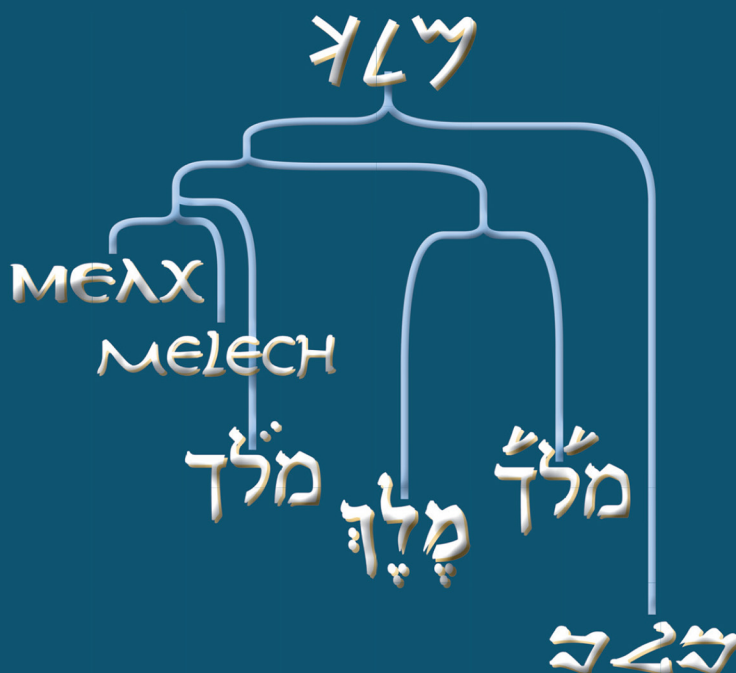# The Linguistic Classification of the Reading Traditions of Biblical Hebrew
A Phyla-and-Waves Model

Benjamin P. Kantor

UNIVERSITY OF
CAMBRIDGE
Faculty of Asian and Middle
Eastern Studies

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Cover design by Jeevanjot Kaur Nagpal

The main fonts used in this volume are SIL Charis, Scheherazde New, SBL Hebrew, SBL Greek, Kahle, SBL Hebrew, Hebrew Samaritan, Hebrew Paleo Gezer and Keter Aram Sova.

3. THE HISTORICAL ATTESTATIONS OF THE BIBLICAL HEBREW READING TRADITIONS

While the idea of a hypothesised (Proto-)Biblical Hebrew reading tradition (or traditions) of the mid-to-late Second Temple Period is plausible, we do not have direct access to any of the oral reading traditions from this period.[14] We only have access to what this earlier reading tradition—or collection of oral reading traditions—would eventually become in the following centuries. And, in some sense, the historical record we do have at our disposal is accidental. The first substantial historical record of a Biblical Hebrew oral reading tradition is not actually attested until the second or third century CE, in the Greek transcriptions of Hebrew found in the second column of Origen's Hexapla (Kantor forthcoming c). This is followed by the substantial Latin transcriptions of Hebrew in Jerome's writings of the fourth and fifth centuries CE. The historical record is silent again until the early medieval period, during which explicit vowel notation systems finally developed, namely those of the Palestinian, Babylonian, and Tiberian traditions. Finally, though not codified in writing historically, the modern oral reading tradition of the Samaritan community provides—albeit with significant later developments—a

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[14] Prior to the late Roman period, only indirect (and fragmented) evidence exists, such as the Greek transcriptions of Hebrew in the LXX and the use of *matres lectionis* in the Dead Sea Scrolls.

witness to an oral reading tradition that has its roots in Second Temple times.[15] An overview of each of these historical attestations follows in the remainder of this chapter.

1.0. Origen's Secunda

In the middle of the third century CE, in Caesarea, the church father and biblical scholar Origen (185–253 CE) compiled the Hexapla (ἑξαπλᾶ 'sixfold'), so named for its format of six parallel columns. It may in fact be the world's first parallel Bible. The first column contained Hebrew in Hebrew letters, the second column a Greek transcription of the Hebrew, the third column the Greek translation of Aquila, the fourth column the Greek translation of Symmachus, the fifth column a version of the Septuagint (LXX), and the sixth column the Greek translation of Theodotion; in some cases, additional columns were added as well, such as the 'Quinta' and the 'Sexta', so named as they are the 'fifth' and 'sixth' Greek translations (sometimes) included in the Hexapla. The original probably looked something like this (based on Cambridge University Library T-S 12.182 and the Mercati palimpsest; see Mercati 1958; Kantor 2022; Carrera Companioni 2022):

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[15] Note that there are scores more of modern traditions, but these are generally developments from the Palestinian tradition (via the Ashkenazi or Sephardi branch) or from the Babylonian tradition (via the Yemenite branch). As such, for our purposes, they do not typically provide more historically relevant information than the Palestinian or Babylonian traditions as attested in the Middle Ages.

Figure 2: Impression of Origen's Hexapla

Although the nature and content of the Ḥexapla is interesting for a variety of reasons, what concerns us most here is the second column, which contains a Greek transcription of the Hebrew Bible: e.g., the word שָׁלוֹם is written as σαλωμ and the word בַּיִת is written as βαϊθ. While it is true that Origen is ultimately responsible for the production of the Hexapla in the third century CE, none of the other texts contained therein were original to him. The same goes for the second column, also known as the 'Secunda'.

There is significant evidence that Origen found the text of the second column—or extracts thereof—among the Jewish community of Caesarea Maritima (see Kantor forthcoming c). It is not entirely clear if the Caesarean Jews had transcribed the entire Hebrew Bible into Greek by the time Origen encountered them.

If not, it is likely that Origen enlisted their help to expand their already existing practice of transcribing the Hebrew scriptures into Greek for the entire Bible. In either case, however, the Greek transcriptions of Hebrew in the second column may be regarded as reflecting an authentic Biblical Hebrew oral reading tradition of late Roman Palestine. As such, the second column of Origen's Hexapla constitutes the oldest continuous record of the vocalisation of the Hebrew Bible in existence (Kantor 2022; forthcoming c).

In terms of layout, there was usually one Hebrew word written per line in the (reconstructed but unattested) left column and one corresponding transcription in the right column. In some cases, however, multiple words were written on the same line:

Table 3: Ps. 46.1–2 in the first and second columns of the Hexapla

[למנצח]	λαμανασση	'to the choirmaster'
[לבני קרח]	<λ>ἀβνηκορ	'to the sons of Korah'
[על עלמות]	αλ·αλμωθ	'according to Alamoth'
[שיר]	σιρ	'a song'
[אלהים לנו]	ε’λωειμ λανου	'God is for us'
[מחסה ועז]	μασε·ουοζ	'a refuge and strength'
[עזר]	ε’ζρ	'a help'
[בצרות]	βσαρωθ`	'in troubles'
[נמצא מאד]	νεμσα·μωδ	'very present'

From a linguistic standpoint, the Biblical Hebrew reading tradition reflected in the Secunda largely reflects a language system like that of Tiberian Hebrew, but there are a number of significant differences and characteristic features, such as the following:

- The tradition underlying the Secunda appears to reflect a vowel system with at least seven distinct qualities and phonemic length distinctions: i.e., /ī/ [iː] (= ι or ει), /ē/ [eː] (= η), /e/ [ɛ] (= ε), /a/ [a]/[æ] (= α), /ā/ [ɑː] (= α), /o/ [o] (= ο), /ō/ [oː] (= ω), /ū/ [uː] (= ου).

- It seems to be the case that there was no vowel of the *qameṣ* quality (i.e., /ɔ(ː)/) as in Tiberian Hebrew, only a short /a/ [a]/[æ] vowel and a long /ā/ [ɑː] vowel.

- Where Tiberian has the vowels *ḥireq* (i.e., /i/) or *qibbuṣ* (i.e., /u/) in closed unstressed syllables, the Secunda tends to have /e/ or /o/ vowels, respectively: e.g., νεζρω vs נִזְרוֹ [nizˈrˤoː] 'his crown' (Ps. 89.40); οκκωθαϊ vs חֻקֹּתָי [ħuqqoːˈθaːaj] 'my statutes' (Ps. 89.32).

- Historical short **u* is also often preserved where Tiberian has vocalic *shewa*: e.g., ιεφφολου vs יִפֹּלוּ [jippaˈluː] 'will fall' (Ps. 18.39).

- With respect to the system of suffixes, the Secunda tradition tends to exhibit -*VC* patterns rather than -*CV* patterns: e.g., ελωαχ vs אֱלֹהֶיךָ [ʔɛloːˈhɛːχɔː] 'your (MS) God' (Ps. 45.8); ουαλλα vs וְעָלֶיהָ [vɔʕɔːˈlɛːhɔː] 'and over it (FS)' (Ps. 7.8).

- The Secunda also maintains the historical **a* vowel in certain patterns where Tiberian has /i/: e.g., μαβσαραυ vs מִבְצָרָיו [mivsˤɔːˈʀɔːɔv] 'his fortresses' (Ps. 89.41).

- In the realm of syllable structure, the oral reading tradition behind the Secunda appears to have had a higher tolerance for consonant clusters than the Tiberian tradition: e.g., ουαμμελχ vs וְהַמֶּלֶךְ [vahamˈmɛːlɛχ] 'and the king' (1 Kgs 1.1).

- Note also that an epenthetic can occur between the first and second radicals of a *yiqṭol* verb when the second radical is a sonorant: e.g., ϊκερσου vs יִקְרְצוּ־ [jiq̄ṛaˈsˤuː] 'they will wink' (Ps. 35.19); ιεσεμου vs יִשְׂמְחוּ־ [jismuˈħuː] '[do not] let them rejoice!' (Ps. 35.24).

- Gutturals do not always bring about lowering in the Secunda as they do in Tiberian: e.g., θεσου vs תַּעֲשׂוּ [tʰaːʕaˈsuː] 'you (MP) do' (Mal. 2.13); μεββεσε vs מַה־בֶּצַע [maˑbˈbɛːsˤaʕ] 'what gain… ?' (Ps. 30.10). Note also that the Secunda does not have furtive *pataḥ*: e.g., ουαββωτη vs וְהַבּוֹטֵחַ [vahabboːˈtˤeːaħ] 'and the one who trusts' (Ps. 32.10).

- Definiteness following inseparable prepositions is also less common in the Secunda: e.g., βσαχ 'in sky' vs בַּשַּׁחַק 'in the sky' (Ps. 89.38).

- Finally, note that there is often no difference in the Secunda between the verbal form used for modal and jussive meanings (i.e., *wyiqṭol* in Tiberian) and that used for narrative past (i.e., *wayyiqṭol* in Tiberian): e.g., ουϊεθθεν 'and made; and makes(?)' (Ps. 18.33), but cf. וְיִתֶּן [vijittɛn] 'and may give' (Ps. 72.15) vs וַיִּתֶּן [vaɟɟitˈtʰeːen] 'and made' (Ps. 18.33; Kantor 2020).

While there are many other characteristic features of the Biblical Hebrew tradition underlying the Secunda, these will be outlined where relevant in the remainder of the book. In short, however, the Secunda may be regarded as an authentic ancient reading tradition of Biblical Hebrew, probably of the Jewish community of late Roman Caesarea. While typologically more archaic than other traditions cited on this list in numerous ways, it also exhibits some innovative features of its own.

2.0. Transcriptions in Jerome

Similarly to the Secunda, the writings of Jerome (347–419 CE) constitute another rare source for transcriptions of an ancient Palestinian reading tradition of Biblical Hebrew. Unlike the Secunda, however, Jerome does not provide us with a continual transcribed text of the Bible. His transcriptions—in Latin rather than Greek—occur only sporadically in his commentaries and letters, particularly when he is making a point that touches on the meaning or nature of the original Hebrew. His transcriptions appear to be based on his own familiarity with Hebrew acquired through his own personal interactions with Jewish informants.

Indeed, although Jerome was born in Stridon on the border of Dalmatia and Pannonia, an ascetic impulse drove him to the Syrian desert of Chalcis southeast of Antioch during the 370s CE. It was during this time that he first started to learn Hebrew from a Jewish Christian. He probably also picked up some Aramaic during this time, since it would have been necessary for communication with the locals. However successful his Hebrew learning was during this time, however, it accelerated drastically after his move to Bethlehem in Palestine in the summer of 386 CE. It was there that he encountered numerous Aramaic-speaking Jewish interlocutors, who were able to instruct him in Hebrew. Over the coming years, Jerome grew in his knowledge of Hebrew through regular interaction with the knowledgeable Jewish scholars of Bethlehem, who would have explained Hebrew grammar to him in Greek (Quasten 1988, 212–19; Graves 2007, 84–98). With the help of these scholars, it seems that Jerome, unlike Origen, achieved a significant level of proficiency in Hebrew.

Therefore, the transcriptions of Biblical Hebrew in Jerome's commentaries and writings most likely reflect an authentic oral reading tradition current among the Jews of Bethlehem during the early Byzantine period. As noted above, however, the transcriptions are sporadic and not continuous. Usually only one or two words are quoted. On occasion, a full phrase can be quoted. The longest quotation extends for several verses. Note the examples below:

(1)   Jerome, Against Iouinianus, I.31 (text from *Notitia Clavis Patrum Latinorum* 610):

loquatur isaias spei nostrae fideique mysterium: ecce uirgo in utero concipiet et pariet filium, et uocabis nomen eius emmanuel. scio iudaeos opponere solere, in hebraeo uerbum alma non uirginem sonare, sed adolescentulam. et reuera uirgo proprie bethula appellatur, adolescentula autem uel puella, non alma dicitur, sed naara. quid est igitur quod significat alma? Isaiah speaks of the mystery of our hope and faith: Behold, a virgin will conceive and bear a son, and you will call his name Emmanuel. I know that the Jews are in the habit of opposing this view, arguing that in Hebrew the word **alma** does not signify 'virgin', but 'young woman'. And, actually, 'virgin' is specifically called **bethula**, but 'young woman' or 'girl', is not called **alma**, but **naara**. What is it, then, that **alma** signifies?

(2)   Jerome, Commentary on Galatians, 2.3 (text from *Notitia
         Clavis Patrum Latinorum* 591):
         *In eo autem loco ubi Aquila et Theodotion similiter transtule-
         runt dicentes: quia maledictio Dei est suspensus, in hebraeo
         ita ponitur: chi klalat eloim talui.*
         But in the place where Aquila and Theodotion have simi-
         larly rendered with the phrase 'for the curse of God is one
         who hangs', in Hebrew the following is found: **chi klalat
         eloim talui**.

(3)   Jerome, Epistle LXXIII, 5 (text from Hilberg 1912):
         *verum quia amanter interrogas et uniuersa, quae didici, fidis
         auribus instillanda sunt, ponam et Hebraeorum opinionem et,
         ne quid desit curiositati, ipsa Hebraica uerba subnectam:
         umelchisedech melech salem hosi lehem uaiain, uhu cohen le-
         hel helion: uaibarcheu uaiomer baruch abram lehel helion
         cone samaim uares: ubaruch hel helion eser maggen sarach
         biadach uaiethen lo maaser mecchol quod interpretatur in
         Latinum hoc modo: et Melchisedech, rex Salem, protulit panes
         et uinum—erat autem sacerdos dei excelsi—benedixitque illi
         et ait: benedictus Abram deo excelso, qui creauit caelum et
         terram, et benedictus deus altissimus, qui tradidit inimicos
         tuos sub manu tua; et dedit ei decimas ex omnibus.*
         But because you ask me affectionately, and all which I
         have learned should be poured into faithful ears, I will
         place here both the opinion of the Hebrews and, lest
         something lack in curiosity, I will subjoin also the Hebrew
         words themselves: **umelchisedech melech salem hosi
         lehem uaiain, uhu cohen lehel helion: uaibarcheu
         uaiomer baruch abram lehel helion cone samaim**

**uares: ubaruch hel helion eser maggen sarach biad-
ach uaiethen lo maaser mecchol**, which is interpreted
in Latin as follows: And Melchisedec, king of Salem,
brought forth bread and wine—he was in fact the priest
of the most high God—and he blessed him and said,
'Blessed be Abram by the most high God, who created
heaven and earth, and blessed be the most high God, who
delivered your enemies under your hand.' And he gave
him tithes from all.

From a linguistic standpoint, the Biblical Hebrew reading
tradition reflected in Jerome's transcriptions shares more fea-
tures with that reflected in the Secunda than with any other at-
tested tradition, including Tiberian. Note the following exam-
ples:[16]

- Although the Latin script does not make as many distinctions
  as Greek script, the vowel system of Jerome was probably
  similar to that of the Secunda: i.e., /ī/ (= *i*), /ē/ (= *e*), /e/
  (= *e*), /a/ (= *a*), /ā/ (= *a*), /o/ (= *o*), /ō/ (= *o*), /ū/ (= *u*).
- Like the Secunda, the tradition underlying Jerome appears to
  have had no vowel of the *qameṣ* quality (i.e., /ɔ(ː)/) as in
  Tiberian. Rather, it had just a short /a/ vowel and a long /ā/
  vowel.
- Jerome also tends to have an /e/ or /o/ vowel in closed
  syllables where Tiberian has *ḥireq* (i.e., /i/) or *qibbuṣ* (i.e.,

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[16] Examples from Jerome cited here and throughout the book are taken
from a variety of sources, which are incorporated in my critical edition
(in preparation) of the Latin transcriptions of Hebrew in Jerome.

/u/): e.g., *nethab* vs נִתְעָ֔ב [niθˈʕɔːɔv] 'loathed' (Isa. 14.19); *sgolla* vs סְגֻלָּ֔ה [saʁulˈlɔː] 'prized possession' (Mal. 3.17).

- Like the Secunda, gutturals do not always bring about lowering as they do in Tiberian: e.g., *ieros* vs יַחֲרֹ֖ושׁ [jaːħaˈʁoːoʃ] 'must plough' (Hos. 10.11).
- Note the pattern of suffixes, which, like the Secunda tradition, prefers *-VC* over *-CV*: e.g., *lach* vs לְךָ֣ ׀ [laˈχɔː] 'for you (MS)' (Ps. 63.2); *sarach* vs צָרֶ֑יךָ [sˤɔːˈʁɛχɔː] 'your (MS) enemies' (Gen. 14.20).
- Like the Secunda, Jerome also maintains the historical **a* vowel in certain patterns where Tiberian has /i/: e.g., *mabsar* vs מִבְצָ֑ר [mivˈsˤɔːɔʁ] 'fortress' (Jer. 6.27).
- Definiteness following the inseparable prepositions was also less common in the tradition behind Jerome's transcriptions: e.g., *labaala* 'to terror/calamity' vs לַבֶּהָלָ֑ה [labbɛhɔːˈlɔː] 'to the terror/calamity' (Isa. 65.23).
- As in the Secunda, short **u* is often preserved where Tiberian has vocalic *shewa*: e.g., *iezbuleni* vs יִזְבְּלֵ֣נִי [jizbaˈleːniː] 'will honour me' (Gen. 30.20).

There are, however, some points in which the reading tradition reflected in the transcriptions of Jerome differs from that of the Secunda:

- Jerome has more regular syllable structure and less tolerance for consonant clusters than the Secunda: e.g., *barura* for בְּרוּרָ֑ה [vaʁuːˈʁɔː] 'plain (FS)' (Zeph. 3.9) and *melech* for הַמֶּ֖לֶךְ [hamˈmɛːlɛχ] 'the king' (Zech. 14.10).
- Unlike the Secunda, Jerome does appear to exhibit some cases of something like furtive *pataḥ* alongside cases of its

absence: e.g., *ruah* for רוּחַ [ˈʁuːaħ] 'wind' (Jer. 10.13), *colea* for קוֹלֵעַ [qoːˈleːaʕ] 'slinging (MS)' (Jer. 10.18), *sue* for וְשׁוֹעַ [vaˈʃoːaʕ] 'and Shoa' (Ezek. 23.23); but cf. *maphate* vs מְפַתֵּחַ [mafatˈtʰeːaħ] 'engraving (MS)' (Zech. 3.9), *bari* vs בָּרִחַ [bɔːˈʁiːaħ] 'fleeing (MS)' (Isa. 27.1), *esne* vs וְהַצְנֵעַ [vahasˤˈneːaʕ] 'and [doing] humbly' (Mic. 6.8).

- While the Secunda often exhibits no difference between the modal-jussive (i.e., *wyiqṭol*) and the narrative-past (i.e., *way-yiqṭol*), Jerome exhibits a distinct narrative-past form: e.g., *uaiecra* in Jerome vs ουϊκρα in the Secunda for וַיִּקְרָא [vaɟɟiqˈʁɔː] 'and called' (Lev. 1.1).

All in all, the reading tradition underlying the Latin transcriptions of Jerome exhibits considerable similarity to that of the Secunda. At the same time, however, it also has some features that resemble those of the Tiberian tradition.

3.0. Palestinian

It was not until around the sixth or seventh century CE that various Jewish communities finally began to codify their oral reading traditions in writing. By adding vowel signs to the text of the Hebrew Bible, tradents of the reading tradition could ensure that the text would be read correctly even by those who did not know the tradition. While three main *notation systems* of vocalisation developed during this period, namely Palestinian, Babylonian, and Tiberian, that known as the 'Palestinian' vocalisation system was quite possibly the first (Dotan 2007, 624).

As its name suggests, the Palestinian vocalisation developed in the Land of Israel as a notation system for a particular

pronunciation tradition of Hebrew. On this point, and especially in the case of 'Palestinian', it is important to distinguish between the Palestinian *pronunciation* tradition (i.e., the phonetic realisation) and the Palestinian *vocalisation* tradition (i.e., the notation system). While these two streams of tradition often overlap, this is not always the case.

As far as the oral pronunciation itself goes, the Palestinian tradition appears to be closely related to how Hebrew (and Jewish Aramaic) was generally pronounced when it was still a living language in Palestine, and perhaps subsequently as well. In other words, the Palestinian pronunciation tradition reflects the general pronunciation of Hebrew current among the population of Palestine rather than a special 'biblical' or high register pronunciation (Dotan 2007, 624–30; Heijmans 2013b; Yahalom 2016). While the Tiberians preserved a more prestigious and formal reading tradition of the Hebrew Bible, the 'Palestinian' pronunciation tradition essentially reflects the 'basic Palestinian dialect' (Phillips 2022, 94–95). It is this pronunciation tradition—or variants of it—that would go on to spread throughout North Africa, the Middle East, Asia, and even Europe. As it spread throughout these regions, it would eventually split into two main modern branches descendant from Palestinian, namely Ashkenazi and Sephardi Hebrew (for more on this subject, see chapter 4, §6.0).

As far as the *vocalisation* goes, however, it is possible that it was developed to represent something more akin to the Tiberian system in its initial stages. Note that the Palestinian *vocalisation* has seven distinct vowel signs, correspondent with the number of distinct vowel qualities in Tiberian, even though the

Palestinian *pronunciation* tradition, like contemporary Jewish Aramaic, has only five distinct vowels. Two separate signs are used for a single /e/ vowel (cf. Tiberian *ṣere* and *seghol*) and two signs are used for a single /a/ vowel (cf. Tiberian *pataḥ* and *qameṣ*):

Table 4: Palestinian vowel signs

Sign	Sound
א�	i
אֵ	e
אֶ	e
אָ	a
אַ	a
אֹ	o
אֻ	u

  The Palestinian *vocalisation* (i.e., notation system) may even reflect a primitive stage in a long process that would eventually yield the Tiberian notation system (Phillips 2022, 94–95).[17] Indeed, it is possible that, after the development of the Tiberian notation system, the scholarly tradents of the more prestigious Tiberian oral *pronunciation* tradition left off with the old

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[17] An alternative view suggests that the Palestinian notation system developed specifically for the recitation of *piyyuṭim* (i.e., liturgical poetry) and was then later extended to biblical manuscripts. While the Bible had a well-developed and stable reading tradition, the *piyyuṭim* required further aids for readers (Yahalom 1974, 218–19; Dotan 2008). For the weaknesses of this view based on the coherence and unity of the seven-sign Palestinian vowel system, see Phillips (2022, 94–95).

('Palestinian') notation system and came to use the Tiberian vo-
calisation system exclusively.[18]

At this point, because proficiency in the Tiberian tradition
required extensive instruction, the previous notation system
came to be the 'default' for other Hebrew readers in Palestine.
This may be the reason why the 'Palestinian' notation system has
come to reflect the more vernacular pronunciation tradition of
Palestine. If it came to be used primarily by those Hebrew readers
of Palestine who did not know Tiberian, then it is only sensible
that it would most closely reflect the more common Hebrew dia-
lect of the region (Phillips 2022, 94–95).[19] Note, however, that

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[18] Personal communication with Kim Phillips. See also Phillips (2022,
94–95).

[19] Also personal communication with Kim Phillips. Note, however, that
there are other explanations as to why a notation system with seven
vowel signs should map onto a pronunciation tradition with five vow-
els. According to Bendavid (1958, 484–85) and Morag (1972, 37), the
seven vowel signs reflect an earlier stage of the pronunciation tradition
with seven vowels. Yahalom (1997, 8–11), however, regards fewer
vowel signs as more indicative of the earlier stages of the pronunciation
tradition. According to Revell (1970, 109–21), there were actually mul-
tiple dialects of the Palestinian pronunciation tradition, one with fewer
vowels and one with more vowels. According to Eldar (1989, 13), the
original Palestinian pronunciation tradition had a five-vowel system.
Manuscripts that appear to include more signs reflect a sort of 'graphic
Tiberianisation' based on imitation of the more prestigious Tiberian tra-
dition. Such manuscripts do not, however, reflect a phonemic reality.
According to Dotan (2007), the second /e/-vowel sign (i.e., אֱ) is the
product of a later stage of development. Both /a/-vowel signs (i.e., אַ
and אֲ), on the other hand, go back to the beginning stages of the vocal-
isation. It is thus possible that the two separate /a/-vowel signs were

there are some Palestinian manuscripts that appear to reflect convergence with Tiberian, probably born out of a desire to imitate the more prestigious reading tradition (Khan 2017; Khan 2020b, 89–91; Phillips 2022, 64). The frequency of convergence can actually complicate identifying what is true and authentic 'Palestinian' pronunciation.

Here we should also mention that the nature of a Palestinian-vocalised text is quite different from that of the Tiberian-vocalised BHS most familiar to students and scholars. While the Tiberian vocalisation is comprehensive—everything is vocalised— most Palestinian-vocalised manuscripts only include occasional vowels where relevant for purposes of disambiguation. See, for example, the beginning verses of Psalm 40 in a Psalms scroll with Palestinian vocalisation from the Cairo Genizah (P300 [MS Cambridge T-S 20.54]; Garr and Fassberg 2016, 112):

1   למנצח לדוד מזמור

       'To the choirmaster. A Psalm of David.'

2a   קֹּוֹה קויתי יהוה

       'I have surely waited on YHWH.'

2b   ויט אֵלי וישמֹע שֹׁוֹעֹתי

       'And he inclined to me and heard my cry.'

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originally intended to reflect two distinct vowels. No manuscript evidence, however, from this early hypothetical stage is preserved. The earliest manuscript evidence we have already exhibits a five-vowel system. It is thus possible that an earlier system with signs for six distinct vowels was adopted by tradents of a pronunciation tradition with only five vowels. For further details and summaries of these views, see Dotan (2007); Heijmans (2013b, 966).

3a   ויעלני מֹבור שֿאון מֹטיט הֿיון

‘And he raised me up from the pit of destruction, from the miry bog.’

3b   ויקֿם על סֹלע דֿגלי כונֹן אשוֹרי

‘And set my feet on a rock, established my steps.’

4a   ויתֿן בֹּפי שיר חֹדש תהילה לאלהינו

‘And he put a new song in my mouth, praise to our God.’

4b   יראו רֹבים וייֿראו ויבטחֹו ביהוה

‘Many will see and fear and trust in YHWH.’

5   אשרי הגֹּבר אשר שֹם יהוה מֹבטחו ולא פֿנֿה אל רהֹבים ושֿטֹי כֹזֿב

‘Blessed is the man who has made YHWH his trust, and who has not turned to the proud, those who go astray after deceit.’

The lack of comprehensive vowel notation is consistent with what we would expect in the primitive stages of vowel notation in Hebrew. When first adding vowel signs to a text, it would make sense to add them only where it was necessary. This is one of the reasons why the Palestinian vocalisation system is regarded as older than Tiberian.

Another particular feature of the Palestinian tradition concerns its corpus, most of which is comprised of *piyyuṭim*, the liturgical Hebrew poetry tradition of Byzantine and medieval Palestine. There are, at the same time, numerous biblical manuscripts with Palestinian vocalisation. Moreover, there is much biblical material quoted directly within the *piyyuṭim*. While some have argued that this distribution shows that the Palestinian vocalisation was first developed to be used with *piyyuṭim*, this is not necessarily the case. It should also be noted that all attested Pal-

estinian-vocalised manuscripts come from the Cairo Genizah (Do-
tan 2007, 624–30; Heijmans 2013b; Yahalom 2016; Phillips
2022, 94–95).

From a linguistic perspective, due to the convergence of
Palestinian and Tiberian, it can sometimes be difficult to deter-
mine which features are authentic and original to the Palestinian
pronunciation tradition. Nevertheless, despite Tiberian influence,
scholars have identified a number of linguistic features charac-
teristic of Palestinian pronunciation:[20]

- As noted above, at least as it has come down to us, the
  pronunciation tradition reflected in the Palestinian
  vocalisation system appears to reflect a five-vowel system:
  i.e., /i, e, a, o, u/. Whereas Tiberian has a pair of both *e*-
  vowels (*ṣere* and *seghol*) and *a*-vowels (*pataḥ* and *qameṣ*),
  Palestinian only has one of each. This may not have been the
  case, however, at an earlier (hypothesised) stage of the
  tradition (Dotan 2007, 626; Ryzhik 2010; Heijmans 2013b,
  966; Phillips 2022, 94–95).
- Like the Secunda and Jerome, the Palestinian tradition does
  not appear to have a vowel of the *qameṣ* quality—it has just
  a single /a/ vowel—though some have claimed such for an
  earlier hypothesised stage of the tradition.
- Parallel to Tiberian *qameṣ ḥaṭuf* (i.e., /ɔ/ in an unstressed
  closed syllable), the Palestinian tradition has a simple /o/-

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[20] Examples from Bendavid (1958); Revell (1970, 61–71); Harviainen
(1977, 143, 171–72); Yahalom (1997, 12–27); Heijmans (2013b, 964–
66); Garr and Fassberg (2016, 114); Yahalom (2016).

vowel: e.g., אֹזֶנך [ʔozˈnaχ] vs אָזְנְךָ [ʔɔznaˈχɔː] 'your (MS) ear'; קֹרבן [qorˈban] vs קָרְבָּן [qɔʀˈbɔːn] 'sacrifice'.

- As was the case with the Secunda and Jerome, the Palestinian tradition also has often has an /e/ or /o/ vowel in closed syllables where Tiberian has *ḥireq* (i.e., /i/) or *qibbuṣ* (i.e., /u/): e.g., כֹּלָּי(ון) [kʰellaˈjon] vs כִּלָּיוֹן [kʰillɔːˈjoːon] 'destruction' (Isa. 10.22); וֹיּשֹׁבֹע [vajjeʃʃavaʕ] vs וַיִּשָּׁבַע [vaɟɟiʃʃɔːˈvaːaʕ] 'and swore' (Josh. 14.9); זֹבֹל [zeˈvol] vs זְבֻל [zaˈvuːul] 'residence; temple'; בֹּתֹמֹי [beθomˈmi] vs בְּתֻמִּי [baθumˈmiː] 'in my integrity' (Ps. 41.13). The tendency for *e* and *o* instead of *i* and *u* is also a feature of Jewish Palestinian Aramaic (Fassberg 1990, 34–45).

- The parallel to Tiberian vocalic *shewa* is often represented with an *e*-vowel sign in Palestinian: e.g., בֹּרֹיתֹך [beriˈθaχ] vs בְּרִיתְךָ [baʀiːθˈχɔː] 'your (MS) covenant'; לֹגֹדֹלֹוֹ [leʀaddeˈlo] vs לְגַדְּלוֹ [laʀaddaˈloː] 'to magnify him'. Note that vocalic *shewa* was actually realised phonetically as a short [a] vowel in Tiberian in most environments.

- In terms of syllable structure, the Palestinian tradition sometimes has a helping vowel where Tiberian has silent *shewa*: e.g., תֹיקֹצֹוֹר [tʰiqaˈsˤor] vs תִּקְצוֹר [tʰiqˈsˤoːoʀ] 'you (MS) shall sow'; מֹשֹׁלֹיך [maʃaˈliχ] vs מַשְׁלִיךְ [maʃˈliːiχ] 'throwing away (MS)'. Note also that where Tiberian vocalises the CONJ *waw* as וּ [wu-], the Palestinian tradition sometimes vocalises it with an /a/-vowel or an /e/-vowel: e.g., וֹתֹדֹבֹּר [veθðabˈber] vs וּתְדַבֵּר [wuθðabˈbeːeʀ] 'and you (MS) shall speak'.

- The Palestinian tradition can also maintain a front /e/ vowel before gutturals where Tiberian exhibits vowel lowering to

[a]: e.g., מֹלֵחַ [ˈmeleħ] vs מֶלַח [ˈmɛːlaħ] 'salt'; נֹעְ(ה)שׂוּ [naˈʕ(e)ˈsu] vs נַעֲשׂוּ [naːʕaˈsuː] 'they were made'. Furtive *pataḥ* seems to be absent in at least some Palestinian manuscripts, though inconsistent notation may play a role here: e.g., מֹרוּחַ [meˈruħ] vs מֵרוּחַ [meːˈʀ̟uːaħ] 'from the wind of' (Ps. 55.9).

- In the realm of morphology, there are *segholate* patterns that look something like the Aramaic pattern קְטֵל. This is based on a particular distribution of the /e/-vowel signs in *certain* Palestinian-vocalised manuscripts: e.g., צֹדֶק (≈צֶדֶק) [sˤɛˈðɛq] vs צֶדֶק [ˈsˤɛːðɛq] 'righteousness' (Ps. 51.21).

- As in the Secunda and Jerome, the 2MS suffix also appears to reflect the -*VC* shape rather than the -*CV* shape. While it can be difficult to tease out Tiberian influence, there are some passages (and certain rhymes in *piyyuṭim*) that reflect the suffix [-aχ]: e.g., בֵּיתֶ֫ךָ... כבוֹֹדֶךָ [beˈθaχ... kevoˈðaχ] vs ...בֵּ֫יתְךָ כְּבוֹדְךָ [beːˈθɛχɔː... kavoːˈðɛːχɔː] 'your (MS) house... your (MS) glory' (Ps. 26.8); קָדְשֶׁ֫ךָ [qoðˈʃaχ... ʕamˈmaχ] vs ...קָדְשְׁךָ עַמְּךָ [qɔðʃaˈχɔː... ʕammaˈχɔː] 'your (MS) holiness... your (MS) people' (Deut. 26.15).

While there are many other noteworthy features of Palestinian Hebrew, these will suffice to provide a bit of an introduction to the tradition.

4.0. Babylonian

As its name suggests, the Babylonian vocalisation and pronunciation tradition has its origins among Jewish communities of medieval Babylonia (modern Iraq). Jewish settlement in Babylon be-

gan after the destruction of the First Temple. It remained a significant Jewish community into the Middle Ages. Already by the beginning of the tenth century CE, the Babylonian tradition of Hebrew seems to have gained popularity, being used among the Jewish communities of Iran, the Arabian peninsula, and Yemen as well. In fact, Yemenite Jews have preserved features of the medieval Babylonian pronunciation in their own oral reading tradition down to modern times. In terms of absolute chronology, the Babylonian vocalisation (i.e., the notation system) probably began to develop around the same time as Palestinian, though perhaps just a bit later. As a pronunciation tradition, however, the Babylonian tradition has deep historical roots. Note that there are already incantation bowls from the fourth century CE that reflect the Babylonian pronunciation tradition (via *matres lectionis*; Dotan 2007, 630–33; Khan 2013c, 953–54; Heijmans 2016; Molin 2020).

As far as the vowel signs go, the Babylonian tradition is a bit more complex than either the Palestinian or the Tiberian. Unlike the other medieval notation systems, Babylonian has two main types of vocalisation, the 'simple system' and the 'compound system'. Within the simple system, there are two varieties, the 'line system' comprised of supralinear lines and, more rarely, the 'dot system' made up of supralinear dots. Each system has six vowel signs that correspond to six distinct vowel sounds. The parallel to Tiberian *seghol* (i.e., [ɛ]) has merged with the Babylonian /a/ vowel (parallel to Tiberian *pataḥ* = [a]), whether pronounced as an /a/ vowel or as something between /a/ and /ɛ/ (perhaps [æ]?; Khan 2013c, 954–55):

Table 5: Babylonian vowel signs

Lines	Dots	Sound
אַ	אַ	i
אַ	אַ	a
אַ	אַ	ɔ
אַ	אַ	e
אַ	אַ	o
אַ	אַ	u

In addition to these vowel signs, another sign known has *ḥiṭfa* (i.e., א) developed that could be used to mark vocalic *shewa* (Khan 2013c, 954–55).

Although it is rarer, the dot system does not appear to have been invented any earlier or later than the line system. Both seem to have developed around the same time. Interestingly, some of the vowel signs in the line system appear to have developed from the letters themselves. The Babylonian *a*-vowel sign (i.e., אַ) was originally just a tiny letter *ʿayin* ע. Similarly, the Babylonian *ɔ*-vowel sign (i.e., אַ) developed from a miniature letter *ʾalef* א. The *i*-vowel sign (i.e., אַ) appears to have developed from a small letter *yod* י. Finally, the *u*-vowel sign (i.e., אַ) developed from a tiny letter *waw* ו (Khan 2013c, 954–55).

The compound system of Babylonian vocalisation mentioned above is based on the signs depicted above but with various additions and combinations to distinguish long and short vowels. A short vowel, for example, is indicated by adding the *ḥiṭfa* sign (i.e., אַ) above or below one of the cardinal vowel signs. This is particularly useful to indicate that a syllable is closed by

gemination. A simple-system vocalisation like מִגֹּדוֹ could poten-tially indicate either [m(ə)ɣiːˈðoː] or [m(ə)ɣidˈdoː], but a com-pound-system vocalisation like מִגֹּדוֹ can only represent [m(ə)ɣidˈdoː] (Yeivin 1985, 1092; Khan 2013c, 955–56).

Another complexity of the Babylonian tradition concerns the multiplicitous nature of the pronunciation tradition. Three stages of the Babylonian pronunciation tradition can be identi-fied in the manuscripts: Old Babylonian, Middle Babylonian, and Late Babylonian. As one might expect, the Old Babylonian layer reflects the most archaic and authentically Babylonian pronunci-ation. It should also be noted that, similar to Palestinian, Old Babylonian manuscripts tend to exhibit only partial vocalisation. Note the following example text, Joel 3.1-3 (Garr and Fassberg 2016, 90–99):

1a   והיה אחרי כן אשפֹּךְ את רוחי על כל בשר
            'And after this, I will pour out my spirit on all flesh.'

1b   ונבאו בניכם ובנותיכם זקניכם חלמֹת יחלמון בֹּחוריכם חזינֹות יראו
            'And your sons and daughters will prophesy. Your elders
            will dream dreams. Your young men will see visions.'

2   וגם על הֹעֹבֹדים ועל הֹשפֹחות בימים ההמה אשפוֹךְ את רוחי
            'And also upon the male and female servants will I pour
            out my spirit in those days.'

3   ונתֹתי מופתים בֹשמים ובֹארץ דֹם וֹאש ותמרֹות עֹשֹן
            'And I will set signs in heaven and earth, blood and fire
            and pillars of smoke.'

Middle and Late Babylonian manuscripts tend to exhibit a fuller vocalisation. Later stages of Babylonian also begin to ex-hibit more convergence with the Tiberian tradition, since imitat-ing the most prestigious reading tradition was not uncommon.

This is especially the case in Late Babylonian. Nevertheless, there are also some important developments within the Babylonian tradition itself in these later stages, not necessarily related to the Tiberian tradition (Yeivin 1985, 1092; Khan 2013c, 954).

Unlike Palestinian, Babylonian vocalisation was used mainly for biblical manuscripts, though many rabbinic texts and *piyyuṭim* are also found with Babylonian vocalisation (Khan 2013c, 953). This is important because there are often significant linguistic differences between the Babylonian vocalisation of rabbinic texts and the Babylonian vocalisation of biblical texts.

From a linguistic perspective, it is important to note that Babylonian Biblical Hebrew exhibits perhaps the greatest similarity with Tiberian Hebrew. Like Tiberian, the Babylonian pronunciation tradition has a vowel of the *qameṣ* quality (i.e., אֹ = [ɔ:]). The orthoepically lengthened prefix vowel in the verb יהיה 'will be' is also a feature particular to Babylonian and Tiberian (Khan 2018). Such features may indicate a close relationship between Tiberian and Babylonian, both reflecting a higher, more formal (or 'biblical') recitation tradition that has its roots in the late Second Temple Period. Nevertheless, Babylonian exhibits some particular linguistic characteristics of its own (examples from Khan 2013c, 956–62):

- As noted above, the Babylonian tradition exhibits a six-vowel system with the following qualities: [i], [e], [a], [ɔ], [o], [u]. In comparison with Tiberian, the missing vowel is *seghol* (i.e., [ɛ]), which has merged with *pataḥ* (i.e., [a]).
- A number of manuscripts exhibit confusion between *ḥolem* (i.e., אֹ = [o(:)]) and *ṣere* (i.e., אֵ = [e:]), perhaps due to a

more fronted pronunciation of Babylonian /ō/: e.g., יֹרֹחֹף (≈ יְרַחֵף) vs יְרַחֵף [jaʀaːˈħeːef] 'flutters' (Deut. 32.11).

- Historical short *u in open syllables is sometimes preserved in Babylonian even though it reduces to *shewa* in Tiberian: e.g., יִשמוֹרֵֹנִי [jiʃmoˈreːniː] vs יִשְׁמְרֵנִי [jiʃmaˈʀeːniː] 'guards me' (Deut. 32.11); לַבֹּקֹרִים [labboqɔːˈriːm] vs לַבְּקָרִים [labbaqɔːˈʀiːim] 'in the mornings' (Lam. 3.23).

- The vocalisation of the gutturals is also noteworthy. As in the Secunda and Jerome, vowel lowering does not occur before /h/ and /ħ/ in certain verbal forms: e.g., יהרוֹס [jihˈroːs] vs יֶהֱרֹוס [jaːhaˈʀoːos] 'tears down' (Job 12.14); יחשֹׁב [jiħˈʃoːv] vs יַחְשֹׁב [jaħˈʃoːov] 'counts' (Ps. 32.2). This likely reflects the generalisation of the /i/ prefix vowel and/or less standardisation of vowel lowering before gutturals.

- Babylonian also has a different pattern of vocalisation with gutturals. In the *yiqtol* form of I-ʾ and I-ʿ verbs, the full vowel is written on the guttural rather than before the guttural: e.g., יֹעֹמֹד, יַעְמֹד /jʕamṓð/ [jaʕaˈmoːð] vs יַעֲמֹד /jaʕmṓð/ [jaːʕaˈmoːoð] 'he stands'. Also, Babylonian generally has a full vowel on a guttural where Tiberian has a *ḥaṭef* vowel: e.g., עֲשִׂיתֹֿם [ʕasiːˈθaːm] vs עֲשִׂיתֶם [ʕasiːˈθɛːɛm] 'you (MP) did'. Finally, Babylonian does not have furtive *pataḥ* as Tiberian does: e.g., רוֹח [ˈruːħ] vs רוּחַ [ˈʀuːaħ] 'spirit'.

- In terms of syllable structure, an epenthetic vowel often occurs between the first and second radicals of a *yiqtol* verb when the second radical is a sonorant or sibilant: e.g., תקֹרבוֹ [tʰiqirˈvuː] vs תִּקְרְבוּ [tʰiqʀaˈvuː] 'you (MP) approach'.

- The CONJ *waw* also exhibits various patterns in Babylonian: e.g., וּתְלַבֵּב [wiθlabˈbeːv] vs וּתְלַבֵּב [wuθlabˈbeːev] 'and let make cakes!' (2 Sam. 13.6).

- Babylonian also maintains the historical *a vowel in certain patterns where Tiberian shifts it to /i/: e.g., מֹדְבֹּר [maðˈbɔːr] vs מִדְבָּר [miðˈbɔːɑ̯ʀ] 'desert' (Ps. 102.7).

- In the pronominal system, nominal system, and verbal system, there are also a number of patterns where Tiberian has /ē/ but Babylonian has /a/: e.g., הַם [ˈham] vs הֵם [ˈheːem] 'they'; לַב [ˈlaːv] vs לֵב [ˈleːev] 'heart'; זֹקַן [zɔːˈqaːn] vs זָקֵן [zɔːˈqeːen] 'grew old'; תֵּלַד [tʰeːˈlaːð] vs תֵּלֵד [tʰeːˈleːeð] 'she will give birth'. Along with the merger of *seghol* and *pataḥ*, such examples reflect a general tendency to shift short *e → *a* in Babylonian Hebrew.

- The 1CS prefix vowel of the *yiqṭol* form also differs in both *qal* and *pi''el/pi''al*: e.g., וָאֶתְפֹּשׂ [wɔːʔɛθˈpʰoːos] vs וָאֶתְפֹּשׂ [vɔːʔɛθˈpʰoːos] 'and I took hold' (Deut. 9.17); אֲדַבֵּר [ʔeðabˈber] vs אֲדַבֵּר [ʔaðabbeʀ̯] 'I speak' (Num. 12.8).

- Finally, note that the 3MS and 1CP suffixes on the preposition מִן 'from', which are identical in Tiberian as מִמֶּנּוּ [mimˈmɛnnuː] 'from him; from us', are different in Babylonian: i.e., מִמֹּנוּ [mimˈmannuː] 'from him' vs מִמֹּנוּ [mimˈmeːnuː] 'from us'.

There are many other features of Babylonian, but these are enough for a general introduction. Overall, while the Babylonian tradition exhibits considerable similarity with Tiberian, it also has numerous of its own peculiarities. Some of these reflect similarity with spoken forms of the language.

5.0. Tiberian

The Tiberian oral reading tradition is both the most familiar and the least familiar of the Biblical Hebrew reading traditions. On one hand, the *niqqud* '(vowel) pointing' of standard printed Hebrew Bibles like BHS is that of the Tiberian tradition. On the other hand, almost everyone who reads from BHS imposes a non-Tiberian pronunciation tradition on the Tiberian vowel signs. Most of the time, they use some variation of Palestinian (see chapter 3, §3.0), which has made its way into modern times in the form of the Ashkenazi, Sephardi, and Modern Hebrew pronunciation systems.

Historically, the Tiberian tradition was a distinct oral pronunciation tradition of medieval Palestine which existed contemporaneously with the Palestinian and Babylonian traditions. Associated specifically with the city of Tiberias on the shores of the Sea of Galilee, it existed side-by-side geographically with the Palestinian tradition, which was also current in medieval Palestine. While Palestinian, which exhibits greater influence of the vernacular, was used on a more popular level across segments of the population, Tiberian was the preserve of scholars and those who had made the effort to learn the more formal recitation tradition. This register divide was not limited to Palestine, however, as it extended across the Middle East. Already by the tenth century CE, Tiberian was widely regarded as superior to the other reading traditions, even in areas where the Babylonian tradition was much more commonly used (Ofer 2016; Khan 2020b).

The Tiberian vocalisation signs likely developed slightly later than those of the Palestinian and Babylonian traditions. Unlike Palestinian, which has five vowel qualities, and Babylonian, which has six vowel qualities, the Tiberian vocalisation tradition has seven distinct vowel qualities (Khan 2020b, §I.2.1):

Table 6: Tiberian vowel signs

Name	Sign	Sound
ḥireq	א	i
ṣere	א	e
seghol	א	ɛ
pataḥ	א	a
qameṣ	א	ɔ
ḥolem	אֹ, א	o
shureq, qibbuṣ	אֹ, א	u

In addition to these primary signs, the Tiberian vocalisation also has a *shewa* sign (א), which is used to mark both an epenthetic vowel (i.e., vocalic *shewa*) and the close of a syllable (i.e., silent *shewa*). Generally, the phonetic value of vocalic *shewa* is [a] like *pataḥ*. The *shewa* sign can also be combined with the vowels *seghol*, *pataḥ*, and *qameṣ* to produce the so-called 'ḥaṭef' vowels, namely *ḥaṭef-seghol* (א), *ḥaṭef-pataḥ* (א), and *ḥaṭef-qameṣ* (א). The *ḥaṭef* vowels are typically used to indicate a specific vowel quality on a guttural consonant when the morphological pattern would normally result in a simple vocalic *shewa*. Alt-

hough Tiberian has a number of distinct vowel lengths, their distribution is relatively consistent and largely predictable based on syllable structure (Khan 2020b, §§I.2.2, I.2.5).[21]

As we mentioned above, this vocalisation system would overtake both the Palestinian and Babylonian systems among Jewish communities everywhere. Indeed, users of the Palestinian and Babylonian systems eventually adopted the Tiberian vocalisation signs. For matters of language and grammar, Tiberian had become the sole authority (Ofer 2016; Khan 2020b, §I.0.9).

It should be stressed, however, that the adoption of the Tiberian *vocalisation signs* does not imply the adoption of the pronunciation tradition.[22] Rather, the Tiberian *pronunciation* tradition seems to have faded out of use by around the twelfth century CE, perhaps because there were not enough teachers proficient in the tradition who could train others. Even after the adoption of the Tiberian signs, then, tradents of other oral traditions continued to use their own pronunciation systems. The mismatch be-

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[21] Suchard 2018 presents a similar phonemic analysis of Tiberian. The primary difference between the analyses of Suchard and Khan concerns the status and/or existence of 'underspecified /e/ and /o/'.

[22] Note that the body of tradition of the Tiberian Masoretes is comprised not only of (i) the consonantal text of the Hebrew Bible, but also of (ii) the codicological layout, (iii) divisions of paragraphs, (iv) accent signs, (v) vocalisation, (vi) marginal notes, (vii) grammatical treatises, and (viii) the oral reading tradition. While the written/textual elements of their tradition eventually became the standard for Jewish communities across the world, the oral element of their tradition (i.e., viii) died out around the twelfth century CE (Khan 2020b, 16–19).

tween oral pronunciation tradition, on one hand, and the Tiberian signs, on the other, led to various Hebrew grammarians articulating new rules to explain certain anomalies (Ofer 2016; Khan 2020b). Note, for example, that the whole concept of *qameṣ qaṭan/ḥaṭuf*, which seeks to explain the different pronunciation of the *qameṣ* vowels in a word like חָכְמָה /ħoχˈma/ (in Sephardi pronunciation), is irrelevant in Tiberian, which pronounces the word as [ħɔχˈmɔ:].

Because it is not necessarily well known even among scholars of Biblical Hebrew, a text from the Hebrew Bible (Ps. 1.1–2) vocalised with Tiberian pointing is transcribed below, both with a phonemic representation and with a phonetic representation (Khan 2020b, 621):

1a   אַשְׁרֵי־הָאִישׁ אֲשֶׁר ׀ לֹא הָלַךְ בַּעֲצַת רְשָׁעִים

        /ʔaʃrē hɔ̄ʔíʃ ʔʃér lố hɔláχ baʕṣáθ rʃɔ̄ʕím/

        [ˌʔaːˌʃaˑʀεː-hɔːˈʔiːiʃ   ʔaˈʃεːεʀ   ˈloː   hɔːˈlaːaχ   baːʕaˈˤʕɑːαθ ʀaʃɔːˈʕiːim]

        'Blessed is the man who does not walk in the counsel of the wicked,'

1b   וּבְדֶרֶךְ חַטָּאִים לֹא עָמָד

        /wuv-ðérχ ḥaṭṭɔ̄ʔím lố ʕɔ̄mɔ̄̃ð/

        [wuvˈdεːʀεχ ħatˤtˤɔːˈʔiːim ˈloː ʕɔːˈmɔːɔd]

        'and does not stand in the way of sinners,'

1c   וּבְמוֹשַׁב לֵצִים לֹא יָשָׁב׃

        /wuvmōʃáv lēṣím lố jɔ̄ʃáv/

        [wuvmoːˈʃaːav leːˈsˤiːim ˈloː jɔːˈʃɔːɔv]

        'and does not sit in the seat of scoffers,'

2a   כִּי אִם בְּתוֹרַת יְהֹוָה חֶפְצוֹ

        /kí̄ ʔím bθōráθ ʔðōnɔ̄j ḥefṣố/

['kʰiː 'ʔiːim baθoːˈʁaːaθ ʔaðoːˈnɔːɔj ħɛfˈsˤoː]
'but his delight is in the law of YHWH,'

2b   וּבְתוֹרָתוֹ יֶהְגֶּה יוֹמָם וָלָיְלָה:

/wuvθōrɔ̄θṓ jɛhˈgɛ́ jōˈmɔ́m vɔlɔ̄́jlɔ̄/

[ˌwuˑvθoːʀ̞ɔːˈθoː jɛhˈgɛː joːˈmɔːɔm vɔːˈlɔːɔjlɔː]

'and upon his law he meditates day and night.'

The Tiberian vocalisation system was mainly used for biblical manuscripts, the most famous of which being the Leningrad Codex (L), which underlies BHS, and the Aleppo Codex (A). When such Masoretic codices were vocalised, it was likely carried out based on the oral reading tradition of a master teacher of the Tiberian tradition (Khan 2020b, 22, 25–28). Over time, however, it was eventually extended to record the oral reading traditions of other Jewish texts, such as the Mishnah, liturgical poetry, and even some prose literature (Ofer 2016, 188). Nevertheless, it does not always reflect a consistent pronunciation tradition in each of these sorts of documents. In some cases, a more Palestinian-type tradition is reflected in the use of the Tiberian vocalisation signs. This even occurs in many medieval biblical manuscripts.

Linguistically, Tiberian is more similar to the Babylonian tradition (see chapter 3, §4.0) than it is to the other traditions, namely Secunda, Jerome, and Palestinian. As noted earlier, Tiberian and Babylonian likely have ties to a more formal 'biblical' recitation tradition with roots in the late Second Temple Period. Nevertheless, the Tiberian tradition exhibits some particular linguistic characteristics of its own (Khan 2013b):

- Unlike the Babylonian tradition, which has a six-vowel system, the Tiberian pronunciation tradition has seven

distinct vowel qualities: i.e., [i], [e], [ɛ], [a], [ɔ], [o], [u].
Most notable here are the qualities *qameṣ* (i.e., [ɔ]), which is
absent outside of Tiberian and Babylonian, and *seghol* (i.e.,
[ɛ]), which is unique to Tiberian.

- A historical short **u* vowel in a closed unstressed syllable (not
  followed by gemination) generally merges with *qameṣ* in
  Tiberian: e.g., **ḥukmā* 'wisdom' → חָכְמָה [ħɔχˈmɔː].
- Unlike Palestinian, which often realises vocalic *shewa* as an
  /e/-vowel, and Babylonian, which often maintains the
  consonant cluster, the Tiberian tradition realises vocalic
  shewa as an [a]-vowel like *pataḥ*: e.g., דְּבָרִים /dvɔrím/ 'words'
  is pronounced phonetically as [davɔːˈʁiːim].
- Note that among the Jewish traditions of Biblical Hebrew,
  Tiberian tends to exhibit more cases of vowel
  lowering/backing in the environment of gutturals, as in the
  case of furtive *pataḥ*: e.g., רוּחַ [ˈʁuːaħ] 'wind'; קוֹלֵעַ [qoːˈleːaʕ]
  'slinging'.
- Although the consonantal text of the Masoretic Text regularly
  has no final *heh mater* for 2ms forms, the Tiberian tradition
  exhibits -*CV* suffixes/endings: e.g., דְּבָרְךָ [davɔːɔʁˈχɔː] 'your
  word' and דִּבַּרְתָּ [dibˈbaːaʁtʰɔː] 'you spoke'.

While there are many other characteristics of the Tiberian
tradition, we may assume that readers are generally more famil-
iar with Tiberian *niqqud* than the other traditions. Overall, the
Tiberian tradition may be regarded as fairly conservative and
transmitted by reliable scholars. There is a reason why it was re-
garded as the most prestigious of the medieval reading traditions.
Even if it is not always more conservative than other traditions—

it does exhibit some innovation—it seems to be the product of a very well preserved recitation tradition.

6.0. Samaritan

The Samaritan oral tradition is the outlier among the Biblical Hebrew reading traditions, for reasons both linguistic and orthographic. Since the Samaritan community split off from the wider Jewish community around the early-to-mid Second Temple Period, their language and scribal tradition developed distinctly.

Unlike the tradents of the Palestinian, Babylonian, and Tiberian traditions, which eventually developed comprehensive vocalisation systems for their oral reading traditions, the Samaritans never did. While there is occasional vowel notation in some manuscripts of the Middle Ages—most have no vowel signs—the notation is neither homogenous nor complete. It thus has little value for describing the grammar (Florentin 2016, 118). The Samaritan reading tradition is primarily known via the documentation of its oral descendant in modern times by Ben-Ḥayyim (1977b). While some might regard such a modern oral tradition as too late to be included alongside the other traditions in this list, even the modern oral tradition exhibits features that clearly go back to the late Second Temple Period.

On this point, it is important to distinguish the Samaritan Pentateuch, which constitutes the distinct textual tradition of the Samaritans, from the Samaritan oral tradition, which constitutes their pronunciation tradition of that text. Most of the differences between Samaritan and the other traditions lie in the latter. Nevertheless, with respect to the former, two important points should

be mentioned. In contrast to the Masoretic Text, there is no stable and crystallised 'received text' version of the Samaritan Pentateuch (Florentin 2016, 118). Also, while the textual traditions of Palestinian, Babylonian, and Tiberian are based on the Jewish/Aramaic script, the Samaritans still use a form of the Paleo-Hebrew script: e.g., בראשית is Jewish/Aramaic script but ᴎᛘᛋᛆᚾᚱ is Samaritan script.

In addition to a distinct textual tradition, different script, and general absence of vowel notation, the Samaritan tradition also exhibits numerous unique linguistic innovations, largely due to the fact that Samaritan was transmitted separately from the Jewish traditions. It has a significantly different phonological inventory as well as numerous important morphological differences, such as a different system of *binyanim* (i.e., verbal stems). Such innovations likely reflect the influence of vernacular Hebrew and Aramaic (as spoken among the Samaritans from the Second Temple Period onwards) on their reading tradition.

The vocalic inventory of Samaritan Hebrew differs from the Jewish traditions in a number of respects (Ben-Ḥayyim 2000, 43–53):

- Historically, the Samaritan tradition appears to have had a five-vowel system. While the modern tradition might still reflect the five vocalic phonemes of an earlier period, the oral reading tradition as recorded by Ben-Ḥayyim exhibits seven distinct qualities: [i], [e], [ə] [a], [ɑ], [o], [u].
- Aside from [ə], the remaining vowels can be of varying quantities, of which Samaritan has four, namely short, somewhat long, long, and extra-long. Aside from the CONJ

waw—realised as a short [u] vowel—short vowels occur only in closed syllables. All vowels in open syllables, even if derived from *shewa* historically, are lengthened. Note, however, that these different lengths vary in pronunciation depending on the style and speed of recitation.[23]

- In terms of syllable structure, there are numerous cases where Samaritan has a vowel where Tiberian has silent *shewa*: e.g., [wjeːˈbeːki] vs וַיֵּבְךְּ [vajˈjevkʰ] 'and wept' (Gen. 27.38).

The consonantal inventory of Samaritan also differs from Tiberian, and the Jewish traditions generally, on a number of points (Ben-Ḥayyim 2000, 30–42; Florentin 2016):

- While the Jewish traditions pronounce etymological */ɬ/—also known as the historical ancestor of the letter *sin* שׂ—as /s/, the Samaritan tradition realises it as /ʃ/: e.g., [jiʃˈrɑːʔəl] vs יִשְׂרָאֵל [jisʕɔːˈʔeːel] 'Israel' (Gen. 32.29).

- Moreover, while the Jewish traditions have a plosive and a spirantised realisation for each of the six consonants בג״ד כפ״ת, this phenomenon is not present in Samaritan: e.g., [kɑːˈbeːda] vs כָּבְדָה [χɔːɔvˈðɔ] 'was grave' (Gen. 18.20); [wbeːˈɡɑːdəm] vs וּבְגָדִים [wuvʁɔːˈðiːim] 'and garments' (Gen. 24.53); [amˈɡaddəf] vs מְגַדֵּף [maʁadˈdeːef] 'blaspheming' (Num. 15.30). Note that פ is always pronounced as [f]: e.g., [ˈlisfad] vs לִסְפֹּד [lisˈpʰoːoð] 'to mourn' (Gen. 23.2). Historically, however, Samaritan did exhibit dual realisations of the consonants בפדו״ת—note that כ and ג are not present—

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[23] The same could be said about the varying vowel length in modern Jewish reading traditions of Biblical Hebrew.

as indicated by evidence in the Samaritan grammarians (Ben-Ḥayyim 2000, 32–33).

- Most instances of historical gutturals have faded away in the Samaritan tradition, whether resulting in a long vowel or a double consonant where the guttural should have been: e.g., [jeˈrɑːsˤ] vs יִרְחַץ [jirˈħaːasˤ] 'shall wash' (Lev. 1.13); [ˈjɑːmmɑd] vs יַעֲמֹד [jaːʕaˈmoːoð] 'survives' (Exod. 21.21). Gutturals are sometimes preserved word-initially as [ʕ]: e.g., [aʃˈʃiːti] vs עָשִׂיתִי [ʕɔːˈsiːθiː] 'I have made' (Gen. 7.4); [ʕaːˈʔuːti] vs אֲחֹתִי [ʔaħoːˈθiː] 'my sister' (Gen. 20.2); [ʕaːˈfarti] vs חָפַרְתִּי [ħɔːˈfaːaʀ̟tʰiː] 'I have dug' (Gen. 21.30).

With respect to the orthography, it should also be noted that the Samaritan Pentateuch has more *matres lectionis* than the Masoretic Text: e.g., ᎓ᚘᚙ∣ᚘᎩ (≈וירום) [wˈjeːrom] vs וְיָרֹם 'and may be lofty!' (Num. 24.7); ᚛ᚘᚙᚘᎩᚙᚙ ᚙᚘ᚛ᚘ (≈בראישון) [barraːˈʔiːʃon] vs בָּרִאשׁוֹן [bɔːʀ̟iːˈʃoːon] 'on the first' (Gen. 8.13).[24]

The Samaritan tradition also exhibits many differences in the morphology, a small selection of which is outlined below (Florentin 2016, 125–30):

- The Jewish reading traditions generally have five main *binyanim* (i.e., verbal stems): *qal, piʿʿel, hitpaʿʿel, hifʿil*, and *nifʿal*. In the Samaritan tradition, *piʿʿel, hitpaʿʿel*, and *nifʿal* each have two distinct stems, one with a doubled middle root letter and one with a single middle root letter: e.g., [ˈdabbər]

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[24] Note, however, that this latter example has an extra syllable, so it is not merely an orthographic difference but also a phonological one.

vs דִּבֶּר [dibˈbɛːɛʀ] 'spoke' (Gen. 12.4), but cf. [wˈkaːfər] vs וְכִפֶּר [vaχipˈpʰɛːɛʀ] 'and shall make atonement' (Exod. 30.10).

- The Samaritan oral tradition does not normally distinguish CONJ *waw* + *yiqṭol* from the *wayyiqṭol* past narrative form: e.g., [wˈjiʃkan] vs וְיִשְׁכֹּן [vijiʃˈkʰoːon] 'and may dwell!' (Gen. 9.27), but cf. [wˈjiʃkan] vs וַיִּשְׁכֹּן [vaɟɟiʃˈkʰoːon] 'and dwelt' (Exod. 24.16). In some cases, however, the Samaritan tradition may secondarily re-vocalise a *yiqṭol* form as a *qaṭal* form where Tiberian has *wayyiqṭol*: e.g., [wˈjaːʃab] (≈ וְיֵשֶׁב) vs וַיֵּשֶׁב [vaɟˈɟeːʃɛv] 'and lived' (Gen. 4.16).

- Aside from differences in the *binyanim* and verbal morphology, it should also be noted that the Samaritan tradition often exhibits distinct noun patterns, often due to the generalisation of one form across the paradigm: e.g., [ˈdeːbar] vs דָּבָר [dɔːˈvɔːɔʀ] 'word' (Gen. 37.14). The Samaritan form probably reflects the generalisation of the bound form, which at one time exhibited reduction of the first vowel: i.e., *dəbar.

- The pronominal system and person endings in Samaritan Hebrew often reflect a more archaic stage of development. The 2MP/3MP forms have a final [-mma] sequence where the Jewish traditions terminate simply in [-m]: e.g., [ˈimma] vs הֵם [ˈheːem] 'they' (Gen. 3.7); [ʃabˈtimma] vs שַׁבְתֶּם [ʃavˈtʰɛːɛm] 'you (MP) turned' (Num. 14.43). The 2FS pronoun has a final vowel, unlike the other medieval traditions: e.g., ℳℳ𐤀 (≈אתי) [ˈatti] vs אַתְּ [ˈʔatʰ] 'you (FS)' (Gen. 24.23).

- The Samaritan tradition also has a number of extra morphological distinctions not present in Tiberian. The word

הֲלֹא, for example, which is used as an interrogative 'is it not... ?' and a presentative 'look!' in Tiberian, has two distinct forms in Samaritan: e.g., [ˈɑːluː] vs הֲלֹא [haˈloː] 'look!; behold!' (Gen. 13.9), but cf. ᴙ{{ᴙ}}ᴢᴣ (≈הלוא) (הלוא) [ˈɑːlɑ] vs הֲלֹא [haˈloː] 'have ... not?' (Gen. 27.36). As in the Babylonian tradition, Samaritan also exhibits a distinction between the 1CP and 3MS suffixes on the preposition מִן 'from': [mimˈmɑːnu] vs מִמֶּנּוּ [mimˈmɛːɛnnuː] 'from us' (Gen. 23.6); [mimˈminnu] vs מִמֶּנּוּ [mimˈmɛːɛnnuː] 'from/than him' (Gen. 48.19).

While there are many more distinctives of the Samaritan tradition, these serve to provide a bit of a window into the nature of the tradition.

Because there are no vowel signs in the Samaritan tradition, we present an example text (Gen. 1.1) below in Samaritan script and phonetic transcription of the oral tradition:

1   ᴘᴘᴙᴤᴤᴤᴙᴙ ᴘᴙᴘ ᴙᴣᴈᴙᴤ ᴙᴙ ᴙᴤᴤᴤᴤᴙᴣ ᴘᴙᴘ ᴙᴤᴤᴙᴤᴤᴙᴤᴙ
      (≈בראשית ברא אלהים את השמים ואת הארץ)
      [baːˈraːʃət ˈbaːra eˈluwwəm ˈit aʃˈʃaːməm ˈwit ˈaːrəsˤ]
      'In the beginning, God created the heavens and the earth.'

Although the Samaritan oral reading tradition developed primarily around the Torah (i.e., Samaritan Pentateuch), there are also a number of non-biblical compositions in Samaritan Hebrew and Aramaic from the Middle Ages. The oral reading tradition of these mostly liturgical texts, as preserved by the Samaritans in modern times, has also been documented by Ben-Ḥayyim in his 1977 work. While most are Samaritan Aramaic prayers and

liturgical poetry from various periods, there are also several liturgical poems in Samaritan Hebrew. These are especially important since they add to a corpus that would otherwise be comprised of only the Torah (Ben-Ḥayyim 1977a).

7.0. Other Noteworthy Traditions

While the six Biblical Hebrew reading traditions described above constitute the most historically relevant for genealogical classification and subgrouping, they are by no means the only reading traditions that existed throughout history.

There is evidence that, even in ancient times, other oral reading traditions existed alongside those we have covered. Note, for example, that some manuscripts in the Dead Sea Scrolls appear to reflect features of a reading tradition distinct from that of the Secunda, even though they are almost contemporary. The transcriptions of various Hebrew words into Greek in ancient versions like the LXX, Aquila, Symmachus, and Theodotion also exhibit features somewhat different from those of the roughly contemporary Secunda. And yet, we cannot address these oral traditions systematically because their attestation is only sporadic. In the Dead Sea Scrolls, it is only the occasional *mater lectionis* that may provide a window into the oral reading tradition—as opposed to merely the textual tradition. Similarly, in the ancient Greek versions, only an odd word here or there (or proper name) gets transcribed. As such, the ancient oral reading traditions reflected fragmentarily in the Dead Sea Scrolls and the Greek ver-

sions are of limited value for our present discussion. Nevertheless, they may be mentioned occasionally where relevant in the remainder of this book.

We would also be remiss if we did not acknowledge the wealth of various modern oral reading traditions of Biblical Hebrew. If anything, the diversity of oral reading traditions present in ancient times has only grown exponentially into the present day. As various Diaspora communities came into being around the world, from Greece, to Kerala, Kurdistan, Yemen, and Argentina, each of these communities developed their own oral reading tradition, albeit still based on the Tiberian vowel pointing. In each community, the oral reading tradition of the Hebrew Bible came to acquire various phonological features of the vernacular language of its tradents. As a result, many of the distinctives of modern reading traditions are relatively recent innovations and of little relevance for understanding the oral readings of late antiquity (Morag 1958).

Moreover, as we will explain further in the following section, modern traditions (except for Samaritan) can be categorised as Sephardi, Ashkenazi, or Yemenite, with the former two being derived from the Palestinian tradition and the latter being derived from the Babylonian tradition (Morag 2007). As such, aside from cases where the medieval attestation of Palestinian and/or Babylonian is incomplete, these modern traditions are just further developments of these two traditions, which are already covered in our list of six. Nevertheless, we may still occasionally utilise them when relevant, namely in cases of incomplete attestation of the medieval traditions.