

The Etymology of χάρτης ‘Papyrus Roll’*

Gary A. Rendsburg

As is well known, the Greek lexicon includes numerous words, including common words and base vocabulary items, which lack a suitable Indo-European (IE) etymology, especially when compared to the lexica of other IE languages.¹ One need only peruse the great etymological dictionaries of Frisk, Chantraine, and Beekes in order to see the oft-used words *unerklärt*, *unbekannt*, *ohne (sichere) Etymologie*; *inconnue*, *ignorée*, *obscur*, *pas d'étymologie*; and *unexplained*, *no etymology*, *unknown origin*, *without etymology*.²

Among the words which fall into this category is χάρτης ‘papyrus roll’, listed in Frisk as “unerklärt,”³ in Chantraine as “inconnue,”⁴ and in Beekes as “unexplained.”⁵ These authors, along with others,⁶ assume that the word is of Egyptian origin — a natural supposition given the Egyptian source of *Cyperus papyrus*, the sedge plant which grows abundantly along the banks of the Nile, including in the Nile Delta. And

* For comments on an earlier version of this essay and for several references cited below, I am grateful to colleagues Aaron Michael Butts (Catholic University), Charles Häberl (Rutgers University), Jan Joosten (University of Oxford), Charles Krahmalkov (University of Michigan), Mark Leuchter (Temple University), Matthew Morgenstern (Tel-Aviv University), and Azzan Yadin-Israel (Rutgers University). I also express my thanks to the anonymous external reader of this article for *SCI*. Above all, however, I am most indebted to Philip Schmitz (Eastern Michigan University) for a vibrant exchange of many lengthy emails during the latter stages of composing this essay (March 2016). The usual disclaimers apply, for I alone remain responsible for the proposal put forward herein.

¹ For discussion, see Anna Morpurgo Davies, “The Linguistic Evidence,” in Gerald Cadogan, ed., *The End of the Early Bronze Age in the Aegean* (Cincinnati Classical Studies, new series, vol. 6; Leiden: E. J. Brill, 1986), pp. 93-124, especially pp. 105-106; and J. Clackson, “The Genesis of Greek,” in A.-F. Christidis, ed., *A History of Ancient Greek: From the Beginnings to Late Antiquity* (Cambridge: Cambridge University Press, 2007), pp. 191-192. See also the scattered comments in Robert Mailhammer, *The Germanic Strong Verbs: Foundations and Development of a New System* (Trends in Linguistics: Studies and Monographs 183; Berlin: Mouton de Gruyter, 2007), pp. 183-184, including, for example, “non-Indo-European influence on the Greek lexicon is an accepted fact” (p. 184).

² For the abbreviations of the standard dictionaries used in this article, see at the end, “Reference Works Cited Herein.”

³ Frisk, *Wörterbuch*, vol. 2, p. 1075.

⁴ Chantraine, *Dictionnaire*, vol. 4/2, pp. 1248-1249. Chantraine died before the appearance of the final volume of his *magnum opus*. The information in the “Avant-propos du fascicule IV-2” (~ p. 1166) informs the reader that Olivier Masson was responsible for the section which includes χάρτης.

⁵ Beekes, *Dictionary*, vol. 2, pp. 1615-1616.

⁶ See, for example, Edward Ross Wharton, *Etyma Graeca: An Etymological Lexicon of Classical Greek* (London: Percival, 1890), p. 132, with the simple notice, “Egyptian.”

yet no Egyptian word is forthcoming to serve as a reliable etymon. Simply put, the Egyptian lexemes *w3d*, *mnh*, *twfy*, *dt* do not match up phonetically with Greek χάρτης.⁷ In the words of Chantraine (or perhaps better, Masson [see n. 4]), “L’hypothèse usuelle d’un emprunt à l’Égypte, en raison de la provenance du papyrus, n’est appuyée par aucun argument linguistique.”⁸

Martin Bernal believed that he found a suitable Egyptian source, to wit, *š3i* ‘bundle’, *š3yt* ‘dues, taxes’,⁹ but both the semantics and the phonetics are exceedingly strained. First, on the semantic side: a) *š3i* refers to a bundle of flax, and to my knowledge is never used in conjunction with the papyrus plant, never mind a papyrus scroll;¹⁰ and b) *š3yt* ‘dues, taxes’ almost certainly derives from the verb *š3* ‘ordain, assign’,¹¹ so that any connection to ‘papyrus’ is even more distant.

Secondly, the phonetic match of Egyptian *š* > Greek *χ*, as demanded by the initial consonants of the two posited words, is simply too far a stretch. True, there is some overlap (to use a very general term here) between the Egyptian consonants *š* and *ħ*, but the picture does not support Bernal’s derivation. Evidence suggests that *š* represents [x̣] (a palatalized velar) during the Old Kingdom period, but thereafter this consonant was realized as [j] (a post-alveolar fricative).¹² Accordingly, only if Bernal’s suggested etymon was borrowed into Greek during the Old Kingdom period could the proposal be countenanced¹³ — though once again, I emphasize, the semantics do not align. In sum, it is far more advisable to abandon this approach altogether and to look elsewhere for a suitable source of χάρτης ‘papyrus roll’.¹⁴

If, after generations in pursuit of an Egyptian etymon for the key Greek word χάρτης ‘papyrus roll’, none has been identified, perhaps it is time to set our eyes on a different

⁷ For these terms, see, respectively, Erman, *Wörterbuch*, 1.263-264, 2.83, 5.359, 5.511. The first, second, and fourth of these terms are listed in Faulkner, *Dictionary*, pp. 55, 109, and 318. Note that the third term *twfy* is related to Hebrew שִׁפּ *suf* ‘papyrus-thicket’, though whether the term was borrowed from Egyptian into Semitic, or vice versa, remains an open question. For discussion, see Yoshiyuki Muchiki, *Egyptian Proper Names and Loanwords in North-West Semitic* (SBLDS 173; Atlanta: Society of Biblical Literature, 1999), pp. 251-252.

⁸ Chantraine, *Dictionnaire*, p. 1249.

⁹ Martin Bernal, *Black Athena*, vol. 3: *The Linguistic Evidence* (New Brunswick, N.J.: Rutgers University Press, 2006), pp. 200-201.

¹⁰ See Erman, *Wörterbuch*, 4.405; and Faulkner, *Dictionary*, 261. The shorter form *š3* ‘field, meadow, marsh, swamp’ is used for ‘papyrus thicket’ in one Late Egyptian text (Lesko, *DLE*, 2.105), but this is insufficient grounds for making any connection.

¹¹ See Erman, *Wörterbuch*, 4.402-403; and Faulkner, *Dictionary*, 260-261.

¹² James P. Allen, *The Ancient Egyptian Language* (Cambridge: Cambridge University Press, 2013), pp. 44-45.

¹³ As to the remainder of the word: there is no problem with Egyptian *š* > Greek *ρ* (notwithstanding some complications, for which see Allen, *The Ancient Egyptian Language*, pp. 39-42); but the ending of the word prevents difficulties yet again (though there is no need to detail those issues here).

¹⁴ Let it be known that in the past I lent support to Bernal’s project; see Gary A. Rendsburg, “Black Athena: An Etymological Response,” *Arethusa* (Special Issue Fall 1989), pp. 67-82. But this article was limited to the more restricted evidence presented in vol. 1 of *Black Athena*, not to the much longer list of words proposed in vol. 3.

horizon for the source of this lexeme. We shall do so below, though first let us pause to discuss the specific meaning of the word. Liddell and Scott glossed the word as “*a leaf of paper*, made from the separated layers of the papyrus,”¹⁵ and other scholars opined similarly.¹⁶ More recent studies, emanating from the pens of the great papyrologists Naphtali Lewis and T. C. Skeat, however, have determined, based on the price of χάρτης and other evidence, that the word must mean ‘papyrus roll’ (and not ‘papyrus sheet’).¹⁷ The acceptance of this conclusion is intimated especially by the gloss in Chantraine / Masson, ‘rouleau de papyrus’¹⁸ — though I hasten to add that Frisk, ‘Papyrusblatt, -rolle’,¹⁹ and Beekes, ‘papyrus leaf, roll’,²⁰ seem more agnostic on the issue.²¹ This issue is not of primary interest to us, nor does it affect the proposal to be made below, but it is worth mentioning here nonetheless, if only to set the record straight. All agree, regardless, that χάρτης refers to the writing surface, with especial reference to papyrus.

If Egyptian does not serve as a source for the Greek word χάρτης ‘papyrus roll’, then our eyes should be set towards the other great source of cultural influence on ancient Hellas, namely, the Semitic world in general and the Phoenician sphere in particular.²²

¹⁵ LS, p. 1716 — though see also below, n. 21. Here and throughout this article, when dictionary entries use the word ‘paper’, ‘Papier’, etc., the term should be understood generically, since real ‘paper’ did not reach the Near East and the Mediterranean basin from China until centuries after the composition of most of the texts referenced herein. In general, ‘paper’ in these contexts refers to the papyrus-based writing material (and perhaps parchment at times). To be sure, the generic usage can be justified on etymological grounds, since ‘paper’, ‘Papier’, etc. all derive from Greek πάπυρος, Latin *papyrus* (Buck, *Dictionary*, p. 1289).

¹⁶ See, for example, Wilhelm Schubart, *Das Buch bei den Griechen und Römern*, 3rd edition (Heidelberg: Lambert Schneider, 1962), pp. 21-23.

¹⁷ Naphtali Lewis, *Papyrus in Classical Antiquity* (Oxford: Clarendon, 1974), pp. 73-74; and T. C. Skeat, “Was Papyrus Regarded as ‘Cheap’ or ‘Expensive’ in the Ancient World?” *Aegyptus* 75 (1995), pp. 75-93, esp. pp. 76-77.

¹⁸ Chantraine, *Dictionnaire*, vol. 4/2, p. 1248.

¹⁹ Frisk, *Wörterbuch*, vol. 2, p. 1075.

²⁰ Beekes, *Dictionary*, vol. 2, p. 1615.

²¹ In contrast to LS (see above, n. 15), LSJ, p. 1780, glossed the word as “*papyrus*, or a roll made thereof.”

²² For a series of penetrating studies and an overall synthesis, see John Pairman Brown, *Israel and Hellas*, 3 vols. (BZAW 231/276/299; Berlin: Walter de Gruyter, 1995-2001). For a recent survey of possible structural features (rather than lexical borrowings), see Cyril Aslanov, “Northwest Semitic Structural Influences on Archaic Greek: A Reassessment,” *Judaica Petropolitana* 1 (2013), pp. 17-33. For the most recent treatment of Semitic borrowings into Greek, see Rosól, *Lehnwörter*. According to at least one reviewer (J.-F. Nardelli, “Review of Rafał Rosól, *Frühe semitische Lehnwörter im Griechischen*,” in *The Classical Review* 64 [2014], pp. 331-33), this book must be used judiciously. Regardless, the author does not include the subject of our present enquiry, viz., the word χάρτης ‘papyrus roll’, in his book. I will refer to Rosól’s book numerous times below, given its very complete coverage, including in those cases where the author rejects an etymology proposed by earlier scholars and accepted by the present author.

The Phoenician lexis includes a somewhat enigmatic word *חרטית* ḤRTYT, attested but once in a Punic dedicatory inscription from Carthage (*KAI* 81.2).²³ The relevant clause is as follows:

לרבת לעשתרת ולתנת בלבנן מקדשם חדשם <אל> כם כל אש בנ[ם] . . .
והחרטית אש במקדשם אל

To Lady Astarte and to Tinnit of Lebanon, these new sanctuaries [are dedicated], as well as everything which is in them . . . and the ḤRTYT which is/are in these sanctuaries.²⁴

Now, most scholars assume that the key word means ‘sculptures’ or the like, based on one possible meaning of the Hebrew cognate (see anon).²⁵ But there is no inherent reason why this must be so, for it is equally possible that the word in question could mean ‘writings’ or ‘scrolls’ or the like, based on the second meaning of the Hebrew cognate (again, see below)²⁶ — especially in light of the widely attested ancient Near Eastern practice of storing documents, including sacred texts, within temple precincts.²⁷

²³ Throughout this article, I use SMALL CAPS to transcribe (mainly Phoenician) words for which we lack a vocalization, and *italics* to transliterate (mainly Hebrew) words for which we possess a vocalization, albeit the Masoretic one from the early Middle Ages. See further below, n. 36.

²⁴ For the reading and translation, see *KAI*, vol. 1, p. 17, vol. 2, pp. 98-99; and Krahmalkov, *Dictionary*, p. 196. I am wont not to attempt to analyze the morphology of the key word *חרטית* ḤRTYT, and thereby to propose a vocalization — though for a potential parallel (albeit one with a different theme vowel), see *מלכית* MLKYT ‘royal women’ (*KAI* 11), vocalized as *mlkīyōt* by Johannes Friedrich, Wolfgang Röllig and Maria Giulia Amadasi Guzzo, *Phönizisch-punische Grammatik*, 3rd edition (Rome: Pontificio Istituto Biblico, 1999), p. 139, §204a. The plurality if not majority of segolate nouns are of the *qatl* type, including the Hebrew form of the word ‘king’, to wit, *malk*, but in Phoenician the stem for ‘king’ (and hence for ‘queen’ presumably) is *milk*. We will return to the issue of segolate nominal forms below (see pp. 157-158).

²⁵ In addition to *KAI* and Krahmalkov mentioned in the previous note, see the scholars cited by J. Hoftijzer and K. Jongeling, *Dictionary of the North-West Semitic Inscriptions*, 2 vols. (Handbuch der Orientalistik, Erste Abteilung, Band 21; Leiden: E. J. Brill, 1995), vol. 1, p. 404.

²⁶ True, the inscription continues with a list of wrought objects, including *מלכת החרץ* MLKT ḤHRṢ ‘gold work’ (line 2), along with whatever *מאזנם* M’ZNM and *עלם* ‘LM may signify (Krahmalkov, *Dictionary*, pp. 266 and 368, suggests ‘storeroom’ and ‘risers, columns’, respectively) — but there is no *a priori* reason why the first item mentioned in the inscription, that is, *חרטית* ḤRTYT cannot refer to ‘writings, scrolls, etc.’, especially if collectively they constituted the most salient and perhaps even most sacred element contained within the walls of the temple.

²⁷ For a general overview, see J. A. Black and W. J. Tait, “Archives and Libraries in the Ancient Near East,” in Jack M. Sasson, ed., *Civilizations of the Ancient Near East*, 4 vols. (New York: Charles Scribner’s Sons, 1995), vol. 4, pp. 2197-2209. Examples cited include the Nabu temples in Nineveh and Nimrud, the Shamash temple at Sippar, and the Abusir papyri found in the funerary temple of Neferirkare Kakai (5th Dynasty). For the most famous instance in the Bible, see the discovery of the scroll housed in the innermost portion of the Temple in Jerusalem during the reign of Josiah, described in 2 Kings 22. For discussion, with other examples from both the Bible and the ancient Near East, see David M. Carr, *Writing on the Tablet of the Heart: Origins of Scripture and Literature* (New York:

In fact, one of the most remarkable relevant discoveries occurred specifically at Carthage, where c. 5000 bullae were found amongst the ruins of the temple destroyed by the Romans in 146 B.C.E.²⁸ If there were two bullae per scroll, this attests to c. 2500 documents housed in a single temple archive! Also noteworthy in a Phoenician context is Porphyry's comment, transmitted by Eusebius (*Praeparatio evangelica* 1.9.21), that Sanchuniathon "collected all the ancient history from city records and temple registers" (ἐν τοῖς ἱεροῖς ἀναγραφῶν).²⁹

Equally relevant to our interpretation of *KAI* 81 are the statements by various Mesopotamian rulers demonstrating the importance of the inscriptions deposited in the temples.³⁰ Thus, for example, Rim Sin I (r. 1822-1763 B.C.E.),³¹ king of Larsa, proclaimed concerning the temple of Ninshubur: "I put there forever my foundation inscription proclaiming my royal name."³² Šamši-Adad (r. 1808-1775 B.C.E.), an Amorite king of Assyria, declared concerning the temple of Assur: "When the temple becomes dilapidated, may whoever among the kings, my sons, renovates the temple anoint my foundation inscriptions and my monumental inscriptions with oil, make a sacrifice, and return them to their places."³³ In another declaration, the same monarch

Oxford University Press, 2005), pp. 160-161; and Karel van der Toorn, *Scribal Culture and the Making of the Hebrew Bible* (Cambridge, Mass.: Harvard University Press, 2007), pp. 63-64, 86-87. For a focus on the post-biblical period, see Alan Millard, *Reading and Writing in the Time of Jesus* (Sheffield: Sheffield Academic Press, 2000), pp. 158-159. The most recent comprehensive statement is Jaqueline S. du Toit, *Textual Memory: Ancient Archives, Libraries and the Hebrew Bible* (Sheffield: Sheffield Phoenix, 2011), esp. pp. 56-76.

²⁸ Friedrich Rakob, "Ein punisches Heiligtum in Karthago und sein Römischer Nachfolgebau," *RM* 98 (1991), pp. 38-80, esp. 59-61; and Dietrich Berges, "Die Tonsiegel aus dem karthagischen Tempelarchiv: Vorbericht," *RM* 100 (1993), pp. 245-68 and pls. 60-68. For a brief comment, see Millard, *Reading and Writing in the Time of Jesus*, p. 39. I do not mean to imply that *KAI* 81 refers to the depositing of texts in this temple specifically, since the find spot of the inscription at the mound of Bordj-Djedid is about 1 km northwest of Rakob's excavation site. I further hasten to add that not all scholars accept Rakob's conclusion that the large building uncovered at his site comprises a temple.

²⁹ Translation by Harold W. Attridge and Robert A. Oden, *Philo of Byblos: The Phoenician History: Introduction, Critical Text, Translation, Notes* (Catholic Biblical Quarterly Monograph Series 9; Washington: Catholic Biblical Association of America, 1981), p. 21. See also Albert I. Baumgarten, *The Phoenician History of Philo of Byblos: A Commentary* (Études préliminaires aux religions orientales dans l'Empire romain; Leiden: E. J. Brill, 1981), p. 41.

³⁰ These examples are taken from Dominique Charpin, *Reading and Writing in Babylon* (Cambridge, Mass.: Harvard University Press, 2010), pp. 238-239. Though I also provide additional bibliography when citing each text.

³¹ The regnal years which follow are taken from Charpin, *Reading and Writing in Babylon*, p. xii, and they in turn appear to be based on the so-called Middle Chronology.

³² Douglas R. Frayne, *Old Babylonian Period (2003-1595 B.C.)* (Royal Inscriptions of Mesopotamia, Early Periods, vol. 4; Toronto: University of Toronto Press, 1990), p. 290 = Rim Sin I, no. 13, lines 36-37. Note that this text is in Sumerian.

³³ A. Kirk Grayson, *Assyrian Rulers of the Third and Second Millennia B.C. (to 1115 B.C.)* (Royal Inscriptions of Mesopotamia, Assyrian Periods, vol. 1; Toronto: University of Toronto Press, 1987), p. 50 = Šamši-Adad, no. 1, lines 88-98. This and the following text are in Akkadian, with the two key words *temmennu* 'foundation inscription' (*CAD* 18 [T], pp.

stated at length, concerning the inscriptions of Maništušu (r. 2276-2261 B.C.E.), king of Akkad,³⁴ which he found while restoring the temple of Eshtar: “The monumental inscriptions and foundation inscriptions of Maništušu, I swear I did not remove but restored to their places. I deposited my monumental inscriptions and foundation inscriptions beside his monumental inscriptions and foundation inscriptions. . . . In the future when the temple becomes old . . . May he [sc. a future monarch] not remove my monumental inscriptions and foundation inscriptions as I did not remove the monumental inscriptions and foundation inscriptions of Maništušu but restore them to their places.”³⁵

In light of the evidence presented here, concerning the depositing of documents and inscriptions in ancient temples, and in light of the semantic range of the cognate Hebrew word חֶרֶט *heret* to be discussed below, to my mind the wording in *KAI* 81 והחרטית אש במקדשם אל WHHRTYT 'Š BMQDŠM 'L should be understood as ‘and the writings which are in these temples’.

As adumbrated above, the selfsame root of the Phoenician word is attested twice in Biblical Hebrew, both times as the noun חֶרֶט *heret*,³⁶ albeit with different connotations. The first passage is the following:

Exodus 32:4 וַיִּקַּח מִיָּדָם וַיַּצֵּר אֹתוֹ בְּחֶרֶט וַיַּעֲשֶׂהוּ עֵגֶל מִסַּכָּה

And he [sc. Aaron] took from their hand, and he fashioned it with a tool (*heret*), and he made it (into) the molten young-bull.³⁷

Unfortunately, we cannot know specifically what kind of tool חֶרֶט *heret* connotes, though clearly it is used to fashion gold into an object.³⁸ It is this usage, in turn, which leads scholars to interpret the Phoenician word חֶרֶטית HRTYT as ‘sculptures’.

337-338) and *narû* ‘monumental inscription’ (*CAD* [N/1], pp. 364-367). For detailed discussion of these terms, see Richard S. Ellis, *Foundation Deposits in Ancient Mesopotamia* (New Haven, Conn.: Yale University Press, 1968), pp. 145-150. For the latter term, see also Sally Dunham, “Sumerian Words for Foundation: Part I: *Temen*,” *RA* 80 (1986), pp. 31-64; and Hanspeter Schaudig, “The Restoration of Temples in the Neo- and Late Babylonian Periods,” in Mark J. Boda and Jamie Novotny, eds., *From the Foundation to the Crenellations: Essays on Temple Building in the Ancient Near East and Hebrew Bible* (*Alter Orient und Altes Testament* 366; Münster: Ugarit-Verlag, 2010), pp. 145-149. Note that *temennu* means both ‘foundation’ and ‘foundation inscription’.

³⁴ This monarch is a relatively minor figure in Mesopotamian history, but he serves as the generational link between his famous father Sargon (r. 2334-2279 B.C.E.) and his famous son Narim-Sin (r. 2254-2218 B.C.E.).

³⁵ Grayson, *Assyrian Rulers of the Third and Second Millennia B.C.*, p. 54 = Šamši-Adad I, no. 2, lines ii:21 — iii:10. See also Ellis, *Foundation Deposits in Ancient Mesopotamia*, p. 173.

³⁶ In general in this paper, I have used a simplified method of transliterating Hebrew, thereby avoiding the need for diacritical marks (macron, circumflex, etc.) to indicate Hebrew vowels.

³⁷ That is, the traditional ‘Golden Calf’, but the Hebrew word עֵגֶל *egel* connotes both ‘calf’ still dependent on its mother and ‘young-bull’. The former, as a relatively weak animal, would not be used to portray a deity, whereas the latter, as a virile animal, would.

³⁸ Remarkably, a cognate persists in contemporary Damascene Arabic, as observed by G. R. Driver, “Things Old and New in the Old Testament,” *Mélanges de l'Université Saint-Joseph* 45 (1969) (= Maurice Dunand volume), pp. 465-466.

The second attestation of *heret* חֶרֶט in the Bible is connected to writing:³⁹

Isaiah 8:1 וַיֹּאמֶר יְהוָה אֵלַי קְחֵלְךָ גִלְיוֹן גָּדוֹל וּכְתֹב עָלָיו בְּחֶרֶט אָנוֹשׁ לְמַהֵר שְׁלֵל חָשׁ בּוֹ:

And Yhwh said to me, “Take for yourself a large scroll, and write upon it in human writing (*heret* ‘*enos*’), ‘for Maher-shalal-hash-baz’.”

We need not detain ourselves here with the enigmatic four-word expression which Isaiah is to inscribe on the scroll; suffice to say that it is a symbolic name for his son to be born (see v. 3). Of greater relevance to our present concern is the noun גִּלְיוֹן *gillayon*, which some have translated as ‘tablet’ (thus RSV, NRSV, etc.), but which clearly must refer to a roll or scroll (see already KJV), since the noun derives from the verbal root ג-ל-ל *g-l-l* ‘roll’.⁴⁰

[N.B.: Normally, one would derive גִּלְיוֹן *gillayon* from the root ג-ל-ה \ ג-ל-י *g-l-h / g-l-y* ‘reveal, uncover, disclose’. But as Stig Norin observed, in this particular case, the geminate root ג-ל-ל *g-l-l* ‘roll’ is a preferable source, especially given the interchange between these two verb classes (IIIy and geminate) in Biblical Hebrew.⁴¹ In fact, Norin’s grammatical analysis was anticipated by the medieval Jewish commentator Abraham ibn Ezra, who wrote, יש אומרים מ’מגילה’ והנה יו”ד תחת דגש ‘there are those who say, from *məgilla* ‘scroll’, with *yod* [sc. IIIy] instead of *dageš* [sc. geminate]’. The semantic overlap between the two verb classes is best seen in the use of ג-ל-ה \ ג-ל-י *g-l-h / g-l-y* to mean ‘go into exile,’ more closely related to ‘roll away’ *vel sim.* than to ‘reveal, uncover, disclose’.]

The phrase חֶרֶט אָנוֹשׁ *heret* ‘*enos*’ remains an enigma, notwithstanding several efforts in recent years. The most thorough treatment derives from the pen of Hugh Williamson,⁴² who, with an eye to Exodus 32:4, opines that חֶרֶט *heret* means ‘stylus’, so that the phrase is to be rendered ‘human stylus’. But precisely why a stylus should be classified as ‘human’ remains unclear; hence, to my mind, the door is open for a different interpretation. In its only other attestation in ancient Hebrew sources, we encounter the phrase חֶרֶט חַיִּים *heret* חַיִּים in 1QM (War Scroll) 12:3, where indeed ‘stylus’ seems appropriate, even if the expression ‘stylus of life’ is a bit confounding.

The alternative view contrasts חֶרֶט אָנוֹשׁ *heret* ‘*enos*’ of our passage with the expression מִכְתָּב אֱלֹהִים *miktab* ‘*elohim*’ ‘writing of God’ > ‘divine writing’ in Exodus

³⁹ There is no need to consider the noun חֶרֶיט *harit* ‘purse, handbag’ in 2 Kings 5:23, Isaiah 3:22 (both in the plural), which seems not to be related.

⁴⁰ For at least one scholar who accepts the meaning גִּלְיוֹן *gillayon* ‘scroll’, see Frank Talmage, “חרט אנוש in Isaiah 8:1,” *Harvard Theological Review* 60 (1967), pp. 465-468. Amongst the medieval Jewish commentators, Rashi wrote simply או לוח *məgilla* ‘o *luah*’ ‘scroll or tablet’. For the insight of Abraham ibn Ezra, see below, in the next paragraph.

⁴¹ See Stig Norin, “Was ist ein Gillajon?” *Vetus Testamentum* 56 (2006), pp. 363-369. Norin concluded that the word גִּלְיוֹן *gillayon* refers to a cylinder seal, which indeed was rolled over a clay surface. While I reject this portion of his article, he was absolutely correct, to my mind, to understand the relationship between the two different Hebrew verb classes (see esp. p. 364 and n. 7) and to thereby connect this noun to the meaning ‘roll’.

⁴² H. G. M. Williamson, “The Practicalities of Prophetic Writing in Isaiah 8:1,” in James K. Aitken, Katherine J. Dell, and Brian A. Mastin, eds., *On Stone and Scroll: Essays in Honour of Graham Ivor Davies* (Berlin: de Gruyter, 2011), pp. 357-369.

32:16.⁴³ As such, the phrase in Isaiah 8:1 means ‘human writing’ (see my translation above), even if the precise connotation of this locution remains beyond our grasp.⁴⁴ Quite possibly, Targum Yonatan got it right, with *מְפָרֵשׁ כְּתָב מְפָרָשׁ* *kətab məparaš* ‘clear writing’, that is, for all to see clearly.⁴⁵ As such, Isaiah 8:1 comprises an apt parallel to Habakkuk 2:2 *כְּתוּב חֲזוֹן וּבְאֵר עַל-הַלְחֹת* *kətoḇ ḥazon u-ba’er ‘al hal-luḥot* ‘write (the) prophecy, and clearly, on the tablets’.⁴⁶

Regardless of which route we pursue, there is no doubt that the noun *הֶרֶט* *heret* in Isaiah 8:1 is connected to writing on a scroll. As such, this word a) could explain the aforementioned Phoenician usage; and b) could serve as the source of the Greek word γάρτης ‘papyrus roll’ with which we began this paper and which remains our primary interest.

With regard to the latter point: one will admit that regardless of which definition we ascribe to *הֶרֶט* *heret*, either ‘writing instrument’ (be it ‘stylus’ or whatever) or ‘the writing’ (that is, that which appears on the writing surface), we still are one step away from the meaning of Greek γάρτης ‘papyrus roll’ — though the latter understanding bridges the gap more, in my estimation.

Here we need to consider what happens when words are borrowed from one language to another, along with the semantic development in analogous words in other languages. The steps between and among ‘writing tool’, ‘that which is written’, ‘the writing surface’, and ‘the physical form of the written text’ are not very large ones. For example, a) Latin *liber* originally signifies ‘the thin inner bark of a tree’, whence the meaning ‘book’ (Buck, *Dictionary*, p. 1293); b) Latin *caudex* means originally ‘tree trunk’, from which developed ‘wooden tablets forming a book’ (de Vaan, *Dictionary*, p. 99), whence the term *codex*, which in turn yields English ‘code’, with reference to the contents of the text contained within the codex; c) Germanic *bok*, *book*, *Buch*, etc., share the same etymology as ‘beech’ (*OED*, s.v., ‘book’); and d) Latin *charta / carta* ‘paper’⁴⁷ yielded Italian *cartone*, French *carton*, whence English *cartoon*, in its original meaning ‘a drawing on stout paper, made as a design for a painting of the same size to be executed in fresco or oil, or for a work in tapestry, mosaic, stained glass, or the like’ (attested since at least 1684), before the rise of its modern connotation ‘A full-page illustration in a paper or periodical; esp. applied to those in the comic papers relating to current events’ (attested from 1843 onward) (*OED*, s.v., ‘cartoon’). Though the most apt parallel to the reconstruction proffered here may be e) *crayon*, which can mean not only the writing implement, but also a drawing created by crayon (*OED*, s.v., ‘crayon’).

⁴³ On the notion of divine writing, both in Israel and in Mesopotamia, see Shalom M. Paul, “Heavenly Tablets and the Book of Life,” *JANES* 5 (1973), pp. 345-353. For more on Exodus 32:16 specifically, see below, Appendix I.

⁴⁴ As for the preposition *בְּ* *be-*, which precedes our enigmatic phrase, compare such passages as 1 Chronicles 28:19, 2 Chronicles 2:10, 35:4, CD 19:35, 4Q264a 1:4, with the prepositional phrase *בְּכֵתָב* *bi-kətab* meaning either ‘in writing’ or ‘that which is written’ (see especially the second Qumran reference).

⁴⁵ Though note that Septuagint *γραφεῖδι ἀνθρώπου* ‘a man’s pen’ understands *הֶרֶט* *heret* as the writing instrument.

⁴⁶ This part of the verse is patently clear, notwithstanding the difficulty of the verb *יָרַשׁ* *yaruš* in the following clause.

⁴⁷ On Latin *charta / carta* as a borrowing from Greek γάρτης, see ahead in Appendix III, n. 86.

Thomas Jefferson went one step further when he wrote to James Madison, with reference to a chemistry book he was sending to him, “It is a poor crayon, which yourself and the gentlemen which issue from your school must fill up” (*OED, ibid.*).⁴⁸

In light of these semantic shifts during the course of centuries, one can imagine that the original Northwest Semitic word *ḥeret* meant originally ‘writing tool’ (based on the attestation in Exodus 32:4), which then was extended to ‘the writing which was written with the tool’ (thus my understanding of Isaiah 8:1; see also the occurrence in Phoenician), and then which apparently, during the course of its borrowing across the Mediterranean, came to mean ‘papyrus roll’ in Greek.

The semantic shifts noted above are attested within the history of the same language (Latin, Germanic, English, etc.).⁴⁹ Even more radical semantic shifts or semantic expansions may occur when words are borrowed from one language to another. In the opposite direction to the one posited here, we may note two post-biblical Hebrew words borrowed from Greek, with different nuances or meanings. Consider the following:

a) *אִפְטִיָּה* *ʾYPTYYH* ‘consulship’, ‘regnal era’, ‘significant date from which an era is reckoned’, borrowed from Greek *ὐπατεία* ‘consulate’; as Daniel Sperber remarked, “The meanings of the word in Rabbinic lit[erature] seem to be unattested in the classical sources.”⁵⁰

b) *זִיטְמָא* *ZYTM* ‘blameworthy conduct’, borrowed from Greek *ζήτημα* ‘judicial inquiry, subject of dispute, etc.’.⁵¹

In modern times we witness the same phenomenon. An excellent example is German *Handy* ‘mobile phone’, borrowed from English, which even jumps grammatical category, for in the source language the word occurs only as an adjective and is not used for the modern technological invention. For a second example, consider Modern Hebrew *פּוֹנְצֵר* *panṭŕer*, borrowed from English, but whose semantic range has expanded from ‘puncture’ (as in a tyre or other inflatable item) to mean also ‘disruption, foul-up, mishap’, especially in colloquial Hebrew — even though this connotation does not obtain in English (either British or American) ‘puncture’.

So while my reconstruction of Hebrew-Phoenician *ḥeret* > Greek *χάρτης* ‘papyrus roll’ may contain a “missing link,” comparative material instructs us that such semantic adjustments are possible during the course of lexical transmission.

As to the form of the word: note that while *ḥeret* represents the later Masoretic pronunciation of the word, as with all such segolate nouns, we can be certain that the syllable structure of this noun during the Iron Age was /ḥart/, in accord with the vocalization pattern of Greek *χάρτης*⁵² (on the question of the initial consonant, see the

⁴⁸ Thomas Jefferson, “Correspondence,” in H. A. Washington, ed., *The Writings of Thomas Jefferson*, 9 vols. (New York: John C. Riker, 1853-1854 / reprint: New York: Cambridge University Press, 2011), vol. 2, p. 247.

⁴⁹ For some brief comments relevant to Greek, see Francisco Rodríguez Adrados, *A History of the Greek Language: From its Origins to the Present* (Leiden: Brill, 2005), p. 9.

⁵⁰ Sperber, *Dictionary*, pp. 41-42, with the quotation on p. 42.

⁵¹ *Ibid.*, pp. 94-95.

⁵² The Greek form, of course, includes the first declension masculine singular nominative ending *-ης*, indicating that the loanword was integrated into Greek noun morphology. The anonymous reader for this journal suggests further that the word “was reanalysed as *χάρ-της* and that element *-της* was identified with the very productive suffix *-τας/-της*.” I am not

next paragraph).⁵³ This is equally the case for both Hebrew and Phoenician, with evidence forthcoming from Greek and Latin transcriptions. For Hebrew, note $\alpha\rho\varsigma$ = ארץ 'ars (> Masoretic ארץ 'ereš) 'land, earth'; and $\gamma\alpha\beta\rho$ = גבר gabr (> Masoretic גבר geber) 'man', both from Origen's *Hexapla* (3rd century C.E.).⁵⁴ For Phoenician, note $\alpha\lambda\phi$ = אלף = אלף 'alp (~ Masoretic אלף 'elep) 'ox, bull'; and arb = ערב 'arb (~ Masoretic ערב 'ereb) 'evening'.^{55 56}

The picture is a bit more complicated, though, for the Hebrew-Phoenician grapheme π H was polyphonous, as it represented two separate consonants: both the pharyngeal fricative /ħ/ (IPA [ħ]) and the velar fricative /x/ (IPA [x]). When Semitic languages such as Arabic and Ugaritic (which distinguish these two consonants in writing) provide cognates, we are able to ascertain which manner of articulation the word had in ancient Canaanite (Hebrew, Phoenician, etc.).⁵⁷ In this case, we have no such evidence, but based on Greek χάρτης, with *chi* as the first letter, we can be reasonably certain that the Hebrew-Phoenician word was pronounced /ħart/. For a well-known parallel, see Ugaritic-Phoenician-Hebrew *ħrs* — חרץ חRS — חרוץ *ħarus* 'gold' (see also Akkadian *ħurāšu*), which arrives into Greek as χρυσός 'gold'.⁵⁸ For a less commonly attested

totally convinced by this suggestion, since the derivational suffix $-\tau\alpha\varsigma/-\tau\eta\varsigma$ typically creates agent or actor nouns, but I include the comment here nonetheless.

⁵³ For a parallel situation, compare the following: a) the Masoretic pronunciation of נבל *nebel* 'lyre' (though also at times נבל *nebel*), and its Greek derivative νάβλας 'lyre' (Masson, *Recherches*, pp. 67-69; Beekes, *Dictionary*, vol. 2, p. 993; and Rosół, *Lehnwörter*, pp. 73-74); and b) מלח *meleḥ* 'mortar' (*hapax legomenon* in Jeremiah 43:9), and its Greek derivative μάλθη 'mix of wax and pitch' (LSJ, p. 918; Lewy, *Fremdwörter*, p. 172; and Beekes, *Dictionary*, vol. 2, p. 898). Though for the latter see further below, n. 66.

⁵⁴ John H. Huernergard, "Segholates: Pre-Modern Hebrew," in *EHLL*, vol. 3, pp. 520-522, esp. p. 521.

⁵⁵ See Charles R. Krahmalkov, *A Phoenician-Punic Grammar* (Handbuch der Orientalistik 1.54; Leiden: Brill, 2011), p. 127. Note that the first of these two nouns appears in Hebrew only in the plural form (7x), but there is no question of its status as a *qatl* form, especially in light of the homonym אלף 'elep 'thousand', which appears throughout the Bible, in all possible forms, including the masculine singular form presented here.

⁵⁶ One should note here that whereas *qatl* nouns are exceedingly common in Semitic generally and in Hebrew particularly, the CvCC pattern is not common in Egyptian, at least as far as we are able to reconstruct the vocalization patterns in that language. For discussion, see Antonio Loprieno, *Ancient Egyptian: A Linguistic Introduction* (Cambridge: Cambridge University Press, 1995), pp. 36-37, 39-40, 48-50. Hence, the very form of χάρτης suggests a Semitic rather than an Egyptian source for the word.

⁵⁷ The standard work remains Joshua Blau, *On Polyphony in Biblical Hebrew* (Proceedings of the Israel Academy of Sciences and Humanities 6/2; Jerusalem: Israel Academy of Sciences and Humanities, 1982). For a concise statement, see Gary A. Rendsburg, "Phonology: Biblical Hebrew," in *EHLL*, vol. 3, pp. 102-103. We can infer the same situation for Phoenician, based on the graphic representation of Canaanite words in ancient Egyptian; see James E. Hoch, *Semitic Words in Egyptian Texts of the New Kingdom and Third Intermediate Period* (Princeton: Princeton University Press, 1994), pp. 411-414. I highlighted this finding in my review essay: "Semitic Words in Egyptian Texts," *JAOS* 116 (1996), pp. 508-511, esp. p. 509.

⁵⁸ Masson, *Recherches*, pp. 37-38; Beekes, *Dictionary*, vol. 2, p. 1652; and Rosół, *Lehnwörter*, pp. 109-11.

noun, see Hebrew הַלְבָנָה *helbāna* ‘galbanum’ (*hapax legomenon* in Exodus 30:34), which arrives into Greek as χαλβάνη ‘resin’.^{59 60}

While on the subject of phonology, we also should note that Semitic /t/ (Hebrew-Phoenician-Aramaic ט) typically corresponds with Greek τ, both in borrowed words and in transcriptions. For the former, note Hebrew נָטָף *naṭap* ‘an incense ingredient’ (Exodus 30:34) > Greek νέτωπον ‘almond-oil’;⁶¹ and Hebrew/Phoenician נִקְטָר *NQṬR* ‘that which is wafted up’ (not attested in this form in either language in their ancient strata, but the root is common) > Greek νέκταρ ‘nectar’;⁶² while for the latter, note Aramaic טְלִיטָא ‘little girl’ > τάλιθα (Mark 5:41),⁶³ along with myriad place names and personal names transferred from the Hebrew Bible to the Septuagint (e.g., טוֹבִיָּה *tobiyya* [Neh 2:10, etc.] > Του/ωβια(ς) ‘Tobias’).

The proposal put forward here is not without its gaps and holes. But in so far as it proposes an etymology for Greek χάρτης ‘papyrus roll’, one hitherto not considered, I trust that the reader will at least countenance this suggestion in his or her future studies, if not be convinced of its correctness already hereby.

Finally, it goes without saying that an eye to the Phoenician orbit for the source of Greek χάρτης ‘papyrus roll’ follows the borrowing of other words from the same semantic field. The most recognizable ones, of course, are the names of the letters (along with their forms); as well as the noun δελτος ‘writing tablet’ < Phoenician דִּלְט *DLT* ‘writing tablet’.⁶⁴ Other possible items include: a) ἄβαξ ‘reckoning board, calculation

⁵⁹ Masson, *Recherches*, p. 60; Beekes, *Dictionary*, vol. 2, p. 1609; and Rosół, *Lehnwörter*, pp. 104-05. The presence of *ḥalbānat* ‘galbanum’ in Arabic does not serve as counter-evidence, since almost undoubtedly the word was borrowed from Aramaic, at a point after the merger of /ḥ/ > /h/ in Northwest Semitic. Thus, for example, Immanuel Löw, *Die Flora der Juden*, 4 vols. (Vienna: R. Löwit, 1924-1926), vol. 3, p. 456.

⁶⁰ One will admit that the picture is not as neat as one would like, since Hebrew כַּתֹּנֶת *kaṭonet* ‘tunic’ corresponds to Greek χιτών ‘tunic’ (with Semitic /k/ corresponding to Greek /χ/), but this lexeme almost undoubtedly constitutes a *Kulturwort* or *Wanderwort*, rather than a pure borrowing from Semitic into Greek. Complicating the picture are the Greek dialectal forms κίθωνι and κίθωνος (with reversed aspiration or with none), along with the Latin form *tunica* (with the consonants in a different order). For discussion, see Masson, *Recherches*, pp. 27-28; Brown, *Israel and Hellas*, vol. 1, pp. 204-205; Beekes, *Dictionary*, vol. 2, p. 1635; and Gary A. Rendsburg, “Cultural Words: Biblical Hebrew,” in *EHLL*, vol. 1, pp. 640-642, esp. p. 641.

⁶¹ Brown, *Israel and Hellas*, vol. 1, p. 331. Note the toponym נֶפֶטָה *naṭopa* in 2 Samuel 23:28-29, Ezra 2:22, Nehemiah 7:26, a place near Bethlehem, where most likely this product grew, with a vowel pattern closer to the Greek form. This etymology is rejected by Rosół, *Lehnwörter*, p. 196.

⁶² Saul Levin, “The Etymology of νέκταρ: Exotic Scents in Early Greece,” *Studi Micenei ed Egeo-Anatolici* 13 (1971), pp. 31-50. The actual form is attested two times in later Hebrew, in the Babylonian Talmud (c. 500 C.E.), at B. Pesahim 49a and B. Yoma 14b; information from *Ma’agarim*, s.v., קִטָּר. For a variety of other options concerning the etymology, see the long discussion in Beekes, *Dictionary*, vol. 2, pp. 1004-1005. This example is also rejected by Rosół, *Lehnwörter*, p. 196.

⁶³ This form also indicates the correspondence of Semitic /t/ [ṭ] with Greek /θ/.

⁶⁴ While dated, one still may consult with much profit the work of Lewy, *Fremdwörter*, pp. 169-171. For the Phoenician word, see Krahmalkov, *Dictionary*, p. 149. For the cognate

table’, if it indeed derives from Hebrew אֲבָק *’abaq* ‘dust, sand, powder’ or its (unattested) Phoenician cognate;⁶⁵ b) μάλθη ‘mix of wax and pitch’, discussed above (see n. 53), since the term appears in the context of writing boards, in addition to ships, etc.;⁶⁶ and c), if it not be a folk etymology, βύβλος ‘book, papyrus roll’ < Phoenician גבל GBL ‘Gebal / Byblos’.⁶⁷

Appendix I: The Hebrew Word קרית *ḥarut*

In typical Biblical Hebrew literary style, the word קֶרֶט *ḥereṭ* ‘tool’ in Exodus 32:4 finds an auditory echo in the word קְרִית *ḥarut* ‘incised, engraved’ in Exodus 32:16:⁶⁸

וְהַמְכֻתָּב מִכְתָּב אֱלֹהִים הָיָא קְרִית עַל־הַלְחָת

And the writing was the writing of God, inscribed (*ḥarut*) on the tablets.⁶⁹

Ugaritic evidence, see Gordon, *UT*, p. 385, §19.668; though *DULAT*, vol. 1, p. 271, is uncertain, even though the text in question (*CAT* 5.7 [with *dlt* appearing in line 5]) is a scribal exercise. For the cognate Hebrew evidence, see Jeremiah 36:23 (where דִּלְת *delet* means ‘column of a scroll’) and Lachish ostracon 4:3; both passages are treated by Shmuel Aḥituv, *Echoes from the Past: Hebrew and Cognate Inscriptions from the Biblical Period*, trans. Anson F. Rainey (Jerusalem: Carta, 2008), pp. 70-71.

⁶⁵ Lewy, *Fremdwörter*, p. 173. This example constitutes yet another etymology rejected by Rosól, *Lehnwörter*, p. 155.

⁶⁶ *Ibid.*, p. 172. In this case, however, one would have to assume atypical correspondence of Semitic /t/ [ט] > Greek /θ/, though such is attested elsewhere, e.g., Akkadian *napṭu* ‘naphtha’ > Greek νάφθα ‘naphtha’ (see also Rabbinic Hebrew נִפְטָה *neṭṭa* [M. Shabbat 2:2, T. Shabbat 2:4, etc.]). For the Akkadian term, which is attested from the Old Babylonian period onward, see *CAD*, vol. 11 [N/1], p. 326. Note that this borrowing is also rejected by Rosól, *Lehnwörter*, p. 190.

⁶⁷ This item remains one of the thorniest issues in the field. The borrowing of the city-name Gebal / Byblos for the word ‘book, papyrus roll’ once-upon-a-time was generally accepted. Masson, *Recherches*, pp. 101-107, however, proposed precisely the opposite, namely, that the Greek word is of unknown origin and that the Phoenician city was in fact named after it. For discussion and numerous references, see Lewis, *Papyrus in Classical Antiquity*, pp. 7-8, n. 7; and for the most recent treatment, see Beekes, *Dictionary*, vol. 1, pp. 246-247. Again, Rosól, *Lehnwörter*, p. 167, elected to reject this item.

⁶⁸ For alliteration in Biblical Hebrew narrative, with a focus on the first two books of the Torah, see Gary A. Rendsburg, “Alliteration in the Book of Genesis,” in Elizabeth R. Hayes and Karolien Vermeulen, eds., *Doubling and Duplicating in the Book of Genesis: Literary and Stylistic Approaches to the Text* (Winona Lake, Ind.: Eisenbrauns, 2016), pp. 79-95; and Gary A. Rendsburg, “Alliteration in the Exodus Narrative,” in Chaim Cohen, Victor A. Hurowitz, Avi Hurvitz, Yohanan Muffs, Baruch J. Schwartz, and Jeffrey H. Tigay, eds., *Birkat Shalom: Studies in the Bible, Ancient Near Eastern Literature, and Postbiblical Judaism Presented to Shalom M. Paul on the Occasion of His Seventieth Birthday* (Winona Lake, Ind.: Eisenbrauns, 2008), pp. 83-100. Additional material will appear in my forthcoming book: Gary A. Rendsburg, *How the Bible Is Written* (Bethesda, Md.: CDL Press, forthcoming), chs. 5, 6, 10, 11. I did not treat the aural linkage between Exodus 32:4 and Exodus 32:16 in these works, though I elect to do so here.

This latter word is a *hapax legomenon* in the Bible,⁷⁰ which rather curiously is used here in connection with writing. Is it related to our word *הָרֵט* *heret*, whose meaning in Isaiah 8:1 we posited as ‘writing’?

Notwithstanding the back-door approach which we utilized, based on the presence of the *chi* in *χάρτης*, we concluded that the first letter of *הָרֵט* *heret* represents the velar fricative /ħ/ (IPA [x]), as opposed to the pharyngeal fricative /ħ/ (IPA [ħ]). If the root *ח-ר-ת* *h-r-t* ‘incise, engrave’ is related to the root *ש-ר-ח* *h-r-š* ‘plough’, presumably as an Aramaism or Aramaic-like feature (with the shift of /š/ > /t/), then there can be no etymological connection between *הָרֵט* *heret* and *הָרוּת* *harut*. For the Arabic and Ugaritic cognates *h-r-t* ‘plough’ inform us that the initial consonant is the pharyngeal fricative /ħ/.⁷¹ In which case we must assume that the author of Exodus 32 employed the Aramaic-like root *ח-ר-ת* *h-r-t* (v. 16) for the purposes of long-range alliteration with the noun *הָרֵט* *heret* (v. 4), since the two words sound sufficiently similar.

If one wishes to posit a direct relationship between *הָרֵט* *heret* ‘tool, writing’ and *הָרוּת* *harut* ‘incised, engraved’, then one would have to a) disassociate the latter word from the proposed cognates meaning ‘plough’; b) assume that the first root letter in both terms is /ħ/; and c) countenance an interchange of the two dental consonants /t/ and /t/, perhaps due to the presence of the preceding /r/.⁷² While (a) and (b) are possible, item (c) runs into the problem that such an interchange within Semitic is essentially non-existent.⁷³ This approach, accordingly, would require some special pleading.

We must assume, therefore, that either a) the word *הָרוּת* *harut* ‘incised, engraved’ is related to the Semitic word for ‘plough’, and that somewhat unexpectedly it appears in Exodus 32:16 as an Aramaism or Aramaic-like feature, presumably *alliterationis causa*;⁷⁴ or b) the word *הָרוּת* *harut* ‘incised, engraved’ attests to an independent Semitic

⁶⁹ For a thorough analysis of this verse, see Brian Doak, “Written with the Finger of God: Divine and Human Writing in Exodus,” in Eric Nelson Newberg and Lois E. Olena, eds., *Children of the Calling: Essays in Honor of Stanley M. Burgess and Ruth V. Burgess* (Eugene, Ore.: Wipf and Stock, 2014), pp. 81-110, esp. pp. 99-105.

⁷⁰ I do not count here the toponym *הָרֵת* *haret* ‘Hereth’ (in English Bibles), which appears in 1 Samuel 22:5. Though see below, n. 75, for additional attestations in post-Biblical Hebrew sources.

⁷¹ Lane, *Arabic-English Lexicon*, vol. 2, pp. 541-542; Gordon, *UT*, p. 399, §19.905; and *DULAT*, vol. 1, pp. 371-372. See also Akkadian *erēšu* (B), although the meaning of the verb has shifted to ‘seed by drilling seed into a furrow by means of a seeder-plow, to cultivate or plant (a field)’; see *CAD*, vol. 4 [E], pp. 285-289.

⁷² This would hold regardless of how the emphatic consonant is understood: ejective, glottalized, uvularized, pharyngealized, or whatever.

⁷³ For two possible examples, see Carl Brockelmann, *Grundriss der vergleichenden Grammatik der semitischen Sprachen*, 2 vols. (Berlin, Reuther & Reichard, 1908-1913), vol. 1, p. 154, §54eγ-δ, though both are rather obscure. Within the Hebrew realm, an analogue may present itself, if *טבור* *tabbur* ‘navel’ and *תבור* *tabor* ‘(Mount) Tabor’ are related (note Greek *ὀμφαλός* ‘navel’ used as a geographical term), but the connection between them strikes one as *Volksetymologie*.

⁷⁴ I say ‘somewhat unexpectedly’ because Aramaic-like features typically appear only in Aramean contexts within the Torah (while in Exodus 32 the geographical setting is Mount Sinai). See Gary A. Rendsburg, “Aramaic-like Features in the Pentateuch,” *Hebrew Studies* 47 (2006), pp. 163-176.

root ח-ר-ת *h-r-t*, used in both Hebrew and Aramaic.⁷⁵ Personally, I am agnostic on the matter, though we need not prolong the discussion any further.

Appendix II: A Second (?) Semitic Root *h-r-t*

In the main body of this article, I posited that Hebrew-Phoenician חרט derives from the Semitic root *h-r-t* (as opposed to *h-r-t*). A homonymous root *h-r-t*, at first glance unrelated, occurs both in Ugaritic and in Arabic. In the former language, the root occurs but once, in *CAT* 1.23:38, with the meaning ‘pluck’.⁷⁶ Notwithstanding this lone attestation, the meaning is relatively certain, for in the previous stich El shoots a bird in the sky and in the following stich he places it upon the coals.⁷⁷

In Arabic the root *h-r-t* connotes ‘peel, remove, pull off’, often used with reference to plants, stalks, bark, etc.⁷⁸ Is it possible that Hebrew חרט *heret* / Phoenician חרטית *ḥrtyt*, and thence Greek γάρτης, are in fact related? After all, in the process of producing the writing material, the papyrus stalks need to be peeled and sliced into strips.⁷⁹ If this connection be made, then perhaps the “missing link” has indeed been found — which is to say, the basic meaning of the Semitic root is ‘peel, slice, remove, etc.’, from which was derived the Phoenician word חרטית *ḥrtyt* ‘scrolls, writings’ and the Hebrew word חרט *heret* ‘writing’ (along with the Ugaritic sense of ‘pluck’).⁸⁰

This is a very tempting derivation, though not one of which I am totally convinced, and hence I relegate the discussion to this appendix. If the Hebrew-Phoenician lexeme is not related, then we simply have two homonymous roots, as often occurs within the field of Semitic lexicography.

Appendix III: The Reborrowing of γάρτης ‘Papyrus Roll’ into Hebrew and Aramaic (and thence into Arabic and Ethiopian)

In the body of this article, I hopefully established the source of γάρτης ‘papyrus roll’, a term borrowed by Greek from a Northwest Semitic dialect/language such as Phoenician or Hebrew. In this appendix, we turn our attention to the latter-day and reverse flow of this lexeme. Once Greek became the ascendant language throughout the Eastern

⁷⁵ For the Hebrew evidence, in addition to its sole occurrence in the Bible presented here, note that the verbal root occurs 1x in Ben Sira (45:11) and 19x in Qumran Hebrew (information from *The Dead Sea Scrolls Electronic Library* program, revised edition, 2006), in addition to a single occurrence of the noun חרת *ḥrt* ‘stylus’ in 1QH 9:24 (ibid.). For the Aramaic material, see *CAL* > Lexicon Browser, s.v., [xrt] = חרת.

⁷⁶ Gordon, *UT*, p. 404, §19.1005; and *DULAT*, vol. 1, p. 409.

⁷⁷ For the Ugaritic text and an English translation, see conveniently Theodore J. Lewis, “The Birth of the Gracious Gods,” in Simon B. Parker, ed., *Ugaritic Narrative Poetry* (Writings from the Ancient World; n.pl.: Society of Biblical Literature, 1997), p. 210. For more detailed discussion, see David Toshio Tsumura, “The Ugaritic Drama of the Good Gods: A Philological Study,” Ph.D. dissertation, Brandeis University, 1973, pp. 65-66.

⁷⁸ Lane, *Arabic-English Lexicon*, vol. 2, p. 723.

⁷⁹ See Richard Parkinson and Stephen Quirke, *Papyrus* (London: British Museum / Austin: University of Texas Press, 1995), pp. 13-14.

⁸⁰ In which case the sense of חרט *heret* ‘stylus’ would derive from the meaning ‘writing’.

Mediterranean, in the wake of the military conquests by Alexander the Great and his successor kingdoms, quite naturally hundreds of Greek words flowed into Semitic. We have precious little Phoenician material of relevance,⁸¹ but fortunately we have a large body of Hebrew and Aramaic literary sources from late antiquity. Dialects of the two languages such as Rabbinic Hebrew, Jewish Palestinian Aramaic, and Syriac are replete with Greek loanwords, the topic of which continues to be the subject of scholarly investigation.⁸²

As occasionally happens in the interplay between culture and language, especially when two cultures and two languages intersect over the course of a millennium or more, a word which was borrowed from Language A into Language B at an early stage is re-borrowed from Language B back into Language A at a later stage, usually in slightly modified form. Good examples of this phenomenon are afforded by English *cheque* and *penalty*, both of which were borrowed from French during the Middle English period (from Old French *eschec* and Middle French *pénalité*, respectively)⁸³ — and which in recent times have been re-borrowed into French (the latter used especially in sports contexts).⁸⁴

The same process occurred with the word under investigation here, for in Hebrew and in various Aramaic dialects we find reflexes of *χάρτης* ‘papyrus roll’ with various spellings.⁸⁵ Obviously, the borrowing of *χάρτης* ‘papyrus roll’ (within the semantic field

⁸¹ For one instance of a Greek word in a Phoenician inscription, which has been recognized for some time, see *KAI* 40.2 כנפרס KNPRS < Greek κανηφόρος ‘basket bearer’. The inscription is from Idalion, Cyprus, and is dated to year 30 of Ptolemy II, that is, 255 B.C.E. For discussion, see *KAI*, vol. 2, pp. 57-58. For some more recent identifications, see Philip C. Schmitz, “Greek Words in Phoenician and Punic: Recently Identified Examples,” *Aula Orientalis* 32 (2014), pp. 123-141. One also can find Greek loanwords treated in the more general analysis provided by Wilfred G. E. Watson, “Loanwords in Phoenician and Punic,” in Oswald Loretz, Sergio Ribichini, Wilfred G. E. Watson and José Á. Zamora, eds., *Ritual, Religion and Reason: Studies in the Ancient World in Honour of Paolo Xella* (Alter Orient und Altes Testament 404; Münster: Ugarit-Verlag, 2013), pp. 327-346.

⁸² For the most recent and very comprehensive treatment, see Aaron Michael Butts, *Language Change in the Wake of Empire: Syriac in Its Greco-Roman Context* (Linguistic Studies in Ancient West Semitic 11; Winona Lake, Ind.: Eisenbrauns, 2016).

⁸³ See *OED*, s.v. ‘check’, int. and n.¹, and ‘penalty’, respectively.

⁸⁴ For these two examples, I here express my indebtedness to (what appears to be) an undergraduate term paper written by Marie Fortin at the Mittuniversitetet (Sweden) (June 2009), available online at <http://miun.diva-portal.org/smash/get/diva2:225323/FULLTEXT01.pdf>.

⁸⁵ While not germane to our present undertaking, it may be worth noting that the Rabbinic Hebrew lexis also admits the like-sounding loanwords קרדס *qrds* / קרטס *qrts* ‘smooth, rub clean’ (vb.) (e.g., M. Kelim 30:1) and קרטיסים *qartesim* ‘rule, control’ (n.) (e.g., M. ‘Avoda Zara 1:3), but these derive from Greek καρτός ‘shorn smooth’ (LS, p. 747; LSJ, p. 880) and Greek κράτος ‘strength, might, rule, sovereignty’ (LS, p. 842; LSJ, p. 992), respectively, with no connection to the topic of this article. For the former, see Menaḥem Moreshet, *Leqsiqon ha-Po‘al še-Niḥaddeš bi-Lšon ha-Tanna‘im* (English title: *A Lexicon of the New Verbs in Tannaitic Hebrew*) (Ramat-Gan: Bar-Ilan University Press, 1980), pp. 337-338. For the latter, see Shai Heijmans, “Ha-Millim ha-Še‘ulot mi-Yavanit u-mi-Laṭinit ba-Mishna: Leqsiqon ve-Torat Hege” (English title: “Greek and Latin Loanwords in Mishnaic Hebrew: Lexicon and Phonology”), Ph.D. dissertation, Tel-Aviv University, 2013, p. 227. Note that

of writing) into Hebrew and Aramaic reflects the influence of Greek language, Greek writing, Hellenistic education, and Hellenistic administration in Egypt and the Levant during the last few centuries B.C.E. and the first four or five centuries C.E. (even as overlordship transitioned from the Greek sphere to the Roman Empire).⁸⁶

Normally, I would treat the Hebrew material first and then move to the Aramaic sources, but since the earliest attestation of our word (that is, as a borrowing from Greek into Semitic) appears in an Egyptian Aramaic papyrus from the Persian period, we begin our chronicling there.⁸⁷

The term first occurs in Saqqara papyrus no. 125, frg. A, line 2: קרטיס QRTYS / ברטיס KRTYS.⁸⁸ This document is very fragmentary, but the reading seems secure, notwithstanding the disagreement over whether the first letter is *qof* (thus J. B. Segal, in the *editio princeps*⁸⁹) or *kaf* (thus Javier Teixidor in his review⁹⁰). The date of this specific papyrus is impossible to determine, and in fact the dating of the entire corpus of Saqqara papyri is fraught with difficulty. Most evidence points to the 5th century B.C.E., though “there is no certain evidence to show that all the papyri were written at the same epoch,”⁹¹ and in fact “the latest regnally dated document so far identified among these papyri dates to the reign of Alexander, though whether it is to be ascribed to Alexander the Great of Macedon or to his son, Alexander IV, is unclear.”⁹² The presence of קרטיס QRTYS / ברטיס KRTYS in this fragmentary text may point to the early Hellenistic period,

these loanwords appear in Tannaitic sources (that is, from before c. 300 C.E.), while echoes of γάρτης ‘papyrus roll’ occur only in the later Amoraic sources (that is, from after c. 300 C.E.).

⁸⁶ While the subject of our investigation here is the borrowing of γάρτης ‘papyrus roll’ into Semitic languages during late antiquity, I also take the opportunity to note the transfer of the Greek word into Armenian as *k’art*, *k’artēs*, *k’artez*, for which see Carl Brockleman, “Die griechischen Fremdwörter im Armenischen,” *ZDMG* 47 (1893), p. 11; and Albert Thumb, “Die griechischen Lehnwörter im Armenischen,” *BZ* 9 (1900), p. 422. Better known, of course, is the transfer of the Greek word into Latin *charta* / *carta*, for which see Günther Alexander E. A. Saalfeld, *Tensaurus italograecus: Ausführliches historisch-kritisches Wörterbuch der griechischen Lehn- und Fremdwörter im Lateinischen* (Vienna: Verlag von Carl Gerold’s Sohn, 1884), p. 274, with both connotations: ‘das Papier als Rohstoff’ and ‘das beschriebene Papier, daher für Schrift, Brief, Buch, Gedicht &c, jedoch immer mehr in materieller Beziehung’. In the Romance languages and beyond, including English, the word acquired a host of semantic extensions (see, e.g., *OED*, s.v. ‘chart’); and see above, p. 156 (re *cartoon*).

⁸⁷ The various Aramaic dialects are detailed immediately below, though for convenience see *CAL* > Lexicon Browser, s.v. *qrTs* = [קרטיס] / *krTys* = [ברטיס]. For a snapshot of our word in rabbinic texts, incorporating both Western Aramaic and Eastern Aramaic material, see Samuel Krauss, *Griechische und lateinische Lehnwörter im Talmud, Midrasch und Targum*, 2 vols. (Berlin: S. Calvary, 1898-1899), vol. 2, p. 567.

⁸⁸ J. B. Segal, *Aramaic Texts from North Saqqâra, with Some Fragments in Phoenician* (London: Egypt Exploration Society, 1983), p. 117.

⁸⁹ *Ibid.*

⁹⁰ Javier Teixidor, “Review of J. B. Segal, *Aramaic Texts from North Saqqâra, with Some Fragments in Phoenician*,” *JAOS* 105 (1985), p. 733.

⁹¹ Segal, *Aramaic Texts from North Saqqâra*, p. 4.

⁹² *Ibid.*, p. 2.

patristic writings, such as those of Ephrem (4th century C.E.) and John of Ephesus (6th century C.E.), with meanings ranging from ‘papyrus plant’ to ‘sheet/scroll for writing’.⁹⁹

In the closely related Jewish Babylonian Aramaic dialect, the word appears, to the best of my knowledge, only two times, both meaning ‘sheet of paper’:¹⁰⁰

- B. Giṭṭin 69a קורטיסא QWRTYS’ (amongst many variant readings)
- Ḥarba de-Mošē (“The Sword of Moses,” a magical text) 44:16 קרטאסא QRT’S’

In the third of the Eastern Aramaic dialects, Mandaic, the term is attested but once, though in a slightly different form: *qarṣta* ‘sheet of paper’, reflecting both metathesis and a realignment of the emphatic and non-emphatic consonants, with /t/ > /t/ and /s/ > /š/.¹⁰¹

For the record, it is worth presenting here a few details about the single Mandaic attestation of our word.¹⁰² It occurs in a late copy of instructions for the inscribing of an amulet:

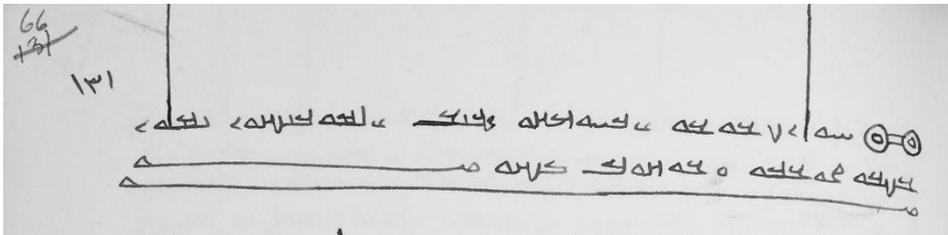


Image: MS Drower 46, fol. 66a, lines 1-2, used with kind permission of the Bodleian Libraries, University of Oxford.

The text actually reads *lqaruntai*, which is rather meaningless, and hence should be read *lqarṣtai*, given the possible confusion between the *u-n* combination in the word and the single letter *ṣ*.

Turning now to Hebrew sources of the same general time period, we may cite several attestations of the word:¹⁰³

⁹⁹ Sokoloff, *SL*, p. 650; and Aaron Michael Butts, “The Integration of Consonants in Greek Loanwords in Syriac,” *Aramaic Studies* 14 (2016), p. 29.

¹⁰⁰ Sperber, *Dictionary*, p. 194; and Sokoloff, *DJBA*, p. 1039.

¹⁰¹ Drower and Macuch, *Dictionary*, p. 402. Though note that the lemma in the dictionary reads *qaruṣta*. See the next paragraph for explication.

¹⁰² While the various scholars who assisted me in the present article receive acknowledgment in the opening footnote, I here feel the need to mention specifically the two Mandaic specialists whom I consulted on this matter: my colleague Charles Häberl and especially Matthew Morgenstern.

¹⁰³ Sperber, *Dictionary*, pp. 194-195.

- Vayyiqra' Rabba 21.2 (477:3) קוטריס QWTRYS 'scroll'
- Vayyiqra' Rabba 21.3 (478:6) קוטריס QWTRYS 'scroll'
- Midrash Tehillim 45.5 (271) קרטס QRTS 'document'

Several observations on the two attestations in Vayyiqra' Rabba: a) yes, this is the same text cited above vis-à-vis Aramaic, for it is one of the rabbinic documents which fluctuates between the two languages (see above, n. 94); b) the form of the word קוטריס QWTRYS reflects metathesis, not unexpected given the presence of the sonorant consonant /r/ in this word; and c) just to give the reader a sense of how the word is used in one rabbinic compilation, the context here is Moses's taking a קוטריס QWTRYS 'scroll' and dictating or transcribing the Torah.

In later Hebrew sources, that is, from the early Middle Ages (both Rabbanite and Karaite), the form כָּרְטִיס *kartīs* 'document' (with /k/, not /q/) seems to have become the standard one.¹⁰⁴ And just to bring the matter up to the very present, the word was revived in Modern Hebrew, starting in 1897, so that today כָּרְטִיס *kartīs* is the standard word for 'ticket' (as in 'entrance ticket').¹⁰⁵

Finally, we note that from Aramaic the word passed into Arabic as *qirṭās* 'parchment', for example, and perhaps most famously, Qur'an 6.7 كِتَابًا فِي قُرْطَائِينَ *kitāban fi qirṭāsīn* 'writing on parchment'.¹⁰⁶ Well, perhaps not finally, because from Arabic the word passed into various Ethiopian languages, including Ge'ez *kərtas* 'leaf of a book, scroll, roll, letter, slate, parchment, paper, leaf of paper', and as a denominative verb *kartasa* 'write'.¹⁰⁷ Amongst the modern Ethiopian Semitic languages, see also Amharic *qərṭas*, *kərṭas* 'piece of paper, chart', Harari *qərṭās* 'talisman', and Tigrinya *kərṭaš* 'chart, letter'.¹⁰⁸

Rutgers University

¹⁰⁴ This stratum of Hebrew takes us well beyond our subject, so I simply direct the reader to Alexander Kohut, *Aruch ha-Shalem / Aruch Completum*, 8 vols. (Vienna: Menorah, 1926), vol. 4, p. 320; and *Ma'agarim*, s.v., כָּרְטִיס.

¹⁰⁵ *Ma'agarim*, s.v., כָּרְטִיס; and any standard Modern Hebrew dictionary.

¹⁰⁶ See Siegmund Fraenkel, *Die Aramaischen Fremdwörter im Arabischen* (Leiden: E. J. Brill, 1886), p. 245; and Brown, *Israel and Hellas*, vol. 1, p. 330. At a later stage, with the introduction of paper into the Near East, the Arabic word *qirṭās* took on this new meaning as well, viz., 'paper', for which see Jonathan M. Bloom, *Paper before Print: The History and Impact of Paper in the Islamic World* (New Haven, Conn.: Yale University Press, 2001), p. 47.

¹⁰⁷ Wolf Leslau, *Comparative Dictionary of Ge'ez* (Wiesbaden: Otto Harrassowitz, 1991), p. 294.

¹⁰⁸ Wolf Leslau, *Arabic Loanwords in Ethiopian Semitic* (Wiesbaden: Otto Harrassowitz, 1990), pp. 251, 281, 315, respectively, along with the summary listing on p. 358.

Reference Works Cited Herein

Indo-European

- Beekes, *Dictionary* = Robert Beekes, *Etymological Dictionary of Greek*, 2 vols. (Leiden: Brill, 2010).
- Buck, *Dictionary* = Carl Darling Buck, *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (Chicago: University of Chicago Press, 1949).
- Chantraine, *Dictionnaire* = Pierre Chantraine, *Dictionnaire étymologique de la langue grecque*, 4 vols. (Paris: Klincksieck, 1968-1980).
- Frisk, *Wörterbuch* = Hjalmar Frisk, *Griechisches etymologisches Wörterbuch*, 3 vols. (Heidelberg: C. Winter, 1954-1972).
- LS = Henry George Liddell and Robert Scott, *Greek-English Lexicon*, 7th edition (New York: Harper, 1883).
- LSJ = Henry George Liddell, Robert Scott, and Henry Stuart Jones, *Greek-English Lexicon*, revised 9th edition (Oxford: Clarendon Press, 1940).
- OED = *Oxford English Dictionary*, cited via *OED Online* (2016), accessed via Rutgers University Libraries.
- de Vaan, *Dictionary* = Michiel de Vaan, *Etymological Dictionary of Latin and the Other Italic Languages* (Leiden: Brill, 2008).

Egyptian

- Erman, *Wörterbuch* = Adolf Erman, *Wörterbuch der ägyptischen Sprache*, 7 vols. (Berlin: Akademie-Verlag, 1926-1961).
- Faulkner, *Dictionary* = Raymond O. Faulkner, *A Concise Dictionary of Middle Egyptian* (Oxford: Griffith Institute, 1976).
- Lesko, *DLE* = Leonard H. Lesko, *A Dictionary of Late Egyptian*, 2 vols., 2nd edition (Providence: B. C. Scribe, 2002-2004).

Semitic

- CAD = A. Leo Oppenheim, Erica Reiner, Martha T. Roth, et al., *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, 21 vols. (Chicago: University of Chicago Press, 1956-2010).
- CAL = *Comprehensive Aramaic Lexicon* (Cincinnati: Hebrew Union College, 2016), online at <http://call.cn.huc.edu/>.
- CAT = Manfred Dietrich, Oswald Loretz, and Joaquín Sanmartín, eds., *The Cuneiform Alphabetic Texts from Ugarit, Ras Ibn Hani and other places*, 2nd edition (Münster: Ugarit-Verlag, 1995).
- Drower and Macuch, *Dictionary* = E. S. Drower and R. Macuch, *A Mandaic Dictionary* (Oxford: Clarendon Press, 1963).
- DULAT = Gregorio del Olmo Lete and Joaquín Sanmartín, *A Dictionary of the Ugaritic Language in the Alphabetic Tradition*, 2 vols., trans. Wilfred G. E. Watson (Handbuch der Orientalistik 1.67; Leiden: Brill, 2003).

- EHLL* = Geoffrey Khan, et al., eds., *Encyclopedia of Hebrew Language and Linguistics*, 4 vols. (Leiden: Brill, 2013).
- Gordon, *UT* = Cyrus H. Gordon, *Ugaritic Textbook* (Rome: Pontificium Institutum Biblicum, 1965).
- KAI* = Herbert Donner and Wolfgang Röllig, *Kanaanäische und aramäische Inschriften*, 3 vols. (Wiesbaden: Otto Harrassowitz, 1962-1964).
- Krahmalkov, *Dictionary* = Charles R. Krahmalkov, *Phoenician-Punic Dictionary* (Orientalia Lovaniensia Analecta 90; Leuven: Peeters, 2000).
- Lane, *Arabic-English Lexicon* = Edward W. Lane, *Arabic-English Lexicon*, 8 vols. (London: Williams & Norgate, 1863-1893).
- Ma'agarim* = *Ma'agarim: The Historical Dictionary of the Hebrew Language* (Jerusalem: Academy of the Hebrew Language, 2016), online at <http://maagarim.hebrew-academy.org.il>.
- Sokoloff, *DCPA* = Michael Sokoloff, *A Dictionary of Christian Palestinian Aramaic* (Orientalia Lovaniensia Analecta 234; Leuven: Peeters, 2014).
- Sokoloff, *DJBA* = Michael Sokoloff, *A Dictionary of Jewish Babylonian Aramaic* (Ramat-Gan: Bar-Ilan University Press / Baltimore: Johns Hopkins University Press, 2002).
- Sokoloff, *DJPA* = Michael Sokoloff, *Dictionary of Jewish Palestinian Aramaic* (Ramat-Gan: Bar-Ilan University Press, 1990).
- Sokoloff, *SL* = Michael Sokoloff, *A Syriac Lexicon* (Winona Lake, Ind.: Eisenbrauns / Piscataway, N.J.: Gorgias, 2009).
- Sperber, *Dictionary* = Daniel Sperber, *A Dictionary of Greek and Latin Legal Terms in Rabbinic Literature* (Ramat-Gan: Bar-Ilan University Press, 1984).

Cross-Linguistic

- Lewy, *Fremdwörter* = Heinrich Lewy, *Die semitischen Fremdwörter im Griechischen* (Berlin: K. Gaertners, 1895).
- Masson, *Recherches* = Emilia Masson, *Recherches sur les plus anciens emprunts sémitiques en grec* (Paris: C. Klincksieck, 1967).
- Rosół, *Lehnwörter* = Rafał Rosół, *Frühe semitische Lehnwörter im Griechischen* (Frankfurt am Main: Peter Lang, 2013).