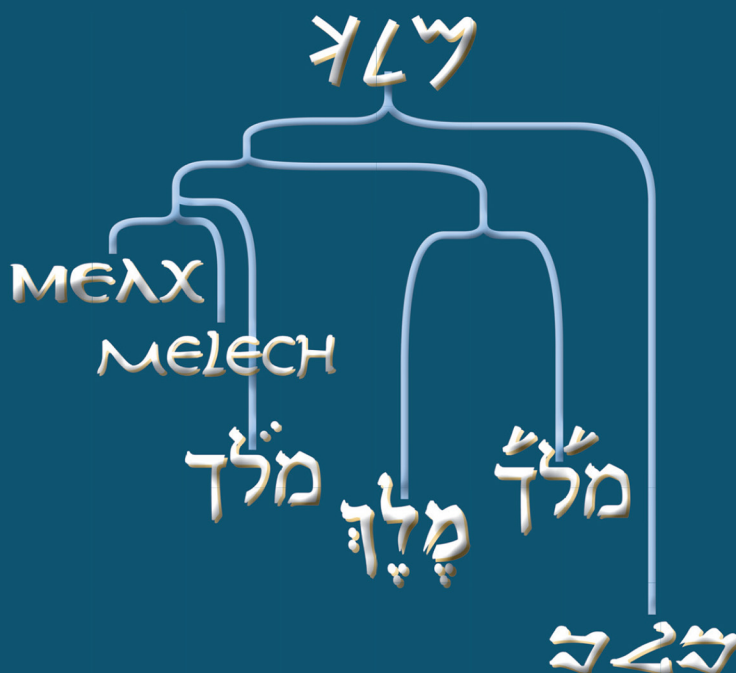


The Linguistic Classification of the Reading Traditions of Biblical Hebrew A Phyla-and-Waves Model

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5. WAVES: INFLUENCE, CONTACT, AND CONVERGENCE

The preceding chapter, entitled ‘Phyla’, focused on genetic subgroupings based on shared innovations, though language contact was addressed in passing. In the present section, entitled ‘Waves’, we enumerate some of the more significant instances of language influence, contact, and convergence in the various Biblical Hebrew reading traditions.

We begin by looking at vernacular influence on the various reading traditions throughout history (§1.0). While many more periods and languages could be addressed, we focus here on three main language contact scenarios. We first deal with the influence of Aramaic and vernacular Hebrew on the ‘popular’ reading traditions of late antiquity like the *Secunda* (§1.1).¹⁰⁴ We also cover two features possibly resulting from Greek influence on the Hebrew traditions of the Roman and Byzantine periods (§1.2). Following this, we consider briefly the influence of the Arabic vernacular on Hebrew reading traditions of the medieval period (§1.3). Finally, we look briefly at the influence of European languages on modern traditions like Ashkenazi and Sephardi (§1.4).

¹⁰⁴ It should also be added that Samaritan Hebrew exhibits many features of what must have been spoken Hebrew or Aramaic in the late Second Temple Period. Though not the focus of any one section, these are mentioned in passing where they correlate with other features examined. This acts as secondary support for a feature being regarded as part of the vernacular or spoken form of the language.

We will also look at a somewhat reverse phenomenon, namely the imitation of a more prestigious or standard reading tradition by other reading traditions (§2.0). This phenomenon, which may be termed ‘convergence’, applies to Palestinian, Babylonian, and even Secunda manuscripts of the Middle Ages.

1.0. Vernacular Influence

1.1. Influence of Aramaic/Hebrew Vernacular on ‘Popular’ Traditions in Late Antiquity

There are a number of features in the ‘popular’ branch of Biblical Hebrew that reflect influence of vernacular Hebrew and/or Aramaic of late antiquity, both in phonology and morphology.

Phonology and Syllable Structure

1.1.1. The Five-Vowel System

The Palestinian tradition is characterised by a five-vowel system: /i, e, a, o, u/ (see chapter 4, §4.1.1). If we include *shewa* = [ə] (rather than [e]) as a distinct vowel, this would result in a system of six vowels, though there is some discussion as to whether ‘*shewa*’ has merged with /e/ in Palestinian. In any case, the very same system is reflected in the Palestinian-pointed fragments of Jewish Palestinian Aramaic from the Cairo Genizah, which suggests that influence of Aramaic on Palestinian Hebrew might have affected the phonology (Fassberg 1990, 28–31, 47).

1.1.2. Realisation of *Shewa*

When representing reduced vowels, the Secunda, Jerome, and the Palestinian tradition tend toward *e*-class vowels rather than *a*-class vowels as in Tiberian (see chapter 4, §2.2.2). The realisation of vocalic *shewa* as an *e*-class vowel is also a feature of Jewish Palestinian Aramaic. Note the use of an /e/ vowel sign to mark *shewa* in Jewish Palestinian Aramaic fragments from the Genizah (Fassberg 1990, 47): e.g., בְּעִיר [beʿir] ‘cattle’ (Exod. 22.9). It is worth noting that various forms in Samaritan Hebrew also seem to reflect the realisation of *shewa* as [e]: e.g., הדברים [adde:'bɑ:rəm] ‘the words’ (Gen. 15.1).

1.1.3. */i/ and */u/ → /e/ and /o/

The lower realisation of the etymological vowels */i/ and */u/ as /e/ and /o/ in closed unstressed syllables appears to be a feature of the ‘popular’ branch generally not attested in Tiberian or Babylonian (see chapter 4, §2.2.1). Note that a similar feature appears to be attested in Jewish Palestinian Aramaic fragments from the Genizah (Fassberg 1990, 30, 35–36): e.g., לֵבָא /lebba/ ‘heart’ (B; Gen. 4.7); דְּאֵמְהָ /d-ʔemmeh/ ‘of his mother’ (E; Gen. 30.3); מְלֵי /melle/ ‘words of’ (A; Exod. 22.8); יֵתֵן /jetten/ ‘will give’ (A; Exod. 22.9); מֵן- /men-/ ‘from’ (D; Deut. 5.20); לְשָׁן /leʃʃan/ ‘language’ (D; Deut. 27.8).

1.1.4. */a/ → [i], [e] before Sibilants

The tendency for vowels to be raised and/or fronted in the environment of sibilants in the Secunda and Jerome (see chapter 4, §4.2.3) has parallels in vernacular Hebrew and Aramaic. In a late

Roman inscription from Beth Shearim, we find a *yod mater* before /ʃ/ in what would otherwise be expected to be a **maqṭal* pattern: מִשְׁכְּבְךָ = [miʃkʰaːʔβaːχ]/[mɛʃkʰaːʔβaːχ] ‘your resting place’ (CIIP 1001; Beth Shearim, 2nd/3rd century CE). The Jewish Palestinian Aramaic fragments from the Genizah exhibit a similar phenomenon (Fassberg 1990, 66–67): e.g., וְתִתְּשָׂהּ [ve-ʔetteshað] (from **tittashad*) ‘has been warned’ (A; Exod. 21.29); וְתִשָּׂא [ve-θɛʃkaħ] (from **taškah*) ‘will find’ (A; Exod. 22.5); מִשְׁכְּנָה [miʃkena] (from **mašknā*) ‘the tent’ (B; Exod. 39.33).

1.1.5. Rule of *Shewa*

Earlier in this book, we noted that the Secunda and Jerome tend to resolve sequences relevant for the so-called ‘rule of *shewa*’ with an /a/ vowel, whereas Tiberian and Babylonian tend to do the same with an /i/ vowel. It is important to note, however, that there is sometimes a distinction between the biblical pronunciation tradition and the rabbinic pronunciation tradition, which was likely closer to the vernacular.

In Babylonian, for example, note that ‘rule-of-*shewa*’ sequences usually get resolved with a *hireq*: e.g., וְתִלְבֵּב [wiθlabʔbeːv] ‘and make cakes’ (2 Sam. 13.6); בְּגִבּוֹרָתָם [biɣvuːrɔːθɔːm] ‘with their might’ (Ezek. 32.29). In the rabbinic tradition of Babylonian, however, there is more of a tendency to find *pataḥ* in such sequences: e.g., וּבְמִישׁוֹר [wawmiːʃoːr] ‘and in uprightness’ (Mal. 2.6; Yeivin 1985, 1152–56).

There are also parallels to this phenomenon in Aramaic. In the fragments of Jewish Palestinian Aramaic from the Genizah, the reductions and clustering of the ‘rule of *shewa*’ are typically

resolved by an /a/ vowel: e.g., לָבָשָׁר [lavsar] ‘to the flesh of’ (B; Gen. 2.24); דִּשְׁמַיָּא [daʃmajja] ‘of the heavens’ (Bd; Gen. 7.23); בְּדַמוּת [vaðmuθ] ‘in the image of’ (C; Gen. 32.29); לִשְׁמִי [laʃmi] ‘to my name’ (Cd; Gen. 48.5); לִשְׁמֵהּ [laʃmeh] ‘to his name’ (D; Deut. 26.18; Fassberg 1990, 107–09). Though not especially common, a similar pattern is also attested in Targum Onkelos and Targum Jonathan: e.g., וּבְנֵי אֱלִיאָב ‘and the sons of Eliav’ (Num. 26.9); וְסָלַק ‘and went up’ (Isa. 37.14); בְּשִׁטְרָא ‘in the written document’ (Jer. 32.10). Syriac also regularly pronounces such sequences with an /a/ vowel: e.g., وَاحْجَلْ /wa-v-ħajl:/ ‘and in the power’ (Peshitta Luke 1.17).

All of this suggests that the patterning of $*CəCəC- \rightarrow *CaCC-$ common in the Hebrew traditions underlying the Secunda and Jerome is likely the result of the influence of the vernacular, in most cases Jewish Palestinian Aramaic.

Morphology

1.1.6. Suffixes and Person Endings

As we touched on earlier with respect to the 2MS suffixes and endings (see chapter 4, §§2.2.3, 4.2.4), ancient Hebrew exhibits $*-CV$ and $*-VC$ morphological byforms of various suffixes and endings. Although both types of byforms are ancient and authentically Hebrew, it is probable that contact with Aramaic and/or vernacular Hebrew served to reinforce the prevalence of the $*-VC$ type of suffix (i.e., $*-āχ$) and the short person ending $*-t$ in certain

traditions.¹⁰⁵ The fact that Aramaic influence appears in the context of bound morphology is significant for determining the process of contact between the languages. Note the following Aramaic and Mishnaic Hebrew forms in comparison with forms in the Secunda, Jerome, and Palestinian:¹⁰⁶

Table 51: 2MS possessive endings in popular branches || Mishnaic Hebrew and Aramaic

Secunda	Jerome	Palestinian	Mishnaic Hebrew	Aramaic
σεμαχ	<i>dodach</i>	לְמַעַךְ	לְמַעַךְ	לְמַעַךְ
[ʃe'maːχ]	[doː'ðaːχ]	[ʃam'maχ]	[ʃ(e)'maχ]	[ʃ(e)'maχ]
'your name'	'your uncle'	'your people'	'your name'	'your name'
(Ps. 31.4)	(Jer. 32.7)	(Deut. 26.15)	(Maaser2 5.11)	(Gen. 17.5; TarO)

Table 52: 2MS *qatal* forms in Secunda and Jerome || Mishnaic Hebrew and Aramaic

Secunda	Jerome	Mishnaic Hebrew	Aramaic
σαμαθ	<i>sarith</i>	עָשִׂיתָ	עָשִׂיתָ
[ʃa'maʃtʰ]	[saː'riːθ]	[ʃa'siθ]	[ʃ(e)'maʃtʰ]
'you heard'	'you wrestled'	'you have done'	'you heard'
(Ps. 31.23)	(Gen. 32.29)	(Sanh. 6.2)	(Cd; Exod. 7.16)

¹⁰⁵ Similarly, the preference for pausal forms in context in Rabbinic Hebrew—and perhaps the Hebrew of Hellenistic-Roman times more broadly—might also have been a contributing factor (Steiner 1979).

¹⁰⁶ Jewish Palestinian Aramaic of the Genizah is from Fassberg (1990, 175).

Table 53: 2MS independent pronouns in Secunda and Jerome || Mishnaic Hebrew and Aramaic

Secunda	Jerome	Mishnaic Hebrew	Aramaic
<i>ouαθ</i>	<i>ath</i>	אַתְּ מוֹכֵר	אַתְּ
[(w)u'ʔatʰ]	['ʔatʰ]	[ʔatʰ mo'χer]	['ʔatʰ]
'and you'	'you'	'you sell'	'you'
(Ps. 89.39)	(Ps. 90.2)	(Ned. 9.5)	(C; Gen. 31.52)

It is significant to note that comparable forms are also found in Samaritan Hebrew: e.g., קוֹלְךָ ['qu:lak] 'your (MS) voice' (Gen. 3.10); גַּמְלֶיךָ [ga:'ma:lək] 'your (MS) camels' (Gen. 24.14).

In addition to these 2MS suffixes and endings, which we have covered above (see chapter 4, §§2.2.3, 4.2.4), the 'popular' branch of Jewish reading traditions also exhibits parallels in the third-person suffixes with Mishnaic Hebrew and/or Aramaic. Though some of the forms below are exceptional in the 'popular' branch and by no means the norm, they nevertheless could reflect important points of contact via the occasional intrusion of Aramaic features and forms:¹⁰⁷

¹⁰⁷ Jewish Palestinian Aramaic of the Cairo Genizah is from Fassberg (1990, 175). Palestinian in Ps. 55.11 is from Garr and Fassberg (2016, 114). Palestinian in T-S H16.6 is from Yahalom (1997, 64).

Table 54: 3MS suffixes in Secunda and Jerome || Aramaic

Secunda ¹⁰⁸	Jerome ¹⁰⁹	Aramaic
ουεσσακη [(w)u(j)ɛʃa:'k²e:h] 'and kissed him' (Gen. 33.4)	<i>thee</i> [tʰe:'ʔe:h](?) 'its chamber(?)' (Ezek. 40.21)	וְנִשְׁקָיָה [venaʃ'qeh] 'and kissed him' (Gen. 33.4; TarO) כֶּסֶף [kʰas'pʰeh] 'his silver' (A; Exod. 21.21)

Table 55: 3FS suffixes in Secunda and Jerome || Aramaic

Secunda ¹¹⁰	Jerome	Palestinian	Mishnaic Hebrew	Aramaic
αμμουδα [ʕammu:'ða:h] 'its pillars' (Ps. 75.4)	<i>techina</i> [tʰɛxi:'na:h] 'you prepared it' (Ps. 65.10)	חֻמֹּתֶיהָ [homo'θeh] 'its walls' (Ps. 55.11; T-S 12.195)	סִמָּנֶיהָ [siman'nah] 'her tokens' (Nid. 5.8)	גַּפֵּיהָ [gap'pʰa:h] 'its wings' (Dan. 7.4) דְּרֵיהָ [da'reh] 'its generations' (T-S H16.6)

¹⁰⁸ For a full discussion of the form, see Kantor (forthcoming b, §4.1.4.3.2).

¹⁰⁹ The proper interpretation of the form *thee* is by no means clear.

¹¹⁰ Note that the Secunda also has the following forms: ουαλλα /w-ʕālāh/ (?) [(w)uʕal'la:h] 'and over it' (Ps. 7.8); ουεζρα /wjeʕzōrāh/ [(w)uʕeʕz'ra:h] (Ps. 46.6). For a full discussion of this suffix, see Kantor (forthcoming b, §§4.1.2.5, 4.1.3.4, 4.1.4.4).

Although the 2MS suffixes and endings already existed as morphological byforms at an early stage of Hebrew and the 3MS suffix *-ēh occurs only sporadically in the ancient transcriptions, these data are still significant. The ‘popular’ branch demonstrates a propensity for suffixes that parallel those of Mishnaic Hebrew and Aramaic. This phenomenon can be explained wholly through contact or by seeing contact as a means to reinforce the prevalent use of certain historical byforms that were authentically Hebrew.

1.1.7. Aramaic *Segholates*

In Tiberian Hebrew, the historical patterns **qat̪l*, **qit̪l*, and **quṭl* typically develop into the *segholate* patterns קָטַל, קִטַּל, or קֻטַּל. Such patterns result from an epenthetic vowel breaking up the final consonant cluster. In Aramaic, on the other hand, these same patterns often develop into קָטַל, קִטַּל, or קֻטַּל with initial *shewa* and a full vowel (with stress) where there was historically a consonant cluster. Note the following examples: Hebrew רֶגֶל ‘foot’ vs Aramaic רִגְלָא; Hebrew קֶצֶף ‘anger’ vs Aramaic קִצְפָא; Hebrew צֶלֶם ‘image’ vs Aramaic צִלְמָא; Hebrew סֵפֶר ‘book’ vs Aramaic סִפְרָא; Hebrew כֶּרֶם ‘vineyard’ vs Aramaic כִּרְמָא or כֶּרֶם;¹¹¹ Hebrew קֶשֶׁט ‘truth; right’ vs Aramaic קִשְׁטָא.

Although *segholate* nouns with an Aramaic vowel pattern appear occasionally in all the reading traditions of Biblical Hebrew, the Palestinian tradition is particularly noteworthy here.

¹¹¹ Note that this particular *segholate* noun exhibits different vowels. Targumic Aramaic has /a/: e.g., כֶּרֶם /k(ə)rám/ [k^h(e)'ram] ‘vineyard’ (Exod. 22.4). Jewish Palestinian Aramaic has /e/ (Fassberg 1990, 142): e.g., כֶּרֶם /k(ə)rém/ [k^h(e)'rem].

Though we did not cite it above, since it may not be relevant for genetic subgrouping, a high proportion of *segholate* nouns with an Aramaic pattern is a particular characteristic of Palestinian. Despite the fact that we have outlined a five-vowel system for Palestinian, there are some manuscripts that make a distinct use of the ‘šere’ sign over against the ‘seghol/shewa’ sign. In such manuscripts, it is common for the vowel pattern to indicate an initial *shewa* followed by *šere* in the vocalisation, which would entail an Aramaic pattern (Yahalom 2016, 171): e.g., צִדֵּק [s^ʕ(ə)ʔðeq] ‘righteousness’ (Ps. 40.10); לִשְׁטֹף [le-ʃ(ə)t^ʕef] ‘for a flood’ (Ps. 32.6); מִסֵּפֶר [miss(ə)ʔfer] ‘from (the) book’ (Ps. 69.29); מִקָּדָם [miqq(ə)ʔðem] ‘from old’ (Ps. 77.12). The frequency of such forms in the Palestinian tradition suggests a high degree of contact with and influence from Aramaic.

While the distribution of such Aramaic *segholates* in Palestinian is particularly strong, it is worth noting that such forms occasionally appear in the Secunda and Jerome as well. In the Secunda, there is one case in which the preposition כַּ followed by the infinitive רוּם in the Tiberian tradition appears to be pronounced as the Aramaic *segholate* כָּרַם ‘vineyard’: *χραμ* /krám/ [k^hram] (Secunda || BHS כָּרַם Ps. 12.9 ‘as [vileness] is exalted’).¹¹² In Jerome, the title of the book of Psalms appears to reflect an Aramaic pattern: *sephar thallim* /s(ə)pár tallím/ [səʔar t^halʔli:m] (Jerome || -- סֵפֶר תְּהִלִּים Psalms Title ‘Book of Psalms’):

¹¹² Though not a *segholate*, in another case, what parallels the verb יָקַר in the Tiberian tradition appears to be pronounced as Aramaic יָקָר ‘glory’ in Secunda Hebrew: *ουῖααρ* /w-jqār/ [(w)ujiʔk^ʔa:ʔ] (Secunda || BHS יָקַר Ps. 49.9 ‘and is costly’).

Table 56: Aramaic segholates in Secunda and Jerome || Aramaic

Secunda	Jerome	Aramaic
χραμ [^h k ^h ram] ‘vineyard’ (Ps. 12.9)		כְּרָם [k ^h (e)‘ram] ‘vineyard’ (Exod. 22.4; TarO)
οὐ̇ξα̇ρ [(w)u̇ji‘k ² α:R] ‘and glory’ (Ps. 49.9)		וִיקָר [vi‘qar] ‘and glory’ (Isa. 10.18; TarJ)
	<i>sephar thallim</i> [sɛ‘ΦAR t ^h al‘li:m] ‘Book of Psalms’ (Ps.)	סֵפֶר [s(ɔ)‘far] ‘book’ (Isa. 29.18; TarJ)

Though not attested with the same frequency as in the Palestinian tradition, these occasional Aramaic *segholate* patterns in the Secunda and Jerome may reflect some degree of Aramaic influence.

1.1.8. Plural Patterns

Historically, plural forms of *segholate* nouns involved the insertion of an /a/ vowel after the second radical: e.g., *‘*abd*’ ‘servant’ and *‘*abadīm*’ ‘servants’ = עֲבָדִים and עֲבָד. While this is a common feature in Hebrew, Aramaic does not form plurals of such words with *a*-insertion: e.g., עֲבָד ‘servant’ and עֲבָדִין ‘servants’.¹¹³ These patterns also hold true when suffixes are added: e.g., Biblical Hebrew עֲבָדֶיךָ ‘your (MS) servants’ but Biblical Aramaic (*qere*) עֲבָדְךָ

¹¹³ Note, however, that the fricative realisation of כפ"ד consonants in the third radical spot demonstrates that /a/-insertion plurals must have existed at an earlier stage of Aramaic.

‘your (MS) servants’; Biblical Hebrew עֲבָדָיו ‘his servants’ but Biblical Aramaic עֲבָדָיו ‘his servants’. It should be noted that such *a*-insertion plurals also occur in feminine forms of the Hebrew *segholates*, namely **qitlā*, **qatlā*, **qutlā*: e.g., עֲלְמָה ‘maiden’ and עֲלְמוֹת ‘maidens’.¹¹⁴

The Secunda and Jerome often attest to plurals with *a*-insertion: e.g., φλαγαν (Secunda || BHS נַחֲלָיו Ps. 46.5 ‘its streams’); *semanim* (Jerome || BHS שְׁמָנִים Isa. 28.1 ‘oils/fats’). In a number of cases, however, they exhibit plural patterns similar to those in Aramaic without *a*-insertion, especially when modified with a pronominal suffix:

Table 57: *Segholate* plurals in Secunda and Jerome || Mishnaic Hebrew and Aramaic

Secunda	Jerome	Mishnaic Hebrew	Aramaic
αρρωθ [har'βo:θ] ‘ruins’ (Ps. 9.7)		תבלים [t ^h av'lim] ‘spices’ (Maaser2 2.1)	מלכין [mal'χin] ‘kings’ (Gen. 14.9; TarO)
αβδαχ [ʔaβ'ða:χ] ‘your servants’ (Ps. 89.51)	<i>baphethee</i> [baφeθ'he:he:] ‘in its entrances’ (Mic. 5.5)		עבדך [ʔav'ðaχ] ‘your servants’ (Gen. 42.13; TarO)

¹¹⁴ It has been argued recently that ‘*a*-insertion’ is not the result of a ‘broken plural’ pattern but rather the outcome of adding an epenthetic to the pattern to resolve a cluster involving an external plural suffix *-w-: i.e., *CVCC-w-ū → *CVCaC-ū (see Suchard and Groen 2021).

εσδαχ	<	שבטך
[hez'da:χ]	<	[ʃiv'tʰaχ]
'your mercies'	<	'your tribes'
(Ps. 89.50)	<	(Deut. 12.14; TarO)

Although Yuditsky (2017, 178) makes a good argument that these plural patterns are authentically Hebrew as well, the distribution should not be ignored. At least in the Secunda, this is the default shape for *segholate* plurals with suffixes. This is exactly the sort of environment where we might expect a tradent of the reading tradition to default back to what is more familiar to them from their vernacular (Kantor forthcoming b, §3.4.2.1).

To the above list may we may also add the following form attested in Secunda Hebrew: αμμιμ (Secunda || BHS עַמִּים Ps. 18.48 'its streams'). Note that there are two plural forms of the word עַם 'people' in Biblical Hebrew, עַמִּים and עַמְמִים. The unusual *i* vowel in between the second and third radicals is unlikely to be etymological. Rather, it probably reflects assimilation of a reduced 'shewa-slot' vowel—or even an epenthetic vowel due to the Obligatory Contour Principle—thus indicating that the underlying form is /ʕam.mīm/ or /ʕam(ə)mīm/. The close front quality [i], then, is the result of assimilation of a variable vowel to the following long [i:] vowel: i.e., *aməṁīm → [ʕami'mi:m]. This may be compared to the following form with an epenthetic vowel in between /p/ and /q/: εφιχιδ /ʔepqīð/ [ʔɛfikʰi:ð] (Secunda || BHS עֲפִיחִי Ps. 31.6 'I entrust'). If this interpretation is correct, we may posit that the Secunda Hebrew form αμμιμ is formed on the basis of analogy with the Aramaic form עַמְמִין, which has *shewa* instead of *qameṣ* on the second radical (Kutscher 1959, 485; Yuditsky 2017, 176; Kantor forthcoming b, §4.3.3.1).

1.1.9. I-^c Verbs in *Yiqtol*

As noted above (see chapter 4, §2.2.5), traditions of the ‘popular’ branch often generalise an /e/ prefix vowel in the *qal* prefix conjugation form, even in I-^c verbs of the etymological **yaqtul* pattern. In this respect, they differ from both Tiberian and Babylonian. As such, this feature could be a shared innovation of the popular branch. Language contact with Aramaic, however, might also have been a factor, whether directly responsible for the form or as a force to reinforce a tendency to generalise the prefix vowel:

Table 58: I-^c verbs in *qal* prefix conjugation forms in Secunda and Palestinian || Aramaic

Secunda	Palestinian	Aramaic
θεσου	וְתַעֲדִי	יַעֲדִי
[tʰɛʃ'su:]	[vattʰeʃ'di]	[jiʃ'de]
‘you do’	‘and you got adorned’	‘goes away’
(Mal. 2.3)	(Ezek. 16.13)	(Isa. 22.25; TarJ)

Note that this feature is also attested in Samaritan Hebrew: e.g., יַעֲשִׂי [ʿje:ʃʃu] ‘shall do’ (Exod. 12.47). This could support the claim that it is the result of influence of the vernacular.

1.1.10. Theme Vowel in *Yiqtol* II-Guttural Forms

As we noted above (chapter 4, §2.2.5), there is a tendency for II-guttural and III-guttural verbs to have an /o/ theme vowel, rather than an /a/ theme vowel, in the *qal yiqtol* form in the Secunda (Kantor forthcoming b, §§4.2.1.2.4, 4.2.1.2.5). This feature, which is largely absent in other traditions, finds parallels in both Mishnaic Hebrew and Aramaic:

Table 59: Theme vowel in II-guttural *yiqtol* verbs in Secunda || Mishnaic Hebrew and Aramaic

Secunda	Mishnaic Hebrew	Aramaic
θεσσοδηνι [t ^h esʃo ^l ðe:ni:] ‘you support’ (Ps. 18.36)	תעום [θit ^{ʕi} ʃom] ‘taste’ (Ketub. 7.2)	טעם [ʔat ^{ʕi} ʃom] ‘I taste’ (2 Sam. 3.35; TarO)
εμωσημ [ʔemho: ^l ts ^ʔ e:m] ‘I strike them’ (Ps. 18.39)	לא ימחוק [ʔlo jim ^h ʃoq] ‘should not smooth’ (BabaB. 5.11)	וימחוק [vejim ^h ʃoq] ‘and wipes out’ (Num. 5.23; TarO)
ουεσοαχημ [(w)uʔeʃho ^l k ^ʔ e:m] ‘and I beat them’ (Ps. 18.39)	וישחוט [jiʃ ^h ʃot ^ʕ] ‘shall slaughter’ (Ketub. 7.2)	ותשחוק [veθiʃ ^h ʃoq] ‘and you shall beat’ (Exod. 30.36; TarO)
λοομ [lo ^h ʃom] ‘make war!’ (Ps. 35.1)	לא יפחות [ʔlo jif ^h ʃoθ] ‘should not give less’ (Sheqal. 6.6)	אדחוקינן [ʔiðhoqi ^l nun] ‘I urge them’ (Gen. 33.13; TarO)

As such, its presence in the Secunda may be regarded as the result of influence of the vernacular. It is also possible, however, that analogy to non-guttural roots brought this feature about as the result of parallel development. Nevertheless, the close affinity to forms in Mishnaic Hebrew and Aramaic should not be ignored.

1.1.11. Conjugation of the Verb הָיָה

In the Secunda, there are various realisations of the word הָיָה-יְהִיָּה ‘to be’. Most of these are fairly regular, as can be seen in the examples below (Kantor forthcoming b, §§4.2.1.1.6, 4.2.1.2.9, 4.2.1.5.8):

Table 60: Regular instances of verb ‘to be’ in Secunda

Secunda	Phonemic	Phonetic	Verse	Tiberian
αἰθι	hājī-tī	haˈji:θi:	Ps. 30.8	הָיִיתִי
αἶη	hǰé	haˈje:	Ps. 30.11	הָיָה
αἶη:	hǰé	haˈje:	Ps. 31.3	הָיָה
ιεῖε	je-hǰé	jehˈje:	Ps. 89.37	יְהִיָּה

There are two instances, however, which may reflect the influence of Aramaic and/or Mishnaic Hebrew on the morphology (Kantor forthcoming b, §§4.2.1.1.6, 4.2.1.2.9):

Table 61: Instances of verb ‘to be’ in Secunda that may reflect Aramaic and/or Mishnaic Hebrew influence

Secunda	Phonemic	Phonetic	Verse	Tiberian
θου	tə-h-ǰí	ˈtʰu:	Ps. 32.9	תְּהִי
αεα	hājǎ	haˈ(j)ɑ:	Ps. 89.42	יְהִיָּה

According to normal phonological rules in the Secunda, we would expect the parallel to the Tiberian form תְּהִי to be represented in the Secunda as θεῖου** /tehǰú/. The form θου, however, would seem to imply a morphology more akin to /t(ə)hǰí/ [ˈtʰu:], which parallels Mishnaic Hebrew forms like יהו ‘will be’ (Hul. 8.2) and Aramaic forms like תְּהוּן ‘you will be’ (Kantor forthcoming b, §4.2.1.2.9).

With respect to the form αεα, it is true that there is a general tendency for semivowels and glides to weaken in the Hebrew tradition of the Secunda (Yuditsky 2008): cf. forms like εωσηβ [(j)oˈʃe:β] ‘resident of’ (Ps. 49.2). This may be what is represented by the *epsilon* here. At the same time, one might suggest that the users of Secunda Hebrew were more accustomed to using the verb הוה [haˈwa:] ‘was’ in their Aramaic vernacular. It is possible that their vernacular form influenced their pronunciation of

the Hebrew form so that the middle radical was pronounced somewhat in between [j] and [w], resulting in a weakened realisation (Kantor forthcoming b, §4.2.1.1.6).

1.1.12. Analogy with *Yiqtol* in the Infinitive

Historically, the *qal* infinitive of a strong verb was of the pattern **qtol* or **qatōl* at an earlier stage of Hebrew. In certain weak verbs, like I-n, I-y, and לָקַח, the infinitive was of the pattern **qītł* (Lambdin and Huehnergard 2000, 58; Suchard 2020, 47, 65, 246). In later forms of Hebrew, like Mishnaic Hebrew, the infinitive can sometimes take a different shape based on analogy with the *yiqtol* form. Note, for example, how the Mishnaic Hebrew infinitive of the verb לָקַח is not לִקְחָת (לִ) ‘to take’ as in Biblical Hebrew but לִיקַח ‘to take’, based on analogy with the *yiqtol* form יִקַּח: e.g., וְהוּא אֵינוּ רוֹצֶה לִיקַח ‘and he does not want to take/buy (it)’ (BabaM. 4.10). Although the evidence is meagre, there is one case in which a similar form may be attested in the Secunda:

Table 62: Hybrid-vernacular form of the infinitive in Secunda

Secunda	Mishnaic Hebrew
σαθι	לִישָׂא
[sa:ʰi:]	[lis'sa]
‘my carrying’	‘to marry’
(Ps. 89.51)	(Sota 4.3)

According to normal Secunda conventions, we would expect the form to be represented as σῆθι or σῆθηθι.¹¹⁵ It is plausible, however, that the author(s) of the Secunda pronounced the infinitive of

¹¹⁵ Cf. the following nominal forms: σῆθηθ (Secunda || BHS שֶׁשֶׁת Lev 13.2 ‘swelling’); σῆθ (Secunda || BHS שֶׁשֶׁת Lev 13.10 ‘swelling’).

א"ש as ש"ל due to the influence of vernacular and/or Mishnaic Hebrew. Faced with the consonantal text שאת, the transcriber imposed the vowels of the more familiar form (ש"ל) on the portion of the form amenable to modification (i.e., שאת). As a result, he vocalised the form as σαθי שאת, which is essentially a hybrid of the Mishnaic form superimposed over the consonantal text of the MT.¹¹⁶ This may indicate that there was influence of vernacular Hebrew on the tradition of the Secunda (Kantor forthcoming b, §4.2.1.6.7).

1.1.13. *Pi^{ce}l* → *Pa^{ce}l*

In Jerome’s transcriptions, there is only one case of a 3MS *qaṭal* verb of a strong root in the D stem. This lone occurrence exhibits an initial /a/ vowel, thus reflecting *pa^{ce}l* rather than *pi^{ce}l*:

Table 63: *Pa^{ce}l* in Jerome

Jerome	Aramaic
<i>maggen</i>	מָלִיל
[mag'gen]	[mal'lel]
‘delivered’	‘spoke’
(Gen. 14.20)	(Gen. 27.5; TarO)

This form in Jerome corresponds with the normal D-stem form in Aramaic: cf. Biblical Aramaic קָבַל ‘received’ (Dan. 6.1) and Targumic Aramaic מָלִיל ‘spoke’ (Gen. 27.5). Note that it is also the regular D-stem form in Samaritan Hebrew: e.g., דָּבַר [‘dabbər] ‘spoke’ (Gen. 12.4). As such, this feature likely reflects influence

¹¹⁶ For a similar phenomenon in the Dead Sea Scrolls, see Hornkohl (2020).

of the spoken language on the traditions of both Jerome and the Samaritans.¹¹⁷

1.2. Influence of Greek during the Hellenistic–Roman and Byzantine Periods

While Aramaic and vernacular Hebrew are clearly the most influential contact languages for the ‘popular’ reading traditions of late antiquity, Greek also had at least a small part to play. The influence of Greek is exhibited in at least two features: (i) the weakening of word-final nasals and (ii) the shift of *waw* from a labiovelar approximant /w/ to a labiodental fricative /v/. Note, however, that the latter applies geographically to Palestine indiscriminately of a ‘popular’ vs ‘Masoretic’ distinction.

1.2.1. Nasal Weakening

The weakening of pre-stop and word-final nasals is one of the most characteristic features of Koine Greek of Judea-Palestine during the Roman and Byzantine periods. It is attested frequently in spellings such as the following: *λειτρο* (for *λίτρον*) and *κακωσι και* (for *κάκωσιν και*). Such spellings probably reflect either the nasalisation of the final vowel and/or the assimilation of the nasal to a following stop: i.e., *λειτρο* = [ˈlitrō] or *κακωσι και* = [ˈkakɔsi(n) jɛ] (Kantor 2023, §§7.5.1–2). Greek transcription of

¹¹⁷ Alternatively, it could reflect the influence of certain famous phraseology attested elsewhere in the Hebrew Bible, such as *אֲנִי מָגֵן לְךָ* ‘I am a shield for you’ (Gen. 15.1). After all, the Samaritan oral reading tradition pronounces the form in Gen. 14.20 as ‘shield’ (i.e., [ˈamgən]) rather than ‘delivered’ (presumably [ˈmaggən]).

Hebrew and Aramaic in Judeo-Palestinian epigraphy exhibits the same phenomenon. Note that the name בנימן (or מנימין?) is once written as *μενιαμι*, reflecting elision of final /n#/ . The transcriptions *σαλω* and *σαλων* for the proper name שלון/שלים may also attest to this phenomenon (Kantor 2023, §7.5.2).

A similar feature is attested sporadically in Secunda Hebrew. In the Secunda, a word-final nasal /m/ sometimes interchanges with /n/ and vice versa: e.g., *ζωην* (Secunda || BHS זָעַם Ps. 7.12 ‘angry’); *θαμμιν* (Secunda || BHS תָּמִים Ps. 18.31 ‘innocent’); *θεσθιργν* (Secunda || BHS תִּסְתִּירֶם Ps. 31.21 ‘you hide me’); *ααμιν* (Secunda || BHS הָעַמִּים Ps. 49.2 ‘the peoples’); *αυωναν* (Secunda || BHS עֲוֹנָם Ps. 89.33 ‘their iniquity’); *σειειν* (Secunda || BHS צִיִּים Isa 13.21 ‘desert dwellers’); *νοοσθαμ* (Secunda || BHS נְהֻשְׁטָן 2 Kgs 18.4 ‘Nehushtan’). It should be noted that this feature is not limited to endings that might be construed as Aramaic, such as the plural or suffixes, but also occurs with root letters, as in *θαμμιν* (Yuditsky 2017, 23–24; Kantor forthcoming b, §3.2.4).

Other contemporary Hebrew evidence exhibits a similar phenomenon. The interchange of ך < ם in final position is attested in Mishnaic Hebrew, the Dead Sea Scrolls, and the Judaean Desert texts. It normally occurs when the MPL morpheme ם־ is realised as ך־ or suffixed forms ending in ם- are realised as ך- (i.e., grammatical morphemes): e.g., עומדין (for עומדים). Such a phenomenon, however, is not limited to the morphological level but can also occur in what appear to be mere phonetic variants: e.g., אדן (for אדם). In other cases, a word-final ך is omitted in spelling: e.g., למע (for למען) and יוחנה (for יוחנן). In other cases, a word ending in a final /-ā/ vowel might be spelled with a final nasal: e.g.,

Different scholars have interpreted this material variously. According to Kutscher (1976, 58–68), final ם and ן were both realised as [n]. Ben-Ḥayyim (1958, 210–11) argues that the word-final nasal elided and left behind a nasalised vowel (i.e., ןא = [ʔa:ðã:] or [ʔa:ðã:ŋ]). The distribution of word-final /m/ ↔ /n/ interchanges in both grammatical and non-grammatical morphemes in Mishnaic Hebrew has been covered by Naeh.¹¹⁹ Regarding this interchange in grammatical morphemes in the Judean Desert texts, Mor has shown that, leaving aside the dual form,¹²⁰ the distribution of word-final ן/ם should be regarded as a scribal phenomenon. In non-grammatical morphemes, the historical spelling is always maintained (Naeh 1992, 297–306; Naeh 1993, 364–92; Mor 2015, 106–15).

¹¹⁹ In non-grammatical morphemes, final ʔ occurs after low vowels, whereas final ɒ occurs after high vowels. This likely reflects a nasalised vowel. In grammatical morphemes, nominal forms generally maintain the ɒ̃, whereas participles used verbally tend to take the ʔ̃. According to Naeh, this reflects the influence of Aramaic on the morphology rather than a nasalised vowel (Naeh 1992, 297–306; Naeh 1993, 369–92; Mor 2015, 107–08).

¹²⁰ The dual is written with ם normally (e.g., שנים, טפחים). For Mor, this is explained by regarding the dual ending as lexicalised with the word. As such, it was not conceived of as an independent or individual morpheme (Mor 2015, 111).

Because the interchange of $\mu > \nu$ occurs in both non-grammatical morphemes (e.g., $\theta\alpha\mu\mu\nu$) and grammatical morphemes (e.g., $\alpha\alpha\mu\nu$, $\alpha\nu\nu\alpha\nu$) in the *Secunda*, the variants probably point to a phonetic phenomenon rather than a morphological one. While various explanations may account for this phonetic phenomenon, such as dissimilation (Yuditsky 2017, 23–24) or confusion in the environment of sonorous consonants, we should not rule out language contact. The fact that this feature is incredibly common in contemporary Koine Greek of the region (and elsewhere) suggests that areal diffusion may be the best explanation. At the same time, the influence of Aramaic morphology raises the possibility of a development brought about and/or encouraged by multiple factors.

1.2.2. *Waw to Vav*

Another possible feature resulting from Greek influence during the Roman and Byzantine periods is the realisation of the consonant *waw/vav* υ . While this consonant was clearly pronounced as a labiovelar semivowel [w] during the biblical period,¹²¹ it came to be realised as [v] in the Tiberian tradition and various streams of Palestinian by the Middle Ages. An analysis of phonological developments in Judeo-Palestinian Greek, transcription conventions of the consonant *waw/vav*, and the reflex of Hebrew $*/w/$ in modern traditions leads to the conclusion that Greek influence (via Aramaic) likely accounts for this shift of $*/w/ \rightarrow /v/$ (Khan and Kantor 2022).

¹²¹ Note transcriptions into cuneiform that demonstrate this: e.g., הוֹשֶׁעַ $\rightarrow a\acute{u}\text{-}se\text{-}^3$ or $\acute{u}\text{-}se\text{-}^3$ (Millard 2013, 838–47).

In Judeo-Palestinian Greek of the Hellenistic–Roman and Byzantine periods, there were two important phonological developments underway. On one hand, the historical phoneme β = /b/ shifted to /β/ (and later /v/). This is evidenced by spellings like $\beta\epsilon\rho\upsilon\tau\alpha\rho\iota\upsilon$ (for Latin *uerutarius*; CIIP 221–22, 1st century BCE–1st century CE). At the same time, the second element of the diphthongs $\alpha\upsilon/\epsilon\upsilon$ = /aυ/ and /eυ/ was shifting from /u/ → /β(ʷ), φ(ʷ)/ → /β, φ/ (and later to /v, f/). This is evidenced by spellings like $\alpha\upsilon\tau\omicron\upsilon$ (for $\alpha\upsilon\tau\omicron\upsilon$; CIIP 1554, 3rd–6th centuries CE). While the former shift (/b/ → /β/) likely occurred at a relatively early stage, the latter shift (e.g., /aυ/ → /aβ, aφ/) was likely progressing throughout the period and not universal until Byzantine times (Kantor 2023, §§7.1.2, 8.2.4–5).

In Greek transcription traditions of Hebrew dated to the Hellenistic–Roman period, we find that the consonant */w/ still appears to be maintained as a labiovelar approximant [w]: e.g., Ἰεσοῦα (Gött. || BHS יֵשׁוּעַ Gen 46.17 ‘Ishvah’); $\beta\sigma\alpha\lambda\omicron\upsilon\iota$ (Secunda || BHS בְּשָׁלֵוִי Ps. 30.7 ‘in my ease’). This is consistent throughout all Greek transcription traditions of Hebrew during the period. In the Byzantine period, however, we start to see the conventions change. Epiphanius (4th century CE) and Theodoret (5th century CE) transcribe the tetragrammaton as $\iota\alpha\beta\epsilon$. John the Lydian (5th/6th century CE) transcribes the month name יָרֵחַ as $\sigma\iota\beta\alpha\nu$. These data point to a shift of Hebrew /w/ → /v/ some time between the Roman and Byzantine periods. Given that this chronology corresponds with the timeline outlined for a similar change in Greek, it is quite possibly the result of language contact (Khan and Kantor 2022).

Such an absolute chronology is also confirmed by certain spelling interchanges attested in Jewish Palestinian Aramaic. Note that in *Breshith Rabbah*, we find frequent interchanges of ב and ו, as in נוטי (for נבטי), בשלש (for ושלש), and הלבוי (for הלואי). These data similarly point to a shift of *waw* to *vav* by the Byzantine period (Sokoloff 1968; Kutscher 1976). Once again, the timeline correlates nicely with the parallel changes in Koine Greek.

The distribution of /w/ or /v/ for historical */w/ in modern Sephardi reading traditions also supports the claim that /v/ in Hebrew is the result of contact with Greek. In areas where Greek was heavily spoken, such as Syria, the modern realisation is /v/, as in the Aleppo tradition of Sephardi Hebrew (Henshke 2013, 538). Where Greek was not as heavily spoken, the modern realisation is still /w/, as in Marrakesh, Jerba, and Baghdad (Akun 2013, 705; Henshke 2013, 538). While this distribution could be a coincidence, the fact that the Aleppo is the only one that falls within the ancient borders of the eastern (Greek-speaking) part of the empire is significant. However, a careful analysis of the data shows that it was not just the presence of Greek that determined the realisation of *waw*, but also the prevalence of Aramaic. This suggests that Greek influence was mediated into Hebrew via Aramaic. This fits well with the concentration of both Aramaic and Greek in Palestine (Khan and Kantor 2022).¹²²

¹²² Note, however, that various data points require further explanation, such as some apparent interchanges of ב and ו in Qumran Hebrew, the reflex of */w/ in Samaritan, the influence of Arabic on the reading traditions, etc. For a full analysis, see Khan and Kantor (2022).

In light of all the preceding data, it is probable that Hebrew **w/* shifted to */v/* in Tiberian and other Palestinian traditions as a result of areal diffusion. Aramaic users likely perceptually matched */w/* with the more salient */v/* (or */β/*) of Greek. This matching brought about a ‘perceptual magnet effect’, which eventually led to the shift of */w/* → */v/*. Such a change in Aramaic resulting from contact with Greek likely eventually made its way into the Hebrew reading tradition (Khan and Kantor 2022).¹²³

1.3. Influence of Arabic Vernacular on Medieval Traditions (and Sephardi, Yemenite)

While Aramaic, vernacular Hebrew, and Greek were the primary contact languages of the Hellenistic–Roman and Byzantine periods, Arabic was the dominant contact language of the Middle Ages. As a result, there are a number of features of the medieval Hebrew reading traditions that can likely be explained as a result of contact with Arabic.

Historically, it is not clear if the so-called ‘emphatic’ consonants *א פ ע* were originally realised as glottalic ejectives */tʔ/*, */kʔ/*, */sʔ/* (or */tsʔ/*), or as pharyngealised */tˤ/*, */q/*, */sˤ/*.¹²⁴ While this

¹²³ For a linguistic analysis of this change in light of the work of Blevins (2017), see Khan and Kantor (2022).

¹²⁴ In the case of *א*, note that the glottalic pronunciation would better explain the affricate realisation */ts(ʔ)/*, for which there is significant evidence across various Hebrew traditions (Steiner 1982). On the other hand, certain spellings in Tannaitic Hebrew would be consistent with spreading processes based on pharyngealisation (Heijmans 2013a, §58).

debate is unlikely to be resolved without more evidence, it may be noted that there was likely variation (Wikander 2015; 2022). In Tiberian Hebrew, however, these consonants were realised as pharyngeals (Khan 2020b, §§I.1.9, I.1.18, I.1.19): i.e., $\text{ט} = [\text{t}^{\text{h}}]$, $\text{ק} = [\text{q}]$, $\text{צ} = [\text{s}^{\text{h}}]$. While it is possible that these realisations had developed naturally internal-to-Hebrew, it is more likely that their medieval realisation in Tiberian is the result of Arabic influence. At the very least, Arabic influence encouraged the preservation and/or selection of certain variants of these consonants already existent in Hebrew. The same principle likely applies to the realisation of these consonants among Arabic-speaking tradents of the Palestinian tradition and the Babylonian tradition.

Note, however, that there is one lexeme in the Tiberian tradition in which the consonant צ is realised as an emphatic $[\text{z}^{\text{h}}]$, namely in the name $\text{אַמְצִיָּהוּ} = [\text{ʔamaz}^{\text{h}}\text{ʔn}:\text{hu}:]$. Because a similar phenomenon is also attested in medieval Arabic, this could be the result of influence (Khan 2020b, 192–93).

Another feature of Tiberian Hebrew (at least in non-standard manuscripts) likely influenced by Arabic concerns the realisation of the vowels *seghol* and *pataḥ*. There are a variety of examples in which these two signs interchange: e.g., עֶשְׂרִים (T-S Misc 1.46, Arrant 2020 || L [BHS]: עֶשְׂרִים Exod. 27.10 ‘twenty’); אַרְבֶּה (II Firkovitch Evr. II B 10 || L [BHS]: אַרְבֶּה Gen. 16.10 ‘I shall multiply’). There is even one example of such a phenomenon in the Leningrad Codex: בְּהִמְתֵּךְ (cf. more common בְּהִמְתֶּךָ)

‘your livestock’ (Deut. 28.11).¹²⁵ This interchange is likely due to influence of the local Arabic dialect. Rather than the phonetic tokens of *pataḥ* and *seghol* being matched with their Tiberian prototypes, they were matched with the Arabic phonemes /a/ and /ā/ (Khan 2020b, §I.4.3.3; note the data from Arrant 2020).

In the Palestinian pronunciation traditions, the realisation of the consonants *dalet rafah* ד /ð/ and *tav rafah* ת /θ/ were also determined to a large degree by Arabic influence. In those regions where the vernacular Arabic dialects did not have the interdental /ð/ and /θ/, these consonants merged with their plosive counterparts, namely *dalet degusha* ד /d/ and *tav degusha* ת /t/. While this is clearly evident in modern Sephardi traditions, the feature appears to be attested in medieval evidence as well (Khan 1997; Khan 2020b, 110, 588–96).

In Samaritan Hebrew, the influence of Arabic is most clearly seen in the realisation of historical */p/. While historically Samaritan must have had a */p/ consonant, after long exposure to and close contact with Arabic, this sound fell out of the consonantal inventory of Samaritan. In its place, we find either /f/ or (in some cases of gemination) /bb/: e.g., פרי [ʿfi:ri] ‘fruit’ (Gen. 1.12) and ויפל [wʿjibbal] ‘and fell’ (Gen. 17.3). The fact that we also find /ff/ alongside /bb/ (e.g., מפרי [mifʿfi:ri] ‘from the fruit of’ (Gen. 3.2)) suggests that /bb/ had begun to substitute for /pp/ at a very early stage (Ben-Ḥayyim 2000, 33).

While many other features of Arabic influence could be mentioned in this section, these few examples suffice to illustrate

¹²⁵ Note, however, that the *pataḥ* here is secondary. I would like to thank Ben Outhwaite for pointing this out to me.

its impact on reading traditions of the Middle Ages. It should also be noted that Arabic has continued to exert influence on various Sephardi and Yemenite traditions in modern times. We already mentioned the shift of /ð/, /θ/ → /d/, /t/ in some Sephardi dialects due to Arabic influence. In various Yemenite traditions, the realisations of *ṣ* as [g], [j], or [d͡ʒ] appear to be conditioned based on the realisation of Arabic *ج* *jim* in the local dialect (Morag 2007, 549, 556). Beyond these specific more recent changes, the presence of Arabic also serves to preserve certain medieval features that otherwise would likely have been lost, such as the pharyngealised realisation of the emphatic consonants and the proper realisation of the gutturals (Morag 2007, 556).

1.4. Influence of European Languages on Ashkenazi Traditions (and Sephardi)

The final language contact scenario we consider is that of European languages. While this is relevant for both Ashkenazi and Sephardi traditions, the influence of European languages is most clearly evidence in its impact on the former.

Much of the Ashkenazi phonological inventory has been altered from its Palestinian ancestor as a result of contact with European vernacular languages. As noted above, while medieval Ashkenazi originally had a five-vowel system like Palestinian, certain changes came about as a result of certain developments in German dialects spoken by Jews. In various German dialects, including Yiddish, earlier [a:] and [a] in an open syllable shifted to [o] (or [u]) in the twelfth century (Khan 2020b, 112–15). This

had an impact on the realisation of *gameš* in some Ashkenazi traditions: e.g., Western Ashkenazi ['tom] (Glinert 2013, 196 || תם 'honest, naïve') and [ka'lo:] (Glinert 2013, 196 || כלה 'bride'). Similarly, a diphthongised realisation of Yiddish long [e:] in an open syllable, which began to develop in the thirteenth and fourteenth centuries, gradually led to a diphthongal realisation of *šere*: e.g., Northeastern Ashkenazi ['ejɛl] and Mideastern Ashkenazi ['ajɛl] (Katz 1993, 70 || עגל 'calf').

Similar influence of European languages was likely exerted on the consonantal system of Ashkenazi Hebrew. Perhaps the most obvious example concerns the elimination of the guttural consonants *ʁ* and *ʕ* due to the absence of /ʔ/, /ʕ/ in the consonantal inventories of the vernacular: e.g., [u'su] (Katz 1993, 80 || BHS שׁוּׁׁׁׁ Est. 1.3 'he made/did'). The merger of *ת* and *כ*, on the other hand, is likely due to the presence of the phoneme /x/ in the vernacular: e.g., [xajl] (Katz 1993, 80 || BHS לַיִל Est. 1.3 'army [cstr.]'). The de-pharyngealisation of *ט* and *ק* to a simple /t/ and /k/ is also likely due to the absence of pharyngealised consonants in European languages. While some might argue that the realisation of *צ* as an affricate [ts] in Ashkenazi Hebrew is the result of German influence, it is equally possible that this sound is archaic (Steiner 1982). Finally, while the shift of *tav rafah* ת to /s/ could reflect natural development, it might also have been encouraged or catalysed by the absence of an interdental /θ/ in many vernacular contact languages of Europe, including German

and Yiddish. The same explanation likely applies to the absence of fricative realisations of \aleph and τ in Ashkenazi traditions.¹²⁶

Although not as pervasive in the tradition as a whole, the influence of European languages is also evidenced in the Sephardi traditions among Ladino-speaking, Italian, and Dutch-Portuguese communities. Unlike the Arabic- and Aramaic-speaking Sephardi communities, which maintain most of the medieval consonantal inventory of Palestinian, these European Sephardi communities alter or eliminate most of the gutturals and the emphatics due to influence of the local vernacular. Both \aleph and φ are often realised as ‘zero’, π is realised as /x/, and the emphatics υ and φ are simplified to /k/ and /t/ (Morag 2007, 556). All of these features are likely due to the historical phonemes, absent in the local vernaculars, being replaced by alternate phonemes from the vernacular. Nevertheless, unlike in the Ashkenazi traditions, the five-vowel Palestinian system has been maintained until the present day (Morag 2007, 556).

While many more features could be cited in this section, these suffice to illustrate the relevance of European-language influence on (especially) the Ashkenazi traditions and the Sephardi traditions.

2.0. Convergence with Tiberian in Middle Ages

While the Jewish vernaculars have exerted a centrifugal force on (usually the more ‘popular’) Biblical Hebrew reading traditions throughout history, pulling their features in the direction of the

¹²⁶ For a full consonantal comparison, see Morag (2007, 556).

spoken language, the Tiberian tradition seems to have exerted a centripetal force on the reading traditions of the Middle Ages, pulling them into conformity with its own features. Indeed, while the earliest layers of Palestinian and Babylonian exhibit a significant degree of distinctiveness, later layers of these traditions exhibit considerable convergence with Tiberian. There are even some cases of medieval Greek manuscripts of the *Secunda* exhibiting this same convergence. All of this is likely due to the prestige of the Tiberian tradition during the Middle Ages.

2.1. Palestinian

As we have mentioned above (see chapter 3, §3.0, and chapter 4), the Palestinian tradition is a bit difficult to parse due to the high degree of convergence with Tiberian therein. Comparing various sources, however, helps us discern which features are due to convergence and which features are authentic. This appears to be the case when we compare non-biblical manuscripts with biblical manuscripts, on one hand, and more diverse biblical manuscripts with more ‘standard’ biblical manuscripts, on the other. Such a comparison yields examples like the following, with more authentic Palestinian features in the first column, forms that exhibit convergence in the middle column, and the Tiberian form in the right column:¹²⁷

¹²⁷ Palestinian is from Harviainen (1977, 142, 166); Yahalom (1997, 24–25); Garr and Fassberg (2016, 110–11, 113, 117).

Table 64: Convergence in Palestinian manuscripts

Palestinian	Palestinian → Tiberian	cf. Tiberian
לְבוֹ [leb'bo] (Bod.Heb. MS d 41, 13v, l.23)	בְּלִבּוֹ [belib'bo] (Ps. 37.31; T-S 20.54)	בְּלִבּוֹ [balib'bo:] 'in his heart' (Ps. 37.31)
לְנֶשֶׁחַ [nes'eh] (T-S H 16.5)	לְנֶשֶׁחַ [la'nes'ah] (Ps. 52.7; T-S 12.195)	לְנֶשֶׁחַ [lo'ne:s'ah] 'forever' (Ps. 52.7)
עַמְּךָ [ʕam'maχ] (Deut. 26.15; Bod.Heb. MS d 63, fol. 83v)	עַמְּךָ [ʕamme'χa] (Ps. 72.2; T-S 12.196)	עַמְּךָ [ʕamma'χ:] 'your people' (Ps. 72.2)
חֵכְמָה [haχ'ma] (Ant. 912)	חֵכְמָה [hoχ'ma] (Ps. 37.30; T-S 20.54)	חֵכְמָה [hχ'ma:] 'wisdom' (Ps. 37.30)

Note also that the profile of many Palestinian manuscripts, which attempt to distinguish two *e*-vowels and two *a*-vowels, is perhaps the most clear sign of convergence.¹²⁸

Many other features could be cited, but these suffice to show that there was a significant degree of convergence towards Tiberian in Palestinian biblical manuscripts of the Middle Ages.

¹²⁸ For a selection of these, see Revell (1970); Yahalom (1997).

2.2. Babylonian

It has been well established that later Babylonian manuscripts tend to exhibit considerable convergence with Tiberian features as opposed to Old (or authentic) Babylonian features. While many examples could be cited, we list only a brief selection of examples below, with the more authentic Old Babylonian features in the first column, the forms that exhibit convergence in the middle column, and the Tiberian form in the right column (Yeivin 1985, 77–87):

Table 65: Convergence in Babylonian manuscripts

Old Babylonian	Babylonian → Tiberian	cf. Tiberian
אַרָץ [ˈʔarasˤ]	אַרָץ [ˈʔe:resˤ]	אַרָץ [ˈʔe:ʔesˤ] ‘land’
אֲשֶׁר [ʔaʃa(:)r]	אֲשֶׁר [ʔaʃe:r]	אֲשֶׁר [ʔaʃe:ʔ] ‘that; which’
זֶה [ˈza:]	זֶה [ˈze:]	זֶה [ˈze:] ‘this’
בְּגָדִי [baɣˈðe:]	בְּגָדִי [biɣˈðe:]	בְּגָדִי [biʔˈðe:] ‘garments of’
הַמִּזְבֵּחַ [hammazˈbe:h]	הַמִּזְבֵּחַ [hammizˈbe:h]	הַמִּזְבֵּחַ [hammizˈbe:ah] ‘the altar’
לֵב [ˈla:v]	לֵב [ˈle:v]	לֵב [ˈle:ev] ‘heart’

Such convergence often involves the substitution of Babylonian *šere* for Babylonian *pataḥ*, which is parallel to Tiberian *seghol*. In

other cases, it may involve the updating of a different morphological nominal pattern such as קטלִי → קטלֵי.

Although the Babylonian tradition enjoyed a good deal of prestige itself early on in the Middle Ages, the Tiberian tradition eventually won out as the most prestigious and authoritative among the medieval Biblical Hebrew reading traditions (see chapter 3, §§4.0–5.0). Such convergence is a result of this development.

2.3. **Secunda**

In some medieval manuscripts of the Secunda, some distinctively ‘Secunda’ forms are updated to match more ‘Tiberian’ (or at least ‘standard’) Hebrew conventions. This can be seen by comparing earlier (or better) manuscripts of the same exact readings. Note the chart below (Kantor forthcoming d, §A.IV.5):

Table 66: Convergence in medieval Secunda manuscripts

Secunda (Best MSS)	Secunda (Other MSS)	cf. Tiberian
σεφρ αθελλιμ	σεφε ^{er} θιλλιμ	סֵפֶר (ה)תְּהִלִּים ‘Book of Psalms’ (Ps. Title)
αων ακοββαϊ ισοββουνι	αων ακουββαι ισουββουνει	עוֹן עֲקֹבִי יְסוּבֵנִי: ‘the iniquity of those who cheat me surrounds me’ (Ps. 49.6)
ουα ^{la} λα (or ουαλ< ^a >α?)	ουα ^{le} α	וְעָלֶיהָ ‘and over it’ (Ps. 7.8)

<λ>αβνη αδαμ

λεβνη αδαμ

לְבָנֵי אָדָם:
 ‘of the sons of men’
 (Ps. 12.9)

In the first example, an epenthetic is inserted to break up the normal Secunda final cluster in a *segholate* pattern. In the following word, the normal Secunda short /e/ vowel is replaced with a *hireq* to better match the Tiberian form. In the second example, the normal Secunda short /o/ vowel is replaced by an /u/ vowel to better match Tiberian patterns with *shureq/qibbuš*. In the third example, the Aramaic-type PREP with suffix [ʕäˈla:h] (or [ʕaˈla:ha:]) is modified to match the *seghol-qameš* sequence in Tiberian. Finally, in the fourth example, the *CəCəC- → *CaCC- ‘rule of *shewa*’ resolved with an *a*-class vowel in the Secunda is updated to (at least partially) match a ‘rule of *shewa*’ with an *e*-class or *i*-class type vowel. These examples demonstrate that, even for a source as diverse as the Secunda, scribes felt the need to update it in conformity with Tiberian Hebrew—or at least some other more ‘standard’ tradition of Hebrew. Finally, it should be noted that this type of convergence is distinct from that of the preceding two categories (§§2.1–2.2), since here it is likely merely a scribal phenomenon rather than that of a living recitation tradition.

2.4. Addendum: Convergence with ‘Proto-Tiberian’ in Jerome?

Even though the Hebrew tradition reflected in the transcriptions of Jerome is most closely related to Secunda Hebrew (see chapter 4, §4.0), some of its distinctive features (over against the Secunda) parallel features found in Tiberian. In particular, we

may note that it regularly has an epenthetic vowel in *segholate* nouns (e.g., *melech*; chapter 4, §5.1.1), it has a consistent and distinct *wayyiqṭol* (e.g., *uaiecrā*) form (chapter 4, §5.1.2), and it has sporadic instances that appear to reflect a non-etymological [a] vowel in the ‘vocalic *shewa*’ slot (chapter 4, §5.1.3). Overall, each of these features points to greater regularisation of syllable structure. Such a general trend is also characteristic of Tiberian Hebrew, which happens to be the only other tradition that exhibits all these three features. This raises the possibility that, either in sporadic instances or in certain features, Jerome was influenced by a more formal or prestigious tradition of the Byzantine period. While it is tempting to call this ‘Proto-Tiberian’ or ‘Proto-Masoretic’, such a claim is obviously highly speculative. Much more evidence would be required to deem such influence conclusive. Nevertheless, it should be stressed that such influence would be minimal, since Jerome is still most closely related (in many more respects) to the Hebrew tradition underlying the *Secunda*.