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THE PROSODIC MODELS OF ANDALUSI HEBREW METRICS[*]

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1.0. INTRODUCTION

Throughout the long history of Hebrew poetry of Andalusi origin, the methodological foci and analytical proposals found in manuals have changed and evolved, always adapting to the new realities of who was producing and consuming these types of compositions. Today, it is understood that Andalusi Hebrew metrics is based on a set succession and combination of long and short syllables, with the different sequences producing different metres.[1] It is also widely accepted that metrical adaptation was carried

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[1] This, for instance, was the approach used in the classic work by Schirmann (1995, 119–22, especially n. 105).

out by Dunash ben Labraṭ in tenth-century Cordoba.[2] However, arguments continue even today about whether this system is based on an opposition of long and short syllables (traditional quantitative pattern) or open and closed syllables with phonic accents giving the composition its rhythm (accentuated pattern).[3]

The traditional conception seems to have its origin in the introductions to Hebrew metrics written by Abraham ibn ʿEzra in his *Sefer Ṣaḥot*[4] and Moshe Qimḥi in *Mahalak shevile ha-daʿat*.[5] As both authors, Ibn ʿEzra and Qimḥi, were 'distributors' of the Andalusi legacy in Europe, it is not surprising that they found a simplified formula to transmit and adapt the complex classical *ʿarūḍ* to an Arabic-speaking and Romance-speaking public who had either lost quantitative rhythm or never known it. According to this model, metres originated in the alternation of the medieval metrical units known in Hebrew as *yated* (a sequence correlated with CVCVC) and *tenuʿa* (a sequence correlated with CVC), producing what both men considered the Hebrew metres and, to some extent, this is still used today to scan any verse that employs this metrical system, whether the poet was Arabic-speaking or not. Both authors seem to have echoed the vowel theory of Moshe's

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[2] Although medieval sources had already attributed this adaptation to Dunash ben Labraṭ, the first modern academic to defend it was Brody (1937) in response to questions from Pinsker, Shamhuni, and Harkabi.

[3] For a summary of the different theories on Andalusi metrics in general, see Corriente (1986; 1991; 1998, 90–121 and 31–37).

[4] Lippmann (1827, x–xi) edition, and Del Valle (1977, 145–58).

[5] See folios 45–50 of the Venice edition (1546).

father, Yosef Qimḥi,[6] converting the concept of *ḥarf,* understood in the metrical system used between the tenth and twelfth centuries as the smallest unit that can be scanned, into an alternation of short and long syllables.[7] This form of scanning became established on the Iberian Peninsula as well, and was described in the early fourteenth century by David ben Yom Ṭob ben Bilya of Portugal.[8] The model was very widespread and would become the version transmitted among the different Jewish communities in Europe during the sixteenth and seventeenth centuries.

This alternation of short and long syllables is similar to what Orientalist William Jones did centuries later when he believed that the Arabic *ʿarūḍ* was simply a copy of Greek and Latin

[6] The theory of ten vowels, five large or long and five small or short, was first put forward in *Sefer ha-zikkaron* (ed. Bacher 1888, 17–19).

[7] On the metrical syllables, *ḥarf* or *mora* see Frolov (2000, 68–93). At the end of the chapter, Moshe Qimḥi himself confesses that he manipulated the Andalusi metrical system when he says: וראוי שתדע שזאת החלוקה למיני השיר איננה מה שעשו חכמי השיר בעצמה כי הם חלקו השיר לסיגים והכניסו תחת סוג מהם מינים: אבל ראיתי החלוק הזה יותר נקל 'you should know that this division into types of verses (= metres) is not exactly what poetry experts used, since they divided the verse into sections and introduced the types (= feet) under each category; however, this division (*yated-tenuʿa*) seems easier to me'. [This passage is at the bottom of folio 50 just before the colophon in the Venice edition (1546)].

[8] Edited by Allony (1966). The triple approach to vowels (Masoretic, grammatical, and metrical) can also be seen at the end of the fifteenth century in Saʿadyah ibn Danān (Cohen 2000, 66–76, for the Arabic version and 155–67 for the Hebrew version).

metrics, an idea that can be found even today in manuals on classical Arabic metrics written in Europe. Much more interesting is the mixed system to study Andalusi Hebrew metrics devised by David Yellin,[9] who, after recognizing the Ḵalīlian metrical system in medieval Hebrew metrics, used the *paʿal* paradigm to scan and catalogue the metres.

Thus, up to four different basic prosodic models of Andalusi Hebrew metrics can be identified:

(i) the original or indigenous model used between the tenth and twelfth centuries, faithfully conveyed in an anonymous manual,[10] to a lesser extent in the first texts on metrics and even in later pieces such as Yaʿaqov ben Elʿazar ha-Bavli's thirteenth-century work;[11]

(ii) the Romance model, devised by Andalusi authors exiled in southern Europe after the arrival of the Almohads;

(iii) the classical or European model, inspired by the methods of classical Greek poetry;

(iv) the mixed or Israeli model codified by David Yellin, a hybrid of all the earlier models and the one used today.

2.0. THE INDIGENOUS MODEL

This is the original model on which the Arabic metrical science (*ʿilm al-ʿarūḍ*) used by medieval poets in arabophone settings was

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[9] Yellin (1939) and Yellin (1940, 44–53).

[10] Edition by Martínez Delgado (2017).

[11] Yahalom (2001).

based.[12] The classical Arabic metrical system is composed of sixteen metres, fifteen of which, considered classical, are attributed to Al-Ḵalīl ibn Aḥmad al-Farāhīdī (718–791), with the last (*mutadārak*) attributed to his disciple ʾAbū al-Ḥasan Saʿīd ibn Masʿada al-Mujāšiʿī (d. 830), known as Aḵfash al-ʾAwsaṭ.

The units or metrical syllables are formed by joining two or more vocalised letters followed by a quiescent letter.[13] The union of two letters is called *sabab* 'rope' (the type used to tie down a tent), that of three letters in two syllables (CVCVC or CVCV̄) is called *watid* 'peg' (the kind used to fix a tent rope), while the sequence of four or more letters (CVCVCVC or CVCVCV̄) is known as *fāṣila* 'fastener'.[14]

Two types of *sabab* are recognised:[15]

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[12] For the description of the metrics in this work, I have followed, firstly, classic medieval treatises like the work by Ibn ʿAbd Rabbihi, *Kitāb al-ʿIqd al-Farīd* (ed. Amīn et al. 1948), the annotated edition of *La Khazradjyah* (ed. Basset 1902), the *Kitāb al-ʿArūḍ* by Ibn Jinnī (ed. al-Hayb 1989²), and that by al-Rabaʿī (ed. Badrān 2000) in addition to *al-Kāfī* by al-Tabrīzī (ed. Shamseddīn 2008²) and, secondly, modern classical manuals like those by Álvarez Sanz y Tubau (n.d.); ʿAtīq (1987); Sobh (2011); and Hāšimī (n.d.).

[13] For the concept of *ḥarf* as letter, as syllable, and as *mora*, and for how it is used to compose feet and metres, see Frolov (2000, 68–93). For its definition in Hebrew, see Jastrow (1897, 4).

[14] The metaphor consists of understanding the verse as a tent (*bayit*) held in place with a *sabab* 'rope', which is, in turn, fixed with a *watid* 'peg' assisted by a *fāṣila* 'fastener'.

[15] To catalogue the syllables and feet, I will use the Hebrew alphabet and reproduce the original Arabic vocalisation with the Hebrew vowels

1. *Sabab ḵafīf* 'light rope' (henceforth abbreviated as s): a succession of two letters, the first vocalised and the second quiescent, i.e., one closed syllable (CVC, represented as פַּע) or its equivalent, the open syllable with a long vowel (CV̄, represented as פָּא), since lengthened letters are considered quiescent consonants. To vocalise the first letter, any of the vowels (אַ, אָ, אֶ, אֵ, אִ, i, and אֻ) can be used. Therefore, for metrical purposes, פֶּה, אָב, and פַּת are identical.

2. *Sabab ṯaqīl* 'heavy rope' (henceforth abbreviated as L): a succession of two vocalised letters, i.e., two short open syllables (CVCV, represented as פַּעַ). These occur rarely and, in fact, are always followed by a *sabab ḵafīf*, producing the sequence known as *fāṣila ṣuḡrā* (see below). To create a *sabab ṯaqīl*, a compound *shewa* or a *ḥaṭef* vowel (אֲ, אֱ, and אֳ) is used and this implies that the vowel that precedes it is also a vocalised letter, for example, the *mem* and the *ʿayin* in מַעֲשֶׂה, which is equivalent to פַּעֲלָן (henceforth abbreviated as LS). Licence to use this is reserved only and exclusively for feet that require the presence of this metrical syllable. The sequence seems to have been established on the basis of sequences involving a vowel and a following *ḥaṭef* as in וַאֲנִי and כַּאֲשֶׁר, in which the vowel before the *ḥaṭef* was parsed as short. There is no consensus among grammarians, however, about the existence of the *saba ṯaqīl*, since it depends on whether the mobile *shewa* and *ḥaṭefim* were considered vowels. According

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qibbuṣ (*ḍamma*), *pataḥ* (*fatḥa*) and *ḥireq* (*kasra*). Bear in mind that in a case like פַּעֲלָן, *shureq* can never be used with the *waw*, since for metrical purposes in this foot, it is a quiescent letter like final *nun*, meaning that it cannot receive any vowels.

to Ḥayyūj, the sequence is impossible.[16] Ibn Janāḥ[17] and Yosef Qimḥi,[18] however, accept it. According to the anonymous manual,[19] it is not possible in Hebrew in isolation, although in practice it is used.[20]

Two types of *watid* are also recognised:

1. *Watid majmūʿ* 'joined peg' (henceforth abbreviated as w): a succession of three letters, where the first and second are vocalised and the third is quiescent, i.e., a CVCVC sequence (represented as פַּעַל) or CVCV̄ (represented as פַּעוּ). Examples of this type are כְּבָר, בְּנֵה, and וּפֹה. As in the case of the *sabab ḵafīf*, an open syllable with a long vowel is considered to contain a final quiescent letter.

2. *Watid mafrūq* 'separated peg' (henceforth abbreviated as v): a succession of three letters, where the first is vocalised, the second quiescent, and the third vocalised, i.e., CVCCV (represented as פְּעֶל or פַּאֲ). This only appears in two circumstances and there is no consensus among the grammarians concerning it. The first case is apocopated imperatives and imperfects of verbs whose first radical is *yod*, in either *binyan qal*, such as יֵבְךְּ, or *hifʿil*, such as הַשְׁקְ. However, acclaimed authors such as Ḥayyūj argue

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[16] Jastrow (1897, 7).

[17] Derenbourg (1880, 277–90) and Alahmad Alkhakaf and Martínez Delgado (2018, 39–49 and 99–106).

[18] Bacher (1888, 17–18).

[19] Martínez Delgado (2017, 35).

[20] Martínez Delgado (2017, 51 and 84).

that this type of sequence is equivalent to CVCC,[21] while the author of the anonymous manual claims to perceive a *pataḥ* /a/ sound after the last quiescent consonant[22] and thus considers this a CVCCV sequence. The other case occurs in segolate nouns whose third radical is weak, such as בֶּכֶה, in which, according to the phonological theory of the period, the accent on the first radical creates a weak letter and the final *heh* does not count for metrical purposes. It would scan, therefore, as בֶּאךְ, i.e., פְּעְל or CVCCV.

There are also two types of *fāṣila*:

1. *Fāṣila ṣuġrā* 'small fastener' (henceforth abbreviated as LS, i.e., *sabab ṯaqīl + sabab ḵafīf*): a succession of four letters, the first three of which are vocalised and the last quiescent (CVCVCVC, represented as פְּעְלָן). This commonly occurs where there is a vowel followed by a *ḥaṭef*, as in יְעֲמֹד, or in cases where in the scansion of the verse a *shewa* is read as vocalic after a short vowel, as in בִּדְבַר.

2. *Fāṣila kubrā* 'large fastener' (henceforth abbreviated as LW, i.e. *sabab ṯaqīl + watid majmūʿ*): a succession of five letters, the first four of which are vocalised and the last quiescent (CVCVCVCVC, represented as פְּעֲלָתַן). The only author who defends its existence is Ibn Janāḥ who argues that it occurs in the

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[21] Jastrow (1897, 7).

[22] Martínez Delgado (2017, 52 and 83).

words לְשַׁחֲתָה, יְמַשְׁשׁוּ, and כְּתִימֲרוֹת, which for metrical purposes would be יְמַשְׁשׁוּ, לְשַׁחֲתָה, and כְּתִמְרֹת, respectively.[23]

The feet result from the succession of two or three of these prosodic units or syllables. The combination of metric syllables produces up to ten feet. Two of them are composed of five letters: פַּעוּלֶן ws and פַּאעֲלֶן sw; and the other eight are composed of seven: מַפְעוּלָאתֻ ssv, מְתַפַאעֲלֶן LSW, מֻפַאעֲלָתֻן WLS, מֻסְתַפְעִלֶן ssw, מַפַאעִילֶן wss, פַּאעֲלָאתֻן sws, פַּאעֲלָאתֻן svs and מֻסְתַפְעִלֶן vss, respectively.

Once inside the poem, these feet usually undergo a series of modifications that alter their original appearance, which are known as *ziḥāfāt* or *ʿilal*, depending on their position and constancy in the composition. The metres are formed by a succession of feet, sometimes eight (four in each hemistich) and other times six (three in each hemistich). In classical theory, these sequences serve to develop and organise the five metrical circles displayed by Al-Ḵalīl ibn Aḥmad al-Farāhīd in his now lost *Treatise on Metrics*. These five metrical circles are arranged as follows

1. *Muḵtalaf*: two asymmetrical feet that are repeated twice per hemistich. It includes the classical metres *ṭawīl* (פַּעוּלֶן מַפַאעִילֶן ws wss 2x in each hemistich), *madīd* (פַּאעֲלָאתֻן פַּאעֲלֶן sws sw 2x in each hemistich), and *basīṭ* (מֻסְתַפְעִלֶן פַּאעֲלֶן ssw sw 2x in each hemistich).[24]

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[23] Derenbourg (1880, 277–90) and Alahmad Alkhakaf and Martínez Delgado (2018, 39–49 and 99–106).

[24] Theory would later include derived or modern *mustaṭīl* (מַפַאעִילֶן פַּעוּלֶן wss ws 2x in each hemistich) and *mumtadd* (פַּאעֲלֶן פַּאעֲלָאתֻן sw sws 2x in each hemistich) metres in this circle.

2. *Muʾtalaf*: two symmetrical hemistichs that repeat the same foot three times. It includes the classical metres *wāfir* (מְפַאעַלָתֶן WLS 3x per hemistich) and *kāmil* (מֶתַפאעִלֻן LSW 3x per hemistich).[25]

3. *Muštabah*: two symmetrical hemistichs that repeat the same foot three times. It includes the classical metres *hazaj* (מַפאעִילֻן WSS 3x per hemistich), *rajaz* (מֶסְתַפְעִלֻן SSW 3x per hemistich), and *ramal* (פאעִלאתֶן SWS 3x per hemistich).

4. *Mujtalab*: three feet (two of them always the same) are repeated in each hemistich. It includes the classical metres *sarīʿ* (מֶסְתַפְעִלֻן מֶסְתַפְעִלֻן מַפעֻולאתֿ SSW SSW SSV 1x in each hemistich), *munsariḥ* (מֶסְתַפְעִלֻן מַפעֻולאתֿ מֶסְתַפְעִלֻן SSW SSV SSW 1x in each hemistich), *kafīf* (פאעִלאתֶן מֶסְתַפְעִלֻן פאעִלאתֶן SWS SWS SSW 1x in each hemistich), *muḍāriʿ* (מַפאעִילֻן מַפאעִילֻן פאעִלאתֶן WSS WSS SWS 1x in each hemistich), *muqtaḍab* (מַפעֻולאתֿ מֶסְתַפְעִלֻן מֶסְתַפְעִלֻן SSV SSW SSW 1x in each hemistich), and *mujtatt* (מֶסְתַפְעִלֻן פאעִלאתֶן מֶסְתַפְעִלֻן SSW SWS SSW 1x in each hemistich).

5. *Muttafaq*: the same foot repeated eight times. It only includes the classical metre *mutaqārib* (פַעֻולֻן WS 4x in each hemistich). Some manuals add the *mutadārak* metre when it is included with the Ḵalīlian circles (פַאעְלֻן SW 4x in each hemistich) along with its variant (פֻעְלֻן SS 4x in each hemistich).

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[25] The theory would later include the derived metre *mutawaffir* or *mustawfir* (פַאעְלאתֶן SWL 3x per hemistich) in this circle.

The succession of these feet produces the verse or *bayt*.[26] The verse is made up of two hemistichs; the first hemistich is known as the *ṣadr* (in Hebrew *delet*) and the second as *ʿajz* (in Hebrew *soger*). The term for the first two or three feet (depending of the length of the hemistich) is *ḥašw* 'stuffing', while the last feet in each hemistich have their own name, *ʿarūḍ* for the last foot of the first hemistich and *ḍarb* for the last foot of the second hemistich.[27]

The verse can be complete (*tāmm*), if all its feet are used;[28] in the case of *ṭawīl* its complete form is:

ʿajz			*ṣadr*	
מַפָאעִילֻן	פָּעוֹלֻן מַפָאעִילֻן פָּעוֹלֻן	מַפָאעִילֻן	פָּעוֹלֻן מַפָאעִילֻן פָּעוֹלֻן
ḍarb	*ḥaṣw*	*ʿarūḍ*	*ḥašw*

The verse can be partial (*majzūʾ*), if it has supressed a foot in each hemistich. In *ṭawīl* this would be:

פָּעוֹלֻן מַפָאעִילֻן מַפָאעִילֻן   פָּעוֹלֻן מַפָאעִילֻן מַפָאעִילֻן

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[26] Unlike the Romance model, which understood that the verse is produced by the succession and alternation of *yated* and *tenuʿa*; this conception distorts the metrical nature of these compositions.

[27] In the medieval Hebrew tradition (Romance or later), there are no known names for these basic components on which part of the rhythm is based, perhaps because they had already lost their original function in a non-arabophone context, as suggested by the words of Moshe Qimḥi. Nevertheless, it is possible that the terms *delet* and *soger* originally referred to these two feet and not to the hemistichs.

[28] This form is used in the metres *ṭawīl*, *basīṭ*, *wāfir*, *kāmil*, *rajaz*, *ramal*, *sarīʿ*, *munsariḥ*, *khafīf*, and *mutaqārib*.

It can be weak (*manhūk*) if two-thirds of the metre is supressed.
In *ṭawīl* this would be:

<div dir="rtl" align="center">פַעוּלֶן מפאעיִלֶן   פַעוּלֶן מפַאעיִלֶן</div>

It can be divided (*maštūr*) if a complete hemistich is eliminated
In *ṭawīl* this would be:

<div dir="rtl" align="center">פַעוּלֶן מפַאעיִלֶן פַעוּלֶן מַפַאעיִלֶן</div>

Moreover, if the poet rhymes *ʿarūḍ* and *ḍarb* in both hemistichs
at the beginning of the poem, i.e., both feet share the rhyme and
foot, this rhythm is called *taṣrīʿ*.

Finally, according to this model, Hebrew verse scans in the
following way:

(1)   לְבָבִי בְּקִרְבִּי חַם וְעֵינִי מְדַמַּעַת לְמַעַן אֲנִי נִכְסָף לְחַמֹּת וּמֵפַעַת

My heart burns in my bowels and my eyes spill tears be-
cause I am homesick for Hammot and Mefaʿat (Shemuel
ha-Nagid)[29]

<div dir="rtl" align="center">לְבָאבִי בְּקִרְבִּיחַם וְעֵינִי מְדַמְמָאעַת   לְמַאעַן אֲנִינִכְסָף לְחַמְמֹת וּמֵיפַאעַת</div>

<div dir="rtl" align="center">פַעוּלֶן מפַאעיִלֶן פַעוּלֶן מפַאעיִלֶן   פַעוּלֶן מפַאעיִלֶן פַעוּלֶן מַפַאעיִלֶן</div>

The scansion would be the same as in an Arabic verse such as:[30]

<div dir="rtl" align="center">فَأَمَّا تَمِيمٌ تَمِيمُ بْنُ مُرٍّ فَأَلْفَاهُمُ القَوْمُ رَوْبَى نِيَامَا</div>

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[29] Sáenz-Badillos and Targarona Borrás (1988, 42*).

[30] I took the following example from *Kitāb al-ʿarūḍ* by Al-Rabaʿī (Badrān
2000, 61). The same example is used by Elʿazar ben Yaʿaqob (Yahalom
2001, 111). This is not the only case where they coincide, which is why
it is quite possible that one of the sources of Arabic verse that this Iraqi
author had was the treatise by al-Rabaʿī (eleventh century).

As for the tribe of Tamīm, Tamīm ben Mur, the people found them sleeping soundly.

This scans as follows:

فَأَمَّا   تَمِيْمُنْ   تَمِيْمُبْ   نُمُرِّنْ   فَأَلْفَا   هُمُلْقَو   مُرَوْبَى   نِيَامَا

فَعُولُنْ   فَعُولُنْ   فَعُولُنْ   فَعُولُنْ   فَعُولُنْ   فَعُولُنْ   فَعُولُنْ   فَعُولُنْ

Additionally, all of these feet can be modified. If the *sabab* in the stuffing (*ḥašw*) feet is affected, the modification is known as *ziḥāfāt* (these may be isolated), and if both the *sabab* and the *watid* of the *ʿarūḍ* and *ḍarb* are affected, it is called *ʿilal* (once applied, it must be maintained throughout the poem). The *ziḥāf* is always an elision or modification that affects the second letter of the *sabab*. Its use is not necessary and it never alters the metre. Although theoretically it should be avoided, it is reflected quite commonly in poetic lines. It affects only the *sabab* and is found especially in the *ṭawīl*, *basīṭ*, and *hazaj* metres.

The modification or *ziḥāf* can be simple:

ṭalm: the first letter of the *watid majmūʿ* is eliminated. פְּעוּלָן > פִּעְלָן = עוּלָן.

ʾiḍmār: the vowel of the second letter is eliminated. מְתְפַאעְלָן > מְתַפְּעְלָן = מְסְתַפְּעְלָן.

kabn: the second letter of the foot is eliminated when it is quiescent. פַּעֲלַאתָן > פַאעְלַאתָן.

waqṣ: the second vocalised letter of the foot is eliminated. מְפַאעְלָן > מְתַפַאעְלָן.

ṭayy: the fourth letter is eliminated when it is quiescent. מַפְעְלַאתָ > מַפְעוּלַאתָ.

ʿaṣb: the fifth letter is made quiescent when it is vocalised. מְפַאעַלָתֶן > מְפַאעִילָן = מַפַאעִילָן.

qabḍ: the fifth letter of the foot is eliminated when it is quiescent. מַפַאעִלֻן > מַפַאעִילֻן.

ʿaql: the fifth vocalised letter is eliminated. מְפַאעַלָתֶן > מְפַאעַתֶן = מְפַאעֻלֻן.

kaff: the seventh quiescent letter is eliminated. פַאעְלָאתֶן > פַאעְלָאתֻ or מְפַאעִילֻן > מְפַאעִיל.

ḥaḏf: the last *sabab ḵafīf* of the foot is supressed. מְפַאעִילֻן > מְפַאעִי = פַעֻולֻן.

However, it can also be compound, i.e., two modifications can apply in the same foot. This can only occur in the second, fourth, fifth, and seventh letter.[31] There are four types:

ḵabl: *ḵabn* + *ṭayy*. מֻסְתַפְעִלֻן > מֻתַעִלֻן = פַעִלָתֻן.

ḵazl: *ʾiḍmār* + *ṭayy*. מֻתַפַאעִלֻן > מֻתְפַעִלֻן = מֻפְתַעִלֻן.

šakl: *kaff* + *ḵabn*. פַאעְלָאתֻ > פַעְלָאתֻ.

naqṣ: *kaff* + *ʿaṣb*. מֻפַאעַלָתֻ > מֻפַאעַלְתֻ > מֻפַאעִיל.

In turn, *ʿilal* is an alteration that affects both the *sabab* and the *watid* of *ʿarūḍ* and *ḍarb* and once applied, it must be maintained throughout the poem. It can consist of an addition or suppression.

The following are additions:

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[31] Not all the metres accept these double modifications; an incompatibility occurs and solutions like *muʿāqaba*, *murāqaba*, and *mukānafa* are used, depending on the types of metres.

tarfīl: a *sabab ḵafīf* is added to the *watid majmūʿ* at the end of the foot. מְסְתַפְעְלַאתֶן = מְסְתַפְּעְלֶן + פַּע.

tadyīl: a quiescent letter is added to the *watid majmūʿ* at the end of the foot. מְסְתַפְּעְלַאן = מְסְתַפְּעְלֶן + פּ.

tasbīǧ: a quiescent letter is added to the *sabab ḵafīf* at the end of the foot. פַּאעְלַאתֶן = מְפַאעַלַתַאן = מְפַאעַלַתֶן + פּ or פּ + פַּאעְלַאתֶן = פַּאעְלַאתַאן.

Along with these three, another addition exists that can be applied to any foot, known as *ḵazm*. It consists of adding one or several letters to the beginning of the stich or hemistich and is used in the *ṭawīl*, *madīd*, *basīṭ*, *kāmil*, and *ramal* metres.

The following are suppressions:

ḥaḏf: the last *sabab ḵafīf* in the foot is supressed. מַפַאעְיִלֶן > פַּעוּלֶן = מַפַאעִי.

qaṭf: a *sabab ḵafīf* in the foot is supressed and the preceding vowel disappears. פַּעוּלֶן = מְפַאעֵל > מְפַאעְלַתֶן.

qaṣr: the second letter in the *sabab ḵafīf* is supressed and the vowel of the first letter is eliminated. מַפַאעֵיל > מַפַאעִילֶן.

qaṭʿ: the last letter of the *watid majmūʿ* is supressed and the vowel of the second letter is eliminated. פַּאעֵל = פַּאעְלֶן > פִּעְלֶן.[32] When this phenomenon occurs in *mustaṭīl*, it is called *tašʿīṯ*, i.e., to shorten one foot in a syllable.

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[32] Some theorists believe that *qaṣr* and *qaṭʿ* are the same; however, *qaṣr* applies to *sabab ḵafīf* and *qaṭʿ* to *watid majmūʿ*.

ḥaḏḏ: the *watid majmūʿ* at the end of the foot is supressed. פְּעְלַן = מֶסְתַפְּ > מֶסְתַפְּעְלַן.[33]

ṣalm: the *watid mafrūq* at the end of the foot is supressed. מַפְעֶולַאתָ > מַפְעֶו = פְּעְלַן (only in the *sarīʿ* metre).

waqf: the vowel of the last letter of the *watid mafrūq* is eliminated. מַפְעֶולַאן = מַפְעֶולַאת > מַפְעֶולַאתָ (specifically in the *sarīʿ* and *munsariḥ* metres).

kašf: the last letter of the *watid mafrūq* is supressed. מַפְעֶולַאתָ > מַפְעֶולַא = מַפְעֶולַן > פְעֶולַן (specifically in the *sarīʿ* and *munsariḥ* metres).

Just as there can be double additions, likewise double suppression can occur:

batr: *ḥaḏf* + *qaṭʿ*, the quiescent letter of the *watid majmūʿ* is suppressed and eliminated, leaving what precedes it quiescent. פַע > פַעֶו > פַעֶולַן (madīd). פְּעְלַן = פַאעֶל > פַאעֶלַא > פַאעְלַאתֶן (mutaqārib).

Additionally, other suppressions exist that can be applied to any foot. These are:

kharm: the first letter of the *watid majmūʿ* of the first foot at the beginning of the verse is suppressed in the *ṭawīl*, *hazaj*, *muḍāriʿ*, *muqtaḏab*, and *mutaqārib* metres. פְּעְלַן = עֶולַן > פַעֶולַן. When this occurs in the foot פַאעְלַאתֶן > מֶפַאעַאלַתֶן, it is called *ʿaḏb*.

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[33] Some theorists argue that this can only occur in the foot מֶתַפַאעְלַן > מֶתַפַא.

ṯarm: *ṯalm* + *qabḍ*. פַּעֵל > עֵוֹל > פַּעֵוֹלָן. When this occurs in the
foot מַפַאעֵילָן > פַאעֵלָן it is called *šatr*.

karb: *ṯalm* + *kaff*. מֻפְעֵוֹל = פַאעֵיל > מַפַאעֵילָן.

qaṣm: *ṯalm* + *ʿaṣb*. מֻפְעֵוֹלָן > פַאעַלָתָן > מֵפַאעַלָתָן. This should
not be confused with *ʿaḍb*, which occurs only at the begin-
ning.

jamm: *ṯalm* + *kašf*. פַאעֵלָן = פַאעָתָן > פַאעַלָתָן > מֵפַאעֵלָתָן.

ʿaqd: *ṯalm* + *naqṣ*. מֻפְעֵוֹל = פַאעֵלְת > פַאעַלָתָן > מֵפַאעֵלָתָן.

With this model, it is possible to affirm that the metre used in the
first known compositions by Dunash ben Labraṭ (ca. 958) is a
modified version of *mustaṭil* (wssss).[34] This was established as a
classical formula and was reproduced and used exclusively in the
musammaṭ genre (both *muṯallaṯ* and *murabbaʿ*) by the four great
Hebrew poets of the Golden Age (mid-eleventh to mid-twelfth
century), namely Samuel ben Nagrela, Shelomo ibn Gabirol,
Moshe ibn ʿEzra, and Yehuda ha-Levi. An example of this scan-
sion is as follows:[35]

(2)   דְּעֶה לִבִּי חָכְמָה וּבִינָה וּמִזְמָּה   נְצֹר דַּרְכֵי עָרְמָה שְׁמַע הַמּוּסָרִים
Know, my heart, wisdom, science and reflection. Follow the
paths of intelligence, listen to the disciplined ones

דְּעֶהלִבְבִי חָכְמָה וּבִינָהוּמ זִמְמָה   נְצֹרדַּרְכֵי עָרְמָה שְׁמַעהַמְמֵמֵו סָארם
מַפַאעֵילָן פִּעְלָן מַפַאעֵילָן פִּעְלָן   מַפַאעֵילָן פִּעְלָן מַפַאעֵילָן פִּעְלָן

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[34] Traditionally catalogued as *ṭawīl*. Yaʿaqob ben Elʿazar catalogues it as
a variant of *hazaj* (Yahalom 2001, 88), although metrical theory does
not permit such a sequence in this metre.

[35] Sáenz-Badillos (1980, 1*; vocalisation mine).

The second foot, פָּעֲלָן, has been modified by *qaṭʿ* (*tašʿīṯ* because it occurs in *mustaṭīl*), producing פִּעְלָן.

In the following composition, likewise, Ibn Gabirol has not created a hybrid metre,[36] but rather has applied a *ṯalm* modification to the *ṭawīl* metre with a *taṣrīʿ* rhythm, as confirmed by the second verse:

(3)   מִי זֹאת כְּמוֹ שַׁחַר עוֹלָה וְנִשְׁקָפָה   תָּאִיר כְּאוֹר חַמָּה בָּרָה מְאֹד יָפָה

כְּבוֹדָהּ כְּבַת מֶלֶךְ עֲדִינָה מְעֻנָּגָה   רֵיחָהּ כְּרֵיחַ מֹר מֻקְטָר וְכִשְׂרֵפָה

Who is this who rises like the dawn and comes into sight, shines like a radiant sun, so beautiful

Like a daughter of kings, noble and elegant; her aroma is like the aroma of burnt myrrh and a thurible

מִיזֹת   כְּמוֹשַׁאחַר עוֹלָה וְנִשְׁקָאפָה   תָּאאר כְּאֹרְחַמְמָה בָּארָה מְאֹדְיָאפָה

פִּעְלָן   מַפָאעִילֶן פִּעְלָן מַפָאעִילֶן   פִּעְלָן מַפָאעִילֶן פִּעְלָן מַפָאעִילֶן

כְּבוֹדָה כְּבַתמֶלֶךְ   עֲדִינָה מְעֻנְנָאגָה   רֵיחָה   כְּרֵיאחְמֹר   מֻקְטָר וְכִשְׂרֵיפָה

פַּעֲלָן מַפָאעִילֶן פַּעֲלָן מַפָאעִילֶן   פִּעְלָן מַפָאעִילֶן פִּעְלָן מַפָאעִילֶן

The same can be said about the funeral epitaph of Shemuel ben Shoshan of Toledo dated 1257 (lines 2 and 4):[37] the metre is *wāfir* (with *ʿarūḍ* and *ḍarb* affected by *qaṭf*) with frequent modification of the original foot מַפָאעֲלָתֶן with *ʿaṣb*, producing מַפָאעִילֶן in all its feet except the second, without any need to eliminate the *ḥaṭef* vowel beneath the guttural consonant during the scansion:

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[36] Brody and Schirmann (1974, 98).

[37] Millás-Cantera (1956, 77–78).

(4)   אֲדוֹן מִשְׂרָה כְּלִיל מַעֲשֶׂה אֲשֶׁר הוּא   וְחָכְמָה נוֹלְדוּ יַחַד תְּאוֹמִים

Lord of might, of absolute supremacy, he and wisdom born at the same time, twins

אֲדֹנְמִשְׂרָה כְּלִלְמַעֲשֶׂה אֲשֶׁרְהָא   וְחָכְמָהנֹלְ לְדֵוִיאַחַד תְּאוֹמִם

מְפָאעִילֶן מַפָאעִלָתֶן פַּעוּלֶן   מְפָאעִילֶן מַפָאעִילֶן פַּעוּלֶן

At times, editors argue that the compositions lack metre ($\bar{}\,\smallsmile\,\smallsmile\,\bar{}$ / $\smallsmile\,\smallsmile\,\smallsmile\,\bar{}$). However, this model makes it possible to identify the metre by taking into account the modifications. For example, the following composition by Yehuda ha-Levi[38] is clearly a *mutaqārib* affected by *talm*:

(5)   יוֹעֵץ וּמֵקִים בְּמְרוֹם שְׁחָקִים   וְעַל יָם רְחוֹקִים צִדְקוֹ סָרָח

Who decides and executes this in the high Heavens, and over the far-off seas, his justice shines

יוֹעֵץ וּמֵיקִם בְּמְרֹם שְׁחָאקִם   וְעַלְיָם רְחוֹקִם צִדְקוֹ סָארָח

פִּעְלֶן פַּעוּלֶן פַּעוּלֶן פַּעוּלֶן   פַּעוּלֶן פַּעוּלֶן פִּעְלֶן פִּעְלֶן

3.0. THE ROMANCE MODEL

The first allusions to this model are found in the writings of the Andalusi Jews who settled in Provence after the Almohad conquest of 1146. The oldest treatise that uses this model to explain Andalusi Hebrew metrics is *Sefer Ṣaḥot* by Abraham ibn ʿEzra, written in Mantua in the mid-twelfth century.[39] This is an adaptation of the original Andalusi metrical system of feet appropriate for a non-arabophone context and is a much smaller, simplified

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[38] I am following the edition by Sáenz-Badillos and Targarona (1994, 476–83).

[39] See note 4.

version of the original model with a mixture of elements that were in vogue in Andalusi Hebrew poetry, such as the repeated use of *musammaṭ*.[40]

Unlike the complexity of the original Andalusi model, the only rule specified by Abraham ben ʿEzra is ישמרו רק מספר התנועות והשוא המתנועע עם התנועה שהיא אחריו קורין אותו יתד 'the number of vowels simply must be maintained; mobile *shewa* followed by a vowel is called *yated*'. After this brief clarification, he distinguishes seventeen forms that constitute eleven metres, of which only ten are classical. At no time does he speak of feet, only of an alternation of *yated* (henceforth abbreviated as Y) and *tenuʿa* (henceforth abbreviated as T). Ibn ʿEzra distinguishes the metres without naming them. The first three cases are Hebrew *musammaṭ*:

> 1. YTTTT:[41] Ibn ʿEzra shows that this sequence can repeat in a line three (*muṯallaṯ* or ternary) or four (*merubbaʿ* or quaternary) times.

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[40] In fact, the first poems attributed to Dunash ben Labraṭ were scanned using this Eastern form that resulted from the appearance of internal rhymes (*sammaṭa*) in the monorhyme lines of *qaṣīda*s (for the relationship between *musammaṭ* and *muwaššaḥ*, see Corriente [1998, 24–25], and for Hebrew poetry, see Martínez Delgado [2016, 39–58]). These compositions are formed by dividing the verse into sections with rhyme that is identical, but different from the end of the last foot, i.e., *bbba*, *ccca*, *ddda*, etc. These divisions of the verse can become *murabbaʿ* (quaternary) or *muḵammas* (quinary).

[41] This is the derived or modern *mustaṭīl* form מְפַאעִילֶן פַּעוּלֶן, but applying *tašʿīṯ*, producing מְפַאעִילֶן פִּעְלֶן.

2. TTTT:[42] the line must be a *musammaṭ merubbaʿ* (quaternary: *bbba, ccca*, etc.), it has no *yated*, according to Ibn ʿEzra, it is קל 'light' and may even dispense with the internal rhymes of the *musammaṭ*.

3. YTYT: the line must be a *musammaṭ merubbaʿ* (quaternary: *bbba, ccca*, etc.) where a *shewa* has been added to each foot (YT). This is the classical *mutaqārib* metre in its complete form.

4. TTYTT:[43] this metre continues to have a *merubbaʿ* (quaternary) line, but it is 'greater' than the previous one. The internal rhyme alternates between the different feet that form the hemistichs of the verses (*abab, abab*, etc.). According to Ibn ʿEzra, a *shewa* can be added at the beginning of each sequence (YTYTT) and then the original, complete form of the *ṭawīl* reappears.

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[42] Although known as *mišqal ha-tenuʿot* in Hebrew, this is the Arabic metre *mutadārak* modified according to Arabic norms, as Yellin (1939, 192) suspected. This foot does not have to repeat throughout the entire verse; it can alternate with פַּעְלָן, which is common in Arabic since its complete use is rare, even in that language. This metre accepts the *qaṭʿ* modification in all its feet. Because of this, once the modifications are applied, the metre changes its name.

[43] This is a complete form of the Arabic *ṭawīl* metre modified with *ḵarm* at the beginning of each hemistich פִּעְלָן מַפַאעִילָן.

5. YTTYTT:[44] this is one of the most common metres in Hebrew and corresponds to the Arabic *hazaj*. Ibn ʿEzra asserts that some add YT to the end of this sequence, producing YTT YTT YT, which is in point of fact the *wāfir* metre.

6. TTYTTYTT:[45] this metre is, according to Ibn ʿEzra, the richest, because it has up to three types of variants. The first is obtained by adding a *shewa* to the beginning of the YTYTTYTT line;[46] the second adds a vowel to the end, producing TTYTTYTTT;[47] the third is the only one that preserves *ḍarb* and *ʿarūḍ*, producing a complete classical sequence TTYTTYTTY TTYTTYTTT.[48]

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[44] In the Del Valle edition (1977, 150) *yated* + *tenuʿa* + *yated* + two *tenuʿot*, but the scansion of the poem itself confirms the error.

[45] This is the *kāmil* metre with an *ʾiḍmar* modification in the stuffing (*ḥašw*) feet and *ḥaḏḏ* in the *ḍarb*, without any sign of its *ʿarūḍ*. In Hebrew, the version of this metre known as *kāmil muḍmar* is the most commonly used one. See Martínez Delgado (2012, 277–80).

[46] This is really a recourse used by the Jewish poets to reconcile it with its original foot; in other words, in the first foot of the hemistich, the second vowel of the *fāṣila ṣuġrā* is replaced by a *sabab ḵafīf*, since there is no consensus about this sequence in Hebrew. According to Arabic theory, if the last two feet undergo an *ʾiḍmār* modification, the primitive form must appear in the poem so that it is not confused with *rajaz*; thus, the first foot is different and has a form that does not exist in Arabic.

[47] This is a *kāmil muḍmar* where *ḍarb* and *ʿarūḍ* are first affected by *qaṭʿ* (פַּעְלָאתֶן > מְתַפַּאעְלֻן) and then by *ʾiḍmār* (מִפְעֻוִלָן = פַּעְלָאתֶן > פַּעְלָאתֶן).

[48] This is really a *rajaz*. This confusion is very common in Hebrew metrics. On the *šalem* and *ha-šalem we-ha-soʿer* metres see below §5.0.

7. TTYTYT: this is the classical *mujtaṯ* metre in partial form (*majzūʾ*) with complete *ʿarūḍ* פַּאעְלַאתֻן and identical *ḍarb*.

8. TYTTYT:[49] this verse actually reproduces an incomplete TYTT sequence, but this is the *ramal* metre as it is most commonly used.[50]

9. TTYTTY: in principle, it is not clear in the text if this is a variant of the previous case or a new metre. Given that it is clearly a *rajaz* in the *majzūʾ*, or partial, form with complete *ʿarūḍ* (מֶסְתַפְעִלֻן) and identical *ḍarb*, it should be identified as a different metre. According to Ibn ʿEzra, it is used with a *merubbaʿ* verse (quaternary *musammaṯ*).

10. TTYTY: according to Ibn ʿEzra, in this sequence that repeats four times, the Y at the end must be replaced by T. The complete sequence would be TTYTY TTYTY TTYTY TTYTT.[51] According to the author, this is a difficult metre to use (*kaḇed*) in Hebrew.

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[49] In the Del Valle edition (1977, 153), the final YT is omitted according to the scansion of the verse; as this sequence makes no sense; I am following Lippmann (1827, xi).

[50] This is a *majzūʾ*, or partial, verse with complete *ʿarūḍ* (פַּאעְלַאתֻן) and identical *ḍarb*.

[51] This is the *basīṭ* metre with *ʿarūḍ* in complete form (*tāmm*) and *ḍarb* modified by *qaṭʿ* (פִּעְלֻן = פַּאעֻל > פַּאעְלֻן)

11. TYTY:[52] Ibn ʿEzra asserts that this is the most difficult of all. According to the example, it is used with a *merubbaʿ* line (quaternary *musammaṭ*).

Moshe Qimḥi presents something similar in his work *Mahalaḵ Shevile ha-Daʿat*. As above, the prosodic units are Y and T. Qimḥi distinguishes the following metres:

1. TTTTTTTT (*mutadārak*, 2 in Ibn ʿEzra's classification);

2. YTTTT (*mustaṭīl*, 1 in Ibn ʿEzra's classification);

3. YTTTTYTT (*kāmil*, 6 in Ibn ʿEzra's classification);[53]

4. YTTYTTYT (*wāfir*, 5 in Ibn ʿEzra's classification);

5. YTTYTT (*hazaj*, 5 in Ibn ʿEzra's classification);

6. YTYTTYTYTTT (*ṭawīl*, 4 in Ibn ʿEzra's classification);

7. YTYTYTYT (*mutaqārib*, 3 in Ibn ʿEzra's classification);

8. TYTTYT (*ramal*, 8 in Ibn ʿEzra's classification);

9. TTYTTTYTT (*basīṭ*, 10 in Ibn ʿEzra's classification);

10. TTYTTTTYT (*sarīʿ*, not found in Ibn ʿEzra's classification);

11. TTYTTYTTT (*rajaz*, 6 in Ibn ʿEzra's classification);

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[52] This is the *mutadārak* metre; its modified variant known as *mišqal ha-tenuʿot* is much more common in Hebrew, see 2. TTTT.

[53] This is a modified version. The first stuffing (*ḥašw*) foot has been modified with *qaṣr* and the second with *ʾiḍmār*. The verse must be *majzūʾ*, or partial, with *ʿarūḍ* modified with *ḥaḏḏ* and *ʾiḍmār*, according to the classical norm.

12. TTYTYT (*mujtaṯṯ*, 7 in Ibn ʿEzra's classification);

13. TTYTTYTT (*kāmil*, 6 in Ibn ʿEzra's classification);[54]

14. TTYTTY (*rajaz*, 9 in Ibn ʿEzra's classification);

15. TTYTTTT (*munsariḥ*, not found in Ibn ʿEzra's classification);

16. TTYTY (*basīṯ*, 10 in Ibn ʿEzra's classification);

17. TTYTTYTTT (*rajaz*, 6 in Ibn ʿEzra's classification);

18. TYTY (*mutadārak*, 11 in Ibn ʿEzra's classification).

This model was highly successful and is frequently found in other manuals on metrics written between the fourteenth and fifteenth centuries in the Iberian Peninsula. It appears, for example, in the work of David ben Yom Ṭob ben Bilya from Portugal, who divides the vowels into kings (*qameṣ, pataḥ, ṣere, segol, ḥolem,* and *ḥireq*) and servants (*shewa* and *qibbuṣ śefatayim* or *shureq*) and, as Qimḥi did, includes up to eighteen variants of what are today considered nine metres.[55] In the last years of Nasrid Granada, Saʿadya ibn Danān wrote an introduction to his dictionary that included the tripartite conception of Hebrew vowels (Masoretic, grammatical, and metric). He dedicated an entire chapter to the art of

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[54] This is a modified version. A syllable is added to *kāmil muḍmar* at the end (*tarfīl*) so that it is not confused with *rajaz*. TT TTY TT in the edition, the scansion of the verses used as an example is followed.

[55] Allony (1966).

writing poetry,[56] following this model in broad terms and deviating in many respects from the indigenous model when he tried to merge them. Beginning in the fifteenth century, this was the model that was transmitted among the different Jewish communities dispersed around Europe in works by distinguished teachers such as Avshalom ben Moshe Mizraḥi, Abravanel, and David ben Yaḥya from Portugal, and in the sixteenth and seventeenth centuries in the works of the Italians Emmanuel ben Yequtiʾel, Azaría de Rossi, Samuel Archivolti, and Emmanuel Fransis, and the Dutchman Salomón de Oliveyra.[57]

4.0. THE CLASSICAL OR EUROPEAN MODEL

The inspiration for this model is classical Greek poetry and to some extent it is the heir to the thesis set forth by William Jones (1746–1794) for Arabic metrics in his *Poeseos Asiaticae Commentariorum Libri Sex* (Lipsiae, 1777²) and continued, first by Heinrich Ewald (1803–1875) in his *De Metris Carminun Arabicorum Libri Duo* (Brunsvigae, 1825–1854), and then by William Wright (1830–1889) in his renowned *A Grammar of the Arabic Language* (Cambridge, 1969³).[58] With regard to Andalusi Hebrew poetry, the most complete and exact description of this model comes

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[56] See Cohen (2000, 66–76) for the Arabic version and ibid. (155–67) for the Hebrew version.

[57] A review of all these authors can be found in Del Valle (1988, 349–459).

[58] On the history of the study of ʿarūḍ in Europe, see Frolov (2000, 1–22).

from María José Cano, who used this method to codify and scan the entire *dīwān* of the Andalusi poet Shelomo ibn Gabirol.[59]

In this model, metre is understood to be quantitative and based on alternating long and short syllables. As with the Romance model, only two basic prosodic syntagms are recognised:

> *yated*: the succession of short and long syllables (*iambo* in Greek and *watid majmūʿ* in Arabic), represented below by $|-\breve{}\,|$.

> *tenuʿa*: a long syllable (*sabab ḵafīf* in Arabic), represented below by $|-|$.

The vowel in the long syllables can be any of the seven Tiberian vowels, while the vowels in the short syllables can only be the simple *shewa*, its three compounds and the *waw* conjunction vocalised with *shureq* (וּ).

The feet are composed of three or four syllables and, therefore, can, from a prosodic point of view, be binary or ternary.

Binary (reading from right to left)

Arabic	Classical	Romance
פְּעוּלַן	$\|-\|-\breve{}\,\|$	TY
פַּאעְלַן	$\|-\breve{}\,\|-\|$	YT
פְּעְלַן	$\|-\|-\|$	TT

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[59] Cano (1987, 31–38).

Ternary (reading from right to left)

Arabic	Classical	Romance
מֶפַאעִילֶן	$\|-\|-\|-\check{}\|$	TTY
פַאעְלַאתֶן	$\|-\|-\check{}\|-\|$	TYT
מֶסְתַפְעִלֶן	$\|-\check{}\|-\|-\|$	YTT

According to this model, the metres can be symmetrical (the first two feet are identical), asymmetrical (the first two feet are different), or free (*muwaššaḥ* or *šir ha-ʾezor*).

The line (*bayit*) is divided into two hemistichs. The first is known as *delet* and is responsible for determining the metre in this model. The second, known as *soger,* is usually a repetition of the first, carries the rhyme, and also usually takes most of the modifications (the addition or suppression of syllables, the suppression of a letter, or even the whole hemistich).

The symmetrical or simple metres can be binary or ternary:

Binary feet (reading from right to left):

mutaqārib								
TY	TY	TY	TY	|	TY	TY	TY	TY
$--\check{}$	$--\check{}$	$--\check{}$	$--\check{}$	|	$--\check{}$	$--\check{}$	$--\check{}$	$--\check{}$

mutadārak								
TT	TT	TT	TT	|	TT	TT	TT	TT
$--$	$--$	$--$	$--$	|	$--$	$--$	$--$	$--$

Ternary feet (reading from right to left)

wāfir							
TY	TTY	TTY	TTY	| TY	TTY	TTY	TTY
– – ˘	– – – ˘	– – – ˘	– – – ˘	| – – ˘	– – – ˘	– – – ˘	– – – ˘

hazaj			
TTY	TTY	| TTY	TTY
– – – ˘	– – – ˘	| – – – ˘	– – – ˘

ramal					
TY	TYT	TYT	| TY	TYT	TYT
– – ˘	– – ˘ –	– – ˘ –	| – – ˘	– – ˘ –	– – ˘ –

kāmil					
YTT	YTT	YTT	| YTT	YTT	YTT
– ˘ – –	– ˘ – –	– ˘ – –	| – ˘ – –	– ˘ – –	– ˘ – –

sarī^c						
YT	YTT	YTT	|	YT	YTT	YTT
– ˘ –	– ˘ – –	– ˘ – –	|	– ˘ –	– ˘ – –	– ˘ – –

The asymmetrical or compound metres alternate binary and ternary feet (reading from right to left):

ṭawīl								
TTY	TY	TTY	TY	|	TTY	TY	TTY	TY
– – – ˘	– – ˘	– – – ˘	– – ˘	|	– – – ˘	– – ˘	– – – ˘	– – ˘

basīṭ								
YT	YTT	YT	YTT	|	YT	YTT	YT	YTT
– ˘ –	– ˘ – –	– ˘ –	– ˘ – –	|	– ˘ –	– ˘ – –	– ˘ –	– ˘ – –

mujtaṯṯ				
TYT	YTT	|	TYT	YTT
– – ˘ –	– ˘ – –	|	– – ˘ –	– ˘ – –

munsariḥ				
TTT	YTT	|	TTT	YTT
− − −	− ˘ − −	|	− − −	− ˘ − −

5.0. THE ISRAELI METHOD

This is a mixed system devised by David Yellin to study Andalusi Hebrew metrics[60] based on the first codifications of Yehuda ha-Levi's metrics by Heinrich Brody.[61] It is, in short, a hybrid of the indigenous and classical forms, but with some confusion produced by the Romance model.

Brody's initial conclusions about Andalusi Hebrew metrics were harshly criticised by Halper (1913). He said that Brody did not correctly identify many metres and manipulated the vocalisation because he paid more attention to theory than to practice, basing his analysis on Freytag and blindly following Ibn Danān. Brody concluded that some feet are impossible in Hebrew: two short vowels cannot follow each other (they are replaced by a long vowel in Arabic), and there can be no *watid mafrūq* (no Arabic verses end in a short vowel, since they are always scanned as long). According to Halper, viewed from the Arabic, all metres fit, but Arabic can use long and short syllables, while Hebrew prefers to use long ones. This, then, led Brody to assert that there are some impossible metres in Hebrew. Halper questioned the extent to which Arabic metres can be used to analyse Hebrew

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[60] Yellin (1939; 1940, 44–53).

[61] Brody (1895).

metres.[62] He argued that the equation of Hebrew mobile *shewa* with an Arabic short vowel is an artificial equivalence used by Hebrew poets that should not affect the recitation of the poem. It would appear that Halper was describing Arabic metrics using Greek categories and understood that all syllables are long in Hebrew, including accentuated ones. He argued that the arabophone Jews were aware that *shewa* often corresponded to short Arabic vowels and made the change. Halper rightly suspected that a vowel followed by *shewa* could be two short vowels.

In these circumstances, David Yellin saw no other choice but to catalogue all the Arabic metres used by Shemuel ha-Nagid following the indigenous model. This resulted in the new system that recognises the five Ḵalīlian circles in Hebrew metrics and uses the root *paʿal* to represent schematically the scansion and to catalogue the metres.[63] However, the current use of the *paʿal* scheme to scan these compositions from the classical period (tenth–twelfth centuries) is unsatisfactory since it distorts the reality of the modifications applied. In Yellin's system the metrical patterns are reduced to seven basic feet:

מְתַפְּעֲלִים (ssw)	פְּעוּלִים (ws)
נִפְעָל (ss)	מְפֹעָלִים (wss)
נִפְעָלִים (sss)	פְּעֲלוּלִים (sws)
	פּוֹעֲלִים (sw)

The last two feet are actually forms that result from modifications (*ziḥāfāt*) in the indigenous model: נִפְעָל (ss) and נִפְעָלִים

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[62] See my list in Martínez Delgado (2017, 123–37).

[63] For the Hebrew adaptation of these circles, see Yellin (1940, 47–52).

(sss), and in no case form part of the original metre. In fact, it is these modified forms that confirm that the Jewish poets were respecting the Arabic feet and did not Hebraise them as Yellin claims. If they had done so, the foot פַּעוּלֶן (never פְּעוּלֶן) would have resulted in an impossible פְּע after a double *batr*-type modification.

Nonetheless, the exhaustive cataloguing of metres carried out by Yellin is one of the most important contributions to the study of Hebrew metrics in modern times. This system, however, creates some confusion when attempting to identify metres, such as mixed metres and bimetric compositions and, of course, when attempting to identify metres in the first Hebrew poetry written in the mid-tenth century. By way of example, Yellin correctly identified the *šalem* metre. He spoke, however, of another mixed metre devised by the Hebrew poets that he called *ha-šalem we-ha-soꜥer*.[64] The application of classical metre to these compositions shows that the poets were really using two different Arabic metres, *kāmil* and *rajaz*, on each occasion.

Finally, the greatest contribution of this model has been in the area of nomenclature for the study of Andalusi Hebrew poetry. These are the Hebrew translations of the names of Arabic metres that are used today in any study in this field.

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[64] Yellin (1939, 189 n.1 and especially 195).

Arabic	Hebrew (20th cent.)	Ibn Danān (15th cent.)
Ṭawīl	*ʾAroḵ*	*ʾAroḵ*
Madīd	*Mitmoded*	*Mašuḵ*
Basīṭ	*Mitpaššeṭ*	*Pašuṭ*
Wāfir	*Merubbe*	*ʿOdef*
Kāmil	*Šalem/Šalem we-Soʿer*	*Tamim*
Hazaj	*Marnin*	*Megil*
Rajaz	*Šalem/Šalem we-Soʿer*	*Ḥaruz*
Ramal	*Qaluaʿ*	*Ḥol*
Sarīʿ	*Mahir*	*Memaher*
Munsariḥ	*Dohar*	*Myuttar*
Ḵafīf	*Qal*	*Qal*
Muḍāriʿ	*Dome*	*Medamme*
Mujtatt	*Qaṭuaʿ*	*Pasuq*
Muqtaḍab	—	*Meʾussaf*
Mutaqārib	*Mitqareḇ*	*Mitqareḇ*
Mutadārak	*Mašlim/Mišqal ha-Tenuʿot*	*Teʿuni*

All the important studies of Hebrew Andalusi metrics have been based on this system, including N. Allony's work (1951) on the metrics of Dunash ben Labraṭ and other poets from the Golden Age, A. Mirsky (1961, 25–35) on the *dīwān* of the wandering poet Yiṣḥaq ben Ḵalfun, and Y. Yahalom (2001) in his study of Yaʿaqob ben Elʿazar. This is also the model used in the important anthology of Schirmann (1954–1959) and the main

modern editions of the *dīwāns* composed by the four great Hebrew poets of the Golden Age, Samuel ibn Nagrela,[65] Shelomo ibn Gabirol,[66] Moshe ibn ʿEzra,[67] and Yehuda ha-Levi.[68]

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[65] For *Ben Tehillim*, see the edition by Sáenz-Badillos and Targarona Borrás (1997), and for the rest, Jarden (1966–1992).

[66] For example, his secular poetry, ed. by Brody and Schirmann (1974). See also Jarden (1971–1972); and Jarden (1975).

[67] This is the case for his secular poetry edited by Brody (1934); Brody (1942); Pagis (1977); and his liturgical poetry, Levin and Rosen (2012).

[68] See the classic edition by Brody (1894); and the anthology of Yehudah ha-Levi by Sáenz-Badillos and Targarona Borrás (1994).

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