and corresponding to the sound [a] is formed.<sup>37</sup> As can be seen, al-Sa' rān only gives information about the movement of the lips. He does not name vowels with different terms according to the position of the lips.

'Iṣām Noureddīn, divides the vowels of Modern Standard Arabic into two groups as rounded and unrounded or straight, according to the lips positioning. He describes the vowels in which the lips take a rounded shape during pronunciation, with the Arabic expression al-ṣawāit al-mustadīrah / الصَوَائِتُ الْمُسْتَدِيرَةُ. The English equivalent of the expression الصَوَائِتُ الْمُسْتَدِيرَةُ is rounded vowels. The vowels in which the lips are in a horizontally open position are named with the Arabic expression al-ṣawāit al-munfarīḥah / الصَوَائِتُ الْمُنْفَرِجَةُ.<sup>38</sup> The expression الصَوَائِتُ الْمُنْفَرِجَةُ can be transferred to English as unrounded vowels. Noureddīn used the short vowel [a] called al-fatha, [a:] symbolized by ا from the long vowels, the short vowel [i] called al-kasra and the long vowel [i:] symbolized by ي, unrounded vowel. He defines the short vowel al-dhamma which is symbolized by [u] and long vowel و, which is symbolized by the [u:] as the rounded vowel of MSA.<sup>39</sup>

Kamāl Bishr is of the opinion that all world languages have vowel sets consisting of [i], [e], [ɛ], [a], [ɑ], [ɔ], [o], [u] phonemes. The number of vowels in any language can be increased or decreased by referencing these primary basic vowels determined according to the International Phonetic Alphabet.<sup>40</sup> Vowels are formed by various movements of the lips. The basic movement of the lips that affects the quality of the sound is the fusion. Therefore, vowels can be examined under two separate headings based on the divergence and convergence of the lips. Bishr names the first of these with the composition al-ḥarakāt ghayr al-maḍmoumeh / الْحَرَكَاتُ غَيْرُ الْمَضْمُومَةِ. This expression referring to the movement of the lips away from each other, covers the [i] that occurs with the opening and widening of the lips and the movement that occurs with the separation of the lips [ɑ]. He names the vowels in which the lips approach each other during the pronunciation, with the expression al-ḥarakāt al-maḍmoumeh / الْحَرَكَاتُ الْمَضْمُومَةِ, which means the combined movements of the lips. The convergence or merging of the lips is more intense in the pronunciation of some sounds and less in others. The vowels formed by the fusion of the lips are the half-open, back and round vowel symbolized as [u] and [ɔ]. The sound value of the [ɔ] symbol is unknown. Based on the round and posterior vowel descriptions, this vowel type may be one of the [o] and [u] vowels.<sup>41</sup> Despite the information he gave about the effect of lips on the pronunciation of vowels, Bishr does

<sup>37</sup> al-Sa' rān, *Ilm al-Lughā*, 184.

<sup>38</sup> Noureddīn, *Ilm al-Aṣwāt al-Lughawiyya*, 260.

<sup>39</sup> Id, *Ilm al-Aṣwāt al-Lughawiyya*, 262.

<sup>40</sup> Bishr, *Ilm al-Aṣwāt*, 227-228.

<sup>41</sup> Bishr, *Ilm al-Aṣwāt*, 233-234.

not classify the vowels of Modern Standard Arabic according to the condition of the lips. However, despite establishing a similarity relationship between the vowels of MSA and some vowels from other languages in the International Phonetic Alphabet, in terms of the position of the tongue in articulation.<sup>42</sup> By taking the lip condition as a criterion in articulation, it does not include such an association between vowels.

Bassām Baraka, on the other hand, describes the vowels in two ways, straight and rounded, according to the condition of the lips. The vowel in which the lips take a rounded shape during pronunciation is the rounded vowel. The rounded vowel in Modern Standard Arabic is [u], symbolized by the al-dhamma. He describes this type of vowel with the Arabic expression al-ṣāit al-mustadīr / الصائت المُستدِير. The vowel formed by the stretching of the lips is the unrounded vowel. One of the short vowels [i], symbolized by al-kasra is the unrounded vowel of MSA. It should be noted here that Baraka presents unrounded or straight vowel term, with the Arabic expression al-ṣāit al-munqabid / الصائت المُنْقَبِض.<sup>43</sup>

‘Aḥmad Mukhtār ‘Umer states that the sounds in world languages are classified under three headings according to the lip condition. According to this classification, sounds are divided into three groups as rounded (ar. المُستدِيرَة), unrounded or straight (ar. غَيْرُ المُستدِيرَة) and natural (ar. المُحَايِدَة). According to that; roundness, unroundness and naturalness are not exclusive to vowels. Among the consonants in some languages, there are rounded, unrounded and natural ones. For example, /w/ in English is a rounded consonant. As for the vowels of Modern Standard Arabic; ‘Umer does not give any information about which group the vowels of this language fall into.<sup>44</sup>

Moḥamed ‘Alī al-Khoulī, classified the vowels contemporaries such as Maḥmūd al-Sa‘rān, Kamāl Bishr and Bassām Baraka, who are similar to them in many aspects in terms of their methods of examining vowels, according to their lip condition. However, he only takes the rounding movement of the lips as a criterion. He summarizes this subject in a few sentences as follows: “The rounding of the lips with the pronunciation of the sound is called rounded. Like al-dhamma with short pronunciation and و with long pronunciation. Such sounds are called rounded sounds.<sup>45</sup> It is noteworthy that he uses the word sound instead of vowel.

In the light of this information and evaluations, it is possible to list the vowels of Modern Standard Arabic in terms of the position of the lips, under two groups as rounded and unrounded as follows:

<sup>42</sup> Id, *‘Ilm al-Aṣwāt*, 466.

<sup>43</sup> Baraka, *‘Ilm al-Aṣwāt al-‘Āmm*, 85.

<sup>44</sup> ‘Umer, *Dirāse al-Ṣawt al-Lughawiyya*, 125-126.

<sup>45</sup> al-Khoulī, *Madkhal ilā ‘Ilm al-Lughā*, 38.

Table 2: Vowels of the Modern Standard Arabic According to Lips Positioning in Articulation

**Vowels According to Lips Positioning in Articulation****Unrounded Vowels**

al-Faṭḥa from short vowels symbolized as [a] in the International Phonetic Alphabet

al-Kasra, one of the short vowels symbolized by [i] in the International Phonetic Alphabet

**Rounded Vowels**

al-Dhamma from the short vowels symbolized by [u] in the International Phonetic Alphabet

**3.3. Vowels According to the Mouth Opening**

Vowels are divided into four groups according to the degree of aperture of the mouth: close, half-close, open and half-open. Since the mouth opening is provided by the chin movements, such a classification can also be called vowels according to the chin opening in articulation.<sup>46</sup>

Maḥmūd al-Sa' rān groups vowels according to the degree of rise of the tongue in the mouth as narrow (ar. الضيق) – semi-narrow (ar. نصف الضيق) and open (ar. المفتوح) – half-open (ar. نصف المفتوح). Among the long vowels in the expression بِيَع, the sound equivalent of ي is [i:] and it is a narrow vowel of Modern Standard Arabic. The sound equivalent of ا in the word بَاء is [e:] and it is one of the long vowels. This type of vowel is one of the semi-open vowels according to the degree of rise of the tongue in the mouth. Among the long vowels in قَال and corresponding to the sound [a:], ا is one of the open vowels of MSA. al-Dhamma, one of the short vowels in the expression صُم, corresponds to the sound [u] and is a half-open vowel of MSA. Based on the examples given by al-Sa' rān, it can be said that he included the long vowels as well as the short vowels within the scope of his grouping as narrow - semi-narrow, open - half-open.<sup>47</sup>

Kamāl Bishr also examines vowels under four headings, narrow, wide (ar. المتسع) or open, semi-narrow and semi-wide (ar. نصف المتسع) according to the degree to which the tongue rises towards the upper palate. The narrow vowels of the Modern Standard Arabic are the short vowels [i], which is denoted by al-kasra, and [u], which is denoted by al-dhamma. MSA has only one wide vowel. This vowel is [a], symbolized by the short vowel al-faṭḥa.<sup>48</sup>

ʿIṣām Nouredīn divides vowels into four groups according to the lip condition: close (ar. المغلقة), half-close (ar. نصف المغلقة), open and half-open (ar. نصف المفتوحة)

<sup>46</sup> Günay Karaağaç, *Türkçenin Ses Bilgisi* (İstanbul: Kesit Yayınları, 2018), 43.

<sup>47</sup> al-Sa' rān, *ʿIlm al-Lughā*, 184.

<sup>48</sup> Bishr, *ʿIlm al-Aṣwāt*, 466.

vowels. He calls the ones that occur with the tongue rising towards the upper palate as close vowels. Close vowels can also be given the name of narrow vowels (ar. الصوائت الضيقة). The degree of opening of the mouth affects the distance between the tongue and the palate. The closer the mouth is to the closed position, the smaller the distance between the tongue and the palate. The vowels in which there is a distance between the tongue and the palate during their pronunciation are called open vowels. These vowels are also called wide vowels (ar. الصوائت المتسبعة). If the horizontal or vertical position of the tongue in the mouth is close to the position of the tongue when pronouncing open vowels, they are called half-open. If the shape of the tongue is close to closed vowels, then the vowels in question are called half-close vowels. Noureddīn exemplifies the vowels he quotes from French and German under these four groups. Modern Standard Arabic does not include vowels under these headings.<sup>49</sup>

Bassām Baraka divides vowels into four groups as close, half-close, open and half-open, according to the degree of mouth opening during pronunciation. According to that; the degree of mouth opening depends on the vertical movement of the tongue. Therefore, it correlates the distance between the palate and the back of the tongue with the degree of aperture of the mouth. Baraka, who subject only the short vowels of Modern Standard Arabic to this type of classification, defines al-dhamma and al-kasra as a close vowel and al-fathā as an open vowel.<sup>50</sup>

In line with the above-mentioned views of modern phoneticists, it can be said that there are only two vowel groups in Modern Standard Arabic, called open [or wide] and close [or narrow]. The open vowel of MSA is the short vowel [a], symbolized by al-fathā. During the pronunciation of this sound, the mouth is in a fully open position. There is also a distance between the palate and the back of the tongue. Close vowel of MSA is one of the short vowels [i], corresponding to al-kasra. During the pronunciation of this sound, the mouth takes a position opposite to the open vowel.

The distance between the tongue and the back of the palate narrows. The open and close vowels of MSA are shown in the table below:

<sup>49</sup> Noureddīn, *ʿIlm al-Aṣwāt al-Lughawiyya*, 263-264.

<sup>50</sup> Baraka, *ʿIlm al-Aṣwāt al-ʿĀmm*, 80-85.

Table 3: Vowels of Modern Standard Arabic According to the Mouth Opening

Vowels According to the Mouth Opening	
Open Vowels	Close Vowels
al-Fatḥa from short vowels symbolized as [a] in the International Phonetic Alphabet	al-Dhamma from the short vowels symbolized by [u] the International Phonetic Alphabet
	al-Kasra, one of the short vowels symbolized by [i] in the International Phonetic Alphabet

### 3.4. Vowels According to the Duration

Maḥmūd al-Sa' rān examines short and long vowels as two separate vowel groups.<sup>51</sup> He puts long vowels in the same classification as short vowels, with the same criteria. There is no duration among these criteria.

Kamāl Bishr does not see length in vowels as a contextual phenomenon. Long vowels are not specific to a particular position in the word. However, they do not need another vowel who comes before or after them to make sense. On the contrary, long vowels alone are considered as one of the basic elements that make up the word. Since they have a phoneme structure, they have both semantic and structural value in the word. While ق in the expression qatele / قَاتِل is written with al-fatḥa from short vowels, the meaning is killed when the same word is written with ِ from long vowels, and as qa:til / قَاتِل, the meaning changes as fighting, struggling.<sup>52</sup>

Bassām Baraka is of the opinion that it is possible to separate the vowels from the consonants by considering the duration factor. This kind of classification can also be expressed as the classification of vowels in terms of quantity. The duration of a sound means its continuity and length over time. The duration of the utterance depends on the force of the breath or the force of the air being pushed out of the lungs during exhalation. For this reason, vowels are considered in two groups as short vowels and long vowels according to the length of their articulation. The ي corresponding to the sound [i:] in the bashi:r / بَشِير and nazi:r / نَظِير expressions is an example of a vowel that is pronounced longer than other vowels. The sound [i], which is found in the words bishrun / بِشْر and fiṭrun / فِطْر and symbolized by al-kasra, is an example of a short vowel. Long vowels in Modern Standard Arabic have a distinctive meaning. The words feteḥa / فَتَح, which includes al-fatḥa from short vowels, and fa:teḥa / فَاتَح, which includes ِ from long vowels, are different from each other in terms of meaning; فَتَح means to open up, فَاتَح means to show, to open the subject first.<sup>53</sup>

<sup>51</sup> al-Sa' rān, *Ilm al-Lughā*, 183-184.

<sup>52</sup> Bishr, *Ilm al-Aṣwāt*, 461

<sup>53</sup> Baraka, *Ilm al-Aṣwāt al-Āmm*, 83.

According to ‘Aḥmad Mukhtār ‘Umer, all language sounds, whether vowels or consonants, have a natural pronunciation duration. For this reason, there is continuity and quantity for the pronunciation of language sounds. Sounds that are pronounced beyond the natural pronunciation time are characterized as long sounds. Language sounds that do not exceed the natural length of utterance by comparison with such sounds can be characterized as sounds with short length of utterances. There are sound groups of these two types in terms of length and shortness, especially in vowels. Although there are examples of short and long vowels in all world languages, the use of these vowels in a grammatical unity to distinguish meaning is seen in some languages such as Chinese and Arabic. There are two types of vowels in Modern Standard Arabic, long and short vowels. The longer ones are [a:], [u:] and [i:], symbolized as ا, و, ي.<sup>54</sup>

In Modern Standard Arabic, the shortness or length of the pronunciation of a vowel can cause semantic and structural changes in the word. This is due to the fact that short and long vowels are considered as two independent phonemes. However, recent anatomical studies prove that the difference between long and short vowels is not only quantitative. In addition to quantity, these two vowels have different characteristics in terms of quality. What is meant by quality is physiological criteria, which is associated with the shape of speech organs during the pronunciation of these sounds. During the pronunciation of short and long vowels, the language actively participates in the pronunciation and takes different positions in both vowels:<sup>55</sup>

Table 4: Vowels of Modern Standard Arabic According to the Duration

Vowels According to the Duration	
Short Vowels	Long Vowels
al-Fatḥa from short vowels symbolized as [a] in the International Phonetic Alphabet	ا , one of the long vowels symbolized as [a:] in the International Phonetic Alphabet
al-Damma from the short vowels symbolized by [u] in the International Phonetic Alphabet	و , one of the long vowels symbolized as [u:] in the International Phonetic Alphabet
al-Kasra from the short vowels symbolized by [i] in the International Phonetic Alphabet	ي , one of the long vowels symbolized as [i:] in the International Phonetic Alphabet

<sup>54</sup> ‘Umer, *Dirāse al-Şawt al-Lughawī*, 126.

<sup>55</sup> Id, *Dirāse al-Şawt al-Lughawī*, 329.

## Conclusion

In Arabs, the first study evaluated in the context of modern phonetic studies was dated 1947 and belongs to Ibrāhīm Anīs. Anīs, in his book named *al-Aṣwātu'l-Lughawī*, touched on the subject of what sound is and how it is produced by comparing the sounds of arabic from classical to modern with modern and scientific methods. From these sounds, he examined especially the place of articulation of consonants, the names they got by characterizing them with the place of articulation and the characteristics of the air according to the way the air moves along the vocal tract during exhalation.

During the period from the 19th century to the 21st century, Arab phoneticians have done many studies on the sounds of Arabic. Although these phoneticians basically followed the method used by Ibrāhīm Anīs, in addition to the International Phonetic Alphabet - especially in the classification of consonants - there are serious differences of opinion among them about grouping the sounds of Arabic - especially vowels - according to various criteria based on the International Phonetic Alphabet which is called the modern method. For example Maḥmūd al-Sa'rān, one of the 20th century Arab phonetician and Kamāl Bishr one of the 19th century Arab phonetician these two name based on the vowel classification in the International Phonetic Alphabet in the classification of vowels. but they differ from each other as to which of the short and long vowels of Modern Standard Arabic should be included in this classification. although Bishr lived in a later period compared to al-Sa'rān, when considered in the context of modern phonetic science, with a point of view reminiscent of classical period language scholars, he ignored the qualitative differences and saw the long and short vowels of MSA as the same in terms of sound quantity. Therefore, he classified only the short vowels called al-ḥaraka according to the state of the tongue, the state of the lips and mouth opening according to modern criteria. However, al-Sa'rān was earlier than Bishr - 19th century - approaching the method used by the Arab phoneticians who lived in the 19th century in the classification of sounds, he accepted the long and short vowels as two separate phonemes and classified both phonemes according to the state of the tongue, the state of the lips and the mouth opening.

It can be concluded that there is a difference of opinion between Arab phoneticians, who studied the vowels of Arabic in the context of modern phonetics, between the 19th and 21st centuries. These differences of opinion can be grouped under three headings. The first of these, whether the short vowels called al-ḥaraka can be seen as the same phoneme as the long vowels called the madd letters or not. The second of these is whether Arabic vowels can be classified in terms of duration or not. Finally, there are differences of opinion among modern Arabic phoneticians as to whether allophones of Arabic vowels should be classified or not.

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