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the annotator of Ibn al-Mukarrab (De Goeje, *La fin des Karmates*, in *JA* 1895); for the 12th century, the Syriac chronicle of Michael the Syrian, ed. and trans. by Chabot, iii, and above all, a unique extant chronicle originating from Artukid Diyār Bakr, the History of Mayyāfāriķīn of Ibn al-Azraķ al-Fāriķī (unpublished; analysis of the political events in my *Diyār Bakr au temps des premiers Urtukides*, in *JA* 1935); for the 13th century, before the Mongol intervention, the great histories of Ibn al-ʿAdīm (mentioned above), Ibn al-Athīr, Ibn Wāṣil (edition in course of preparation by Djamāl al-Dīn al-Shayyāl, Alexandria; vol. I, appeared in 1953), al-Djazārī (*Oriens* 1951, 151), and especially the section relating to Djazīra in the *Aʿlāķ* of ʿIzz al-Dīn Ibn Shaddād (unpublished; analysis in my *Djazīra au XIIIᵉ s.*, in *REI* 1934), which constitute the Arab sources, and, in addition, in Persian, the History of the Saldjūķids of Asia Minor of Ibn Bībī (facsimile edition by A. S. Erzi, Ankara 1956, critical edition by N. Lugal and A. S. Erzi, i, Ankara 1957; a Turkish version was edited by T. Houtsma, *Recueil*, iii, A. German translation by H. W. Duda is in the press.) and, in Syriac, the *Chronography* of Gregory Abu 'l-Faradj Bar Hebraeus (ed. and trans. by Budge); for the Mongol, post-Mongol and Tīmūrid period, one must glean the fragments of information scattered among the standard chronicles of the Mamlūks, the Ilkhānids and Tīmūr, and more especially in the *History of the Ayyubids* (of Ḥiṣn Kayfā, unpublished, analysis by the author in *JA* 1955), and augment this by the *inshāʾ* works of the period, the continuation of the Syriac Eccleciastical Chronicle of Bar-Hebraeus (ed. Abbeloos and Lamy) and (for the period since Tīmūr) the anonymous Syriac work edited and translated by Behnsch (Bratislava 1838) and the Armenian history of Tamerlane by Thomas de Medzroph (ed. and trans. by Nève); see also the *dīwān* of Sayf al-Dīn al-Ḥillī, and, perhaps, the *Kitāb-i Diyārbakriyya* of Abū Bakr Tihrānī (end of the 15th century), which is not accessible to me (see *IA*, articles Diyarbekir and Akkoyunlu, and Faruk Sumer, article mentioned below).

The inscriptions, collected up to the beginning of the 14th century in *RCEA*, have nearly all been studied by Sauvaget in the appendix to A. Gabriel, *Voyage archéologique en Turquie Orientale*, 1940; see also Sauvaget, *La tombe de l'Ortokide Balak* (*Ars Islamica* 1938) and Sül. Savci, *Silvan Tarihi*, Diyarbekir 1949. — For buildings, see Gabriel, *op. cit.* — For *objets d'art*, see J. T. Reinaud, *Monuments Blacas*, ii, 40, and P. Casanova, *Inventaire de la collection Princesse Ismail*, 1896. For coins (not a few unpublished coins exist in private collections), the Istanbul and British Museum catalogues, and S. Lane Poole, *The Coins of the Urtuk's*, in *Marsden Numismatic Chronicle*, 1875; B. Butak, *Resimli turk paralari*, Istanbul 1947-50.

The only comprehensive modern studies are those, necessarily brief, by Mukr. Halil Yinanç (*Diyarbekir*) and Köprülü (*Artuk-oğullarī*) in *IA*. My *Diyar Bakr* etc. mentioned above, one of my early works, is only of value for political events; see also my *Première Pénétration turque en Asie-Mineure* (*Byzantion* 1948) and my *Syrie du Nord* mentioned above: the histories of the Crusades of Grousset and Runciman; the valuable commentaries on inscriptions by Van Berchem in *Abh. G. W. Göttingen* 1897, and in Strzygowsky, *Amida*

1910; H. Derenbourg, *Ousama b. Mounkidh*, i, 1886; Faruk Sümer, *Döğerlere Dair*, in *Türkiyat Mecmuasi* 1953. For the 14th century, see my *Contribution à l'histoire du Diyār Bakr au XIVᵉ s.*, in *JA*, 1955; on Daniel bar al-Khaṭṭāb, Nau, in *Rev. Or. Chrét.* 1950.   (CL. CAHEN)

ARTVIN, town in the far north-east of Turkey, 41° 10′ north, 41° 50′ east, situated on the Çoruh. It was ceded to Russia by the Treaty of San Stefano in 1878 together with Kars and Ardahan, and ceded back by Georgia on Feb. 23rd, 1921. Since then, it has been the centre of the *ķaḍā* and the capital of the *wilāyet* of Çoruh. In 1945, there were 3,980 inhabitants in the town itself and 16,966 in the *ķaḍā*.
                                        (FR. TAESCHNER)

ʿARŪBA [see TAʾRĪKH].

ʿARŪḌ. I. *ʿIlm al-ʿArūḍ* is the technical term for ancient Arabic metrics. *ʿIlm al-ʿArūḍ* and *ʿIlm al-shiʿr* are occasionally used synonymously in the sense of "science of versification", and in this extended sense *ʿIlm al-ʿArūḍ* embraces not only the Science of Metre, but also the Science of Rhyme. Usually, however, the rules governing rhyme (*ʿIlm al-Ḳawāfī*, sg. *Ḳāfiya*) are treated separately, and *ʿIlm al-ʿArūḍ* is confined to metrics in the stricter sense. As such, Arabic philologists define it in the following manner: *Al-ʿarūḍ ʿilm bi-uṣūl yuʿraf bihā ṣaḥīḥ awzān al-shiʿr wa-fāsiduhā* (*ʿArūḍ* is the science of the rules by means of which one distinguishes correct metres from faulty ones in ancient poetry).

There is no generally accepted etymology for this sense of the term *ʿArūḍ*. Some Arabic grammarians maintain that it acquired the meaning of metrics because the verse is constructed on its analogy (*yuʿraḍ ʿalayhi*); others say that the term was used because al-Khalīl developed it in Mecca, and this city is also called al-ʿArūḍ. Georg Jacob (*Studien in arabischen Dichtern*, 180) has suggested a curious explanation by pointing to the passage in the *Dīwān* of the Hudhaylites (95, 16), where the poem is compared to an obstinate female camel (*ʿarūḍ*) which the poet tames. The most plausible explanation still remains the one based on the concrete meaning which *ʿArūḍ* has as part of a tent, and the transferred sense which it acquired in metrics, as the last foot of the first hemistich: originally it describes "the transverse pole or piece of wood which is in the middle of a tent, and which is its main support and hence the middle portion (or foot) of a verse" (Lane). Since the last foot of the first hemistich in the centre of the line (*bayt al-shiʿr*) is as important for its structure as the centre pole is for that of the tent (*bayt al-shaʿr*), one may readily assume that *ʿArūḍ* then came to be the general term for the science of metric structure.

There are few works on metrics by Arab philologists, and their contents are of little value. This fact is all the more surprising if one bears in mind how many works of lasting value have been written by prominent Muslim scholars on grammar and lexicography. The *Kitāb al-ʿArūḍ*, which al-Khalīl, the founder of the science of metrics, is said to have written, has not survived, nor have any of the works on the subject written by the older grammarians. The earliest monographs which we have concerning *ʿIlm al-ʿArūḍ*, in the wider sense, date from the turn of the 3rd century A. H. There are sections on metrics in some of the larger *Adab* works; the oldest and best known of these can be found in the *ʿIķd al-Farīd* (Ed. Cairo, 1305, III, 146 ff.) of Ibn ʿAbd Rabbihi (died 328/940). The following list gives the names o

4th century

Ibn Ḳaysān	I, 110	*talḳīb al-ḳawāfī wa-talḳīb ḥarakātihā*; ed. W. Wright in *Opuscula arabica* (1859) 47-74.
Al-Ṣāḥib al-Talkānī	S. I, 199	*al-iḳnāʿ fī 'l-ʿarūḍ*
Ibn Djinnī	I, 126; S. I, 192	

5th century

Al-Rabaʿī	S. I, 491	
Al-Ḳundhurī	I, 286	
Al-Tibrīzī	I, 279; S. I, 492	1) *al-kāfī* 2) *al-wāfī*

6th century

Al-Zamakhsharī	I, 291; S. I, 511	*al-ḳusṭās fī 'l-ʿarūḍ*
Ibn al-Ḳaṭṭāʿ	I, 308; S. I, 540	*al-ʿarūḍ al-bāriʿ*
Al-Dahhān	I, 281	
Nashwān al-Ḥimyarī	I, 301	
Al-Saḳḳāṭ	I, 282; S. I, 495	

7th century

Abū 'l-Djaysh al-Andalusī	I, 310; S. I, 544	*ʿarūḍ al-Andalusī*; first printed Istanbul 1261; much commented upon.
Al-Khazradjī	I, 312; S. I, 545	*al-ḳaṣīda al-khazradjiyya*; critical ed. by R. Basset: *Le Khazradjiyah, Traité de métrique arabe* (Alger 1902); the text can also be found in all editions of the *Madjmūʿ al-mutūn al-kabīr*; much commented upon.
Ibn al-Ḥādjib	I, 305; S. I, 537	*al-maḳṣad al-djalīl fī ʿilm al-Khalīl*; ed. Freytag in: *Darstellung der arab. Verskunst* (1830) 334 ff.; much commented upon.
Al-Maḥallī	I, 307; S. I, 539	1) *shifā* 2) *urdjūza*
Ibn Mālik	I, 300	*al-ʿarūḍ*

8th century

Al-Kalāwisī	2, 259	
Al-Sāwī	2, 239; S. 2, 258	*al-ḳaṣīda al-ḥusnā*

9th century

Al-Damāmīnī	2, 26	
Al-Ḳināʿī	2, 27; S. 2, 22	*al-kāfī fī ʿilmay al-ʿarūḍ wa 'l-ḳawāfī*. First printed Cairo 1273; copied in the *Madjmūʿ*; much commented upon.
Al-Shirwānī	2, 194	

11th century

Al-Isfarāʾirī	2, 380; S. 2,513	

12th century

Al-Ṣabbān	2, 288; S. 2, 399	*manẓūma [al-shāfiya al-kāfiya] fī ʿilm al-ʿarūḍ*; printed several times in Cairo; also copied in all editions of the *Madjmūʿ*.

those Arab philologists whose works on metrics are preserved in manuscripts (—mere commentators are omitted). They are arranged in centuries, reckoning from the Hidjra, and details are given only in the case of the better known works; references to Brockelmann are, however, given in every case.

Just as the ancient Indians and Greeks developed their own form of metric poetry, so did the ancient Arabs. Ancient Arabic poems were already written and recited in the known metres a hundred years before Islam, and they retained their form more or less unchanged in the succeeding centuries. The usual ancient Arabic poem, the so-called *Ḳaṣīda*, [*q.v.*] is comparatively short and simple in its structure. It consists of 50 to 100 monorhyming lines (rarely of more), and there is no strophic division in ancient Arabic poetry. Each line (*bayt*, pl. *abyāt*) consists of two clearly distinct halves (*miṣrāʿ*, pl. *maṣārīʿ*); the name for the first hemistich being al-ṣadr, that for the second *al-ʿadjuz*. Only these more obvious attributes of the line were recognised and named during the 1st century A.H. Al-Khalīl Ibn Aḥmad al-Farāhīdī (died ca. 175 A.H. in Baṣra) was the first to investigate the inner, rhythmical structure of Arabic verse; he distinguished between different metres, gave them the names by which we still know them, and divided them up into their subordinate metric element. The written description and analysis of observations made by ear presented, however, very serious difficulties.

In all languages the choice and position of words in prose is solely governed by generally accepted syntactic rules and by the desire of the speaker to express his thoughts as clearly as possible. In poetry, however, when it is based on rhythm, the choice of words and their sequence within the line is not so uncontrolled. The rhythm of the verse and the metres in which it finds its external expression are

created by the following factors: 1) the observance of a definite order in the sequence of syllables within the line, and 2) the regular recurrence of accent, indicated either by stress or some other means. The rhythm of a line in poetry is as completely tied to the phonetic properties of the language in which it is written as are the syllables of the words in the prose of the language concerned. This is, above all, a matter of the *duration* of the syllables and the *stress* with which they are pronounced. Syllables have a measurable length in all languages, but whereas in some (e.g. in the Germanic languages) there is no fixed and definite proportion of length of syllables (for, although there are admittedly some syllables in these languages which are always long and others which are always short, there are many which have no fixed quantity), there are, on the other hand, other languages (such as ancient Greek) where the quantity of every syllable in every word is absolutely fixed. In these, there is a strict distinction between long and short syllables in prose, too; the ratio of their length is roughly 2 : 1. The position is similar with regard to the element of stress: whilst in every language there is one syllable in a word which is somehow raised above the others, the strength of this accent is, however, something which differs widely in the individual languages. Thus, for example, ancient Greek uses musical pitch, whereby individual syllables are distinguished only by a higher tone, whilst in the Germanic languages they are distinguished by an expiratory stress which renders them more emphatic in comparison with the other syllables. The rhythmic structure of the verse has in all languages to adapt itself to these qualities of the syllables. If the quantity of the syllables is definitely fixed, then the rhythm of the verse is attained largely by regularly recurring sequences of short and long syllables, forming metrical 'feet', which last the same length of time. One then speaks of 'quantitative' verse. If, on the other hand, stress, rather than any fixed quantity, is the characteristic by means of which definite syllables are distinguished from their neighbours, then the rhythm of the verse and the structure of its metre, will both be largely produced by the alternation of accented and unaccented syllables. In this case we speak of 'accentual' verse.

From the prose of the Ḳorʾān, and the poetry of the ancient poets, as it has come down to us, we know that in the ancient Arabic language the quantity of the syllables was definitely fixed. From certain grammatical facts one may assume that an expiratory accent was also present, though only slightly developed. *A priori* one can therefore assume that the rhythm in ancient Arabic verse (as in ancient Greek verse) found its expression in 'quantitative' metrics. The theoretical treatment of this problem, however, was at that time a far more difficult one for the Arabic philologist than for the Greek prosodist. The latter used the term 'syllable', made a clear distinction between short and long syllables, and chose the short syllable, the χρόνος πρῶτος, as the basic unit for measuring the duration of the verse. They also had a term and a graphic sign for the pitch by which one syllable in every word was distinguished. Arabic philologists, by contrast, did not possess the *concept* of syllable, let alone the refinement of the 'short syllable'. Al-Khalīl, too, did not know the words 'syllable' and 'stress', yet his ear surely perceived what we call syllables and stresses, for his graphic paraphrase —which we can understand if we try hard—does

give us a clear picture of the rhythm in ancient Arabic verse.

Primarily, Al-Khalīl made good use of the peculiarities of Arabic script, in which the face of each word is a guide to the quantity of its syllables: one individual 'moving' consonant (*ḥarf mutaḥarrik*), i.e. a consonant with a vowel sign (e.g. بَ قَ), corresponds to what we call a short syllable, and two consonants, of which the first is 'moving' and the second 'quiescent' (*sākin*) (e.g. فِي، لَوْ، قَدْ), correspond to what we call a long syllable. There are only a few fixed spellings which fail to comply with this rule (e.g. بِنْ بْنِ = بْ، وَلْ = وَلْ، اَاَخَرُ = وَآلْ، آخَرُ = اَاَخَرُ; قَنْتَلَ = قَتَّلَ، ذَالِكَ = ذٰلِكَ). Thanks to this peculiarity of the Arabic script, Al-Khalīl was able to take the face of the verse as a basis for his treatment of Arabic metres. In order to be independent of the changing shape of the letters, graphic symbols were introduced, namely the symbol | o for the 'quiescent' and the symbol o for the 'moving' consonant (e.g. فَقَا نَبَّكَ = o | o | o o).

Both al-Ḥarīrī and Ibn Khallikān report that Al-Khalīl had noticed the different rhythms produced by the hammering in different copper-workshops in the bazaar in Baṣra, and that this gave him the idea of developing a science of metre, in other words, of determining the rhythm in the structure of the ancient poems. This late report agrees with the earlier one by Al-Djāḥiẓ, who states that Al-Khalīl was the first to distinguish between different metres, that is to say, that he was the first who in listening had distinguished different rhythmic structures in the ancient verses, and that he was the first to analyse this rhythm, by dissecting it into its metric elements. His theory was supplemented in its details by later Arabic prosodists, but these additions made no difference to the basic conception. Even today, the 16 Arabic metres are still given in the very order in which Al-Khalīl gives them, because it is only in this order that they can be united in the graphic presentation of the five metric circles (*dawāʾir*, sg. *dāʾira*).

According to him, every metre comes into being by the repetition of 8 rhythmic feet which recur in definite distribution and sequence in all metres. The term applied to these feet is *djuzʾ*, pl. *adjzāʾ* ("part"). In accordance with the common practice of Arabic grammarians, he represents each of these 8 "parts" by a mnemonic word, derived from the root *fʿl*. Of these eight mnemonics, 2 consist of five consonants each, namely: faʿūlun فَعُولُنْ and fāʿilun فَاعِلُنْ, 6 of seven consonants each, namely mafāʿīlun مَفَاعِيلُنْ, mustafʿilun مُسْتَفْعِلُنْ, fāʿilātun فَاعِلَاتُنْ, mufāʿalatun مُفَاعَلَتُنْ, mutafāʿilun مُتَفَاعِلُنْ, mafʿūlātu مَفْعُولَاتُ. The following table of the 5 metric circles will clarify how the 16 metres are made up of these 8 feet. For the sake of clarity, the circles are opened out and given as straight lines, and only one hemistich is given in the rhythmical mnemonic words for each metre (see Circle 1-5, p. 670).

Circle 1

Ṭawīl		FAʿŪ	-luṇ	MAFĀ́	-ʿī-	lun	FAʿŪ́	-lun	MAFĀ́	-ʿī	-lun	
Basiṭ		-ʿILUN	fā	-ʿILUN		mus	-taf	-ʿILUN	fā	-ʿILUN	mus	-taf- .....|
Madīd		-ʿILUN		fā	-ʿILĀ	-tun	fā	-ʿILUN	fā	-ʿILĀ́	-tun	fā ..	

Circle 2

| Wāfir | | MUFĀ́ | -ʿala | -tun | MUFĀ́ | -ʿala | -tun | MUFĀ́ | -ʿala | -tun | |
| Kāmil | | -ʿILUN | | muta | -fā | -ʿILUN | muta | -fā' | -ʿILUN | muta | -fā- .. | |

Circle 3

Hazadj		MAFĀ́	-ʿī	-lun	MAFĀ́	-ʿī	-lun	MAFĀ́	-ʿī	-lun	
Radjaz		-ʿILUN		mus	-taf	-ʿILUN	mus	-taf	-ʿILUN	mus	-taf- ..	
Ramal		-ʿILĀ	-tun		fā	-ʿILĀ	-tun	fā	-ʿILĀ	-tun	fā- ...	

Circle 4

Sarīʿ		mus-taf-ʿilun mus -taf -ʿilun māf -ʿu -LĀTU mus -taf -ʿilun mus -taf -ʿilun maf -ʿū-LĀTU
Munsariḥ		mus -taf -ʿilun maf -ʿū -LĀTU mus -taf -ʿilun	
Khafīf		fā -ʿilā -tun mus -TAFʿI -lun fā -ʿilā -tun	
Muḍāriʿ		mafā -ʿī -lun FĀʿI -lā -tun mafā -ʿī -lun	
Muḳtaḍab		maf -ʿū -LĀTU mus -taf -ʿilun mus -taf -ʿilun	
Mudjtathth		mus -TAFʿI -lun fā -ʿilā -tun fā -ʿilā -tun	

Circle 5

| Mutaḳārib | | FAʿŪ | -lun | FAʿŪ | -lun | FAʿŪ | -lun | FAʿŪ | -lun | |
| Mutadārik | | -ʿILUN | | fā | -ʿILUN | fā | -ʿILUN | fā | -ʿILUN | fā- .. | |

The order of the 5 circles is based on an arithmetical principle. They are arranged according to the number of consonants in the mnemonic words of the metres which compose them. The three metres *Ṭawīl*, *Basiṭ* and *Madīd*, whose hemistiche: consist of 24 consonants each, form the first circle; the two metres *Mutaḳārib* and *Mutadārik*, whose hemistiches consist of only 20 consonants each, form the last circle. The remaining metres, whose hemistiches consist of 21 consonants each, are divided among the three circles in the middle. The order of the metres within the circles is also a formal one: the *Adjzā³* of a metre are first written around the periphery of a circle, thus the three *mafāʿilun mafāʿilun mafāʿilun* of the *Hazadj* are inscribed around the periphery of circle 3. If one reads the same circle again, but starting at a different point, one automatically gets the mnemonic words of another metre: thus if, for instance, in circle 3 one does not begin with *mafā-* (as in *Hazadj*), but only with the *-ʿi-* of *mafāʿilun*, one obtains the metric scheme of *Radjaz*, and if one advances still further and does not begin reading till the *-lun*, ore obtains the scheme of *Ramal*. The possibility of dividing the *Adjzā³* of a circle in various ways, and of reaching different metric schemes by doing so, is only due to Al-Khalīl having purposely constructed his circles so that the mnemonic words united in each circle not only produce the same total number of consonants, but coincide completely in their 'moving' and 'quiescent' consonants as well, if they are written in a certain relationship to one another. This can be clearly seen in the above table of the 5 circles if one transcribes the Latin letters into Arabic ones. The agreement emerges even more obviously if we substitute the signs which are used by the Arabic prosodists for the 'moving' and 'quiescent' consonants themselves. The following picture will then emerge for circle 3:

Hazadj		o	o	o o	o	o	o o	o	o	o o
Radjaz	o o	o	o	o o	o	o	o o	o	o
Ramal	o	o o	o	o	o o	o	o	o o	o

The same relative coincidence is also found between the metres contained in the remaining 4 circles. Al-Khalīl's object in arranging the metres in this purely formal system of the 5 circles has not been handed down to us either by himself, or by any of the later prosodists. It is quite certain, however, that this merely external superimposition of 'moving' and 'quiescent' consonants in the mnemonics is not meant to imply a rhythmic development of one metre out of another.

The 8 *Adjzā³*, which, as we have seen, recur again and again in different distributions in the 16 metres, can be further split into their metric components. For Al-Khalīl, however, the metric component means something different than for the occidental prosodist. It is not the smallest indivisible unit of sound, but the smallest independent word occurring in the language. Accordingly, he distinguished two pairs of metric components which he apparently regarded as such because none of the 4 words concerned (each with its particular sequence of 'moving' and 'quiescent' consonants), could be derived from any of the other 3, whilst all 8 feet could be formed by combinations from these 4 words. He took the terms for these two pairs of components from two important parts of the tent, and he distinguished between:

A: The two *Asbāb* (sg. *sabab* "cord") which consist of two consonants each, namely

1) *sabab khafīf* = 2 consonants, the first 'moving', the second 'quiescent', as in words like قَدْ

2) *sabab thaḳīl* = 2 consonants, both 'moving', e.g. words like لَكَ

B: The two *Awtād* (sg. *watid* "peg") which consist of three consonants each, namely

1) *watid madjmūʿ* = 3 consonants, the first two 'moving', the last 'quiescent', as in words like لَقَدْ

2) *watid mafrūḳ* = 3 consonants, the first and third moving, the middle one 'quiescent', e.g.

words like وَقَتِ

In this manner, each of the 8 feet can be reduced to its metric components as follows; thus مَفَاعِيلُنْ

mafā-ʿi-lun = B1 + A1 + A1 or مُتَفَاعِلُنْ *muta-fā-ʿilun* = A2 + A1 + B1. Each of the 16 metres given in the circles can therefore be scanned on this basis, e.g. *Wāfir* = *mufāʿalatun mufāʿalatun mufāʿalatun* = B1 + A2 + A1, B1 + A2 + A1, B1 + A2 + A1 or *Sariʿ* = *mustafʿilun mustafʿilun mafʿūlātu* = A1 + A1 + B1, A1 + A1 + B1, A1 + A1 + B2.

Since it is thus possible to reduce all the metres to their basic components, one might assume this metric system to be complete. The fact remains, however, that the 16 metres never actually appear in the form in which they are given in the 5 circles, but nearly always deviate from this ideal form—at times to a considerable extent. In other words, the sequence of 'moving' and 'quiescent' consonants in ancient Arabic poems does not correspond to the sequence determined by the circles. Therefore one can no longer split the metric forms used by the poets into the 8 ideal feet, nor yet divide these into their two metric elements, because that method of scanning is based completely on the sequence of 'moving' and 'quiescent' consonants in the ideal metres of the circles. This fact was, of course, known to Al-Khalīl just as well as it is to us, and in fact his circles are just a kind of rhythmic *Uṣūl*, from which the actual metric forms used by the poets deviate in a certain manner as *Furūʿ*. Consequently, there are also two different terms designating the metres. The ideal forms in the circles are called *buḥūr* (sg. *baḥr* "river", ῥυθμός"); those deviating from them, and actually occurring in ancient poetry are called *awzān al-shiʿr* (= metres).

The smallest of the deviations is the shortening of the metre. This is immediately visible, because then the metre no longer has its full (*tām*) number of *adjzāʾ*. According to the degree of shortening, there are three possibilities. The line is either

a) *madjzūʾ*, if there is one *djuzʾ* missing in each of the two hemistiches (if, for instance, in *Hazadj*, *Kāmil* or *Radjaz* the foot is repeated only twice and not three times); or

b) *mashṭūr*, when a complete half (*shaṭr*) is absent (as, for instance, when the *Radjaz* is reduced to *one* hemistich); or

c) *manhūk*, when the line, on rare occasions, is "weakened to exhaustion" i.e. (as for instance in *Munsariḥ*) when it is reduced to a third of its size.

All these deviations only concern the external shape of a metre and not its rhythmical structure, which does find its expression in the sequence of 'moving' and 'quiescent' consonants.

The very numerous cases in which this particular sequence in the ancient poems differs from that prescribed by the circles have been covered by a special set of rules. This forms a necessary supplement to the circles, because the deviations would be arbitrary—and thus the circles would lose their authoritative character as *Uṣūl*—if there were no such rules. Just as one is amazed at the regularity of the first part of the system—the five circles and their normal metres—so one is confused by the

second part with its casuistry and its complications. This, however, is inherent in its very nature. Neither Al-Khalīl nor the later prosodists use the term 'syllable', and we can therefore not expect any *general* rules (e.g. concerning the reduction of long syllables to short, the omission of short syllables etc.). In effect, they were obliged to mention in each individual case whether and to what extent the 'moving' and 'quiescent' consonants in ancient poetry showed a plus or a minus as compared with the ideal scheme of the circles. This had to be done in every metre and every one of its feet in both halves of the line, and in order to denote them clearly, individual terms had to be created to cover each one of these numerous differences. A certain order and clarity emerges from this baffling list thanks to the fact that all deviations fall into two classes, which perform different functions and appear in different parts of the line.

The last foot of the first hemistich (*al-ʿarūḍ*, pl. *aʿārīḍ*) and the last foot of the second hemistich (*al-ḍarb*, pl. *ḍurūb*), that is to say, the ends of the two halves of the line, suffer most from deviations. The terms for these two vulnerable parts of the verse are definite, the terms for the other feet vary and are usually given the collective name *al-ḥashw* ('stuffing'). By analogy, one also distinguishes two groups of deviations, the *Ziḥāfāt* and the *ʿIlal*. The *Ziḥāfāt* ('relaxations') are, as the name suggests, smaller deviations which occur only in the *Ḥashw* parts of the line in which the characteristic rhythm runs strongly, and their effect is a small quantitative change in the weak *Asbāb*-syllables. As accidental deviations, the *Ziḥāfāt* have no regular or definite place, they just appear occasionally in the feet. By contrast, there are the *ʿIlal* ('diseases', 'defects') which appear only in the last feet of the two halves of the lines, and there, as their name suggests, they cause considerable change as compared to the normal feet. They alter the rhythmic end of the line considerably, and are thus clearly distinct from the *Ḥashw* feet. As rhythmically determined deviations, the *ʿIlal* do not just appear occasionally but have to appear regularly, always in the same form, and in the same position in all the lines of the poem. A further difference between the two groups of deviations is the fact that the *Ziḥāfāt* fall only on the *Sabab* (and there on its second consonant), whilst the *ʿIlal* alter the *Watid* in each of the last feet of the two hemistiches as well as in their *Sabab*s.

By applying the definite *Ziḥāfāt* and *ʿIlal* rules, and taking the normal form of the feet of each metre as a point of departure, one arrives at the forms actually occurring in the *Kaṣīdas*. Just as the normal feet are denoted by their 8 mnemonic words, (*faʿūlun*, *mafāʿilun*, etc.), which express the normal sequence of their 'moving' and 'quiescent' consonants, there are also mnemonics denoting the forms which have undergone alteration because of *Ziḥāfāt* and *ʿIlal*, and these indicate the changed sequence of consonants. Thus, for instance, *mu[s]tafʿilun*, when its *Sīn* is lost, should become *mutafʿilun*. If, however, as in this case, the resulting form is not one linguistically possible in Arabic, then the same sequence of consonants (i.e, the same sequence of 'longs' and 'shorts') is expressed by an equivalent word which is linguistically acceptable, in this case, for instance, by *mafāʿilun*. By contrast with the *Uṣūl* forms of the feet, these modifications are known as the *Furūʿ* forms of the feet. In the following, the *Furūʿ* will be added in brackets, if their form

differs from that of the *Uṣūl*. Space here does not permit a detailed list of all *Ziḥāfāt* and *ʿIlal* (cf. for the details the arabic compendia of the *ʿIlm al-ʿarūḍ*). A few examples will be given, however, in order to illustrate the theoretical exposition, and to show how peculiar and complicated this particular part of the system is.

As already stated, the *Ziḥāfāt* appear when the *Sabab* in a line does not possess its full normal form, but shows a change in the second consonant. Then, however, one does not simply speak of a *Ziḥāf*, because this would be ambiguous. In order to describe the *Ziḥāf* accurately, one must state which consonant of a foot is affected, and whether that is a 'moving' or a 'quiescent' consonant. For example, one can divide the so-called 8 'simple *Ziḥāfāt*' into two groups, according to whether a *sabab khafīf* or a *sabab thakīl* is affected. Even then, one must denote the eight cases by individual terms. 1) We have a *khabn*, if the second consonant of a foot is missing, e.g., the *sīn* in [مَفَاعِلُنْ] [= مُسْتَفْعِلُنْ مُسْ مَ], or the *alif* in فَ[ا]عِلُنْ; we have a *ṭayy*, if the 4th consonant is missing, e.g., the *fā* of مُسْتَ[فْ]عِلُنْ [= مُفْتَعِلُنْ]; a *kabd*, if the 5th consonant is concerned, e.g., the *nūn* in فَعُو[نْ]لُنْ or the *yā* in مَفَاعِ[ي]لُنْ; and a *kaff*, when the 7th consonant is missing, e.g., the *nūn* of فَاعَلَا[نْ]تُنْ. 2) In the *sabab thakīl*, there can either be only the vowel of the second consonant missing (then one speaks of an *iḍmār*, in the case of the *fatḥa* of *mut[a]fāʿilun* [= *mustafʿilun*], and of an *ʿaṣb* in the case of the *fatḥa* of *mufāʿal[a]tun* [= *mafāʿīlun*]) or both this consonant and its vowel (then one speaks of a *wakṣ*, if the *ta* of *mu[ta]fāʿilun* [= *mafāʿilun*] is missing, and of an *ʿakl* in the case of the *la* of *mufāʿa[la]tun* [= *mafāʿilun*]).

Whilst the *Ziḥāfāt* always lead to a minus, when compared with the normal *Sabab*, the *ʿIlal* (which change the last feet of the two hemistichs) fall into two groups, according to whether they arise out of an addition (*ziyāda*) or an omission (*naḳṣ*). 1) the *tadhyīl*, for example, adds a 'quiescent' consonant to the *watid majmūʿ* (thus مُسْتَفْعِلُنْ becomes مُسْتَفْعِلَانْ), the *tarfīl* a *sabab khafīf* (thus مُتَفَاعِلُنْ becomes مُتَفَاعِلَاتُنْ). 2) On the other hand, the *hadhf* means the loss of a *sabab khafīf* (as for *mafāʿī[lun]* [= *faʿūlun*] or for *faʿū[lun]* [= *faʿal*]), the *katf* means the loss of a *sabab khafīf* and the preceding vowel (as, for instance in *mufāʿal[atun]* [= *faʿūlun*]) and the *hadhadh* means the loss of a whole *watid majmūʿ* (as in *mutafāʿ[ilun]* [= *faʿilun*]).

These examples give only a rough impression of the complexity of the classical system. Even more complicated changes take place when two deviations obtain within one foot and in certain other special cases. In this manner one can derive from the 8 basic feet no less than 37 *Furūʿ* feet, all of which actually appear in old poetry. Feet undergoing a change

through *ʿIlal* play the greater part for two reasons. Firstly because they produce a greater plus or minus in the normal feet than the weaker *Ziḥāfāt*, and secondly because they cause rhythmic variants, which recur throughout the whole poem. Because of the large range of varying line endings, a great number of sub-divisions appear in all metres; and because the *Ḍarb*, the last foot of the second hemistich, is (being the end of the whole line) more concerned with these changes than the *ʿArūḍ* (the last foot of the first hemistich), the possible metres are named after their different *Ḍurūb*. The *Ṭawīl*, for example, has only one *ʿArūḍ*, i.e., the last foot of its first hemistich always has the same form (shortened by *kabd*) of *mafāʿilun*; but it has three *Ḍurūb*, i.e., apart from the normal form of the last foot of its second hemistich there are two further forms of its *Ḍarb*. Accordingly, one speaks of the first, second, or third *Ṭawīl*, depending on whether the *Ḍarb* has the form *mafāʿilun*, *mafāʿilun* or *faʿūlun*. The same goes for all other metres. The *Kāmil*, which has 9, has the greatest number of *Ḍurūb*. The sum of all possible *Aʿārīḍ* of all 16 metres is 36, and that of all *Ḍurūb* is 67; in other words, the 16 ancient Arabic metres are used by the poets in a total of 67 rhythmic variations, merely counting the changes caused by *ʿIlal* in the line-endings and ignoring the sporadic *Ziḥāfāt* in the *Ḥashw* of the line.

We are now—if we trust the Arabic prosodists and follow them on their circuitous ways—in a position to scan all the metres which appear in ancient Arabic poetry, and this would appear to bring to an end the exposition of *ʿIlm al-ʿArūḍ* in its general structure. Nevertheless, European Orientalists have never relied unreservedly on the Arabic prosodists, because the inner reason for the complicated structure of their system has not been understood. What was the reason for constructing the circles? And why formulate statements about ideal metres when one cannot arrive at the actual forms of the metres except by a complicated system of permissible deviations? To these objections we must add that the underlying concepts of Arabic prosodists, and the way in which they expound the patterns of sound and rhythm, are completely alien to us. They describe prosodic phenomena externally, according to the changes which the consonants of the words in the line undergo, whereas we are accustomed—as already mentioned—to explaining the changing metrical shape of a line in different languages by giving the characteristics of the syllables of the language concerned. In the system of the Arabic prosodists we do not, however, find any direct statement concerning the length and stress of syllables in ancient Arabic poetry. Therefore it seems that we have nothing to learn from them concerning the real essence of Arabic metrics, that is to say, nothing about the way in which the characteristic rhythm of ancient Arabic poetry originated, whether—as in ancient Greek—it came into being exclusively through the harmony of periodically recurring sequences of 'shorts' and 'longs', i.e., purely quantitatively, or whether the element of accentual stress was also a factor in deciding the shape of the rhythm of their poetry. Hence one has generally tended not to accept their system, making use of its terminology with reluctance and only to the extent required in order to understand the commentaries on the ancient poems.

It has already been pointed out that the quantity of the syllables is absolutely fixed in the ancient

literary Arabic language, so that one can assume that the rhythm in their verse has found its expression in some form of quantitative metrics. This basic assumption is shared by almost all the experts who have dealt with Arabic metrics. There is no agreement, however, on the question as to whether (and to what extent) factors other than the quantity of syllables shaped the rhythm of ancient Arabic verse. There are various views as to the composition and sequence in which 'shorts' and 'longs' are arranged into feet, and these, in turn, into metres; and there is furthermore the particularly vexed question of whether the rhythm of the lines found its expression exclusively in a quantitative pattern of 'shorts' and 'longs' in the individual feet (as in ancient Greek), or whether there was also a rhythmic stress (ictus), which recurred regularly and emphasised certain syllables in the line.

Heinrich Ewald, disregarding the theories of the Arabs, produced an entirely fresh theory regarding the organic growth of ancient Arabic metrics. He began with the thesis that its rhythm originated not only from the quantity of the syllables but also from the presence of marked stress on some of them (*rhythmum constat aequabili arseos et theseos vicissitudine contineri*). To begin with (in 1825), he found only iambic metres (marked by a recurrance of short and long syllables); but in his second presentation (1833) he distinguished 5 rhythmic kinds: *genus iambicum, genus antispasticum, genus amphibrachicum, genus anapaesticum, genus ionicum*. This classification has gained currency because W. Wright accepted it and printed it at the end of his *Grammar of the Arabic Language* (3rd ed. 1898, vol. II, 361 ff.). Whereas Ewald could start on secure basis concerning the quantity of syllables, his conclusions, as far as the second rhythmical factor (stress) was concerned, could only be based on assumptions at which he had arrived by comparing the structure of Arabic verse with the structure of Greek metres and the sequence of 'longs' and 'shorts' within them. His conclusions not only cannot be proved, but are not, in fact, tenable because they start with the assumption that the same rhythm obtains in both Arabic and Greek metres, without adducing any proof to this effect and without taking into account that the very presence of rhythmic stress in ancient Greek poetry is itself a matter of controversy. This is the reason why all the later experts who started from the same or similar assumptions as Ewald disagree both with Ewald and with each other on the important question of how to divide up the feet and whether any syllables are to be stressed (and, if so, which).

Stanislas Guyard advanced an entirely different explanation of the essence of Arabic metrics: he decided to adopt a musical beat, measuring the exact time of each syllable and fixing it by a musical note, instead of merely distinguishing metric 'longs' and 'shorts' at the ratio of 2 : 1. Accepting the division of feet and metres, handed down in the Arabic mnemonics, he concluded from his musical measurements that a *temps fort* and a *temps faible* had to alternate every time. Apparent contradictions were explained either by describing a *temps fort* as weak or by inserting a pausal note (*silence*)—which was not, however, graphically expressed—to play the rôle of a *temps faible*. Other deviations he explained by the assumption of a double ictus in every Arabic foot, and he discarded the *mafʿūlātu* foot as imaginary because it would not fit in with his theories. He was then in a position to assert that the 16 metres with all their variations did correspond

to the musical rhythm which he had assumed; but far from explaining the essence of the metric line-structure in Arabic poetry he had simply transposed it into a sequence of musical terms.

Martin Hartmann is concerned with the development of the various metres and with their derivations from each other, rather than with the actual essence of Arabic metrics. He therefore does not argue with Ewald, though one may assume that he disagrees with him because he goes so far as to say that there was nothing to indicate that the Arabs ever thought of quantitative distinctions in their poetry. Although Hartmann never explicitly says this, it has been asserted that ancient Arabic poetry was in his opinion accentual in character. On the other hand, he rightly asserts that the syllable with the main stress must always be of a constant length and that its preceding short syllable must equally be of a constant duration. Concerning the origin of the metres, he assumed that these were in the last resort instinctive rhythmical imitations of the regularly recurring sounds made by camels' feet. As a camel advances its feet in pairs, he assumes the basic metre to be the one which consists of the alternation of an accented and an unaccented syllable. Depending on whether one starts with the animal's first step, as it starts off from the static position, or from one of the intermediate paces, one gets the *Hazadj* ($\cup \acute{\cup} \cup -$) or *Radjaz* ($\cup - \cup \acute{\cup}$); the difference between them being that the stress is on the first element in the first case and on the second in the other. According to him, *Mutaḳārib* and *Mutadārik* developed from these two basic metres by inserting not one, but in each case two, unstressed syllables between the two steps, i.e. between the two stressed syllables; and *Wāfir* and *Kāmil* respectively by the alternate insertion of two unstressed syllables and one unstressed syllable between the two stressed ones. Similarly, he takes *Basīṭ* ($- - \cup - [-] - \cup -$) and *Ṭawīl* ($\cup - [-] - \cup - - -$) to be defective forms of *Radjaz* and *Hazadj*. He, too, has difficulties with the derivation of other metres from the diiamb, because in that case there is no alternation of stressed and unstressed syllables, but two stressed ones have to come together. Hartmann's expositions are subjective assumptions concerning the origin of Arabic poetry in general, and the derivation of metres from one original metre in particular. His arguments do not convince as he offers no conclusive proof, and also because he appears to believe that rhythmic occurrances can be adequately explained by the arbitrary inclusion or exclusion of syllables or by the simple assumption of an anacrusis or a pause. Hartmann himself admits that he has been unable to show what made the Arabs choose the particular combinations which appear in the 16 metres.

Gustav Hoelscher, too, has advanced a theory concerning the origin of Arabic metrics and the derivation of its metres from each other. The simplest, and according to tradition the oldest, metre, the *Radjaz*, developed from rhymed prose, *Sadjʿ*, by regulating the number and quantity of syllables; it has a rising rhythm and is dipodically bound. In his opinion, all other metres developed from *Radjaz*: first *Sarīʿ*, *Kāmil* and *Hazadj*; and then, with varying forms of syncope, *Wāfir*, *Basīṭ*, *Ṭawīl* and *Mutaḳārib*. The same objections must be raised here as were raised in the case of Hartmann's theory of derivation: Hoelscher himself admits that *Khafīf* and *Munsariḥ* cannot be derived from *Radjaz*, and apart from diiambic metres he also lists ditrochaic metres of a falling rhythm. In addition,

Hoelscher deals extensively with the basic rhythmic factors which determine the essence of all metres. He says that the simplest rhythmical group, the beat or foot, has a "division of time into fixed proportions" and consists of a "regular change from light to heavy"; but he does not define these two factors any further. The rhythmical time-value of the syllable, according to him, is always one single "counting-unit", irrespective of its quantity, and the law according to which a long syllable has twice the length of a short one is not to be applied to Arabic poetry. Similarly, he admits the presence of an ictus, and states that a "bar" consists of two dynamically related parts (of which the second is always the heavier); at the same time he asserts that the stronger ictus, being free, is not tied to either of the two stresses.

Alfred Bloch, in contrast to Hoelscher, stresses the existing clear difference between 'longs' and 'shorts'. His detailed study of the patterns in ancient Arabic prose and the facility with which it can be fitted into all metres lead him to the conclusion that—compared with other languages—ancient Arabic possessed truly ideal phonetic conditions which rendered it suitable to quantitative metrics. Furthermore, he regards quantity as the only factor shaping the rhythm of the verse, and (following Rudolf Geyer) decides against the assumption of an ictus.

The reason why such varying and contradictory theories concerning the essence of Arabic metrics have been advanced lies in the fact that we have no record of the recitation of ancient poems, and that the casuistic expositions of the Arabic metricians have such a repellent character that it seemed justifiable to disregard them completely. Thus, different experts approached the subject from personal points of view (the musical analogy, analogies with the poetry of other peoples, etc.). Neither attitude towards the teaching of the Arabic metricians (uncritical acceptance or outright rejection) is in fact justifiable. Surely as renowned a philologist as Al-Khalīl, whose fundamental achievements as a phonetician, grammarian and lexicographer are recognised even today, did not construct the five circles and the complicated metric system connected with them just for fun. One may assume with certainty that thereby he meant to express certain observations which he had made when he heard the ancient poems. Starting from this assumption, the author of this article has analysed all the parts of Al-Khalīl's system in order to arrive at the actual core of the theory of the circles. The following gives the most important results of these investigations, which bring out clearly the particular peculiarity of ancient Arabic metrics.

a) Al-Khalīl purposely arranged the feet of the metres within the circles in such a relation to one another that all 'moving' and 'quiescent' consonants (i.e. all their long and short syllables) should coincide. In this way, the length of the syllables was graphically shown, and he did not have to use a term for it. Since the Arabic language *in itself* already mirrors the quantity of syllables, there would have been no need for Al-Khalīl to construct the circles if he had only wanted to make statements concerning the length of the syllables in the feet. One must therefore assume from the start that he meant to express something else in addition, concerning the rhythm of Arabic poetry, by this arrangement of the metres in the circles.

b) Whilst the Greek metricians used terms for the metric feet which state nothing other than a certain sequence of 'longs' and 'shorts', Al-Khalīl chooses mnemonic words to represent the 8 basic feet which correspond to words actually occurring in the Arabic language. But it is the stress which is the bond that integrates the syllables into the unity of a word. One is therefore tempted to assume that the mnemonics for the feet are meant to indicate that in them, too, one syllable was always to be stressed in each case.

c) This assumption is strengthened by the way in which Al-Khalīl further divides the feet up into their components. Whilst the Greeks accept the short and long syllables as basic metric units, Al-Khalīl again used actual words—the shortest words pronounceable in themselves (i.e. monosyllabic and disyllabic words)—to denote these smallest parts. These words too, state something concerning the stress obtaining in them. The two *Asbāb*, i.e. (sequences of syllables like قَدْ (ḳad = –) and لَكَ (laka = ∪∪), do not have a stress of their own in prose either, but (proclitically or enclitically) adapt themselves to the preceding or subsequent words, whilst the two *Watid* words لَقَدْ (laḳád = ∪–́) and وَقْتَ (wáḳta = –́∪) have a marked stress of their own in opposite directions. When these sequences of syllables form a line, as metric components of a foot, then they have definite rhythmical functions. The two *Asbāb*, being unstressed parts of the foot, have no influence over the shaping of the rhythm, and are thus exposed to quantitative changes, the *Ziḥāfāt*, but the *Watid*, as the bearer of the stress, constitutes the rhythmical core of the metre, and as such within the line it is (as has been shown) proof against any change whether in sequence of syllables or in its quantity. Depending on which of the two opposing *Awtād* forms the core of the foot, we have a rising or a falling rhythm.

d) This substantiated assumption that *those* syllables in the line which form the *Watid* element carry the rhythmic stress becomes a certainty as a result of the following argument, which brings out the obvious purpose for the construction of the 5 circles. Only 4 of the 8 basic feet can be absolutely and unambiguously scanned. These are the following: FAʿŪ-lun, MAFÁ-ʿi-lun, MUFÁ-ʿala-tun, maf-ʿū-LÁTU. Since every foot must have a *Watid*, one cannot divide those 4 feet into their components except as shown in print, the *Watid* being represented by capital letters. In other words, the syllables which carry rhythmic stress in these 4 feet are clearly established; consequently it is equally clear which syllables carry the stress in the 4 metres Ṭawīl, Wāfir, Hazadj and Mutaḳārib, because these metres consist exclusively of unambiguous feet. But, according to the teaching of Al-Khalīl, there are two ways of analysing the other 4 basic feet. Either: fā-ʿILŪN, mus-taf-ʿILŪN, fā-ʿILÁ-tun, muta-fā-ʿILŪN, or: FÁʿI-lun, mus-TÁFʿI-lun, FÁʿI-lā tun, muta-FÁʿI-lun. In other words, the rhythmic stress in these 4 feet could actually lie on a different syllable in every case, and, accordingly, all metres which consist of these 4 feet could also have either a rising or a falling rhythm. In the case of these ambiguous metres—which form the greater part of those in existence—there is only one possible method of showing clearly in which of the two possible ways it is to be read, namely by placing it

in one of the 5 circles. The following well thought-out inner mechanism emerges as the actual reason for the construction of the circles: the *first* metre of every circle—with the exception of circle 4—is the leading metre, and consists only of unambiguous feet, for which the position of their *Awtād* is absolutely fixed; the second and third metres, however, consist of the 4 ambiguous feet. If one writes down the mnemonic words of these metres in relation to the first metre (as reproduced in the table), it will be found not only that the short and the long syllables coincide, but also that in every circle from the second metre onwards, *one* of two possible *Awtād* falls in its entirety (i.e. in its indivisible syllable-sequence) under the unambiguous *Watid* of the first metre. This, in turn, means that the second possibility of scanning is out of the question. Thus the circles are graphic figures whose purpose is to show which syllables bear the rhythmic stress as *Watid* elements by means of the arrangement of all metres in relation to one another. Thus, for example, the two feet *mustafʿilun fāʿilun*, which form the *Basiṭ*, cannot be unambiguously scanned. However, the fact that their *TAFʿI* and *FĀʿI* do not fall under the *Watid* of the *Ṭawīl*, but that in both cases their *ʿILŪN* falls under the unambiguous *Awtād FAʿŪ* and *MAFĀ* of the *Ṭawīl*, shows (as clearly as if it were written in a table) which syllables of the *Basiṭ* actually bear the rhythmic stress. In this way it has been proved that the metres brought together in the circles 1, 2, 3 and 5 have, without exception, a rising rhythm, and we also know, on what syllables the stresses were laid.

e) Circle 4 differs from this rule. This is already clearly visible externally, because its first metre, the *Sariʿ*, does not consist exclusively of unambiguous feet. This deviation was surely intended by Al-Khalīl, because (1) in contrast with the other circles, which are homogeneous and only incorporate metres of rising rhythm, circle 4 is not uniform; in it—and only in it—one finds the foot *maf-ʿū-LĀTU*, the only one of the 8 basic feet which has a falling rhythm, but that, too, never alone, but always together with one of the other 7 feet. The metres of this circle thus have a mixed rhythm of rise and fall. (2) The *Watid madjmūʿ*, the representative of rising rhythm, (∪−) has a particularly rigid structure in Arabic verse; it never undergoes any change within the hemistich and therefore clearly and distinctly dictates the rhythm of *those* metres in which it is to be found. In contrast with it, the *Watid mafrūk*, the core of the falling rhythm (−∪) is less clearly fixed in composition, hence variable and weaker in shaping rhythm. This explains why the syllables carrying the stress in the metres *Sariʿ*, *Khafīf* and *Munsariḥ* do not stand out with the same clarity as in the other metres. It is certain that Al-Khalīl realised this because he gave this circle the name "al-mushtabih" ("the dubious one, the one of several meanings").

It becomes evident that analysis of the circles produces an answer to the questions which have been in dispute, and on which arabists have hitherto held such different views. (1) The rhythm of ancient Arabic metres was not only produced by the quantity of the syllables, but also by the element of rhythmic stress; we even know on which syllables this stress lay in all the metres. (2) Nearly all the metres have a clear, rising rhythm; in no metre was there exclusively a falling rhythm; only a few metres—namely those in circle 4—which occur more

rarely, have a rhythm which changes from rise to fall and which, because of this mixture, has less of a clear character. (3) The rhythmical core of all feet and metres (excluding the few in circle 4) is formed by the sequence of a short and a long syllable (∪−) which is inseparable in its sequence and unchangeable in its quantity, and where the long syllable always carries the stress.

Al-Khalīl listened to recitals of ancient poetry and embodied his observations graphically in the construction of the circles, hence the results of their analysis can be taken to be contemporary evidence; and, indeed, they lead us to a complete understanding of the peculiarities of ancient Arabic metres. As we shall see, a metric system, theoretically constructed from the inseparable core of the rising rhythm (∪−), is completely identical with the system of metres used by the ancient Arabic poets.

If neutral syllables are grouped around the core, we get feet of a rising rhythm; these cannot have less than 3 or more than 5 syllables. Thus we arrive at the following 7 feet: (1) ∪−×, ×∪− (2) ∪−××, ××∪−, ×∪−∪ (3) ∪−∪∪−, ∪∪−∪−. No further or different forms of feet can be derived from the core ∪−. If one does not represent these feet by symbols, but in the manner of the Arabic grammarians by *voces memoriabiles*, then one gets exactly those mnemonic words which Al-Khalīl fashioned for the 7 feet of the rising rhythm: (1) *FAʿŪ-lun*, *fā-ʿILŪN*, (2) *MAFĀ-ʿi-lun*, *mustaf-ʿILŪN*, *fā-ʿILĀ-tun*, (3) *MUFĀ-ʿala-tun*, *mutafā-ʿILŪN*.

Whilst the actual rhythmical core of these feet always appears in the same indivisible and unalterable form, with the stress on the 'long', the neutral syllables (which have no part in the shaping of the actual rhythm) are neither bearers of stress nor stable in their quantity; they can be either a 'long' or a 'short', and their only function is to bring some variation into the rhythm. Such variations do appear, and the difference between them depends on whether (a) the foot begins immediately with the core, which makes a rising rhythm especially strong: ∪−×, ∪−××, ∪−∪∪−; (b) whether the core is at the end of the foot, which gives the rhythm a somewhat hurrying and skipping character: ×∪−, ××∪−, ∪∪−∪−; (c) or whether the core is enclosed within the foot, which somehow hampers the forcefulness of the rising rhythm: ×∪−×. Just because the grouping of neutral syllables around the core determines the rhythmical variations, it is absolutely necessary to keep to this fixed shape of the feet when scanning the metres.

By combining these 7 feet, one gets metres of rising rhythm of the following 3 groups: (1) The 7 "simple" metres are arrived at by the repetition of the 7 feet in identical form. These 7 theoretically constructed metres are completely identical with the metres *Wāfir*, *Kāmil*; *Hazadj*, *Radjaz*, *Ramal*; *Mutaḳārib*, *Mutadārik* used by the ancient poets. (2) If the 7 feet are combined not with themselves (as sub 1) but with each other, there result according to the calculation of variables many possibilities of "combined" metres. Most these potential metres, however, are incapable of realisation chiefly because they would offend against the general metric law according to which two cores can never succeed each other directly, but must always be separated by not more than two neutral syllables. It will then be seen that the three groups of feet, distinguished above, can be combined into compound metres only with

themselves, but never with each other. Consequently of the list of possible combined metres only three pairs are left, namely those which correspond exactly to the metres *Ṭawīl, Basīṭ, Madīd* used by the ancient poets and to their reverses.

(3) The gap which is caused by the absence of metres combined by feet of diverse variations of rising rhythm (as shown sub 2) is filled in by "mixed" metres which commence with one of the 7 feet of rising rhythm and are then varied by the foot of falling rhythm maf-ʿū-LÁTU. In this case too the theoretical construction again leads to the mixed metres used by the ancient poets, and which Al-Khalīl has united in circle 4.

The fact that the metrical system constructed theoretically from the core of the rising rhythm ᴗ ⏗ is identical with the metres actually used by the ancient poets affords us full insight into the ground-plan and the system of the ancient Arabic metres.

If the rising rhythm was "the" poetic form, by means of which Arabic poets fashioned their poems, one can, *a priori*, assume, that those metres which displayed the core of the rising rhythm most strongly were preferred and used most readily. Such are, primarily, the two metres *Ṭawīl* and *Basīṭ*, which combine unequal feet, and of the simple metres *Wāfir* and *Kāmil* (in which the rhythm is more variable because of the sequence of the two 'shorts'), rather than the other simple metres. In fact, this accords with the results obtained by various arabists (cf. Bräunlich, in *Islam*, XXIV, 249) in their statistical investigations into the frequency of metres: three-quarters of all *Kaṣīdas* were composed in these 4 metres, and amongst these *Ṭawīl* (as the strongest) heads the list.

Thus the peculiarity of ancient Arabic metres lies in the fact that they unlike the ancient Greek ones are not formed by the joining of *single* syllables, but are developed from an inseparable *pair* of syllables, the core of the rising rhythm. Only this one rhythmical idea has taken shape in Arabic metrics, but the principle is carried out in all its possible variations and effects. The reason why poets unconsciously developed this one principle to perfection can only be explained by the fact that the ancient Arabic literary language, in its structure of sound and syllable, conforms to the shape of the rising rhythm and invites such development. It is this monorhythm which basically distinguishes ancient Arabic metrics from the polyrhythm of ancient Greek metrics (which expressed various rhythmic figures without developing any one, as it were, systematically to its ultimate possibilities, as the Arabic does). Because Arabic metrics are sometimes wrongly simply equated with Greek ones, a further basic difference between the two systems of versification must be pointed out: the only factor which governs the rhythm of Greek verse is the quantity of the basic metric units which recur at regular intervals, and it is therefore a case of a quantitative metric (measuring the time); the ictus (the element of energy of rhythmic stress, if indeed it was present, merely had the task of regulating the quantity when this was disturbed by an anceps-syllable. Ancient Arabic metrics are also of a quantitative nature (every syllable in the language has an absolutely fixed duration), but in poetry the number of neutral syllables which can be either a 'long' or a 'short' is so great that the quantity alone cannot have been decisive for the rhythm. Therefore, with it we have—not only in a regulating but in a shaping capacity—stress; these two together, in an

indivisible and unchangeable unit, form the rhythmic core of the feet and metres. In most lines, the ictus and the word-accent will coincide on the same 'long', but even when a word-accent falls on a syllable without an ictus there could be no discord. Within a line, the ictus—being the factor which shapes the rhythm—acts more strongly than the word-accent; but in ancient Arabic, with its contrast of 'long' and 'short', both are dependent on the quantity of the syllables, and hence are not as strong as in accentual languages.

The special peculiarity of the rhythmical structure in ancient Arabic poetry is in itself proof enough that Arabic metrics are an autochthonous growth which has not been transplanted from somewhere else to Arabic soil. Merely for the sake of completeness, let it be mentioned here that Tkatsch (*Die arabischen Uebersetzungen der Poetik des Aristoteles*, vol. I, Vienna 1928, 99 ff.) supposes that "the illiterate sons of the desert" had received knowledge of Greek metrics through Aramaic-Christian intervention, and that they had then developed it further. This assumption, however, has been accorded little attention and no acceptance because of its lack of substantiation.

The form of the *Kaṣīda* and the ancient metres used in it, have survived—though in a limited range—until today. There is considerable material on this in Socin's *Diwan aus Centralarabien* (Leipzig, 1901, T. 1-3), where the older literature is also mentioned (vol. III, 1 f.). The *Kaṣīda* and its ancient metres are still used today by the Bedouin; but they are rarely used by other poets, and then only when they want to appear consciously archaic. The metre of the modern Bedouin *Kaṣīda* is usually a *Ṭawīl* with the first syllable missing; *Ramal, Basīṭ, Radjaz* and *Wāfir* are also used. As this form of modern verses is a direct continuation of ancient Arabic poetry in content, form, and language, the rules of the *ʿIlm al-ʿarūḍ* are applicable to it. They can, however, *not* be applied to the actual Arabic folk-poetry, of which there are traces even in pre-Islamic times, and which was greatly cultivated in later centuries. This *'muse populaire'* is different from the ancient *Kaṣīda* because it no longer has the monotonous rhyme which recurs throughout the poem but a rich strophic structure, and because it is freer in its choice of themes, but most particularly because the language of folk-poetry is the language of every-day life. The sound-structure of this, however, is fundamentally different from that of ancient literary Arabic. The emphatic stress which is evident in the colloquial language caused a shortening of the vowels and omission of the endings. Consequently one can no longer find the regular alternation of 'long' and 'short' and the absolutely fixed relation in the quantity of the syllables which were the most characteristic feature of the old literary language, and as such determined the rhythm of the poetry. Therefore we cannot expect to find in popular poetry the metres which the ancient poets created and adapted to the phonetic structure of the Arabic literary language. In it, as well as in the colloquial language, stress prevails; it even gains in force when the songs are recited, because the stressed syllables are then emphasised by beating on instruments or by hand-clapping. The different forms of Arabic popular poetry are therefore outside the framework of the article *'Arūḍ*, which is concerned only with the metrics of the ancient poetry.

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(Gotthold Weil)

II. The most outstanding feature of the ʿArūḍ system as adopted by the Persians is the emphasis laid on quantity, which gives to Persian verse a lilt and swing which can be more readily appreciated by ears to which the more subtle rhythms of Arabic verse are unfamiliar. To words ending in two consonants (*nūn* excepted) preceded by a short vowel, or one consonant preceded by a long vowel, an extra short vowel was added. This *nīm-fatḥa*, as it is called, is now not pronounced by the Persians. By poetic licence, certain monosyllabic long syllables may become short according to scansion. Of the types of poem in use the *Mathnavī* and the *Rubāʿī* are most characteristic of Persian poetry. The former is a many-rhymed poem in couplets of which each hemistich rhymes with the other. The freedom thus allowed in rhyming renders this form eminently suitable for epic and didactic verse. The *Rubāʿī* (Quatrain), also called *Tarāna*, is said (Browne, i, 472-3) to have been the earliest of the verse-forms invented by the Persians. It is derived from no less than twenty-four varieties of the *Hazadj* metre, and it is perhaps the form best known to the West. The *Kaṣīda* lost much of its importance at an early period in Persian literature and became more and more artificial under such poets as Khāḳānī (d. 582/1185). In scope and subject matter, it much resembled its Arabic prototype except that in Persian hands it became more of a eulogy of the poet's patron. Of the same single-rhymed type but

shorter (five to fifteen verses), the *Ghazal* achieved more fame at the hands of Persian poets and lent itself to a graceful sonnet-like form. Only in the opening lines do the hemistichs of these poems rhyme. The two types of refrain poem—the *Tardjiʿ-band* and *Tarkīb-band* were a Persian innovation. The former consists of about five to ten lines which differ in rhyme with a refrain (*wāsiṭa*) in the same metre. If the refrain differs in each instance where it occurs, the poem is then called *Tarkīb-band*. Of the various types of multiple poem which have internal rhymes and are grouped under the general term of *Musammaṭ*, the *Mustazād* deserves special mention. It is a poem of which each second hemistich is followed by a short metrical line which has some bearing on the sense of the first hemistich without altering the meaning. All these lines rhyme together throughout the poem. The Persians have been credited with the invention of three new metres— the *Djadīd*, *Ḳarīb* and the *Mushākil*, but these are of rare occurrence.

The adoption by the Turks of the Perso-Arabic metrical system was facilitated, not only by a genuine admiration for Persian *belles-lettres*, but also by the resemblance which the ancient Turkish method of versification (*parmak ḥisābī*) bore to the ʿArūḍ metres. For example, the *Ḳutadghu Bilik*, composed in 462/1069, was written in a metre which was not unlike the *Mutaḳārib*, and the Turkoman *tuyug* was similar to the *rubāʿī*. Both the original and the ʿArūḍ systems enjoyed a parallel existence until the former was ousted by the latter during the XVth century. The main difference between the two forms is that in the *parmak ḥisābī* the verses were based not on quantity but on the number and beat of the syllables. The old system survived only in the folk-poetry of Anatolia of which the most representative types are the *türkü*, *sharkī* and the *mani* (*maʿnī*). In the XVIIth century, a revival of the old prosody began under such poets as Ḳaradjaoghlan, and, in the course of last century, the growth of national feeling led to the victory of the Turkish system. The ʿArūḍ system is now obsolete and is cultivated only by a few conservative or neo-classicist poets. The most important innovation produced by the Turks in the ʿArūḍ was somewhat artificial, although it was very necessary. In purely Turkish words there are, of course, no long syllables, but the Perso-Arabic letters of prolongation were used as vowel-letters. By a poetic licence, these were regarded as long where the metre demanded it.

The metres in use in Persian and Turkish are rather less numerous than those used in Arabic. Some of the more popular metres such as the *Ṭawīl*, *Basīṭ*, *Wāfir*, *Kāmil* and *Madīd* are scarce. For details of the metres most used the reader is referred to the bibliography.

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(G. Meredith-Owens)

ARŪḌĪ [see Niẓāmī ʿArūḍī].

'ARŪDJ, Turkish corsair who seized possession of Algiers at the beginning of the 10th/16th century. He is sometimes designated by the name of Barbarossa (a term which is sometimes interpreted as a corruption of Bābā ʿArūdj), but it appears this surname more often refers to his brother Khayr al-Dīn [*q.v.*].

ʿArūdj came from the island of Midilli (Mytilene-