Islamic Studies 63:3 (2024) pp. 357–384
https://doi.org/10.52541/isiri.v63i3.3219

The Painting and the Background in Arabic Prosody: A New Theory for Arabic Metrics

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Abstract

Following the interest in the theory, system, and method in contemporary studies, there is a clear focus on the theory of Arabic prosody in modern studies, which investigate the phonetic aspects of Arabic poetry and how they are unified with the senses in the poetry. Some scholars have introduced their hypotheses and conceptions about the metrical system of Arabic poetry. The present paper aims to introduce a new hypothesis, which concentrates on distinguishing between the metrical painting and its background as well as determining the metrical basis, rhythmic alternating units, and the metrical texture. In investigating the metrical system in Arabic, it reviews some prominent studies about Arabic metrics and discusses different metrical bases that have been proposed, such as stress, syllable length, and syllable weight, through the relation between these proposed metrical bases and the linguistic and metrical systems. In addition, the paper proposes a parallel unit to the syllable called "segment pack" to be the alternating metrical unit instead of the syllable, which has been adopted in aforementioned studies as if it is an alternating unit. Furthermore, it distinguishes between the elements of the metrical painting and its background and advances new hypotheses regarding the metrical basis and texture alongside the genesis of Arabic poetry.

Keywords

Arabic metrics, standard vowel, Arabic metrical basis, texture, segment pack, syllable.

Introduction

Although the prosody of Arabic poetry has been accurately characterized by al-Khalīl b. Aḥmad al-Farāhīdī (d. 170/786) and his followers from the eighth century CE onwards, both the theory, according to which the metrical system is built, and the system are not deliberated or even noticeably mentioned in their books and treatises. Since the poetics in Arabic that differentiates between poetry and prose belongs mostly to the nature of poetry and its metre, the contemporary debate about it asserts that the theory of Arabic prosody has not been somehow revealed. The current paper evokes, in its concern with the theory of Arabic prosody, that the system is the connecting point

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between the phenomenon and its theory. It considers the explicit system of the two basic segments (*mutaḥarrik* and *sākin*), their mixtures of cords (*asbāb*), pegs (*awtād*), and fasteners (*fawāṣil*)—the compound of a heavy cord (*sabab thaqīl*) with a light cord (*sabab khafīf*) or with a collected peg (*watid majmūʿ*)—, foot, and metre the apparent face of the metrical phenomenon and not the deep system controlling this phenomenon. Rather, the system is the invisible structure behind these different metrical units that grants them the license to be metrical units and puts them in a specific hierarchy. That hidden system of the metrical phenomenon, with its different units and their cases, is what is being sought by different hypotheses and theories contemporary studies have advanced in their attempts to explain the phenomenon.[1]

While evaluating this situation, we have to consider two points. The first one is that Arabic prosody is not a special case in this respect. All disciplines related to the Arabic language focused on instituting and explaining rules for specific elements of the linguistic system they are interested in. The second is that studying any subject in terms of system, theory, and method was not the main concern of medieval scholars. They did not separate phenomena, systems, and theories from each other. Separating these different aspects owes to contemporary thought and is a fundamental characteristic of modern linguistics. Consequently, one has to deduce a system by examining the rules and the scattered explanations introduced for these rules to produce a body of hypotheses concerning the phenomenon.

Discussing the system of Arabic prosody as perceived by traditional Arabic scholars and introduced in their writings implies that the early Arab prosodists accurately perceived and properly introduced it. Therefore, the current paper focuses on explaining the old theory, which al-Khalīl first proposed, and situates it in the framework of metrical theory in recent studies.

On the one hand, the general theory of rhythm or metrics has been outlined and its different bases have been grouped in different works. Lotz revealed that the basis of that general theory revolved around the

[1] For example, see Geert Jan van Gelder, *Sound and Sense in Classical Arabic Poetry* (Wiesbaden: Harrassowitz, 2012); Joan Maling, "The Theory of Classical Arabic Metrics" (PhD diss., Massachusetts Institute of Technology, 1973); L. Elwell-Sutton, "The Foundations of Persian Prosody and Metrics," *Iran* 13 (1975): 75-97, doi:10.2307/4300527; W. F. G. J. Stoetzer, *Theory and Practice in Arabic Metrics* (Leiden: Het Oosters Instituut, 1989); Dmitry Frolov, *Classical Arabic Verse: History and Theory of ʿArūḍ* (Boston: Brill, 2000); Zaki N. Abdel-Malek, *Towards a New Theory of Arabic Prosody*, 5th ed. (n.p.: Tajdid Online Forum for Facilitating Arabic Studies, 2019).

number of syllables in the pure syllabic metre and the syllable, along with a prosodic feature or another like quantity or length of the syllable (short or long) for the durational metre, the weight of the syllable (heavy or light) for the dynamic metre, and the class of the tone (even or changing) for the tonal metre.[2] On the other hand, when situating the theory of rhythm in Arabic poetry in the general theory of metrics, there were several attempts with different hypotheses, which examined the basis of rhythm in Arabic poetry even before Lotz's work.

However, the current paper is divided into four sections preceded by an introduction and followed by a conclusion. While the first section refers to the prominent hypotheses and theories contemporary studies have introduced, the second one discusses the different challenges these hypotheses face. The third section is devoted to the metrical basis and texture in al-Khalīl's theory and introduces the hypothesis of the current paper. The fourth section reviews the metrical texture and genesis of Arabic poetry.

Prominent Hypotheses about Arabic Metrics

There are various hypotheses about Arabic metrics based, for the most part, on more than one basis in different studies on Arabic metrics. These hypotheses were presented not only in the studies proposing alternatives to the traditional view of metrical theory in Arabic but also in the studies critical of it. Some of these new proposed bases appeared in the studies supporting the Arabic traditional theory.

Ewald's book *De metris carminum Arabicorum*, published in 1825, had recourse to the ancient Greek poetic structures to determine the structures of Arabic poetry. Through comparing the Arabic structures with the Greek ones, he introduced five types of Arabic rhythm. He also adopted, according to Weil,[3] that the source of rhythm in Arabic poetry is the length of the syllable. The rhythmic pattern in Arabic is based on the alternation of short and long syllables.

Unlike Ewald, who resorted to Greek poetic structures, Stanislas Guyard resorted to the musical structure to explain the essence of rhythm in Arabic poetry. His work "La théorie nouvelle de la métrique arabe" (1876) is one of the closest Western views to the view of al-Khalīl. He focuses on the musical aspect of the prosody.[4] He considers the

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[2] John Lotz, "Metric Typology," in *Approaches to Semiotics*, ed. Thomas A. Sebeok (The Hague: Mouton, 1960), 135-48.

[3] G. Weil and G. M. Meredith-Owens, "'Arūḍ," in *Encyclopédie de l'Islam en ligne (EI-2 French)*, ed. P. Bearman (Leiden: Brill, 2010), doi: https://doi.org/10.1163/9789004206106_eifo_COM_0066.

[4] Stanislas Guyard, "La théorie nouvelle de la métrique arabe, précédée des considérations générales sur le rythme naturel du langue," *Journal Asiatique* 7 (1876):

quantity in explaining the rhythm and asserts that it comes from the length of the vowel. The vowels have an important role in his theory; they are responsible for the quantity in metrics. He points out that musical sounds are either consonants followed by a vowel or the vowels themselves.[5] Weil sees that Guyard has formulated the structures of the Arabic poetic lines in sequences of musical terms instead of explaining the essence of its rhythm.[6] However, in Guyard's theory for Arabic metrics, one can investigate the nature of the quantity of the vowel to see whether it must be the length of the vowel only or the length and number of the vowel.[7]

Like the works adopting the optimality theory, the study of Golston and Riad[8] is concerned with the notions of clashes and lapses in the distribution of moras of the metrical structure. It, therefore, represents the model for the hypotheses, adopting the phonological basis for Arabic metrics and relying on mora for explaining the rhythmic pattern of Arabic poetry. It calls its method "prosodic metrics" and considers characterizing the Arabic metres formally a way to support the early observation that Arabic metres are iambic.[9] Adjusting Arabic metres according to what it described as universal rhythmic notions, it investigated the moraic clashes and lapses on both verse-foot level and metron level within the first four most highly frequented Arabic metres, according to the four corpora of Vadet I and II,[10] Stoetzer,[11] and Bauer.[12] Although it applied the notions of moraic clashes and lapses to only four Arabic metres, it stated that only these four metres respect LAPSE-FT[13]

413–79; Guyard, "La théorie nouvelle de la métrique arabe, précédée des considérations générales sur le rythme naturel du langue," *Journal Asiatique* 8 (1876): 101–252, 285–315.

[5] Guyard, "La théorie nouvelle de la métrique arabe," 8. This idea in itself can explain the Arab prosodists' talk about "*ḥarf mutaḥarrik*," which means a consonant followed by a short vowel.

[6] Ibid., 13.

[7] Weil and Meredith-Owens, "'Arūḍ."

[8] Chris Golston and Tomas Riad, "The Phonology of Classical Arabic Meter," *Linguistics* 35, no. 1 (1997): 111-32, accessed September 22, 2009, http://zimmer.csufresno.edu/~chrisg/index_files/ArabicMeter.pdf.

[9] Heinrich Ewald, *De Metris Carminum Arabicorum Libri Duo, cum Appendice Emendationum in Varios Poetas* (Oxford: Oxford University Press, 1825); Georg Jacob, *Altarabisches Beduinenleben nach den Quellen Geschildert* (Hildesheim: Georg Olms, 1967 [1897]).

[10] Jean Vadet, "Contribution à l'Histoire de la Métrique Arabe," *Arabica* 2, no. 3 (1955): 313-21, accessed May 4, 2019, http://www.jstor.org/stable/4054896.

[11] Stoetzer, *Theory and Practice in Arabic Metrics*.

[12] Thomas Bauer, *Altarabische Dichtkunst: Eine Untersuchung ihrer Struktur und Entwicklung am Beispiel der Onager-Episode* (Wiesbaden: Harrassowitz, 1992), 149-62.

[13] It is connected—along with the term CLASH-FT—to the prosodically assumed alternation at the level of metrical feet between strong (stressed) and weak

and this explains why they are more attested than the other metres. Unlike the three metres of *Kāmil*, *Wāfir*, and *Basīṭ*, *Ṭawīl* does not consistently violate any rhythmic constraint. It converts from depending on pegs (*awtād*) and cords (*asbāb*) as basic units to verse feet. In its attempt to avoid "ternarity," it regards the traditional Arabic feet (*taf'īlāt* sing. *taf'īlah*) as metra composed of two verse feet, and the peg (*watid*) as a composed unit. Then, it divides the poetic line into two half-lines, each half-line into two metra, each metron into two verse feet, and each verse feet into two metrical positions with one or two moras. Thus, a peg (*watid*) is a composed unit, not one of the smallest units.

The main idea of Frolov[14] is that only Arabic possesses the second model of rhythm in the Semitic languages and its model of rhythm is quantitative. This quantitative model in Arabic relies on mora instead of the syllable as Arabic is a mora-counting language, not a syllable-counting language. He depends on the axiom that "a given language's system of versification takes up the metrical system which is already there."[15] Following this axiom, he introduces his insight that the rhythm is restricted to selecting from features in use. In defining the metrical structure of Arabic, he excludes *ḥarf* considering it "shorter than the natural minimum of speech" and because it cannot be pronounced separately."[16] The minimal syllabic unit for him is not the *ḥarf*. It does not function as a basic building block of the feet.

Therefore, the lowest level for him is the "elementary prosodic unit" (EPU), whose length and structure are controlled by some strict limitations. These EPUs are considered metrical syllables.[17] He investigates the "higher levels of prosodic structure," which, according to him, contain both "word models" and "pausal groups" (syntagms), whose statistical maximum is forty to fifty *ḥarf*s to fifteen EUPs.[18]

In general, the different studies propose quantitative and qualitative hypotheses. They also discuss different foundations, such as syllable length, syllable stress, and syllable weight, which is based on its mora count. However, there is still a general lack of understanding of the

(unstressed) syllables. While the term CLASH-FT refers to an excess of strong syllables within a metrical foot, creating a conflict between them, it also refers to the absence of strong syllables or stress that was prosodically expected within the metrical foot, creating a gap.

[14] Frolov, *Classical Arabic Verse*.
[15] Ibid., 92.
[16] Ibid., 84.
[17] Ibid., 90.
[18] Ibid.

system proposed by al-Khalīl for Arabic metres and investigating the real role of both vowels and consonants in Arabic rhythm.

The Challenges of the Hypotheses

According to the principle of rhythmic alternation (PRA)[19] stating that rhythmic patterns arise from the alternation between weak and strong positions, the abovementioned hypotheses and others depend on the syllable as the basic alternating unit and the stress, the length of the syllable or the moras count for calculating the weakness and strength of the alternating syllables. While the qualitative hypotheses or theories, consider alternation between the stressed and unstressed syllables, the quantitative theories consider alternation between short and long syllables or between syllables with different numbers of moras.

Therefore, Arabic metrics necessitate discussing the notions or bases of syllable, stress, and mora with a focus on their relations to both linguistic and metrical systems despite different critical reviews that have already discussed these bases. However, this paper will give its remarks about these bases through their relations to both linguistic and metric systems.

Relations to the Linguistic System

A general remark about these bases is that to admit some characteristic as a basis for poetic metres, it must be steadily a linguistic characteristic which entails being perceived after being systematically pronounced or produced. While being pronounced is the first existence of all linguistic characteristics, being perceived does not involve all the pronounced characteristics. Being a linguistic characteristic excludes, in turn, some of the pronounced characteristics when the language does not regulate them. Hence, being a metrical characteristic is not a free being. Rather, it is a fourth existence tied to three previous existences. It must be preceded by being pronounced, being perceived, and being linguistic through being a part of that specific language. According to this hypothesis, which can be called the hypothesis of the "four beings," the notions of syllable, stress, length of syllable, and weight of syllable estimated by mora should be investigated in the Arabic language.

[19] Bruce Hayes, "A Metrical Theory of Stress Rules" (PhD diss., Massachusetts Institute of Technology, 1980); Alan S. Prince, "Relating to the Grid," *Linguistic Inquiry* 14, no. 1 (1983): 19-100, accessed May 4, 2019, http://www.jstor.org/stable/4178311; Elizabeth O. Selkirk, *Phonology and Syntax* (Cambridge, MA: MIT Press, 1984).

Regardless of the relevance of the syllable as a phonological entity, as questioned by Chomsky and Halle,[20] there are two points to be argued here.

The first is that there are serious doubts as to being clearly perceived and then being metrically utilized in Arabic as there is no real need to consider it phonologically and it has no morphological role. At least its role in Arabic is indistinct and needs to be proved. Its being physiologically recognized in Arabic as a chest-pulse according to Stetson[21] or as a prominence peak according to the prominence theory by Jespersen is not sufficient to play a metrical role. It should be noted that the notion of syllable was known by its Arabic term (*maqṭa'*), as it can be seen in the Arabic tradition. While introducing the segments, cords (*asbāb*) and pegs (*awtād*), al-Fārābī (d. 339/950) refers to both short and long syllables as follows:

> Each unvocalized letter (*ḥarf ghayr muṣawwit*) followed by a short vocalizing (*muṣawwit qaṣīr*) to which it is combined is called a short syllable (*maqṭa' qaṣīr*). Arabs call it a vocalized letter (*ḥarf mutaḥarrik*) since they call the short vocalizing segments "*ḥarakāt*." . . . And each unvocalized letter (*ḥarf ghayr muṣawwit*) combined with long vocalizing (*muṣawwit ṭawīl*), we call it a long syllable (*maqṭa' ṭawīl*).[22]

This quoted text denotes that the Arabic tradition believes in the partial role of syllables, as short and long syllables were known. They were known not only as the two constituents for phonologically or metrically analysing feet in Arabic but as a part of a variety of the constituents of feet (*taf'īlāt*) along with cords and pegs. This means that the existence of a syllable in a language does not entail that it has a primary role in analysing it.

The second point to be argued as regards the relation between the rhythmic basis and the linguistic system is about the real role of syllables in rhythm. It is common—as stated, for instance, in PRA—[23]to consider the syllables as alternating units. Another contrary insight, this paper proposes, is that the real alternating elements are not the syllables but the metrical segment packs, a notion proposed below by the paper, according to the number of standard vowels that they carry. The syllables, or even the proposed metrical segment packs, are no more

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[20] Noam Chomsky and Morris Halle, *The Sound Pattern of English* (New York: Harper & Row, 1968).

[21] R. H. Stetson, *Motor Phonetics: A Study of Speech Movements in Action*, 2nd ed. (Amsterdam: North-Holland Publishing Company, 1951).

[22] Muḥammad al-Fārābī, *Kitāb al-Mūsīqā al-Kabīr*, ed. Ghaṭṭās 'Abd al-Mālik Khashabah (Cairo: al-Kātib al-'Arabī, 1967), 1075.

[23] Selkirk, *Phonology and Syntax*, 52.

than a requirement or a means to have an alternately changing feature. If one looks carefully, one will find that metrical segment packs are of two types, built on the standard vowel number they have. Thus, while the feature of stress, length, weight, or any other eligible feature deserves to be investigated in itself, the rhythmic importance of syllable or metrical segment pack does not exceed being a requirement for the alternating feature. This insight—which will be discussed in detail below while investigating the elements of painting in discussing the relation between the symbolic notation and the metrical basis—will be of great help especially when syllables do not have such a crucially proved role in a language and the notion of syllables seems to be imposed on that language.

Concerning stress, it has no semantic role in the linguistic system of Arabic as it indisputably has no phonemic role therein.[24] This absence of stress-bearing, a phonemic role, asserts that Arabs do not consider it, even if they recognize it. The role of stress in Arabic is restricted to distinguishing between the Arabic vernaculars. The three different dialect groups of Arabic, based on stress and syllabification patterns in Kiparsky's work,[25] differ in the place of stress and this, in turn, strongly contradicts any rhythmic role for stress in Arabic poetry particularly with the absence of any records for pronunciation of Arabic poetry or any traditional documented studies about it.

Mora, in contrast to stress, length and quantity, is not a linguistic feature but it is just an imaginary unit proposed to measure the syllable weight by determining its prosodic feature of stress or timing duration. Consequently, there is no need to discuss its relevance to the linguistic system of Arabic since mora is based on measuring the prosodic features that have been already discussed above. In addition, considering mora for metrical structures in Arabic poetry entails that Arabic is "a mora-counting language" within the classification of natural languages proposed by Trubetzkoy.[26] It also means that Arabic depends on stress or duration as mora is based on one of them. Applying mora as a metrical basis for Arabic poetry would be of great value when a metrician tries to subject the metrical system of Arabic poetry to a universal theory of metrics or when there is a need to solve a problem in the traditional

[24] Salman H. Al-Ani, *Arabic Phonology: An Acoustical and Physiological Investigation* (The Hague: Mouton, 1970).
[25] Paul Kiparsky, "Syllables and Moras in Arabic," in *The Syllable in Optimality Theory*, ed. Caroline Féry and Ruben van de Vijver (Cambridge: Cambridge University Press, 2003), 147-82, doi:10.1017/CBO9780511497926.007.
[26] N. S. Trubetzkoy, *Principles of Phonology*, trans. A. M. Baltaxe (Berkeley: University of California Press, 1969), 182.

theory of al-Khalīl. The paper investigates the problem of binarity from al-Khalīl's perspective; that of the variants of metra (*taf'īlāt*) and that of the equality of long vowels and unvocalized consonants (*ḥarf sākin*), which the mora method treats through assigning a mora for an unvocalized consonant (*ḥarf sākin*) when it comes as a coda consonant in Arabic, which is a language with "weight by position" (WBP). Thus, the two types of long syllables (CVV) and short syllables (CVC) are considered equals.

Relations with the Metrical System

A general remark, concerning adopting the syllable notion for analysing the Arabic metrical system, is that syllables violate the two most prominent metrical phenomena in Arabic metres, which are that the basic metrical unit is the two collected vocalized consonants in "collected peg (*watid majmū'*) (//o) and that this basic metrical unit alternates either with a single vocalized consonant in the light cord (*sabab khafīf*) (/o), three vocalized consonants in small fastener (*fāṣilah ṣughrā*) (///o), or two separated vocalized consonants in two successive light cords (/o /o). The syllable notion goes against this peculiarity of the Arabic metrical phenomenon and disperses the collected peg (*watid majmū'*) (//o) by breaking it into a short syllable (CV) and a long one (CVV) or (CVC).

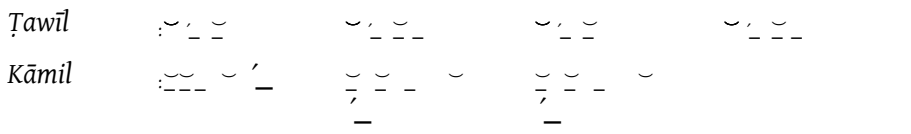
Another significant general remark concerns the application of any prosodic basis, especially syllable, stress, and mora. It is supposed that at least while applying any of the syllables, stress, or mora notions, it must be applied to the actual words of the poems instead of being applied to the mnemonic words for the different feet or metra (*taf'īlāt*) in al-Khalīl's system. Applying any of these notions to al-Khalīl's system is a kind of development of al-Khalīl's system itself instead of restudying the Arabic poetry by way of any of these suggested notions.

Generally, any attempt to study the Arabic metrics needs to be run on the actual poetry, not on the feet proposed by al-Khalīl. Al-Khalīl's system of metrical notation is different from the systems of syllable length, stress, and syllable weight. It does not reveal a lot about them. It has nothing about the number of syllables in each word or the place of a syllable in the word. It would only be of help in classifying the syllables into short and long which is not sufficient to situate the stress in a poetic line. Thus, one would be misguided if one tries to investigate any of these notions through al-Khalīl's metrical system of notation itself instead of the actual words found in Arabic poems. A metrician must investigate the actual words in the poems, and not the mnemonic words (*taf'īlāt*), as they only provide the abstract phonetic structure across the words of the poetic line.

The insufficiency of investigating these mnemonic words instead of the actual words can be clarified through the following three challenges:

First, these mnemonic words being insufficient to situate the stress in a poetic line come from the fact that they are only capable of representing the sequence of the consonants and the vowels across the words, regardless of their place in the words. All that this abstract phonetic sequence can do is to differentiate between the long and short syllables. Certainly, revealing the type of syllable is not sufficient to determine where to place the stress because in Arabic neither every long syllable is stressed nor every short syllable is unstressed. The weight, place, and number of syllables in a word regulate the stress in the word. Stress, for instance, "falls on the long syllable nearest to the end of the word."[27] This means that the other long syllables in the same word if they exist, will not have stress. Moreover, the first short syllable and the third syllable from the end would have stress if there is no long syllable in the word.[28] The short syllable would have a stress if it is in a monosyllabic word.[29] Rules regulating stress in Arabic mean nothing but that stress correlates to the actual words, hence the actual words themselves must be investigated and not some mnemonic words which only represent the abstract phonetic structure across the words and not of the words.

It is not clear how Maling[30] correlated the stress to the mnemonic words (*taf'īlāt*) while applying Wiel's hypothesis to both *Ṭawīl* and *Kāmil* as follows:



[27] W. M. Erwin, *A Short Reference Grammar of Iraqi Arabic* (Washington: Georgetown University Press, 1963), 40; Al-Ani, *Arabic Phonology*, 88.
[28] Erwin, *Short Reference Grammar of Iraqi Arabic*.
[29] Al-Ani, *Arabic Phonology*, 88.
[30] Maling, "Theory of Classical Arabic Metrics," 13. While Maling uses the breve symbol (˘) for a short syllable, she uses the macron symbol (-) for a long syllable. Thus, for her, the peg "*watid majmū'*" (*fa'ū* //o) is divided into a short syllable followed by a long syllable (*fa'ū˘*-). If the long syllable (-) is shortened by dropping its silent second part, she represents this with the combined symbols of a long syllable and a short syllable (-˘), placing the short syllable symbol (˘) above the long syllable symbol (-) to indicate the possibility of shortening the long syllable into a short one. She places the stress symbol (ˊ) on the second syllable of the "*watid majmū'*" (the collected peg), which remains long and does not undergo *ziḥāf* (metrical alteration).

These mnemonic words (*tafʿīlāt*) are different from the actual words and, therefore, it is not valid to substitute them. "*Tafʿīlāt*" do not conform to the words in any aspect other than the sequence of "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" across the actual words. Their boundaries and that of actual words do not have to match each other as "*tafʿīlah*" represents the sequence of "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" for a part of a word, a word or more than a word.

Moreover, even if we accept "*tafʿīlāt*" instead of the actual words of the poetic line, there will be the following two problems with the stress that have been proposed by Maling in the first foot of *Ṭawīl* metre "*faʿūlun*" and the foot of *Kāmil* metre "*mutafāʿilun*" while her applying Wiel's hypothesis: 1) Although the rules of stress in Arabic state that the stressed syllable is "the long syllable nearest to the end of the word,"[31] Maling, as seen in the above quotation, did not consider this stress rule. She proposed that the stress is on the middle syllable in the foot of *Ṭawīl* metre (◡ ´ _ ◡) and the last long syllable in the foot of *Kāmil* metre (◡ ◡ _ ◡ ´ _); 2) The probability of shortening the last long syllable entails that the stress would change its place according to the length of this last syllable. However, the probability in the Arabic stress system questions the validity of it being the metrical basis.

Second, in the mnemonic words (*tafʿīlāt*), the equalization of the two segments of unvocalized consonant (C) and the long vowel (VV), which are labelled "*ḥarf sākin*," and that of the two long syllable structures of (CVC) and (CVV) needs to be explained. What would be the same rhythmic effect that stands behind this or that equalization?

Accepting Arabic as a language with "weight by position" and that any coda consonant in its closed syllables has a mora is not sufficient to metrically equalize the two structures or types of long syllable (CVC) and (CVC), since having or not having a stress is not the point. Rather, the point is—with the absence of a phonemic role for stress in the Arabic linguistic system—whether stress has a rhythmic role for the Arabic ear.

Third, the different variants for each mnemonic word (*tafʿīlah*) coming from "*ziḥāf*" (pl. *ziḥāfāt*) strongly affect the syllable length, the stress and consequently the syllable weight. A "*ziḥāf*" strongly affects the structure of both long and short syllables as it normally reduces the long syllable (CVC) to a short one (CV) and the long syllable (CVV) to just a consonant (C) by removing the "*ḥarf sākin*" (C or VV). It also reduces the short syllable (CV) to a consonant (C) by deleting the vowel (V). A "*ziḥāf*" can also combine two short syllables and make a closed long syllable by removing the middle vowel of any three successive vocalized consonants

[31] Erwin, *Short Reference Grammar of Iraqi Arabic*, 40; Al-Ani, *Arabic Phonology*, 88.

(CVCVCVV) or (CVCVCVC) in the foot of (*mutafā'ilun*) in *baḥr al-Kāmil* (the metre of the perfect) or of (*mufā'alatun*) in *baḥr al-Wāfir* (the metre of the exuberant). This simply means that the first short syllable becomes a long one and the second short syllable is cancelled by removing its vowel and merging its consonant with the first syllable as a coda for it. This means that the three syllables in (CVCVCVV) or (CVCVCVC) become two after "*ziḥāf*": (CVCCVV) or (CVCCVC).

These massive changes raise questions about considering the syllable length and using the difference between the long and short syllables as a basis of metres. These changes mean that in Arabic both long and short syllables are perceived the same. They also raise questions about considering the number of the syllable as we have seen that two short syllables followed by a long one become two after the change of *ziḥāf*. Both the length and number of syllables need a lot to be proved as bases for Arabic metres. Nevertheless, the general rule of *ziḥāf*, according to al-Khalīl's theory of metres, correlates *ziḥāf* to the second part of cord "*sabab*," not to syllables.

The Metrical Basis and Texture in al-Khalīl's Theory

Investigating the theory of al-Khalīl would be almost a theory of the theory. He simply set up his metrical system of Arabic poetry without clarifying the hypotheses standing behind the system he set up. Consequently, any discussion of al-Khalīl's hypotheses will not be more than hypotheses about his undeclared hypotheses. However, the paper will introduce a theory or a body of hypotheses regarding al-Khalīl's theory through the following points:

The Types and Levels of Metrical Notation in al-Khalīl's Theory

Al-Khalīl adopted neither stress nor syllable as a metrical basis for Arabic poetry. To find out the metrical basis in al-Khalīl's theory, one should investigate its metrical notation. Adopting the syllabic notation—as usually used in contemporary papers—takes one far away from al-Khalīl's viewpoint.

Generally, the metrical notation al-Khalīl adopted has two forms with five levels.

The first form of metrical notation is symbolic and constitutes only the first level. This form or level shows only the two values of "*ḥarf mutaḥarrik*" and "*ḥarf sākin.*" It assigns the slashed dash mark (/) for the first value "*ḥarf mutaḥarrik*" and the circle mark (O) for the second one "*ḥarf sākin.*" This level or form of metrical notation is considered the most abstract. It represents the level of the smallest units in al-Khalīl's theory. Therefore, it is ideal for guiding the researcher to the metrical basis.

The second form of notation, unlike the first symbolic one, is based on the segments and accordingly is called the segmental form of notation. It depicts the metrical compounds. This segmental form of notation has another four levels of notation covering the level of metrical "segment pack," the foot (*taf'īlah*) level, the metre level, and the circle level. The term "segments" best fits these packs since any one of them includes both consonants and vowels. These segment packs have phonological and metrical levels. While the phonological level shows the sequence of consonants and vowels in Arabic, the metrical one reveals how the phonological segment packs can be structured in metres. The phonological segment pack is a parallel unit to the syllable. Unlike the syllable, which revolves around the vowel as its nucleus, the phonological segment pack revolves around the consonant, as will be detailed below. The metrical segment pack revolves around the "*ḥarf sākin*" (C) or (VV). To be a pack, these packs must have a "*ḥarf sākin*" at their end or in their middle. Therefore, the two successive vocalized consonants (CVCV), which in the Arabic tradition are called a heavy cord (*sabab thaqīl*) (//), are not a metrical "segment pack" but just a part of some other metrical "segment pack" as it is detailed below.

The phonological "segment pack" proposed by the present paper differs from the syllable in that it concentrates on the consonant instead of the vowel. It best fits the Arabic phonological system which, unlike the "vowel-centred system" languages that are understood by analysing them within the syllable notion, is a "consonant-angled system."

The dichotomy of "*ḥarf mutaḥarrik*" (CV) and "*ḥarf sākin*" (C) or (VV) in the Arabic tradition does not belong to segment pack analysis. Rather, it belongs to the classification of the segment pack's constituents. In addition, the dependency notion seems to be the basis of this classification since "*ḥarf mutaḥarrik*" (CV) represents the independent element, which can come first or even alone, in the segment pack and "*ḥarf sākin*" (C) or (VV) represents the dependent element since (C) must be combined with a following vowel and (VV) must be preceded by a consonant.

While analysing the segment pack within this dichotomy, the dependency notion must be slightly changed. Only the initial consonant must be considered the independent element, and the following elements—the vowel alone or with a final consonant—are considered the dependent elements. The phonological segment pack shows that the sequence of consonants and vowels in Arabic is generally based on a consonant as an independent segment and a short vowel, alone or with an extra consonant, or a long vowel as a dependent segment, and it may take one more consonant at the end in pause case, as shown in the following table:

The Case	Examples		The Components of a Segment Pack							
			IS (Independent Segment)	+	DS (Dependent Segment)		+			
			Consonant	+	Vowel: Short	Vowel: Long	+	Consonant	+	Consonant
General	*bi*	(with)	Y	+	Y	×	+	×	+	×
	min	(from)			Y	×		consonant		×
	mā	(no)			×	Y		×		×
Pause	*bint*	(a girl)			Y	×		consonant		consonant
	māt	(died)			×	Y		consonant		×
	ḍāll	(astray)			×	Y		consonant		consonant

Table 1

The early Arab philologists analysed the phonological sequence from the angle of the consonant since it is the independent and first segment of any phonological segment pack.

In the phonological segment pack, the relation between its segments is simply a relation of a consonant and a vowel. Two successive unvocalized consonants can only come in two positions: at the end of the phonological segment pack and in the pause case.

The level of metrical "segment pack" is that of cords (*asbāb*), pegs (*awtād*) and fasteners (*fawāṣil*), which regulates the sequence of consonants and vowels in poetry in general. This level of notation in al-Khalīl's metrical theory is not the syllabic level but only an alternative for it. Far away from onset and coda, this level of notation, unlike syllables, concentrates on revealing the allowed sequences of consonants and vowels in poetic structures. It provides some rules regulating these allowed sequences. As in prose, in poetry, there is neither a metrical compound starting with an unvocalized consonant "*ḥarf sākin*" nor two or more successive unvocalized consonants. Only in poetry, there are no more than four successive vocalized consonants.

The following level of the metrical notation form is that of the foot (*tafʿīlah*). It is a metron level according to the view of Golston and Tomas.[32] This level is mnemonic since it gives different mnemonic words

[32] Golston and Riad, "*The Phonology of Classical Arabic Meter*," 111-32.

for the different feet (*taf'īlāt*). It determines the different groups of the sequences of "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" through eight basic mnemonic words (*taf'īlāt*), such as "*fā'ilun*," "*fa'ūlun*," "*mafā'īlun*," "*mustaf'ilun*," etc.

An upper level of metrical notation is that of metres (*buḥūr*) which reveals the whole structure of the metre. The last level of the metrical notation is that of metrical circles. The different metres are grouped in circles.

However, the general attitude in contemporary scholarship is to surpass the symbolic notation and replace the segmental one with the syllabic one. Many scholars do not mention the symbolic notation at all and substitute the segmental form of notation with the syllabic notation although all of these traditional types and levels of notation are necessary for defining both metrical basis and texture as they are closer to the theory of al-Khalīl than the syllabic notation. While the symbolic form of notation is ideal for guiding us to the metrical basis, the segmental form of notation, with its four levels, is ideal for revealing the metrical texture of Arabic. Although neither of the two notions of "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" used in the first level of metrical notation—which is the symbolic one—is the metrical basis, they are still the nearest notions to it, as will be shown below. In addition, it will be shown that the notion of a metrical "segment pack," which this paper proposes, is closer to the metrical structure than the notion of syllables.

The Symbolic Notation and Metrical Basis

It is apparent that nothing has been concluded regarding the symbolic notation level other than the kinds of "*ḥarf*." At the very least, it has nothing referring to any of the notions of stress, syllable, or mora. While the slashed dash mark (/), which is assigned to "*ḥarf mutaḥarrik*," is equal to the two segments of syllable structure (CV) and not only a vowel (V), the circle mark (O), which is assigned to "*ḥarf sākin*," is equal to either a consonant (C) or a long vowel (VV).

The symbolic form of metrical notation includes the essential rhythmic basis for al-Khalīl. The other one determines the rhythmic structures of metrical "segment packs" (*taf'īlāt*) metres and metrical circles based on the essential basis and its sequences. However, neither of the terms "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" used in the symbolic notation is eligible to be a metrical basis. The first term "*ḥarf mutaḥarrik*" is not a simple element to be taken as the metrical basis; it is composed of two segments (CV). The second one "*ḥarf sākin*" is not static; rather, it is variable because it can be a consonant (C) or a long vowel (VV).

The two simple and static elements of which the ternarity of (CV) of "*ḥarf mutaḥarrik*" (C) and (VV) of "*ḥarf sākin*" are composed are the consonant (C) and the vowel (V).

What the paper proposes to be the metrical basis within al-Khalīl's theory is the standard vowel, which is a short one (V). It completely excludes both the consonant and the long vowel from the metrical painting. They are nothing more than a background for the metrical painting. Thus, the metrical painting itself is composed of only standard vowels grouped in packs and painted on the consonants. These packs will be called "consonant packs" as the consonants represent the base of these vowels.

This central hypothesis entails the following sub-hypotheses: 1) Only the short vowel is the element used in the painting. It represents the standard vowel for the metrical painting. 2) The consonants are needed for the vowels not as a part of the painting but only as a background since every vowel in Arabic has an onset. 3) The short vowel and the consonant are not alternating units. Rather, they represent the painting and its background. 4) The metrical alternation is based on the vowel count instead of their presence and absence, as will be detailed when discussing metrical texture. 5) Proposing the short vowel as a metrical basis in Arabic poetry is greatly supported by the Arabic morphological system, which maintains the vowel, short and long, for the morphological forms that are very close to the metrical structures (metrical feet *taf'īlāt*) as it will be detailed. 6) Although the slash sign (/) stands, in al-Khalīl's theory, for "*ḥarf mutaḥarrik*" which is composed of the two parts of consonant and vowel, it targets and picks the vowel itself from the painting. He refers to the two parts since the vowel is inseparable from the consonant and there is no vowel, short or long, without a consonant preceding it as an onset. In addition, if he refers to the vowel only instead of (CV), any two successive vowels will constitute a long vowel if they are homogeneous. Thus, there is another role for the consonant apart from being a background of the painting. It is to keep the successive vowels short vowels even when they are similar, as in "*kataba*" (wrote). The first "*a*" is not merged with the second "*a*" and the second "*a*" with the third "*a*" because of the consonants "*t*" and "*b*." 7) In the Arabic tradition, short vowels have not stood, as full segments, as can be understood by comparing short vowels (*ḥarakāt*) with letters (*ḥurūf*), which include both consonants and long vowels (*ḥurūf al-madd*). Ibn Jinnī (d. 392/1002) described the short vowels as parts of long vowels

(*ab'āḍ ḥurūf al-madd wa 'l-līn*).[33] 8) A short vowel, if it is prolonged and made double, is not a segment. Rather, it is a half-segment or just a supra-segmental. It is a prosodic feature, just like stress. This is supported by al-Farābī, who described the "*ḥarf mutaḥarrik*" and "*ḥarf ghayr mutaḥarrik*" as "*ḥarf muṣawwit*" (vocalized letter) and "*ḥarf ghayr muṣawwit*" (unvocalized letter).[34] This means that both the presence and the absence of a short vowel, the (*ḥarakah*) and the (*sukūn*), represent how the consonant is pronounced, according to the state of the parts of articulation. That is why there is no vowel without an onset. In Arabic, a vowel must be preceded with an onset consonant. 9) Although a long vowel (*ḥarf al-madd*), on the other hand, begins as a prosodic feature, it becomes a segment because prolonging a short vowel causes a full segment. 10) While the full segment is the basis of measurement for the temporal value in Arabic metres, the short vowel is assigned no role in this temporal measurement. On the one hand, both the unvocalized consonant (C) and the long vowel (VV) are given the same temporal value, one temporal space, since each one of them is a full segment. On the other hand, both the unvocalized consonant (C) and the vocalized consonant (CV) are equal since the short vowel is nothing more than a supra-segmental. This simply means that according to the traditional viewpoint, the Arabic ear is accustomed, concerning the temporal value in metres, not to consider any length less than a full segment. 11) Both the unvocalized consonant (C) and long vowel (VV) are used to gather the short vowels in packs. They both represent the boundaries of the metrical segment packs or, in other words, function as separators to organize the distribution of short vowels in packs. Unless there are separators of consonants and/or long vowels, the short vowels will not be packed in packs. 12) Both of them are non-standard vowels. The first one is a zero vowel and the second is a long vowel. 13) While the distance between a short vowel (= 1 vowel) and a consonant (= 0 vowel) is one short vowel coming from decreasing one short vowel (-1 vowel), the distance between a short vowel (= 1 vowel) and a long one (= 2 vowels) coming from increasing one vowel (+1 vowel) is one short vowel as well. 14) The metrical system in Arabic does not consider the difference between adding and subtracting. Rather, it considers their quantity. Both adding and subtracting are the same since the quantity of their change is one short vowel. 15) To recognize the phonological reason for which the consonant (C) and the long vowel (VV) have the same term of "*ḥarf sākin*," it must be noted that both the term "*sākin*" and the term

[33] Abū 'l-Fatḥ b. Jinnī, *Sirr Ṣinā'at al-I'rāb*, ed. Ḥasan Hindāwī, 2nd ed. (Damascus: Dār al-Qalam, 1993), 17.
[34] Al-Fārābī, *Kitāb al-Mūsīqā al-Kabīr*, 1075.

"*ḥarakah*" in Arabic are not parallel to the two English terms "consonant" and "vowel." Both the term "*sākin*" and the term "*ḥarakah*" in Arabic describe the state of the parts of articulation upon pronunciation. While the term "*sākin*" means that the parts of articulation keep steady without moving until they start moving for the next segment, the term "*ḥarakah*" means that these parts keep moving. Consequently, the long vowel (VV) is termed "*sākin*" in Arabic because these parts remain just as they were at the beginning of pronouncing the vowel. Similarly, the consonant (C) is termed as "*sākin*" in Arabic since these parts remain in the same state, they had in the beginning of pronouncing the vowel. 16) Stress, unlike short vowels, does not fit the metrical system in Arabic since it is not noticeable as far as the short vowel. Its absence in the linguistic system of the Arabic language weakens its being the basis of its rhythm compared to the short vowel, which the Arabic ear is accustomed to noticing the different vowels to differentiate the different words. 17) To admit stress as the metrical basis in Arabic entails admitting that syllables are alternating units.

However, adopting the short vowel (V) as a metrical basis instead of stress in Arabic poetry can be supported and defended based on its importance in the Arabic linguistic system, as well as its prominence in the writings of the early Arab linguists compared to stress: 1) Unlike stress, which has no prominent linguistic role in Arabic, the Arabic language grants vowels, short and long, a strictly systematic role. In contrast to consonants, vowels are limited to the morphological role if they are non-finals and to the syntactic role as ending case marks when they are finals. The lexical role is restricted to the consonant and semi-vowels. This simply means that vowels only belong to the morphological patterns of words and not to their substance. This strongly recommends vowels being the metrical basis since the metres are nothing but rhythmic forms. 2) It is not quite precise to propose that early Arab metricians neither recognized stress nor tested it as a metrical basis based on the subtleness of stress since they have recognized some linguistic elements as subtle as stress and that which is much more subtle than stress. Examining vowels in the Arabic tradition supports the hypothesis that the early Arab linguists examined the vowels in Arabic accurately. In measuring the vowel length, they went beyond classifying the vowels into short vowels (*ḥarakāt*) and long ones (*ḥurūf al-madd*). They measured one-third of a short vowel while analysing the phenomenon of "*ikhtilās*," in which one-third of the short vowel is removed, and analysing the phenomenon of "*rawm*," in which one-third

of the short vowel remains after removing two-thirds of it.[35] Moreover, the striking observation is that they noticed the phenomenon of "*ishmām*," which means "giving the one vowel a scent or flavour of the other," as described by Wright.[36] Furthermore, the Arabic tradition shows that in reality stress characteristics, places, and frequency were investigated.[37] It was recognized and its validity for being a metrical basis was examined. However, the hypothesis that stress is the metrical basis is not a new one at all. It has been examined as the basis of the metrical system in Arabic for more than a thousand years in the Arabic tradition. Moreover, it was based on the metrical system of Greek. Ibn Sīnā (d. 427/1037) says that "stresses have a verdict in the speech that makes it close to versed speech."[38] He adds, referring to the relation between the metrical system in Arabic and that in Greek, this kind of speech resembles the iambic in Greek.[39]

The Segmental Notation and Metrical Texture

From the symbolic form of notation, it has already been stated that the metrical basis is the short vowel, which is taken as a standard for the metrical painting. However, the metrical texture can be revealed by determining the different units, their subclasses, their structures, and how these different units alternate.

The segmental form of the metrical notation in the Arabic tradition was set up to represent the texture of rhythmic structures in Arabic poetry. Accordingly, this form of notation should be used to determine the alternating units and their sequences. However, the paper proposes the following hypotheses to represent its chief hypothesis about the metrical texture in al-Khalīl's theory for Arabic poetry: 1) The basic and non-composed unit for metres in Arabic poetry is the vowel since it is the metrical basis. 2) The aspect of alternating the metrical basis, which is the standard vowel, is neither its presence and absence nor its contrasting with the consonant. Rather, it is the length of this vowel itself. 3) The opposite parties are the standard vowel, which is equal to one short vowel, and the non-standard vowel, which would be either the zero vowel (C = consonant) or two vowels (VV = long vowel). 4) Accordingly, the three parties of short vowel (V), consonant (C), and

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[35] Aḥmad b. 'Umar al-Ḥamawī, *al-Qawā'id wa 'l-Ishārāt fī Uṣūl al-Qirā'āt*, ed. 'Abd al-Karīm Bakkār (Damascus: Dār al-Qalam, 1986), 52.
[36] William Wright, *A Grammar of the Arabic Language* (Cambridge: Cambridge University Press, 1997 [1898]), 276.
[37] Al-Ḥusayn Ibn Sīnā, *al-Khaṭābah*, in *al-Manṭiq*, ed. Aḥmad Fu'ād al-Ahwānī (Cairo: al-Maṭba'ah al-Amīriyyah, 1958), 223.
[38] Ibid.
[39] Ibid.

long vowel (VV) are considered a dichotomy by grouping the consonant and the long vowel together as a non-standard vowel opposite the standard one (V). 5) From the two parties of standard vowel and non-standard vowel, the metrical unit of "segment pack," which represents the first composed metrical unit, emerges. 6) This metrical unit of "segment pack" is higher than the unit of the metrical basis. It is composed of alternating parties: the standard and non-standard vowel. 7) The different metrical segment packs fully cover the rhythmic structures in Arabic poetry. No single poetic structure falls outside the sequences stated by these metrical segment packs. 8) The five parties of metrical "segment packs" can be termed as follows: a) The "standard single-vowel pack," as its segments contain just one single standard vowel: This term refers to the light cord (*sabab khafīf*) (/o) which consists of "*ḥarf mutaḥarrik*" (CV) and "*ḥarf sākin*" (C) or (VV). b) The "standard double-vowel pack," as its segments contain two successive standard vowels: The term "standard double-vowel pack" does not refer to the heavy cord (*sabab thaqīl*) (//), which consists of two "*ḥarf mutaḥarrik*" (CV CV) since it has no "*ḥarf sākin*" (c) or (VV), which is a must for any segment pack. Rather, it refers to the collected peg (*watid majmūʿ*) (//o), which consists of two "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" (C) or (CV CV C) or (CV CV VV) and the separated peg (*watid mafrūq*) (/o/), which consists of two "*ḥarf mutaḥarrik*" and "*ḥarf sākin*" (C) or (VV) in between (CV C CV) or (CV VV CV). c) The "standard triple-vowel pack" (///o), as its segments contain three standard vowels: This term refers to the small fastener (*fāṣilah ṣughrā*), which consists of three "*ḥarf mutaḥarrik*" (CV) and "*ḥarf sākin*" (C) or (VV). d) The "standard vowel-quadrupled pack" (////o), as its segments contain four standard vowels: This term refers to the big fastener (*fāṣilah kubrā*), which consists of four "*ḥarf mutaḥarrik*" (CV) and "*ḥarf sākin*" (C) or (VV). Although this standard vowel-quadrupled pack is a pack because it has a "*ḥarf sākin*," it should not be considered within the level of metrical "segment pack" as it is not a basic pack. It is just a variant that emerges by removing the "*ḥarf sākin*" from two successive standard single-vowel packs and merging them with a standard double-vowel pack. 9) Apart from the heavy cord (*sabab thaqīl*), which is fundamentally not a pack because it does not have a "*ḥarf sākin*" and a big fastener (*fāṣilah kubrā*), which is not a basic pack, the metrical "segment packs" have the following two opposite parties: a) The standard double-vowel pack, which can be either a collected peg (*watid majmūʿ*) (//o) or a separated peg (*watid mafrūq*) (/o/). b) The non-standard double-vowel pack, which would be either the standard single-vowel pack (/o), which is a light cord (*sabab khafīf*) or the standard triple-vowel pack (///o), which is a small fastener (*fāṣilah ṣughrā*). 10) Thus, the

four parties of the metrical segment packs are considered a dichotomy by grouping the standard single-vowel pack (*sabab khafīf*) with the standard vowel-tripled segment pack (*fāṣilah ṣughrā*) as a non-standard double-vowel pack and grouping both the collected peg (*watid majmūʿ*) and separated peg (*watid mafrūq*) as a standard double-vowel pack. 11) The phonological segment packs, of which these metrical segment packs are composed, revolve around the consonant as an independent segment with which a speaker must begin, and not around the vowel as in the case of syllable-modelled languages. Thus, the phonological segment pack has two parts: the independent part, which consists of a consonant with a short vowel and the dependent part, which can be either an unvocalized consonant (C) or a long vowel (VV). 12) Unlike the syllable, which consists of an onset and a rhyme, the phonological segment pack consists of both independent and dependent segments. 13) This paper proposes the metrical segment pack, which covers the light cord, pegs, and fasteners, as an alternative to the notion of the syllable, based on the phonological model Arabic belongs to. This is proposed instead of the syllable because the syllable does not properly meet the nature of the metrical structure in Arabic, which requires a pack, which accepts more than one successive vocalized consonant to cover the collected peg (*watid majmūʿ*) (//o) and the small fastener (*fāṣilah ṣughrā*) (///o) beside the light cord (*sabab khafīf*) with its one vocalized consonant (/o). While the metrical segment pack covers and considers each one of them as a single metrical unit, the syllable notion only accepts the last one, the light cord (*sabab khafīf*) (/o), as a single unit, and divides the others into possible syllables. Therefore, the metrical segment pack, unlike the syllable, considers the collected peg (*watid majmūʿ*) (//o), which represents the most prominent phenomenon in Arabic metrics, and the small fastener (*fāṣilah ṣughrā*) (///o), which is another special phenomenon in Arabic metrics. While the syllable overlooks these two phenomena in Arabic metres, considering them to consist of more than one syllable, the metrical segment pack, on the other hand, keeps the collected peg and the small fastener (*fāṣilah ṣughrā*) as a non-composed basic unit for the feet in Arabic. 14) The metrical segment packs, and not syllables, are the units from which the metrical feet (*tafʿīlāt*) are built. They best fit the metrical structure of Arabic, which considers the standard vowel count along with their presence and absence. 15) Any metrical foot (*tafʿīlah*) consists of two parts: an unchangeable standard double-vowel pack, (//o) or (/o/), and a changeable non-standard double-vowel pack, which can be a standard single-vowel pack (/o), a standard triple-vowel pack (///o), or two standard single-vowel packs (/o, /o). 16) The changes of "*ziḥāf*" are permitted to facilitate the metres for the poets without, at the same time, affecting the rhythm. These

changes do not affect the rhythm of the foot for two reasons. The first one is that these changes do not target the peg, which is an unchangeable standard double-vowel pack. This makes the peg a cornerstone in the metrical foot "*taf'īlah*." The second is that the standard double-vowel pack, which is a peg, either collected (//o) or separated (/o/), must be repeated after a specific number of vowels, one, two, or three, and/or a specific number of temporal spaces, two, three, or four. Each "*ḥarf mutaḥarrik*" or "*ḥarf sākin*" takes one temporal space. For instance, the final collected peg "*watid majmūʿ*" (//o), in the metrical foot "*mustaf'ilun*," (/o/o //o), needs to always be preceded by two standard vowels, and, only when it is not changed, by four temporal spaces. In the metrical feet "*mutafāʿilun*", (/// o//), it needs to always be preceded by three standard vowels, and, only when it is not changed, by three temporal spaces. The two conditions for counting standard vowels and the temporal spaces needed for the pegs in the feet of "*mustaf'ilun*" (/o/o //o) and "*mutafāʿilun*" (/// o//) are shown in the following table:

The Foot	Its Form		Its Structure	The Collected Peg is Preceded by a Fixed Number of		
				standard vowels	+/ (and / or)	temporal spaces
mustaf'ilun	original	*mustaf'ilun*	/o/o //o	Y (two)		Y (four)
	variants	*mutaf'ilun*	//o //o	Y (two)		×
		mustaʿilun	/o/ //o			×
		Mutaʿilun	// //o			×
mutafāʿilun	original	*mutafāʿilun*	///o //o	Y (three)		Y (four)
	variant	*Mutfāʿilun*	/o/o //o	×		Y (four)

Table 2

17) While the metrical feet with a light cord "*sabab khafīf*" (/o) "*faʿūlun*" (//o /o) or two (/o, /o) "*mustaf'ilun*" (/o /o //o), "*mafāʿīlun*" (//o /o /o) and "*fāʿilātun*" (/o //o /o) drop out the temporal spaces count and only require two standard vowels with the collected peg (//o), the metrical feet with a small fastener "*fāṣilah ṣughrā*" (///o) may disregard the standard vowel count and only require the count of temporal spaces. It requires four temporal spaces, (///o) or (/o/o). 18) While the quantity of

the vowels and that of the temporal spaces is unchangeable in the pegs except in *Mutadārik* metre, which was added after al-Khalīl as the sixteenth metre, only one of them is changeable in the foot depending on which metrical segment pack it has. Does it have only a light cord (*sabab khafīf*) (/o), two (/o, /o) or a small fastener (*fāṣilah ṣughrā*) (///o)?

The Metrical Texture and the Genesis of Arabic Poetry

Based on the hypothesis that the standard vowel is the only element of the painting and the consonant is just a background for it, this paper goes further and draws its view about both the metrical texture and the genesis of Arabic poetry.

The Metrical Texture

Traditional Arabic metrics have both rhythm and rhyme as their two main components. According to the view of this paper, the rhythm, which adopts the short vowel, the element of the painting, as its standard basis, depends on alternation and iteration. The alternation occurs in the feet, which alternate between the two segment packs, the standard double-vowel pack, the collected peg (*watid majmūʿ*) (//o) or the separated peg (*watid mafrūq*) (/o/), and the non-standard double-vowel pack, the standard single-vowel pack, the light cord (*sabab khafīf*) (/o) or the standard triple-vowel pack, the small fastener (*fāṣilah ṣughrā*) (///o). In the compound metres, the alternation is between two different feet, like "*Ṭawīl*" metre, which alternates the foot of "*faʿūlun*," and the foot of "*mafāʿīlun*." The iteration is found in repeating the foot in the metres that adopt a single foot like "*Kāmil*" metre "*mutafāʿilun*" and the pair of feet in the metres that adopt two different feet, like "*Ṭawīl*" metre "*faʿūlun mafāʿīlun.*"

On the other hand, the rhyme, which is already a part of the metre and bears its own rhythm, has an extra role in the musical painting of the ode "*qaṣīdah*." Its extra musical role arises from iterating the same segments at the end of each poetic line. These iterated segments depend on repeating the same consonant and vowels. They are called, in the Arabic tradition, the letters and short vowels of rhyme (*ḥurūf al-qāfiyah wa ḥarakātuhā*). However, they must have only one consonant, on which the ode is based, called "*rawiyy*," and some vowels, short and/or long. This means that the extra-musical role of rhyme is the effect of repeating the same segments, a consonant with some vowels. The rules that regulate rhyme in Arabic poetry make it a highly sophisticated version of "*sajʿ*," one of the lexical embellishments (*al-muḥassināt al-lafẓiyyah*), in Arabic prose.

There is another source for musical diversity in the poetic texture and it goes back to the changes of "*ʿilal*," which, unlike that of "*ziḥāf*," are

used for musical diversity at the end of each hemistich. They are used to get rid of monotony. They also share with the rhyme in ending the poetic line with a special musical effect.

The Genesis of Arabic Poetry

The musical parallelism in the Arabic ode "*qaṣīdah*" arises from iterating the metrical foot, which has two alternating segment packs, or the pair of metrical feet, in the case of metres with two alternating, different feet. This leads to the hypothesis that Arabic poetry has evolved from the "*izdiwāj*" in prose, which is called in poetry "*ḥusn al-taqsīm*" and means to put your speech in equal chunks in length and rhythm without *saj'*. This "*izdiwāj*" has the early form of musical parallelism and its iterating units are the speech chunks. The rhythm of parallelized speech chunks comes from the morphological patterns which are considered, according to the view of the paper, the predecessor of metrical patterns (metrical feet "*taf'īlāt*") and played a major role in the emergence of Arabic poetry. This main hypothesis can be proven from the following comparison of the morphological and metrical patterns, both of which are mainly based on vowels.

The morphological patterns and the metrical patterns, which are the mnemonic words that express "*taf'īlāt*," differ in their abstractness regarding short and long vowels because of their different assignments. On the one hand, the morphological patterns are less abstract than metrical ones since they consider each vowel, short or long, by assigning each one its value, because the differences between vowels, short, or long, are some of what the morphological patterns are based on. On the other hand, the metrical patterns, "*taf'īlāt*," are more abstract than morphological ones since they do not consider each vowel, short or long, by assigning each one its value. Rather, they only assign the same value to any short vowel and another value to any long vowel. They only consider the length of the vowel. The following table shows how the morphological pattern considers each vowel, short or long, while the metrical one, which assigns to all of the three only one pattern, does not.

		Short Vowel	Long Vowel	Morphological Pattern	Metrical Pattern
karīm	(generous)	*a*	*ī*	*fa'īl*	
shurūq	(sunrise)	*u*	*ū*	*fu'ūl*	*fa'ūl*
kitāb	(book)	*i*	*ā*	*fi'āl*	

Table 3

Having just one metrical pattern (*fa‘ūl*) means the sameness of all short vowels, *a*, *u*, and *i*, and that of all long ones, *ā*, *ū*, and *ī*. Consequently, this means that "*taf‘īlāt*" considers short vowels to have the same metrical effect and, similarly, long ones have another identical metrical effect.

This difference in abstractness regarding the vowels, between the morphological and metrical patterns, supports the hypothesis that morphological patterns are the ancestors of the metrical ones and the hypothesis that the parallelism between speech chunks took the following three stages:

First is parallelism between words with the same morphological patterns as "*karīm*" (generous) and "*ṭawīl*" (tall or long), which both have the same morphological form of "*fa‘īl*." Any ear easily notices the metrical similarity between words with the same morphological pattern.

Second is parallelism between words with equal morphological patterns like "*karīm*" (generous), "*shurūq*" (sunrise), and "*kitāb*" (book), which have the three morphological forms of "*fa‘īl*", "*fu‘ūl*" and "*fi‘āl*." These equal morphological patterns represent a middle level of abstractness between morphological patterns and metrical patterns. Thus, this type of parallelism needs a trained ear to notice the metrical similarity between the words with equal morphological patterns.

Third is parallelism not between words but across words as in the parallelism between a word, like "*karīm*" (generous) and a phrase, like "*wa mādhā*?" (and what?), which have equal patterns of "*fa‘īl*" and "*fa‘āl*." This type of parallelism needs a well-trained ear to notice the metrical similarity between the speech chunks with equal morphological patterns.

Therefore, parallelism, depending on the same morphological patterns and then on equal morphological patterns, precedes parallelism in poetry.

Briefly, the view of this paper is based on the following four sub-hypotheses: 1) Arabic poetry has emerged from "*izdiwāj*" as they both have parallelism. 2) While the parallelism of poetry is found in the metrical feet or pairs of feet, the parallelism of "*izdiwāj*" is found in the speech chunks. 3) The morphological patterns in the "*izdiwāj*" played the same role as metrical feet in poetry. They are the aspects on which parallelism between the chunks of speech was based in what can be called the pre-poetic stage. 4) The paralleled chunks in "*izdiwāj*," with their simple rhythm, have evolved to become verses or poetic lines, with their sophisticated rhythm.

Unlike the hypotheses proposed in different studies (elaborated in detail by Frolov,[40] the paper does not consider the "*saj'*" the genesis of Arabic poetry since "*saj'*," one of the lexical embellishments (*al-muḥassināt al-lafẓiyyah*) in Arabic prose, is not based on rhythm, which is the basis of metres. Rather, it is based on the effect of iterating the same segment or a group of successive segments. The "*saj'*," in the view of this paper, is only the genesis of the poetic rhyme since both the "*saj'*" and the poetic rhyme mean to end the speech chunks and the poetic lines with the same segment or group of segments.

A hypothesis that deserves to be considered is that the "*Mutadārik*" metre, not the "*Rajaz*" metre, is the earliest in Arabic poetry. The paper proposes that this insight be considered for two clear reasons. The first is that the foot of this metre, "*fā'ilun*" (/o//o), like the foot of "*Mutaqārib*" metre, "*fa'ūlun*" (//o /o), is the simplest metrical structure since it consists of only a light cord "*sabab khafīf*" (/o) followed by a collected peg "*watid majmū'*" (//o). Alternating one and two standard vowels is easier than alternating two collected standard vowels (//o) and two separated standard vowels (/o, /o) as in the "*rajaz*" foot "*mustaf'ilun*" (/o /o //o). The second is that the standard double-vowel pack, the collected peg "*watid majmū'*," of the foot, "*fā'ilun*" (/o//o), can, unlike "*Mutaqārib*" foot, be violated by the changes of "*ziḥāf*," which are not allowed to target the peg. It can be changed to "*fālun*" (/o/o). One can suggest that al-Khalīl did not mention it as his sixteenth discovered metre since it seemed to him a middle stage between the parallelized structures of prose, that of "*izdiwāj*," and the strict metrical structure, that of poetic metres.

Conclusion

With a balanced consideration of al-Khalīl's metrical thought and the recent metrical notion based on contemporary phonological theory, by analysing the traditional metrical notation and reviewing the recent studies about Arabic metrics focusing on their different bases and concepts, this paper has introduced its view regarding the basis, the texture, and the genesis of the metrical painting, which includes, inter alia, the following points:

First, in discussing the validity of stress, syllable length and mora, which affect the syllable weight, as a metrical basis, this paper examined these hypotheses in the light of their relation to the Arabic linguistic and metrical systems and stated four of its main hypotheses as follows: 1) The hypothesis of "four beings" states that for any characteristic being a

[40] Frolov, *Classical Arabic Verse*, 97-134.

metrical basis is its fourth being because being a metrical basis must be preceded by being systematically pronounced by the language speakers, being perceived and clearly recognized by them, and being steadily constituting a part of the linguistic system itself. This hypothesis aims at ensuring that the ear is accustomed to it. 2) The maxim says that the peculiarity of the metrical phenomenon of a language is the crucial condition to accept any hypothesis or explanation. Therefore, the hypotheses, suggested by different contemporary studies, must be evaluated in light of the most prominent metrical phenomena in Arabic metres, which is that the two collected vocalized consonants in collected peg (*watid majmūʿ*) (//o) alternate either with a single vocalized consonant in the light cord (*sabab khafīf*) (/o), three vocalized consonants in small fastener (*fāṣilah ṣughrā*) (///o), or two separated vocalized consonants in two successive light cords (/o /o). 3) Only the actual words of the poetic lines, not the mnemonic words expressed by "*tafʿīlāt*," which represent the metrical feet, are eligible to reflect the system of stress in Arabic poetic lines. Therefore, one must analyse the actual words of the poetic line to arrive at the stress order therein, instead of analysing these mnemonic words. 4) The massive changes caused by *ziḥāf*, including shortening the long syllables and reducing the syllables count in the poetic line, fundamentally contradict considering the syllable length the metrical basis and weaken considering the syllables to be the alternating metrical units. At the very least, these massive changes need a plausible explanation within the hypothesis that considers the syllable length.

Second, in presenting its view of Arabic metres, the paper investigated the three aspects of the metrical basis, texture, and genesis as follows: 1) Regarding the metrical basis, it concluded the following: a) While the painting itself is made of the standard vowel, which constitutes its only ingredient, the consonant functions as the background of this painting. b) Although the standard vowel is a half segment, it does not belong to the segments, according to what the Arabic ear is accustomed to. Rather, it belongs to the supra-segmentals because it is a prosodic feature. c) The full consonant is the only basis for temporal measurement in Arabic metres. d) In the Arabic tradition, the notion of "*ḥarf sākin*," the unvocalized consonant (C) and the long vowel (VV), function as separators between packs of standard vowels. 2) Regarding the metrical texture, the main hypotheses of the paper are as follows: a) While the phonological segment pack, a new notion proposed by the paper, is closer to Arabic phonological thought, which is consonant-angled, than the syllable notion, the metrical segment pack, another notion proposed by the paper, fits the Arabic metrical

phenomenon better than the syllable, with which different contemporary studies have replaced cords, pegs, and fasteners, collected in this paper under the title of "metrical segment pack." b) The alternating metrical units cannot be the syllable. Rather, they are the segment packs based on the standard vowel count they have. c) The binarity in Arabic metres can be seen from the angle of the standard double-vowel pack, which is the collected peg "*watid majmūʿ*," and the non-standard double-vowel packs, which are the metrical segment packs other than the collected peg. d) The changes caused by *ziḥāf* have been explained, within al-Khalīl's viewpoint, by the principle that any peg is repeated after both a specific number of standard vowels and a specific number of temporal spaces when there is no change, or only one of them when there is a change affecting the vocalized consonant "*ḥarf mutaḥarrik*" or the unvocalized consonant "*ḥarf sākin*." 3) Regarding the metrical genesis, it concluded that: a) "*Izdiwāj*," not "*sajʿ*," could be the genesis of Arabic poetry since it is based on parallelism. b) The parallelism of metrical patterns, which are found in the metrical feet "*tafʿīlāt*," is the third level of parallelism. It is preceded by the parallelism of morphological patterns across the words, which, in turn, evolved from the morphological patterns of the words. The "*Mutadārak*" metre, not the "*Rajaz*" metre, could be the first poetic metre in Arabic because of its simplicity. Moreover, unlike other poetic meters, it accepts *ziḥāf* changes within the "*watid majmūʿ*" (a fixed metrical unit), despite this unit typically being unchangeable.

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