Towards a New Theory of Arabic Prosody

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CHAPTER I

AL-KHALĪL'S THEORY

It is generally believed that al-Khalīl b. Aḥmad al-Farāhīdīy[1] (711-786 A.D.) was the first[2] to develop an elaborate theory defining the meters of ancient Arabic poetry.[3] His theory (as interpreted by the present writer) is summarized below.[4]

(1) A meter is defined as a set of phonological components which occur in a certain arrangement. In this context, a phonological component is either a mutaḥarrik (plural: mutaḥarrikaat), or a saakin (plural: sawaakin); the former is defined as a consonant plus a following short vowel, while the latter is defined as (a) a consonant which is not followed by a vowel or (b) vowel length. Thus the sequence CV consists of a mutaḥarrik, while each of the sequences CVV and CVC consists of a mutaḥarrik and a following saakin. In the following example (from ᶜAntarah b. Shaddād's muᶜallaqah), each mutaḥarrik is represented by a dash, and each saakin is represented by a dot:

wa?idaa ṣaḥawtu famaa ?uqaṣṣiru ᶜan nadan
– – – • – – • – – – • – – • – – – • – – •

wakamaa ᶜalimtii śamaa?ilii watakarrumii.
– – – • – – • – – – • – – • – – – • – – •

The mutaḥarrikaat and the sawaakin of a given meter cluster into perceptually distinct units called tafaaᶜiil (singular: tafᶜiilah); accordingly, the dots and dashes of the above sequence are grouped as follows:

– – – • – – • – – – • – – • – – – • – – •

– – – • – – • – – • – – • – – – • – – •

Each taf^{c}iilah is represented by a measure[5] of the same phonological composition; the above meter, for example, is represented as follows:

mutafaa^{c}ilun mutafaa^{c}ilun mutafaa^{c}ilun

mutafaa^{c}ilun mutafaa^{c}ilun mutafaa^{c}ilun

Unless otherwise indicated, the term foot and the term taf^{c}iilah will be used synonymously in this study.

Al-Khalīl postulated an intermediate level on which the mutaḥarrikaat and the sawaakin are grouped into blocks which, in turn, are mapped out into feet; the blocks in question are of four types:[6]

(a) sabab xafiif (– •)
(b) sabab θaqiil (– –)
(c) watad majmuu^{c} (– – •)
(d) watad mafruuq (– • –)

Thus a foot is analyzable successively into immediate constituents, mediate constituents, and ultimate constituents (henceforth designated by the abbreviations IC's, MC's, and UC's respecitively): an IC is either a sabab or a watad; a MC is either a mutaḥarrik or a saakin; and an UC is a consonant, a short vowel, or the feature of vowel length.[7]

In a foot, an IC boundary follows each trucial distance; the expression "trucial distance" is coined by the present writer, for lack of a better term, to designate the shortest sequence which is identifiable as an IC (i.e., a sabab or a watad) and which allows the following string to begin with (or consist of) an IC. Thus an IC boundary cannot precede a saakin, nor can an IC boundary precede one final MC. In the following examples, the IC

boundaries are indicated by slanting lines:[8]

fa^{C}uulun = – – ·/ – ·
faa^{C}ilun = – ·/ – – ·
faa^{C}ilaatun = – ·/ – – ·/ – ·
mustaf^{C}ilun = – ·/ – ·/ – – ·
maf^{C}uulaatu = – ·/ – ·/ – · –

A foot must contain a single watad; in addition, it must contain at least one sabab (but no more than two).[9]

(2) Al-Khalīl postulated ten basic feet: fa^{C}uulun, faa^{C}ilun, mafaa^{C}iilun, mustaf^{C}ilun, faa^{C}ilaatun, mufaa^{C}alatun, mutafaa^{C}ilun, faa^{C}i-laatun, maf^{C}uulaatu, and mustaf^{C}i-lun.[10] Al-Khalīl also postulated fifteen meters each consisting of two identical hemistichs. Some of those meters consist of four feet per hemistich, while others consist of three feet per hemistich. Some of the fifteen meters must be clipped, others may be clipped, and still others may not be clipped.[11] Thus the shortest of al-Khalīl's hemistichs consists of two feet, while the longest consists of four feet.

Al-Akhfash (who died forty years after al-Khalīl's death) added a meter to the fifteen mentioned above; the additional meter (which may be clipped) is known as al-mutadaarak.[12]

(3) Arabic meters fall into two groups: the standard, and the derived; the former are the sixteen meters described above, and the latter are variants which result from applying to the feet of standard meters certain rules called az-zihaafaat wal^{C}ilal. A standard meter is given below, followed by two variants:

(a) mufaa^{C}alatun mufaa^{C}alatun fa^{C}uulun
mufaa^{C}alatun mufaa^{C}alatun fa^{C}uulun

(b) mufaa^{c}altun mufaa^{c}alatun fa^{c}uulun
mufaa^{c}alatun mufaa^{c}altun fa^{c}uulun

(c) mufaa^{c}altun mufaa^{c}alatun fa^{c}uulun
mufaa^{c}altun mufaa^{c}alatun fa^{c}uulun

For centuries, al-Khalīl's theory remained unchallenged; during the nineteenth and the twentieth centuries, however, dissatisfied scholars attempted to introduce refinements ranging from abbreviation of al-Khalīl's system to total reformulation. In the following passages; al-Khalīl's theory is evaluated to point out the deficiencies which underly the present writer's dissatisfaction.

A theory is evaluated by (1) the degree of its descriptive adequacy, (2) the degree of its generality, and (3) the degree of its simplicity:[13]

(1) Descriptive adequacy (henceforth abbreviated to adequacy): The theory must account for the data being studied.

(2) Generality: The specific corpus being studied should be related to the genus it typifies, and the theory defining the specific corpus should be constructed in accordance with a general theory which defines the genus. For example, a theory which attempts to define the meters of Arabic poetry must be constructed in accordance with a theory which defines such concepts as "meter" and "rhythm" independently of any particular poetry. When based on a general theory, the rules of a specific theory become "natural", "plausible", and "reasonable": in other words, such rules acquire "explanatory power" in addition to adequacy; not only do they specify what occurs, but they also provide reasons for such occurrence.

Of several equally adequate theories, the most general is to be preferred.

(3) Simplicity: Although intuitively valid, the

concept of simplicity is not easy to define. Some of the factors to be considered in measuring the simplicity of a theory are the following:

(a) The number of rules and the amount of effort required to apply each rule.

(b) The number of technical terms and the degree of complexity involved in defining each term.

(c) The extent to which the rules are dissimilar.

(d) The degree of predictability facilitated by the rules and the degree of arbitrariness which persists in spite of the rules.

Al-Khalīl's theory satisfies the requirement of adequacy, but it fails to satisfy the requirements of generality and simplicity:

(1) Al-Khalīl's IC's and MC's are unique entities: one can hardly expect them to be useful tools in the description of non-Arabic poetry.

(2) The extreme complexity of al-Khalīl's system was evident from the very beginning. It is related that a man asked al-Khalīl to teach him the rules of Arabic meters. Frustrated by the fruitless effort he had wasted over a long period of time, al-Khalīl instructed his student to scan a line of poetry whose translation follows:

'If you fail to accomplish a certain task,
abandon it and turn to what you can accomplish.'

The student perceived the disguised message and gave up the study of Arabic meters. Today, few indeed are those who have mastered al-Khalīl's theory.[14]

The complexity of al-Khalīl's theory is attributable, at least in part, to the following facts:

(a) The rules--especially those defining metric variation[15]--are extremely numerous, extremely detailed, and extremely dissimilar. Al-Khalīl specifies and classifies

the transformations which result in metric variation, but his classification is complicated by reliance on two criteria: what change takes place, and which constituent undergoes the change; furthermore, instead of stating the conditioning environments in general terms (thus making it possible to determine the variants of any given foot), he merely lists the feet which undergo each change.

(b) Technical terms are abundant and their definitions are quite complicated.[15]

(c) The degree of arbitrariness condoned by the theory is frustrating; for example, stringing into a sequence (with no restrictions on order) any two, three, or four of the ten feet would yield a large number of standard meters; the admissibility of only sixteen (including almutadaarak) seems altogether arbitrary.

FOOTNOTES

[1]When no conventional transliteration is available for them, Arabic names and bibliographical data are written in the Library of Congress transliteration system (the only departure from that system being the use of ʾ for the glottal stop and the use of ᶜ for the voiced pharyngeal fricative); other Arabic utterances are transcribed phonemically using the following symbols:

(a) Symbols for consonants (listed in the order of the Arabic alphabet): ʾ, b, t, θ, j, ḥ, x, d, ḏ, r, z, s, š, ṣ, ḍ, ṭ, ẓ, ᶜ, ġ, f, q, k, l, m, n, h, w, y.

(b) Symbols for short vowels: i, a, u.

(c) Symbols for long vowels: ii, aa, uu.

[2]See al-Sayyid's al-ᶜArūḍ wa al-Qāfiyah, p. 9. See also ᶜAtīq's ᶜIlm al-ᶜArūḍ wa al-Qāfiyah, pp. 7-11.

[3]In this study, the body of Arabic poetry which preceded the nineteenth century is called "ancient", and the balance is called "modern".

Certain metric innovations have occurred in modern Arabic poetry; especially significant are those initiated by Nāzik al-Malāʾikah and Badr Shākir al-Sayyāb in 1947 (see al-Nuwayhīy's Qaḍíyyat al-Shiᶜr al-Jadīd, pp. 99, 249). It must be emphasized, however, that a large portion of modern Arabic poetry is characterized by strict adherence to the meters of ancient models.

[4]See al-Rāḍī's Sharḥ Tuḥfat al-Khalīl.

[5]Two types of Arabic measures must be differentiated: those are the grammatical and the prosodic. For a definition of the grammatical type, see Abdel-Malek's Closed-List

Classes, pp. 148-154. The prosodic measures were probably inspired by the pre-existent grammatical measures, but the two types differ in an important respect: in a grammatical measure the symbols f, ᶜ, and l stand for the first radical, the second radical, and the third radical respectively; in a prosodic measure, these symbols do not necessarily stand for radicals. It seems that al-Khalīl simply adopted the grammatical measures which, redefined and slightly modified, could stand for his sequences of mutaḥarrikaat and sawaakin.

[6]See al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, p. 10.

[7]The present writer believes that vowel length is a realization of underlying glides. This analysis would reduce the ultimate constituents of feet to two types: consonants and short vowels: nevertheless, we shall not insist on adopting the analysis in question because it is not universally accepted, because the arguments which support it are beyond the scope of this study, and because the underlying representation of vowel length has no drastic bearing on the issues being discussed.

[8]See al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, p. 11.

[9]See al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, p. 10.

[10]The hyphen in faaᶜi-laatun and mustafᶜi-lun calls for special considerations when the rules of metric variation are applied. See al-Sayyid's al-ᶜArūḍ wa al-Qāfiyah, pp. 17, 18.

[11]Clipping is dropping the last foot of each hemistich. Of al-Khalīl's meters, five must be clipped (almadiid, alhazaj, almuḍaariᶜ, almuqtaḍab, almujtaθθ), three may not be clipped (aṭṭawiil, assariiᶜ, almunsariḥ), and seven may be clipped (albasiiṭ, alwaafir, alkaamil, arramal, arrajaz, alxafiif, almutaqaarib). See al-Sayyid's al-ᶜArūḍ wa al-Qāfiyah, pp. 20-84; also see al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, p. 84.

[12]See al-Sayyid's al-ᶜArūḍ wa al-Qāfiyah, p. 85. ᶜAbd al-Ḥamīd al-Rāḍī argues that al-mutadaarak could not have been overlooked by al-Khalīl (see al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, pp. 17, 18).

[13]See Chomsky's Syntactic Structures, pp. 49-60.

[14]See al-Sayyid's al-ᶜArūḍ wa al-Qāfiyah, p. 12.

[15]See al-Rāḍī's Sharḥ Tuḥfat al-Khalīl, pp. 43-91.

CHAPTER II

PROPOSED MODIFICATIONS

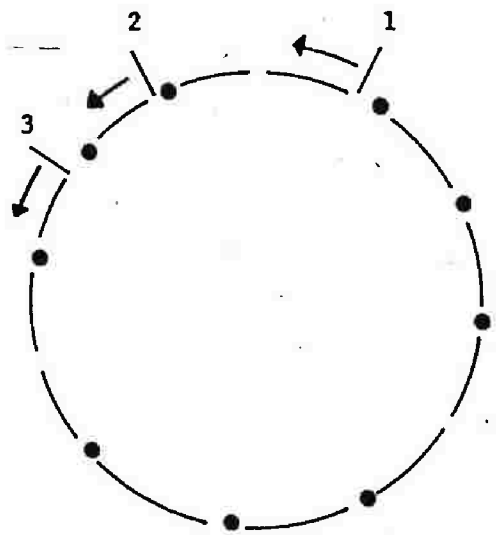
The modifications and revisions which have been proposed fall into three groups: those whose primary goal is to achieve more simplicity, those whose primary goal is to achieve more adequacy, and those whose primary goal is to achieve more generality. It is neither possible nor necessary to discuss in this brief study all of the numerous proposals which have been advanced, and the reader must therefore be satisfied with a sketchy presentation of a representative sample.

2.1. Proposals Aimed at Simplification

2.1.1. Al-Khalīl's proposal for simplification

The first attempt to simplify the theory was made by al-Khalīl himself. Probably with the purpose of facilitating predictability, he devised five circles each embodying a set of MC's.[1] Proceeding in a counter-clockwise direction from different points on a given circle (and stopping in each case at the point of departure) generates a set of meters.[2] For example, the following circle--called daa?iratu lmujtalab--generates alhazaj, arrajaz, and arramal. It is assumed that al-Khalīl constructed this circle by "curving" one hemistich of alhazaj to juxtapose the initial and the final MC's; thus of the meters which daa?iratu lmujtalab generates, alhazaj may be called the "primary" and the other two may be called "affiliates".

daa$^{\text{?}}$iratu lmujtalab



(1) alhazaj: – – • – • – • – – • – – • – • – – • – • –
(mafaa^{C}iilun mafaa^{C}iilun mafaa^{C}iilun)

(2) arrajaz: – • – • – – • – • – – • – • – – •
(mustaf^{C}ilun mustaf^{C}ilun mustaf^{C}ilun)

(3) arramal: – • – – • – • – • – – • – – • – • –
(faa^{C}ilaatun faa^{C}ilaatun faa^{C}ilaatun)

Al-Khalīl's primary meters are attawiil, alwaafir, alhazaj, assarii^{C}, and almutaqaarib. Given below is a somewhat detailed description of the procedure followed when circles are used to generate meters:

(1) The MC's constituting one hemistich of a primary meter are arranged on the circumference of a circle. The sequence begins from a given point (the primary onset) and proceeds in a counter-clockwise direction.

(2) The onsets of affiliates are marked successively on the circle, the movement being in a counter-clockwise

direction. Marking the affiliate onsets proceeds in accordance with the following guidelines:

(a) Each affiliate onset is separated from the preceding onset by a trucial distance. Thus an onset cannot precede a saakin, nor can the final affiliate onset be placed one MC before the primary onset.

(b) The final affiliate onset is that which precedes the point of repetition (i.e., the point where the primary meter starts for the second time). In daa?iratu lmujtalab, the point of repetition is one sabab after the third onset.

(3) A meter (or, more accurately, one hemistich of a meter) is generated by starting at a given onset, and stringing together the successive MC's (moving in a counter-clockwise direction); the final MC of the string is that which immediately precedes the point of departure.

(4) Grouping the MC's into feet is guided by three observations:

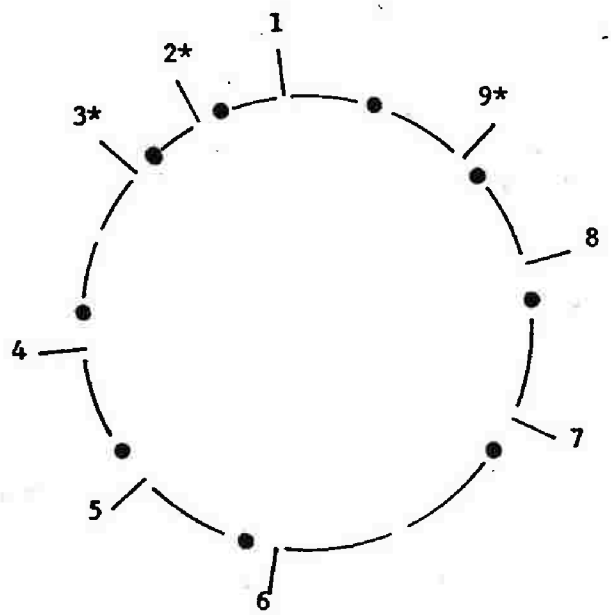
(a) That a foot contains a single watad.

(b) That a foot contains (in addition to the watad) at least one sabab but no more than two.

(c) That in most hemistichs there is repetition of at least one foot.

One of al-Khalīl's circles (daa?iratu lmujtalab) has already been presented; the rest are given below. Asterisks identify the onsets of "neglected meters"--i.e., meters which did not occur in al-Khalīl's corpus. If it is not the primary onset, the point of repetition is identified by a double bar. Remember that for each meter only one hemistich is generated (the two hemistichs are identical)

daa$^{?}$iratu lmuštabih



(1) assarii^{C} (primary): mustaf^{C}ilun mustaf^{C}ilun maf^{C}uulaatu

(4) almunsarih: mustaf^{C}ilun maf^{C}uulaatu mustaf^{C}ilun

(5) alxafiif: faa^{C}ilaatun mustaf^{C}i-lun faa^{C}ilaatun

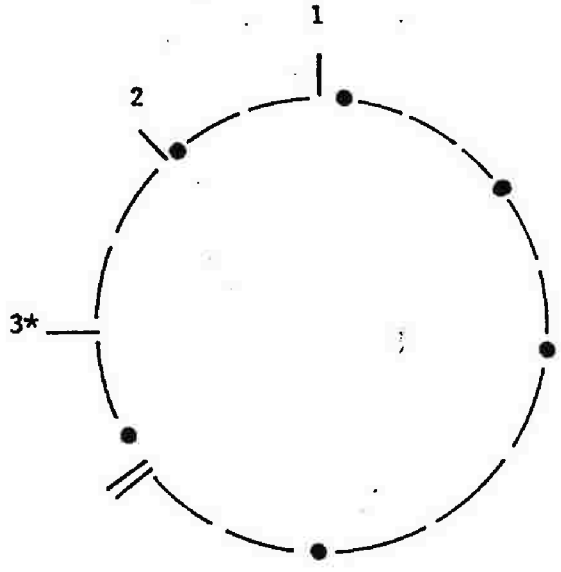
(6) almuḍaari^{C}: mafaa^{C}iilun faa^{C}i-laatun mafaa^{C}iilun

(7) almuqtaḍab: maf^{C}uulaatu mustaf^{C}ilun mustaf^{C}ilun

(8) almujtaθθ: mustaf^{C}i-lun faa^{C}ilaatun faa^{C}ilaatun

Notice that a tenth onset could not occur after the sabab (— •) which follows the ninth onset: were this to happen, the tenth onset would be separated from the primary onset by a single MC.

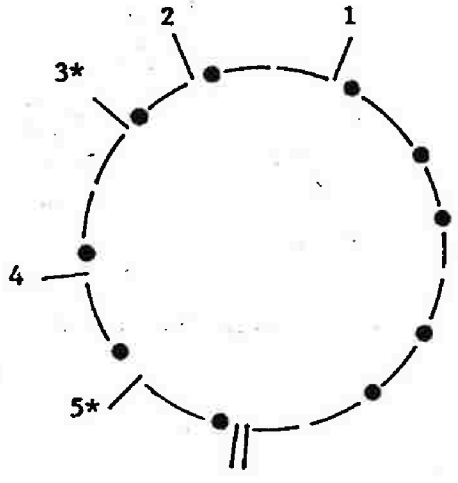
daa$^{?}$iratu lmu$^{?}$talif



(1) alwaafir (primary): mufaa^{C}alatun mufaa^{C}alatun mufaa^{C}alatun

(2) alkaamil: mutafaa^{C}ilun mutafaa^{C}ilun mutafaa^{C}ilun

daa$^{?}$iratu lmuxtalif

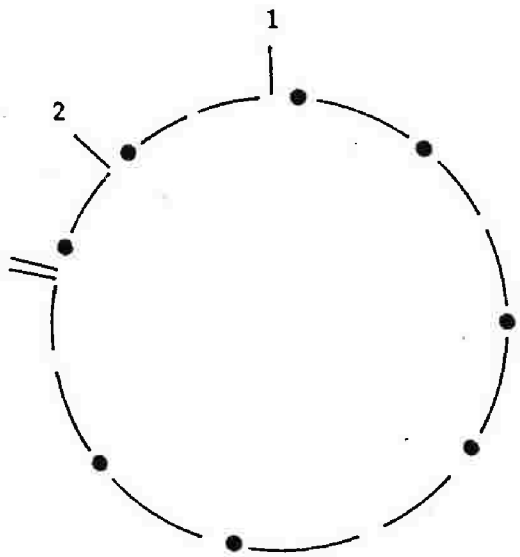


(1) attawiil (primary): fa^{c}uulun mafaa^{c}iilun fa^{c}uulun mafaa^{c}iilun

(2) almadiid: faa^{c}ilaatun faa^{c}ilun faa^{c}ilaatun faa^{c}ilun

(4) albasiit: mustaf^{c}ilun faa^{c}ilun mustaf^{c}ilun faa^{c}ilun

daa?iratu lmuttafiq



(1) almutaqaarib (primary): fa^{c}uulun fa^{c}uulun fa^{c}uulun fa^{c}uulun

(2) almutadaarak: faa^{c}ilun faa^{c}ilun faa^{c}ilun faa^{c}ilun

The onset of almutadaarak is specified on daa?iratu lmuttafiq, but it must be remembered that--according to certain authorities--almutadaarak was not identified by the inventor of the circles.

Arab prosodists usually arrange the circles in the following order: daa?iratu lmuxtalif, daa?iratu lmu?talif, daa?iratu lmujtalab, daa?iratu lmuštabih, daa?iratu lmuttafiq; this order was altered in the above discussion to accommodate our own sequencing of the principles involved.

At first glance, the circles seem to provide considerable simplification: one has to remember only five primary meters; once he has represented the primary meters by circles, one begins at specifiable points and generates the rest of the meters. However, a closer examination of the circles reveals at least the following shortcomings:

(1) The five primary meters continue to be a set of seemingly arbitrary sequences.

(2) Occasionally a circle may lead to incorrect grouping of MC's; for example, daa?iratu lmuxtalif may lead to the assumption that the sequence constituting each hemistich of almadiid is faa^{c}ilun mustaf^{c}ilun faa^{c}ilun mustaf^{c}ilun; actually the sequence in question is faa^{c}ilaatun faa^{c}ilun faa^{c}ilaatun faa^{c}ilun.

(3) The circles simplify neither the rules of metric variation nor the large number of technical terms.

The inevitable conclusion, therefore, is that the circles do not sufficiently simplify al-Khalīl's theory; nevertheless, the ingenuity which devised them is far from wasted, for they show that certain meters contain identical sequences of MC's.

Several modern scholars have attempted to simplify al-Khalīl's system by reducing the number of meters, reducing the number of feet, and reformulating the rules of metric variation. Among those scholars are Jamīl Ṣidqī al-Zahāwī and Ibrāhīm Anīs.

2.1.2 Al-Zaḥāwī's proposal for simplification

In a short but well-written article,[3] al-Zahāwī shows that almutadaarak and almutaqaarib can yield all of the other fourteen meters:

(1) Each hemistich of almutadaarak consists of the string faa^{c}ilun faa^{c}ilun faa^{c}ilun faa^{c}ilun; each hemistich of almutaqaarib consists of the string fa^{c}uulun fa^{c}uulun fa^{c}uulun fa^{c}uulun. Al-Zahāwī shows that the two feet faa^{c}ilun and fa^{c}uulun are composed of the same constituents: ^{c}ilun and a sanad; he also shows that the two feet differ in the position of the sanad relative to ^{c}ilun (a sanad is defined as a sequence consisting of a mutaḥarrik and a following saakin).

(2) Ten meters can be formed from almutadaarak and four from almutaqaarib by altering as many feet as necessary; an alteration consists of "repeating a sanad or a sabab, deleting either, or changing one to the other" (a sabab is defined as a mutaḥarrik).[4] For example, albasiiṭ is formed from almutadaarak since:

(a) Each hemistich of albasiiṭ consists of the string mustaf^{c}ilun faa^{c}ilun mustaf^{c}ilun faa^{c}ilun.

(b) Each hemistich of almutadaarak consists of the sequence faa^{c}ilun faa^{c}ilun faa^{c}ilun faa^{c}ilun.

(c) The foot mustaf^{c}ilun can be represented as faafaa^{c}ilun.

One may therefore conclude that Classical Arabic poetry has two basic feet (with ^{c}ilun as the basic foot constituent).

Al-Zahāwī fails to explicate an important transformation: namely, reduction of the number of feet in the process of generating one meter from another. While the hemistichs of almutadaarak and almutaqaarib consist of four feet each, the hemistichs of some other meters consist of less than four feet each; thus, in order for the two basic meters to yield the other fourteen, a foot per

hemistich must be deleted in some cases, and two feet per hemistich must be deleted in other cases. Al-Zahāwī also fails to address the question of predictability: it is one thing to say that modifying two meters in accordance with a set of general rules generates fourteen other meters, but quite a different matter to say (as al-Zahāwī does) that the output must be known in each case before the necessary transformation can be determined.

2.1.3. Anīs' Proposal for simplification

Some twenty-five years after al-Zahāwī's article was published, Ibrāhīm Anīs presented a proposal for simplifying the description of Arabic meters.[5] Fundamental to that proposal is the definition of feet in terms of syllables rather than al-Khalīl's IC's. Before discussing the proposal itself, it is therefore necessary to define the various types of Arabic syllables, and to show the relevance of the syllable (as a phonological entity) to the study of Arabic meters.

There are three types of syllables in Classical Arabic: short, medium, and long. Those types are defined below (C = any consonant, V = any short vowel, and VV = any long vowel):

(1) Short: CV
(2) Medium: CVV, CVC
(3) Long: CVVC, CVCC, CVVCC

Notice that a medium syllable differs from a short one in having a single additional element--the additional element being vowel length or a final consonant. Also notice that a long syllable differs from a short one in having two or three additional elements--the additional elements in each case being (1) vowel length and a final consonant, (2) two final consonants, or (3) vowel

length and two final consonants. The distribution of long syllables is extremely restricted in Classical Arabic; in ancient Arabic poetry, their distribution is even more restricted (they occur only occasionally in hemistich-final position[6]). Thus for the purpose of scansion, the syllables of ancient Arabic poetry may be conveniently divided into two types: short (CV) and long (all syllables other than CV).[7] In the following example, a dash stands for a long syllable and ∪ stands for a short syllable (a space separates each pair of consecutive feet):

wa^{ʔ}idaa ṣaḥawtu famaa ^{ʔ}uqaṣṣiru ^{ʕ}an nadan
∪ ∪ – ∪ – ∪ ∪ – ∪ – ∪ ∪ – ∪ –
(mutafaa^{ʕ}ilun mutafaa^{ʕ}ilun mutafaa^{ʕ}ilun)

wakamaa ^{ʕ}alimti śamaa^{ʔ}ilii watakarrumii
∪ ∪ – ∪ – ∪ ∪ – ∪ – ∪ ∪ – ∪ –
(mutafaa^{ʕ}ilun mutafaa^{ʕ}ilun mutafaa^{ʕ}ilun)

The simplification proposed by Ibrāhīm Anīs consists of:

(1) Excluding almuḍaari^{ʕ} and almuqtaḍab from the inventory of meters due to their extreme scarcity.

(2) Using six "new" feet (tafaa^{ʕ}iil) in defining ten of the remaining meters.

The "new" feet fall into two groups: the primary (fa^{ʕ}uulun, faa^{ʕ}ilun, mustaf^{ʕ}ilun), and the derived (fa^{ʕ}uulaatun, faa^{ʕ}ilaatun, mustaf^{ʕ}ilaatun). Notice that the derived feet result from adding a final syllable to each of the primary feet. Various combinations of the "new" feet constitute the meters aṭṭawiil, almutaqaarib, albasiiṭ, arrajaz, assarii^{ʕ}, almunsariḥ, alxafiif, almujtaθθ, arramal, and almadiid.[8]

It is obvious from the above discussion that Anīs achieves less simplification than al-Zahāwī achieved twenty-five years earlier: Anīs proposes

more primary feet, accounts for less meters, reveals less relationships among the various meters, and condones more arbitrariness. Anīs does, however, achieve considerable success in formulating relatively simple rules for metric variation; with the hemistich as the domain of their application, his rules are the following:[9]

(1) A hemistich-initial long syllable may be replaced by a short syllable.

(2) Of two consecutive long syllables which introduce the hemistich, either the first or the second may be replaced by a short syllable.

(3) Of two consecutive long syllables which do not introduce the hemistich, the second may be replaced by a short syllable.

(4) Of three consecutive long syllables, either the second or the third may be replaced by a short syllable.

(5) Of four consecutive long syllables, the third may be replaced by a short syllable.

(6) Two consecutive short syllables may be replaced by a long syllable provided that such replacement does not result in a sequence of more than four long syllables. The provision, however, applies neither to alkaamil nor to alwaafir.

It is thus clear that replacing al-Khalīl's asbaab and awtaad by syllables can lead to impressive simplification of the rules for metric variation.

In passing, it should be mentioned that al-Khalīl's system came very close to defining Arabic syllables: al-Khalīl's mutaḥarrik corresponds to what we now call the short syllable, and his saakin corresponds to the "additional element" used above in defining medium and

long syllables. It is unfortunate that al-Khalīl, when studying his dashes and dots, failed to recognize the significance of two basic entities whose patterned recurrence gives rise to meter: the first entity consists of a dash (i.e., the short syllable type of Arabic poetry) while the second consists of a dash and a following dot (i.e., the long syllable type of Arabic poetry[10]); it is tempting to blame this failure on pre-occupation with the patterned recurrence of sequences (each sequence consisting of two or more MC's)

2.2. Proposals Aimed at Increasing Adequacy

Published in December of 1974, Abū Dīb's is one of the most recent attempts to develop a theory which surpasses al-Khalīl's in adequacy. Abū Dīb claims that the principles underlying Arabic poetry can produce an infinite number of meters, and that recent innovations in modern Arabic poetry constitute possibilities which--by some accident--did not previously materialize. Thus Abū Dīb seeks to account for more data than al-Khalīl's theory encompasses.

The following paragraphs summarize Abū Dīb's theory.

A hemistich consists of "rhythmic units" (feet). Two basic rhythmic units (BRU's) are proposed: faa-^{c}ilun/fa-^{c}ilun, and ^{c}ilun-faa/^{c}ilun-fa (the slanting line means 'or'). The "rhythmic nuclei" constituting the units are ^{c}ilun and faa/fa; ^{c}ilun is the "basic nucleus" to which faa/fa is "added", and thus each hyphen within the rhythmic units sets off an "addition".

Al-Khalīl's meters are formed in two manners:

(1) By deleting rhythmic nuclei from theoretical meters. In this context, a theoretical meter consists of two identical hemistichs and each hemistich consists

of six identical BRU's. In each instance, the nucleus deleted may be <u>ᶜilun</u> or <u>faa/fa</u>; there are no instances where <u>ᶜilun</u> is deleted at some point and <u>faa/fa</u> is deleted at some other point in the same theoretical meter. The deletion in question may apply to any BRU, or any set of BRU's, in the first hemistich; the changes which occur in the first hemistich are duplicated in the second hemistich.

(2) By adding rhythmic nuclei to theoretical meters. Here a theoretical meter consists of two identical hemistichs and each hemistich may consist of two, three, or four identical BRU's. The nucleus added in each instance is <u>faa</u> or <u>fa</u>: it is placed at least once before the BRU, after the BRU, or on both sides of the BRU. Apparently the addition may apply to any BRU, or any set of BRU's, in the first hemistich; the changes which occur in the first hemistich are duplicated in the second hemistich. Of the infinite number of meters which this mechanism can generate, only a few are selected by Arabic poetry.

As a part of his attempt to account for metric variation, Abū Dīb assigns numerical values to the <u>mutaḥarrikaat</u> and the <u>sawaakin</u> (notice that Abū Dīb chooses to retain al-Khalīl's MC's): the numerical value for a <u>mutaḥarrik</u> is 1; for a <u>saakin</u>, zero. Abū Dīb then asserts that metric variation is governed by two rules:

(1) Equivalent (i.e., commutable) rhythmic units must be identical in total numerical value.

(2) The basic nucleus must occupy the same position in equivalent rhythmic units; this rule, however, is less binding than the first: because they are identical in total numerical value, some rhythmic units are com-

mutable even though they differ in regard to the position of the basic nucleus.

The above rules explain why faa-fa-ᶜilun (– • – – – •) is frequently replaced by faa-faa-ᶜilun (– • – • – – •) but not by faa-ᶜilun-faa (– • – – • – •) even though the three units are identical in total numerical value; the rules also explain why faa-ᶜilun, ᶜilun-fa, and fa-ᶜilu are considered equivalent in modern Arabic poetry.[11]

In Chapter II, Abū Dīb modifies his position in regard to variation: he explicitly rejects the assumption that some rhythmic units are derived from others, and asserts that commutable rhythmic units are equally "basic" entities which allow the stress pattern of the meter to remain intact (thus, to be commutable, rhythmic units must be similar in stress pattern). To support his assertion, Abū Dīb argues[12] that the poet composes his lines without being conscious of "basic" forms, variants, or rules governing variation.[13]

Abū Dīb's theory (as explained above) is similar in some respects to al-Zahāwī's: the "basic rhythmic units" of the former are similar to the basic feet of the latter; furthermore, both theories employ addition or deletion to produce a set of meters from a common source. The main difference between the two theories is that the latter does not attempt to account for more data than al-Khalīl's corpus. In regard to the role played by stress patterns, Abū Dīb reaches a conclusion which is somewhat similar to Guyard's.[14]

Does Abū Dīb's theory introduce an additional measure of adequacy? The present writer believes that it does since adequacy includes the capacity for revealing latent possibilities and predicting new trends. It is

to Abū Dīb's credit that some of the latent possibilities he points out are already finding their way into modern Arabic poetry (e.g., the use of faa-^{c}ilun, ^{c}ilun-fa, and fa-^{c}ilu as equivalent feet). Unfortunately, Abū Dīb's theory suffers from some procedural contradictions which reduce adequacy; the most obvious of those contradictions concern the role of stress in determining metric variants:

(1) On the one hand, Abū Dīb rejects a descriptive device (the assertion that basic feet yield variants) because it does not account for the performance of Arab poets; on the other hand, he substitutes for that device a feature which cannot account for performance: stress is largely allophonic in Arabic,[15] and for that reason Arabs are generally unaware of stress patterns--let alone being controlled by such patterns in composing poetry.[16]

(2) With no allusion to stress patterning, Abū Dīb defines standard meters as patterned sequences of MC's; this procedure justifies the conclusion that Abū Dīb looks upon the patterning of MC's as the determinant of standard meters and upon stress as a phonologically conditioned, and therefore nonsignificant, feature. When describing metric variation, however, Abū Dīb states that feet are commutable--no matter how their MC's are structured--if they do not alter the stress pattern of the standard meter; thus the nonsignificant feature (stress) has become the determinant, while the determinant (patterning of MC's) has become incidental.

In regard to generality (explanatory power) and simplicity, the theory being discussed has some rather serious drawbacks. It would have been tempting to generously ignore those drawbacks were further adequacy Abū Dīb's only pursuit; but the fact is that Abū Dīb

considers his proposal a complete, self-contained theory which differs radically from, and can totally replace, al-Khalīl's theory.[17] We therefore feel compelled to make the following comments:

(1) The first manner of forming meters is characterized by at least two flaws:

(a) Since either ᶜilun or faa/fa may be deleted from the theoretical strings, the resultant meters are of two groups: those generated by dropping ᶜilun, and those generated by dropping faa/fa. One would expect the two groups to be equal in number; al-Khalīl's meters (as represented by Abū Dīb) are a disappointment to this expectation.

(b) One set of al-Khalīl's meters is generated by deleting periodic nuclei from the theoretical strings; another set seems to be generated by random deletion of nuclei. Both sets are smaller than one would expect.

To say that some possibilities are not utilized hardly constitutes a satisfactory explanation for the discrepancies observed here: it is logical to assume that the meters which gain popularity are the ones which conform most strictly to certain fundamental rules, and that the possibilities which remain dormant are the ones which deviate from those rules. Abū Dīb expounds neither conformity nor deviation; instead, he leaves the reader with the impression that the first manner of forming meters is subject to no small measure of pure accident.

(2) The second manner of forming meters is even more arbitrary than the first: the possibilities are infinite, the popular meters are few, and no attempt

is made to explain the discrepancy.

(3) The status of fa as a rhythmic nucleus is extremely precarious: it is not a conditioned form and therefore cannot be considered a variant of faa; on the other hand, to consider fa an independent nucleus would double the number of meters, thus multiplying the number of latent possibilities.

(4) In a given meter, the boundaries of Abū Dīb's feet (rhythmic units) do not have to coincide with the boundaries of al-Khalīl's feet (tafaa^{c}iil); e.g., each hemistich of almadiid (standard form) consists of three feet in al-Khalīl's system:

– • – – • – • – • – – • – • – – • – •
(faa^{c}ilaatun faa^{c}ilun faa^{c}ilaatun)

According to Abū Dīb's second manner of forming meters, each of the hemistichs in question may be represented by any of the following sequences:

faa-^{c}ilun-faa faa-^{c}ilun faa-^{c}ilun-faa
faa-^{c}ilun faa-faa-^{c}ilun faa-^{c}ilun-faa

faa-^{c}ilun-faa faa-^{c}ilun-faa ^{c}ilun-faa
faa-^{c}ilun-faa-faa ^{c}ilun-faa ^{c}ilun-faa

In al-waafir, Abū Dīb's feet are even less determinate.

Al-Khalīl's taf^{c}iilah is relatively easy to delineate for three reasons:

(a) At least to the trained ear, the taf^{c}iilah is a distinct auditory entity since it has the same shape as actual words.

(b) The taf^{c}iilah has a fairly well-defined composition: it always contains a watad; in addition,

it always contains a minimum of one sabab and a maximum of two.

(c) In most hemistichs there is repetition of at least one taf^{c}iilah.

To be sure, there are cases in al-Khalīl's system where an alternative grouping of MC's is possible (we have already seen that almadiid is one such case); but those cases are rare and the alternatives are few compared to the vast uncertainty which characterizes Abū Dīb's system.

Thus al-Khalīl's foot has a clear advantage over Abū Dīb's.[18]

2.3. Proposals Aimed at Increasing Generality

2.3.1. Ewald's proposal for increasing generality

In 1825, Ewald presented a proposal which has gained no small measure of popularity among Orientalists. Our discussion will be based on the form which the theory has acquired in Wright's Grammar.[19]

The meters of Classical Arabic poetry are divided into six types: the iambic (arrajaz, assarii^{c}, alkaamil, alwaafir), the antispastic (alhazaj), the amphibrachic (almutaqaarib, aṭṭawiil, almuḍaari^{c}), the anapœstic (almutadaarak, albasiiṭ, almunsariḥ, almuqtaḍab), and the ionic (arramal, almadiid, alxafiif, almujtaθθ). The feet employed are those which constitute Roman and Greek meters;[20] each foot is adapted by specifying the form(s) it has in a given Arabic meter.

The following quotation[21] illustrates this system:

"Of antispastic meters there is only one, the hàzég (اَلْهَـزَج the trilling), which consists in a single repetition of ∪ – – ∪ (antispast), varied by ∪ – – – . It may be either catalectic or acatalectic.

"Acatalectic ∪ – – ∪̄ | ∪ – – ∪̄ || ∪ – – ∪̄ | ∪ – – –
Catalectic ∪ – – ∪̄ | ∪ – – ∪̄ || ∪ – – ∪̄ | ∪ – –"

Rather than al-Khalīl's IC's and MC's, the system under discussion employs a more general entity--the syllable; moreover, this system (unlike al-Khalīl's) can be used to describe an impressively large assortment of non-Semitic meters.

Notwithstanding its success in achieving further generality, this theory leaves much to be desired:[22]

(1) A sequence which al-Khalīl regards as a variant is sometimes considered the standard form of the meter (such is the price of segmenting Arabic meters into alien feet); for example, al-Khalīl considers the following sequence a variant of al-mutaqaarib, but the theory being discussed regards the same sequence as the standard form:

∪ – ∪ ∪ – ∪ ∪ – – ∪ – ∪
∪ – ∪ ∪ – ∪ ∪ – – ∪ – –

This reversal of al-Khalīl's stratification would be justifiable were it to simplify the rules of metric variation; the fact is that such reversal complicates those rules. It is true that the proposed system is not intended primarily to simplify al-Khalīl's theory, but neither should it result in further complication.

(2) The theory under discussion attempts to retain

the boundaries of al-Khalīl's feet, and (with an occasional exception) it manages to do so. Unfortunately, the success of this endeavor is not without blemish: in some meters (e.g., arrajaz and assarii^{c}), the proposed feet had to be doubled in order to keep the boundaries of al-Khalīl's feet intact. Since it is motivated neither by the proposed theory nor by a universal theory, this occasional doubling introduces an element of arbitrariness.

(3) Seeing that they resemble words in shape, al-Khalīl's tafaa^{c}iil are an intuitive (as well as an auditory) reality; therefore, the occasional alteration of their boundaries (e.g., in almuḍaari^{c}) reduces explanatory power.

(4) the number of feet constituting a given hemistich appears to be quite arbitrary.

2.3.2. Guyard's proposal for increasing generality

In 1877, Stanislas Guyard published a study in which he discussed Arabic meters within the framework of music. His theory is summarized in the following paragraphs.[23]

The MC's of any meter have durational values determined by the following rules:

(1) A stressed mutaḥarrik = 1 beat

(2) An unstressed mutaḥarrik = $\frac{1}{2}$ a beat

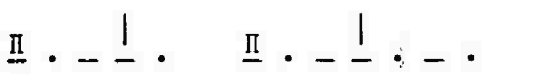
(3) A saakin which follows a major stress = $\frac{1}{2}$ a beat

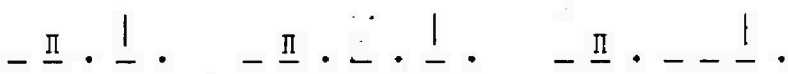
(4) A saakin which does not follow a major stress = $\frac{1}{4}$ of a beat

Notice that while a mutaḥarrik may occur stressed, a saakin never does. A stressed mutaḥarrik is defined as one which has a major stress (i.e., a primary or a secondary stress); an unstressed mutaḥarrik is one which has a weak stress.

Clearly, stress plays an important role in Guyard's

system; it is therefore necessary to specify the placement of stress in al-Khalīl's tafaa^{c}iil. In the following list, a double bar is used to indicate primary stress, and a single bar is used to indicate secondary stress (maf^{c}uulaatu, which Guyard considers unauthentic, does not appear in the list):


faa^{c}ilun faa^{c}ilaatun


fa^{c}uulun mafaa^{c}iilun mufaa^{c}alatun

mutafaa^{c}ilun mustaf^{c}ilun

Notice that each taf^{c}iilah contains two stressed mutaḥarrik's and at least one mutaḥarrik which is not stressed.

In accordance with the above discussion, a hemistich of alkaamil (standard form) may be represented by sequence (a) below:[24]

(a)
(mutafaa^{c}ilun mutafaa^{c}ilun mutafaa^{c}ilun)

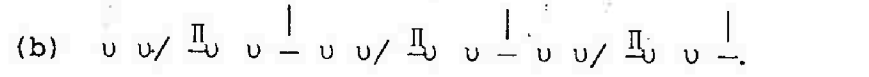
Guyard divides sequences such as the above into musical measures each of which consists of four beats; this division necessitates the addition of three rules:

(5) Each measure begins with a primary stress.

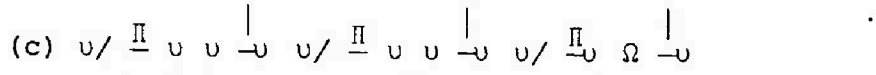
(6) Each major stress is separated from the next major stress by one beat.

(7) The constituents of a hemistich are considered a closed circle: the last major stress in the hemistich is followed by the first, with one beat separating the two.

Thus the hemistich under discussion consists of the musical measures shown in sequence (b) below (slanting lines separate successive measures):

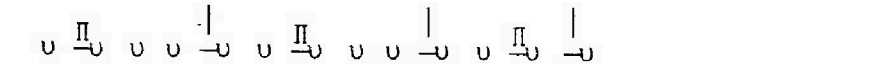
(b) 

What precedes the first primary stress is considered a termination of the last musical measure; each hemistich of alkaamil, then, consists of three musical measures. As can be seen from comparing sequence (b) with sequence (a) rules (6) and (7) may have to be satisfied by altering certain durational values.[25] In some instances, the two rules may have to be satisfied by adding a rest; the following is an appropriate illustration (Ω stands for a rest equal to half a beat[26]):

(c) 

(mufaa^{c}alatun mufaa^{c}alatun fa^{c}uulun)

But for the necessity of dividing it into musical measures, sequence (c) would be as follows:



Metric variation results from changes which occur in

the tafaa^{c}iil and which produce one tàf^{c}iilah from another; for example, a variant of albasiiṭ would result if we delete the second MC of faa^{c}ilun (– · – – ·), thus causing faa^{c}ilun to become fa^{c}ilun. Those changes are subject to the following rules:

(1) A taf^{c}iilah cannot undergo a change which would alter the pattern of major stress. Thus mufaa^{c}alatun (– $\overset{\Pi}{-}$ · – – $\overset{|}{-}$ ·) may become mafaa^{c}iilun (– $\overset{\Pi}{-}$ · – · $\overset{|}{-}$ ·) since both have primary stress on the second MC and secondary stress on the penultimate MC; however, faa^{c}ilun ($\overset{\Pi}{-}$ · – $\overset{|}{-}$ ·) cannot become fa^{c}uulun (– $\overset{\Pi}{-}$ · $\overset{|}{-}$ ·), part of the reason being the fact that the former has primary stress on the first MC while the latter has primary stress on the second MC.

(2) Only unstressed MC's can be changed: a saakin may be deleted (remember that the sawaakin are never stressed), and an unstressed mutaḥarrik may be reduced to a saakin if it follows another mutaḥarrik. For example, changing faa^{c}ilun ($\overset{\Pi}{-}$ · – $\overset{|}{-}$ ·) to fa^{c}ilun ($\overset{\Pi}{-}$ – $\overset{|}{-}$ ·) involves deletion of a saakin, while changing mufaa^{c}alatun (– $\overset{\Pi}{-}$ · – – $\overset{|}{-}$ ·) to mafaa^{c}iilun (– $\overset{\Pi}{-}$ · – · $\overset{|}{-}$ ·) involves reduction of a mutaḥarrik.

(3) It is common to compensate for reduction by (a) increasing the durational value of a neighboring MC, or by (b) adding a rest.

Guyard's theory relates Arabic meters to a general theory (music); this provides plausible explanations for compensatory length, rests, etc. In regard to metric variation, generality leads to simplification and provides a reason for the fact that certain changes occur while others do not.

In Mūsīqā al-Shi^{c}r al-^{c}Arabīy, [27] ^{c}Ayyād observes that reaction to the meter may be independent of reaction to the lexical meaning: for example, certain meters are soft and soothing while others inspire excitement and enthusiasm. Guyard's theory can explain reactions of this sort: a rest before a certain word may emphasize that word; again, a feeling of psychological unrest may result when word stresses do not coincide with taf^{c}iilah stresses.

^{c}Ayyād is probably correct when he observes[28] that recent developments in musical concepts invalidate some portions of Guyard's theory. It is no longer true, for example, that each measure must consist of four beats; and it is no longer true that each measure must begin with a stressed note. Thus it may not be necessary to add rests merely to guarantee for each measure the durational value of four beats (Guyard sometimes has more rests in a meter than the native's intuition would supply[29]); furthermore, the fact that a hemistich-initial segment lacks primary stress may not constitute sufficient reason for assigning that segment to the last measure. The present writer would like to add that the theory suffers from several other defects:

(1) The number of musical measures in any given meter seems to be arbitrary.

(2) The theory seems to regard as a possible hemistich any combination of al-Khalīl's tafaa^{c}iil. No explanation is offered for the occurrence of only a few combinations. Even an appeal to latency would not remove the necessity of explaining why poets favor certain possibilities and reject others.

(3) The theory emphasizes certain types of features which are often shared by a set of measures or a set of

tafaa^{c}iil (e.g., the patterning of stress). There are other types of shared features which deserve to be considered (e.g., those discussed by al-Zahāwī) but which are concealed by Guyard's theory.

(4) Guyard considers stress a determinant of meters on all levels, thus escaping the contradiction which entrapped Abū Dīb. The question which remains unanswered is whether a largely allophonic feature (stress) must dominate a theory of Arabic meters.