Ḫ > Ḥ IN ASSYRIA AND BABYLONIA*

RICHARD C. STEINER
YESHIVA UNIVERSITY

What is it about Mesopotamia that continues to hold West Semites like my distinguished friend and colleague, Prof. Barry Eichler, in thrall so many centuries after the Assyrian and Babylonian captivities? Only Barry can answer that question, and I suspect he will do so in his remarks. I wish to address a more modest question. How should Barry pronounce the word that to this day is used to refer to the devastation visited by the East Semites on his ancient homeland—the Yiddish word *khurbn*?

Semitic originally had a contrast between the voiceless pharyngeal fricative *ḥ and the voiceless uvular fricative *ḫ; a minimal pair that can be reconstructed for Proto-West-Semitic is *ḥālum "sand" ≠ *ḫālum "maternal uncle." Until two or three decades ago, most Semitists assumed that uvular *ḫ was lost already in Old Aramaic, as the result of a merger with pharyngeal *ḥ.[1] Today, thanks to papyrus Amherst 63 (the Aramaic text in Demotic script), there is a new conventional wisdom. That text, probably dictated to an Egyptian scribe at the beginning of the third century BCE, consistently distinguishes *ḥ from *ḫ.[2] Thus, Aram. חמר "wine" is transcribed with Demotic ḫ in four places (cf. Ug. ḫmr "wine"), while Aram. חמה "venom" is transcribed with Demotic ḥ in three places (cf. Ug. ḥmt "venom").[3] Similarly, Aram. מנחר- "nostril" and -נחרת "snorts" are transcribed in the text with ḫ (cf. Arab. *manḫar* "nostril" and *naḫīr* "snort"), while Aram. נחש "copper, bronze" is transcribed with ḥ in two places (cf. Arab. *nuḥās* "copper").[4]

---

[1]   See, for example, Degen, *Altaramäische Grammatik*, 37; and Segert, *Altaramäische Grammatik*, 88.

[2]   So already Nims and Steiner, "A Paganized Version," 263: "the Proto-Semitic contrast of ḥ with ḫ is perfectly preserved." See now Steiner, "On the Dating," 235–37.

[3]   Steiner and Moshavi, "A Selective Glossary," 1256, 1257.

[4]   Steiner and Moshavi, "A Selective Glossary," 1260–61.

During the past two decades, this discovery has made its way into the handbooks.[5] However, it would be hasty to conclude that the earlier assumption was completely wrong. After all, Amherst 63 comes from Egypt. What about the other areas where Aramaic was spoken, especially Mesopotamia? How long was uvular *ḫ preserved there?

In this article I shall attempt to answer that question. I shall argue that Amherst 63 sheds light on the fate of *ḫ in Mesopotamia as well as Egypt—and perhaps even in Akkadian as well as Aramaic. Examination of the evidence will suggest that the shift ḫ > ḥ occurred in Assyria before it occurred in Egypt and before it occurred in Babylonia.

Aramaic Renderings of Akkadian Ḫ

Amherst 63 contains several Akkadian loanwords relevant to our problem, loanwords that exhibit inconsistency in the treatment of Akk. ḫ. In one of them, נחתם "baker" (V/5 *nḥ.tᵐ m.k.ᵐ* "your baker") < *nuḫatimmu* "cook/baker,"[6] Akk. ḫ is rendered with Aram. ḥ (written with Dem. ẖ in this instance). This is the usual rendering of Akk. ḫ in West Semitic both earlier and later. Thus, from Akk. *maḫīru* "purchase, purchase price" in the second millennium BCE, we find Ug. *mḫr* "price" with ḫ.[7] Much later, in Arabic, we find four renderings with ḥ: *faḫḫār* "(baked) pottery" < *paḫāru* "potter," *ḥazaf* "(unbaked) pottery" < *ḫaṣbu* "clay, sherd, pot" (cf. Dan 2:41 חסף די פחר), *ḥābiya* "a large jar" < *ḫabû* "earthenware jug," and *nusḫah* "copy" < *nisḫu* "copy."[8]

In another loanword, פחה "governor" (XVIII/4 *pḥ*ᵐ, XIX/2 *pḥ.*ᵐ) < *paḫatu* "governor," Akk. ḫ shows up rendered with a pharyngeal ḥ.[9] This is not due to mishearing; the same Akkadian word appears as *fḥt* in

[5]   Beyer, *Die aramäischen Texte*, 101–2; Hug, *Altaramäische Grammatik*, 51; Segert, "Old Aramaic Phonology," 118–19; Muraoka and Porten, *A Grammar of Egyptian Aramaic*, 10 nn. 36–37.

[6]   P.-A. Beaulieu informs me (email communication, March 16, 2009) that "in LB temple archives, it seems that the *nuḫatimmu* is the baker, as he is responsible for preparing cakes, sweets, and bread."

[7]   *CAD* M/1, 97; Del Olmo Lete and Sanmartin, *A Dictionary of the Ugaritic Language*, 539–40. Cf. Hoch, *Semitic Words in Egyptian Texts*, 150–51.

[8]   Kaufman, *Akkadian Influences*, 53, 54, 78, 79. Note that most of these words do not seem to be scholastic borrowings, borrowed from a dead or dying language; four of them relate to everyday occupations such as baking and pottery. They must have been borrowed by Babylonian Aramaic before the Late Babylonian period (from 625 BCE until the disappearance of cuneiform documents). At that period, Akkadian was "an imperfectly learned, dying language" (ibid., 169).

[9]   Steiner and Nims, "Ashurbanipal and Shamash-shum-ukin," 71, 73, as corrected in Steiner, "The Aramaic Text in Demotic Script," 323, 324.

a Liḥyanite inscription of the Persian period (mid-fifth century BCE).[10]
We may also note the absence of χ in the Septuagint's rendering of three
names of Akkadian origin: (1) Ασορ(αδ)δαν = אסר חדן Kgs 19:37, Isa 37:
38) < *Assur-aḫ-iddina*, (2) Αλαε = חלח (2 Kgs 17:6, 18:11) < *Halaḫḫu*, and
(3) Αβωρ = חבור (2 Kgs 17:6, 18:11) < *Ḫabūr*.[11] In all three names, there is
a zero-rendering of Hebrew ח; in חלח, there is also a rendering with ε.
Both are normal renderings of pharyngeal *ḥ* in the LXX; for uvular *ḫ*, the
LXX uses χ.[12]

Why do פחה "governor" and אסר חדן "Esarhaddon" differ from
נחתם "baker" and חבית "jar" in their treatment of Akk. *ḫ*? The first
explanation that comes to mind is chronological: we might assume that
נחתם and חבית (with Aram. *ḥ* for Akk. *ḫ*) were exported from Mesopo-
tamia earlier than פחה and אסר חדן (with Aram. *ḥ* for Akk. *ḫ*), i.e., before
the sound [ḫ] was lost in Akkadian and/or Aramaic. This is hardly like-
ly, however, since פחה and אסר חדן are attested already in early pas-
sages of Isaiah and Kings, whereas נחתם is first attested in Amherst 63
(beginning of the third century BCE)[13] and חבית is not attested until the
Nisa ostraca (first century BCE).[14] A more likely explanation is geo-
graphical: the forms with pharyngeal *ḥ* come from Assyria rather than
from Babylonia.

---

[10] For the dating of the Liḥyanite inscription, see Winnett, *A Study of the
      Lihyanite and Thamudic Inscriptions*, 50–51; Grimme, "Neubearbeitung,"
      311; Albright, "Dedan," 4; Winnett and Reed, *Ancient Records from North
      Arabia*, 115–16; Ephʿal, *The Ancient Arabs*, 212; and id., "Syria-Palestine
      under Achaemenid Rule," 163. The later dating of Caskel (*Liḥyan und
      Lihyanisch*, 101–2) is part of a downward revision of Liḥyanite chronology
      that has not been accepted; see Müller, "Das Frühnordarabische," 21, 22.
      Note also LXX φααθμωαβ for the name פחת מואב, but the absence of χ
      proves little here, since the Greek translation of Ezra-Nehemiah, in which
      this transcription appears, reflects a stage of Hebrew in which *ḫ* has
      already merged with *ḥ*; see Blau, *On Polyphony*, 65–67; and Steiner, "On the
      Dating," 261. Blau (*On Polyphony*, 67) adds that the word פחה "could have
      reached Hebrew by the mediation of a dialect in which *x* had already
      shifted to *ḥ*," thereby anticipating our conclusion.

[11] See Blau, *On Polyphony*, 44–45, 48; cf. also Wutz, *Die Transkriptionen von der
      Septuaginta*, 139.

[12] Blau, *On Polyphony*; Steiner, "On the Dating"; id., "*A*-Coloring Conso-
      nants."

[13] Also from the third century BCE is an Egyptian ostracon in which a man is
      identified as נחתמא; see Porten and Yardeni, *TAD*, 4.202–3, RÉS 1301 l. 7.

[14] Hoftijzer and Jongeling, *Dictionary*, 357 s.v. *ḥwt*.

Ḥ and Ḫ in Assyria

Let us look first at Assyria. According to P. V. Mankowski, "the BH and Aramaic forms [of פחה] are certain loans from Assyrian."[15] This seems plausible: the loanword derives from an Akkadian term that came to be widely used at the time of the Neo-Assyrian empire,[16] and two of its literary occurrences are in speeches of Assyrians (an Assyrian official in 2 Kgs 18:17 and an Assyrian king in Amherst 63, XIX/2). An Assyrian origin is even more likely for the examples from the Septuagint; one, Ασορ(αδ)δαν, is the name of an Assyrian king and the other two, Αλαε and Αβωρ, are toponyms mentioned in connection with Assyrian kings. The evidence suggests that there was a shift ḫ > ḥ in Assyria before the fall of Nineveh in 612 BCE. However, from the evidence presented thus far, it is not clear whether this shift took place in Aramaic (with phonemic merger) or Akkadian (without phonemic merger) or both. Any one of these scenarios would account for the ḥ in pḥ^m/pḥ.^{m} and fḥt and for the absence of χ in Ασορ(αδ)δαν, Αλαε, and Αβωρ.

Evidence that seems to bear on this question comes from a Neo-Assyrian inscription of Esarhaddon in which the Median name *Xšaθrita- appears with an initial k: *Ka-áš-ta-ri-ti, Kaš-ta-ri-ti*.[17] Assuming that the Median name was really pronounced with an initial [x],[18] it is difficult to understand why k would be used to render it. Why not use ḫ as in *Ḫa-šá-at-ri-tu$_4$,* the Late Babylonian (Darius I) rendering of the same name?[19] This evidence suggests that the shift affected the Akkadian spoken in Assyria, at the very least. I came to this conclusion before I knew that the shift had already been posited, on independent grounds, for that dialect. According to J. Hämeen-Anttila, "h (velar [ḫ]) has probably been changed in Neo-Assyrian to pharyngeal ḥ or even to laryngeal h."[20] Since two pieces of evidence for the shift involve Esarhaddon, we may conclude that it probably occurred during his reign (681–669 BCE) at the latest.

What about the *Aramaic* spoken in Assyria? We cannot rule out the possibility that the shift occurred only in the Assyrian dialect of Akka-

---

[15]   Mankowski, *Akkadian Loanwords*, 128.

[16]   See, for example, Henshaw, "The Office of Šaknu," 465, 479–83; Mankowski, *Akkadian Loanwords*, 128–29; and the literature cited in these sources.

[17]   Zadok, *The Ethno-linguistic Character*, 66 (§6.10); Borger, "Kas/štarita," 476. The Assyrian form is probably to be read *Kastarita* rather than *Kaštarita*.

[18]   See n. 41 below.

[19]   Malbran-Labat, *La version akkadienne*, 103 (§41); Hinz, "Kyaxares," 399.

[20]   Hämeen-Anttila, *A Sketch of Neo-Assyrian Grammar*, 15.

dian, leaving *ḫ unchanged in the Assyrian dialect of Aramaic. That scenario would suffice to account for the appearance of the Akkadian loanword פחה with a pharyngeal ḥ in Egypt and Arabia. Nevertheless, since the entire population of Assyria spoke Aramaic by the beginning of the seventh century BCE, the speakers of Akkadian being bilingual,[21] it seems more likely that the two languages would have changed their pronunciation in tandem. Moreover, the shift would have been far more natural in Aramaic, since it already possessed the rare and difficult pharyngeal sound [ḥ].

The evidence for the loss of *ḫ in Assyria is surprisingly inconsistent. In the Septuagint to 2 Kings, one verse before Ασορ(αδ)δαν = אסר חדן (19:37) < *Aššur-aḫ-iddina*, we find Σενναχηριμ = סנחריב (19:36) < *Sin-aḫḫē-erība*.[22] Sennacherib appears with χ in other sources, as well: Herodotus' *Histories* (2.141.2 Σαναχαριβος) and Josephus' *Antiquities* (10.1.1 §1, etc. Σεναχειριμος). Similarly, Esarhaddon appears with χ in Tobit (1:21 Σαχερδονος) and in Josephus' *Antiquities* (10.1.5 §23 Ασαραχοδδας). Finally, the Habor River appears with χ in the Septuagint to 1 Chronicles (5:26 Χαβωρ) and in Ptolemy's *Geography* (5.18 §3 Χαβωρας), with *ch* in Pliny's *Natural History* (31.22, 32.7 *Chabura*), and with ḥ in Arabic sources (*al-Ḥābūr*).[23] A similar inconsistency is found in Amherst 63, which contains another Akkadian loanword whose form and meaning point to Neo-Assyrian as its source: לחן "temple servitor" (VII/12 r.˹ḥ˺.n.nᵐ "temple servitors") < NA *laḫḫinu* "temple official."[24] The ḥ in this Demotic rendering of לחן contrasts with the ḫ in the Demotic rendering of פחה. Assyrian renderings of velar fricatives in foreign names also exhibit inconsistency. In some foreign names, the Assyrians use ḥ rather

---

[21] See Parpola, "National and Ethnic Identity," 5–49 and the literature cited there. We might add that, already in the late eighth century BCE, Sargon II was fighting a losing battle against Aramaic. In one letter, he chastises his correspondent for writing to him "on an Aramaic document," asking: "Why did you not write on an Akkadian tablet?" (*CAD* S s.v. *sepēru*). Nine hundred years later we find R. Judah the Prince fighting a similar battle and asking a similar question: "Why (use) the Syrian language in the Land of Israel?" (Soṭa 49b, BQ 83a).

[22] This form is the only evidence cited by Mankowski (*Akkadian Loanwords*, 157) in support of his claim that "Akkadian PNs containing *x* that are attested in BH show χ in the LXX."

[23] For medieval attestations of the Arabic name, see Lassner, "Khabur," 897–98.

[24] Steiner and Moshavi, "A Selective Glossary," 1259; *AHw* 528; *CAD* A/1, 294; Porten, *Archives from Elephantine*, 200–1; Kaufman, *Akkadian Influences*, 66 n. 176.

than k to render initial velar fricatives, e.g, *Hi-lak/la-ak/-ku/i* = חִלֹ(י)ךְ "Cilicia."[25]

What are we to make of this inconsistency? It is possible that *$\underline{h}$ was not completely lost in Assyria—that some speakers in that ethnically heterogeneous land[26] never carried out the shift.[27] It is also possible that the shift took place (at least in part) during Esarhaddon's reign and that his name made its way to the West in two forms: with $\underline{h}$ before the shift and with h after it.

Ḫ *and* Ḥ *in Babylonia*

In Babylonia, there were apparently three mergers involving Aramaic ח. First, *$\underline{h}$ merged with *h, as in Assyria and Palestine. Subsequently, h lost its pharyngeal constriction, merging with h. Finally, h became silent in at least some positions, merging with zero. Evidence of the second and third mergers in Mandaic and Jewish Babylonian Aramaic texts, including the magic bowls (ca. 5th–7th centuries CE), has frequently been noted.[28] The second merger is reflected already in the Hebrew pronunciation of R. Ḥiyya (late second century CE), a Babylonian disciple of R. Judah the Prince. The latter once suggested to his son that he tease R. Ḥiyya about his inability to distinguish ח from ה, with the claim that it led him to commit blasphemy when, instead of 'וחכיתי לה "I shall wait for the Lord" (Isa 8:17), he read 'וחכיתי לה "I shall smite the Lord" (Megilla 24b)! The evidence for the second merger is also, indirectly, evidence for the first, since it affected ח from both *$\underline{h}$ (e.g., Mandaic *haila* "force, army"; cf. Amherst 63, passim *ḫyr*ᵐ "force, troop") and *h (e.g., Mandaic *hiia* "life"; cf. Amherst 63, XVII/7 *ḥ.yn*ᵐ "life").[29]

The first merger seems to have occurred later in Babylonia than it did in Assyria. One piece of evidence comes from the Aramaic version of Darius's Bisitun inscription (ca. 510 BCE), in which the scribe uses the Aramaic letter ח to render Iranian x in the toponym רחא, corresponding

---

[25] For חילכיא / חלכין "Cilicians" in the Arsham letters, see Driver, *Aramaic Documents*, 25–28 (5:1*, 5:2, 6:4), 61; Porten and Yardeni, *TAD*, 1.110–11, 114–15; cf. חילך "Cilicia" in Ezek 27:11.

[26] See Postgate, "Ancient Assyria," and Parpola, "National and Ethnic Identity."

[27] One might speculate that Assyrians of Anatolian and Iranian origin did not carry out the shift because they realized /ḥ/ as [x] in their Aramaic speech.

[28] For discussion and literature, see Macuch, *Handbook of Classical and Modern Mandaic*, 79–88; Morgenstern, הארמית הבבלית היהודית, 60–61, 64–65; id., "On some Non-Standard Spellings," 251–54.

[29] Drower and Macuch, *A Mandaic Dictionary*, 120, 143; Steiner and Moshavi, "A Selective Glossary," 1256–57.

to *Raxā* in the Old Persian version.[30] This transcription suggests that uvular **ḫ* still existed in Babylonian Aramaic in ca. 510 BCE. If the letter ח represented only pharyngeal *ḥ* at the time, the scribe should have used כ, which, as I have shown elsewhere, already had the value [x] in postvocalic position in Babylonian Aramaic.[31] Indeed, the Akkadian version of the Bisitun inscription uses cuneiform *k* for the presumed Iranian [x] in the name *Ú-ma-ku-iš-tar*,[32] corresponding to *Huvaxštra* "Cyaxares" in the Old Persian version. Thus, the Aramaic version of the Bisitun inscription seems to provide a late-sixth-century terminus post quem for the loss of uvular *ḫ* in Babylonian Aramaic.

When we attempt to fix the date of the change more precisely, we find that the evidence is contradictory. One possible terminus ante quem comes from Arsham letter 11, written in Babylon in the late fifth century BCE.[33] There we find the name of one of the addressees is written once as חנדסירם and once as כנדסירם.[34] Driver wrote that "no satisfactory derivation has been proposed" for the name,[35] but it is now believed to be Luwian, with the first three consonants representing Common Anatolian **ḫant-* "before" (cognate to Latin *ante*) and the last three consonants representing a divine name.[36] If so, we have here hesitation between two Aramaic renderings of Luwian *ḫ* in the same name and the same document. This hesitation could be a result of the loss of the uvular fricative. After the loss, when speakers of Babylonian Aramaic needed to transcribe an initial velar fricative, they might well have used either the velar stop כ (to capture the *place* of articulation)[37] or the pha-

---

[30] Greenfield and Porten, *The Bisitun Inscription*, 38–39, 60. Similarly, in the Persepolis texts (Bowman, *Aramaic Ritual Texts*, 64, 115), we find the personal name סחררת rendering an otherwise unattested *Suxra-raθa* in a document dated to year 13 of Artaxerxes I (452/51 BCE).

[31] Steiner, "Variation, Simplifying Assumptions," *60–*65. It seems unlikely that the use of ח to write Iranian *x* was a historical spelling already in 510 BCE.

[32] Malbran-Labat, *La version akkadienne*, 97, 99, 103; however, see n. 41 below.

[33] Driver, *Aramaic Documents*, 10–11.

[34] Driver, *Aramaic Documents*, 34 (11:1*, 11:2), 61; Porten and Yardeni, *TAD*, 1.124.

[35] Driver, *Aramaic Documents*, 67.

[36] See Grelot, *Documents araméens*, 476; Kornfeld, *Onomastica aramaica*, 34; Muraoka and Porten, *A Grammar of Egyptian Aramaic*, 19; cf. Houwink ten Cate, *The Luwian Population Groups*, 149–50.

[37] It was a stop in initial position, but the fact that it was a fricative in postvocalic position may have promoted its use even in initial position.

ryngeal fricative ח (to capture the *manner* of articulation).[38] If this is cor-
rect, the change would seem to have occurred before the late fifth
century BCE. When we combine this terminus ante quem with the ter-
minus post quem suggested above, we are left with the early/mid-fifth
century BCE as the date of the change.

Unfortunately, this argument is weakened by the fact that the
Luwian name happens to have a prefixed ‏ו– in Arsham letter 11; thus,
strictly speaking, we are dealing with a postvocalic כ. Moreover, it is not
certain that the evidence from that letter reflects the linguistic situation
in Babylonia; the spellings of the Luwian name could derive also from
Cilicia or northern Syria. Indeed, we find a very similar hesitation
between ח and כ in the coins of Pharnabazus, the Persian satrap of Cil-
icia in ca. 379–374 BCE. Some of these have ‏חלך for Cilicia, while others
have ‏כלך.[39] On the other hand, the use of initial כ to render [x] is not
limited to Cilician names. The same rendering is found in the word
‏כרוזא "herald" (Dan 3:4), derived from Iranian *xrausa* "herald."[40]
Although we cannot exclude the possibility that the explanation of this
rendering is to be found in Iranian dialectal variation,[41] it gives some
legitimacy to our use of Arsham letter 11 to assign a late-fifth-century
terminus ante quem to the sound change.

The evidence of Arsham letter 11 is contradicted by evidence from
Greek transcriptions of Akkadian, which seem to suggest a later date.
Westenholz has pointed to the rendering of Akk. $ḫ$ with χ in two exam-
ples: Αδαδναδιναχης = *Adad-nādin-aḫḫē* and Σεχες (for *Σεχετ) = *šiḫtu*
"Mercury."[42] The so-called "Graeco-Babyloniaca" texts use Greek ξ to
render Babylonian $ḫ$ with one exception.[43] In one tablet, we find γισμαρ

---

[38]   It is also possible that, by the late fifth century, the use of ח to write Luwian
       $ḫ$ was a historical spelling.

[39]   Cooke, *A Text-Book of North-Semitic Inscriptions*, 343–44 (cf. 346).

[40]   This etymology, proposed by M. Schaeder, is universally accepted today.
       The existence in BA (Dan 5:29) of a denominative verb from the same root
       shows that the borrowing was not a recent one.

[41]   S. Shaked informs me (email communication, July 15, 2003) that "in *xrausa*-
       the initial *x* is etymologically a *k* realized as a fricative because it forms a
       cluster with the following consonant. This is true, incidentally, of most
       other cases of *x* in Iranian.... It is arguable that in one of the Iranian dialects
       Iranian *k* was not pronounced *x* in the case of *krausa*- (and possibly in other
       cases as well), and that it was from this dialect that Aramaic borrowed the
       word."

[42]   Westenholz, "Graeco-Babyloniaca," 283.

[43]   Knudsen, "Akkadian in Greek Orthography," 73, 75; Geller, "Last
       Wedge," 67; Westenholz, "Graeco-Babyloniaca," 282. This rendering is
       unique. Elsewhere we find ξ used for ṣ or ṣ́; see Steiner, *Affricated Ṣade*," 69.

Μηλω Μηλʼωʼ = gišimmar Meluḫḫa Meluḫḫū "date-palm of Meluḫḫa" and σοος = suḫuššu "young date-palm."[44] Here we see Sumerian and Akkadian ḫ rendered by zero, even when geminated.[45] If these exceptional renderings are the result of a sound change in Babylonian *Aramaic*, we might have to date that sound change to the first century BCE or CE, around the time that it occurred in Palestinian Aramaic.

Conclusions

The available evidence suggests that ḫ > ḥ occurred later in Babylonia than in Assyria, in both Akkadian and Aramaic. In Assyria, it seems to have occurred—for some speakers, at least—before 669 BCE; in Babylonia it seems to have occurred after 510—with some evidence pointing to the early/mid-fifth century BCE and other evidence pointing to the first century BCE or CE. The geographic difference is reflected in two Akkadian loanwords in Amherst 63: Aram. פחה from Assyria written with Demotic ḫ and Aram. נחתם from Babylonia written with Demotic ḫ.

<div align="center">WORKS CITED</div>

Albright, W. F. "Dedan." In *Geschichte und Altes Testament*. Tübingen: J. C. B. Mohr, 1953, 1–12.

Beyer, K. *Die aramäischen Texte vom Toten Meer: samt den Inschriften aus Palästina, dem Testament Levis aus der Kairoer Genisa, der Fastenrolle und den alten talmudischen Zitaten*, Vol. 1. Göttingen: Vandenhoeck & Ruprecht, 1984.

Blau, J. *On Polyphony in Biblical Hebrew*. Jerusalem: Israel Academy of Sciences and Humanities, 1982.

---

[44] Sollberger, "Graeco-Babyloniaca," 66; Geller, "Last Wedge," 70.

[45] It is difficult to accept the view of Westenholz ("Graeco-Babyloniaca," 291) that the zero-rendering is found with Sumerian ḫ but not Akkadian ḫ, because it is difficult to understand how Sumerian phonology could have escaped the influence of Akkadian phonology once Sumerian became a dead language, and how both of them could have escaped the influence of Aramaic phonology once Akkadian became a dead language. The influence of spoken languages on dead languages is well known from Latin and Hebrew. For Latin in France, see Smith, "The English Language," 168: "Every change in the vernacular extended simultaneously to the pronunciation of Latin." For Latin in England, see Brittain, *Latin in Church*, 55: "Since the time of Erasmus, it has followed the changes in English phonetics step by step." For Hebrew examples, see Steiner, "Variation, Simplifying Assumptions," *60 n. 30.

Bowman, R. A. *Aramaic Ritual Texts from Persepolis*. Chicago, Ill.: University of Chicago Press, 1970.

Brittain, F. *Latin in Church: The History of its Pronunciation*. 2nd ed. London: A. R. Mowbray, 1955.

Caskel W. *Lihyan und Lihyanisch*. Köln: Westdeutscher Verlag, 1954.

Cooke, G. A. *A Text-Book of North-Semitic Inscriptions: Moabite, Hebrew, Phoenician, Aramaic, Nabataean, Palmyrene, Jewish*. Oxford: Clarendon Press, 1903.

Degen, R. *Altaramäische Grammatik der Inschriften des 10.–8. Jh. V. Chr.* Abhandlungen für die Kunde des Morgenlandes 38,3. Mainz: Deutsche Morgenländische Gesellschaft, 1969.

Del Olmo Lete, G., and J. Sanmartin, *A Dictionary of the Ugaritic Language in the Alphabetic Tradition*. Leiden: E.J. Brill, 2003.

Driver, G. R. *Aramaic Documents of the Fifth Century B.C.* Oxford: Clarendon Press, 1957.

Drower, E. S., and R. Macuch. *A Mandaic Dictionary*. Oxford: Clarendon Press, 1963.

Eph'al, I. *The Ancient Arabs: Nomads on the Borders of the Fertile Crescent, 9th to 5th century B.C.* Leiden: E. J. Brill, 1982.

——— "Syria-Palestine under Achaemenid Rule." In *Cambridge Ancient History*, Vol. 4, *Persia, Greece, and the Western Mediterranean c. 525–479*, edited by John Boardman et al., 139–64. Cambridge: Cambridge University Press, 1988.

Greenfield, J. C., and B. Porten. *The Bisitun Inscription of Darius the Great: Aramaic Version*. London: Published on behalf of Corpus Inscriptionum Iranicarum by Lund Humphries, 1982.

Grelot, P. *Documents araméens d'Égypte*. Paris: Éditions du Cerf, 1972.

Grimme, H. "Neubearbeitung der wichtigeren Dedanischen und Lihjanischen Inschriften." *Le Muséon* 50 (1937): 269–320.

Hoch, J. E. *Semitic Words in Egyptian Texts of the New Kingdom and Third Intermediate Period*. Princeton, N.J.: Princeton University Press, 1994.

Houwink ten Cate, P. H. J. *The Luwian Population Groups of Lycia and Cilicia Aspera During the Hellenistic Period*. Leiden: E. J. Brill, 1961.

Hug, V. *Altaramäische Grammatik der Texte des 7. und 6. Jh.s v.Chr.* Heidelberger Studien zum Alten Orient 4. Heidelberg: Heidelberger Orientverlag, 1993.

Kaufman, S. A. *The Akkadian Influences on Aramaic*. Chicago, Ill.: University of Chicago Press, 1974.

Knudsen, E. E. "Akkadian in Greek Orthography: Evidence of Sound Change in an Ancient Traditional Pronunciation." *Orientalia Suecana* 38–39 (1989–90): 71–80.

Kornfeld, W. *Onomastica aramaica aus Ägypten.* Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1978.

Lassner, J. "Khābūr." In *The Encyclopaedia of Islam*, Vol. 4, 897–98. New Edition. Leiden, E.J. Brill, 1960–.

Macuch, R. *Handbook of Classical and Modern Mandaic.* Berlin: Walter de Gruyter, 1965.

Malbran-Labat, F. *La version akkadienne de l'inscription trilingue de Darius à Behistun.* Rome: GEI, 1994.

Mankowski, Paul V. *Akkadian Loanwords in Biblical Hebrew.* Winona Lake, Ind.: Eisenbrauns, 2000.

Morgenstern, M. הארמית הבבלית היהודית בתשובות הגאונים — עיונים בתורת ההגה, בתצורת הפועל, בכינויים ובסגנון. PhD Dissertation, Hebrew University, 2002.
    "On some Non-Standard Spellings in the Aramaic Magic Bowls and their Linguistic Significance." *JSS* 52 (2007): 245–77.

Müller, W. W. "Das Frühnordarabische." In *Grundriss der arabischen Philologie*, Vol. 1, edited by W. Fischer, 17–29. Wiesbaden: Reichert, 1982.

Muraoka, T., and B. Porten. *A Grammar of Egyptian Aramaic.* Leiden: Brill, 1998.

Nims, C. F., and R. C. Steiner, "A Paganized Version of Ps 20:2–6 from the Aramaic Text in Demotic Script." *JAOS* 103 (1983): 261–74.

Parpola, S. "National and Ethnic Identity in the Neo-Assyrian Empire and Assyrian Identity in Post-Empire Times." *Journal of Assyrian Academic Studies* 18 (2004): 5–22.

Porten, B. *Archives from Elephantine: The Life of an Ancient Jewish Military Colony.* Berkeley: University of California Press, 1968.

Porten, B., and A. Yardeni. *Textbook of Aramaic Documents from Ancient Egypt.* 4 vols. Winona Lake, Ind.: Eisenbrauns, 1986–1999.

Postgate, N. "Ancient Assyria—A Multi-Racial State." *Aram* 1 (1989): 1–10.

Segert, S. *Altaramäische Grammatik: mit Bibliographie, Chrestomathie u. Glossar.* Leipzig: VEB Verlag Enzyklopädie, 1986.
    "Old Aramaic Phonology." In *Phonologies of Asia and Africa*, Vol. 1, edited by A. S. Kaye, 115–25. Winona Lake, Ind.: Eisenbrauns, 1997.

Smith, G. C. Moore. "The English Language and the 'Restored' Pronunciation of Latin." In *A Grammatical Miscellany Offered to Otto Jespersen on his Seventieth Birthday*, edited by Niels Bøgholm, Aage Brusendorff, and Carl Adolf Bodelsen, 167–78. Copenhagen: Levin & Munksgaard, 1930.

Sollberger, E. "Graeco-Babyloniaca." *Iraq* 24 (1962): 63–72.

Steiner, R. C. *Affricated Ṣade in the Semitic Languages*. New York: American Academy for Jewish Research, 1982.

"The Aramaic Text in Demotic Script." In *The Context of Scripture*, Vol. 1, edited by W. W. Hallo and K. L. Younger, Jr., 309–27. Leiden: E.J. Brill, 1997.

"On the Dating of Hebrew Sound Changes (*$\underline{H}$ > $\underline{H}$ and *$\dot{G}$ > ') and Greek Translations (2 Esdras and Judith)." *JBL* 124 (2005): 229–67.

"Variation, Simplifying Assumptions and the History of Spirantization in Aramaic and Hebrew." In *Sha'arei Lashon: Studies in Hebrew, Aramaic and Jewish Languages Presented to Moshe Bar-Asher*, Vol. 1, edited by A. Maman et al., *52–*65. Jerusalem: Bialik Institute, 2007.

"*A*-coloring Consonants and Furtive *Pataḥ* in Biblical Hebrew and Aramaic According to the Tiberian Masorah." In *Zaphenath-Paneah: Linguistic Studies Presented to Elisha Qimron on the Occasion of his Sixty-Fifth Birthday*, edited by D. Sivan et al., *143–*155. Beer Sheva: Ben-Gurion University of the Negev Press, 2009.

Steiner, R. C., and A. Moshavi. "A Selective Glossary of Northwest Semitic Texts in Egyptian Script." In *Dictionary of the North-West Semitic Inscriptions*, edited by J. Hoftijzer and K. Jongeling, 1249–66. Leiden: E. J. Brill, 1995.

Steiner, R. C., and C. F. Nims. "Ashurbanipal and Shamash-shum-ukin: A Tale of Two Brothers from the Aramaic Text in Demotic Script." *Revue Biblique* 92 (1985): 60–81.

Westenholz, A. "The Graeco-Babyloniaca Once Again." *ZA* 97 (2007): 262–313.

Winnett, F. V. *A Study of the Lihyanite and Thamudic Inscriptions*. Toronto: University of Toronto Press, 1937.

Winnett, F. V., and W. L. Reed, *Ancient Records from North Arabia*. Toronto: University of Toronto Press, 1970.

Wutz, *Die Transkriptionen von der Septuaginta bis zu Hieronymus*. Stuttgart: W. Kohlhammer, 1925.