COLUMNAR TRANSLATION: AN ANCIENT INTERPRETIVE TOOL THAT THE ROMANS GAVE THE GREEKS

Among the more peculiar literary papyri uncovered in the past century are numerous bilingual texts of Virgil and Cicero, with the Latin original and a Greek translation arranged in distinctive narrow columns.[1] These materials, variously classified as texts with translations or as glossaries, were evidently used by Greek-speaking students when they first started to read Latin literature. They thus provide a unique window into the experience of the first of many groups of non-native Latin speakers to struggle with reading the classics of Latin literature.

Discussion of these papyri has so far focussed on the light they shed on the text of Virgil and Cicero in antiquity, on their use of lectional signs, on codicological issues and on what they reveal about ancient education.[2] Little attention has been paid to the Greek translations, which in fact are often disregarded as objects of study on the grounds that they are so bad as to be positively painful to read. Not only are they all in prose, but they are very literal, have no literary or stylistic pretensions, and make no attempt to convey the beauty of the original language. Sometimes, moreover, they display serious misunderstandings of the original.

Despite these acknowledged drawbacks, the ancient translations have something important to tell us. They are among the few surviving examples of a system of exegesis that was fundamental to ancient learning and that has generally been overlooked and misunderstood in modern times, in part because it has no parallel in modern teaching or scholarship. If we wish to appreciate how Greek-speaking scholars and students approached Latin literature, an understanding of their unique translation system is essential.

---

[2] See e.g. R.E. Gaebel, 'The Greek word-lists to Vergil and Cicero', *Bulletin of the John Rylands Library* 52 (1970), 284–325; M.C. Scappaticcio, *Papyri Vergilianae: l'apporto della papirologia alla storia della tradizione virgiliana (I–VI d.C.)* (Liège, 2013); B. Rochette, 'Les traductions grecques de l'*Énéide* sur papyrus: une contribution à l'étude du bilinguisme gréco-romain au Bas-Empire', *Les Études Classiques* 58 (1990), 333–46; id., *Le latin dans le monde grec* (Brussels, 1997), esp. 302–15; M. Fressura, 'Tipologie del glossario virgiliano', in M.-H. Marganne and B. Rochette (edd.), *Bilinguisme et digraphisme dans le monde gréco-romain: l'apport des papyrus latins* (Liège, 2013), 71–116; J. Axer, 'Reedition of the Viennese fragments of Cicero, *In Catilinam* I', in *Festschrift zum 100-jährigen Bestehen der Papyrussammlung der Österreichischen Nationalbibliothek, Papyrus Erzherzog Rainer* (Vienna, 1983), 468–82; H. Maehler, 'Zweisprachiger Aeneis-codex', in J. Bingen and G. Nachtergael (edd.), *Actes du XVe congrès international de papyrologie* II: *Papyrus inédits* (Brussels, 1979), 18–41; V. Reichmann, *Römische Literatur in griechischer Übersetzung* (Leipzig, 1943), 28–57.

COLUMNAR TRANSLATION: THE BASIC PRINCIPLES

The translation system exemplified in the Virgil and Cicero papyri may be called 'columnar translation', because it is based on a system of narrow columns, usually only one to three words wide but capable of containing five or six words per line when necessary.[3] The Latin is usually in the left-hand column and the Greek in the right-hand column, and each line of the Greek column translates the corresponding line of the Latin column. One can therefore read either across the lines to get a translation of a particular phrase, or down one column to get the complete text in either Greek or Latin. The goal of the translation is not only to make clear the overall meaning of the original, but also to show someone with limited knowledge of the original language how that meaning is achieved, by making it possible to identify which words and phrases of the translation correspond to particular elements of the original. The line breaks are positioned to divide up meaningful units; the translator can use them both to show the reader how the original text is to be construed and to organize groupings that can be successfully translated as a unit.

The columnar translation system works best when the two languages involved are structurally similar to one another. This is the case with Latin and Greek, but less so with either of those languages and English. To illustrate how the system works, therefore, example 1 provides an English columnar translation of a text in a language more closely related to English, namely the opening (lines 354–64) of Goethe's *Faust*.

1)	354a	Habe nun,	I have now,
	b	ach!	alas!
	c	Philosophie,	philosophy,
	355a	Juristerey	law,
	b	und Medicin,	and medicine,
	356a	und leider	and unfortunately
	b	auch Theologie!	also theology
	357a	durchaus studirt,	thoroughly studied,
	b	mit heißem Bemühn.	with keen effort.
	358a	Da steh' ich nun,	There I stand now,
	b	ich armer Thor!	poor fool I,
	359a	und bin	and am
	b	so klug	as clever
	c	als wie zuvor;	as before;

---

[3] How much narrower this is than the columns of monolingual papyri depends on the genre. Columnar papyri of Virgil take on average four to five lines to cover one hexameter (see the editions in Scappaticcio [n. 2]), and therefore the average line length is less than one-quarter of the line length in a monolingual text of Virgil. But with Cicero the difference is less great, because while the columns in bilingual papyri are the same width for any genre, columns in monolingual papyri are narrower for prose than for hexameters: according to W.A. Johnson, *Bookrolls and Scribes in Oxyrhynchus* (Toronto, 2004), 101 and 116, the usual width of a column of hexameter verse is 10.4–13.6 cm, whereas that for a column of prose is 4.3–7.5 cm. Nevertheless, the columns in bilingual texts of Cicero are still narrower than those in monolingual texts, for the average width of a bilingual column of Cicero ranges from 3 to 4.7 cm (according to D. Internullo, 'Cicerone latinogreco: *corpus* dei papiri bilingui delle Catilinarie di Cicerone', *Papyrologica Lupiensia* 20–21 [2011–12], 25–150, at 38, 80, 95 and 108, the average column width is 3 cm in *P.Rain.Cent.* 163, 3.5 cm in *P.Ryl.* 1.61, 4 cm in *PSI Congr.XXI* 2 and 4.7 cm in *P.Vindob.* L 127).

360a	Heiße Magister,	I am called Master,
b	heiße Doctor gar,	am even called Doctor,
361a	und ziehe schon	and already I have been leading
b	an die zehen Jahr,	for ten years
362a	herauf, herab	up, down,
b	und quer	and sideways
c	und krumm,	and crookedly
363a	meine Schüler	my students
b	an der Nase herum –	around by the nose –
364a	und sehe,	and I see
b	daß wir	that we
c	nichts wissen können!	cannot know anything!

The English of this translation is not ideal, but it is comprehensible. Because German and English are closely related and have similar grammatical structure, in many lines of this translation the two languages would match no matter where one put the line divisions. But where German and English order differ, the flexibility of the column structure usually makes it possible to produce a translation that matches line for line without doing too much violence to English word order. Thus in lines 358a, 358b, 360b, 361a, 363b and 364c the English words are in a different order from the German ones on the corresponding line, and in lines 354a, 359c, 360a, 360b, 361a, 361b and 364a the English has more or fewer words than the corresponding German.

In antiquity, of course, written texts contained many fewer of the aids that modern readers take for granted. Word division, punctuation, capitalization and diacritical signs such as accents and breathings were only rarely used.[4] Although the lack of these aids seems to have caused little difficulty for readers familiar with the language in which a text was written, those reading a foreign language would have been handicapped particularly by the lack of word division, which made it difficult even to use a glossary. In verse texts the line breaks normally occurred at the ends of verses, and therefore the reader could at least be sure of finding the beginning of a word at the start of each line, but in prose texts not even that aid was available: columns of prose normally had justified margins, so the line divisions often occurred in the middle of a word, without a hyphen or any other indication that the word had been split between lines. The columnar format would have made life easier for language learners by reducing the number of word divisions they had to locate for themselves: columnar texts only have line divisions at word breaks, and therefore in such texts almost half the word breaks are indicated by line breaks.[5]

---

[4] See for example the plates in E. Turner and P. Parsons, *Greek Manuscripts of the Ancient World* (London, 1987²), with discussion on pp. 8–12 of such aids as do occur; for diacritics see also e.g. A. Nodar, 'Ancient Homeric scholarship and the medieval tradition: evidence from the diacritics in the papyri', in B. Palme (ed.), *Akten des 23. internationalen Papyrologenkongresses* (Vienna, 2007), 469–81; for word dividers also e.g. E. Dickey, 'Word division in bilingual texts', in G.N. Macedo and M.C. Scappaticcio (edd.), *Signes dans les textes et textes sur les signes* (Liège, forthcoming).

[5] Cf. the discussion by R.F. Hock and E.N. O'Neil, *The Chreia in Ancient Rhetoric: Classroom Exercises* (Leiden, 2002), 7–8, of *P.Bour.* 1.141–70 (= *M–P*³ 2643, *LDAB* 2744), a fourth-century monolingual Greek papyrus that uses columnar format to present reading material for children first progressing from isolated words to connected sentences, and then moves to longer lines as the student advances. The layout of this papyrus seems to be unique; nevertheless, its existence demonstrates that someone found the columnar layout useful for children first learning to read.

Examples 2 and 3 provide two versions of the opening of Goethe's *Faust*, both of which have been stripped of the aids that an ancient reader would not have had. Example 2 is arranged following the regular layout of poetry in a literary papyrus, with one verse per line.[6] Example 3 is arranged in the narrow columns associated with columnar translation. Although neither is completely straightforward to read, the second is far easier.

2)   HABENUNACHPHILOSOPHIE
       JURISTEREYUNDMEDICIN
       UNDLEIDERAUCHTHEOLOGIE
       DURCHAUSSTUDIRTMITHEIßEMBEMUHN
       DASTEHICHNUNICHARMERTHOR
       UNDBINSOKLUGALSWIEZUVOR
       HEIßEMAGISTERHEIßEDOCTORGAR
       UNDZIEHESCHONANDIEZEHENJAHR
       HERAUFHERABUNDQUERUNDKRUMM
       MEINESCHULERANDERNASEHERUM
       UNDSEHEDAßWIRNICHTSWISSENKONNEN

3)   HABENUN
       ACH
       PHILOSOPHIE
       JURISTEREY
       UNDMEDICIN
       UNDLEIDER
       AUCHTHEOLOGIE
       DURCHAUSSTUDIRT
       MITHEIßEMBEMUHN
       DASTEHICHNUN
       ICHARMERTHOR
       UNDBIN
       SOKLUG
       ALSWIEZUVOR
       HEIßEMAGISTER
       HEIßEDOCTORGAR
       UNDZIEHESCHON
       ANDIEZEHENJAHR
       HERAUFHERAB
       UNDQUER
       UNDKRUMM
       MEINESCHULER
       ANDERNASEHERUM
       UNDSEHE

---

[6] The line length would have been greater in antiquity, for Goethe's verses are shorter than those of the hexameter poetry typically read by ancient language learners (Quintilian, *Inst*. 1.8.5 tells us that Latin speakers started their Greek reading with Homer, and the papyri tell us that Greek speakers learning Latin started with Virgil and moved on to Terence, Juvenal and Seneca: see E. Dickey, *The Colloquia of the Hermeneumata Pseudodositheana* [Cambridge, 2012–15], 1.7–10).

DAßWIR
NICHTSWISSENKONNEN

The benefits of the columnar system were therefore multiple.

ANCIENT COLUMNAR TRANSLATION UNDER OPTIMUM CONDITIONS

Columnar translation works best in texts that were bilingual from the beginning, because under such circumstances the writer can avoid constructions in either language that would cause difficulties when translated into the other. Of course, the works of Virgil and Cicero were not composed bilingually, but another set of texts for which the columnar format is normally used was indeed so composed: the colloquia of the Hermeneumata Pseudodositheana. The colloquia are a set of little dialogues and narratives designed as easy readers for ancient language learners; the oldest portions seem to have been originally composed for Latin speakers learning Greek and the more recent portions for Greek speakers learning Latin, but all parts of the text appear to have been bilingual from their inception.[7]

Example 4 is an extract from one of the colloquia (*Colloquium Montepessulanum* 2h), with a third column added in English.

4)	duo ergo sunt	δύο οὖν εἰσιν	So, there are two
	personae	πρόσωπα	persons
	quae disputant,	τὰ διαλεγόμενα,	who converse,
	ego et tu.	ἐγὼ καὶ σύ.	I and you.
	tu es qui interrogas,	σὺ εἶ ὁ ἐπερωτῶν,	You are the one who asks;
	ego respondeo.	ἐγὼ ἀποκριθήσομαι.	I (shall) answer.

The wording is idiomatic in both original languages; it is possible to read either column in isolation and get a perfectly coherent text. The two columns match perfectly line for line (apart from the difference in tense in the last line). But they do not match word for word, because the constructions used are not simply identical: in lines 3 and 5 Greek uses a participle with an article while the Latin uses a relative clause. Latin could not have used the construction employed here in the Greek; Greek could have used the one employed in the Latin, but the participle is more idiomatic. The columnar translation has therefore allowed the writer the freedom to use the most idiomatic construction in each language while still making the two languages correspond closely.

In example 5 (*Colloquium Harleianum* 1h) the constructions are the same in Latin and Greek, but the word order in the first line is different, and in the last line Greek has an article where Latin does not. Again, therefore, the columnar translation allows both languages to be idiomatic while still making it easy to find the translation of a particular phrase.

---

[7] For the origins and development of the colloquia, which are complex, see the introduction to Dickey (n. 6). Quotations from the colloquia and references to them are hereafter given according to that edition; if the letter at the end is subtracted, the same references can be used to find the passage concerned in the appendix of Goetz's edition (G. Goetz, *Hermeneumata pseudodositheana*; vol. 3 of *Corpus Glossariorum Latinorum* [Leipzig, 1892]). In most medieval copies of the colloquia the Greek occupies the left-hand column and the Latin the right, but I have reversed that order here because the papyrus evidence suggests that the ancient copies normally had the Latin on the left and the Greek on the right.

5)	si quis autem tibi molestatur,	ἐὰν δέ τίς σοι ἐνοχλήσῃ,	But if anyone hassles you,
	indica	μήνυσον	tell
	praeceptori.	τῷ διδασκάλῳ.	the teacher.

In this example the English does not work as well as in the first one, because English requires objects to follow verbs and the placement of the verb on a line by itself after the object makes that impossible without altering the line divisions of the original. This problem, however, arises only because the English has been added after the line divisions were fixed; the original writers did not consider the needs of English translators when dividing up the lines. If we had the same freedom as ancient writers, we could alter the first line division by one word and produce the version in example 6, which would work in all three languages.

6)	si quis autem tibi molestatur,	ἐὰν δέ τίς σοι ἐνοχλήσῃ,	But if anyone hassles you,
	indica	μήνυσον	tell
	praeceptori.	τῷ διδασκάλῳ.	the teacher.

In example 7 (*Colloquia Monacensia–Einsidlensia* 8a) the word order of the Latin and Greek is exactly the same, and the constructions are closely parallel. Nevertheless, the grammar is far from identical: in the fourth line the Greek has a dative and the Latin an ablative, and in the fifth and sixth lines the Greek has a genitive absolute surrounding a dative (as the object of ἀκολουθοῦντος, since ἀκολουθέω takes a dative), while the Latin has an ablative absolute surrounding an accusative (as the object of *sequente*, since *sequor* takes an accusative).

7)	paratus ergo in omnia,	ἑτοιμασθεὶς οὖν εἰς πάντα,	So having been prepared for everything,
	processi	προῆλθον	I went forth
	bono auspicio,	καλῇ κληδόνι,	with a good omen,
	sequente me	ἀκολουθοῦντός μοι	followed by my
	paedagogo.	παιδαγωγοῦ.	paedagogue.

THE COLUMNAR FORMAT COMPARED TO MODERN BILINGUAL FORMATS

Nowadays there are two common formats for bilingual texts. Facing-page translations are generally fairly idiomatic and therefore make the overall meaning of the passage clear, but they often provide little help to the reader who wants to understand exactly what the original text says. Interlinear translations, by contrast, usually tell the reader what the text says but not what it means; it is common for the English of an interlinear translation to make no sense at all when taken as a whole. The contrast is illustrated below in examples 8 and 9, of which the first provides an interlinear translation of the first line of the *Iliad* and the second a translation that one might find on a facing page.

| 8) | wrath | sing | goddess | son of Peleus | Achilles |
| | μῆνιν | ἄειδε, θεά, | | Πηληϊάδεω | Ἀχιλῆος |

9)   Sing, goddess, the wrath of Achilles, son of Peleus.

Neither of these systems is entirely satisfactory, for the reader of a bilingual text is very often someone who wants to understand the original language and needs help to do so. Such a person usually needs help both to find out what the text means and to learn what it says, and neither of the usual modern translation systems offers such help. This problem is particularly acute in the field of linguistics, where research frequently involves presenting very specific information about the workings of languages with which readers are largely or even wholly unfamiliar; the writer's entire argument often rests on examples that very few of the readers can understand without help. For this reason linguists usually provide first an interlinear translation in the form of word-by-word glosses containing both lexical and grammatical information, and then a freer translation to give the overall meaning of the sentence. So a linguist might render the first line of the *Iliad* as in example 10. This solution makes it clear to the reader both what the line means and how and why it means that, but it is very cumbersome: the original five-word line has now acquired twenty-six words of translation and explanation.

10) μῆνιν   ἄειδε   θεά
     wrath.ACC.SG.   sing.IMPERAT.2ND.SG.   goddess.VOC.

     Πηληϊάδεω   Ἀχιλῆος
     son of Peleus.GEN.SG.   Achilles.GEN.SG.

     'Sing, goddess, the wrath of Achilles, son of Peleus.'

The columnar translation, like the linguists' solution, can be regarded as a compromise between the interlinear and the facing-page systems. Because a line-for-line equivalence offers the translator more flexibility than word-for-word equivalence, it is possible to produce a translation that conveys the meaning of the original. At the same time a columnar translation also gives a language learner a good understanding of what the individual words of the original actually say. As example 11 shows, a columnar translation of the first line of the *Iliad* offers all the benefits of the facing-page translation together with many of the benefits of the interlinear version, and it does so with only nine words, in contrast to the twenty-six words of the linguists' combined version.

11) μῆνιν ἄειδε,   Sing the wrath,
     θεά,   goddess,
     Πηληϊάδεω   of Peleus' son
     Ἀχιλῆος   Achilles

COLUMNAR TRANSLATION IN THE VIRGIL AND CICERO PAPYRI

If we take a fresh look at the bilingual Virgil and Cicero papyri in light of an understanding of the nature and purpose of a columnar translation, those translations suddenly appear far better than they did when implicitly compared to our facing-page translations. Sometimes the Greek is not idiomatic, but this is a small price to pay for a translation that efficiently clarifies both what the original means and what it says. Occasionally the translation is not accurate, but that is a problem with execution rather than principle, and is not surprising if some of the translations were done by learners.

Example 12 comes from a columnar version of Cicero's *First Catilinarian*,[8] with the spelling corrected and diacritics added to make the text legible by modern readers. The two versions are essentially the same except in the fourth line, where the Latin gender-neutral *parens* has been rendered in Greek (which lacks an equivalent gender-neutral term) with μήτηρ; as the word for 'fatherland' is feminine in both languages, the use of a feminine word for 'parent' is an obvious choice.

12)	nunc te	νῦν σε	Now of you
	patria	ἡ πατρὶς	the homeland,
	quae communis est	ἥτις κοινή ἐστιν	which is the common
	parens	μήτηρ	mother
	omnium	πάντων	of all
	nostrum	ἡμῶν	of us,
	metuit.	δέδοικε.	has conceived a fear.

Example 13 provides another extract from the same text (section 19 of Cicero's oration). Here the English cannot be made to fit the columnar format completely, but nevertheless the Latin and the Greek work very well; note, in particular, the genitive absolute in Greek corresponding to the Latin *quae cum ita sint*.

13)	sed quam	ἀλλὰ πῶς	But how
	longe	μακρὰν	far away
	uidetur	δοκεῖ	does it seem that he ought to be
	a carcere	ἀπὸ φρουρᾶς	from prison
	atque a uinculis	καὶ ἀπὸ δεσμῶν	and from bonds,
	abesse	ἀπεῖναι	
	debere	ὀφείλειν	
	hic qui se	οὗτος ὅστις ἑαυτὸν	he who himself has judged
	ipse	αὐτὸς	himself
	iam dignum	ἤδη ἄξιον	already worthy
	custodia	φυλακῆς	of confinement?
	iudicauerit?	ἔκρινεν;	
	quae cum ita sint,	τῶν οὕτως ἐχόντων,	Since these things are thus,
	Catilina,	Κατιλίνα,	Catiline,
	debebas	ὤφειλες	you should have …

THE HISTORY OF COLUMNAR TRANSLATION

Columnar translation probably developed from columnar glossaries, for the format is common for certain types of glossary, and a columnar translation is in effect one that treats a continuous text like a glossary. Columnar glossaries were used in ancient Mesopotamia,[9] and it is tempting to try to connect the Latin–Greek columnar translations with the Mesopotamian glossaries, but such a connection is unconvincing. The chronological and geographical gaps between the two groups of columnar texts are

---

[8] *P.Rain.Cent.* 163, edited by Internullo (n. 3), 37–79 (= *M–P*³ 2922, *LDAB* 554), fol. Iᵛ, lines 33–9; the lines quoted here come from section 17 of the speech.

[9] For examples see J. Nougayrol, E. Laroche, C. Virolleaud and C.F.A. Schaeffer, *Ugaritica V* (Paris, 1968), 230–49; for discussion see M. Civil, 'Ancient Mesopotamian lexicography', in J.M. Sasson (ed. in chief), *Civilizations of the Ancient Near East* (New York, 2000), 4.2305–14.

enormous, for there is clear evidence that Roman Egypt received the columnar translation format from Latin speakers, not from speakers of Greek or Egyptian. It is most unlikely that the Romans would have borrowed anything from the Mesopotamians directly, without going via either of those other cultures. Moreover, the columnar glossary is an idea that two cultures could easily have had independently.

The columnar translation format is by far the most common one for Greek–Latin bilingual papyri (a term that will here be restricted to papyri containing the same material in both languages, excluding those in which the two languages say different things and those in which one language provides only a partial translation of the other, for example via occasional glosses). To illustrate the popularity of the format and the other possibilities available, all the bilingual Greek–Latin papyri whose formats I can ascertain are listed in the table below.[10] Although our main concern here is with continuous texts rather than with glossaries, all relevant glossaries are included here as well because of their probable role in the development of columnar translations of continuous texts.

Columnar format
Virgil:

1) *P.Ryl.* III.478 + *P.Mil.* I.1 + P.Cairo inv. 85644 A–B[11] (fourth century A.D., containing parts of Virgil, *Aeneid* 1 with Greek translation)
2) *BKT* IX.39[12] (fourth century A.D., containing parts of Virgil, *Aeneid* 1 and 2 with Greek translation)
3) Ambrosian Palimpsest[13] (fourth or fifth century A.D., containing parts of Virgil, *Aeneid* 1 with Greek translation)
4) *P.Fouad* 5[14] (fourth or fifth century A.D., containing parts of Virgil, *Aeneid* 3 with Greek translation)
5) *P.Oxy.* L.3553[15] (fifth century A.D., containing parts of Virgil, *Aeneid* 1 with Greek translation)
6) P.Vindob. inv. L 24[16] (fifth century A.D., containing parts of Virgil, *Aeneid* 5 with Greek translation)
7) A papyrus edited originally by Husselman[17] (fifth century A.D., containing parts of Virgil, *Georgics* 1 with Greek translation)
8) *P.Ness.* II.1[18] (sixth century A.D., containing portions of Virgil, *Aeneid* 1 and 2 with Greek translation)

---

[10] For papyrological abbreviations see the Checklist at http://library.duke.edu/rubenstein/scriptorium/papyrus/texts/clist.html; further information on each text listed here can be found in the databases referred to (*M–P*³ = Mertens–Pack database, http://promethee.philo.ulg.ac.be/cedopal/indexsimple.asp; *LDAB* = Leuven Database of Ancient Books, http://www.trismegistos.org/ldab/).

[11] Edited by Scappaticcio (n. 2), no. 5; *M–P*³ 2940; *LDAB* 4146.

[12] Edited by Scappaticcio (n. 2), no. 4; *M–P*³ 2939.1; *LDAB* 4149.

[13] Edited by M.C. Scappaticcio, 'Appunti per una riedizione dei frammenti del palinsesto Virgiliano dell'Ambrosiana', *Archiv für Papyrusforschung* 55 (2009), 96–120, and Scappaticcio (n. 2), no. 8; *M–P*³ 2943; *LDAB* 4156.

[14] Edited by Scappaticcio (n. 2), no. 15; *M–P*³ 2948; *LDAB* 4154.

[15] Edited by Scappaticcio (n. 2), no. 9; M. Fressura, 'Revisione di POxy VIII 1099 e POxy L 3553', *Studi di Egittologia e di Papirologia* 6 (2009), 43–71; *M–P*³ 2943.1; *LDAB* 4160.

[16] Edited by Scappaticcio (n. 2), no. 20; *M–P*³ 2951; *LDAB* 4161.

[17] E.M. Husselman, 'A palimpsest fragment from Egypt', in *Studi in onore di Aristide Calderini e Roberto Paribeni* (Milan, 1957), 2.453–9; Scappaticcio (n. 2), no. 33; *M–P*³ 2936; *LDAB* 4159.

[18] Edited by Scappaticcio (n. 2), no. 6; *M–P*³ 2939; *LDAB* 4166. This papyrus also contains a

9) P.Vindob. inv. L 62[19] (sixth century A.D., containing parts of Virgil, *Aeneid* 2 with Greek translation)

Cicero:

10) *P.Rain.Cent.* 163[20] (fourth or fifth century A.D., containing parts of Cicero, *In Catilinam* 1 with Greek translation)
11) *PSI Congr.XXI* 2[21] (fifth century A.D., containing parts of Cicero, *In Catilinam* 1 with Greek translation)
12) *P.Ryl.* I.61[22] (fifth century A.D., containing parts of Cicero, *In Catilinam* 2 with Greek translation)
13) P.Vindob. inv. L 127[23] (fifth century A.D., containing parts of Cicero, *In Catilinam* 3 with Greek translation)

Colloquia:

14) P.Berol. inv. 21860[24] (fourth century A.D., containing phrases from an otherwise unknown bilingual colloquium mixed with glossary material)
15) *P.Prag.* II.118[25] (fourth or fifth century A.D., containing a bilingual colloquium closely related to the *Colloquium Harleianum*)

Other continuous texts:

16) *BKT* IX.149[26] (fourth century A.D., containing Isocrates with Latin translation)
17) *PSI* VII.848[27] (fourth century A.D., containing Aesop fable 264 with Latin translation; format not quite certain owing to small size of surviving fragment)
18) *P.Bon.* 5[28] (third or fourth century A.D., containing model epistles in Latin and Greek)
19) *CLA*[29] II.251 (sixth or seventh century A.D., containing part of the Bible with Latin translation)

---

glossary to portions of Book 4 (i.e. selected words only, but in the inflected forms and in the order that they appear in Virgil's text); evidently the students for whom the papyrus was designed were supposed to be able to progress from using a full translation to using such a glossary by the time they got to Book 4. Fressura (n. 2), 86 has argued that this shift at the start of Book 4 was standard in the teaching of Virgil to Greek speakers.

[19] Edited by Scappaticcio (n. 2), no. 11; M. Fressura, 'PVindob L 62 identificato', *ZPE* 168 (2009), 83–96; *M–P*³ 2944.1; *LDAB* 6194.

[20] Edited by Internullo (n. 3), no. I; *M–P*³ 2922; *LDAB* 554.

[21] Edited by Internullo (n. 3), no. IV; *M–P*³ 2921.01; *LDAB* 556.

[22] Edited by Internullo (n. 3), no. II; *M–P*³ 2923; *LDAB* 4135.

[23] Edited by Internullo (n. 3), no. III; *M–P*³ 2923.1; *LDAB* 559.

[24] Edited as continuous text by J. Kramer, *Glossaria bilinguia altera* (Munich, 2001), no. 9; new edition in which the material is argued to be less coherent in Dickey (n. 6) vol. 2 section 4.2; *M–P*³ 3004.02; *LDAB* 8897.

[25] Edited by E. Dickey and R. Ferri, 'A new edition of the *Colloquium Harleianum* fragment in *P. Prag.* 2.118', *ZPE* 180 (2012), 127–32; *M–P*³ 3004.22; *LDAB* 6007.

[26] *CPF* 1.2.2 21 116 T & 119 T; *M–P*³ 1251.02; *LDAB* 2528.

[27] Edited by Kramer (n. 24), no. 10; *M–P*³ 52; *LDAB* 138.

[28] Edited by J. Kramer, *Glossaria bilinguia in papyris et membranis reperta* (Bonn, 1983), no. 16; *M–P*³ 2117; *LDAB* 5498.

[29] E.A. Lowe, *Codices Latini Antiquiores* (Oxford, 1934–71) = *LDAB* 2881.

Glossaries:[30]

20) *P.Oxy.* LXXVIII.5162 (first or second century A.D.)
21) *P.Oxy.* LXXVIII.5163 (first or second century A.D.)
22) *P.Oxy.* XLIX.3452[31] (second century A.D.)
23) *P.Lund.* I.5[32] (second century A.D.)
24) Kramer (n. 28), no. 12[33] (second or third century A.D.)
25) *P.Oxy.* XXXIII.2660a[34] (third century A.D.)
26) *P.Laur.* IV.147[35] (third century A.D.)
27) Kramer (n. 24), no. 4[36] (third or fourth century A.D.)
28) Kramer (n. 24), no. 6[37] (third or fourth century A.D.)
29) Kramer (n. 24), no. 3[38] (third or fourth century A.D.)
30) *P.Oxy.* LXXVIII.5161 (third or fourth century A.D.)
31) Kramer (n. 28), no. 10[39] (fourth century A.D.)
32) *P.Fay.* 135v descr.[40] (fourth century A.D.)
33) *P.Lond.* II.481[41] (fourth century A.D.)
34) *PSI* VII.756[42] (fourth or fifth century A.D.)
35) *P.Oxy.* VIII.1099[43] (fifth century A.D.)
36) Fragmenta Helmstadiensia + Folium Wallraffianum[44] (sixth century A.D.)

Facing-page format

37) *PSI* XIII.1306 (*LDAB* 3024, fourth or fifth century A.D., containing parts of the Bible with Latin translation): format is not completely certain because of the small size of the fragment, but probably facing pages with Greek on the left.
38) Codex Bezae (*LDAB* 2929, fifth century A.D., containing parts of the Bible with Latin translation): Greek on the left
39) *CLA* (n. 29), V.521 (*LDAB* 3003, sixth century A.D., containing parts of the Bible with Latin translation): Greek on the left
40) *CLA* (n. 29), IV.472 (*LDAB* 3344, sixth or seventh century A.D., containing parts of the Bible with Latin translation; the Greek is in the Latin alphabet): Greek on the left

---

[30] Four other papyri probably belong in this section but are too fragmentary for their format to be ascertained with certainty: *P.Oxy.* XXXIII.2660 (= Kramer [n. 28], no. 6; *M–P*³ 2134.1; *LDAB* 4497; first or second century A.D.), *P.Oxy.* XLVI.3315 (= Kramer [n. 28], no. 8; *M–P*³ 3004.2; *LDAB* 4498; first or second century A.D.), *P.Sorb.* I.8 (= Kramer [n. 28], no. 3; *M–P*³ 3008; *LDAB* 5439; third century A.D.), and P.Vindob. inv. L 150 (= Kramer [n. 24], no. 5; *M–P*³ 2134.6; *LDAB* 6053; fifth century A.D.).

[31] Edited by Kramer (n. 24), no. 7; *M–P*³ 2134.7; *LDAB* 4812.
[32] Edited by Kramer (n. 28), no. 9; *M–P*³ 3004; *LDAB* 4741.
[33] *M–P*³ 2685.1; *LDAB* 5062.
[34] Edited by Kramer (n. 28), no. 7; *M–P*³ 2134.2; *LDAB* 5382.
[35] Edited by Kramer (n. 28), no. 5; *M–P*³ 2134.3; *LDAB* 4675.
[36] *M–P*³ 3004.21; *LDAB* 5755.
[37] *M–P*³ 2134.61; *LDAB* 9218.
[38] *M–P*³ 2134.71; *LDAB* 9217.
[39] *M–P*³ 3007; *LDAB* 5631.
[40] Edited by Kramer (n. 28), no. 11; *M–P*³ 2013.1; *LDAB* 7680.
[41] Edited by Kramer (n. 28), no. 13; *M–P*³ 3005; *LDAB* 5678.
[42] Edited by Scappaticcio (n. 2), no. 13; *M–P*³ 2946; *LDAB* 4155.
[43] Edited by Scappaticcio (n. 2), no. 19; Fressura (n. 15); *M–P*³ 2950; *LDAB* 4162.
[44] Edited by Kramer (n. 28), no. 4; *M–P*³ 2134.4; *LDAB* 6279.

41) *CLA* (n. 29), V.520 (*LDAB* 3403, seventh century A.D., containing parts of the Bible with Latin translation): Latin on the left

The translation follows the original in the same column

42) *P.Yale* II.104 + *P.Mich.* VII.457[45] (third century A.D., containing Aesop with Latin translation)

43) *P.Amh.* II.26[46] (third or fourth century A.D., containing Babrius with Latin translation)

Other formats

44) *BKT* IX.150[47] (first century B.C., containing a glossary): a single column, in which each Latin gloss is underneath the corresponding Greek lemma and slightly indented.

45) P.Sorb. inv. 2069 verso[48] (third century A.D., containing glossary with grammatical explanations in continuous text): an originally columnar text has been copied in long lines, so that short Latin and Greek phrases alternate; the languages are divided by spaces, and new lemmata do not necessarily begin new lines.[49]

46) Chester Beatty codex AC 1499[50] (fourth century A.D., containing among other things a glossary to the Pauline epistles): in the glossary section each Greek word is followed by its Latin translation(s), with double points separating lemma from gloss and multiple glosses from each other, while a unique symbol like a modern double quotation mark (") separates the different entries. Line breaks are irrelevant to the arrangement of the text and often occur in the midst of words. This format may, but does not have to, result from re-arranging a text that originally used the columnar layout.

47) P.Berol. inv. 10582[51] (fifth or sixth century A.D., containing a trilingual colloquium in Latin, Greek and Coptic): an originally columnar text has been put into the usual format for Coptic glossaries (see below) by replacing the intercolumnar spaces with double points, so that each line has three short units (one in each language) separated by punctuation.[52]

Thus the evidence consists of thirty-six columnar papyri (nineteen containing continuous text and seventeen glossaries) and eleven others (nine of which contain continuous text). The distribution of material into these two categories is not random: when a continuous literary text originally composed in one language has been provided with a translation in the other language, the format is always columnar if the original language

---

[45] *M–P³* 2917; *LDAB* 134.

[46] Edited by J. Kramer, *Vulgärlateinische Alltagsdokumente auf Papyri, Ostraka, Täfelchen und Inschriften* (Berlin, 2007), no. 10; *M–P³* 172; *LDAB* 434.

[47] Edited by Kramer (n. 28), no. 1; *M–P³* 2134.5; *LDAB* 6764.

[48] Edited by E. Dickey and R. Ferri, 'A new edition of the Latin–Greek glossary on P.Sorb. inv. 2069 (verso)', *ZPE* 175 (2010), 177–87; *M–P³* 3006; *LDAB* 5438.

[49] See E. Dickey, 'The creation of Latin teaching materials in antiquity: a re-interpretation of P.Sorb. inv. 2069', *ZPE* 175 (2010), 188–208.

[50] Edited by A. Wouters, *The Chester Beatty Codex AC 1499: A Graeco-Latin Lexicon on the Pauline Epistles and a Greek Grammar* (Leuven 1988), 115–47 for the glossary; *M–P³* 2161.1; *LDAB* 3030.

[51] Edited by E. Dickey, 'How Coptic speakers learned Latin? A reconsideration of P.Berol. inv. 10582', *ZPE* 193 (2015), 65–77.

[52] For further information on this papyrus and its layout see Dickey (n. 51).

was Latin, and usually non-columnar if the original language was Greek. Within this latter group there appear to be subdivisions connecting genre and format, for facing-page translations are used only for Biblical texts and translations that follow the original only for fables.

The apparent connection between an originally Latin text and columnar format is reinforced by the fact that papyri not containing Latin almost never use this format. Of course, monolingual Greek papyri by definition do not contain translations of continuous text, but we have numerous Greek–Greek glossaries (mostly Homer lexica, but occasionally lexica of other types), and these normally use a format in which the gloss follows immediately after the lemma, separated by a space (or sometimes by punctuation, or occasionally not separated at all) rather than by the start of a new column. If the gloss is longer than average, it usually continues on a second line, which begins under the lemma but slightly indented. Of the thirty-nine Greek–Greek glossaries whose formats I have been able to verify, thirty-four use this format,[53] three a different non-columnar format[54] and only two the columnar format.[55]

Bilingual Greek–Demotic and Greek–Coptic texts seem never to use the columnar format at all, at least not during antiquity.[56] I can find only one bilingual Greek–Demotic text, a glossary, and this uses the same format as the majority of the Greek–Greek glossaries.[57] Greek–Coptic glossaries also use this format, the only difference being that, whereas Greek–Greek glossaries usually have a space after the lemma, or failing that a high point, Greek–Coptic glossaries tend to divide the lemma from the gloss with a double point (like a modern colon).[58] Greek–Coptic continuous bilingual

---

[53] As this is a large group I give only the *LDAB* numbers, in chronological order from third/second century B.C. to sixth century A.D.: *LDAB* 2344, 7028, 1330, 1460, 9945, 1566, 1634, 1640, 1659, 1712, 1729, 1854, 4558, 4560, 4806, 1674, 1817, 1830, 1841, 5091, 1948, 1969, 1987, 2016, 2022, 2023, 109068, 2060, 2063, 1689, 2118, 10228, 2208, 6322. A number of these are laid out in columns in modern editions, but I have verified the original format from photographs.

[54] A. Henrichs, 'Scholia minora zu Homer III', *ZPE* 8 (1971), 1–12, no. 9 (= $M–P^3$ 1209.5, *LDAB* 1456, first or second century A.D.); A. Henrichs, 'Scholia minora zu Homer II', *ZPE* 7 (1971), 229–60, no. 4 ($M–P^3$ 1166, *LDAB* 1516, second century A.D.); *P.Oslo* II.12 ($M–P^3$ 1160, *LDAB* 1669, second century A.D.).

[55] C. Gallazzi, 'Glossario a Homerus, Odyssea I 46–53', *ZPE* 45 (1982), 41–6 (= $M–P^3$ 1207.1, *LDAB* 1390, first century A.D.) and *PapCongr. XX* p. 285 no. 3 ($M–P^3$ 1163.01, *LDAB* 2252, seventh century A.D.). The format of the second of these is not quite certain; it looks columnar to me from the photograph, but only three lines are well preserved, and traces of a fourth have led the editor to believe that it did not line up with the other three, making the glossary non-columnar.

[56] The basis of this statement is a search (on 31 January 2013) of the Leuven database for papyri containing both Greek and Coptic or Demotic, followed by inspection of editions of all the resulting papyri dating to the sixth century A.D. or earlier, at least in so far as those editions could be located in the Sackler and Bodleian Libraries in Oxford. Most papyri consulted proved not to be bilingual as defined for the purposes of this article; for those that were indeed bilingual I then consulted photographs to verify the original layout, unless this was specified in the literature, since the layouts of editions do not always match those of the originals (editors have a tendency to separate Coptic-style glossaries into columns to make them easier to read). See also the detailed discussion of layout of Greek–Coptic bilingual papyri of the Old Testament by Nagel, who does not mention the columnar format (P. Nagel, 'Griechisch–koptische Bilinguen des Alten Testaments', in id. [ed.], *Graeco–Coptica: Griechen und Kopten im byzantinischen Ägypten* [Halle, 1984], 231–57).

[57] H. Quecke, 'Eine griechisch–ägyptische Wörterliste vermutlich des 3. Jh. v. Chr. (P. Heid. Inv.-Nr. G 414)', *ZPE* 116 (1997), 67–80 (= $M–P^3$ 2131.02, *LDAB* 6962, third century B.C.).

[58] e.g. *P.Rain.UnterrichtKopt.* 257a (*LDAB* 3141, third or fourth century A.D.); *P.Rain.Cent.* 12 (= $M–P^3$ 2133.2, *LDAB* 6614, seventh century A.D.); *P.Rain.UnterrichtKopt.* 280 (= $M–P^3$ 2698, *LDAB* 6668, seventh or eighth century A.D.); *P.Rain.UnterrichtKopt* 264 (= *LDAB* 10974, undated); *SB Kopt.* III.1656 (= $M–P^3$ 2132, *LDAB* 5647, fourth century A.D.; the format of this glossary is not quite like that of the others, but it is certainly not columnar).

texts use a variety of formats, of which the most common during antiquity[59] is for the translation to follow the text in the same column;[60] other formats include having the text on one side of a page and the translation on the other,[61] the facing-page format,[62] and parallel columns in which the two languages do not match line for line.[63]

The obvious inference from the connection between Latin language and columnar format is that the columnar translation format originated in the Latin-speaking areas of the empire. Latin speakers had been learning Greek for centuries before Greek speakers began to learn Latin on any comprehensive scale;[64] therefore, it is inherently likely that some of the Latin–Greek bilingual materials (especially glossaries and colloquia)

[59] Greek–Coptic bilingual texts continued to be produced throughout the medieval period, and in fact the majority of those listed on the *LDAB* are medieval. Because medieval developments are not relevant to the question of origin investigated here, I have only looked at continuous Coptic texts datable to the sixth century A.D. or earlier.

[60] e.g. C. Schmidt and W. Schubart, *Acta Pauli nach dem Papyrus der Hamburger Staats- und Universitäts-Bibliothek* (Hamburg, 1936) (= *LDAB* 3138, third or fourth century A.D., parts of the Bible with Coptic translation); L. Amundsen, 'Christian papyri from the Oslo collection', *Symbolae Osloenses* 24 (1945), 121–47, at 121–40 (= *LDAB* 2993, fourth century A.D., parts of the Bible with Coptic translation); F. Rösch, *Bruchstücke des ersten Clemensbriefes, nach dem achmimischen Papyrus der Strassburger Universitäts- und Landesbibliothek* (Strasbourg, 1910), 119–22 (= *LDAB* 2806, fifth century A.D., parts of the Bible with Coptic translation); *P.Köln* IV.169 (= *LDAB* 3238, fifth century A.D., parts of the Bible with Coptic translation); Codex Scheide (ed. H.-M. Schenke, *Das Matthäus-Evangelium im mittelägyptischen Dialekt des Koptischen* [Berlin, 1981] = *LDAB* 107734, fifth century A.D., doxology with Coptic translation); C. Römer, 'Das zweisprachige Archiv aus der Sammlung Flinders Petrie', *ZPE* 164 (2008), 53–62, at 61–2, no. 26 (= *LDAB* 10092, fifth or sixth century A.D., early Christian text with Coptic translation); *P.Rain. UnterrichtKopt* 269 II (= *LDAB* 2719, fifth or sixth century A.D., *Menandri Sententiae* with Coptic translation); *P.Rain.UnterrichtKopt* 269 I (= *M–P*³ 1583, *LDAB* 2452, fifth to seventh century A.D., *Menandri Sententiae* with Coptic translation); *P.Rain.UnterrichtKopt* 268 (= *M–P*³ 1583.2, *LDAB* 2723, sixth or seventh century A.D., one of the *Menandri Sententiae* with Coptic translation); *Biblia Coptica* I.III Sa 72 (= *LDAB* 3195, sixth or seventh century A.D., parts of the Bible with Coptic translation); *Biblia Coptica* IV.III Sa 700 (= *LDAB* 2897, parts of the Bible with Coptic translation).

[61] e.g. W.M. Brashear and H. Satzinger, 'Ein akrostichischer griechischer Hymnus mit koptischer Übersetzung (Wagner-Museum K 1003)', *Journal of Coptic Studies* 1 (1990), 37–58 (= *LDAB* 5584, third or fourth century A.D., Greek hymn with Coptic translation); W.M. Brashear and H. Quecke, 'Ein Holzbrett mit zweisprachigen Hymnen auf Christus und Maria', *Enchoria* 17 (1990), 1–19 (= *LDAB* 5943, fifth century A.D., Greek hymn with Coptic translation).

[62] e.g. R. Pintaudi, *Antinoupolis* (Florence, 2008), 146–7, no. 6 (= *LDAB* 113257, fifth century A.D., Biblical); W.C. Till and P. Sanz, *Eine griechisch–koptische Odenhandschrift* (Rome, 1939) (= *LDAB* 3483, sixth century A.D., Biblical); K. Treu, 'Griechisch–koptische Bilinguen des Neuen Testaments', *Koptologische Studien in der DDR* (Halle, 1965), 95–123, at 111–13 (= *LDAB* 2898, sixth century A.D., Biblical).

[63] e.g. A.I. Elanskaya, *The Literary Coptic Manuscripts in the A.S. Pushkin State Fine Arts Museum in Moscow* (Leiden, 1994), 458–60 (= *LDAB* 2866, fourth or fifth century A.D., Biblical) and K. Wessely, 'Ein faijumisch–griechisches Evangelienfragment', *Vienna Oriental Journal* 26 (1912), 270–4 (= *LDAB* 2965, sixth century A.D., Biblical). Probably also to be put in this category are two papyri of which only one column survives and whose layout cannot therefore be completely verified: *MPER* NS 9 pp. 49–51 no. 3 (= *LDAB* 2964, sixth century A.D., Biblical) and Treu (n. 62), 100–4 (= *LDAB* 2815, sixth century A.D., Biblical).

[64] Already in the Republic it was normal for educated Latin speakers to have studied Greek. Exactly when significant numbers of Greek speakers began learning Latin probably varied from province to province, as some Greek-speaking areas came under Roman domination centuries before others. But in Egypt significant Latin learning seems to have begun in the second century A.D., to judge from the dates of preserved Latin–Greek glossaries (see examples 19 and following in the list above) and from the dates at which Latin loanwords start to be used in Greek papyri (see E. Dickey, 'Latin influence on the Greek of documentary papyri: an analysis of its chronological distribution', *ZPE* 145 [2003], 249–57, at 252). For further information on the learning of Latin by Greek speakers see Rochette (n. 2 [1997]).

originated in the West for use by Latin speakers and were later adapted for use by Greek speakers. Some texts show positive evidence of a Western origin and later Eastern adaptation.[65] If the materials themselves migrated across the empire, it is not surprising that their format came with them.

The colloquia are among the materials that probably originated in the West, and it is notable that they are universally found in columnar format, not only in papyri but also in medieval manuscripts; only in the Renaissance do colloquium manuscripts with other formats start to appear. But the bilingual texts of Virgil and Cicero cannot have originated in the West: those are clearly designed for Greek speakers learning Latin. The first teachers who produced such texts were probably expatriate Latin speakers teaching Greek in the East; they would have used the columnar format they knew and appreciated from their own studies to help their students with Latin texts.

Our understanding of the mechanics of teaching and scholarship in the ancient West is limited, especially in comparison with the vast resources the papyri provide for understanding the education system of the Greek East.[66] Apart from a few rather sparse descriptions in literary texts, all we can do to understand what sort of materials teachers, students and scholars used in the Western empire is to extrapolate from the materials we have from Greek-speaking Egypt. Given the Romans' respect for Greek literature, culture and scholarship, the traditional assumption that Roman education was modelled largely on Greek education has not been an unreasonable one. But in the case of columnar translation the influence seems to have gone the other way: a technique developed in the West was borrowed by teachers in the East.

If this technique had not happened to involve Greek as well as Latin, it would not have been borrowed by people living in a climate that preserves writing materials, and we would not now know about it at all. Under these circumstances it is perhaps worth considering whether there are other respects in which Western education may have been less similar to that in the East than we normally suppose.

University of Reading   ELEANOR DICKEY
                                                                     E.Dickey@reading.ac.uk

---

[65] See Dickey (n. 49) and Dickey (n. 6), 1.39–52.
[66] See S.F. Bonner, *Education in Ancient Rome: From the Elder Cato to the Younger Pliny* (London, 1977), 165, and note the concentration on Eastern evidence in R. Cribiore, *Writing, Teachers, and Students in Graeco–Roman Egypt* (Atlanta, 1996); R. Cribiore, *Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt* (Princeton, 2001); and T. Morgan, *Literate Education in the Hellenistic and Roman Worlds* (Cambridge, 1998).