A Judaeo-Arabic Biblical Glossary as a Source for Arabic Historical Dialectology

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Abstract

MS T-S Ar.5.58 is a translation glossary from the Cairo Geniza that contains a list of Judaeo-Arabic glosses for Hebrew words from the biblical book of Samuel. These Arabic words are fully vocalised with the Tiberian Hebrew pointing system, providing more precise phonetic information about the scribe's native Arabic dialect than could be expressed with standard Arabic vowel signs. This pointing reveals linguistic features known from modern varieties of vernacular Arabic, including a conditional tendency to raise /a/ to /e/ and a reflex of *ǧīm* as /g/. The manuscript can be dated between the tenth and twelfth centuries, making it an important source for the history of spoken medieval Arabic and Middle Arabic writing.

Keywords: Middle Arabic, Judaeo-Arabic, Arabic dialects, vocalisation, lexicography, Cairo Geniza

Introduction

A perennial problem of Arabic historical dialectology is the relative paucity of manuscripts that clearly record non-Classical forms. This problem is compounded by the fact that extant texts which do contain colloquial features are either unvocalised or vocalised with just a few Arabic vowel signs. Only a fraction of these texts are fully vocalised, but even with those we are limited by the Arabic writing system itself: the three Arabic vowel signs (*fatḥa*, *kasra*, *ḍamma*) are insufficient to record all of the vowel qualities in dialectal Arabic. A vocalisation system with more than three signs could, in theory, record additional allophones more precisely, but no such system was common in the medieval Arabic written tradition.[1] Likewise, the Arabic script has no way to explicitly indicate stress patterns, nor can it easily mark dialectal reflexes of Classical consonants.

However, the Tiberian Hebrew writing system has signs for seven discrete vowel qualities, a sign for marking unstressed syllables, and a dot that distinguishes between stop and fricative consonants. A few early medieval Judaeo-Arabic texts make use of these signs

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[1] Green dots do occasionally occur in early Qurʾān manuscripts to indicate the raising of *a*-vowels via *imāla*, but this system is rare and unattested in non-Qurʾānic manuscripts. See DUTTON, "Red Dots, Green Dots (Part I),"116.

to transcribe fully vocalised medieval Arabic, and this practice enables a near complete re-construction of their dialectal phonology. One such manuscript is T-S Ar.5.58,[2] a fragment from the Cairo Geniza that contains a Judaeo-Arabic translation glossary for the book of Samuel.

MS Cambridge University Library, Taylor-Schechter Arabic 5.58

T-S Ar.5.58 is part of a glossary that contains Arabic translations of Hebrew nouns, verbs, and phrases from 1 Samuel 17:7 to 19:10. It is a single parchment folio, measuring 17.4 × 16.6 cm, and is relatively well preserved. It has a few holes, some ink has faded, and there are multiple dark stains, but in general the text is still legible. It was once part of a bifolium, but the second leaf remains only as a stub, and there are eight small holes that indicate it was once sewn into a quire. Presumably, this quire was part of a larger translation glossary for the whole book of Samuel.

The text is arranged into four columns on each page. The first and third columns give lists of Hebrew words from Samuel, while the second and fourth columns give Arabic glosses for those words. Each column has 20 rows, except for the third and fourth columns on the recto, which only have 19. In total, there are 79 lexical entries. These glosses contain a mixture of Classical, pseudo-Classical, and vernacular Arabic forms, reflecting a type of literary Middle Arabic.

The Arabic glosses are written in Hebrew script, making them a specific type of non-Classical Arabic known as 'Judaeo-Arabic.' Broadly speaking, 'Judaeo-Arabic' refers to the varieties of colloquial Arabic spoken in Jewish communities from the eighth century onwards. These dialects of Jewish *ʿāmmiyya* were often similar to those of Christian and Muslim Arabic-speakers in the same regions, although they also (unsurprisingly) incor-porated a fair amount of Hebrew and Aramaic vocabulary. In writing, 'Judaeo-Arabic' refers to Arabic transcribed in Hebrew script.[3]

Biblical translation glossaries are a dime a dozen in the Cairo Geniza collections,[4] but T-S Ar.5.58 is exceptional in that it is fully vocalised Judaeo-Arabic written on parchment. When papermaking arrived in Cairo in the ninth century, it began supplanting papyrus and parchment as the most common writing support, and by the tenth or eleventh century, paper dominated as a comparatively cheap material.[5] Parchment remained in use, but to a much lesser extent, and consequently most parchment fragments in the Geniza were produced

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2 MS Cambridge University Library, Taylor-Schechter Arabic 5.58. See BAKER & POLLIACK, *Arabic and Judeo-Arabic Manuscripts*, 31.

3 See KHAN, "Judaeo-Arabic'; BLAU, *Handbook*, 20–22, 97–153; BLAU, *A Grammar of Medieval Judaeo-Arabic*.

4 Just in the folder that contains T-S Ar.5.58, there are eight other biblical glossaries (T-S Ar.5.6, T-S Ar.5.31, T-S Ar.5.35, T-S Ar.5.37, T-S Ar.5.51, T-S Ar.5.52, T-S Ar.5.59, T-S Ar.5.61) and three Mishnaic glossaries (T-S Ar.5.7, T-S Ar.5.13, T-S Ar.5.21). For introductions to the Cairo Geniza collections and their history, see Reif, *A Jewish Archive from Old Cairo*; HOFFMAN and COLE, *Sacred Trash*; JEFFERSON, "Deconstructing 'the Cairo Genizah.'"

5 GACEK, *Arabic Manuscripts*, 186; DÉROCHE et al., *Islamic Codicology*, 51–52.

between the tenth and twelfth centuries. It is thus most likely that T-S Ar.5.58 was written between 900 and 1200. This range places it among the earliest known Judaeo-Arabic texts with complete vocalisation.

The Writing System of T-S Ar.5.58

T-S Ar.5.58 records Arabic glosses with 'classical' Judaeo-Arabic orthography. This orthography is the most common type of Judaeo-Arabic writing, and mimics Classical Arabic by transcribing each Arabic character with a single Hebrew character. It was used between the tenth and fifteenth centuries,[6] and contrasts the rarer 'phonetic' orthography, which recorded the phonetic realisation of Judaeo-Arabic rather than imitating Classical Arabic.[7] The phonetic system also reflects a greater tendency to use *plene* spellings for short vowels in Arabic.[8] Conversely, the classical orthography conceals much of its internal vowel phonology, resulting in a relatively standardised Judaeo-Arabic writing system that could be read by Jews in communities that spoke different varieties of Arabic.[9] The scribe of T-S Ar.5.58, however, wanted a more precise record for their glossary of Samuel, so they transcribed all of the Arabic vowels using Tiberian Masoretic vocalisation signs.

During the early medieval period, groups of Hebrew scribes and scholars known as 'Masoretes'[10] created vowel signs to vocalise the text of the Hebrew Bible. Their primary goal was preserving Hebrew recitation traditions in the midst of an Arabicising linguistic landscape, and they developed three different vocalisation systems in service of that goal. These included the Palestinian and Babylonian systems, which saw use respectively in Palestine and Iraq, as well as the Tiberian system, named after the Masoretes of Tiberias on the Sea of Galilee.[11] The Tiberian Masoretic tradition proved the most authoritative of the Hebrew systems, and the Tiberian vowel signs supplanted almost all other Hebrew vocalisation systems in the Middle East and Europe.[12] The majority of vocalised Judaeo-Arabic manuscripts contain Tiberian pointing.[13]

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6 KHAN, "Judaeo-Arabic," 151.

7 BLAU and HOPKINS, "On Early Judaeo-Arabic Orthography'; KHAN, "Vocalized Judaeo-Arabic," 201–2; KHAN, "Judaeo-Arabic," 150–51. One telling sign of the phonetic orthography is the transcription of the definite article (*al-*) before a dental or alveolar consonant by omitting the *lām*, whereas classical orthography transcribes the *lām* even when it elides into the following sun letter.

8 BLAU, *Handbook*, 29.

9 KHAN, "Judaeo-Arabic," 155.

10 From the Aramaic root *msr*, 'transmitting, passing on;' JASTROW, *A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature*, I:811. The Masoretes are so named for their role in creating the 'Masora,' a textual tradition and apparatus related to the proper recitation of the Hebrew Bible.

11 DOTAN, "Masorah," 624.

12 The Tiberian pronunciation tradition died out around the eleventh century, but most Jewish communities still adopted the Tiberian signs, which remain standard in Modern Hebrew. See DOTAN, 633, 646; KHAN, *The Tiberian Pronunciation Tradition*, I:§I.0.9.

13 KHAN, "Vocalized Judaeo-Arabic," 206–7. Some manuscripts instead contain Arabic vowel signs, for

This system has nine graphemes that originally represented seven vowel qualities.[14] These signs included the *ḥolem* /o/ (א), *qameṣ* /ɔ/ (אַ), *pataḥ* /a/ (אַ), *segol* /ɛ/ (אֶ), *ṣere* /e/ (אֵ), *ḥireq* (אִ), and *qibbuṣ* /u/ (אֻ). Another sign, *šureq*, also represented /u/ when written with a *mater lectionis* letter *vav* (אוּ). Lastly, the *šewa* sign (אְ) represented silence at a syllable break, or /a/, equivalent to *pataḥ*.[15] This latter *šewa* is known as 'vocalic' *šewa*, and it occurs where the Masoretes pronounced an epenthetic vowel in place of a historic lexical vowel, predominantly in unstressed, open syllables.[16] *Qameṣ* (/ɔ/) and *segol* (/ɛ/) do not appear in the Arabic of T-S Ar.5.58, but the other seven signs do. They all seem to retain their original Tiberian functions, which allowed the scribe to record allophonic features like *imāla* and to use *šewa* as a marker of Arabic stress patterns.

Vocalisation in Middle Arabic

Consistently vocalised Middle Arabic texts are about as rare as hens' teeth, so much of the evidence for non-Classical medieval vowel phonology comes from somewhat roundabout sources. Joshua Blau describes four in particular: a late ninth- or early tenth-century Greek transcription of Arabic,[17] several 'phonetic' Judaeo-Arabic transcriptions with *plene* short vowels,[18] a thirteenth-century Coptic transcription of Egyptian Arabic,[19] and a twelfth- or thirteenth-century 'classical' Judaeo-Arabic letter with full Hebrew vowel signs.[20] He deems this last text 'comparatively late' for his analysis of early Middle Arabic features,[21] but he includes it nonetheless, as it is uncommon for a classical Judaeo-Arabic text to contain more than a smattering of vowel points.

Geoffrey Khan has likewise shown that a number of vocalised Judaeo-Arabic manuscripts reflect features of medieval colloquial Arabic,[22] but like Blau's late letter, most of his sources cannot be easily dated before the twelfth century. He does refer to three parchment Geniza manuscripts which may be earlier, including a copy of the *siddur* ('prayer book') of Saʿadiya Gaon,[23] a translation of Ecclesiastes,[24] and a commentary on a

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example: T-S Ar.5.12, T-S Ar.5.17, T-S Ar.54.31, and T-S NS 301.25. See VIDRO, "Arabic Vocalisation in Judaeo-Arabic Grammars," 341–51.

14 None of the signs indicated quantity. Instead, vowel length in Tiberian Hebrew was determined by stress position and cantillation.

15 DOTAN, "Masorah," 633–34; KHAN, *The Tiberian Pronunciation Tradition*, I:§I.2.5.1.

16 KHAN, *The Tiberian Pronunciation Tradition*, I:§I.2.5.3.

17 BLAU, *Handbook*, 29, 68–71; VIOLET, "Ein zweisprachiges Psalmfragment aus Damaskus.' BLAU and VIOLET date this manuscript to the eighth century, but more recent palaeographic analysis suggests that it is later. See KHAN, "Orthography and Reading," 396; MAVROUDI, "Arabic Words in Greek Letters.'

18 BLAU, *Handbook*, 29, 136–54.

19 BLAU, 29, 155–67; SOBHY, "New Coptic Texts of the Monasteries of St. Marcus.'

20 BLAU, *Handbook*, 29, 167–74; BLAU and HOPKINS, "A Vocalized Judaeo-Arabic Letter.'

21 BLAU, *Handbook*, 155.

22 KHAN, "Vocalized Judaeo-Arabic.'

23 T-S Ar.8.3; 21 folios, though only 14 folios contain significant vocalisation, and several of those are severely damaged. BAKER & POLLIACK, *Arabic and Judeo-Arabic Manuscripts*, 38. This is likely the

liturgical poem.[25] Along with this small parchment corpus,[26] we may now add the translation glossary of T-S Ar.5.58 as another source of vocalised Middle Arabic.

These four manuscripts follow roughly the same vocalisation practices, but they also show significant variation. For example, the scribe of the Ecclesiastes translation used *ṣere* (/e/) only sparingly, while the *siddur* scribe applied it with reckless abandon. These differences reveal that the scribes who pointed these manuscripts did not all follow the same rules for vocalising Judaeo-Arabic, and their work likely reflects slightly different varieties of spoken Arabic. As such, the pointing system of each manuscript must be evaluated on its own, and any patterns must be derived first on internal evidence before comparing with other texts. The following sections examine T-S Ar.5.58 through this lens.

Edition of the Text

Methodology

This section contains an edition of T-S Ar.5.58, with the hope of making its linguistic data available to Arabic scholars who may not read Judaeo-Arabic. It is split into four sections, each containing two columns of lexemes from the manuscript. These columns are arranged along with their line and verse numbers, a transcription of the Judaeo-Arabic in Latin characters, and an English translation of the Arabic form. The transcriptions are as specific as possible according to the vocalisation in the manuscript, and I have generally avoided giving additional details that the scribe could not have conveyed with the system of signs available to them. Some of the Arabic glosses are not literal renderings of the Hebrew

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largest extant sample of vocalised Judaeo-Arabic in Geniza collections, and Khan cites it more than any other manuscript in his analyses of vocalised Judaeo-Arabic. See KHAN, "The Function of the Shewa Sign," 105, 107–8; KHAN, "Vocalized Judaeo-Arabic," 202–6, 208, 210; KHAN, "Orthography and Reading," 296–402. Saʿadiya's *siddur* is one of the oldest extant collections of liturgical material arranged for use in medieval synagogue services. Saʿadiya completed it sometime between 922 and his death in 942. See MALTER, *Saadia Gaon*, 146–50; and edition of Davidson, Assaf, and Joel, *Siddur R. Saadja Gaon*.

24 T-S Ar.27.55, Ar.53.12, and Lewis-Gibson (L-G) Ar.I.150; 6 folios; BAKER & POLLIACK, *Arabic and Judeo-Arabic Manuscripts*, 158, 535. Khan cites Ar.53.12 several times; see KHAN, "Vocalized Judeo-Arabic," 204–5, 208–9; and edition of POSEGAY & ARRANT, "Three Fragments of a Judaeo-Arabic Translation of Ecclesiastes.'

25 Bodleian Hebrew d.42/10; 4 folios; Adolf NEUBAUER and A.E. COWLEY, *Catalogue of the Hebrew Manuscripts in the Bodleian Library*, vol. II (Oxford: Clarendon Press, 1906). See KHAN, "Vocalized Judaeo-Arabic," 209. Specifically, this manuscript is a commentary on the *azhara* ('exhortation') known as *Attah Hanḥalat Torah la-ʿAmka* (אתה הנחלת תורה לעמך); see GOTTHEIL & BRODY, "Azharot.'

26 Paper manuscripts with substantial vocalisation are more common, and among those that have been studied are: T-S Ar.3.1, Ar.18(1).113, Ar.30.313, Ar.39.107, Ar.54.11, and Ar.54.63; T-S New Series (NS) 89.36, NS 91.12, NS 163.97, NS 261.101 (belongs with NS 261.125 and NS 261.126), and NS 301.25; T-S Additional Series (AS) 170.176; Lewis-Gibson (L-G) Ar.II.3 (belongs with L-G Ar.II.4, L-G Ar.II.10, and L-G Ar.II.142), L-G Ar.II.73; and Jewish Theological Seminary ENA 2752.26. See BLAU and HOPKINS, "A Vocalized Judaeo-Arabic Letter'; KHAN, "The Function of the Shewa Sign'; KHAN, "Vocalized Judaeo-Arabic'; VIDRO, "Arabic Vocalisation in Judaeo-Arabic Grammars.'

words, but it is beyond the scope of this paper to analyse the lexical and theological implications of these differences.

In some cases, I have reconstructed a vowel or part of a word where the text or vowel points were omitted or damaged. These reconstructions are indicated by [square brackets]. A few letters have (curved brackets), which indicate that they were most likely quiescent in speech. It must be noted that the vocalisation in the manuscript appears to reflect the scribe's aural perception of each word while reading aloud from a translation of Samuel. This context may have influenced their perception of vowel length and stress positions, but we cannot access this layer of information without the full translation of 1 Samuel that the glossary belongs to.

In addition to the folio's main columns, there are several notes in the margins of the recto. They are in a different hand from the primary text and relate to the lexical items. I have included these annotations as footnotes when it is possible to decipher them.

Line citations take the form R1.1 (recto column 1, line 1) or V1.1 (verso column 1, line 1).

A Note on *Šewa*

In Hebrew recitation, the *šewa* sign (אַ) does not inherently represent any one vowel quality. Instead, it marks either silence (like *sukūn*) or an epenthetic short vowel, usually in an unstressed, open syllable. The quality of this 'vocalic' *šewa* can range between several different vowels (e.g. /a/, /e/, and /ə/) depending on its phonetic context and the particular reading tradition. In the majority of Tiberian Hebrew contexts, it was pronounced with a neutral open quality /a/.[27]

Vocalic *šewa* in the Arabic of this text also predominantly denotes a short vowel in an unstressed, open syllable. Following the standard Tiberian usage, this sign likely represented epenthetic /a/ in most places, and it corresponds to positions where Classical Arabic has *fatḥa*. This epenthesis may correspond to broader Middle Arabic trends of reducing short vowels in unstressed, open syllables.[28] I have transcribed these instances of vocalic *šewa* (as well as the composite *šewa* sign, *ḥateph pataḥ* אֲ) as *ạ*, which should be interpreted as representing an open or open-mid short vowel. Some of these vowels could be greatly reduced in quantity, almost to zero, but the *šewa* sign does not specify their exact length. There are also three instances where vocalic *šewa* likely indicates /i/ due to a correspondence with the vowels of Classical Arabic particles. I have transcribed these with *ị*, which represents a short, front vowel in an open syllable, the precise quality of which can only be assumed from context.

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27 KHAN, *The Tiberian Pronunciation Tradition*, I:§I.2.5.2; KHAN, "The Function of the Shewa Sign.'

28 BLAU, *Handbook*, 30.

T-S Ar.5.58 Recto, Column 1-2

Verse	Translation	Transcription	Column 2	Column 1	Line
17:7	and a bearer of shields	wạ-ḥēmil ʾad[rāʿ]	וְחַאמְל אַדֿ[ראע]	וְנֹשֵׂא הַצִּנָּה	1
17:8	battlefields	maʿrakāt	מַעֲרכַּאת	מַעַרְכוֹת	2
	choose (pl.); pick out (pl.)	ʾaḫtārū ʾantaqū[29]	אכֿתַּארו אנתְקו	בְּרוּ לָכֶם	3
17:9	I will withstand him	ʾatīquh[30]	אַטִיקֵה	אוּכַל לוֹ	4
17:10	I condemned	ʾanā ʿayyarat	אַנַא עַיַּרת	אֲנִי חֵרַפְתִּי	5
	and let us all fight	wạ-nuqātil gamī[31]	וְנֻקַאתֵּל גְּמִיע	וְנִלָּחֲמָה יָחַד	6
17:11	and they grieved and were afraid	wạ-gizi'ū wạ-ḥašiyū or wạ-ḫašyū	וְגִזִעוּ וְכַֿשִׁיו	וַיֵּחַתּוּ וַיִּרְאוּ	7
17:13	and his second	wạ-tēnīh	וְתַאנִיה	וּמִשְׁנֵהוּ	8
17:16	he would go day after day	yaġtadī wạ-yamsī	יַגְֿתְּדִי וְיַמְסִי	הַשְׁכֵּם וְהַעֲרֵב	9
17:17	a measure of fried grain	kīlgeh[32] mūqlī	כִּילְגֶּה מוּקְלִי	אֵיפַת הַקָּלִיא	10
	and he supplied the troops	wạ-ʾaḫḍir ʾal-ʿaskar	וְאַחְֿצֵֿר אלְעַסכַּר	[וְהָרֵץ] הַמַּחֲנֶה	11
17:18	wheels of cheese[33]	ʾaqriṣa al-gubun	אַקְרִצַה אלגֻּבֶּן	[חֲרִצֵי] הֶחָלָב	12
	their responsibility	ḍ[a]mānhum	צַֿמַאנְהֶם	[עֲרֻבָּתָם]	13

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29 The second gloss may be a later addition. Both form-VIII imperatives here are marked with initial /a/, in contrast to Classical Arabic /i/. The same phenomenon occurs in the perfect of form-VIII (ʾazḍạrāh; 'he berated him;' R4.18), as well as form-VII (wạ-ʾantabaʿ[a]t; 'and it was imprinted;' V2.5; ʾanʿaqạdat; 'it was knit together;' V2.12) and possibly form-X (wạ-ʾ[a]stạq[ā]m; 'and it was proper;' V4.7). Khan interprets this feature as a pseudo-Classical hypercorrection that would not have been pronounced in vernacular Arabic, but Blau takes it as a more natural development based on comparison with Violet's Greek transcription. See KHAN, "Vocalized Judaeo-Arabic," 205–6; BLAU, *Handbook*, 39.

30 The 3ms object and possessive suffixes are consistently written as *qibbuṣ* before *ha'* (i.e. *-uh*). This form is probably an imitation of Arabic orthography, and was pronounced *-u* or *-ū*.

31 Conjunctive *wāw* is almost always transcribed as *vav* with *šewa*, imitating the Hebrew orthography.

32 *Tā' marbūṭa* is usually represented by *ha'* (ה), imitating Classical Arabic orthography. This *ha'* was not pronounced as a consonant.

33 There is a note between columns 1 and 2 that corresponds to this gloss. It reads: [..]קואליב אלגֿבן קדֿור אלב כברהם (*qawālib al-jibin qaddūr al-b*[..] *kubrihim*); 'the chunks of cheese, the measure of the […] is their largeness(?).' It is mostly unvocalised, but in contrast to the vowel points on *al-gubun* ('cheese') in the main text, this later hand writes it with two *hireq*s: *al-jibin* (or *al-gibin*). There are not enough marginal notes to say whether this second writer also meant to record a stop-plosive reflex of *ǧīm*. Compare modern Egyptian *gibna*, pl. *giban*; HINDS & BADAWI, *A Dictionary of Egyptian Arabic*, 148.

Verse	Translation	Transcription	Column 2	Column 1	Line
17:20	and he left behind and left	wạ-wạḏar wạ-tar[a]k or wạ-tark	וְוַדַר וְתַרךְ	וַיִּטֹּשׁ	14
	the side	ʾal-ʿạṭf	אלְעַטף	הַמַּעְגָּלָה	15
	the battlefield	ʾ[a]l-maʿraki(h)i	אלמַעֲרַכֶּה	הַמַּעֲרָכָה	16
17:25	in order to condemn	ʾan lị-yūʿayyir[34]	אן לְיוּעַיֵּיר	כִּי לְחָרֵף	17
	he will enrich him	y[u]ġnīh	יגְנִיה	יַעְשָׁ[רֶנּוּ]	18
	he will be made a noble	yūṣnaʿ ḥūr[35]	יוּצְנַע חור	יַעֲשָׂה חָפְשִׁי	19
17:26	the Philistine	ʾal-filasṭīnī	אלפִלַסְטִינִי	הַפְּלִשְׁתִּי	20

T-S Ar.5.58 Recto, Column 3-4

Verse	Translation	Transcription	Column 4	Column 3	Line
17:26	this	hāḏā	הַאדַא	הַלָּז	1
17:28	you abandoned : you left	rạfiḍt : ṭạrakat[36]	רְפַצְֿת : תְּרַכַּת	נָטַשְׁתָּה	2
	your insolence	qiḥaṭạk	קְחַתְּךְ	זְדֹנְךָ	3
17:30	other foreigners	ʾ[a]l-ʾ[a]gēnib ʾaḥar	אלאגֵֿאנִב אכַּר	אל מוּל אַחַר	4
17:32	let no heart sink[37]	lā yasquṭ qalab	לַא יַסְקַט קַלַב	אל יִפֹּל לֵב	5
17:35	and I would seize it by its beard	wạ-ḍạbbạṭati[38] bị-laḥiyuh or wạ-ḍạbbạṭti bị-laḥiyuh	וְצַבַּטְֿת בְּלַחְֿיֶה	וְהֶחֱזַקְתִּי בִּזְקָנוֹ	6
17:38	his armour	qạbāh	קְבַּאה	מַדָּיו	7
17:39	and he became girded	wạ-ʾatiḥallaz[39]	וְאַתְחַלַּז	וַיַּחְגֹּר	8

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34 The particles ʾan and li- here mimic the Hebrew syntax.

35 Loss of gemination and likely compensatory lengthening from /u/ to /ū/ in comparison with Classical Arabic ḥurr ('a noble').

36 The scribe apparently heard an epenthetic vowel in positions where kāf closes a syllable. Compare yakimạ[lū] ([לוֹ]יַכְּמְ; 'they become complete;' V4.15).

37 There is a note between columns 3 and 4 that corresponds to this gloss. It reads: lā yarʿub qalab (לא ירעב קלב; 'Let no heart be frightened').

38 The marked final /i/ on this word is unexpected.

39 Apparently form V with a prothetic aleph, which is observed in other Middle Arabic texts. See BLAU, Handbook, 30.

Verse	Translation	Transcription	Column 4	Column 3	Line
	he has [not][40] tested	*yūgarrib*	יוגַּרֵב	נִסָּה	9
	I have [not] tested	*ʾūgarrib*	אוגַרֵב[41]	נִסִּיתִי	10
	and he removed them	*wa-nazaʿhum*	וְנַזְעֲהֶם	וַיְסִירֵם	11
17:40	his staff	*ʿaṣātuh*	עֲצַאתֻה	מַקְלוֹ	12
	a smooth (lit. hairless) stone	*ḥigārah maḷīṭih*	חִגַּארה מְלִיטה	חַלּוּקֵי	13
	from the wadi	*min ʾ[a]l-wēdī*	מן אלוַאדִי[42]	מִן הַנַּחַל	14
	in the bag	*bil-miḫle(h)i*[43]	בִּלְמִכְלֶה	וּבַיַּלְקוּט	15
	and his sling	*ū-miqlāʿuh*[44]	וּמִקְלַאעֶה	וְקַלְעוֹ	16
17:42	and he turned towards	*wa-ʾ[i]ltafat* or *wi-ltafat*	וְאלְתְּפַת	וַיַּבֵּט	17
	and he scolded him	*wa-ʾazdarāhi* or *wa-ʾazdarāh*[45]	וְאזְדְּרַאהֶ	וַיִּבְזֵהוּ	18
17:43	with staves	*bil-ʿaṣā*	בִּלְעֲצַא	בַּמַּקְלוֹת	19

T-S Ar.5.58 Verso, Column 1-2

Verse	Translation	Transcription	Column 2	Column 1	Line
17:45	and with the spear	*ū-bi-ʾal-qanēh*[46]	וּבַּאלְקְנֵאה	וּבַחֲנִית	1
17:46	he will deliver you	*yūsallimak*	יוסַלְּמַךְ	יְסַגֶּרְךָ	2

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40 Both this and the following gloss translate negated verbs in 1 Samuel, and presumably they were preceded by *lam* in whatever Arabic source text this glossary belongs to.

41 There is probably a *dageš* in the *gimel* of this word, but a stain on the parchment obscures it.

42 The *vav* in this word is almost rubbed off. Only one dot remains below it, but the original sign was likely *ṣere*.

43 The expected Classical Arabic orthography has *alif* (مخلاة; *miḫlā*), but the Judaeo-Arabic spelling is defective.

44 In contrast to most of the conjunctive *wāw*s, this *vav* is marked with *šūreq* rather than *šewa*. This notation imitates the Hebrew orthography, which marks conjunctive *vav* with *šūreq* before labial consonants. Note the same phenomenon on *ū-bi-ʾal-qanēh* (V2.1).

45 The 3ms object suffix seems to be -*h* (if the final dot is *mappiq*) or -*hi* (if it is *ḥireq*) when preceded by /ā/.

46 The lack of elision of the *aleph* here may be a pseudo-Classical correction, not representative of speech. Compare KHAN, "Vocalized Judaeo-Arabic," 213–14.

Verse	Translation	Transcription	Column 2	Column 1	Line
	the corpse of	*gūṯat*	גּוּתַת	פֶּגֶר	3
17:49	to his forehead	*'ilā gabhatuh*[47]	אֶלָּא גַּבְהַתֶּה	אֶל מִצְחוֹ	4
	and it was imprinted	*wạ-'anṭaba'[a]t*	וְאַנְטַבַּעת	וַתִּטְבַּע	5
17:51	from its sheath	*min ġimḍạhā* or *min ġimdhā*	מִן גִמְדְהַא	מִתַּעְרָהּ	6
17:52	in a path of gates	*fī ṭ[ạ]rīq '[a]bwāb*	פי טריק אבוַאב	בְּדֶרֶךְ שַׁעֲרִים	7
17:53	from pursuing	*min laḥaq*	מִן לַחַק	מִדְּלֹק	8
	and they plundered	*wạ-naḥabū*	וְנַהַבּוּ	וַיָּשֹׁסּוּ	9
17:55	whose son is that	*bin man ḏā*	בִּן מַן דַא	בֶּן מִי זֶה	10
	the boy	*'[a]l-ġulām*	אלגֻלַאם	הַנַּ[עַר]	11
18:1	it (f.) was knit together	*'an'aqạdat*	אַנְעַקְדַת	נִקְשְׁרָה	12
18:4	and he disentangled	*wạ-salak*	וְסַלַךְ	וַיִּתְפַּשֵּׁט	13
	his belt	*zūnārūh*[48]	זוּנַארוּה	חֲגוֹרוֹ	14
	his belt	*manṭạqatuh*	מַנְתְּקְתֶּה[49]	חֲגוֹרוֹ	15
18:5	he was brilliant	*ya'qīl*	יַעְקִיל	יַשְׂכִּיל	16
18:6	to sing and drum	*lị-yuġannī wạ-yaṭbul*[50]	לִיֻגַנִּי וְיַטְבֶּל	לָשִׁיר וְחַמְחֹלת	17
	with the third	*[wạ-bil-]m[u]ṯ[a]l[la]ṯ*	[ובאל]מתלת	וּבַשְׁלִישִׁ[ים]	18
18:7	the playing women	*'[a]l[ē]'ibāt*[51]	א[לֵ]אעבּאת	הַמְשַׂחֲקוֹת	19
18:9	he saw David	*[rēy] d[awud]*	[ראי] ד[וד][52]	עוין אֶת דָּוִד	20

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47 The *pataḥ* on the *ha'* suggests that the second syllable is closed.

48 Compare modern Egyptian *zinnār*, 'girdle;' HINDS & BADAWI, *A Dictionary of Egyptian Arabic*, 382. The *nūn* of *zūnārūh* here is apparently ungeminated, and the initial vowel has undergone compensatory lengthening. Note the same phenomenon in *ḥūr* above (R2.19).

49 The Hebrew חֲגוֹרוֹ ('his belt') repeats here, and מַנְתְּקְתֶּה is a second gloss for it. It is most likely a transcription of منطقته (*manṭaqatuh*), with the scribe interchanging *tā'* for *ṭā'*.

50 This conjunctive *wāw* is marked with both *šewa* and *šūreq* (/u/). One of these signs is probably a mistake, but they could represent *wu-* or *u-*.

51 This orthography is unexpected, as the *lamed* of the definite article is omitted.

52 Only the *ṣere* and *dalet* are visible here. I have extrapolated the gloss based on the Hebrew.

T-S Ar.5.58 Verso, Column 3-4

Verse	Translation	Transcription	Column 4	Column 3	Line
	and onwards	wa-ḥalōm[53]	וַהֲלוֹם	וָהָלְאָה	1
18:11	and he threw	wạ-ʾalqā	וְאַלְקָא	וַיָּטֶל	2
	and he turned	wạ-dār	וְדַּאר	וַיִּסֹּב דָּוִד	3
18:18	I will become a son-in-law	ʾ[a]kūn ḥatan	אכון כֿתן	אֶהְיֶה חָתָן	4
18:19	time of giving	waqt ʾiʿṭā	וַקֵת אֶעְטַא	בְּעֵת תֵּת	5
	the Meholathite (f.)	ʾ[a]l-m[a]ḥol[a]tī	אלמחולתי[54]	הַמְּחוֹלָתִי	6
18:20	and it was proper	wạ-ʾ[a]staq[ā]m	[וַא]סְתְּקַאם	וַיִּישַׁר	7
18:21	as a snare	li-ʿ[a]trah	לְעַתְרה	לְמוֹקֵשׁ	8
	you will become a son in law	tūḫātin	תוכאתֵּן	תִּתְחַתֵּן	9
18:22	softly	bi-luṭf	בְּלֻטף	בַּלָּט	10
	he is fond of you	ḥawī [bạk]	הֲוִי [בָּךּ]	חָפֵץ בְּךָ	11
18:23	[....] : the unimportant	halkạ[..] ʾ[a]l-hayyīn	הַלְכַֿ[..] אלהַיֵּין	הַנְקַלָּה	12
	poor and unimportant	fạqīr wạ-hayyīn	פְּקִיר וְהַיֵּין	רָשׁ וְנִקְלֶה	13
18:25	as a dower	bimhar or bi-mạhar	בְּמְהַר	בְּמוֹהַר	14
18:26	they become complete	yakimạ[lū][55]	יַכִּמַ[לוֹ]	מָלְאוּ	15
18:27	and they completed	wạ-ʾakmạlū	וְאַכְּמַלוֹ	וַיְמַלְאוּם	16
18:29	to fear	li-yaḫ[f]ā[56]	לִיַכֿ[פ]א	לֵרֹא	17
18:30	he succeeded while surpassing	nạ[gaḥ wạ]-ʿāqil	נְ[גח ו]עַאקֵל	שָׂכֵל	18
19:10	and he turned	w[a-dā]r	ו[דא]ר	וַיִּפְטַר	19
	he fled and slipped away	ḥạrab [wạ-ʾi]nfalit	הֲרב [וַא]נְפַלֹת	נָס וַיִּמָּלֵט	20

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53 From Classical Arabic *halumma* (هَلُمَّ; 'onwards'), with apparent loss of gemination and compensatory lengthening with a shift from /u/ to /ō/. Compare the de-gemination and lengthening in *ḥūr* (חור; 'a noble;' R2.19) and *zūnārūh* (זונארוה; 'his belt;' V2.14).

54 The gloss is unvocalised, and appears to be a direct borrowing of the Hebrew without changing it to an Arabic form (e.g. *maḥuliyya*).

55 This word appears to have epenthetic /i/, with the expected form being *yakmạlū*.

56 The scribe must have meant something like *yaḫūf* or *yaḫāf* ('he fears') here, but the remaining text looks more like *yaḫfā* ('he is hidden').

Observations and Analysis

Almost every vowel sign and diacritic dot conforms to its expected usage in Tiberian Hebrew, and it is clear the scribe was well-versed in the details of Tiberian pointing. This regularity allows for a confident reconstruction of the intended Middle Arabic vowel phonology in many of the glosses. Additionally, when viewed through a standard Tiberian lens, the use of *dageš* dots appears both regular and systematic. This consistency reveals the scribe's pronunciation of certain Arabic consonants as either stops (e.g. ج) or fricatives (e.g. ذ and ث).

Medieval Arabic Vowels in the Tiberian Writing System

Seven of the nine Tiberian vowel signs appear in the Arabic of T-S Ar.5.58. *Pataḥ* (/a/) and *ḥireq* (/i/) occur regularly in places where *fatḥa* (/a/) or *kasra* (/i/) would be expected in Arabic-script writing. *Qibbuṣ* (/u/) and *šureq* (/u/ or /ū/) both occur for *ḍamma* (/u/), with an apparent preference for *qibbuṣ* for short vowels and *šureq* for long vowels. *Qameṣ* (/ɔ/) and *segol* (/ɛ/) are absent, but *ṣere* (/e/) appears conditionally in places where Classical Arabic would have /a/ or /ā/. *Ḥolem* (/o/) occurs only once.[57]

While the scribe conforms to the 'classical' Judaeo-Arabic orthography in the consonants of nearly every gloss, they do not transcribe Arabic vowels in the same one-to-one way. Moreover, the scribe records dialectal allophones that could not otherwise be represented with Arabic vowel signs. This type of transcription occurs in places where Classical Arabic has either *tāʾ marbūṭa* or /ā/ in an open syllable, and represents a trend of raising and fronting *a*-vowels in specific phonetic contexts. This phenomenon is known as *imāla* in the Arabic grammatical tradition.[58]

In imitation of Classical Arabic orthography, the scribe represents *tāʾ marbūṭa* with the letter *heʾ* (ה),[59] but they mark its vocalisation variously as /i/, /e/, and /a/. Three times, the vowel before *tāʾ marbūṭa* is raised to *ṣere* (/e/): *kīlgeh* (כֵּילְגֶּה; 'a measure;' R2.10), *bil-miḥle(h)i* (בְּלְמִכְלֶה; 'in the bag;' R4.15), and *bi-ʾal-qạnēh* (בַּאלְקְנֵאה; 'with the spear;' V2.1).[60] The transcribed *heʾ* (ה) in these words is only an orthographic representation of *tāʾ marbūṭa*, and likely would not have been pronounced. Despite this, the scribe also added a *ḥireq* (/i/) dot below the letter at the end of *miḥle(h)i*, reinforcing that the final vowel is fronted. Similar notation occurs with [*a*]*l-maʿrạki(h)i* (אלמערכִּה; 'the battlefield;' R2.16), although this time the vowel before the *tāʾ marbūṭa* is also /i/. The final instance of vowel raising with *tāʾ marbūṭa* is the word *mạlīṭih* (מְלִיטַה; 'smooth, shaven;' R4.13), which is also marked as /i/. In each of these cases, the syllable before the expected final /a/ is either closed with

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57 V4.1: וַהֲלֹום (*wa-ḥạlōm*; 'and onwards').

58 LEVIN, "The Imāla," 1–2, XIII; LEVIN, "'Imāla'; ALFOZAN, "Assimilation in Classical Arabic," 18, 35–36; al-NASSIR, *Sībawayh the Phonologist*, 91.

59 Except in V2.3, where the construct form *gūṯat* (גּוּתַת; 'the corpse of') is spelled phonetically with *tav*. This spelling for the construct form of nouns ending in *tāʾ marbūṭa* is common in 'phonetic' Judaeo-Arabic orthography, in contrast to 'classical' Judaeo-Arabic; KHAN, "Judaeo-Arabic," 150.

60 Although see LEVIN, "The Imāla," XIX, as he finds that *imāla* of the vowel represented by اة- is rare in modern Arabic dialects.

/i/, or open with vocalic *šewa*.[61] It seems that in this scribe's Arabic dialect, such a syllable structure could induce a final /a/ to be raised and fronted, resulting in a high vowel somewhere between /e/ and /i/. This vowel raising correlates with the *imāla* of final /a/ known from both medieval and modern varieties of Arabic,[62] and is also recorded with *plene* spellings of *yod* in other medieval Judaeo-Arabic texts.[63]

Similar raising occurs in words where Classical Arabic would have /ā/ in an open syllable. When such a vowel *precedes* a syllable with /i/, then the /ā/ is raised to /ē/: *wạ-ḥēmil* (וְחֵאמֵל; 'and a bearer;' R2.1), *wạ-ṯēnīh* (וַתֵאנִיה; 'and his second;' R2.8), *ʾ[a]l-ʾ[a]gēnib* (אלאגֵّנֵב; 'foreigners;' R4.4), *min ʾ[a]l-wēdī* (מֵן אלוֵّאדִי; 'from the wadi;' R4.14), and probably [*rēy*] *d[awud]* ([רֵ]ראיʾ [ד]וד; 'he saw David;' V2.20). This type of contextual *imāla* of medial /ā/ occurs in a number of medieval and modern Arabic dialects.[64]

Applying these rules to damaged areas of the manuscript, it is possible to extrapolate some missing vocalisation. The first vowel points on the word אלאﬠבّאת are too badly rubbed to read, but given that the Classical Arabic form of this word would have /ā/ in an open syllable preceding a syllable with /i/, the original vocalisation was probably with *ṣere*: *ʾ[a]l[ē]ʿibāt* (אֵ[לֵّ]אﬠבّאת; 'the playing women;' V2.19).

However, there are exceptions to this rule, and it seems some consonants prevented this vowel raising when they occurred before or after /ā/, including: *ḫāʾ* in *tūḫātin* (תּוּכַאתֵّן; 'you will become a son-in-law;' V4.9) and *qāf* in *ʿāqil* (עַאקֵל; 'surpassing;' V4.18). This phenomenon corresponds to the effect that pharyngeal and emphatic *mustaʿliya* letters have, preventing *imāla* of nearby *a*-vowels.[65]

There is also one gloss that contains a *ḥolem* sign, indicating an Arabic word with the vowel /o/: *wa-ḥalōm* (וַהֲלֹוֹם; 'and onwards;' V4.1), analogous with the Classical Arabic *halumma* (هَلُمَّ; 'onwards'). The *ḥolem* is written with a *plene* letter *vav*, even though no *wāw* appears in the Classical Arabic orthography, suggesting that this vowel was pronounced long (/ō/). There is also no indication of gemination on the final *mem*.

The signs *segol* (/ɛ/) or *qameṣ* (/ɔ/) do not appear in the Arabic columns, and indeed there is little reason for them to, as neither represents a cardinal Arabic vowel. By contrast, they both occur often in the Hebrew columns, closely matching the expected forms from 1 Samuel 17-19. These Hebrew forms do, however, differ in a few small details.[66] In particular, there are two instances where the scribe used a *segol* in a position where the standard Masoretic text has *pataḥ*. They write *ha-nɛʿɛr* ([הַנֶّﬠֶר; 'the boy;' V1.11) when the expected form is *ha-naʿar* (הַנַּﬠַר), and *seḥɛl* (שֶׂכֶל; 'he behaved;' V3.18) instead of the expected *sɔḥal* (שָׂכַל). These interchanges of *segol* for *pataḥ* suggest that the scribe per-

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61 *Šewa* in these cases may represent unstressed short /e/, but there is no way to know for sure from the signs in the manuscript.

62 Lentin, "The Levant," 180–81; Levin, "The Imāla in the Arabic Dialects," 62–78; al-Nassir, *Sībawayh the Phonologist*, 91–103.

63 Hopkins, "On Imāla of Medial and Final ā'; Khan, "Judaeo-Arabic," 150–51.

64 Levin, "'Imāla.'

65 al-Nassir, *Sībawayh the Phonologist*, 97–99; Levin, "'Imāla.'

66 The scribe adopts *plene* spellings of several Hebrew words that have defective orthography in the Masoretic text. Compare R3.2, R3.3, R3.5, R3.11, and V1.14 with the corresponding verses in the Westminster edition of the Leningrad codex (<http://www.tanach.us/Tanach.xml>).

ceived /a/ and /ɛ/ as allophonic in Hebrew, a situation likely conditioned by the comparatively small vowel inventory of their native Arabic. As such, there was certainly no reason for them to use *segol* to transcribe allophones of /a/ in the Arabic glosses, since all of its phonetic functions could be covered by *pataḥ*. This usage contrasts the scribe's marking of /e/, which they perceived as distinct enough from /a/ to warrant the use of the *ṣere* sign in Arabic.

On the other hand, there are no clear Hebrew interchanges related to *qameṣ* (/ɔ/), and the scribe had no trouble differentiating it from *pataḥ* (/a/) in the Hebrew words. This phonological understanding implies that they distinguished between /ɔ/ and /a/ in their Hebrew pronunciation. If so, then they still maintained a key element of the Tiberian pronunciation tradition, in contrast to the more common Palestinian and later Sephardi Hebrew traditions, where *pataḥ* and *qameṣ* were both realised as /a/.[67] This detail suggests that the text was vocalised prior to the extinction of the Tiberian pronunciation system, no later than the eleventh century.[68]

Silent *šewa* conforms to its Tiberian usage in the Arabic glosses, consistently marking the close of a syllable (like Arabic *sukūn*). Meanwhile, vocalic *šewa* occurs frequently and consistently to indicate an open or near-open vowel, predominantly in unstressed, open syllables. These syllables seem to be places where the scribe pronounced a short lexical vowel or a short epenthetic vowel that corresponds to a lexical vowel in Classical Arabic (usually *fatḥa*). Most of these vocalic *šewa*s were probably realised as /a/, the same quality as Tiberian *šewa* and equivalent to *pataḥ*. However, it does seem that the scribe used *šewa* deliberately in contrast to *pataḥ* to highlight that a syllable was unstressed and open. *Šewa* also indicates /i/ several times,[69] corresponding to the vowel in the Classical Arabic particles *bi-* and *li-*: *li̱-yūʿayyir* (לְיוּעַייִר; 'to condemn;' R2.17); *bi̱-laḥiyuh* (בְּלַחִיֶה; 'by its beard;' R4.6); *li̱-yuǧannī* (לְיְגַּנִּי; 'to sing;' V2.17).

The scribe also uses the combination sign of *šewa* and *pataḥ* (i.e. *ḥateph pataḥ*), but this usage is solely an orthographic convention to avoid marking a guttural letter with vocalic *šewa*. This practice matches the standard Tiberian rule for *ḥateph* vowel signs, and implies that *hateph pataḥ* is phonetically equivalent to *šewa* in the Arabic glosses.[70]

Besides the expected usage in unstressed, open syllables, there are a few instances where it seems vocalic *šewa* must be in a closed or stressed syllable. This notation differs from the *šewa* in Tiberian Hebrew, where it cannot indicate a stressed vowel and only rarely appears in closed syllables.[71] For example, the first syllable of *ʾa̱nā ʿayyarat* (אֲנָא עַייַרת; 'I condemned;' R2.5) is marked with *ḥateph pataḥ*, unexpectedly suggesting that the first vowel is unstressed (i.e. *ʾana̍*). Similarly, for *manṭa̱qatuh* (מַנְתְּקַתֶּה; 'his belt;' V2.15),

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67 DOTAN, "Masorah," 644; KHAN, *The Tiberian Pronunciation Tradition*, I:§I.0.12. It is worth noting that the Babylonian Hebrew tradition also distinguished /ɔ/ and /a/ phonemically, and there was an active Babylonian synagogue in Cairo during the medieval period. See KHAN, I:§I.2.1.4; JEFFERSON, "Deconstructing 'the Cairo Genizah,'" 425.

68 KHAN, *The Tiberian Pronunciation Tradition*, I:§I.0.12.

69 See KHAN, "The Function of the Shewa Sign," 110–11.

70 No guttural letter (א ה ח ע) in the manuscript occurs with regular vocalic *šewa*.

71 KHAN, *The Tiberian Pronunciation Tradition*, I:316–17. See also, KHAN, "The Function of the Shewa Sign," 107–8.

the most likely reading is with stress on the second syllable (*mantáqatuh*), and yet the *tav* has *šewa*. The phrase *wạ-nazạ'hum* (וְנֲזַעְהֶם; 'and he removed them;' R4.11) is even more difficult to interpret, as the vowel after the *zayin* is marked by *šewa*, even though it seems that that syllable is both stressed *and* closed (*nazá'hum*). These potentially irregular stress patterns do not match the expected stress patterns of modern Egyptian colloquial Arabic,[72] despite the likely Egyptian provenance of this manuscript.

There are two other places where a vocalic *šewa* appears in a closed syllable. Both mark the vowel before the *kaph* of a 2ms suffix: *qiḥatạk* (קְחַתְּךָ; 'your insolence;' R4.3) and *yūsallimạk* (יוֹסַלְּמְךָ; 'he will deliver you;' V2.2).[73] If the scribe pronounced this suffix as *-ak* – the same as modern Egyptian and Levantine dialects – then one would expect *pataḥ* (/a/) in these closed syllables. If these *šewa*s do represent /a/, then the scribe may have had an orthographic policy specific to this suffix that permitted *šewa* in a closed syllable. Such a practice would approximate the graphic appearance of the equivalent Tiberian Hebrew suffix ךֳ– (*-aḫɔ*).

Without more evidence, it is difficult to determine the exact functions of *šewa* in every instance. The scribe may simply have conflated *šewa* and *pataḥ* due to their equivalent qualities, or they may have recorded *šewa* occasionally for what they heard as ambiguous vowels in closed or stressed syllables. At any rate, it is clear that they predominantly used vocalic *šewa* to record short vowels in unstressed, open syllables.

Dageš as a Marker of Arabic Stops and Fricatives

The twenty-two letters of the Hebrew alphabet are insufficient to transcribe the twenty-nine Arabic letters on a one-to-one basis, so in Judaeo-Arabic a few Hebrew characters each represent two different Arabic consonants.

Judaeo-Arabic scribes often addressed this consonantal ambiguity by placing a diacritic dot or stroke above a Hebrew character to indicate that it represented an Arabic letter that had no Hebrew equivalent. Historically, the first letters to receive this treatment were Hebrew *ṣade* (צ), *ṭet* (ט), and *gimel* (ג),[74] which took dots to indicate Arabic *ḍād* (צׄ), *ẓā'* (טׄ), and *ǧīm* (גׄ or ג̇).[75] This system eventually expanded with diacritic dots on other Hebrew letters, but at first the new dots were a last resort, used only for Arabic phonemes (i.e. /ḍ/, /ẓ/, and /ǧ/) that did not exist in Hebrew phonetics. For other letters, instead of adding diacritics, early Judaeo-Arabic scribes preferred to use the Hebrew writing system to the fullest extent possible to indicate Arabic phonemes. This preference led to the application of the Hebrew *dageš* dot to Judaeo-Arabic to differentiate between stops and fricatives.

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72 MITCHELL, *An Introduction to Egyptian Colloquial Arabic*, 110–11.

73 This notation also occurs in the Saʿadiya *siddur* from T-S Ar.8.3; see KHAN, "Vocalized Judaeo-Arabic," 210. By contrast, the 2ms ending is always written with *pataḥ* in the Ecclesiastes translation from T-S Ar.27.55, T-S Ar.53.12, and L-G Ar.I.150.

74 The diacritic dot for *ḍād* (צׄ) is the most common in classical Judaeo-Arabic texts, although the dot for *ẓā'* (טׄ) may only be less so because *ẓā'* is relatively infrequent in Arabic phonology. Medieval texts with a dot for *ǧīm* (גׄ) practically always also contain the dots for *ḍād* and *ẓā'*. Diacritic dots usually do not occur on other letters (e.g. כׄ דׄ תׄ פׄ) unless a manuscript also has dots for *ḍād*, *ẓā'*, and *ǧīm*.

75 In 'phonetic' Judaeo-Arabic orthography, a *dalet* with a supralinear dot (דׄ) could also indicate *ḍād*. See KHAN, "Judaeo-Arabic," 150.

Besides the vowel points, *dageš* is the only Tiberian diacritic mark that appears regularly in T-S Ar.5.58. The Masoretes originally placed this dot inside of a Hebrew letter to represent either gemination or the realisation of a fricative consonant with a stop-plosive allophone. This notation meant that a *bet* (ב) was pronounced as a fricative /v/, but with *dageš* it was a stop /b/ (בּ). Similarly, *gimel* /ǧ/ (ג) with *dageš* was /g/ (גּ), *dalet* /ḏ/ (ד) was /d/ (דּ), *kaph* /ḫ/ (כ) was /k/ (כּ), *pe'* /f/ (פ) was /p/ (פּ), and *tav* /ṯ/ (ת) was /t/ (תּ).

The scribe of T-S Ar.5.58 uses *dageš* in exactly this way, and it allows them to transcribe eight Arabic consonants /g/ (ج), /ġ/ (غ), /d/ (د), /ḏ/ (ذ), /k/ (ك), /ḫ/ (خ), /t/ (ت), and /ṯ/ (ث) using just four Hebrew letters (ג ד כ ת). In fact, they apply *dageš* with a remarkable degree of regularity and consistency, nearly always specifying a stop or fricative quality when given the chance. The distribution of these *dageš* dots suggests that the scribe maintained interdental pronunciations of *ṯā'* (/ṯ/) and *ḏāl* (/ḏ/), as well as a velar stop-plosive realisation of *ǧīm* (/g/, rather than /ǧ/).

Based on the unambiguous readings in the manuscript, the distribution of *dageš* is as follows:

- *dageš* marks gemination 10 times
- *bet* occurs 11 times with *dageš*, and 6 times without; it always represents /b/ (ب)
- *pe'* occurs 6 times, never with *dageš*; it always represents /f/ (ف)
- *gimel* occurs 8 times with *dageš*, every time representing /g/ (ج)
- *gimel* occurs 5 times without *dageš*, every time representing /ġ/ (غ) [76]
- *dalet* occurs 7 times with *dageš*, every time representing /d/ (د)
- *dalet* occurs 4 times without *dageš*, 3 times representing /ḏ/ (ذ) and once representing /d/ (د)
- *kaph* occurs 11 times with *dageš*, every time representing /k/ (ك)
- *kaph* occurs 8 times without *dageš*, 7 times representing /ḫ/ (خ) and once representing /k/ (ك)
- *tav* occurs 21 times with *dageš*, every time representing /t/ (ت)
- *tav* occurs 11 times without *dageš*, 6 times representing /ṯ/ (ث) and 5 times representing /t/ (ت)

Altogether, the scribe marks Arabic stops with *dageš* 58 times, while fricatives always occur without *dageš* (27 times total). There are only 13 instances where the scribe does not mark a stop with *dageš*. Six of these are *bet*,[77] which only ever represents a bilabial stop in Judaeo-Arabic, so pointing it with *dageš* at all is a redundant practice that the scribe retained from Hebrew. The other seven include one medial *kaph*,[78] one medial *dalet*,[79] and five *tav*s in final position. Two of these *tav*s are in feminine plural endings,[80] two are

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[76] There are three cases where there is a *gimel* in the text, but the manuscript is damaged and ambiguous as to whether they had *dageš* or not. See אלגֶּבֶן (*al-gubun*; 'the cheese;' R2.12); אוּגַרֹּב (*'ūgarrib*; 'I have [not] tested;' R4.10); and [נֹגֹח]ֹ (*na[gaḥ]*; 'he succeeded;' V4.18).

[77] R4.4, R4.5, R4.9, R4.10, V2.4, and V2.7 twice.

[78] אכון (*'akūn*; 'I will become;' V4.4).

[79] אַנֹעֲקַדַת (*'an'aqadat*; 'it was knit together;' V2.12).

[80] מַעְרַכַּאת (*ma'raḳāt*; 'battlefields;' R2.2) and א[לֹ]אֹעֲבַּאת (*'[a]l[ē]'ibāt*; 'the playing women;' V2.19).

endings of perfect verbs,[81] and the last is in the word *waqt* (וַקְת; 'time;' V4.5). The omissions of *dageš* in the *kaph* and *dalet* were likely oversights, but the *tav*s are all in positions where a reader would know that the grapheme necessarily represented /t/.

This phenomenon of *dageš* as a marker of Arabic phonology makes T-S Ar.5.58 a particularly valuable source for determining the realisation of vernacular Arabic consonants. The scribe who pointed this text used both the Judaeo-Arabic supralinear diacritic dot and the intralinear *dageš* dot to specify Arabic letters. However, they only used the diacritic dot on *ṣade*, indicating the Arabic *ḍād* (ض),[82] and not on any other letter.[83] This usage suggests that /ḍ/ was the only Arabic phoneme that the scribe could not record using the Tiberian writing system alone. This conclusion is then relevant to the Arabic letter *ǧīm*.

The most common way to indicate *ǧīm* in Judaeo-Arabic texts is like *ḍād*, using a diacritic dot either above or below the letter *gimel* (גֹ or גִ).[84] This dot clarified that a *gimel* represented a phoneme which did not exist in Biblical Hebrew phonetics; that is, the affricate /ǧ/. However, the scribe of T-S Ar.5.58 transcribed Arabic *ǧīm* using *gimel* with *dageš*, even though the supralinear diacritic dot was known to them.[85] This practice suggests that they pronounced *ǧīm* not as a non-Hebrew affricate, but rather as a stop that had an equivalent Hebrew consonant. That consonant was *gimel*, usually realised with *dageš* in the Tiberian tradition as a voiced velar stop /g/,[86] and apparently equivalent to this scribe's vernacular reflex of Classical Arabic *ǧīm*. This *ǧīm* /g/ reflex is well-known from Egyptian Arabic in both medieval and modern times,[87] and its manifestation here is perhaps unsurprising, given the discovery of this manuscript in the Cairo Geniza.

This consistent delineation between Arabic stops and fricatives has further implications for the scribe's realisation of *ḏāl* (ذ) and *ṯā'* (ث). While many Arabic dialects, including those of urban Egypt, eventually lost the interdental pronunciation of Classical Arabic *ḏāl* (/ḏ/) and *ṯā'* (/ṯ/),[88] the scribe of T-S Ar.5.58 was careful to record them either with or without *dageš*. For example, the glossary includes *hāḏā* (הַאדָא; 'this;' R4.1), without *dageš* in the *dalet* (/ḏ/); and *bin man ḏā* (בֵּן מַן דָא; 'whose son is that;' V2.10), again with no *dageš*. By contrast, in *yaġtaḏī* (יַגְתְּדִי; 'he would go daily;' R2.9), the *dalet* (/d/) and *tav* (/t/) both have *dageš*, though the *gimel* (/ġ/) does not; and in *wēdī* (וֵאדִּי; 'wadi;' R4.14) the *dalet* is likewise marked as a stop. Similarly, the text has *wạ-ṯēnīh* (וְתֵאנִיה; 'and his

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81 עַיַּירַת (*'ayyarat*, 'I condemned;' R2.5) and תְּרַכַּת (*ṭarakat*; 'you left;' R4.2).

82 R2.11, R2.13, R4.2, and R4.6.

83 None of the Arabic glosses contain *ẓā'*, but if they did, it would likely have been transcribed as Hebrew *ṭet* with a diacritic dot (טֹ).

84 CONNOLLY, "Revisiting the Question of Ǧīm," 156–57, 165–69. I suspect that that the supralinear diacritic dot came into use with *gimel* first on analogy with *ḍād* (ض) and *ẓā'* (ظ), prior to the introduction of the sublinear dot. Connolly argues that the sublinear dot was placed below *gimel* on analogy with the dot position in Arabic ج.

85 For another example of this phenomenon, see POSEGAY & ARRANT, "Three Fragments of a Judaeo-Arabic Translation of Ecclesiastes."

86 KHAN, *The Tiberian Pronunciation Tradition*, I:§I.1.3.

87 BEHNSTEDT & WOIDICH, "The Formation of the Egyptian Dialect Area," 69–70; CONNOLLY, "Revisiting the Question of Ǧīm," 162–63, 178–79.

88 HOLES, "Introduction," 12.

second;' R2.8), without *dageš* in the *tav* (/t̲/); and *gūt̲at* (גּוּתַת; 'the corpse of;' V2.3), with *dageš* in the *gimel* (/g/) and final *tav* (/t/), but not in the first *tav* (/t̲/). This consistent notation suggests that the scribe consciously distinguished these interdental consonants from their alveolar counterparts, definitely in writing, and probably in speech.

Conclusion

T-S Ar.5.58 is a parchment folio from the Cairo Geniza that contains part of a Judaeo-Arabic translation glossary for the Hebrew book of Samuel. It was most likely produced between 900 and 1200, and probably before the end of the eleventh century. The Arabic words in this glossary are fully vocalised with Tiberian Hebrew vowel signs, and this pointing system allowed the scribe to record vocalic allophones – most notably /e/ – from their native Arabic dialect. They also used the Tiberian *šewa* to indicate stress patterns in Arabic words, and their distribution of the *dageš* dot suggests that they realised Arabic *ǧīm* as a voiced velar stop /g/. These details would not be evident if the text were written in Arabic script, which makes this manuscript a unique source for the phonetic features of medieval vernacular speech.

More research is required to fully understand the linguistic features of this text, particularly with respect to its lexical inventory and verbal morphology. Further comparative study is also needed to determine the relationship between this manuscript, other vocalised Judaeo-Arabic manuscripts, and Middle Arabic texts more broadly. Such work is for the future, but it is hoped that the present edition makes these rare data points more accessible to all scholars of Arabic.

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