THE HISTORICAL BACKGROUND OF THE VOWEL *ṢERE* IN SOME HEBREW VERBAL AND NOMINAL FORMS

By GEOFFREY KHAN

The Faculty of Oriental Studies, Cambridge

One of the most important sources for our knowledge of the length of vowels in the Tiberian tradition of Biblical Hebrew is a corpus of manuscripts containing transcriptions of the Hebrew Bible into Arabic letters. In most of the manuscripts the Arabic transcription employs the orthography of Classical Arabic to represent the sounds of Hebrew. Since Classical Arabic orthography used *matres lectionis* systematically to mark long vowels we are able to reconstruct the distribution of long and short vowels in Tiberian Hebrew. The transcriptions show us that the main factors determining vowel length were stress and syllable structure.[1]

A close examination of the transcriptions reveals that also the quality of a vowel could have a bearing on its length. They reveal that, in a context where vowels were lengthened, the close vowels (*i, u*) were not lengthened to the same degree as the open vowel *a*. This is particularly clear in the transcription of syllables marked with the minor *ga'ya* and in the prefixes of the verbs היה and חיה. Some manuscripts regularly transcribe with a *mater lectionis* both close and open vowels (*i, u, a*) that occur in these syllables, e.g. BL Or. 2544: وُولِياعقُوب عَال-هَاجِمُور (עַל־הֶחָמֹר, Ex. 4: 20), وِيِبِشْتِاحِوُو (וַיִּשְׁתַּחֲווּ, Gen. 33: 7), وِلْيِعْقُوب (וּלְיַעְקֹב, Ex. 6: 8); BL Or. 2547 fols. 1–287 + Or. BL 2549 fols. 1–140: وِاِبِّى (וַיְהִי – Josh. 3: 14), تِبِّى (תְּהְיֶ֫ה – Josh. 4: 6), تِحِبُو (תֶּחֱיוּ – Jer. 35: 7).

Many manuscripts, however, regularly transcribe with a *mater lectionis* only the open vowel *a* in these forms. When the vowel is close (*i, u*) such manuscripts frequently transcribe the syllable without a *mater lectionis*, e.g. BL. Or. 2548 fols. 1–185: وَهِثْنَاحِلُوم (וְהִתְנַחֲלְֽתֶּם – Is. 39: 1), وِيِحْزَاق (וַיֶּחֱזַק – Is. 39: 1), وِثِقْشِرِيم (וּתְקַשְּׁרִים – Is. 49: 18); BL Or. 2539 fols. 56–114: وِاِبِّى (וַיְהִי – 14: 2); وَثِقْشِرِيم (וּתְקַשְּׁרִים – Gen. 24: 22), تِحِيُون (תִּחְיוּן – Gen. 15: 13), بِبِّى (יִהְיֶ֫ה – Deut. 8: 1).

I have argued elsewhere that this reflects intrinsic differences in vowel duration conditioned by the quality of the vowel.[2] Research in the phonetics of various languages has shown that the duration of a vowel varies according to its quality. Close vowels tend to be pronounced shorter than open vowels when other conditions are equal.[3]

This phonetic principle had an influence not only on the medieval Tiberian

---

[1] See G. Khan, *Karaite Bible manuscripts from the Cairo Genizah* (Cambridge, 1990), 'Vowel length and syllable structure in the Tiberian tradition of Biblical Hebrew', *Journal of Semitic Studies*, XXXII, 1987, 23–82, 'The orthography of Karaite Hebrew Bible manuscripts in Arabic transcription', *Journal of Semitic Studies*, XXXVIII, 1993, 49–70.

[2] G. Khan, 'The pronunciation of the minor *ga'ya* as reflected in Karaite Bible manuscripts in Arabic transcription' [in Hebrew], *Language Studies*, V–VI, M. Bar-Asher (ed.), (Jerusalem, 1992), 465–79, 'The pronunciation of the verbs היה and חיה in the Tiberian tradition of Biblical Hebrew', to appear in G. Goldenberg and S. Raz (ed.), *Studies in Semitic and Cushitic linguistics*.

[3] Differences in duration conditioned by vowel quality are thought to be above the threshold for auditory discrimination and thus to be audible. They are also thought to be physiologically conditioned and so constitute a phonetic universal. See I. Lehiste, *Suprasegmentals* (Cambridge, Mass., 1970), 18–19.

pronunciation tradition but also on the historical development of Hebrew phonology. In this paper I shall examine the historical background of one detail of Tiberian Hebrew phonology in order to illustrate this.[4]

In the tradition of Hebrew that was adopted by the Tiberian Masoretes, the following vowel quality shifts took place some time before the Masoretic period: $e{:}\bar{e} > \varrho{:}\bar{e}, a{:}\bar{a} > a{:}\bar{\jmath}$. The result was the emergence of four vowel qualities ($\varrho, e, a, \jmath$) from an original two (e, a). The signs *ṣere* and *qameṣ* in Tiberian Hebrew represent vowels that were long *e* and *a* respectively before the operation of the quality shifts. The signs *segol* and *pataḥ* in Tiberian Hebrew represent vowels that were short *e* and *a* respectively before the operation of the quality shifts.

At some stage after these quality shifts had taken place, vowel length became totally dependent on stress and syllabic structure. All stressed vowels and all vowels in an unstressed open syllable were pronounced long. As a result not only *qameṣ* and *ṣere* but also *pataḥ* and *segol* were pronounced long when stressed or when in an open syllable.[5]

At some stage after vowel length became dependent on stress and syllable structure, long and short *o* developed into two distinct qualities: $o{:}\bar{o} > \jmath{:}\bar{o}$. For this reason long $\bar{o}$ occurs only in stressed or unstressed open syllables whereas short $\jmath$ occurs only in unstressed closed syllables.

There is an apparent discrepancy in the historical development of the vowels in a final closed syllable of verbs. If we look at the vowels in the final syllable of the perfect and imperfect Qal, Niph'al and Pi'el in Tiberian Hebrew we are presented with a problem:

Perfect: קָטֵל, הָלַךְ, כָּבֵד, קָטֹן, נִקְטַל, קָטַל

Imperfect: יִקְטֹל, יֵלֵךְ, יִכְבַּד, יִקְטַן, יִקָּטֵל, יְקַטֵּל.

The final syllables contain *pataḥ*, *ṣere* or *ḥolem* in both the perfect and imperfect. *Pataḥ* represents a vowel that was short before the general lengthening of stressed vowels but *ṣere* represents a vowel that was long before this general lengthening. It would appear, therefore, that there is an asymmetry in the length of the final vowel both within a single verbal pattern (e.g. Qal: קָטַל vs. כָּבֵד) and also across verbal patterns (e.g. Qal יִכְבַּד vs. Pi'el יְקַטֵּל). Since the $o{:}\bar{o} > \jmath{:}\bar{o}$ quality shift did not take place until after the general lengthening of stressed vowels had become operative, the *ḥolem* in the final syllable of the verb forms could reflect either short or long *o* before the general lengthening.

A similar asymmetry is found in two nominal patterns:

1. *Segolate nouns.* In some instances the first syllable has *segol* or *pataḥ*: מֶלֶךְ, נַעַר. In many forms deriving from the patterns *qiṭl* and *quṭl* the vowel is *ṣere* or *ḥolem*: זֵכֶר, בֹּקֶר.

2. *Nouns with an originally doubled final consonant.* In forms deriving from the pattern *qall* the vowel is *pataḥ*: רַב. In forms deriving from *qill* and *qull*, however, the vowel is *ṣere* or *ḥolem*: לֵב, עֹז.

Within the Tiberian tradition some verb forms are attested in two different variants, one with ṣere in the final syllable and the other with pataḥ. In many cases one of the variants is associated with the pausal form and the other with the context form. The variation also occurs, however, within context forms and within pausal forms. Also, one of the vowels (ṣere or pataḥ) is not consistently associated with pause or context across all verbs with such variants. There is, however, a tendency for the forms with ṣere to occur in pause and those with pataḥ to occur in context. Examples: תֵּרֵד ,תֵּרַד (both context); יֹאכַל (context), יֹאכֵל (pause); תֹּאכַל 3 p.f. sg. (context and pause), תֹּאכֵל (pause); תֹּאמַר (context), תֹּאמֵר (pause); יֵלֵךְ (context), יֵלֵךְ (pause); גָּדַל (con-text), גָּדֵל (pause); מָלַט (context), מָלֵט (pause). Note also that the verbs דִּבֵּר and כִּבֵּס are vocalized with ṣere in pause.

A few monosyllabic nouns with an originally doubled final consonant that are vocalized with pataḥ in Tiberian Hebrew are derived from the pattern qill, e.g. פַּת (פִּתִּים), צַד (צִדִּים), בַּת (< bitt < bint), סַף (cf. Akkadian sippu), גַּת (cf. Gimtu, Ginti, Giti in the cuneiform sources).

Some segolate nouns with ṣere or ḥolem in the first syllable are attested in variant forms with segol in the first syllable, e.g. יֵשַׁע/יֵשַׁע, נֵצַח/נֶצַח, נֵבֵל/נֶבֶל, טֶפַח/טֹפַח, עֶצֶב/עֹצֶב, חֵסֶר/חֹסֶר.

Some light is cast on this problem by examining sources reflecting types of Hebrew pronunciation that were different from standard Tiberian.

In the medieval Babylonian tradition of Hebrew most verb forms that have ṣere in the final syllable in Tiberian Hebrew are attested either with ṣere or with pataḥ.[6]

The form קָטַל almost always has pataḥ when it occurs in context (קְטֹל). When it occurs in pause it usually has ṣere (קְטֹל), though forms with pataḥ are attested (קְטֹל).[7]

Many verbs that in Tiberian Hebrew have ṣere in the final syllable of sg. imperfect Qal have pataḥ in the Babylonian tradition, in both context and pause, e.g. תֵּלֵד (Gen. 24: 39 תֵּלֵד), תֵּלֵד (Deut. 28: 57 תֵּלֵד), יֵשֵׁב (Num. 35: 28 יֵשֵׁב), יֵרֵד (I Sam. 26: 10 יֵרֵד), יֵרֵד (Ex. 33: 9 יֵרֵד).[8]

In pause, forms of the imperfect with a suffixed vowel always have ṣere in the penultimate syllable, as in Tiberian Hebrew: תֵּלְכִי, יֵשְׁבוּ, יֵרְדוּ.[9]

The Niphʻal imperfect generally has pataḥ in the final syllable in context (יִקְטֹל). In pause it is usually vocalized with ṣere (יִקְטֹל) and occasionally with pataḥ (יִקְטֹל). The pausal form of the 3rd m. pl. imperfect has ṣere in the penultimate syllable (יִקְטֹלוּ).[10]

The final syllable of the 3 m. sg. perfect Piʻel always has pataḥ, in both context and pause (קְטֹל). The pausal form of the 3 m. pl. has ṣere (קְטֹלוּ). In the 3 m. sg. imperfect the vowel of the final syllable is usually ṣere (יְקְטֹל). It is occasionally vocalized with pataḥ (יְקְטֹל). In pause it is nearly always vocalized with ṣere, with only a few isolated cases with pataḥ. The

---

[6] The Babylonian pataḥ corresponds to both pataḥ and segol in the Tiberian vocalization.

[7] I. Yeivin, The Hebrew language tradition as reflected in the Babylonian vocalization [in Hebrew], (Jerusalem, 1985), 434–5.

[8] Yeivin, 602–3.

[9] ibid., 603.

[10] ibid., 505–7.

pausal form of the 3rd m. pl. imperfect always has *ṣere* in the penultimate syllable (יִקְטֹלוּ.).[11]

In the participles קוֹטֵל, קָטֵל, מְקַטֵּל the Babylonian tradition regularly has *ṣere*. There are sporadic cases where *patah* occurs. Most of these can be interpreted as construct forms, e.g. חֹתֵן מֹשֶׁה (חֹתֵן מֹשֶׁה, Jud. 1: 16).

The general trend that is reflected in the Babylonian tradition is that *patah* occurs in a closed final syllable of many verbal forms where Tiberian Hebrew has *ṣere*. In some forms the Babylonian tradition has either *patah* or *ṣere*. In such cases the proportion of forms with *ṣere* is greater among those occurring in pause than those occurring in context.

Many segolate nouns which have *ṣere* or *holem* in the first syllable in Tiberian Hebrew have *patah* in the Babylonian tradition: נֹצֵר (Is. 60: 21: נֵצֶר), רֹתֵם (I Kg. 19: 5: רֶתֶם), חֹטֵר (Prov. 14: 3: חֹטֶר), בַּשֶּׁפֶל (Ecc. 10: 6: בִּשְׁפֹל).[12]

Many monosyllabic nouns with an originally doubled final consonant which have *ṣere* in Tiberian Hebrew are vocalized with *patah* in the Babylonian tradition in both context and pause: צֵל (צַל), לֵב (לַב), אֵשׁ (אַשׁ), עֵת (עַת), כֵּן (כַּן), קֵץ (קַץ), שֵׁן (שַׁן). Occasionally the pausal form is vocalized with *qameṣ*, e.g. צָל. A few nouns of this pattern have *ṣere* corresponding to the *ṣere* in the Tiberian tradition: אֵם (אַם), חֵן (חַן), חֵץ (חַץ), חֵת (חַת).[13]

We can reconstruct the pronunciation of the aforementioned verbal forms in pre-Masoretic Hebrew on the basis of the Greek transcription of Hebrew in the second column of Origen's Hexapla. In the transcription alpha is used where Tiberian Hebrew has long *qameṣ* but where Tiberian Hebrew has *patah* the Hexapla has either *alpha* or *epsilon*: ναθαν = נָתַן (Ps. 46: 7), αδ = עַד- (Ps. 28: 9), ελ = אַל (8 times), ρεκ = רִק (Ps. 32: 6). *Epsilon* occurs also where Tiberian Hebrew has *segol* or short *hireq*: ιεθερ = יִתֵר' (Ps. 31: 24), φιεμ = פִּיהֶם (Ps. 35: 21), βεχι = בְּכִי (Ps. 30: 6); λεββι = לְבִּי, αλρεγη = עַל רִגְעֵי- (Ps. 35: 20).

Leaving aside the verbal forms under discussion, the Hexapla generally has *eta* where Tiberian Hebrew has *ṣere*, e.g. θερβηνι = תַּרְבֵּנִי (Ps. 18: 36), εκκης = עִקֵּשׁ (Ps. 18: 27), αχην = אָבֵן (Ps. 31: 23).[14] Where Tiberian Hebrew has final הַ — in noun and verb forms derived from final weak roots the Hexapla has *epsilon*: μασε = מַחְסֶה (Ps. 46: 2), ασσανε = אַשְׁנֶה (Ps. 89: 35). The final vowel in these word forms must have been pronounced long. Words with final הָ —are transcribed in the Septuagint with η: μανασση (Codex B, Gen. 41: 51). In Classical Attic Greek η was pronounced as open mid [ẹ̄]. There is no positive evidence for the closing of η to [ī] before A.D. 150. It is likely, however, that this was not a sudden shift but was preceded by a transitional period in which

---

[11] ibid., 514–15, 526–7.

[12] ibid., 817–50.

[13] ibid., 778–5.

[14] By the time of Origen (A.D. 185–254) it is likely that Greek η was pronounced with the quality of the close vowel *ī* and Greek αι was pronounced *ẹ̄*. Since in the transcription of the Hexapla η corresponds not to Hebrew *ī* but to *ē* and αι corresponds to the Hebrew diphthong *ay*, it would appear that the transcription was originally written at an earlier period. The aforementioned shifts in the pronunciation of Greek are datable to the second century A.D. (cf. W. S. Allen, *Vox Graeca: a guide to the pronunciation of Classical Greek*, Cambridge, 3rd ed. 1987, 74, 79). This implies that the transcription that was incorporated into the Hexapla was written no later than the first century A.D. (see G. Janssens, *Studies in Hebrew historical linguistics based on Origen's Secunda*, Leuven, 1982, 20–1).

[ẹ] was pronounced as a closer mid vowel [ẹ].[15] At the period in which the Septuagint transcriptions were made (third century B.C.) η was still an open mid vowel [ẹ] but by the time of the composition of the Hexapla transcription [ẹ] had already closed to [ẹ]. At the time of the Hexapla transcription and probably also at an earlier period the final long vowel in forms represented in Tiberian Hebrew by ה‬ —must have been more open than [ē], presumably in the region of open mid [ẹ]. In the Hexapla transcription it is represented by ε since η had by this period closed to [ẹ]. The letter ε was pronounced [e] and so was closer to the open mid quality [ẹ]. Since at the period of the Septuagint η was still an open mid [ẹ] it was suitable to represent the final Hebrew vowel in question.[16]

In the Hexapla, verb forms that have ṣere in a final closed syllable in Tiberian Hebrew are sometimes transcribed with epsilon and sometimes with eta. The forms occurring in context all have epsilon, whereas those occurring in pause have either epsilon or eta.

Context

 ιεθθεν (יִתֵּן, Ps. 18: 33).
 ιμαλλετ (יְמַלֵּט, Ps. 89: 49).
 ιδαββερ (יְדַבֵּר, Ps. 49: 4).
 θεσσαβερ (תְּשַׁבֵּר, Ps. 48: 8).
 ααλλελ (אֲחַלֵּל, Ps. 89: 35).
 ασσακερ (אֲשַׁקֵּר, Ps. 89: 34).
 ουβαρεχ (וּבָרֵךְ, Ps. 28: 9).
 θεσθερ (תִּסָּתֵר, Ps. 89: 47).[17]

Pause

 θηληχ (תֵּלֵךְ, Ps. 32: 8).
 ιησηβ (יֵשֵׁב, Ps. 9: 8).
 εχαζεβ (אֲכַזֵּב, Ps. 89: 36).

Pausal forms which have ṣere in a penultimate open syllable in Tiberian Hebrew always have eta in the Hexapla.

 ιδαββηρου (יְדַבֵּרוּ, Ps. 35: 20).
 ιαλληλου (יְחַלְּלוּ, Ps. 89: 32.
 ιαλληχουν (יְהַלְּכוּן ?, MT: יֵלֵכוּן, Ps. 89: 31).

Participles which have ṣere in a stressed closed syllable in Tiberian Hebrew have eta in the Hexapla:

---

[15] In classical Attic ει was pronounced as the close mid [ẹ] but by the end of the fourth century B.C. it began to close to [ī]. It is possible that this shift facilitated the closing of [ẹ]; cf. Allen, *Vox Graeca*, 74.

[16] In the Babylonian tradition final open syllables vocalized with *segol* in Tiberian Hebrew are sometimes vocalized with *qameṣ*: עֹלָה (עֹלֶה, Ps. 74: 23), וָאֶרְאָה (וָאֶרְאֶה, Ezek. 2: 9). Conversely, where Tiberian Hebrew has a final open syllable vocalized with *qameṣ* (ה‬ָ -) the Babylonian tradition sometimes has *pataḥ*: עָשָׂה (עָשָׂה, Ps. 148: 8) (Yeivin, 685–97). This interchange between *qameṣ* and *pataḥ* could not have arisen by analogy with ל״א roots. The masc. sing. active participle Qal of ל״א verbs has ṣere in the final syllable not *qameṣ*. It would appear that in the Babylonian tradition the final [ẹ] vowel in these forms was sometimes opened even further, with the result that it was treated as [a] by the a:ā > a:ɔ quality shift and shifted to [ɔ].

[17] The reading of the transcription of the vowel in the final syllable of וְקָצֵץ (Ps. 46. 10) is not certain. G. Mercati (*Psalterii Hexapli Reliquiae*, The Vatican, 1958) reads ουκ.σσες with *epsilon*.

Context

αννωθην (הֲנֹתֶן, Ps. 18: 48).

νωσηρ (נֹצֵר, Ps. 31: 24).

ωζηρ (עֹזֵר, Ps. 30: 11).

ααφης (הֶחָפֵץ, Ps. 35: 27).

ουσαλημ (זְשָׁלֵם ?, MT: וּמְשַׁלֵּם, Ps. 31: 24).

The only exception is μαλαμμεδ ιαδαι (מְלַמֵּד יָדַי, Ps. 18: 35), which can be interpreted as a construct form.

The Hexapla transcribes the vowel of the final closed syllable of the verbal form יִקְטֹל with *omicron*:

Context

ισροφ (יִשְׂרֹף, Ps. 46: 10).

ερδοφ (אֶרְדּוֹף, Ps. 18: 38).

No instances of these forms in pausal position are extant. When Tiberian Hebrew has a pausal form of the 3 m. pl. imperfect with *holem* in a stressed open syllable in penultimate position the Hexapla has *omega*: ιεσμωρου (יִשְׁמֹרוּ, Ps. 89: 32).

Long *ō* deriving historically from long *ā* is always represented in the Hexapla by *omega*:

νωσηρ (נֹצֵר, Ps. 31: 24).

ασσωμριμ (הַשֹּׁמְרִים, Ps. 31: 7).

ραμωθ (רָמוֹת, Ps. 18: 28).

The occurrence of *omicron* in forms such as ισροφ (יִשְׂרֹף, Ps. 46: 10) indicates that the vowel of the final syllable was pronounced short. This demonstrates that the *epsilon* in the final syllable of verb forms such as ιεθθεν (יִתֵּן, Ps. 18: 33) should also be interpreted as reflecting a short vowel.[18]

We may conclude that the Hexapla reflects a pronunciation of Hebrew in which the vowel corresponding to the *holem* and *ṣere* in Tiberian verbal forms with final closed syllables such as יִקְטֹל and יְקַטֵּל was pronounced short in context. In pause the extant data from the Hexapla show that the vowel corresponding to the *ṣere* in a closed syllable was sometimes pronounced short and sometimes pronounced long. Where Tiberian Hebrew has a pausal form with *ṣere* in an *open* syllable, however, the Hexapla always has a long vowel.

Monosyllabic nouns with an originally doubled final consonant which in Tiberian Hebrew are vocalized with *ṣere* or *holem* are represented in the Hexapla with ε or o respectively:

Context

εμ (אֵם, Ps. 35: 14)

οζ (עֹז, Ps. 30: 8)

Pause

λεβ (לֵב, Ps. 32: 11)

βαεζ (בָּאֵז, Ps. 46: 10)

ουοζ (וָעֹז, Ps. 29: 1)

---

[18] As we have seen, in at least one context (viz. forms such as μασε = מַחֲסֶה) *epsilon* represented a long vowel.

Similarly, segolate nouns which in Tiberian Hebrew have ṣere or ḥolem are represented in the Hexapla with ε or o:

Context

χεσλ (כֶּסֶל, Ps. 49: 14)

αζεχρ (read λζεχρ: לִזְכֵר, Ps. 30: 5)

κορ (קֹרַח, Ps. 49: 1)

Pause

βοκρ (בֹּקֶר,Ps. 46: 6)

The vowels in these two noun patterns, therefore, were pronounced short.

It is not clear what quality of vowel the *epsilon* in the final syllable of verbal forms in the Hexapla was intended to represent. As has been stated above, *epsilon* in the Hexapla corresponds to Tiberian *pataḥ*, *segol*, or short *ḥireq*. It should be noted, however, that Tiberian *pataḥ* corresponds in the majority of cases to *alpha* rather to *epsilon*.[19] Since *alpha* is never used in the final syllable of the verbal forms in question, it is likely that the *epsilon* here was intended to represented a closer vowel.

In the Babylonian tradition *pataḥ* frequently occurs in the final syllable of these verbal forms where Hexapla has *epsilon* and Tiberian has ṣere. Moreover in the Tiberian tradition there are a few cases of *pataḥ* occurring as a variant of ṣere (e.g. תֵּרֵד/תֵּרַד).

This open vowel in final closed syllables that is found abundantly in the Babylonian tradition and in a few isolated forms in Tiberian Hebrew must have developed from an original [i] by Philippi's law: *yuqaṭ'ṭil* > *yuqaṭ'ṭal*.[20] The Hebrew preserved by the medieval vocalization systems shows that either Philippi's law did not operate consistently or, if it originally operated consistently, analogical levelling affected the newly formed [a] inconsistently from one morphological context to another. This lack of consistency is found within individual traditions of Hebrew. In the Tiberian tradition, for instance, the reflex of original *tiqqa'ṭilna* is תִּקַּטֵלְנָה but that of *tuqaṭ'ṭilna* is תֻּקְטֵלְנָה. Moreover, the distribution of [a] vowels resulting from Philippi's law differs slightly from one pronunciation tradition to another. Its distribution is wider in the Babylonian tradition than in Tiberian Hebrew. In the Babylonian tradition, for instance, both the two aforementioned verbal forms have *pataḥ* in the stressed syllable: תִּקְטַלְנָה, תֻּקְטַלְנָה.[21]

In the Hexapla *epsilon* regularly occurs where Tiberian Hebrew has *pataḥ* resulting from Philippi's law, e.g. in Pi'el and Hiph'il perfects with consonantal subject suffixes: ελλελθ (חִלַּלְתָּ, Ps. 89: 40), φεθεθα (פִּתְּחָה, Ps. 30: 12), εκσερθ (הִקְצַרְתָּ, Ps. 89: 46), εσθερθα (הִסְתַּרְתָּ, Ps. 30: 8). Some scholars infer from this that Philippi's law must have taken place after the period of the Hexapla.[22]

---

[19] Janssens, *Studies in Hebrew historical linguistics*, 70.

[20] Ch. Sarauw, *Über Akzent und Silbenbildung in den älteren semitischen Sprachen* (Copenhagen, 1939), 56 ff. According to Sarauw, Philippi's law affected short *i* in every stressed closed syllable. This was an extension of earlier formulations of the law, in which it was said to operate in more restricted contexts. For a summary of these earlier formulations see J. Blau, 'On the chronology of Lex Philippi [in Hebrew], *Ninth World Congress of Jewish Studies* (Jerusalem, 1986), Division D, vol. I, 1–2.

[21] Yeivin, *The Hebrew language tradition*, 383.

[22] Sarauw, *Über Akzent und Silbenbildung*, 78, E. Brønno, *Studien über hebräische Morphologie und Vokalismus, auf Grundlage der Mercatischen Fragmente der zweiten Kolumne der Hexapla des Origenes* (Leipzig, 1943), 448.

This chronology may be correct for the Hebrew of the Hexapla, but cannot be valid for all traditions of Hebrew. There are traces of [a] arising from Philippi's law in the Septuagint (third century B.C.). Moreover the transcriptions in the Septuagint represent epenthetic vowels breaking up consonantal clusters in word final position, e.g. νεβελ (נֵבֶל), εμεκ (עֵמֶק). Philippi's law must have begun to operate before the emergence of these epenthetic vowels, as shown by such forms as צֶדֶק (<ṣadq<ṣidq) and קוֹטֶלֶת (<qōṭalt<qōṭilt).[23] The Hexapla transcription appears to reflect a tradition of Hebrew pronunciation in which the i > a shift has not taken place, at least in the aforementioned pi'el and hiph'il forms.[24] This should be interpreted as an extreme case of the inconsistent operation of the shift across different pronunciation traditions. The shift must have taken place in other contemporary traditions, which were the direct forebears of the medieval pronunciation traditions reflected by the vocalization systems.[25]

In his treatise on Hebrew phonology Sarauw discussed some of the afore-mentioned problems in the Tiberian tradition.[26] He argued that the shift of short i to a in the stressed closed syllables originally took place in all contextual forms. When Philippi's law started to operate, short i in pause had already been lengthened to ē. Originally, therefore, the verbal forms with ṣere in the final syllable occurred in pause, whereas the forms with pataḥ occurred in context. At some later stage, a process of levelling took place and the pausal forms were used also in context. The forms with pataḥ that are attested in the Tiberian tradition are vestiges of the original context forms. Since the original distinction had broken down, the surviving forms with pataḥ were used in both pause and context. Similarly, according to Sarauw, nominal forms with ṣere such as לֵב deriving from the pattern qill were originally pausal forms. The original context form was lab, deriving from libb by Philippi's law. In the Tiberian tradition the pausal form had almost completely supplanted the context form. Sarauw explained the variant vocalization of segolates in a similar manner. The pattern qiṭl became qēṭl in pause but qaṭl in context. In most cases the pausal form qēṭl predominated. Variant forms of Tiberian קֶטֶל with segol in the first syllable (נֶצַח/נֵצַח) are derived from the original context form qaṭl < qiṭl. He held that the variation קֶטֶל/קְטַל had a similar background. The pattern quṭl also shifted to qaṭl in context. The form qōṭl < quṭl was originally restricted to pause.[27]

According to Sarauw the levelling of pausal ṣere and contextual pataḥ occurred since these two vowels differed not only in quantity but also in quality. He suggested that the distinction between contextual and pausal forms with an original stressed a vowel was maintained since, until the Masoretic

[23] cf. Sarauw, Über Akzent und Silbenbildung, 84–85, Blau, Proceedings of the ninth World Congress of Jewish Studies, vol. I (Jerusalem, 1986), 1–4; E. Qimron, Lĕšonénu, L, 1986, 248-9.

[24] Other forms which have pataḥ in Tiberian Hebrew resulting from Philippi's law such as בַּת (< *bint), and זָקֵן (construct < *zaqin) do not occur in the extant portions of the Hexapla transcription. It is significant that the epenthetic vowels in segolate forms are not represented in the Hexapla.

[25] The form והוליכתי written with scriptio plena in the Isaiah scroll from Qumran (IQIsᵃ, Is. 42: 16, MT: והולכתי) also reflects a pronunciation that has not been affected by Philippi's law. See Qimron, Lĕšonénu, L, 248.

[26] Sarauw, Über Akzent und Silbenbildung, 56 ff.

[27] ibid., 90.

period, the difference between the stressed vowels of the two forms was only one of quantity, e.g. קָטַל (context) vs קָטָל (pause).[28] This view is followed by Blau[29] and Qimron.[30]

It is not clear whether the quality shift *e:ē > ẹ:ē* had taken place in the Hebrew pronunciation reflected by the Hexapla. One should be cautious of identifying the Hebrew of the Hexapla as the direct forebear of the medieval Tiberian pronunciation tradition. This vowel shift did not take place in all traditions of Hebrew pronunciation. Many medieval manuscripts with Palestinian or Palestinian-Tiberian vocalization, for instance, reflect a tradition in which there was no qualitative distinction between *segol* and *ṣere*. One cannot exclude the possibility, therefore, that the Hebrew of the Hexapla belongs to a tradition of pronunciation in which this vowel shift was never to take place.

Nevertheless we can explain the distribution of *ṣere* in the Tiberian verbal forms if we assume that, at some stage in the development of the stream of Hebrew pronunciation that became the medieval Tiberian tradition, the distribution of vowel length in verbal forms was similar to what is found in the Hexapla. We may call this proto-Tiberian stage A. At some later period in this tradition of pronunciation, general lengthening of vowels in stressed syllables became operative. We may call this proto-Tiberian stage B. The vocalization system that represented the Tiberian pronunciation tradition was created at some period after stage B had been reached. The vowel quality shifts *e:ē > ẹ:ē* and *a:ā > a:ɔ̄* must have taken place some time before stage B.

When the general lengthening of vowels in stressed syllables became operative, all vowels in the final closed syllable of verbal forms would have been pronounced long. The distinction between contextual and pausal forms in stage B would, therefore, depend on a difference in the quality of the stressed vowel, since there was no longer any distinction in the length of this vowel. Let us assume that the situation in proto-Tiberian stage A was similar to what is found in the Hexapla, i.e. pausal lengthening was inconsistent in verbal forms that have *ṣere* in closed syllables in Tiberian Hebrew. If this were the case, in proto-Tiberian stage B there would have been no consistent difference in vowel quality between pausal and contextual forms in these verbs. This lack of a consistent distinction led to a breakdown of the distinction. The pausal form came to be used in all positions. Manuscripts with Babylonian vocalization reflect a tradition in which the distinction between the two forms was not completely levelled but, nevertheless, the contextual form was predominant in most cases.

It is important to note that levelling of pausal and contextual forms must have taken place *after* the general lengthening in stage B and, therefore, *after* the quality shifts *e:ē > ẹ:ē*, *a:ā > a:ɔ̄*, which took place before the general

[28] ibid., 80.

[29] J. Blau, 'On pausal lengthening, pausal stress shift, Philippi's law and rule ordering in Biblical Hebrew', *Hebrew Annual Review*, v, 1981, 1–11. He argues, however, that the *pataḥ* in the final closed syllable of some imperfect consecutive forms in pause arose originally in pause, e.g. pausal וַיֵּלַךְ vs. context וַיֵּלֶךְ; pausal וַיֹּאמַר vs context וַיֹּאמֶר. Here the *pataḥ* arose by the operation of Philippi's law after pausal lengthening had taken place and after the pausal stress shift to the closed ultima.

[30] Qimron, 'Interchanges of *ṣere/pataḥ* in Biblical Hebrew' [in Hebrew] *Lěšonénu*, L, 1986, 77–101.

lengthening. If the levelling had taken place before the general lengthening, there would have been asymmetry in the length of final stressed vowels in the verbal paradigms (*qāṭal* vs. *qāṭēl*). Since the levelling occurred after the general lengthening and the quality shifts, the difference between the pausal and contextual forms *qɔṭēl:qɔṭāl*, on the one hand and *qɔṭɔl:qɔṭāl*, on the other, consisted only in the quality of the vowels. Sarauw's explanation as to why the levelling occurred in the first pair but not in the second is, therefore, untenable. When the levelling took place all the stressed vowels were long and there was also a qualitative difference between the stressed vowels in *both* pairs.

On the basis of the foregoing facts we may reconstruct the historical development of the verbal forms as follows.

Pausal lengthening of the stressed vowel took place some time before the general lengthening of stressed vowels (proto-Tiberian stage B).

A stressed *a* vowel in pause was regularly lengthened in both closed and open syllables:

qā'ṭal > qā'ṭāl
qā'ṭalū > qā'ṭālū
yiq'ṭal > yiq'ṭāl
yiq'ṭalū > yiq'ṭālū

A stressed *i* vowel in pause was regularly lengthened when in an open syllable:

qā'ṭilū > qā'ṭēlū
yuqaṭ'ṭilū > yuqaṭ'ṭēlū

A stressed *i* vowel in a closed syllable was not regularly lengthened in pause. Sometimes it was lengthened but other times it remained short:

qā'ṭil > qā'ṭēl OR *qā'ṭil* (same as the context form). The form *qā'ṭil* subsequently shifted to *qā'ṭal* by Philippi's law *after* pausal lengthening had ceased to operate.
yuqaṭ'ṭil > yuqaṭ'ṭēl OR *yuqaṭ'ṭil* (the same as the context form). The form *yuqaṭ'ṭil* subsequently shifted to *yuqaṭ'ṭal* by Philippi's law *after* pausal lengthening had ceased to operate.

So, whereas *qā'ṭal* regularly shifted to *qā'ṭāl* by pausal lengthening, the stressed vowel of *qā'ṭil* was not regularly lengthened in pause. It was this lack of a consistent distinction between pausal and contextual forms that led to the levelling of the two forms. In Tiberian Hebrew the original pausal form almost completely supplanted the original contextual form. In the Babylonian tradition, on the other hand, the original contextual form predominated in most cases.

This reconstruction of the historical phonology of the verbal system is supported by the inconsistent occurrence of pausal lengthening in the Hexapla. In the extant portions of the Hexapla this phenomenon is not reflected in the transcription of segolate nouns and monosyllabic nouns with an originally doubled final consonant. In both these forms no lengthening is found in the few pausal forms that are attested. It is likely, nevertheless, that the levelling

of pausal and contextual forms arose on account of the same phonetic process
as affected the verbal forms. We may reconstruct their development as follows:

Segolates
    Qaṭl
    In context: *qaṭl*
    In pause: *qāṭl*
    Then *qaṭl > qeṭel* and *qāṭl > qāṭel.*

After the vowel quality shifts and the operation of general lengthening, the
contextual form was *qēṭel* and the pausal form was *qɔ̄ṭel.* This distinction was
maintained.

    Qiṭl
    In context: *qiṭl*
    In pause: *qēṭl* or *qiṭl*
    Subsequently *qiṭl > qaṭl* by Philippi's law.
    Then *qaṭl > qeṭel* and *qēṭl > qēṭel.*

After the vowel quality shifts and the operation of general lengthening, the
contextual form was *qēṭel.* In pause both *qēṭel* and *qēṭel* occurred. The distinc-
tion between pausal and contextual forms broke down.[31] In the Babylonian
tradition the original contextual form had a wider distribution than in Tiberian
Hebrew.

Monosyllabic nouns
    Qal
    In context: *qal*
    In pause: *qāl*

After the vowel quality shifts and the operation of general lengthening, the
contextual form was *qāl* and the pausal form was *qɔ̄l.* This distinction was
maintained.

    Qil
    In context: *qil*
    In pause: *qēl* or *qil*
    Subsequently *qil > qal* by Philippi's law.

After the vowel quality shifts and the operation of general lengthening, the
contextual form was *qāl.* In pause both *qēl* and *qāl* occurred. The distinction
between pausal and contextual forms broke down. In Tiberian Hebrew the
original pausal form almost completely supplanted the original contextual
form. In the Babylonian tradition, on the other hand, the original contextual
form predominated.

---

[31] In addition to the levelling of pausal and contextual forms of original *qiṭl* the segolate
nouns underwent further analogical processes, e.g. contextual *qēṭel* vs. pausal *qāṭel*; see Sarauw,
Über Akzent und Silbenbildung, 85–6; Blau, *Hebrew Annual Review*, v, 1981, p. 3 n. 8.

Here, then, are cases of the open vowel *a* being lengthened more readily than a close vowel under the same conditions. We see that the operation of this principle did not only affect details of the Tiberian pronunciation tradition such as the minor *ga'ya* and the prefixes of היה and חיה but also had far-reaching consequences on the historical phonology of Hebrew.