

I.4. REFLECTIONS OF THE IMPERFECT LEARNING OF THE TIBERIAN PRONUNCIATION IN THE MIDDLE AGES

I.4.1. PRELIMINARY REMARKS

The Tiberian pronunciation was highly prestigious when it was a living oral tradition (§I.0.9.). For this reason, many readers strove to adopt it in their reading of the Bible and orthoepic measures were taken to ensure that it was pronounced correctly and distinctly. The fact that the Tiberian pronunciation was the ideal target of readers of the Bible is reflected by the fact that many manuscripts pointed with Babylonian and Palestinian vowel signs display a tendency to convergence with the Tiberian tradition.

Although the prestigious Tiberian pronunciation tradition was the ideal target, many readers fell short of achieving this target due to imperfect learning and interference from other reading traditions and vernacular languages.¹ This is reflected by the fact that manuscripts with Babylonian and Palestinian systems of vocalization that were adapted to the Tiberian tradition rarely exhibit complete convergence. Even those of a manuscript such as I Firkovtich Evr. I B 3 (Codex Babylonicus

¹ For the phenomenon of imperfect learning and its role in conditioning linguistic change see Thomason and Kaufman (1988, 251–55) and Thomason (2001, 66–76).

Petropolitanus), which appears to represent the Tiberian tradition very closely, exhibits some differences from the tradition of the inner circle of the Tiberian Masoretic school (§I.2.5.8.).

The various Non-Standard Tiberian manuscripts that have come down to us from the Middle Ages exhibit some developed orthoepic features of the Tiberian tradition, such as the extended use of *dagesh*, but in many cases their vocalization reflects a reading that falls short of the Tiberian model.

The Karaite transcriptions into Arabic script exhibit readings of various degrees of closeness to the Tiberian tradition. Most are very close, whereas a few reflect a reading that falls short of the Tiberian ideal due to imperfect learning and interference. The transcriptions are particularly important for our understanding of the processes at work that resulted in such a failure to reach the ideal target. The discussion in this chapter, therefore, will be based to a large extent on the evidence from the transcriptions.

The failure to achieve the target is due to imperfect learning and the impact of the phonology of a substrate on the production of the reading. The key process involves the matching of phonetic sounds in the Tiberian target pronunciation with phonemic prototypes in the substrate rather than learning the Tiberian phonemic prototypes and matching the phonetic sounds with these. This can lead to a distribution of sounds that does not correspond to that of the Tiberian target. Such a suboptimal outcome can be classified into two types. (i) The distribution of sounds may correspond to that of the substrate. (ii) The distribution of sounds may correspond neither to that of the substrate

nor to that of Tiberian target. In the latter case, the resulting type of pronunciation can be said to be a ‘hypercorrection’.

I.4.2. CONSONANTS

The main case study concerning the interference of a substrate in the achievement of a Tiberian target in the reading of consonants is the pronunciation of the interdental consonants.

In most of the Sefardi reading traditions of the Levant and North Africa that have continued down to modern times the letters *tav* and *dalet* are pronounced as stops in all contexts. They are not pronounced as interdentals where the Tiberian tradition had fricative *tav* [θ] or fricative *dalet* [ð],² e.g.

Aleppo

ˌkəvrat ˈʔe,rø's (Katz 1981, 9 | L [BHS]: כְּבִרְת־אַרְצֵי Gen. 49.19
‘some distance’)

ˈgad geˈdud (Katz 1981, 8 | L [BHS]: גָּד גְּדוּד Gen. 49.19 ‘Gad,
a troop ... ’)

Jerba

wɛˌhəthalˈleːx (Katz 1977, 17 | L [BHS]: וְהִתְהַלֵּךְ Exod. 21.19
‘and he walks about’)

jaʕaˈbod (Katz 1977, 18 | L [BHS]: יַעֲבֹד Exod. 21.2 ‘he will
work’)

² For this phenomenon see Garbell (1954, 232), Katz (1977, 16–18, 1981, 4–5), Akun (2010, 35–37, 46–47), Henshke (2013, 861–182).

Morocco

tihu^lmut (Akun 2010, 46 | L [BHS]: תְּהִמּוֹת Exod. 15.8
‘depths’)

mi^lyad (Akun 2010, 36 | L [BHS]: מִיַּד Exod. 14.30 ‘from the
hand of (cstr.)’)

The Sefardi reading traditions had their origin in the Palestinian reading tradition of Hebrew. This phenomenon, however, was not an original feature of the Palestinian reading tradition, but rather it appears to be the result of interference from the Arabic dialects spoken by the Jews of the regions in question, in which stops have replaced the interdental consonants.³ In regions where the Arabic dialects of the Jews preserved the interdentals, these consonants were generally preserved also in the local Sefardi reading traditions of Hebrew.⁴

In some medieval Karaite transcriptions, there is evidence that readers sometimes pronounced *tav* and *dalet* as stops where interdental realizations would be expected. This is seen particularly clearly in the case of the transcription of *tav*, since the stop and fricative realizations are distinguished by different Arabic diacritics (i.e. ت vs. ث), whereas the occurrence of an Arabic ڤ with-

³ See, for example, Nevo (1991, 3–4: Aleppo), David Cohen (1975, 19: Tunis), Marcel Cohen (1912, 21: Algiers).

⁴ This is seen, for example, in the reading traditions of the Jews of Yemen (Morag 1963, 41–42) and of the Jews of Baghdad (Morag 1977, 5)

out a diacritic in a manuscript of a transcription could, in principle, be the result of the scribal omission of the diacritic from the letter *dhāl* and need not necessarily be interpreted as a *dāl*.

One manuscript of interest in this respect is BL Or 2551, fols. 31-101, which is an Arabic transcription of Psalms accompanied by an Arabic commentary. Where fricative *tav* occurs in the Tiberian tradition, this manuscript generally has the Arabic letter interdental *thāʾ*, e.g.

مِشْلَاح (BL Or 2551 fol. 31r, 3 | L [BHS]: מִשְׁלַחַת Psa. 78.49 ‘sending of’)

مَمَاوِث (BL Or 2551 fol. 31v, 10 | L [BHS]: מִמָּוֹת Psa. 78.50 ‘from death’)

رَاشِيْث (BL Or 2551 fol. 32r, 6 | L [BHS]: רֵאשִׁית Psa. 78.51 ‘beginning’)

قَانِثَا (BL Or 2551 fol. 32v, 13 | L [BHS]: קָנִיתָה Psa. 78.54 ‘(it f.) acquired’)

On several occasions, however, it has Arabic *tāʾ* where the Tiberian pronunciation has a fricative *tav*, reflecting the pronunciation of the consonant as a stop, e.g.

هتعبار (BL Or 2551 fol. 34v, 3 | L [BHS]: הִתְעַבֵּר Psa. 78.62 ‘he was angry’)

אֵת (BL Or 2551 fol. 37r, 14 | L [BHS]: אֵת Psa. 79.1 object marker)

In some cases the vocalizer adds a *rafe* sign over the *tā*ʾ:

כִּתּוֹם (BL Or 2551 fol. 36v, 9 | L [BHS]: כִּתּוֹם Psa. 78.72
‘according to the integrity’)

וּבִתְּבוּנוֹת (BL Or 2551 fol. 36v, 9 | L [BHS]: וּבִתְּבוּנוֹת Psa.
78.72 ‘and with the skilfulness of’)

וּבְתוֹלוֹתָיו (BL Or 2551 fol. 34v, 6 | L [BHS]: וּבְתוֹלוֹתָיו Psa.
78.63 ‘and its maidens’)

בְּחִתּוֹב (BL Or 2551 fol. 55r, 2 | L [BHS]: בְּחִתּוֹב Psa. 87.6
‘when writing’)

The fact that in many places the manuscript has *thā*ʾ where expected in the Tiberian tradition shows that the reading that it represents is not a type of Sefardi reading without any interdental consonants such as those discussed above. It appears to be an attempt at reading with a Tiberian pronunciation. The reader was successful in achieving the correct pronunciation of fricative *tav* in many places, but in several cases interference from a substrate resulted in this being read incorrectly as a stop. The *rafe* sign written over *tā*ʾ in some cases reflects the reader’s Tiberian target, which was not achieved.

It is significant to note that in this manuscript transcriptions of Tiberian fricative *tav* with the Arabic stop *tā*ʾ are much

more common in the Hebrew words that are embedded within the Arabic commentary. None of these is marked with the *rafe* sign, e.g.

משלחת (BL Or 2551 fol. 31v, 7 | L [BHS]: מְשַׁלְחָתָהּ commentary on Psa. 78.49 ‘sending of’)

נתיב (BL Or 2551 fol. 31v, 12 | L [BHS]: נְתִיבָהּ commentary on Psa. 78.50 ‘a path’)

لا تاسور (BL Or 2551 fol. 31r, 13 | L [BHS]: אֲלֹ תִסָּוֶר Deut 17.11 in the commentary on Psa. 78.50 ‘you shall not decline’)

The isolated Hebrew words within the commentary evidently reflect a less learned type of reading than the reading of the biblical text itself. Less effort was made to achieve the prestigious Tiberian target.

The ultimate origin of this elimination of interdental in the Hebrew reading is likely to have been the lack of interdentals in the vernacular Arabic speech of the reader, as is the case with the modern Sefardi traditions without interdentals. There is, indeed, evidence from inscriptions and papyri that interdental consonants were lost in some Arabic dialects as early as the beginning of the eighth century C.E. (first century A.H.).⁵

⁵ See Hopkins (1984, 33–36). To the material cited by Hopkins can be added the inscription no. 15 in Combe, Sauvaget and Wiet eds. (1931-

A possible way of explaining the suboptimal distribution of stops and interdentals in the manuscript is the model proposed by Blevins (2017) for phonological processes that take place in language contact situations. In the spoken vernacular of the reader, there was not an unvoiced interdental phoneme /θ/ but only a stop phoneme /t/ or, more likely, /t^h/, i.e. an aspirated unvoiced stop. This had only stops as its phonetic realization, i.e. [t^h] and most likely also deaspirated [t]. When the reader heard in the Tiberian pronunciation the interdental phonetic tokens [θ], these were perceptually matched to the stop /t^h/ prototype phoneme of the reader's vernacular. This matching brought about a 'perceptual magnet effect', to use Blevins' metaphor, whereby the interdental tokens of Tiberian were perceived as being like the stop tokens of the prototype in the native vernacular. As a result of this lack of perception, or at least difficulties of perception, of phonetic difference, the two tokens were confused. The ultimate result of such a process would be the pulling of the interdental into a change that would level its difference from the token of the prototype in the vernacular, i.e. a stop. In the attempted pronunciation reflected by the manuscript, however, the reader still had some knowledge, if imperfect, of the Tiberian distribution of interdentals and a desire to implement it, at least in the learned reading of the biblical text section. This has prevented a complete levelling of the distinction between interdentals and stops.

1991). The main evidence in these sources is the occurrence of the pointing of Arabic *tā'* where *thā'* is expected.

Another manuscript of a Karaite transcription, BL Or 2552 fols. 90-141, in most cases has an Arabic *tā'* where a fricative *tav* occurs in the Tiberian tradition, e.g.

כי מוֹת נָמוֹת (BL Or 2552 fol. 90v, 2 | L [BHS]: כִּי־מָוֹת
נָמוֹת 2 Sam. 14.14 'because we have to die')

קוהַלֵּת (BL Or 2552 fol. 90v, 3 | L [BHS]: קוהַלֵּת Ecc. 1.1
'preacher')

יִתְרוֹן (BL Or 2552 fol. 92v, 2 | L [BHS]: יִתְרוֹן Ecc. 1.3
'profit')

A Tiberian fricative *tav* is represented by Arabic *thā'* only in a few cases, e.g.

רַאִיִּי (BL Or 2552 fol. 106v, 3 | L [BHS]: רַאִיִּי Ecc 4.15 'I
saw')

נַחֲלָתָנוּ (BL Or 2552 fol. 133v, 1 | L [BHS]: נַחֲלָתָנוּ Lam. 5.2
'our inheritance')

יְתוּמִים (BL Or 2552 fol. 133v, 11 | L [BHS]: יְתוּמִים Lam. 5.3
'orphans')

This indicates that the reader was making some attempt at the prestigious Tiberian pronunciation. The process of levelling of vernacular and Tiberian phonetic tokens had, however, progressed further than in BL Or 2551, fols. 31-101. This would have

involved, presumably, a lesser degree of ability to perceive differences between the tokens and a lesser degree of knowledge of the correct distribution of tokens in the Tiberian pronunciation. A further reflection of this in the manuscript is the occurrence of an Arabic *thā'* where there was a stop in the correct Tiberian reading:

אל־תִּרְשָׁע (BL Or 2552 fol. 113v, 2 | L [BHS]: אל־תִּרְשָׁע Ecc.

7.17 'do not be wicked!')

This can be regarded as a hypercorrection, whereby the reader strives to achieve the prestigious Tiberian reading by using an interdental token, but this is used incorrectly where the stop token should have occurred, resulting in a distribution of tokens that corresponds neither to that of Tiberian pronunciation nor to that of the vernacular substrate.

Another type of phenomenon that may be interpreted as the result of imperfect learning of the Tiberian tradition is attested in the following transcriptions. In some manuscripts, the *tav* in the words אַתָּ 'you (fs)' and בָּתֵּימִם 'houses' is transcribed by a fricative *thā'*, e.g.

אַתָּ (BL Or 2544, fol. 14v, 2 | L [BHS]: אַתָּ Gen. 24.60 'you
: r-
(fs))

בָּתֵּיהֶם (BL Or 2549, fol. 34v, 1 | L [BHS]: בָּתֵּיהֶם Jer. 5.25
+
'their houses')

Elsewhere in these manuscripts, the stop and fricative realization of *tav* are transcribed with their correct Tiberian

distribution. The *tav* in these two words in Tiberian pronunciation have the anomalous feature of being pronounced as a stop after a vowel although they are not geminated, at least in the conservative *dagesh forte*—*dagesh lene* stream of the Tiberian reading tradition (§I.2.5.9.3., §I.3.1.12.).⁶ The fricative pronunciation that is reflected in these manuscripts may be the result of an analogical levelling that eliminated the anomalous distribution of the ungeminated stop. This would be a natural phonological process, but it reflects imperfect learning of the standard Tiberian tradition.⁷

I.4.3. VOWELS

I.4.3.1. Interchanges of Signs Reflecting a Substrate of Palestinian Pronunciation

Many biblical manuscripts with Non-Standard Tiberian vocalization exhibit interchanges of *pataḥ* and *qameṣ* vowel signs and interchanges of *segol* and *šere* vowel signs. Similar interchanges are found in many biblical texts with Palestinian vocalization.

⁶ In the more advanced extended *dagesh forte* stream of the Tiberian tradition the *tav* would have been geminated in both words (§I.3.1.11.3.).

⁷ A parallel to this phenomenon of fricativization of the *tav* by analogy is attested in the Babylonian tradition of Biblical Hebrew, in that one manuscript with Babylonian vocalization has a Babylonian *rafe* sign over the *tav* of the plural form ‘houses: וְבָתַי׃ (BHS וּבְתַי׃ Ezek. 26:12 ‘and the houses of’ (Yeivin 1985, 868)).

Different patterns of interchanges are attested across the manuscripts.⁸

These interchanges reflect the fact that the reading tradition of the scribe had only one 'a' vowel phoneme and only one 'e' vowel phoneme, which was characteristic of the Palestinian reading tradition. This corresponded to the sound system of Jewish Palestinian Aramaic, which, in turn, is likely to have arisen by convergence with the sound system of Greek in Byzantine Palestine.

It is significant to note that non-biblical texts, generally of a liturgical nature, which reflect the Palestinian type of pronunciation, whether expressed in Tiberian or Palestinian vowel signs, sometimes have only one 'a' vowel sign and one 'e' vowel sign.⁹ Such liturgical texts no doubt reflect more directly the Palestinian sound system. The biblical manuscripts that exhibit interchanges of vowels reflect the result of readers attempting to pronounce the text with the prestigious Tiberian pronunciation but failing to achieve the target. The interchanging of written signs in the manuscripts reflects the phenomenon, but we must turn to some Karaite transcriptions to have more insight

⁸ For this phenomenon in Non-Standard Tiberian biblical texts see Morag (1959), Díez Macho (1963), and Blapp (2017). For biblical texts in Palestinian vocalization see Revell (1970a).

⁹ For liturgical texts with Tiberian vocalization of this nature see Mishor (2002, 235), Rand and Loeffler (2015, 9) [I thank my colleague Michael Rand for these references] and for texts with Palestinian vocalization see Revell (1970a; 1970b) and Yahalom (1997).

into how the signs were pronounced and the phonological processes that lay behind these interchanges of signs.

1.4.3.2. Evidence for the Phonetic Realization of Interchanged Signs

Of particular interest in this regard is the Karaite transcription in BL Or 2555. This manuscript exhibits an interchange of *šere* and *segol* signs in syllables where the vowel is long. In the transcription such vowels are represented sometimes by Arabic *ʿalif* and sometimes by Arabic *yāʿ*. This can be interpreted as reflecting the fact that the scribe read each of the two vowel signs with two different qualities. These may be reconstructed as [ɛ:], which was represented by *ʿalif*, and [e:], which was represented by *yāʿ*. Some examples are as follows.

Where Standard Tiberian has *segol*

(i) *Segol* sign corresponding to Tiberian *segol* is represented by *ʿalif*:

יֶאֱדָא [jɔːʔɛːχɔː] (BL Or 2555 fol. 71v, 5 | L [BHS]: יֶאֱדָא

Ecc. 7.18 ‘your hand’)

(ii) *Šere* sign corresponding to Tiberian *segol* is represented by *ʿalif*:

הַאֵבֶל [ʰeːvɛl] (BL Or 2555 fol. 26r, 12 | L [BHS]: הַאֵבֶל Ecc.

4.8 ‘vanity’)

(iii) *Segol* sign corresponding to Tiberian *segol* is represented by *yāʿ*:

يَافِي [jɔ:'fe:] (BL Or 2555 fol. 10r, 5 | L [BHS]: יָפִי־ Ecc. 3.11

‘beautiful’)

(iv) *Ṣere* sign corresponding to Tiberian *segol* is represented by *yā*ʔ:

يَيْلِدُ [ʔje:lɛð] (BL Or 2555 fol. 31v, 1 | L [BHS]: יֵלֵד־ Ecc. 4.13

‘child’)

Where Standard Tiberian has *ṣere*

(i) *Ṣere* sign corresponding to Tiberian *ṣere* is represented by *yā*ʔ:

يِيذَاع [je:'ða:aʔ] (BL Or 2555 fol. 81r, 2 | L [BHS]: יִדַע־ Ecc.

8.5 ‘he will know’)

(ii) *Segol* sign corresponding to Tiberian *ṣere* is represented by *yā*ʔ:

هَبْهِيمَا [habbehe:'mɔ:] (BL Or 2555 fol. 18r, 1 | L [BHS]:

הַבְּהֵמָה Ecc. 3.21 ‘the beast’)

(iii) *Ṣere* sign corresponding to Tiberian *ṣere* is represented by *ʔalif*:

هَامَّا [ʔhɛ:emmɔ:] (BL Or 2555 fol. 14v, 2 | L [BHS]: הָמָה Ecc.

3.18 ‘they’)

(iv) *Segol* sign corresponding to Tiberian *ṣere* is represented by *ʔalif*:

כָּאֵן [ˈkʰɛːɛn] (BL Or 2555 fol. 14v, 5 | L [BHS]: כָּאֵן Ecc. 3.19
 ‘thus’)

This shows that interchanges of vowel signs can reflect a pronunciation with interchanges of vowel qualities that is independent of the interchange of the signs. This situation can be explained by the model used above (§I.4.2.). We may assume that the reader had only one long ‘e’ vowel prototype phoneme in the pronunciation tradition that he was most competent in. We can represent this as /ē/ and assume that it had the phonetic token [e:]. When the reader heard in the target Tiberian pronunciation the phonetic tokens of *šere* [e:] and long *segol* [ɛ:], both of these were perceptually matched with the prototype /ē/. This matching brought about a ‘perceptual magnet effect’, whereby the [e:] and [ɛ:] tokens of Tiberian were perceived as being like the [e:] tokens of the prototype in the source pronunciation. The reader attempted to pronounce the tokens of the Tiberian target pronunciation but had difficulty in distinguishing between them and, moreover, could not match the signs with the phonetic tokens that he pronounced.

I.4.3.3. Interchanges of Signs Reflecting a Substrate of Arabic Vernacular

Several medieval Bible manuscripts vocalized with Tiberian signs exhibit the interchange of *segol* and *pataḥ*. The vocalization of some of these manuscripts exhibits a variety of other Non-Standard Tiberian features, such as the extended use of *dagesh*. This applies, for example, to manuscripts such as the following:

לְעֹזְרָתִי (T-S A13.20, Blapp 2018, 148 | L [BHS]: לְעֹזְרָתִי Psalms 70.2 ‘to my help’)

שַׁעַר (T-S A13.20, Blapp 2018, 148 | L [BHS]: שַׁעַר Psalms 69.13 ‘gate’)

עֶשְׂרִים (T-S Misc 1.46, Arrant 2020 | L [BHS]: עֶשְׂרִים Exodus 27.10 ‘twenty’)

רָבֶעַ (T-S Misc 1.46, Arrant 2020 | L [BHS]: רָבֶעַ Exodus 29.40 ‘quarter’)

The interchange is sporadically found, however, also in early model manuscripts that have a vocalization that is otherwise standard Tiberian. One such manuscript is II Firkovitch Evr. II B 10 (Yeivin 1980, 23 = L3), which was dedicated in 946 C.E., e.g.

אֶרְבָּה (II Firkovitch Evr. II B 10 | L [BHS]: אֶרְבָּה Genesis 16.10 ‘I shall multiply’)

There is evidence of this phenomenon even in L. In Deut. 28.11 BHS has the form בְּהֵמָתְךָ ‘your cattle’ with a *pataḥ* in place of an expected *segol*, which occurs elsewhere in this form in L and also in Deut. 28.11 in other early model manuscripts (e.g. S בְּהֵמָתְךָ). Golinetz (2013, 254–355) has shown that the *pataḥ* in L was written over an original *segol* by a second hand after, it seems, the ink of the *segol* had become faint. It is not clear at what period this second hand made this change, but it reflects the type of *segol*—*pataḥ* interchange that is discussed here.

Some Non-Standard Tiberian manuscripts exhibit a tendency to substitute *pataḥ* for *segol* specifically in the environment of gutturals, e.g.

עָרְוֹת (T-S AS 5.144, Outhwaite 2020 | L [BHS]: עָרְוֹת Lev. 18.15 ‘nakedness’)

הָאֲזָרָה (T-S AS 5.144, Outhwaite 2020 | L [BHS]: הָאֲזָרָה Lev. 18.26 ‘the native’)

As can be seen from other examples cited above, however, the interchange of *pataḥ* and *segol* is not restricted to this pattern in many manuscripts.

The Babylonian vocalization system did not have a sign that corresponded to Tiberian *segol*. The Babylonian sign *miftaḥ pumma* corresponded to both Tiberian *pataḥ* and Tiberian *segol*. In principle, therefore, it may be thought that the interchange of *segol* and *pataḥ* was due to a substrate of a Babylonian pronunciation tradition. The manuscripts described above, however, do not exhibit other features of Babylonian pronunciation. It is more likely that the interchange was brought about by the influence of the vernacular language of the vocalizers, which, at the period in question, must have been Arabic. Following the model of explanation used for other interference features, the interchange can be said to have arisen by the process of matching the *pataḥ* and *segol* phonetic tokens, i.e. [a], [a:], [ɑ], [ɑ:], [ɛ] and [ɛ:], with the Arabic prototype phonemes /a/ and /ā/, rather than with the distinct prototypes of *pataḥ* and *segol* in Tiberian pronunciation. In modern Arabic vernaculars the Arabic phonemes /a/ and /ā/ have a range of phonetic allophonic realizations that include [æ], [æ:], [ɛ], [ɛ:], [ɑ] and [ɑ:] (Barkat-Defradas 2011b, 2011a). Assuming that this was the case also in the Middle Ages, then this would have facilitated the perceptual matching of the Arabic prototypes /a/ and /ā/ with the tokens of Tiberian *pataḥ* and *segol*.

As a result of this imperfect learning of Tiberian prototype phonemes and consequent difficulties of perceiving the differences between them, the phonetic qualities and their graphic representation were confused.

Some Non-Standard Tiberian Bible manuscripts that have the *pataḥ—segol* interchange exhibit also interchanges of these vowels with other vowels, resulting in three-way or even four-way interchanges. Some examples of these from the data presented in Arrant (2020) include the following:

pataḥ—segol—šere interchanges:

וּבִשְׁלֹתָ (T-S AS 67.133, Arrant 2020 | L [BHS]: וּבִשְׁלֹתָ Deut. 16.7 ‘and you will cook’)

יִרְאֶה (T-S AS 67.133, Arrant 2020 | L [BHS]: יִרְאֶה Deut. 16.16 ‘shall appear’)

בְּבִקְרָה (T-S AS 67.133, Arrant 2020 | L [BHS]: בְּבִקְרָה Deut. 14.26 ‘in oxen’)

יְהִיָּה (T-S AS 67.133, Arrant 2020 | L [BHS]: יְהִיָּה Deut. 15.9 ‘will be’)

pataḥ—segol—qameṣ interchanges:

אַתָּם (T-S NS 18.5, Arrant 2020 | L [BHS]: אַתָּם Num. 14.41 ‘you (pl)’)

וַיֹּאמֶר (T-S NS 18.5, Arrant 2020 | L [BHS]: וַיֹּאמֶר Num. 14.41 ‘and he said’)

תִּנְגַּףּוּ (T-S NS 18.5, Arrant 2020 | L [BHS]: תִּנְגַּףּוּ Num. 14.42 ‘you will [not] be struck down’)

pataḥ—*segol*—*qameṣ*—*šere* interchanges:

וַיַּעַן (LG B1.56, Arrant 2020 | L [BHS]: וַיַּעַן Gen. 23.10 ‘and he answered’)

שַׁעַר (LG B1.56, Arrant 2020 | L [BHS]: שַׁעַר Gen. 23.10 ‘gate’)

זָקֵן (LG B1.56, Arrant 2020 | L [BHS]: זָקֵן Gen. 24.1 ‘old’)

סָבִיב (LG B1.56, Arrant 2020 | L [BHS]: סָבִיב Gen. 23.17 ‘around’)

עַבְדּוֹ (LG B1.56, Arrant 2020 | L [BHS]: עַבְדּוֹ Gen. 24.2 ‘his slave’)

לְעֵת (LG B1.56, Arrant 2020 | L [BHS]: לְעֵת Gen. 24.11 ‘at the time of’)

מְרֵאָה (LG B1.56, Arrant 2020 | L [BHS]: מְרֵאָה Gen. 24.16 ‘appearance’)

These three-way and four-way interchanges can also be explained as being due to the interference of an Arabic vernacular substrate. In such cases, the Arabic prototype phonemes /a/ and /ā/ are matched with the phonetic tokens of not only Tiberian *pataḥ* and *segol* but also with those of *šere* and *qameṣ* i.e. [e:], [ɔ] and [ɔ:]. Arabic /a/ and /ā/ can be realized with the high allophones [e], [e:] by the process of vowel raising (known as *ʾimāla*) in various modern Arabic dialects and this can be reconstructed for earlier periods (de Jong 2011). This is reflected by some medieval Judaeo-Arabic texts with Tiberian vocalization signs, which represent such raised /a/ and /ā/ vowels by *šere* (Khan 2010, 204), e.g.

עָלִי עַבְדְּךָ [ʕale: ʕibe:dak] = Classical Arabic *‘alā ‘ibādak*
 ‘on your servants’ (T-S Ar.8.3, fol. 16v)

וְלֹא [walem] = Classical Arabic *wa-lam* ‘and not’ (T-S
 Ar.8.3, fol. 22v)

In these medieval vocalized Judaeo-Arabic manuscripts the Tiberian *qameṣ* sign is generally restricted to the representation of the /a/ vowel in the diphthong /aw/, reflecting, it seems, the partial phonetic assimilation of the vowel to /w/, which resulted in a back open-mid quality close to that of Tiberian *qameṣ*, i.e. [ɔw] (Khan 2010, 210), e.g.

נַבְּחָה [nɔwba] = Classical Arabic *nawba* ‘accident’ (T-S
 Ar.8.3 fol. 17r)

This suggests that the range of phonetic allophones of Arabic /a/ included also [ɔ].

The existence of a range of qualities in the phonetic allophones of Arabic /a/ and /ā/ that corresponded to those of the Tiberian vowels *pataḥ*, *segol*, *ṣere* and *qameṣ* would have facilitated the matching of the Arabic prototypes with these four phonetic qualities. One may say that the three-way and four-way interchanges reflect a lesser ability to perceive the distinct qualities of the Tiberian vowels than the two-way *pataḥ*—*segol* interchange and so a lesser competence in the Tiberian pronunciation.¹⁰

¹⁰ Such a breakdown in the perception of differences in vowel qualities is reflected also in the rhymes of some medieval Hebrew poetry, in which, for example, a syllable with *qameṣ* can rhyme with a syllable with *ṣere* (Rand 2020).

I.4.3.4. Hypercorrect Lengthening of Vowels

In §I.2.8.1.2. it was shown how the duration of long *qameṣ* and *segol* in word-final position was compressed in *deḥiq* constructions such as

L: וְאֶעֱיֶדֶה לָּם 'I shall cause to witness against them' (Deut. 31.28)

L: מִי־אֵלֶּה לָּךְ 'who are these to you?' (Gen. 33.5)

In the Tiberian tradition, however, an effort was made to sustain the duration of these vowels in *deḥiq* to ensure that they were not completely reduced to short vowels, as happened in other reading traditions.

Due to imperfect learning of the Tiberian tradition, this orthoepic measure of sustaining the duration of the word-final vowels *qameṣ* and *segol* in *deḥiq* was sometimes extended hypercorrectly to historically short *qameṣ* and *segol*. This is reflected by the Karaite transcription BL Or 2539 MS B (= ff. 115-132), which represents historically short *qameṣ* and *segol* in unstressed closed syllables with *mater lectionis* 'alif. The fact that other historically short vowel qualities in these conditions are not represented by *matres lectionis* suggests that this phenomenon is related to the orthoepic lengthening of *qameṣ* and *segol* in *deḥiq*, e.g.

فَادِشِي (BL Or 2539 MS B, fol. 125r, 15 | L [BHS]: קְדִשֵׁי Num.

18.8 'the holy gifts of')

לְמַשְׁחָא (BL Or 2539 MS B, fol. 125r, 16 | L [BHS]: לְמַשְׁחָא

Num. 18.8 ‘a priestly portion’)

לְחַאֵק (BL Or 2539 MS B, fol. 125r, 16 | L [BHS]: לְחַאֵק Num.

18.8 ‘as a due’)

עֲגָלוֹת (BL Or 2539 MS B, fol. 115v, 6 | L [BHS]: עֲגָלוֹת

Num. 7.3 ‘covered wagons’)

This manuscript reflects the hypercorrect lengthening also of *ḥatef qameṣ*, e.g.

אֶהָלֵיהֶם (BL Or 2539 MS B, fol. 122v, 13 | L [BHS]: אֶהָלֵיהֶם

Num. 16.27 ‘their tents’)

I.4.4. THE READING OF THE TIBERIAN VOCALIZATION IN THE LATER MIDDLE AGES

The various phenomena described above arose when the Tiberian pronunciation was still a living tradition. It was familiar to the scribes of the manuscripts, even if imperfectly, and it was regarded as a prestigious target. In the later Middle Ages, after the Tiberian pronunciation had fallen into oblivion, the prestige and authority of the oral Tiberian reading shifted to the written sign system (§I.0.12.). The Tiberian vocalization of manuscripts was then largely disconnected from the pronunciation of readers. Since there was no longer any attempt at achieving a pronunciation that differed from the local traditions, the Hebrew Bibles came to be read with these local traditions.