Rhythmic metrification for Classical Arabic verse-patterns

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Abstract

Classical Arabic verse-patterns may appear at first to be extensively diverse and randomly related to their abstract metres. Nonetheless, a closer look reveals how predictable their metrical structure is and, more importantly, how precise their choice of hemistich-final metra could be. Basically, it is accurate to claim that a hemistich-final metron, in particular, carries an essential bundle of verse-pattern identifying features. Such a bundle does not only help distinguish the set of metrification principles shared with other metra, across the board, but also it determines the SW or WS rhythmic alternation prevalent throughout any specific verse-pattern. Fundamental to this rhythmic pattern is the intrinsically prominent metrical position that takes the shape of the uneven iamb. The noticeable alternate distribution of this metrical position in all verse-patterns creates the chain of peaks and troughs distinctive of Classical Arabic metres. All of these principles of metrification and rhythmic alternation are formalised in a limited set of markedness constraints. When ranked in a hierarchy, they should render most harmonic only those attested and theoretically plausible candidates of metrification and metra sequences.

Keywords: metre, verse-pattern, hemistich-final metron, rhythmic alternation, uneven iamb, Optimality Theory

1. Introduction

The wide range of variation observed in the verse-patterns of Classical Arabic poetry is only attributed to a number of different materialisations of a simple set of canonical metres. Al-Khalil ibn Ahmad al-Farahidi, an 8th century CE prosodist, identified the canonical (abstract) metres of Classical Arabic poetry, to which Al-Akhfash (Al-Khalil's student) added one more, bringing the total to sixteen. Studies on Classical Arabic metrics usually refer to these abstract metres using their Arabic names: *Tawil*, *Madid*, *Basit*, *Wafir*, *Kamil*, *Hazaj*, *Rajaz*, *Ramal*, *Sari*, *Munsarih*, *Xafif*, *Mudari*, *Muqtadab*, *Mujtath*, *Mutaqarib*, and *Mutadarak*. Each of these abstract metres comprises two identical hemistichs. A hemistich, which is basically a half line of verse, contains a sequence of three or four prosodic constituents called metra, each of which is conventionally represented by a mnemonic word derived from the root /f ʕ l/. For example, any of the two hemistichs of the *Basit* has the sequence (mustafʕilun - faaʕilun - mustafʕilun - faaʕilun). The metron, which has its own internal structure as detailed later, is considered to be the main building block of the verse-patterns and of their abstract metres. In that regard, it is worth mentioning that only eight metra are used to present the sixteen abstract metres of Classical Arabic poetry. These eight canonical metra are: /faʕuulun/,

/faaʕilun/, /mafaaʕiilun/, /mustafʕilun/, /faaʕilaatun/, /mufaaʕalatun/, /mutafaaʕilun/, and /mafʕuulaatu/. As demonstrated in more detail in subsequent discussion, these are not the only forms that surface as hemistich-final metra in the different verse-patterns.

The variant surface verse-patterns of Classical Arabic poetry are derived from the sixteen abstract metres, by applying a number of transformations that affect different metra in a line of verse, as detailed in Maling (1973) and explained in Paoli (2009). Such transformations alter metra distinguishably. Non-final metra of the first and/or the second hemistich in a given line of verse are optionally altered. Such alternations do not necessarily apply to other lines of verse in the same poem. Conversely, the transformations affecting the final metron of the first and/or the second hemistich are obligatory and uniformly applied to the same metron in every line of verse in a given poem. In traditional Classical Arabic metrics, these final metra of the first hemistich and the second hemistich are respectively termed as *Aroudh* and *Dharb*. All subsequent analysis is focused on the various surface forms of this group of hemistich-final metra.

This paper aims to analyse the set of obligatory verse-patterns identified in terms of the possible surface forms of the final metron in the first and in the second hemistichs. The problem addressed is twofold: firstly, the criteria that distinguish all hemistich-final metra from any other random consonant-vowel sequences must be accurately defined in order to understand how the grammar excludes other possibilities. The second issue concerns the distribution of these various forms of hemistich-final metra on different verse-patterns. Such distribution is justified on the basis of rhythmic alternation. The analysis provided is couched in the constraint-based framework of Optimality Theory (OT), Prince and Smolensky (1993/2004). Therefore, the structural criteria of the attested hemistich-final metra and their rhythmic distribution are ultimately interpreted into sets of constraints and constraint rankings.

The paper is organised into three main sections. In section 2, the different verse-patterns of Classical Arabic poetry are presented in detail, mainly by explaining how they are related to the limited set of abstract metres. This section serves as the source of data to be analysed in subsequent sections. Section 3, provides the background and justification for all metrification principles required to parse the consonant-vowel sequences attested in all hemistich-final forms. This will also include formalising the markedness constraints that interpret those metrification principles. Primarily, section 4 pursues the argument for rhythmically alternating verse feet throughout all verse-patterns. Again, any markedness constraints needed to uphold the rhythmic patterns are introduced and verified.

2. Classical Arabic Verse-patterns

For many centuries, the verse-patterns of Classical Arabic poetry have been studied quite extensively, Al-Damaminy (1445), Wright (1898), Mustafa (1936), Al-Hashimy (1979), Al-Mutairy (2004), Paoli (2009), and Al-Tabtabae (2016), among many others. As mentioned above, such patterns could be viewed as possible surface realisations of their abstract metres. Primarily, a number of transformations alter the surface forms of hemistich-final metra. For example, the final metron of the second hemistich in the abstract meter Kamil can surface unchanged as [mu.ta.faa.ʕi.lun], or it might also take one of two other surface forms: [mu.ta.faa.ʕil] or [mut.faa]. Other reported changes also involve deleting the final metron,

deleting two metra from each hemistich, or even deleting an entire hemistich from a line of verse. Conventionally, these cases are viewed as having empty positions (metra) rather than deleted ones, i.e., examples of catalexis. Applying such transformations to the hemistich-final metra results in a list of surface verse-patterns that is substantially bigger than the sixteen abstract metres. In total, there are sixty-seven attested obligatory verse-patterns in Classical Arabic poetry.

The tables in (1) below list the sixteen abstract Classical Arabic metres and the sixty-seven surface verse-patterns. Every abstract metre, for which only one of the two identical hemistichs is given, is followed by all attested obligatory verse-patterns, where only final surface metra are presented. For the verse-patterns, the metra on the left represent the end of the first hemistich, and the ones on the right represent the end of the second hemistich. In some verse-patterns, a number of options are available for the final metron of the second hemistich, all of which correspond to the same final metron in the first hemistich. In such case, the final metron in the first hemistich is not repeated. For clarity, all metra are syllabified into sequences of light CV and heavy CVC/CVV syllables. Catalexis (an absent metron or an empty hemistich) is indicated by the symbol ∅. It should be noted for now that the proposed metrification, indicated by parentheses and square brackets, is explained in detail in section 3.

(1) Verse-patterns

Tawil

Abstract Metre:

fa.ʕuu.lun - ma.faa.ʕii.lun - fa.ʕuu.lun - ma.faa.ʕii.lun
[(L.H)] [(H)] - [(L.H)] [(H) (H)] - [(L.H)] [(H)] - [(L.H)] [(H) (H)]

Verse-patterns:

… ma.faa.ʕi.lun	… ma.faa.ʕii.lun
[(L.H)] [(H) (H)]→[(L.H)] [(L.H)]	[(L.H)] [(H) (H)] – no change
	… ma.faa.ʕi.lun
	[(L.H)] [(H) (H)]→[(L.H)] [(L.H)]
	… ma.faa.ʕii (fa.ʕuu.lun)
	[(L.H)] [(H) (H)]→[(L.H)] [(H)]

Madid

Abstract Metre:

faa.ʕi.laa.tun - faa.ʕi.lun - faa.ʕi.laa.tun - faa.ʕi.lun
[(H)] [(L.H) (H)] - [(H)] [(L.H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H)]

Verse-patterns:

… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change	… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change
… faa.ʕi.laa (faa.ʕi.lun) - ∅ [(H)] [(L.H) (H)]→[(H)] [(L.H)]	… faa.ʕi.laa (faa.ʕi.lun) - ∅ [(H)] [(L.H) (H)]→[(H)] [(L.H)] … faa.ʕi.laat (faa.ʕi.laan) - ∅ [(H)] [(L.H) (H)]→[(H)] [(L.H)] <c> … faa.ʕil (faʕ.lun) - ∅ [(H)] [(L.H) (H)]→[(H)] [(H)]
… fa.ʕi.laa (fa.ʕi.lun) - ∅ [(H)] [(L.H) (H)]→[(L.L) (H)]	… fa.ʕi.laa (fa.ʕi.lun) - ∅ [(H)] [(L.H) (H)]→[(L.L) (H)] … faa.ʕil (faʕ.lun) - ∅ [(H)] [(L.H) (H)]→[(H)] [(H)]

Basit

Abstract Metre:

mus.taf.ʕi.lun - faa.ʕi.lun - mus.taf.ʕi.lun - faa.ʕi.lun [(H) (H)] [(L.H)] - [(H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H)] [(L.H)]

Verse-patterns:

… fa.ʕi.lun [(H)] [(L.H)]→[(L.L) (H)]	… fa.ʕi.lun [(H)] [(L.H)]→[(L.L) (H)] … faa.ʕil (faʕ.lun) [(H)] [(L.H)]→[(H)] [(H)]
… mus.taf.ʕi.lun - ∅ [(H) (H)] [(L.H)] – no change	… mus.taf.ʕi.lun - ∅ [(H) (H)] [(L.H)] – no change … mus.taf.ʕi.laan - ∅ [(H) (H)] [(L.H)]→[(H) (H)] [(L.H)] <c> … mus.taf.ʕil (maf.ʕuu.lun) - ∅ [(H) (H)] [(L.H)]→[(H) (H)] [(H)]
… mus.taf.ʕil (maf.ʕuu.lun) - ∅ [(H) (H)] [(L.H)]→[(H) (H)] [(H)]	… mus.taf.ʕil (maf.ʕuu.lun) - ∅ [(H) (H)] [(L.H)]→[(H) (H)] [(H)]

Wafir

Abstract Metre:

mu.faa.ʕa.la.tun - mu.faa.ʕa.la.tun - mu.faa.ʕa.la.tun [(L.H)] [(L.L) (H)] - [(L.H)] [(L.L) (H)] - [(L.H)] [(L.L) (H)]

Verse-patterns:

… mu.faa.ʕal (fa.ʕuu.lun) [(L.H)] [(L.L) (H)]→[(L.H)] [(H)]	… mu.faa.ʕal (fa.ʕuu.lun) [(L.H)] [(L.L) (H)]→[(L.H)] [(H)]
… mu.faa.ʕa.la.tun - ∅ [(L.H)] [(L.L) (H)] – no change	… mu.faa.ʕa.la.tun - ∅ [(L.H)] [(L.L) (H)] – no change … mu.faa.ʕal.tun (ma.faa.ʕii.lun) - ∅ [(L.H)] [(L.L) (H)]→[(L.H)] [(H) (H)]

Kamil

Abstract Metre:

mu.ta.faa.ʕi.lun - mu.ta.faa.ʕi.lun - mu.ta.faa.ʕi.lun [(L.L) (H)] [(L.H)] - [(L.L) (H)] [(L.H)] - [(L.L) (H)] [(L.H)]

Verse-patterns:

… mu.ta.faa.ʕi.lun [(L.L) (H)] [(L.H)] – no change	… mu.ta.faa.ʕi.lun [(L.L) (H)] [(L.H)] – no change … mu.ta.faa.ʕil (fa.ʕi.laa.tun) [(L.L) (H)] [(L.H)]→[(L.L) (H)] [(H)] … mut.faa (faʕ.lun) [(L.L) (H)] [(L.H)]→[(H)] [(H)]
… mu.ta.faa (fa.ʕi.lun) [(L.L) (H)] [(L.H)]→[(L.L) (H)]	… mu.ta.faa (fa.ʕi.lun) [(L.L) (H)] [(L.H)]→[(L.L) (H)] … mut.faa (faʕ.lun) [(L.L) (H)] [(L.H)]→[(H)] [(H)]
… mu.ta.faa.ʕi.lun - ∅ [(L.L) (H)] [(L.H)] – no change	… mu.ta.faa.ʕi.lun - ∅ [(L.L) (H)] [(L.H)] – no change … mu.ta.faa.ʕil (fa.ʕi.laa.tun) - ∅ [(L.L) (H)] [(L.H)]→[(L.L) (H)] [(H)] … mu.ta.faa.ʕi.laan - ∅ [(L.L) (H)] [(L.H)]→[(L.L) (H)] [(L.H)] <c> … mu.ta.faa.ʕi.laa.tun - ∅ [(L.L) (H)] [(L.H)]→[(L.L) (H)] [(L.H) (H)]

Hazaj

Abstract Metre:

ma.faa.ʕii.lun - ma.faa.ʕii.lun - ma.faa.ʕii.lun [(L.H)] [(H) (H)] - [(L.H)] [(H) (H)] - [(L.H)] [(H) (H)]

Verse-patterns:

… ma.faa.ʕii.lun - ∅	… ma.faa.ʕii.lun - ∅
[(L.H)] [(H) (H)] – no change	[(L.H)] [(H) (H)] – no change
	… ma.faa.ʕii (fa.ʕuu.lun) - ∅
	[(L.H)] [(H) (H)]→[(L.H)] [(H)]

Rajaz

Abstract Metre:

mus.taf.ʕi.lun - mus.taf.ʕi.lun - mus.taf.ʕi.lun
[(H) (H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)]

Verse-patterns:

… mus.taf.ʕi.lun	… mus.taf.ʕi.lun
[(H) (H)] [(L.H)] – no change	[(H) (H)] [(L.H)] – no change
	… mus.taf.ʕil (maf.ʕuu.lun)
	[(H) (H)] [(L.H)]→[(H) (H)] [(H)]
… mus.taf.ʕi.lun - ∅	… mus.taf.ʕi.lun - ∅
[(H) (H)] [(L.H)] – no change	[(H) (H)] [(L.H)] – no change
… mus.taf.ʕi.lun	∅
[(H) (H)] [(L.H)] – no change	
mus.taf.ʕi.lun - ∅ - ∅	mus.taf.ʕi.lun - ∅ - ∅
[(H) (H)] [(L.H)] – no change	[(H) (H)] [(L.H)] – no change

Ramal

Abstract Metre:

faa.ʕi.laa.tun - faa.ʕi.laa.tun - faa.ʕi.laa.tun
[(H)] [(L.H) (H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H) (H)]

Verse-patterns:

… faa.ʕi.laa (faa.ʕi.lun) [(H)] [(L.H) (H)]→[(H)] [(L.H)]	… faa.ʕi.laa (faa.ʕi.lun) [(H)] [(L.H) (H)]→[(H)] [(L.H)] … faa.ʕi.laat (faa.ʕi.laan) [(H)] [(L.H) (H)]→[(H)] [(L.H)] <c> … faa.ʕi.laa.tun [(H)] [(L.H) (H)] – no change
… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change	… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change … faa.ʕi.laa.taan - ∅ [(H)] [(L.H) (H)]→[(H)] [(L.H) (H)] <c> … faa.ʕi.laa (faa.ʕi.lun) - ∅ [(H)] [(L.H) (H)]→[(H)] [(L.H)]

Sari

Abstract Metre:

mus.taf.ʕi.lun - mus.taf.ʕi.lun - maf.ʕuu.laa.tu [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H) (H)] [(H)] L

Verse-patterns:

… maf.ʕu.laa (faa.ʕi.lun) [(H) (H)] [(H)] L→[(H)] [(L.H)]	… maf.ʕu.laa (faa.ʕi.lun) [(H) (H)] [(H)] L→[(H)] [(L.H)] … maf.ʕu.laat (faa.ʕi.laan) [(H) (H)] [(H)] L→[(H)] [(L.H)] <c> … maf.ʕuu (faʕ.lun) [(H) (H)] [(H)] L→[(H)] [(H)]
… ma.ʕu.laa (fa.ʕi.lun) [(H) (H)] [(H)] L→[(L.L) (H)]	… ma.ʕu.laa (fa.ʕi.lun) [(H) (H)] [(H)] L→[(L.L) (H)]
… maf.ʕuu.laat (maf.ʕuu.laan) [(H) (H)] [(H)] L→[(H) (H)] [(H)] <c>	∅
… maf.ʕuu.laa (maf.ʕuu.lun) [(H) (H)] [(H)] L→[(H) (H)] [(H)]	∅

Munsarih

Abstract Metre:

mus.taf.ʕi.lun - maf.ʕuu.laa.tu - mus.taf.ʕi.lun [(H) (H)] [(L.H)] - [(H) (H)] [(H)] L - [(H) (H)] [(L.H)]

Verse-patterns:

… mus.taf.ʕi.lun [(H) (H)] [(L.H)] – no change	… mus.ta.ʕi.lun (muf.ta.ʕi.lun) [(H) (H)] [(L.H)]→[(H)] [(L.L) (H)]
∅ - maf.ʕuu.laat (maf.ʕuu.laan) - ∅ [(H) (H)] [(H)] L→[(H) (H)] [(H)] <c>	∅ - maf.ʕuu.laat (maf.ʕuu.laan) - ∅ [(H) (H)] [(H)] L→[(H) (H)] [(H)] <c>
∅ - maf.ʕuu.laa (maf.ʕuu.lun) - ∅ [(H) (H)] [(H)] L→[(H) (H)] [(H)]	∅ - maf.ʕuu.laa (maf.ʕuu.lun) - ∅ [(H) (H)] [(H)] L→[(H) (H)] [(H)]

Xafif

Abstract Metre:

faa.ʕi.laa.tun - mus.taf.ʕi.lun - faa.ʕi.laa.tun [(H)] [(L.H) (H)] - [(H) (H)] [(L.H)] - [(H)] [(L.H) (H)]

Verse-patterns:

… faa.ʕi.laa.tun [(H)] [(L.H) (H)] – no change	… faa.ʕi.laa.tun [(H)] [(L.H) (H)] – no change … faa.ʕi.laa (faa.ʕi.lun) [(H)] [(L.H) (H)]→[(H)] [(L.H)]
… faa.ʕi.laa (faa.ʕi.lun) [(H)] [(L.H) (H)]→[(H)] [(L.H)]	… faa.ʕi.laa (faa.ʕi.lun) [(H)] [(L.H) (H)]→[(H)] [(L.H)]
… mus.taf.ʕi.lun - ∅ [(H) (H)] [(L.H)] – no change	… mus.taf.ʕi.lun - ∅ [(H) (H)] [(L.H)] – no change … mu.taf.ʕil (fa.ʕuu.lun) - ∅ [(H) (H)] [(L.H)]→[(L.H)] [(H)]

Mudari

Abstract Metre:

ma.faa.ʕii.lun - faa.ʕi.laa.tun - ma.faa.ʕii.lun [(L.H)] [(H) (H)] - [(H)] [(L.H) (H)] - [(L.H)] [(H) (H)]

Verse-patterns:

… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change	… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change

Muqtadab

Abstract Metre:

maf.ʕuu.laa.tu - mus.taf.ʕi.lun - mus.taf.ʕi.lun [(H) (H)] [(H)] L - [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)]

Verse-patterns:

… mus.ta.ʕi.lun (muf.ta.ʕi.lun) - ∅ [(H) (H)] [(L.H)]→[(H)] [(L.L) (H)]	… mus.ta.ʕi.lun (muf.ta.ʕi.lun) - ∅ [(H) (H)] [(L.H)]→[(H)] [(L.L) (H)]

Mujtath

Abstract Metre:

mus.taf.ʕi.lun - faa.ʕi.laa.tun - faa.ʕi.laa.tun [(H) (H)] [(L.H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H) (H)]

Verse-patterns:

… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change	… faa.ʕi.laa.tun - ∅ [(H)] [(L.H) (H)] – no change

Mutaqarib

Abstract Metre:

fa.ʕuu.lun - fa.ʕuu.lun - fa.ʕuu.lun - fa.ʕuu.lun [(L.H)] [(H)] - [(L.H)] [(H)] - [(L.H)] [(H)] - [(L.H)] [(H)]

Verse-patterns:

… fa.ʕuu.lun [(L.H)] [(H)] – no change	… fa.ʕuu.lun [(L.H)] [(H)] – no change … fa.ʕuul [(L.H)] [(H)]→[(L.H)] <c> … fa.ʕuu (fa.ʕul) [(L.H)] [(H)]→[(L.H)] … faʕ (fal) [(L.H)] [(H)]→[(H)]
… fa.ʕuu (fa.ʕul) - ∅ [(L.H)] [(H)]→[(L.H)]	… fa.ʕuu (fa.ʕul) - ∅ [(L.H)] [(H)]→[(L.H)] … faʕ (fal) - ∅ [(L.H)] [(H)]→[(H)]

Mutadarak

Abstract Metre:

faa.ʕi.lun - faa.ʕi.lun - faa.ʕi.lun - faa.ʕi.lun [(H)] [(L.H)] - [(H)] [(L.H)] - [(H)] [(L.H)] - [(H)] [(L.H)]

Verse-patterns:

… faa.ʕi.lun [(H)] [(L.H)] – no change	… faa.ʕi.lun [(H)] [(L.H)] – no change
… faa.ʕi.lun - ∅ [(H)] [(L.H)] – no change	… faa.ʕi.lun - ∅ [(H)] [(L.H)] – no change … faa.ʕi.laan - ∅ [(H)] [(L.H)]→[(H)] [(L.H)] <c> … fa.ʕi.laa.tun - ∅ [(H)] [(L.H)]→[(L.L) (H)] [(H)]

The tables above list thirty-six different forms of the first hemistich with which sixty-seven different forms of the second hemistich are associated. These surface forms are distributed as follows:

(2) Generalisations for the Verse-patterns

1st Hemistich	**2nd Hemistich**
(10) forms alter the abstract form of the final metron.	(22) forms alter the abstract form of the final metron.
(11) forms delete the final metron or the final metron plus one of the preceding two metra.	(15) forms delete the final metron, the final metron plus one of the preceding two metra, or the entire hemistich.
(7) forms delete the final metron or the final metron plus one of the preceding two metra and alter the abstract form of the final surface metron.	(23) forms delete the final metron or the final metron plus one of the preceding two metra and alter the abstract form of the final surface metron.
(8) forms keep the abstract form of the final metron.	(7) forms keep the abstract form of the final metron.

Subsequent discussion will mainly focus on the cases that involve alternation of the hemistich-final metra. This criterion only applies to seventeen forms of the first hemistich and forty-five forms of the second hemistich. The following section addresses the issue of metrification, particularly of these altered forms.

3. Parsing

Analysing the metrical (rhythmic) parsing of Classical Arabic metres has always attracted interest in the field of metrics and metrical studies in general. Primary research on the topic includes Prince (1989), Schuh (1996), Golston and Riad (1997), Fabb and Halle (2008), Paoli (2009), Deo and Kiparsky (2011), Schuh (2011), Golston and Riad (2016). Some contributions from these works will be cited and explained in more detail throughout this section, and the one that follows, in an attempt to rationalise the wealth of information and the seemingly long list of varied hemistich-final forms inventoried in (1) above. As an initial step towards achieving that objective, all hemistich-final forms, altered or not, are identified and analysed in terms of their syllabic content and syllabic distribution. This should reveal the general parsing principles that govern and regulate the metrification process. Ultimately, such parsing principles could be formalised into a set of markedness constraints, adopting the constraint-based framework of Optimality Theory (OT), Prince and Smolensky (1993/2004) and McCarthy and Prince (1993a, b).

Before examining the various details and proposing a plausible account, it is necessary to emphasise the assumption of multi-level evaluation in Classical Arabic metrics. More precisely, a comprehensive analysis of the matter may utilise a theoretical framework reminiscent of Stratal OT as laid out in Kiparsky (2015), or even a possible model of Harmonic Serialism, McCarthy (2016), that would probably allow for different constraint rankings in the different steps of the evaluation. The reason being is that the two levels of abstract metres on the one hand and verse-patterns on the other are seemingly distinct. Principles for metrification, as generalised in the hierarchy of metrical structure in (4) below, do exhibit some variation between the two levels. Most obviously are the Binarity conditions, which strictly require a minimum and a maximum of two verse feet per metron in each of the sixteen abstract metres, as discussed in Prince (1989) and Golston and Riad (1997), and eventually for each of the eight unique metra as explained in Al-Mohanna (2020). This particular requirement, as shown in (1) and exposed more clearly in (3) below, is relaxed, as hemistich-final matra are allowed to dominate some consonant-vowel sequences that may not be possibly parsed into more than one verse foot. Consequently, a constraint ruling out any metron that is not strictly binary will be ranked undominated in the level where abstract metres/metra are evaluated, a ranking that may not be logically justified for the current account regarding the various surface hemistich-final forms of the different verse-patterns.

The list in (3) below encompasses all different surface forms of hemistich-final metra. They are twenty-two in total, most of which are formed by applying some process(es) that altered their abstract forms. The underlined forms are the ones that kept their abstract representations. In the proposed metrifications to the right of each hemistich-final metron in (3), the L's and H's represent light and heavy syllables, respectively, metrical positions are enclosed in parentheses (MP), verse feet are enclosed in square brackets [VF], and extrametrical consonants are enclosed in angle brackets <c>. This proposed metrification will be explained in more detail later in this section.

(3) Surface Forms of Hemistich-final Metra

fal [(H)]

fa.ʕul [(L.H)]

fa.ʕuul [(L.H)] <c>

fa.ʕi.lun [(L.L) (H)]

faʕ.lun [(H)] [(H)]

faa.ʕi.lun [(H)] [(L.H)]

fa.ʕuu.lun [(L.H)] [(H)]

faa.ʕi.laan [(H)] [(L.H)] <c>

ma.faa.ʕi.lun [(L.H)] [(L.H)]

maf.ʕuu.lun [(H) (H)] [(H)]

maf.ʕuu.laan [(H) (H)] [(H)] <c>

fa.ʕi.laa.tun [(L.L) (H)] [(H)]

muf.ta.ʕi.lun [(H)] [(L.L) (H)]

faa.ʕi.laa.tun [(H)] [(L.H) (H)]

ma.faa.ʕii.lun [(L.H)] [(H) (H)]

mus.taf.ʕi.lun [(H) (H)] [(L.H)]

faa.ʕi.laa.taan [(H)] [(L.H) (H)] <c>

mus.taf.ʕi.laan [(H) (H)] [(L.H)] <c>

mu.ta.faa.ʕi.lun [(L.L) (H)] [(L.H)]

mu.faa.ʕa.la.tun [(L.H)] [(L.L) (H)]

mu.ta.faa.ʕi.laan [(L.L) (H)] [(L.H)] <c>

mu.ta.faa.ʕi.laa.tun [(L.L) (H)] [(L.H) (H)]

Forms identical to seven (underlined) of the eight abstract representations, which are used to describe full abstract metres, are included in the list above as possible forms of hemistich-final metra. No form matching the eighth abstract representation /mafʕuulaatu/ is attested hemistich-finally; it is systematically absent in that position. Three of the seven underlined hemistich-final forms, namely [fa.ʕuu.lun], [faa.ʕi.lun], and [ma.faa.ʕii.lun], do also surface as a result of applying some process(es) to other abstract representations.

Studying the list in (3) reveals a number of characteristics specific to hemistich-final forms. The most obvious is the distribution of the different types of syllables. Heavy (bimoraic) syllables are attested initially, medially, and finally. Light (monomoraic) syllables, however, are never allowed in final positions, which might be considered as the actual generalisation that blocks the eighth abstract representation /mafʕuulaatu/ from appearing in any hemistich-final positions. Another distributional feature regarding light syllables is that their sequences are maximally disyllabic and, when attested, are confined to one such sequence per form. A crucial

consequence of these conditions on the distribution of light syllables is the fact that a single light syllable or a sequence of two is always followed by a heavy syllable, and is always preceded by one when non-initial. Another consequence of the distribution of light syllables is observed in the minimal bimoraic (μμ) hemistich-final form. This minimal metron is only represented by a single heavy syllable as in fal [(H)], but never by a sequence of two light syllables. A final note on the syllabic distribution in hemistich-final forms concerns the superheavy syllable, which comprises a heavy bimoraic syllable followed by one (extrametrical) consonant. This configuration only occurs finally, a statement that basically agrees with the normal distribution of superheavy syllables in Classical Arabic, as documented in Al-Ani and May (1978).

Assuming a specific metrical hierarchical structure will essentially define the general principles of parsing required for the metrification of all consonant-vowel sequences, in (3) above. This will principally identify the various metrical constituents and the dominance relations holding between them. The general metrical structure, adopted by Prince (1989) and Golston and Riad (2000), may be represented as follows:

(4) Metrical Structure

Metron	D
	|
Verse Foot	VF
	|
Metrical Position	MP

A number of parsing principles could be recognised when surface forms of hemistich-final metra in (3) are re-examined in light of the hierarchy in (4). Most obviously are the Binarity requirements which basically regulate the process of parsing consonant-vowel sequences into metrical structure, Prince (1989), Golston and Riad (1997), and Al-Mohanna (2020). In regard to hemistich-final forms, Binarity may be captured in terms of maximality and minimality conditions imposed on metrical constituents, as classified in (5) below:

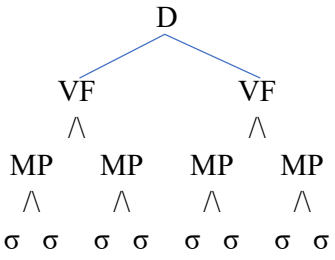
(5) Binarity in Metrical Constituents

Constituent	**Maximality**	**Minimality**
Metron – D	2 VF	2 μ
Verse Foot - [VF]	2 MP	
Metrical Position - (MP)	2 σ	

All of the proposed metrifications in (1) and (3) above assume that metrical constituents are maximally binary: a maximum of two syllables in a (MP), a maximum of two metrical positions in a [VF], and a maximum of two verse feet in a D. Also, the metrifications assume that these constituents are minimally bimoraic. The two extremes of the Binarity domain could be diagrammed as follows:

(6) Binarity Domain

a. Maximality



b. Minimality

The proposed account draws on the basic assumption that constituency of metrical structure is characterised by binary branching, as discussed in Prince (1989). Such Binarity is formalised into the two markedness constraints in (7), which interpret the maximality and minimality conditions in (6):

(7) Binarity Constraints

a. MC-MN: All metrical constituents (MP, VF, D) are minimally bimoraic.

b. MC-MX: All metrical constituents (MP, VF, D) are maximally binary.

None of the surface forms of hemistich-final metra, in (3) above, violates any of these two constraints. Each proposed metrification therein satisfies the Binarity conditions within that broad domain. Monomoraic metrical constituents are totally absent, and Binarity defines maximality by restraining the upper limit of any sister nodes to two at most. The tableau below demonstrates how this pair of undominated and mutually unranked constraints could rule out some of the unfavoured, and eventually unattested, metrifications.

(8)

fa.ʕi.laa.tun LLHH	MC-MN	MC-MX
a. ☞ [(L.L) (H)] [(H)]		
b. [(L) (L.H)] [(H)]	*!	
c. [(L.L.H)] [(H)]		*!
d. [(L.L)] [(H)] [(H)]		*!

The optimal candidate (8a) satisfies both constraints by virtue of having maximally binary constituents that are minimally bimoraic. On the other hand, the monosyllabic monomoraic metrical position (L) in (8b) violates the minimality constraint MC-MN, and the trisyllabic metrical position (L.L.H) in (8c) violates the maximality constraint MC-MX. Also, the

maximality condition is breached on a different level in (8d) which represents a metron with three verse feet.

The proposed parsing of all hemistich-final forms in (3) above, nonetheless, does not cover the full range of possible metrification demarcated by the two Binarity constraints MC-MN and MC-MX. While the minimal metron is represented in the monosyllabic form fal [(H)], the maximally binary metron is not attested. None of the hemistich-final forms has the consonant-vowel sequence that is potentially adequate to parse eight syllables into four metrical positions dominated by two verse feet that will eventually maximise a metron. On a more specific level, maximising metrical positions, i.e., parsing two syllables, is only limited to (L.H) and (L.L) sequences; there are no instances of *(H.L) or *(H.H) metrical positions, even though sequences of such syllables are available. In addition to that, hemistich-final forms erected on a single verse foot are relatively rare, only four of the twenty-two forms. Three of these dominate one bimoraic metrical position, and only one dominates two MPs. Other forms with two metrical positions do also comprise two verse feet, as in faʕ.lun and fa.ʕuu.lun. Such forms are respectively metrified as [(H)] [(H)] and [(L.H)] [(H)] although possible metrifications as *[(H) (H)] and *[(L.H) (H)] will also satisfy both constraints on Binarity (7 a and b). In what remains of this section, these and other issues related to levels of maximal parsing, extrametricality and directionality of parsing are discussed in more detail.

Maximally binary metrical positions are only attested in (L.H) and (L.L) which are intrinsically and/or theoretically capable of satisfying the constraint Rhythmic Type = Iambic (RH-TYPE=I), Prince and Smolensky (1993/2004), as both could unquestionably be characterised as right-headed. Obviously, this will exclude *(H.L) and *(H.H) that may not entirely qualify for this description although other highly ranked constraints are directly responsible for ruling out such implausible metrifications. In particular, an adaptation of the constraint Rhythmic Harmony (RHHRM), presented in Prince and Smolensky (1993/2004), that allows it to assess metrical positions will militate against any MP of the shape *(H.L) which matches the cross-linguistically marked uneven trochee. To account for *(H.H), which obviously has a sequence of two heavy syllables, an anti-clash constraint such as *CLASH-MP, as formalised in Al-Mohanna (2020) to evaluate the distribution of metrical positions, will disfavour any MP that contains two such adjacent heavy syllables. These two constraints, RHHRM and *CLASH-MP, are not violated in candidate such as (L.H) or (L.L), as neither represents the uneven trochee nor contains two adjacent heavy syllables. The two tableaux below demonstrate how metrification candidates like *(H.L) and *(H.H) are filtered out although both satisfy the Binarity constraints MC-MX and MC-MN:

(9) (i)

faa.ʕi.lun HLH	RHHRM	*CLASH-MP
a. ☞ [(H)] [(L.H)]		
b. [(H.L)] [(H)]	*!	

(ii)

mus.taf.ʕi.lun HHLH	RHHRM	*CLASH-MP
a. ☞ [(H) (H)] [(L.H)]		
b. [(H.H)] [(L.H)]		*!

Another observation regarding hemistich-final forms is that final L.L sequences are totally absent. This could be attributed to the constraint VF-FINAL H, Riad (2017), which strictly favours a verse foot ending in a heavy syllable. This constraint, when ranked high in the hierarchy along with RHHRM, will explain why hemistich-final light syllables are never attested in Classical Arabic verse-patterns. As mentioned above, this could ultimately be interpreted as the justification for altering the form of the abstract metron /mafʕuulaatu/ when it appears in a hemistich-final position. In any verse-pattern, this metron will systematically surface with a final heavy syllable in that final position.

Forms with a sequence of three light syllables such as LLLH that may only be parsed into two metrical positions (L.L) and (L.H), are also totally absent whether the two metrical positions are parsed into two successive verse feet or share the same verse foot. The proposed account employs two alignment constraints and a markedness constraint to justify the lack of such sequences. Firstly, the alignment constraint VF-FINAL H, introduced above, will militate against any metrification where the disyllabic and bimoraic metrical position (L.L) occurs finally in a given verse foot. This will certainly exclude the marked sequence LLLH when it is split between two verse feet, such as *--- (L.L)] [(L.H) ---. Ruling out the other possible metrification *--- [(L.L) (L.H)] ---, on the other hand, could be attributed to two more undominated constraints, namely the markedness constraint LH-TO-HD and the alignment constraint ALIGN-VFHD-L, as formalised in Al-Mohanna (2020). As justified even further in the following section on Rhythm, the constraint LH-TO-HD promotes any metrical position formed in the shape of the uneven iamb (L.H) to the head position of its verse foot, and ultimately to the head position of the entire metron. To complement the requirement, the constraint ALIGN-VFHD-L demands that the left edge of any VF be aligned with the left edge of its head MP. Therefore, the assumption that the intrinsic prominence of the uneven iamb is associated with the left edge of the verse foot will render any metrification like *[(L.L) (L.H)] theoretically implausible. In terms of these two OT constraints, such a metrification will violate the constraint LH-TO-HD if the initial metrical position (L.L), rather than (L.H), is assigned headedness. Also, that metrification will violate the constraint ALIGN-VFHD-L if the final metrical position (L.H), rather than the leftmost in the VF, is assigned headedness. Consequently, (L.H) is always parsed initially within a verse foot, a configuration most obviously identified when it shares that verse foot with another metrical position as in the hemistich-final forms faa.ʕi.laa.tun [(H)] [(L.H) (H)], faa.ʕi.laa.taan [(H)] [(L.H) (H)] <c>, and mu.ta.faa.ʕi.laa.tun [(L.L) (H)] [(L.H) (H)]. The tableau below (where a verse foot head is indicated in boldface) demonstrates that no possible parsing of the sequence (L.L) (L.H) could satisfy all three constraints: VF-FINAL H, LH-TO-HD, and ALIGN-VFHD-L.

(10)

LLLH	VF-FINAL H, LH-TO-HD, ALIGN-VFHD-L
a. --- (L.L)] [(L.H) ---	*! VF-FINAL H
b. [**(L.L)** (L.H)]	*! LH-TO-HD
c. [(L.L) **(L.H)**]	*! ALIGN-VFHD-L

As mentioned earlier, the minimal metron fal [(H)] is represented in the list of all possible hemistich-final forms, given in (3) above, but the maximal one is not. Specifically, there is no hemistich-final form that comprises eight syllables. Again, this could be attributed to the constraints VF-FINAL H, LH-TO-HD, and ALIGN-VFHD-L. Collectively, these constraints will rule out all logical possibilities for parsing any of the attested consonant-vowel sequences into the maximally binary metron. This is achieved by blocking any possible combination of two disyllabic metrical positions parsed into a single verse foot. Such evaluation is clarified in the following tableau, where candidates (10 b and c) are repeated in (11 e and f) to give the full list of all possible configurations of disyllabic metrical positions.

(11)

σσσσ	VF-FINAL H, LH-TO-HD, ALIGN-VFHD-L
a. [**(L.H)** (L.H)]	*! LH-TO-HD
b. [(L.H) **(L.H)**]	*! LH-TO-HD, ALIGN-VFHD-L
c. [**(L.L)** (L.L)]	*! VF-FINAL H
d. [**(L.H)** (L.L)]	*! VF-FINAL H
e. [(L.L) **(L.H)**]	*! ALIGN-VFHD-L
f. [**(L.L)** (L.H)]	*! LH-TO-HD

As for metron maximality, it should be noted that only six out of the twenty-two possible hemistich-final forms are potentially sufficient to parse one verse foot with two metrical positions or two verse feet, each of which is erected on a single metrical position. The remaining sixteen forms are either insufficient for such a parse as they comprise only one metrical position (only three forms) or contain more than two metrical positions the parsing of which requires no less than two verse feet. Of those six in between, the two hemistich-final forms [(H)] [(H)] and [(L.H)] [(H)], are parsed into two verse feet although parsing them into one verse foot will never violate any of the two Binarity constraints, or even any of the other undominated constraints introduced thus far. Obviously, this metron maximality is a

consequence of the tendency to agree with the eight abstract metra, which are minimally and maximally binary with exactly two verse feet in each, Prince (1989), Golston and Riad (1997), and Al-Mohanna (2020). Therefore, the most plausible explanation for the proposed metrification will basically assume a constraint favouring maximal metra.

It has always been assumed that metrical parsing is governed by a principle or is subject to a condition promoting Maximality. As formalised in Prince (1976) and adopted in Hayes (1995), the Principle of Maximality dictates creating maximal prosodic structures. The same rationale is maintained by the Maximality Principle formalised in Hayes (1984). Similarly, the Maximality Condition presented in Halle and Vergnaud (1987) is imposed on the process of metrical parsing so that a given constituent would incorporate the maximal substring. This logic may essentially be interpreted into a constraint maximising metrical constituents.

(12) Maximising Metrical Constituents

MAXIMISE-MC: Metrical constituents are maximised.

Decomposing this constraint into more local micro constraints would ultimately achieve various levels of enforcing such maximality requirement. In particular, maximising a specific metrical constituent could be rendered more harmonic than maximising a different one. These various levels of evaluation could potentially be applied to different metrical systems, with varying requirements, by assuming different rankings of the constraints below:

(13) Maximising Metrical Constituents Decomposed

a. MAXIMISE-MP: A metrical position is maximised.

b. MAXIMISE-VF: A verse foot is maximised.

c. MAXIMISE-D: A metron is maximised.

Thus, and for the case detailed above, maximising the metron is optimised by ranking MAXIMISE-D topmost within this set of other local constraints. Nonetheless, MAXIMISE-D will have to be ranked lower than VF-FINAL H to rule out any implausible metrification such as *[(L.L)] [(H)]. The two tableaux below clarify how the proposed metrifications are rendered the most harmonic.

(14) (i)

faʕ.lun HH	VF-FINAL H	MAXIMISE-D	MAXIMISE-VF, MAXIMISE-MP
a. ☞ [(H)] [(H)]			** MAXIMISE-VF
b. [(H) (H)]		*!	

(ii)

fa.ʕi.lun LLH	VF-FINAL H	MAXIMISE-D	MAXIMISE-VF, MAXIMISE-MP
a. ☞ [(L.L) (H)]		*	
b. [(L.L)] [(H)]	*!		** MAXIMISE-VF

On a different dimension, some other hemistich-final forms raise another question regarding possible metrifications. These are the forms with three metrical positions, as forms with a single metrical position, two metrical positions or four undisputedly parse MPs into appropriate verse feet, as clarified in the discussion above. As for hemistich-final forms with three metrical positions, it is logically possible to have two different metrifications for each, [(MP)][(MP)(MP)] or [(MP)(MP)][(MP)]. The list below will help identify the ones with two equally harmonic metrifications, as evaluated by the set of constraints introduced so far. Such metrifications will only differ in the affiliation of their medial metrical positions.

(15)

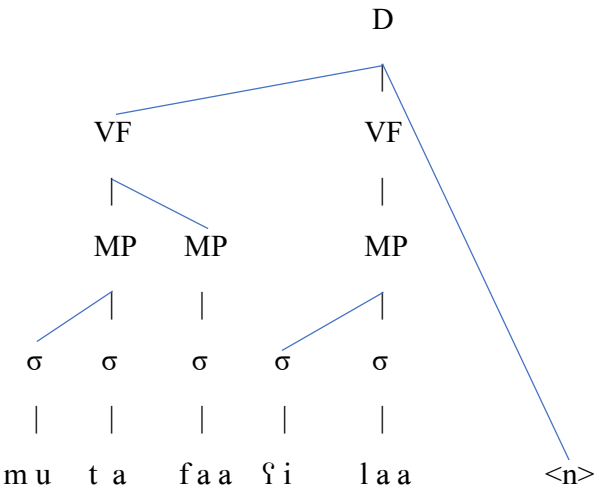
Form	Proposed Metrification	Possible Metrification	Notes
maf.ʕuu.lun	[(H) (H)] [(H)]	[(H)] [(H) (H)]	*Equally Harmonic*
maf.ʕuu.laan	[(H) (H)] [(H)] <c>	[(H)] [(H) (H)] <c>	*Equally Harmonic*
fa.ʕi.laa.tun	[(L.L) (H)] [(H)]	*[(L.L)] [(H) (H)]	Violates: VF-FINALH
muf.ta.ʕi.lun	[(H)] [(L.L) (H)]	*[(H) (L.L)] [(H)]	Violates: VF-FINALH
faa.ʕi.laa.tun	[(H)] [(L.H) (H)]	*[(H) (L.H)] [(H)]	Violates: ALIGN-VFHD-L/LH-TO-HD
ma.faa.ʕii.lun	[(L.H)] [(H) (H)]	[(L.H) (H)] [(H)]	*Equally Harmonic*
mus.taf.ʕi.lun	[(H) (H)] [(L.H)]	*[(H)] [(H) (L.H)]	Violates: ALIGN-VFHD-L/LH-TO-HD
faa.ʕi.laa.taan	[(H)] [(L.H) (H)] <c>	*[(H) (L.H)] [(H)] <c>	Violates: ALIGN-VFHD-L/LH-TO-HD
mus.taf.ʕi.laan	[(H) (H)] [(L.H)] <c>	*[(H)] [(H) (L.H)]	Violates: ALIGN-VFHD-L/LH-TO-HD
mu.ta.faa.ʕi.lun	[(L.L) (H)] [(L.H)]	*[(L.L)] [(H) (L.H)]	Violates: VF-FINALH/ALIGN-VFHD-L/LH-TO-HD
mu.faa.ʕa.la.tun	[(L.H)] [(L.L) (H)]	*[(L.H) (L.L)] [(H)]	Violates: VF-FINALH
mu.ta.faa.ʕi.laan	[(L.L) (H)] [(L.H)] <c>	*[(L.L)] [(H) (L.H)] <c>	Violates: VF-FINALH/ALIGN-VFHD-L/LH-TO-HD

Apparently, only three of the twelve forms above could possibly allow for two different, equally harmonic metrifications. All other possible metrifications of the remaining nine forms are ruled out by some constraint(s). In all three cases, whether the leftmost or the rightmost verse foot is maximal is crucially the main difference between the two metrifications. As explained in the following section, a pair of verse foot alignment constraints will evaluate each of the possible metrifications differently and will render one of them more harmonic than the other.

A final note about the metrification in (1) and (3) above concerns those final extrametrical consonants. Each of the six hemistich-final forms with a final extrametrical consonant has a heavy syllable occurring immediately before that final consonant. As indicated above, this configuration is unique to the superheavy syllable, which is attested finally in Classical Arabic. This metrification, which assumes marking a final consonant extrametrical when it follows a heavy syllable, could be attributed to the constraints SYL-MAXIMALITY (μμ), Al-Mohanna (2010), and Weight-by-Position, as formalised into the OT constraint WBYP, Sherer (1994) and Kager (1999). SYL-MAXIMALITY (μμ) dictates that syllables are maximally

bimoraic, and WBYP requires that a coda consonant is assigned a mora. When ranked undominated, these two constraints will not permit a trimoraic CVVC syllable nor will they allow its final nonmoraic consonant. What this means is that the final consonant in any final CVVC sequence is unsyllabifiable with the preceding CVV. Consequently, the final consonant may be prosodified by a higher metrical constituent, the metron for example. Such metrification could be diagrammed as follows:

(16) mu.ta.faa.ʕi.laa<n> [(L.L) (H)] [(L.H)] <c>



The final consonant is prosodified by linking it directly to the metron; it is not affiliated to any syllable. This degenerate prosodification will inevitably violate EXHAUSTIVITY, as formalised in Selkirk (1995), which is violated when a constituent of type X − 1 is not dominated by some constituent of type X. Specifically, the exact EXHAUSTIVITY constraint violated in (15) is EXH (σ), which should be ranked lower than SYL-MAXIMALITY (μμ) and WBYP to ensure that it is only violated to satisfy these two constraints.

The discussion in this section has revealed a characteristic defining all hemistich-final forms. Persistently, such forms have maintained most of the features distinguishing those eight abstract metra, from which the sixteen abstract metres are composed. Although the strict adherence to Binarity might have been somewhat relaxed in the surface forms, almost all other metrification principles are shared. The distribution of light and heavy syllables, the maximal and minimal metrical positions and verse feet, and the assignment of headedness therein are just few examples of a longer list of commonalities. This obvious similarity between the abstract and the surface forms is vital for preserving the rhythmic alternation that distinguishes the sequences of metra in all of the sixteen metres of Classical Arabic poetry. In the following section, this particular issue is discussed in more detail.

4. Rhythm

In this section, a hemistich-final form is examined as a constituent of the larger line of verse. In that regard, the specific identity of its metrical constituency is not only determined by the metrification principles, discussed in the previous section. It is categorically governed by the predominant rhythmic parsing that is consistent throughout any particular metre. It will be

argued that each of the twenty-two hemistich-final forms is licensed as a legitimate constituent of a given verse-pattern only when it is deemed appropriate to fit the particular rhythm in that verse-pattern. Precisely, examining sequences of verse feet, rather than of metrical positions or metra, is key to understanding the rhythmic pattern in any metre of Classical Arabic poetry. The concatenation of verse feet, within and across metra, is the exact level in the metrical structure that reveals the distinctive iterative rhythm of a verse-pattern.

As mentioned above, each of the sixteen abstract metres in Classical Arabic poetry comprises two identical half-lines, the first hemistich and the second hemistich. Each hemistich contains three metra (eleven metres) or four metra (five metres). There are only eight unique forms of abstract metra, each of which dominates two verse feet, maximally and minimally. Some abstract metres iterate the same metron and others iterate two different metra. The two tables below divide the sixteen metres into two groups, ones that iterate the same metron and others that have mixed metra. For each metre, only one of the two identical hemistichs is given:

(17) (i) Same Metron

Metre	**Metra**
Wafer	mu.faa.ʕa.la.tun - mu.faa.ʕa.la.tun - mu.faa.ʕa.la.tun [(L.H)] [(L.L) (H)] - [(L.H)] [(L.L) (H)] - [(L.H)] [(L.L) (H)]
Kamil	mu.ta.faa.ʕi.lun - mu.ta.faa.ʕi.lun - mu.ta.faa.ʕi.lun [(L.L) (H)] [(L.H)] - [(L.L) (H)] [(L.H)] - [(L.L) (H)] [(L.H)]
Hazaj	ma.faa.ʕii.lun - ma.faa.ʕii.lun - ma.faa.ʕii.lun [(L.H)] [(H) (H)] - [(L.H)] [(H) (H)] - [(L.H)] [(H) (H)]
Rajaz	mus.taf.ʕi.lun - mus.taf.ʕi.lun - mus.taf.ʕi.lun [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)]
Ramal	faa.ʕi.laa.tun - faa.ʕi.laa.tun - faa.ʕi.laa.tun [(H)] [(L.H) (H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H) (H)]
Mutaqarib	fa.ʕuu.lun - fa.ʕuu.lun - fa.ʕuu.lun - fa.ʕuu.lun [(L.H)] [(H)] - [(L.H)] [(H)] - [(L.H)] [(H)] - [(L.H)] [(H)]
Mutadarak	faa.ʕi.lun - faa.ʕi.lun - faa.ʕi.lun - faa.ʕi.lun [(H)] [(L.H)] - [(H)] [(L.H)] - [(H)] [(L.H)] - [(H)] [(L.H)]

(ii) Mixed Metra

Metre	**Metra**
Tawil	fa.ʕuu.lun - ma.faa.ʕii.lun - fa.ʕuu.lun - ma.faa.ʕii.lun [(L.H)] [(H)] - [(L.H)] [(H) (H)] - [(L.H)] [(H)] - [(L.H)] [(H) (H)]
Madid	faa.ʕi.laa.tun - faa.ʕi.lun - faa.ʕi.laa.tun - faa.ʕi.lun [(H)] [(L.H) (H)] - [(H)] [(L.H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H)]
Basit	mus.taf.ʕi.lun - faa.ʕi.lun - mus.taf.ʕi.lun - faa.ʕi.lun [(H) (H)] [(L.H)] - [(H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H)] [(L.H)]
Sari	mus.taf.ʕi.lun - mus.taf.ʕi.lun - maf.ʕuu.laa.tu [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)] - [(H) (H)] [(H)] L

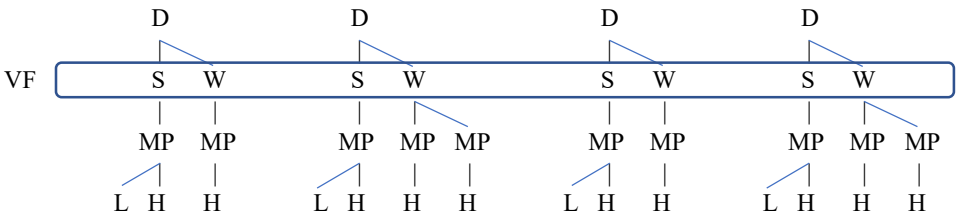
Munsarih	mus.taf.ʕi.lun - maf.ʕuu.laa.tu - mus.taf.ʕi.lun [(H) (H)] [(L.H)] - [(H) (H)] [(H)] L - [(H) (H)] [(L.H)]
Xafif	faa.ʕi.laa.tun - mus.taf.ʕi.lun - faa.ʕi.laa.tun [(H)] [(L.H) (H)] - [(H) (H)] [(L.H)] - [(H)] [(L.H) (H)]
Mudari	ma.faa.ʕii.lun - faa.ʕi.laa.tun - ma.faa.ʕii.lun [(L.H)] [(H) (H)] - [(H)] [(L.H) (H)] - [(L.H)] [(H) (H)]
Muqtadab	maf.ʕuu.laa.tu - mus.taf.ʕi.lun - mus.taf.ʕi.lun [(H) (H)] [(H)] L - [(H) (H)] [(L.H)] - [(H) (H)] [(L.H)]
Mujtath	mus.taf.ʕi.lun - faa.ʕi.laa.tun- faa.ʕi.laa.tun [(H) (H)] [(L.H)] - [(H)] [(L.H) (H)] - [(H)] [(L.H) (H)]

The two tables above demonstrate that verse feet, within and across metra, alternate between two main types. The more prevalent are the ones headed by the metrical position formed in the shape of the uneven iamb (L.H), which means that this disyllabic metrical position is always left-most in its verse foot. As for the other type, the head metrical position is either the monosyllabic/bimoraic (H) or the disyllabic/bimoraic (L.L). The alternation of these two types of verse feet is true for any iteration, whether of the same metron (17 i) or of different metra (17 ii). This characteristic, which is shared among all sixteen metres, is the essence of the rhythmic alternation distinctive of all verse-patterns in Classical Arabic poetry. It will also extend to any pattern where the rare metron /maf.ʕuu.laa.tu/ is involved, i.e., even when the metron is not headed by the metrical position (L.H).

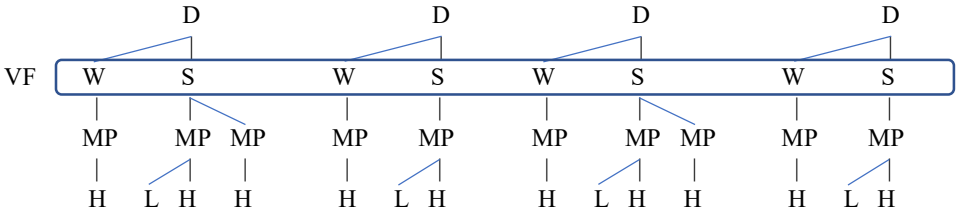
Applying the principles of generative metrics, Prince (1989) describes the rhythmic pattern exhibited in all metres of Classical Arabic poetry as alternating Strong/Weak (S/W) or Weak/Strong (W/S) metrical constituents, which are equivalent to verse feet in the current account. He systematically associates all (L.H) constituents to S positions. Other constituents, (H) and (L.L), that share the same mother constituent with the (L.H) are associated to W positions. When this parsing principle is applied, all metrical positions in the form of the uneven iamb are necessarily assigned headedness of their verse feet and eventually of their metra. Such prominent (Strong) verse feet are always followed and/or preceded by non-prominent (Weak) ones. Interestingly, this SW or WS rhythmic alternation continues throughout the same metre, as mentioned above. To show this rhythmic alternation of SW and WS verse feet, metres of Classical Arabic poetry are diagrammed below, highlighting the level of the verse foot, where the alternation is most obvious. The Mudari is the only Classical Arabic metre that is excluded from the list in (18). Certain characteristics of the consonant-vowel sequences representing that particular metre may require further attention. This specific matter will be discussed in more detail later in the section, showing how the Mudari also follows the same rhythmic alternation of prominent/non-prominent verse feet.

(18)

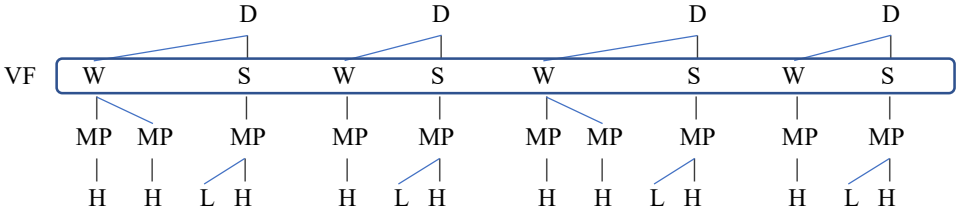
Tawil



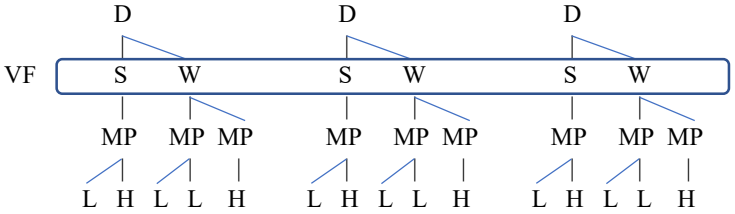
Madid



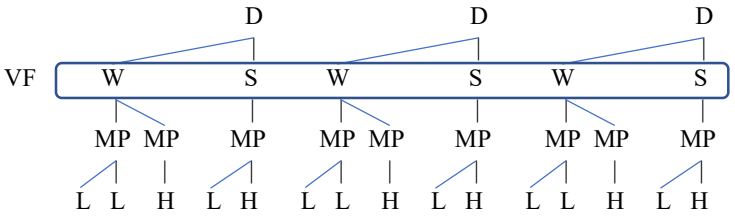
Basit



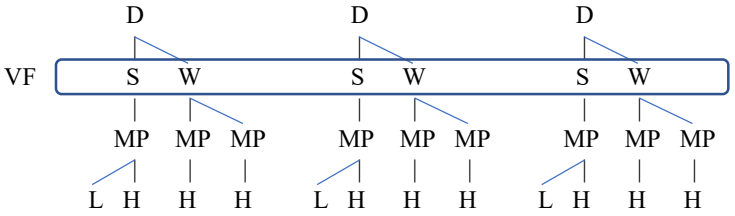
Wafir



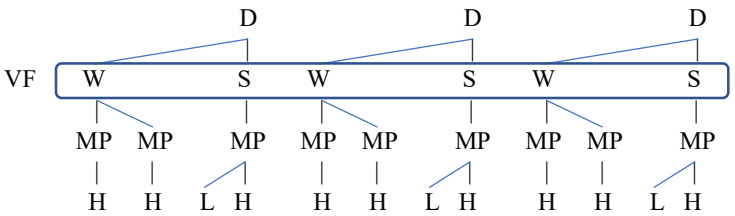
Kamil



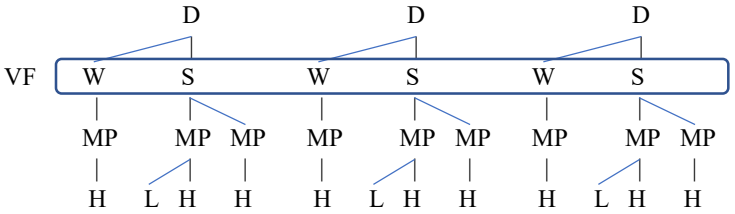
Hazaj



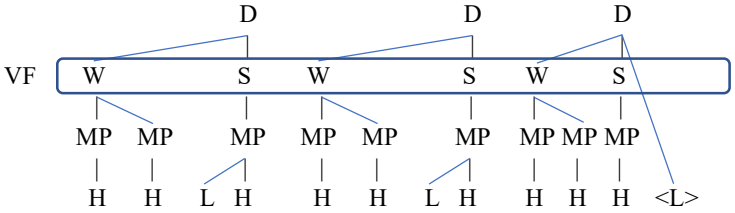
Rajaz



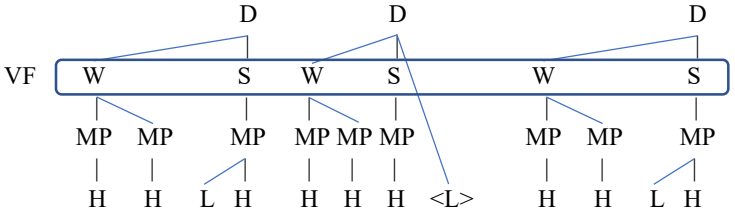
Ramal



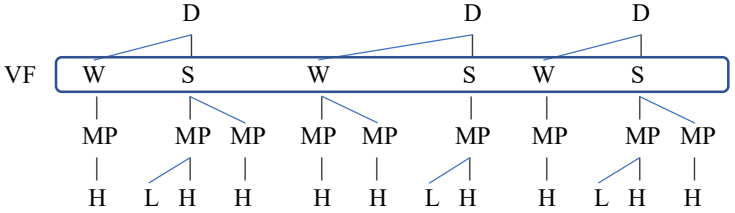
Sari



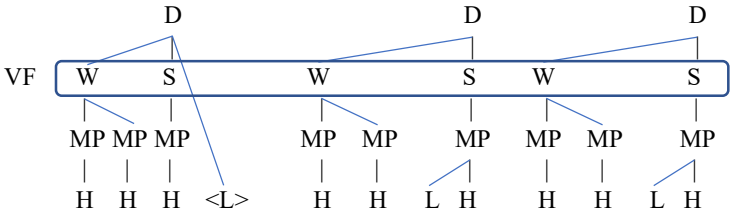
Munsarih



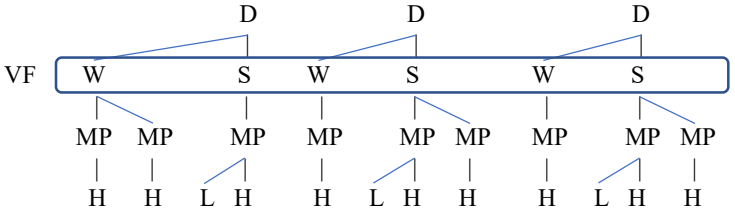
Xafif

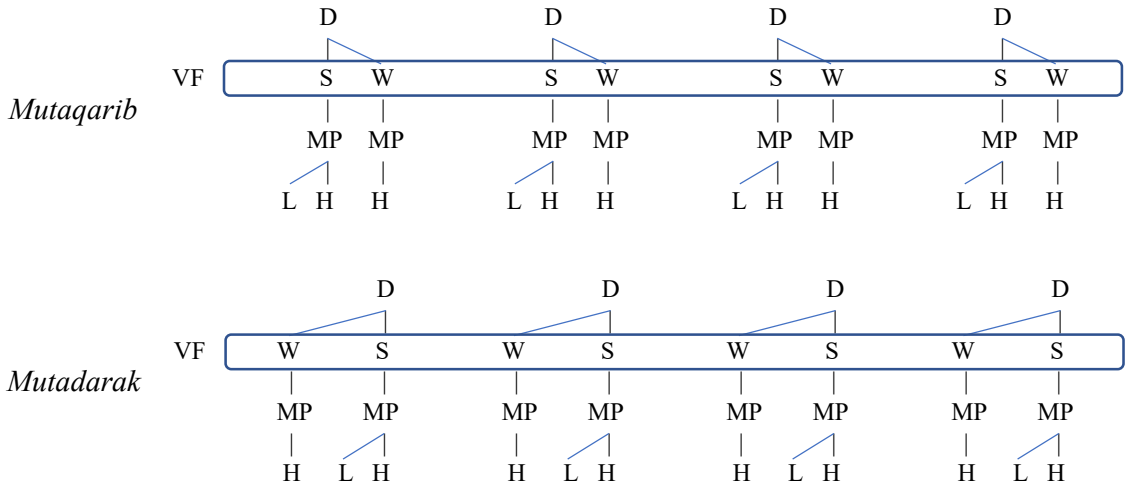


Muqtadab



Mujtath





What is undisputedly certain, as all these rhythmically alternating verse feet are examined, is the consistent prominence of all (L.H) metrical positions. Whenever a verse foot is headed by this a metrical position, it will always be associated to the Strong position of the metron. Thus, it will always be true to uniformly state that any metrical position shaped as the uneven iamb is promoted to a strong position. It is systematically associated to the head position of its verse foot, which eventually culminates to the head position of the entire metron. The markedness constraint LH-TO-HD, employed above, will maintain this prominent status of the uneven iamb. As formalised in Al-Mohanna (2020), this constraint excludes any candidate in which the intrinsically prominent metrical position (L.H) is not assigned headedness.

(19) Prominence of the Uneven Iamb

LH-TO-HD: A metrical position (L**H**) must be dominated by the head of the metron.

This constraint will not exclude the rightmost verse foot in the rarely occurring metron /maf.ʕuu.laa.tu/ [(H) (H)] [(H)] L from being assigned headedness of that metron. As discussed later in the section, this assignment will clearly contribute to a continuum of the rhythmic alternation WS.

The peaks and troughs of prominence exhibited amongst successive verse feet in any given metre of Classical Arabic poetry are explained as immediate consequences of constraints against Clash and Lapse, Liberman and Prince (1977), Selkirk (1984), Nespor and Vogel (1989), and others. Disfavouring clashes and lapses of prominence in pairs of adjacent verse feet will achieve and maintain the rhythmic alternations of S/W or W/S positions. This should be directly interpreted by the pair of constraints below, adapted from McCarthy (2008).

(20) NO CLASH & NO LAPSE

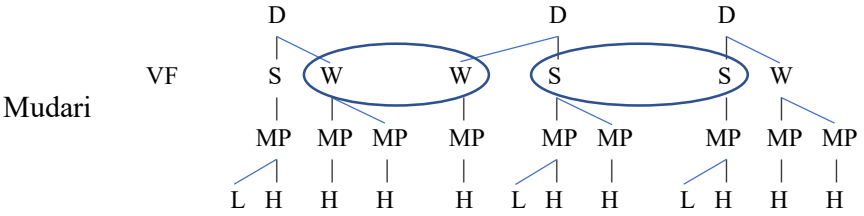
a. *CLASH-VF: Pairs of adjacent prominent verse feet are disallowed.

b. *LAPSE-VF: Pairs of adjacent non-prominent verse feet are disallowed.

All metrifications shown in (18) above satisfy these two constraints. No violations could be identified. Applying the metrification principles discussed in the previous section clearly reveals the fact that there are no sequences possibly parsed into consecutive Strong or Weak verse feet.

The Mudari has been excluded from the list in (18) above, where all other metres of Classical Arabic poetry are portrayed to have continuous rhythmic patterns of SW or WS verse feet. This is a consequence of a superficial discrepancy posed by the sequence of syllables representing this particular metre when strictly subjected to all parsing principles, and ultimately evaluated by all markedness constraints, introduced so far. Specifically, the SW pattern is interrupted by the medial metron that projects a WS pattern, which is restored to SW in the final metron. This configuration will result in a *LAPSE-VF violation (WW) between the initial metron and the medial metron and a *CLASH-VF violation (SS) between the medial metron and the final metron. The cause for each of these two violations is highlighted in the diagrammed representation below.

(21)

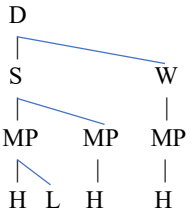
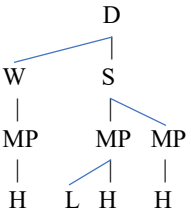
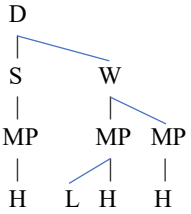
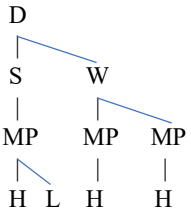


In studies of Classical Arabic metrics, a Kahlilian metrical constituent, traditionally called the peg, is employed when parsing metra. This measuring unit has two variants, namely the P peg (CV.CVX) and the Q peg (CVX.CV), where the X is either interpreted as a coda-consonant or as the second timing slot of a long vowel. To account for cases like the Mudari, Prince (1989) proposes the Q peg as the head of the medial metron in (21), the equivalent of the second foot in his analysis. This Q peg corresponds in form to the uneven trochee (H.L). For all other metres of Classical Arabic poetry, nonetheless, the current account systematically splits any sequence of a heavy syllable and a light syllable between two successive verse feet. In terms of the constraints introduced thus far, such metrification whereby any metrical position of the shape (H.L) is avoided is seen as a consequence of the constraint RHHRM, and ultimately the constraint RH-TYPE=I, as this highly marked metrical constituent is undoubtedly left headed.

For the Mudari, assuming any metrification that licenses the sequence HL as a sanctioned metrical position (H.L), will necessitate a number of ranking arguments. All proposed constraint rankings will not only safeguard the rhythmic pattern, but they will also sustain other predominant parsing principles. In particular, the ranking of the constraints RHHRM and RH-TYPE=I should be reconsidered on more than one dimension. Primarily, the two constraints must be ranked lower than *CLASH-VF and *LAPSE-VF to ultimately maintain the SW rhythmic pattern in the Mudari. Such ranking will basically be interpreted as giving more weight to a continuum of rhythmic alternation than to the shape of a metrical position. This ranking will rule out candidates like (22 b) below. Also, the two constraints, RHHRM and RH-TYPE=I, will have to be ranked lower than LH-TO-HD to uphold the intrinsic prominence of the uneven iamb and to avoid having it associated to a Weak position. Although a false output such as (22 c) achieves the required rhythmic alternation SW, and satisfies the undominated pair *CLASH-VF and *LAPSE-VF, it ignores the intrinsic prominence of the (L.H) implausibly assigning it to a Weak position. In addition to that, another possible satisfier of the constraints *CLASH-VF and *LAPSE-VF could be a candidate that violates another undominated constraint. Specifically, the two possible metrifications [(H.L)] [(H) (H)] and [(H.L) (H)] [(H)] satisfy the

pair *Clash-VF and *Lapse-VF, yet the former violates VF-Final H while the latter satisfies it, indicating that the two constraints RhHrm and Rh-Type=I should also rank lower than the constraint VF-Final H, which is satisfied in all verse-patterns of Classical Arabic poetry. The tableau below demonstrates how a candidate like [(**H**.L) (H)] [(H)] is rendered as the most harmonic metrification of the syllable sequence HLHH in Mudari, even though it licenses the metrical position (**H**.L) as its head.

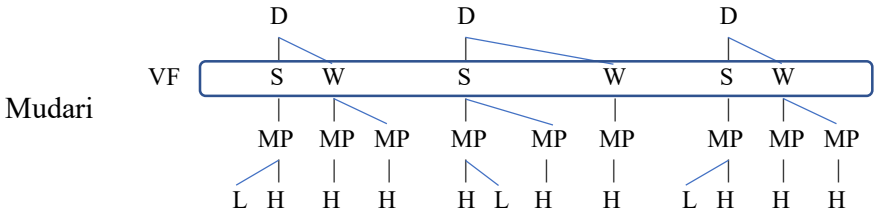
(22)

HLHH in SW alternation	*Clash-VF, *Lapse-VF, LH-to-Hd, VF-Final H	RhHrm, Rh-Type=I
a. ☞ 		* RhHrm *Rh-Type=I
b. 	*! Clash-VF * Lapse-VF	
c. 	*! LH-to-Hd	
d. 	*! VF-Final H	

As highlighted in the diagram below, the sequence of syllables representing the Mudari are parsed into metrical constituents assuming the discussion above. Evidently, applying the

metrification outlined above to this particular metre achieves the required SW rhythmic parsing.

(23)



The list in (18) above and the proposed actual metrification of Mudari in (23) show that the sixteen metres of Classical Arabic poetry are divided into five SW alternating ones and eleven WS alternating ones, as demonstrated below.

(24) Rhythmic Alternations for Abstract Metres

Strong/Weak		**Weak/Strong**	
Tawil:	SW-SW-SW-SW	Madid:	WS-WS-WS-WS
Wafer:	SW-SW-SW	Basit:	WS-WS-WS-WS
Hazaj:	SW-SW-SW	Kamil:	WS-WS-WS
Mudari:	SW-SW-SW	Rajaz:	WS-WS-WS
Mutaqarib:	SW-SW-SW-SW	Ramal:	WS-WS-WS
		Sari:	WS-WS-WS
		Munsarih:	WS-WS-WS
		Xafif:	WS-WS-WS
		Muqtadab:	WS-WS-WS
		Mujtath:	WS-WS-WS
		Mutadarak:	WS-WS-WS-WS

Re-examining all hemistich-final forms for the sixty-seven verse-patterns, including the the Mudari's, specifically to determine their distribution on both SW and WS metres will reveal an interesting characteristic of Classical Arabic verse-patterns. Across the board, each hemistich-final form is capable of continuing the same SW or WS rhythmic alternation prevalent throughout the metre where it occurs. For this statement to be valid, the proposed account must predict the actual SW/WS distribution of the surface hemistich-final forms in (3) so they agree with the rhythmic alternations of their respective metres, and eventually of their verse-patterns. To achieve that, the actually attested hemistich-final forms are divided into two groups: the ones that occur with SW metres, including [(H.L) (H)] [(H)] for Mudari, and the ones that occur with WS metres, as listed below.

(25) Rhythmic Alternations in Hemistich-final Forms

Strong/Weak		**Weak/Strong**	
[(H)]	[S]	[(L.L) (H)]	[W]
[(L.H)]	[S]	[(H)] [(H)]	[W] [S]
[(L.H)] <c>	[S]	[(H)] [(L.H)]	[W] [S]
[(L.H)] [(H)]	[S] [W]	[(H)] [(L.H)] <c>	[W] [S]
[(L.H)] [(L.H)]	[S] [W]	[(H) (H)] [(H)]	[W] [S]
[(L.H)] [(H) (H)]	[S] [W]	[(H) (H)] [(H)] <c>	[W] [S]
[(L.H)] [(L.L) (H)]	[S] [W]	[(L.L) (H)] [(H)]	[W] [S]
[(H.L) (H)] [(H)]	[S] [W]	[(H)] [(L.L) (H)]	[W] [S]
		[(H)] [(L.H) (H)]	[W] [S]
		[(H) (H)] [(L.H)]	[W] [S]
		[(H)] [(L.H) (H)] <c>	[W] [S]
		[(H) (H)] [(L.H)] <c>	[W] [S]
		[(L.L) (H)] [(L.H)]	[W] [S]
		[(L.L) (H)] [(L.H)] <c>	[W] [S]
		[(L.L) (H)] [(L.H) (H)]	[W] [S]

Studying the two lists above reveals that all attested verse-patterns with prevalent SW alternations will only sanction the forms in the left column as their possible hemistich-final metra, and the ones with WS alternations will only allow the forms in the right column. More generally, it is fairly accurate to state that there is some obvious correspondence between the two left columns in (24) and (25), on the one hand, and between the two right ones, on the other. In other words, the only hemistich-final forms available for any verse-pattern of the SW or WS metres are the ones that could continue the same rhythmic alternation.

This distribution of surface hemistich-final forms in (25) seems to agree with the prediction stated earlier regarding the continuum of rhythmic alternations. More specifically, the assumption that the verse foot headed by the (L.H) metrical position only associates to Strong positions explains the left-headedness of SW hemistich-final forms and the right-headedness of WS hemistich-final forms. The same logic also applies to the Mudari's verse foot, the head of which is the marked (H.L) metrical position. Other less prominent verse feet are allowed in both Strong and Weak positions as long as they fit the rhythmic alternation of the verse-pattern. In addition to that, there are seven hemistich-final forms the head verse foot of which is not headed by (L.H), or (H.L). Although the head verse foot in each is not considered to be intrinsically prominent, none of these forms fails to continue the rhythmic alternation of SW or WS verse feet. Of these, the form [(H)] associates its only verse foot to a Strong position as that form only occurs with one of the SW verse-patterns. The other forms, which do not contain intrinsically prominent metrical positions are: [(L.L) (H)], [(H)] [(H)], [(H) (H)] [(H)], [(H) (H)] [(H)] <c>, [(L.L) (H)] [(H)], and [(H)] [(L.L) (H)]. In these forms, the rightmost verse foot (which is the only verse foot in the form [(L.L) (H)]) plausibly associates to a Strong position when the form occurs with any WS verse-pattern.

There are two areas of inconsistency that must be acknowledged, however. Some hemistich-final forms of the Tawil verse-patterns concatenate two verse feet of the form

[(L.H)]. Also, a verse-pattern of Xafif sanctions the hemistich-final form [(L.H)] [(H)] in a WS rhythm. These issues will be revisited later in the section.

After that detailed discussion regarding rhythmically alternating verse feet, it is appropriate now to refer back to the cases of hemistich-final forms that could have their leftmost or the rightmost verse foot maximised. As noted in (15) above, those forms might be represented by two equally harmonic metrifications. The argument proposed to account for these cases assumes a basic distinction between SW and WS metres and verse-patterns. This distinction is realised when Strong and Weak verse feet are contrasted to identify those that dominate two metrical positions and those that only dominate a single one. More specifically, and as suggested in Prince (1989) in order to differentiate between Weak and Strong higher constituents, the Weak are always subdivided. When such a generalisation is applied to the case in hand, a Strong verse foot is interpreted as one that dominates a single metrical position, but a Weak verse foot will dominate two. Consequently, SW verse-patterns will favour metra with final subdivided verse feet [(MP)] [(MP) (MP)], and WS verse-patterns will favour metra with initial subdivided verse feet [(MP) (MP)] [(MP)]. These two assertions are maintained throughout the forms in (25); however, when an undominated constraint is potentially violated, they might not hold up. For example, the constraint VF-FINAL H will always rule out the SW metrifications *[(H.L)] [(H) (H)] and the WS metrification *[(H) (L.L)] [(H)] in favour of [(H.L) (H)] [(H)] and [(H)] [(L.L) (H)], respectively. Another example is having the constraints LH-TO-HD and ALIGN-VFHD-L disfavour a candidate like *[(H) (L.H)] [H] for WS alternations, to parse the same sequence as [(H)] [(L.H) (H)].

The choice between metrifications with initial or final maximal verse feet, in metra comprising three metrical positions, will be attributed to a pair of constraints, one for SW alternations and one for WS alternations. They are alignment constraints reminiscent of the directionality pair, as proposed in McCarthy & Prince (1993a). As mentioned above, such constraints will have to be ranking lower than VF-FINAL H, LH-TO-HD, and ALIGN-VFHD-L. These alignment constraints could be formalised as follows:

(26) Verse Feet Alignment

a. SW Alternation

ALING (VF, L, MT, L): The left edge of each verse foot, in a particular metron, must be aligned with the left edge of that metron.

b. WS Alternation

ALING (VF, R, MT, R): The right edge of each verse foot, in a particular metron, must be aligned with the right edge of that metron.

These are gradient constraints; they will measure the accumulative distance between the designated edges of all verse feet and that of the metron. The metrical position (MP), which is immediately dominated by the verse foot, is used as the measuring unit. Each member of this pair of alignment constraints is expected to evaluate any possible metrifications differently. As demonstrated in the tableaux below, one of two possible metrifications of the sequence LHHH is eventually rendered more harmonic than the other.

(27) (i)

LHHH in SW alternation	ALING (VF, L, MT, L)
a. ☞ [(L.H)] [(H) (H)]	MP
b. [(L.H) (H)] [(H)]	MP MP!

(ii)

HHH in WS alternation	ALING (VF, R, MT, R)
a. ☞ [(H) (H)] [(H)]	MP
b. [(H)] [(H) (H)]	MP MP!

The candidate (27 i b) is ruled out because the accumulative number of MPs separating the left edges of its verse feet from the left edge of the metron is greater than that for the other candidate. In this candidate, the left edge of the leftmost verse foot is separated from the left edge of the metron by zero MPs, but two MPs occur between these edges for the rightmost verse foot. Thus, zero plus two equals two. On the other hand, a similar calculation for (27 i a) will result in only one MP. Also, applying the same logic to (27 ii) should clarify why (a) is more harmonic than (b).

A final note before concluding this section on Rhythm concerns the two areas of inconsistency identified above. Constraint rankings might be the simplest answer for such cases. Specifically, the constraint pair *CLASH-VF and *LAPSE-VF could be argued to outrank LH-TO-HD to account for the [(L.H)] [(L.H)] sequence attested in some hemistich-final forms of the verse-patterns for Tawil, one of the SW metres, and the verse-pattern of Xafif that sanctions the hemistich-final form [(L.H)] [(H)] in a WS rhythm. This proposed ranking does not necessarily apply to their abstract metres, however. To maintain the undominated status of the constraint LH-TO-HD, which should rightly be considered justifiable, an alternative account could theoretically utilise ancipitia, positions that allow long or short syllables. In such an account, the final heavy syllable in [(L.H)] [(L.H)] and the heavy syllable of the initial verse foot in [(L.H)] [(H)], each will occupy an anceps position (indicated by X). Respectively, these two hemistich-final forms will be metrically represented as [(L.H)] [(L.X)] and [(L.X)] [(H)]. The assumption is that a metrical position like (L.X) will not violate the constraint LH-TO-HD, even if that metrical position is ultimately dominated by a Weak verse foot in either SW or WS patterns. Therefore, the Tawil's SW verse-patterns will accommodate the hemistich-final form [(L.H)] [(L.X)], and the Xafif's WS verse-pattern will accommodate the hemistich-final form [(L.X)] [(H)]. It should be noted that the same rationale could be extended to the case of Mudari, restoring the undominated ranking of RHHRM and RH-TYPE=I.

This section establishes the fact that each of the sixteen abstract metres of Classical Arabic poetry maintained a continuous rhythmic alternation of Strong/Weak or Weak/Strong verse feet. More interestingly, a similar argument is pursued for the various verse-patterns of those metres. This essential rhythmic quality is generally associated to the alternate distribution of the (L.H) metrical position. The case of the Mudari confirmed the higher priority given to the rhythmic alternation, when contesting with the form of the metrical position. In addition to that, more support is given to the argument that justifies verse-patterns through rhythmic alternations by showing how it helps determine the more plausible of two possible metrifications of some hemistich-final forms.

5. Conclusion

The seemingly diverse and relatively long list of Classical Arabic verse-patterns could be rationalised utilising a limited set of principles that regulate metrification and rhythmic alternation. Although greater in number, hemistich-final forms exhibit striking similarities in their metrical structure if compared to the abstract metra from which they are derived. The distribution of different syllable types, Binarity, and constituent prominence represent the main areas where the two sets share most characteristics. This similarity is instrumental in achieving a continuum of rhythmic alternation throughout a given verse-pattern. The alternate rhythm of Strong/Weak or Weak/Strong verse feet, exhibited in Classical Arabic metres, is preserved by compatibly distributing hemistich-final forms to fit SW or WS patterns. The intrinsically prominent (L.H) metrical position plays a vital role in defining this rhythmic alternation. The acknowledged discrepancies in some hemistich-final forms of the Tawil verse-patterns and a verse-pattern of Xafif may require further investigation.

Finally, a set of all constraints employed in the analyses is given below, followed by some of the major ranking arguments.

Constraints:

MC-Mɴ, MC-Mx, Rʜ-Tʏᴘᴇ=I, RʜHʀᴍ, *Cʟᴀsʜ-MP, VF-Fɪɴᴀʟ H, LH-ᴛo-Hᴅ, Aʟɪɢɴ-VFHᴅ-L, Maximise-D, Syʟ-Maximality (μμ), Exʜ (σ), *Cʟᴀsʜ-VF, *Lᴀᴘsᴇ-VF, Aʟɪɴɢ (VF, L, Mᴛ, L), Aʟɪɴɢ (VF, R, Mᴛ, R)

General Ranking Arguments:

- The constraint Maximise-D is ranked lower than the constraint VF-Fɪɴᴀʟ H to rule out an implausible metrification such as *[(L.L)] [(H)].
- The constraint Exʜ (σ) is ranked lower than the constraint Syʟ-Maximality (μμ) to allow for final consonant extrametricality.
- The constraints Aʟɪɴɢ (VF, L, Mᴛ, L) and Aʟɪɴɢ (VF, R, Mᴛ, R) are ranked lower than the constraint VF-Fɪɴᴀʟ H to rule out the SW metrifications *[(H.L)] [(H) (H)] and the WS metrification *[(H) (L.L)] [(H)].
- The constraints Aʟɪɴɢ (VF, L, Mᴛ, L) and Aʟɪɴɢ (VF, R, Mᴛ, R) are ranked lower than the constraints LH-ᴛo-Hᴅ and Aʟɪɢɴ-VFHᴅ-L to disfavour the WS metrification *[(H) (L.H)] [H].

Metre-specific Ranking Arguments:

- The constraints RHHRM and RH-TYPE=I could be ranked lower than the constraints *CLASH-VF and *LAPSE-VF to maintain the SW rhythmic pattern in Mudari.
- The constraint LH-TO-HD could be ranked lower than the constraints *CLASH-VF and *LAPSE-VF to accommodate the [(L.H)] [(L.H)] sequence attested in some hemistich-final forms of the Tawil verse-patterns and the verse-pattern of Xafif that sanctions the hemistich-final form [(L.H)] [(H)] in a WS rhythm.

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