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Citation

Suchard, B. D. (2022). The Greek in Daniel 3: code-switching, not loanwords. *Journal Of Biblical Literature*, 141(1), 121-136. doi:10.15699/jbl.1411.2022.7

Version: Publisher's Version

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Note: To cite this publication please use the final published version (if applicable).

The Greek in Daniel 3: Code-Switching, Not Loanwords

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The presence of words deriving from Greek *κιθάρα* (“cithara”), *σαμβύκη* (“sambuca”), *ψαλτήριον* (“psaltery”), and *συμφωνία* (“symphonia”) in Dan 3 has long been taken as damning evidence against the traditional sixth-century BCE date of composition for the book of Daniel. For the past fifty years, however, scholars have increasingly argued that Greek loanwords could have occurred in sixth-century Aramaic. In this article, I challenge the underlying assumption that the Greek words in Dan 3 result from lexical borrowing. They are characterized by a lack of phonological and morphological integration. This suggests that they are not established loanwords but instances of code-switching: Greek linguistic material was inserted into an Aramaic framework by a multilingual author, writing for an audience that was similarly multilingual. As widespread proficiency in Greek is not known to have occurred in the Near East before the Macedonian conquests of the 330s, the identification of these words as code switches thus limits their use in Dan 3 to the Hellenistic period and strongly suggests that they were used for literary effect: together with the lack of Greek code-switching elsewhere in the chapter, they highlight the transience of worldly empires. The phonology of the Greek underlying these code-switches as revealed by the use of *matres lectionis*, moreover, points to a *terminus post quem* of ca. 200 BCE, later than the story collection of Dan 2–6 is usually held to have been put together.

The dating of the book of Daniel has long been a controversial issue. The book’s narrative is set in sixth-century BCE Babylonia. Traditionally, this was also assumed to be the time and place of the book’s composition, as it still is by some

The research for this paper was funded by a Research Foundation – Flanders (FWO) Senior Postdoctoral Fellowship, project number 1231920N, and presented at the 2020 Virtual Annual Meeting of the Society of Biblical Literature, where I received helpful feedback from my copanelists Matthew Morgenstern, Itai Kagan, and Frank Shaw. I thank Holger Gzella, Marijn van Putten, Chams Bernard, and two anonymous reviewers for their comments on earlier versions. I am also very grateful to Ben Noonan for sharing his paper on the Greek words in Daniel 3 and to Ben Kantor for sharing his draft manuscript on the historical phonology of Palestinian Koine Greek.

scholars. Starting with the third-century CE Neoplatonic philosopher Porphyry, however, an alternative, second-century BCE date of composition has been proposed for the latest parts of the book.¹ In this view, the apocalyptic predictions of chapters 7–12 refer to the events surrounding the Maccabean Revolt. Most of these predictions would then have been written as *vaticinia ex eventu* after the events they predict had already taken place. The debate over Daniel's date thus plays into questions of biblical prophecy versus postdiction and divine inspiration versus fallible human authorship.

Linguistic evidence has played an important role in this debate. Besides the question whether the Aramaic of Daniel could plausibly date back to the sixth century, a handful of words from chapter 3 have received a great deal of attention: these are *קיתר(ו)ס*, *שבבא/סבבא*, *פסנטרין/פסנתרין*, and *סיפניה/סומפניה*, occurring in verses 5, 7 (except for the last word), 10, and 15. These words, occurring as a series in these verses, have long been recognized as Greek musical terms. As their exact meaning is sometimes debated, I will simply gloss them as cithara, sambuca, psaltery, and symphonia, respectively.²

As we shall see, the presence of Greek loanwords has been invoked as damning evidence against a sixth-century date of composition. Instead, it was taken to indicate a date of composition after the conquests of Alexander the Great and the subsequent spread of Greek throughout the Near East. More recently, however, scholars have drawn attention to the possibility of earlier borrowing from Greek into Aramaic; one recent contribution even argues that the shape of these loanwords argues for an earlier date of composition, not against it.³

The assumption that these words are lexical borrowings from Greek into Aramaic is shared by scholars defending both positions. In this essay, I will question this assumption on linguistic grounds. Based on their lack of phonological and morphological integration, the Greek words in Dan 3 do not look like loanwords. Rather, they seem to reflect code-switching, the blending of two linguistic systems often employed by multilingual speakers addressing similarly multilingual listeners. Before returning to the case of the Greek words in Daniel and what a modified understanding of their status entails for the book's history and message, the following section will briefly introduce the concept of code-switching and contrast it with lexical borrowing.

¹Porphyry's argument has not reached us in his own words but is described by Jerome in the prologue to his commentary on Daniel.

²The word *כרוד* ("herald") has also been identified as a possible Greek loanword; see the discussion in Benjamin J. Noonan, "Daniel's Greek Loanwords in Dialectal Perspective," *BBR* 28 (2018): 575–603, here 587–93. But since this word behaves differently from the four words that are the topic of this article, I will not discuss it in what follows. Suffice it to say that there is no reason to classify it as a code-switched item rather than an established loanword (whatever its origin), considering its clear phonological and morphological integration and broad attestation in later dialects of Aramaic.

³Noonan, "Daniel's Greek Loanwords."

I. LEXICAL BORROWING AND CODE-SWITCHING

Lexical borrowing is perhaps the most noticeable effect of language contact. Any student of the Hebrew Bible, I expect, will be familiar with the concept.⁴ Ad Backus and Margreet Dorleijn give the following definition:

Lexical Borrowing: the process whereby words from a lending language become entrenched as conventional words in the receiving lexicon.⁵

This definition implies several typical characteristics of lexical borrowing. First, the borrowed words become part of the receiving language's lexicon. They are thus transmitted as part of that language and potentially learned, understood, and used by speakers that have no direct knowledge of the lending language. The presence of loanwords from a given language in a text says nothing about the speaker/author's or audience's proficiency in the lending language. Second, the "entrenchment" of the word in the receiving lexicon may involve adaptation to the receiving phonological and morphological system. The borrowed words are then reshaped, with foreign sounds and morphology being replaced by their closest native equivalents. For instance, Greenlandic *qajaq* exchanged its uvular stops for velars when it was borrowed as English *kayak*, and the English plural is *kayaks*, not *qaannat*, as in Greenlandic.

Since the middle of the twentieth century, linguists have identified code-switching as a process distinct from borrowing.⁶ Backus and Dorleijn define this as follows:

Code-switching: the use of overt material (from single morphemes to entire sentences) from Language B in Language A discourse.⁷

⁴For recent overviews of lexical borrowing into Biblical Hebrew from various languages, see the following entries in *Encyclopedia of Hebrew Language and Linguistics*, ed. Geoffrey Khan, 3 vols. (Leiden: Brill, 2013): Paul Mankowski, "Akkadian Loanwords," 1:82–84; Talya Shitrit, "Aramaic Loanwords and Borrowing," 1:165–69; Tamar E. Gindin, "Persian Loanwords," 3:66–70; Aaron D. Rubin, "Egyptian Loanwords," 1:793–94; and Rubin, "Sumerian Loanwords," 3:665–66. Shai Heijmans ("Greek Loanwords," 2:148–51) discusses the Greek words that are the subject of the present article as well as Greek borrowings into Postbiblical Hebrew.

⁵Ad Backus and Margreet Dorleijn, "Loan Translations versus Code-switching," in *The Cambridge Handbook of Linguistic Code-switching*, ed. Barbara E. Bullock and Almeida Jacqueline Toribio, Cambridge Handbooks in Linguistics (Cambridge: Cambridge University Press, 2009), 75–93. For more detailed discussions of lexical borrowing from a historical-linguistic and contact-linguistic perspective, respectively, see Hans Henrich Hock, *Principles of Historical Linguistics*, 3rd rev. ed. (Berlin: Mouton de Gruyter, 2021), 408–50; Donald Winford, *An Introduction to Contact Linguistics* (Malden, MA: Blackwell, 2003), 29–60.

⁶Penelope Gardner-Chloros, *Code-switching* (Cambridge: Cambridge University Press, 2009), 9.

⁷Backus and Dorleijn, "Loan Translations," 76.

Unlike lexical borrowing, code-switching does imply some proficiency in both languages, certainly for the speaker/author.⁸ Unless the code-switch is completely accidental, it also shows that the speaker/author expects the intended audience to possess some knowledge of the language from which the code-switched material is drawn.

While code-switches may undergo some phonetic adaptation, they are not adapted at the phonological level.⁹ That is, while the phonetic realization of the code-switched segments may be closer to the phonetics of the other language(s) involved than they would be in monolingual discourse, phonemes are not deleted, inserted, or replaced in order to fit the code-switched material into the phonology of the other language, as commonly occurs with loanwords. Moreover, while code-switched material can host morphology from the other language, this kind of morphological integration is often absent, as in the following example (boldface = English; regular = Cypriot Greek).

*kseri ime kipreos tshe nomizo oti **suspect you** an men tu miliso ellinika*

He knows I am a Cypriot and I think **he will suspect you** if I speak Greek to him.¹⁰

Here, the code-switched English verb *suspect* lacks the subject and tense marking required by the Greek (and English) syntax. The citation form is used instead.

In the Hebrew Bible, the processes of style-switching and addressee-switching, where features of a foreign language are used to indicate a foreign setting or addressee, resemble code-switching and may largely rely on it.¹¹ The incorporation of Aramaic discourse in books that are otherwise Hebrew, for example, Jer 10:11, Dan 2:4b–7:28, and Ezra 4:8–6:18 and 7:12–26, can similarly be seen as more or less extended code-switches.¹² As I will argue, code-switching is also the most plausible process underlying the unambiguously Greek words occurring in the Aramaic framework of Dan 3.

⁸Carol Myers-Scotton, *Contact Linguistics: Bilingual Encounters and Grammatical Outcomes* (Oxford: Oxford University Press, 2002), 110.

⁹Barbara E. Bullock, “Phonetic Reflexes of Code-Switching,” in Bullock and Toribio, *Cambridge Handbook of Linguistic Code-switching*, 163–81.

¹⁰Translation adapted from Gardner-Chloros, *Code-switching*, 52.

¹¹See the following entries by Gary A. Rendsburg in *Encyclopedia of Hebrew Language and Linguistics*: “Addressee-switching,” 1:34–35; and “Style-switching,” 3:633–36.

¹²This is less straightforward in the cases of Daniel and Ezra due to their complicated redactional history, whereby the difference in language may partially reflect different sources, but the single verse in Jeremiah is an unambiguous and by all indications intentional code-switch. On Hebrew–Aramaic code-switching in Daniel, see Anatheia E. Portier-Young, “Languages of Identity and Obligation: Daniel as a Bilingual Book,” *VT* 60 (2010): 98–115.

II. THE GREEK WORDS IN DANIEL 3

A clear overview and evaluation of the twentieth- and early twenty-first-century scholarship on the Greek words in Dan 3:5, 7, 10, 15 is given by Ian Young.¹³ I will briefly summarize his review of the literature before turning to an important publication that has appeared since.

In the early twentieth century, the dominant view was that of S. R. Driver, as expressed in his well-known dictum:

The verdict of the language of Daniel is thus clear. The *Persian* words presuppose a period after the Persian Empire had been well established: the Greek words *demand*, the Hebrew *supports*, and the Aramaic *permits*, a date *after the conquest of Palestine by Alexander the Great* (B.C. 332). The Aramaic is also of the type that was spoken *near Palestine*. With our present knowledge, this is as much as the language authorizes us definitively to affirm; though *συμφωνία*, as the name of an instrument (considering the history of the term in Greek), would seem to point to a date somewhat advanced in the Greek period.¹⁴

Driver's main arguments for a date after Alexander are, first, that it is improbable that Greek loanwords would have reached Babylonia by the sixth century BCE and, second, that two of the Greek source words, *ψαλτήριον* and *συμφωνία*, are attested (with meanings that fit the context in Daniel) only from the fourth century BCE onward.¹⁵ Following criticism from scholars arguing for an earlier date of composition,¹⁶ this view was restated in modified form by H. H. Rowley.¹⁷ Rowley

¹³Ian Young, "The Greek Loanwords in the Book of Daniel," in *Biblical Greek in Context. Essays in Honour of John A. L. Lee*, ed. James K. Aitken and Trevor V. Evans, BTS 22 (Leuven: Peeters, 2015), 247–68.

¹⁴S. R. Driver, *The Book of Daniel* (Cambridge: Cambridge University Press, 1900), lxiii (italics in original), among other publications.

¹⁵Strikingly, *συμφωνία* is first attested as the name of a musical instrument with reference to the festive behavior of Antiochus IV (Polybius, *Hist.* 26.1.4, 30.26.8). Its earlier usage with this meaning may be unattested simply due to chance; on the other hand, it is not obvious that the term in Dan 3 must refer to a musical instrument and not some more general musical concept such as "harmony"; see Reinhard Gregor Kratz, *Translatio imperii: Untersuchungen zu den aramäischen Danielerzählungen und ihrem theologiegeschichtlichen Umfeld*, WMANT 63 (Neukirchen-Vluyn: Neukirchener Verlag, 1991), 135 n. 233.

¹⁶R. D. Wilson, "The Aramaic of Daniel," in *Biblical and Theological Studies by the Faculty of Princeton Theological Seminary Published in Commemoration of the One Hundredth Anniversary of the Founding of the Seminary* (New York: Scribner, 1912), 261–306; W. S. Tisdall, "The Book of Daniel: Some Linguistic Evidence Regarding Its Date," *Journal of the Transactions of the Victoria Institute* 53 (1921): 206–45; Charles Boutflower, *In and around the Book of Daniel* (London: SPCK, 1923).

¹⁷H. H. Rowley, *The Aramaic of the Old Testament: A Grammatical and Lexical Study of Its Relations with Other Early Aramaic Dialects* (Oxford: Oxford University Press, 1929).

admits that Greek loanwords could have occurred in sixth-century BCE Babylonian Aramaic, although he judges their presence unlikely. He is also forced to address the question why other Greek loanwords are lacking from the text if Daniel was written after the Macedonian conquests of the 330s. His suggested solution is that the author avoided Greek loanwords out of antipathy to the Hellenistic rulers, including only “the names of musical instruments which his contemporaries would at once associate with the hated foreign festivals of Antiochus Epiphanes, in order to drive home by this allusion the true purport of his story,”¹⁸ that is, that Dan 3 was actually meant to reflect the second-century BCE persecution of the Jews under Antiochus IV.

Later scholarship has continued to question the two main arguments deriving Hellenistic-period authorship from the presence of the Greek words in Daniel. Yechezkel Kutscher and Edwin Yamauchi object that the late attestation of the Greek words is an argument from silence and does not show that these words could not have been borrowed before then.¹⁹ Furthermore, twentieth-century scholarship has gradually revealed that contacts between Greece and the Near East throughout the late second and first millennia BCE were more extensive than previously thought. This considerably increases the likelihood of Greek loanwords, especially technical terms for musical instruments, occurring in a sixth-century BCE Aramaic dialect.

After describing and critically assessing these earlier views, Young concludes his review with two considerations of his own. First, given the fairly recent insights into the fluid nature of biblical texts in the Second Temple period,²⁰ it is practically impossible to be sure that any single word or linguistic feature of a text goes back to its oldest version. This is exemplified by the different occurrences of the Greek words in Dan 3 according to the MT of Daniel (“symphonia” in vv. 5, 10, 15; the other words also in v. 7), the Old Greek (all four words limited to v. 5 only), and the Greek translation attributed to Theodotion (“symphonia” completely missing from some manuscripts; otherwise like the MT). Second, as shown by the text of Ben Sira and the nonbiblical Dead Sea Scrolls, Jewish religious texts in Hebrew and

¹⁸Ibid., 151.

¹⁹E. Yechezkel Kutscher, “Aramaic,” in *Linguistics in South West Asia and North Africa*, ed. Charles Albert Ferguson, vol. 6 of *Current Trends in Linguistics* (The Hague: Mouton, 1970), 345–412; Edwin M. Yamauchi, “The Greek Words in Daniel in the Light of Greek Influence in the Near East,” in *New Perspectives on the Old Testament*, ed. J. Barton Payne, SSETS 3 (Waco: Word, 1970), 170–200.

²⁰See, among others, Eugene Ulrich, *The Dead Sea Scrolls and the Developmental Composition of the Bible*, VTSup 169 (Leiden: Brill, 2015), 20–25; Eva Mroczek, *The Literary Imagination in Jewish Antiquity* (Oxford: Oxford University Press, 2016); Bénédicte Lemmelijn, “Text-Critically Studying the Biblical Manuscript Evidence: An ‘Empirical’ Entry to the Literary Composition of the ‘Text,’” in *Empirical Models Challenging Biblical Criticism*, ed. Raymond F. Person Jr. and Robert Rezetko, AIL 25 (Atlanta: SBL Press, 2016), 129–64.

Aramaic that can securely be dated to the Hellenistic period completely avoid Greek loanwords. The inclusion of Greek words thus does not necessarily date Dan 3 to the Hellenistic period but rather makes it an outlier among the literature of this time.

Young's conclusion that scholarship has moved away from taking the Greek words as evidence for second-century composition is supported by a recent article by Benjamin Noonan.²¹ Noonan points out that, if the Greek words were borrowed in the Hellenistic period, they would presumably have come from Koine Greek. This variety of Greek, which was spread throughout the Near East by the Macedonian conquest, was largely based on the Attic dialect, part of the larger Ionic-Attic dialect group. Three of the words under consideration, however, show features that do not match the Attic and Koine form of their presumed source words:²² קיתר(ו)ס (cithara) has an *-s* ending, unlike Attic *κιθάρα*; סבכא/שבכא (sambuca) is traditionally read with a final *ā*, unlike the *-ē* ending of Attic *σαμβύκη*;²³ פסנתרין/פסנתרין (psaltery) has an *-n* instead of the *-l* attested in Attic *ψαλτήριον*. A striking contrast is found in Syriac, which attests related loanwords that more closely resemble their Koine Greek form: *qytr* (cithara), *smbwqy* (sambuca), and *psltys* (harpist), all matching the source words in these regards.²⁴ Accordingly, Noonan argues that the words in Daniel were borrowed from a non-Attic and therefore non-Koine source. As this would have been implausible after Alexander's conquest, the shape of these words thus supports an older date for the composition of Daniel 3 and argues against the second-century hypothesis.

In the case of סבכא/שבכא, it is important to bear in mind that the vocalization of the Biblical Aramaic corpus is demonstrably secondary to the consonantal text.²⁵ While the final vowel of the vocalized form סְבִכָּא/שְׁבִכָּא is thus at variance with the *-ē* vowel of Koine Greek, this is not necessarily true for the consonantal form, which

²¹Noonan, "Daniel's Greek Loanwords." Noonan's arguments are also briefly stated under the relevant headings in his *Non-Semitic Loanwords in the Hebrew Bible: A Lexicon of Language Contact*, LSAWS 14 (University Park, PA: Eisenbrauns, 2019).

²²Noonan also discusses כְּרוּז ("herald") in "Daniel's Greek Loanwords"; see n. 2 above.

²³Noonan convincingly argues against other scholars' opinion that this word does not come from Greek, based on (1) the interchange between ט and ש, which suggests the word's foreign origin; (2) the statement in Greek sources that the instrument came from a non-Semitic speaking area in northern Syria/Asia Minor, excluding direct borrowing from Semitic into Greek; and (3) the semantic difficulty of the proposed Semitic derivation from the root **sbk* ("to interweave") ("Daniel's Greek Loanwords," 581–83).

²⁴Ibid., 580, 583, 585.

²⁵William S. Morrow and Ernest G. Clarke, "The *Ketib/Qere* in the Aramaic Portions of Ezra and Daniel," *VT* 36 (1986): 406–22; Steven E. Fassberg, "The Origin of the *Ketib/Qere* in the Aramaic Portions of Ezra and Daniel," *VT* 39 (1989): 1–12; Benjamin D. Suchard, "Sound Changes in the (Pre-)Masoretic Reading Tradition and the Original Pronunciation of Biblical Aramaic," *Studia Orientalia Electronica* 7 (2019): 52–65; Suchard, "The Origins of the Biblical Aramaic Reading Tradition," *VT* 71 (2021): 105–19.

could reflect a different pronunciation. Word-final $-ē$ is regularly spelled with either א or ה in Biblical Aramaic—for example, תהוה/תהוא, **tihwē* (“it [f.] will be”); גלה/גלא, **gālē* (“revealing” [m. sg.]).²⁶ As far as the final vowel is concerned, שבכא and סבכא are thus both valid ways of representing *σαμβύαη*.

For the other two words, the form in Daniel is indisputably at odds with the Koine Greek form. But no matching form is attested in other varieties of Greek either. Noonan notes this for פסגטרין/פסגטרין.²⁷ While he believes that the reconstruction of a non-Attic form **ψαντήριον* is probable, based on cases of $-lt-$ > $-nt-$ in some non-Attic dialects,²⁸ these are sporadic changes rather than regular sound laws (as explicitly noted by Lejeune). Therefore, **ψαντήριον* would not be the expected form in these varieties of Greek either. The example of Syriac *nptyr* (“lantern”) from (presumably Koine) Greek *λαμπτήρ* cited by Noonan illustrates that these kinds of sporadic changes could affect loans from Koine Greek, too.²⁹

The non-Attic attestation of a counterpart of קיתרו(ו) is strongest. Noonan compares it to Homeric and dialectal *κίθαρς*. The $-ι-$ spelling in קיתרוס in Dan 3:5 does not match the $-i-$ in the suffix of this Greek form, however. Noonan cites Samuel Krauss for the tendency of Greek i -stems to be borrowed into Hebrew and Aramaic with an סי- suffix, but this tendency operates in the languages of the late antique rabbinic texts, where Krauss attributes it to analogy with the many loanwords originating in Greek o -stems.³⁰ It is doubtful that the same tendency would have been present in the literary Jewish Aramaic of the Persian or Hellenistic period, where, as we have seen, Greek loanwords are virtually absent. Alternatively, קיתרוס could reflect a scribal error for קיתריס, triggered by the visual similarity of *waw* and *yod*, but this is begging the question: the only reason to assume that *waw* is mistaken here is the assumption that the word should reflect *κίθαρς*. The spelling in Daniel *prima facie* reflects a hypothetical Greek form like **κίθαρος*, which is unattested with the meaning “cithara.”³¹ While two of the four

²⁶The construct state plural ending, traditionally read as $-ē$, is consistently spelled with א. But, since this morpheme derives from Proto-Aramaic * $-ay$, it may well have been pronounced as an uncontracted diphthong when the Biblical Aramaic orthography was fixed, as still in Classical Syriac.

²⁷Noonan, “Daniel’s Greek Loanwords,” 585–86.

²⁸Carl D. Buck, *The Greek Dialects: Grammar, Selected Inscriptions, Glossary*, rev. and expanded ed. (Chicago: University of Chicago Press, 1955), §72; Michel Lejeune, *Phonétique historique du mycénien et du grec ancien*, Tradition de l’humanisme 9 (Paris: Klincksieck, 1972), §151.

²⁹Noonan, “Daniel’s Greek Loanwords,” 585 n. 45.

³⁰Ibid., 580 n. 24; Samuel Krauss, *Griechische und lateinische Lehnwörter im Talmud, Midrasch, and Targum*, 2 vols. (Berlin: Calvary, 1898–99), 1:193. Note the extremely negative assessment of Krauss’s work by Haiim B. Rosén, “Palestinian *Κοινή* in Rabbinic Illustration,” *JSS* 8 (1963): 56–72, and others cited there.

³¹*Κίθαρος* does occur with the meaning “chest” and as a type of fish, neither of which meaning suits the context (LSJ, s.v. “κίθαρος”).

Greek words in Daniel thus unexpectedly differ from their Koine Greek counterparts, no other variety of Greek attests a version of these words that forms a complete match either. I am therefore hesitant to conclude that this discrepancy points to borrowing into Aramaic before the Hellenistic period.

Noonan's discussion reveals some other strange features of these words. The comparison with Syriac and other Aramaic dialects highlights the fact that none of these words occurs in the same form as in Daniel elsewhere in Aramaic.³² Second, Noonan observes that, if we assume that the final *aleph* in *שבכא/שבכא* marks the final vowel of the Greek word, it is striking that these four words do not receive the Aramaic emphatic state ending (i.e., the definite article) *א(ת)-*, unlike the preceding Semitic words *קרנא* ("the horn") and *משר(ו)קיתא* ("the flute").³³ Finally, the variation in spelling attested in all four words is unlike that attested elsewhere in Biblical Aramaic, suggesting that rendering their pronunciation in the Aramaic script was problematic.

The absence in broader Aramaic is inconclusive, as even well-established loanwords may fall out of use. The lack of emphatic state marking and the highly variable spelling, however, are significant.

III. THE GREEK WORDS' SPECIAL STATUS

Let us compare the behavior of the Greek words in Dan 3 to Biblical Aramaic loanwords from Persian, the latest uncontested stratum of foreign vocabulary in this variety of Aramaic. As we shall see, the Greek words behave more like code-switches than like loanwords.

Lack of Phonological Integration

All of our words display variation in the MT.³⁴ "Cithara" is spelled as *קיתרוס* in verse 5, but as *קיתרס* in verses 7, 10, and 15. "Sambuca" is *שבכא* in verse 5, but

³² *קתרוס*, *סימפונייה*, and variant forms are attested in rabbinic texts, where they may have been borrowed from Biblical Aramaic (Jastrow, s.v. "קתרוס" "סימפונייה"). Even so, most of the forms differ in some way from those in Daniel.

³³ Noonan, "Daniel's Greek Loanwords," 583.

³⁴ Unfortunately, these words are not attested in any of the Daniel manuscripts from Qumran. The variation in these forms could therefore conceivably be a product of the masoretic transmission of the text. It is unclear, however, why so many variations in spelling would have been introduced precisely in these four words and not elsewhere. While the evidence from Qumran shows that spelling often varied from manuscript to manuscript, the spelling of the relevant features *within* each manuscript is highly consistent. Thus, this variation more likely says something about the words themselves than about their transmission.

פסנתרין in verses 7, 10, and 15. “Psaltery” is פסנתרין in verses 5, 10, 15, but פסנתרין in verse 7. And *symphonia* is סומפניה in verses 5, 15, but סיפניה in verse 10.

The interchange between plene and defective spelling seen in קיתר(ו)ס is quite rare in Biblical Aramaic. Historically long rounded vowels are usually spelled plene with ו, although alternation also occurs in the Akkadian loanword משר(ו)קיתא (“flute”), occurring in the same verses (plene in vv. 5, 7, 15; defective in v. 10), and the Hebrew loanword ניה(ו)חין (“appeasing offerings”) (plene in Ezra 6:10; defective in Dan 2:46). Word-internal short vowels are nearly always written defectively, although a rare plene spelling of **u* occurs in גוב (**gubb*, “pit” [Dan 6:13]) beside גב [Dan 6:8, 25]). In addition, there are a few cases of short **i* spelled plene with י.³⁵ It is thus unclear whether the variable spelling of קיתר(ו)ס indicates a long or short vowel.

The interchange between ש and ס seen in סבכא/שבכא does not occur with native words in Biblical Aramaic. The only other examples are כשדיא (“the Chaldean”) and related forms in Daniel (passim) beside כסדיא (Ezra 5:12), and the Persian name Artaxerxes, which is spelled ארתחששתא (in both Hebrew and Aramaic) in Ezra 4–6 and ארתחשסתא (also in both languages) in the rest of Ezra. סבכא/שבכא in Dan 3 is thus the only word to show ש/ס interchange within the same chapter.

The interchange between ת and ט in פסנתרין/פסנתרין is unique to this word.

Another unique alternation is that between מ and zero in סיפניה/סומפניה. Furthermore, the alternation between ו and י in the first syllable of this word is very rare. Despite the visual similarity between these two letters, we only find one potential parallel in Biblical Aramaic: נהירא (“the light,” Dan 2:22), which is presumably a scribal error for נהורא, the form attested elsewhere. The scribal error in נהירא, however, probably does not reflect confusion between ו and י.³⁶ The unmotivated interchange between ו and י in סיפניה/סומפניה is thus unexpected.

Nothing like this level of variation is apparent in the Persian loanwords. Even when the source word contains sounds foreign to Aramaic, the borrowed form is consistent, for example, **xšaθrapāwan-* (“satrap”), which is consistently represented as אחשדרפן. It is therefore unlikely that these highly variable spellings represent words that were well integrated into Aramaic phonology. If they had been

³⁵These are משפיל (**mašpīl*, “humbling” [m. sg.; Dan 5:19]), הלבישו (**halbīšū*, “clothed” [Dan 5:29]), שויב (**šēzib*, “he saved” [Dan 6:28]), all of which may reflect influence from the long vowel of the Hebrew *hiphil*, and קריבו (**qaribū*, “they approached”) in Dan 6:13, the same verse that spells **gubb* as גוב.

³⁶The form נהירא may have resulted from attraction to נהיר(ותא) (“the understanding”), attested in 4QDan^a (4Q112) instead of the MT’s גבורתא (“the strength,” Dan 2:23), as suggested in Eugene Ulrich et al., *Qumran Cave 4.XI: Psalms to Chronicles*, DJD XVI (Oxford: Clarendon, 2000), 244. The replacement of נהיר(ותא)* by גבורתא in MT Dan 2:23, in turn, can be explained as assimilation to the phrase חכמתא וגבורתא (“the wisdom and the strength”), which occurs a few verses earlier (2:20) in both the MT and 4QDan^a.

so integrated, they would have had a fixed Aramaic form, which could consistently be expressed according to the normal rules of Aramaic orthography. Rather, they reflect inconsistent attempts to represent the foreign, Greek forms of these words. This lack of phonological integration points toward code-switching over lexical borrowing. Significantly, every case of spelling variation corresponds to a phonetic feature of Greek that could not regularly be expressed by the Aramaic orthography of the time.

The alternation between aspirated, unemphatic ט and emphatic, unaspirated פסנתרין/פסנתרין ט is understandable as an approximation of Greek unaspirated (and unemphatic, by default) τ.³⁷

In the same way, the alternation between ו and י, normally *matres lectionis* for \bar{u} and \bar{i} , in סיפניה/סומפניה could be an attempt to render the Greek front rounded vowel υ ;³⁸ Greek loanwords in the Mishnah similarly reflect υ as either a front vowel, as in גִּיפְסִים > גִּיפְסִים, or as a back vowel, as in גְּרוּטִי > גְּרוּטִי.³⁹

The interchange between ש and ס in סבכא/שבכא may reflect the hissing-hushing quality of Greek's only voiceless sibilant, σ .⁴⁰

The varying spelling of the *m* in סיפניה/סומפניה may reflect the weakened articulation of nasals before plosives, which is also reflected in the absence of *m* in סבכא/שבכא < σαμβύαη and is already attested in Attic Greek inscriptions of the fifth century BCE, which occasionally contain forms like ΝΥΦΗ for $\nu\mu\phi\eta$.⁴¹

³⁷For the aspiration of Aramaic פ, ט, and כ, see Klaus Beyer, *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; Aramaische Einleitung, Text, Übersetzung, Deutung, Grammatik/Wörterbuch, deutsch-aramäische Wortliste, Register*, 2 vols. (Göttingen: Vandenhoeck & Ruprecht, 1984), 125–26. Contrast the consistent rendering of aspirated θ as ת in *αἶθαρως > קיתר(ו)ס. Unaspirated κ is rendered as emphatic ק in *αἶθαρως > ס קיתר(ו)ס but as unemphatic כ in σαμβύαη > סבכא/שבכא.

³⁸Incidentally, the fronted realization of this phoneme as [y] is an Ionic-Attic innovation; other Greek dialects preserve the backed realization, [u] (Helmut Rix, *Historische Grammatik des Griechischen: Laut- und Formenlehre*, 2nd ed. [Darmstadt: Wissenschaftliche Buchgesellschaft, 1992], 46).

³⁹Shai Heijmans, “המילים השאלות מיוונית ומלטינית במשנה: לקסיקון ותורת הגה” [Greek and Latin Loanwords in Mishnaic Hebrew: Lexicon and Phonology] (PhD diss., Tel-Aviv University, 2013), §§105–6.

⁴⁰Amalia Arvaniti, “Greek Phonetics: The State of the Art,” *Journal of Greek Linguistics* 8 (2007): 97–208, here 106–7. While this interpretation of the phonetic realization of σ is obviously based on measurements conducted on speakers of Modern Greek, it probably also holds for older forms of Greek, as no contrasting postalveolar sibilant occurred in the language at any point. Cf. the spelling of Greek σ with both ס and ש in epigraphic Hebrew texts from the early Roman period (Uri Mor, עברית יהודאית. לשון התעודות העבריות ממדבר יהודה בין המרד הגדול למרד בר כוכבא, [Judean Hebrew: The Language of the Hebrew Documents from Judea between the First and the Second Revolts] [Jerusalem: Academy of the Hebrew Language, 2015], §3.3.2.1).

⁴¹Leslie Threatte, *The Grammar of Attic Inscriptions*, 2 vols (Berlin: de Gruyter, 1980), 1:485–88.

The consistent spelling of *n* in פסנתרין/פסנתרין may then show that the underlying Greek form did not have a nasal consonant cluster of this type. Instead, this may be a sporadic change affecting the author's perception of the Greek word; we may interpret this change both as assimilation to the following nasal (*n*) and as dissimilation from the following liquid (*r*), both very common processes.⁴² A close parallel occurs in the mishnaic loanword σαλτάριος > סַנְטָר, while other loanwords also show a shift of *l* to *n* near other resonants.⁴³

Finally, the variation between plene and defective spelling in the second syllable of קיתר(ו)ס may reflect the merger of long and short vowels affecting Koine Greek at a certain point in time. This is borne out by the plene spelling of historically short vowels in the first syllables of קיתר(ו)ס < *αἶθραρος and סיפניה/סומפניה < στυμφωία as well as the defective spelling of historically long vowels in the second syllables of סיפניה/סומפניה < στυμφωία and פסנתרין/פסנתרין < ψαλτῆριον. Significantly, this merger of vowel length is first attested in the early second century BCE,⁴⁴ a fact I will return to later.

Lack of Morphological Integration

As I have noted, the Greek words lack morphological definiteness marking, expressed in Aramaic by the emphatic state suffix א- (fem. תא-).⁴⁵ That they are syntactically definite is shown by the morphological definiteness marking of the preceding and following phrases.

בעדנא די תשמעון קל קרנא משרוקיתא קיתרוס סבכא פסנתרין סומפניה וכל זני זמרא

At the moment when you hear the sound of the horn, the flute, cithara, sambuca, psaltery, symphonia, and every kind of musical instrument (Dan 3:5a; my translation)

Loanwords, including those from Persian, regularly take Aramaic morphology. Thus, we find absolute singular רז (“secret”), emphatic singular רזא/רזא (“the secret”), absolute plural רזין (“secrets”), and emphatic plural רזיא (“the secrets”). Also compare construct plural זני (“kinds of”—another Persian loanword) and

⁴²Hock, *Principles of Historical Linguistics*, 63–64, 108.

⁴³Heijmans, “המילים השאולות,” §45.

⁴⁴Benjamin P. Kantor, “The Second Column (Secunda) of Origen’s Hexapla in Light of Greek Pronunciation” (Ph.D. diss., The University of Texas at Austin, 2017), 106. See also the more extensive discussion in Benjamin Kantor, *The Apostles’ Greek: The Historical Pronunciation of New Testament Greek (Koine Greek of Judea-Palestine)* (forthcoming), §§7.3.4, 9.5.1, 10.2.

⁴⁵I assume that the final *aleph* in שבכא/סבכא represents the final vowel of the Greek form. A morphologically integrated Aramaic word ending in *-ē* should insert *-y-* before vocalic suffixes, like Biblical Aramaic כרסא (**kursē*, “throne”), and כרסיה (**kursay-eh*, “his throne”); the expected form for “the sambuca” would hence be שבכיא*.

emphatic singular מִשְׂרוּקִיתָא (“the flute”—an Akkadian loanword) in the example above.

If the Greek words are code-switches, this lack of definiteness marking makes sense. Greek marks definiteness with a separate definite article (masculine ὁ, feminine ἡ, neuter τὸ). As Aramaic syntax calls for a single word, morphologically marked for definiteness, and Greek nouns do not possess an emphatic state, the base form of each noun is used; the independent definite articles are simply left out, as they do not correspond to anything in Aramaic.

IV. CONCLUSION

To paraphrase S. R. Driver, the verdict on the Greek words in Dan 3 is thus clear. The lack of phonological integration demands, the lack of morphological integration supports, and the absence from broader Aramaic permits identifying them as one-off code-switches rather than permanent loanwords. Unlike the use of loanwords, code-switching is possible only if the speaker/author has some level of proficiency in all languages employed; and it will be understood only if the audience also knows these languages to some degree. It is unlikely that this kind of proficiency in Greek could be expected of a Jewish audience living in the Near East before the Hellenistic period.

Based on the variation in spelling, which is much greater in these words than in the rest of Biblical Aramaic as attested in the MT, we can reconstruct the pronunciation of the Greek words that the Aramaic spelling aims to represent as **kit^haros*, **sa^mbyke*, **psaltérion*,⁴⁶ and **sy^mphonia*.⁴⁷ The lack of contrastive vowel length shown by the inconsistent and aberrant use of *matres lectionis* dates this pronunciation to the first half of the second century BCE, when this feature first appears in Greek epigraphy of the Near East, or later, which is ruled out by what else we know about Daniel’s composition. The use of **kit^haros* instead of **kit^hára* for “cithara” suggests that the author was not completely fluent in Greek; perhaps this confusion results from the identical form of both words’ genitive plural, *κιθαρῶν*/**kit^harón*.

Contrary to the recent trend that holds that the presence of Greek loanwords in Dan 3 is compatible with or even suggests an early date of composition, I have concluded that these words reflect code-switching and can be dated rather precisely

⁴⁶The spelling פִּסְנְטָרִיִן/פִּסְנְתָרִיִן could also reflect the contraction of **io* to **i* attested in Greek epigraphy from Roman Palestine (Kantor, “Second Column,” 119–20; Kantor, *Apostles’ Greek*, §2.4). In that case, the underlying pronunciation would be **psaltérin*.

⁴⁷The International Phonetic Alphabet symbol [ɣ] indicates a voiceless retracted alveolar sibilant, like that occurring in Modern Greek or Spanish. [y] is a high front rounded vowel, like Classical Greek υ, German ü, or French u. Superscript nasals indicate prenasalization, while a superscript *h* indicates aspiration.

to the first half of the second century BCE. The code-switching is limited to these four terms. It is therefore unlikely that the situation reflects the unconscious blending of various languages by a thoroughly multilingual author addressing an equally multilingual audience. Rather, the Greek words were consciously included in the text as marked elements. Three of four occurrences are in direct speech by Nebuchadnezzar's herald (v. 5), his Chaldean officials (v. 10), and the king himself (v. 15); significantly, the only occurrence where the narrator uses these words (v. 7) is the one where "symphonia" is missing, slightly abbreviating the list. This points toward a quotative function for the code-switches, implying that they were meant to convey something about the Chaldean authorities in this story. Given the historical context, this supports a weaker version of Rowley's suggestion:⁴⁸ the Greek code-switches are employed to subtly identify the story's antagonists with the Hellenistic rulers of the time, whether they refer specifically to Antiochus IV or to the Seleucids (or Ptolemies) more generally.⁴⁹

As noted, Young warns that any linguistic feature of a given biblical text may be secondary.⁵⁰ While it seems probable that the Greek words in Dan 3 date to the second century BCE, this does not necessarily apply to the whole book or even the whole chapter. In fact, removing the Greek words from verses 5, 7, 10, and 15 results in completely grammatical and sensible sentences and does not affect the narrative. The Greek words are not an integral part of the text (as is confirmed by their absence from vv. 7, 10, and 15 in the Old Greek, most likely due to abbreviation).⁵¹ From the perspective of literary criticism, it is attractive to identify the words as late interpolations, since Dan 3 as a whole is held to have taken shape most likely in the Persian or earlier Hellenistic period.⁵² But notably, these interpolations are limited

⁴⁸ Rowley, *Aramaic of the Old Testament*, 151.

⁴⁹ Reference to the Ptolemies seems less likely if the Greek words made their way into the text in post-200 BCE Palestine, but it is interesting that the loss of contrastive vowel length on which our dating argument is based first crops up in Egypt. While this may simply be a coincidence, it could provide a linguistic connection between Dan 3 and Egypt to match the literary connections highlighted by Tawny L. Holm, "The Fiery Furnace in the Book of Daniel and the Ancient Near East," *JAOS* 128 (2008): 85–104.

⁵⁰ Young, "Greek Loanwords."

⁵¹ The Old Greek's more concise wording is similarly identified as secondary by Tawny L. Holm, *Of Courtiers and Kings: The Biblical Daniel Narratives and Ancient Story-Collections*, Explorations in Ancient Near Eastern Civilizations 1 (Winona Lake, IN: Eisenbrauns, 2013), 279. Indeed, if the presence of these words in verses 7, 10, and 15 of the MT were due to harmonization with verse 5, it would be hard to account for the variation in spelling.

⁵² Both options are considered possible by John J. Collins, *Daniel: A Commentary on the Book of Daniel*, Hermeneia (Minneapolis: Fortress, 1993), 193; and Holm, *Courtiers and Kings*, 488. A Persian-period origin for the tradition underlying Daniel 3 (if not the text itself) is argued for by Kratz, *Translatio imperii*, 134–46, while Rainer Albertz dates the addition of Dan 2–3 and 7 to chapters 4–6 to the last two decades of the third century (*Religionsgeschichte Israels in alttestamentlicher Zeit*, 2 vols, Grundrisse zum Alten Testament 8 [Göttingen: Vandenhoeck & Ruprecht, 1992], 2:651).

to this chapter of Daniel. The similar story of Daniel in the lion's den (ch. 6), the story of Belshazzar's downfall after desecrating the temple vessels (ch. 5), or the hubris-induced madness of Nebuchadnezzar (ch. 4) would all have been similarly promising candidates for association with Hellenistic rulers. While we cannot establish at which point of the composition or transmission of Dan 3 the Greek words were added,⁵³ it seems most likely that they were already present in the text when it was incorporated into the tale collection of Dan 2–6. The formation of this stage of the book of Daniel should then also be dated no earlier than the second century BCE, later than is often supposed.

Within Dan 3 itself, we may still wonder why it is precisely these musical terms that occur in Greek. The chapter is characterized by another set of lists, comprising titles of imperial functionaries in verses 2–3 (also abbreviated in the Old Greek of v. 3): אַחְשֵׁרְפְּנֵי סַגְנֵי וּפְחוּתַי אֲדָרְגוּרֵי גְדַבְרֵי דְתַבְרֵי תַפְתֵּי וְכָל שְׁלֹטְנֵי מְדִינָתָא (“the satraps, the prefects, and the governors, the announcers, the treasurers, the judicial officers, the magistrates, and all the rulers of the provinces”), and the shorter list in verse 27: אַחְשֵׁרְפְּנֵי סַגְנֵי וּפְחוּתַי וְהַדְּבָרֵי מַלְכָּא (“the satraps, the prefects, and the governors, and the king's officers”). The longer version especially is similar to the list of musical terms: two or three well-known terms (“the horn, the flute”/“the satraps, the prefects, and the governors”) are followed by four rarer, presumably more exotic-sounding ones (“cithara, sambuca, psaltery, symphonia”/“the announcers, the treasurers, the judicial officers, the magistrates”) and finally a plain-language summary (“and all kinds of musical instrument”/“and all the rulers of the provinces”). If Greek code-switching was employed to connect the story to a Hellenistic context, why was it not used in these lists of powerful officials?

One factor may have been plausible deniability. Providing the story's antagonists themselves with Greek titles may have seemed too subversive or may have carried too great a risk. But, at the same time, limiting the code-switching to the musical terms plays into Daniel's larger themes of the transience of worldly empire.⁵⁴ The link between Nebuchadnezzar and the Hellenistic rulers is adequately made by including the Greek words, one of which is limited to direct speech by the Chaldean authorities. At its heart—so the text implies—empire is empire: the ruling dynasties change, but much remains the same, and the reader may substitute the secular authorities of their own time for Dan 3's fictional Babylon. Yet the list of imperial officials itself presents the reader with foreign and outdated terminology. Nebuchadnezzar may once have ruled from India unto Ethiopia (as the Old Greek

⁵³For an overview of the recent scholarship on the impossibility of drawing a distinction between original and secondary features of biblical texts, see Shem Miller, *Dead Sea Media: Orality, Textuality, and Memory in the Scrolls from the Judean Desert*, STDJ 129 (Leiden: Brill, 2019), 1–8.

⁵⁴See Kratz, *Translatio imperii*, 197–225; Albertz, *Religionsgeschichte Israels*, 2:661; Anthea E. Portier-Young, *Apocalypse against Empire: Theologies of Resistance in Early Judaism* (Grand Rapids: Eerdmans, 2011), 81.

of Dan 3:1 has it, copying Esth 1:1), but by the second century BCE, his satraps, *ʾādargāzārîn*, *gādābārîn*, *dātābārîn*, and *tiptāʾîn* were nowhere to be found. Apart from any ramifications for the author, giving the officials Greek titles would have ruined this Ozymandias effect. Together, the Greek musical terms and Persian official titles communicate that what goes for the Neo-Babylonian and Achaemenid Empires also goes for the Hellenistic ones: eventually, they all must end. By hinting at how the audience was meant to identify the villains in Dan 3, the Greek code-switches contribute to the message of the end of all worldly kingdoms and the establishment of God's eternal reign that is made so much more explicit in Daniel's apocalyptic chapters and is largely responsible for this book's lasting popularity and influence.