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Variation and Change in Contemporary Orthographic Norms in Documentary Papyri

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Abstract

Spelling deviations are often considered to be the result of random variation or plain mistakes by the scribes. Based on the examples in this paper, I argue that some of the apparent deviations may actually be in accordance with contemporary norms. Close study of the spelling of five lexemes in the corpus of documentary papyri shows that the orthographic conventions at the time may have been different than suggested by contemporary grammarians and modern editors.

Keywords

post-classical Greek – orthography – documentary papyri – variation and change – scribes – grammarians

1 Introduction

Changes from classical to post-classical Greek can be found at almost every level of the language (e.g. phonology, morphology, syntax and lexicon), marking the appearance of some of the characteristic traits of Modern Greek.[1] Post-classical Greek orthography, however, is generally assumed to follow a classical Attic model with a few exceptions, mostly of Ionic origin, such as

1 See e.g. Horrocks 2010, 88-188.

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the preference for -σσ- and -ρσ- instead of -ττ- and -ρρ- and the simplification of the cluster -γν- to -ν-.[2] Although Greek spelling has remained conservative until the modern day, it is hard to believe that post-classical orthography really remained without any changes—not even temporary ones—in scribal norms and practices throughout the Hellenistic, Roman and Byzantine periods. Apart from these few well-known changes, our knowledge of post-classical orthography is limited and primarily based on the transmission of literature rather than on actual examples of writing at the time. Literary sources, often transmitted over many centuries, may not be the easiest place to identify orthographic innovation. Documentary papyri, on the other hand, provide an opportunity to challenge our ideas about the standards of post-classical Greek orthography and they can be compared to the views of (contemporary) grammarians and lexicographers.

2 Greek Orthography

Spelling variation is commonly found in documentary papyri as a result of phonological developments, as Gignac explains:

> … spelling mistakes in the papyri are similarly instructive for the phonology of post-classical Greek, in which there was a disparity between spelling and pronunciation analogous to that in present-day English. The fixed conventional spelling system of Greek progressively failed to reflect a radically changing pronunciation, so that by Roman and Byzantine times many sounds had several possible representations in writing.[3]

The phonological changes and the emergence of "several possible representations in writing" during the Hellenistic period presented a challenging phase in the process of codification of post-classical Greek orthography. I take the term orthography to refer to "a more or less binding norm that can lead to criticism in case of non-compliance" which is established by "the practices of a community of writers within a certain period".[4] As Gignac shows, many scholars tend to speak about orthographic variation in papyri in terms of "spelling mistakes", because they assume that the Greek spelling system consisted of the largely 'fixed' and 'conventional' set of orthographic rules known to us.

2 See Horrocks 2010, 82.

3 Gignac 1976, 58.

4 See Rutkowska and Rössler 2012, 214.

The notion of orthography as 'the correct spelling of a word and the account of its correctness', as defined by Trypho, was already established by the Hellenistic grammarians and codified by the grammarian Aelius Herodian in the second century CE.[5] A continuous tradition of reproduction and adaptation preserves major parts of these earlier works on orthography throughout the Byzantine period and Middle Ages. The grammarians used the following four criteria for determining the correct spelling, originally used for textual criticism: *analogy* (ἀναλογία), namely the formulation of general propositions based on comparison of words, *dialect* (διάλεκτος) by comparison of special forms in different language varieties, *etymology* (ἐτυμολογία) based on the origin of words and *history* (ἱστορία-παράδοσις), which informs us about how the word is used in the literary textual tradition.[6] Siebenborn suggests that a fifth criterion, the use of the word in contemporary language (συνήθεια), is not generally applied to orthography by the Greek grammarians, because it would not be helpful to establish the correct spelling of sounds that were identical in contemporary pronunciation.[7]

This leads us to the following question: is it possible to identify orthographic norms by observing contemporary language use? In his discussion of post-classical Greek as a standard language, Evans concluded that "we should be building our understanding of an emerging standard language in non-literary papyri from this internal evidence much more than from the practices of classical literature".[8] Whereas external orthographic norms can be found in modern dictionaries, grammars and editions of classical literature, contemporary parallels, such as the patterns of language use in documentary and literary papyri, inscriptions, and in Byzantine grammatical treatises, lexicographical works and literary manuscripts, are less accessible and they are not always considered to provide useful evidence for Greek orthographic norms. It is true that professional scribes often tried to follow conservative norms, but they also introduced various types of innovations.[9] Changes in the choice of lexemes and syntactic constructions that depend on chronological and geographical diversification are found in the formulation of frequently used fixed phrases and they can be spread through scribal practices.[10] In this article, I will show that similar context-dependent changes could also have played a role in orthographic variation.

5 See Valente 2015.
6 See Siebenborn 1976, 56-163; Valente 2015, 970-975.
7 Siebenborn 1976, 91-92.
8 Evans 2010, 205.
9 See Leiwo 2003.
10 See Vierros 2012 and Stolk 2015.

3 Corpus of Documentary Papyri

The corpus for this study consists of more than 50,000 published documentary papyri in the Papyrological Navigator (www.papyri.info) dated between the third century BCE and the seventh century CE. This corpus is searchable, but the presentation of the search results could easily obscure internal orthographic patterns. Most importantly, search results do not only include the real attestations as preserved on the papyrus, but also forms found in filled abbreviations, supplements in lacunae, regularizations and other editorial comments provided in the apparatus. This means that the actual attestations become mixed with editorial judgements. Results would have to be checked manually in order to separate modern additions from the ancient writing. A new database, Trismegistos Words (www.trismegistos.org/words), has recently been developed by Alek Keersmaekers and Mark Depauw. In this database one can search for all attestations of a single lexeme and limit the search results by various criteria, such as only attestations outside abbreviations and lacunae, in order to separate real attestations from editorial supplements.[11]

All selected examples of variation are concerned with the variation between the graphemes ⟨ι⟩ and ⟨ει⟩. The merger of the phonemes /ei/ and /i:/ was completed in the spoken language by the mid third century BCE according to Mayser and Schmoll.[12] Variation between these graphemes encountered in documents dated after the mid third century BCE should therefore be understood as spelling variation rather than reflecting different pronunciations. The choice between the spelling of ⟨ι⟩ and ⟨ει⟩ formed also an important part of the study of orthography by the ancient grammarians, which will allow me to compare the statements by grammarians with the actual usage of the selected lexemes in the papyri.[13]

Almost 30,000 editorial regularizations of spelling variation between ⟨ι⟩ and ⟨ει⟩ are collected in Trismegistos Text Irregularities (www.trismegistos.org/textirregularities). This database collects editorial regularizations of

11 For this article, I used the *TM Words* database as well as manual searches through the search results of both alternative spellings in the *PN*. Frequencies of attestations are based on the texts present in *TM* in November 2018 (based on a scrape from *PN* in 2016) and in the *PN* in May 2018.

12 Mayser and Schmoll 1970, 60. Teodorsson 1977, 214 dates this merger before 250 BCE in the position before consonants. Examples before vowels only start to appear around 250 BCE.

13 Hellenistic grammarians divided the study of orthography (ὀρθογραφία) into three parts: *division* (μερισμός) or *syntax* (σύνταξις) dealing with syllabification, *quality* (ποιότης) concerned the spelling of consonants and *quantity* (ποσότης) about the spelling of vowels, which originally was devoted mainly to the spelling of ⟨ι⟩ and ⟨ει⟩, see Siebenborn 1976, 37-41.

orthography and morphology from all digitalized papyrus editions.[14] The choice between external and internal evidence to determine the orthographic standards in post-classical Greek can sometimes lead to conflicting results in editorial practices.[15] For the current article, I searched for (i) cases in which the spelling found on a papyrus is in fact more frequently attested than the spelling of the regularization; (ii) lexemes which are regularized by editors in both directions, i.e. ⟨ι⟩ into ⟨ει⟩ and vice versa, and (iii) lexemes which are inconsistently regularized by (different) editors.[16] These three criteria should identify words for which external and internal standards do not match or for which the spelling changed over time.

I will present five lexemes used in different contexts for which we could consider a (temporary) change in orthographic norms. Section 4 discusses a possible orthographic change in Roman dating formulae, section 5 concerns a lexeme also used in more private contexts and section 6 discusses the spelling of several derived nouns in –(ε)ιον.

4 τρ(ε)ισκαιδέκατος, 'thirteenth'

Between classical and post-classical Greek, the ordinal numbers 13th to 19th lost their double inflection, such as in τρίτος καὶ δέκατος, 'thirteenth'.[17] The first element was replaced by the respective cardinal number, e.g. τρεῖς, 'three', used indeclinably. Historically, two spellings are attested for the indeclinable form of the Greek cardinal number 'three': with ⟨ει⟩ deriving from the PIE nominative form **treḭes* > τρεῖς and with ⟨ι⟩ from the accusative **trins* > τρῖς.[18]

14 See Depauw and Stolk 2015.

15 See Stolk 2018.

16 See also examples in Stolk 2018.

17 The only example Gignac 1981, 202 gives of the supposedly still occurring double inflection is P.Strasb. IV 185r, 15-16 (55 CE): ἀπὸ τρί[τ]ο̣[υ καὶ] δεκάτο[υ] τοῦ Παῦνι μηνός, but the uncertain context of the reading of the first element makes the example highly suspicious. The editor might have considered the spelling of the ⟨ι⟩ instead ⟨ει⟩ in the first element as an indication for the older form, but I will argue in the following that this is not a valid argument based on the evidence for the Roman period. Paul Heilporn has been so kind as to send me a photograph of this papyrus and confirm my suspicions. Even though there seems to be enough space for the slightly longer double inflection, the first visible letter after τρι corresponds better to a sigma than to an omicron and, on the whole, τριṣχ̣α̣ι̣δεκάτ[ο]ῠ would present a better reading for this papyrus.

18 See Beekes 2010, 1502 and Chantraine 1977, 1131. Both spellings for the cardinal number τρ(ε)ισκαίδεκα, 'thirteen', are attested in the *Iliad* and *Odyssey*, see references in Montanari 2015, 2140. The cardinal number is replaced by the form δεκατρεῖς in post-classical Greek, see Gignac 1981, 195-186, which is also attested in both spellings in papyri.

The newly formed ordinal number is attested in both variant spellings in the papyri: τρεισκαιδέκατος and τρισκαιδέκατος.[19] The spelling with ⟨ει⟩ is usually taken as the standard spelling in Attic-Ionic and post-classical Greek.[20] The spelling with ⟨ι⟩, however, according to LSJ "occurs mostly later" and Gignac noted it in his list of attested variants in Roman and Byzantine papyri.[21] Even though both spellings occur frequently, editors of papyrus documents take the spelling with ⟨ει⟩ as the standard form and regularize the spellings with ⟨ι⟩ to ⟨ει⟩. Did the scribes themselves consider the spelling with ⟨ει⟩ or with ⟨ι⟩ as the norm or does the attested variation mean that both spellings were equally acceptable at any time?

There seem to be 335 attestations of the ordinal adjective 'thirteenth' in the digital editions of published documentary papyri in the Papyrological Navigator, of which 96 read τρεισκαιδέκατος in the edition and 236 have the spelling τρισκαιδέκατος. Out of these apparent 96 spellings with ⟨ει⟩, 37 are in fact supplemented by the editor in a lacuna or read in an otherwise problematic context.[22] The almost consistent regularization easily obscures the fact that the spelling τρισκαιδέκατος is found in 218 papyri in a certain context, while τρεισκαιδέκατος features only in 59 certain examples. The preference for the spelling with ⟨ι⟩ becomes even more clear when we look at the chronological distribution of the attestations in documents before and after the start of Roman rule in Egypt.

During the Ptolemaic period in Egypt, the cardinal number is always spelled as τρεισκαιδέκατος, e.g. in ἐν τῶι τρεισκαιδεκάτωι ἔτει, 'in the thirteenth year', in P.Cair.Zen. I 59001, 10-11 (274-273 BCE), and μηνὸς Γορπιαίου τρεισκαιδεκάτηι Φαμενὼθ τρεισκαιδεκάτηι, 'on the thirteenth day of the month Gorpiaios/Phamenoth', in P.Tebt. III 818, 8-9 (174 BCE).[23] The spelling τρισκαιδέκατος appears for the first time in a contract from Alexandria in a dating formula

19 The same spelling variation is also found for the cardinal number τρεῖς, although the spelling with ⟨ει⟩ seems still more frequently found in the digital editions (1319 texts in *PN*) than regularizations only (563 times in *Trismegistos Text Irregularities*).

20 See for example the main entry in LSJ s.v. and Gignac 1981, 202.

21 Gignac 1981, 202.

22 The same phenomenon can be observed in the modern editions of the grammarians. Erbse prints in his edition of the *Scholia in Iliadem* O 678a1 ὡς τὸ τρὶς καὶ δέκατος, ὥστε καὶ τὸ θηλυκὸν τρὶς καὶ δεκάτη (following the spelling of the manuscript), while Lentz (*GG* III. II 97, 12-13) takes over the spelling with ⟨ει⟩ from Lehr's edition of Herodian's Περὶ Ἰλιακῆς προσῳδίας, see his apparatus entry: *pro* τρισκαίδεκατος (*sic*) *et* τρισκαιδεκάτη *L. exhibuit* τρεῖς καὶ δέκατος *et* τρεῖς καὶ δεκάτη.

23 The readings of all attestations cited in this article are based on the digital editions in the *Papyrological Navigator* (*PN*), but have been checked in the printed editions, on a photograph of the papyrus (if available) and for any corrections collected the *Berichtigungsliste*

referring to the thirteenth year of the emperor Augustus: ἕως πένπτης (l. πέμπτης) Ἀθὺρ [τοῦ] [εἰσι]ό̣ν̣τος τρισκαιδεκάτου ἔτους [Καίσαρο]ς, 'until the fifth of (the month) Hathur of the coming thirteenth year of Caesar' (BGU IV 1143, 11-13; 19-18 BCE, see *BL* XI 25).[24] The spelling with ⟨ι⟩ continues in Roman dating formulae for the number of the year, e.g. ἐν τῷ ἐνεστῶτι τρισκαιδεκάτῳ ἔτι (l. ἔτει) Τιβερίου Καίσαρος Σεβαστοῦ in P.Mich. V 337, 13-14 (26 CE, see *BL* XII 122), as well as for the day of the month, e.g. Χοιὰκ τρισκαιδεκάτηι in P.Mich. V 345, 4 (7 CE).

During the first three centuries of the Roman period, we find a total of 122 attestations of the spelling with ⟨ι⟩ and only six certain attestations of the spelling with ⟨ει⟩ in four different texts.[25] I would argue that it is more sensible to assume that there were four scribes who produced six examples of a spelling which was unconventional at the time rather than maintaining that more than a hundred other scribes did. For instance in P.Mich. V 354, 29-30 (52 CE), the spelling of τρεισκαιδεκάτου is found in combination with numerous other non-standard spellings, e.g. the day of the month is written as μιᾷ καὶ εἰκάτει (l. εἰκάδι), 'twenty first' (l. 32). Confusion between the variant spellings of the element 'three' in different formations could explain these few exceptions to the rule. The spelling with ⟨ι⟩ thus seems to have become the standard spelling of this lexeme from the beginning of Roman imperial rule in the Eastern Mediterranean.[26]

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der Griechischen Papyrusurkunden aus Ägypten (*BL*). Translations are added by the author, but may be based on the translation of the edition if available.

24 The spelling variant δεκατρῖς also appears for the first time in documents during the first century CE, but the variants δεκατρεῖς and δεκατρῖς still seem to have been attested in more or less equal quantities during the Roman period (each attested in 21 papyri during the first three centuries CE).

25 P.Mich. V 354, 29-30 (Tebtynis, 52 CE), PSI 10 1134, 8 and 17 (Tebtynis, 91 CE), P.Hamb. I 71, 14 (Philadelpheia, 149 CE), but see τρισκαιδε | κ̣άτου in the subscription in ll. 31-32, and P.Tebt. II 601, 4 and 6 (Tebtynis, 150-151 CE, see *BL* XII 281).

26 A search for both forms in inscriptions collected by the Packard Humanities Institute at https://inscriptions.packhum.org/ (accessed November 2018) suggests that this orthographic norm was also found outside of Egypt. If the spellings of the recorded inscriptions in *PHI* can be trusted, they largely confirm this pattern with only attestations of the spelling ⟨ει⟩ (7 times) in the period BCE changing to 10 attestations of ⟨ι⟩ and only 2 with ⟨ει⟩ in the period CE in inscriptions from Asia Minor and the Near East. A similar pattern can be found in inscriptions from mainland Greece and the Aegean islands. The spelling ⟨ει⟩ (16 times) is more frequently attested than the spelling ⟨ι⟩ (3 times) in inscriptions from the Aegean Islands during the III-II centuries BCE. In inscriptions from mainland Greece, we only find the spelling with ⟨ι⟩ from the first century CE onwards, but both spellings are attested in different periods before that. Better digital resources for inscriptions would allow us to study these types of orthographic variation at a larger scale.

The use of the spelling ⟨ι⟩ during the Roman period could have been aided by analogy to the spelling τρισ- and τρι- in other composite elements.[27] For example, the numeral τρισχίλιοι, 'three thousand', has always had a normative spelling with ⟨ι⟩, because it derives from the adverb τρίς which originally had a short [i]. The cardinal number τρισχίλιοι in fact has a similar distribution of spelling variation to τρισκαιδέκατος in papyrus documents from the Roman period (I-III CE), with 114 attestations of the spelling with ⟨ι⟩ and the spelling with ⟨ει⟩ occurring in only three texts. These parallel frequencies of occurrence give us a good reason to consider the spelling τρισ- in τρισκαιδέκατος just as conventional as the spelling of τρισ- in τρισχίλιοι in papyri from the Roman period, albeit with different etymological origins.

From the fourth century onwards papyrus documents are dated by their *indiction* year. Initially, this new dating formula does not change the spelling of the number: during the fourth century there are 21 attestations of the spelling with ⟨ι⟩ and only 1 of the spelling ⟨ει⟩ (SB XVIII 13252, 3 and 13; 369-370 CE). During the fifth century things start to change. The common spelling with ⟨ι⟩ is continued in the majority of the documents from Oxyrhynchos during the fifth (9 with ⟨ι⟩ and 1 with ⟨ει⟩) and sixth centuries (16 with ⟨ι⟩ and 3 with ⟨ει⟩). In the Hermopolite nome, however, the spelling with ⟨ει⟩ is found again in a letter from the council of Hermopolis from the end of the fourth century (P. Select 10, 11; 399-400 CE, see *BL* VIII 200) and a tax receipt (SB XXII 15314, 3; 444-445 CE) and lease contract (BGU XII 2160, 10; 488 CE) from the fifth century and continues to be more frequent during the sixth century (8 documents with ⟨ει⟩ against 4 with ⟨ι⟩).[28]

The change from Hellenistic kingdom to the Roman Empire seems to mark the change from the spelling τρεισκαιδέκατος to a predominant spelling of τρισκαιδέκατος in documentary papyri. Which aspect of the linguistic interaction between Greeks and Romans may have triggered this change—and possibly other changes—is a question that needs to be studied in its own right. While Roman imperial rule assisted in the spread of Greek orthographic norms across the Eastern Mediterranean, from the fifth century onwards regional

27 The spelling τρι- is normal in compounds such as τρίπους, 'three-legged'; τριμερής, 'tripartite'; τρίμηνος, 'of three months'; τριέτης, 'of three years', see also Chantraine 1977, 1131, and the adverbial τρισ- is also the normal spelling in compounds like τρισμέγιστος, 'thrice greatest', and τρισάγιος, 'thrice holy', just as in τρίς, 'three times'.

28 The spelling with ⟨ι⟩ is only found in two documents from the Hermopolite possibly dating to the fifth century, namely in BGU XII 2144, 3 and PSI I 66, 24 (see *BL* VIII 392). Variation is also found in other regions, but there is not enough material to determine the most frequent pattern in other regions during the fifth century CE.

scribal practices prevail and the orthographic norms seem to have changed again accordingly.

5 κλ(ε)ίνη, 'bed, couch'

Full dating formulae are mostly found in documents produced in professional contexts. Changes in norms and conventions can spread relatively easily through scribal training and shared practices. Even though we are less likely to encounter widespread changes from one spelling to another in private contexts, there are some lexemes for which one could argue for a change in spelling practices.

The noun κλίνη, 'that on which one lies' (LSJ s.v.), derives from the present form of the verb κλίνω (**klin-i̯e/o-*), 'to bend, incline, lean on', which has a long root vowel resulting from compensatory lengthening after merger of the nasal with the *yod* of the present suffix.[29] Root vowels ⟨ι⟩ and ⟨ει⟩ are found for the derivatives without a nasal, but the (long) root vowel ⟨ι⟩ is represented in most derivatives with the nasal, such as the noun κλίνη.[30] In the papyri, both the present verb as well as the derived noun and adjectives are attested multiple times with both spellings ⟨ι⟩ and ⟨ει⟩ in the root, compare, for example, the variant spellings of the adjectives κλινοπετής and κλινήρης, 'bed-ridden', in the documentary papyri.[31] The noun κλίνη occurs most frequently of all, especially in papyri dated between the third century BCE and the third century CE, and mostly in private letters and lists of items.

The literary papyri found in Herculaneum, dated to the first century BCE, show the classical spelling κλίνη, see e.g. P.Herc. 182, 807 and 1050.[32] In the documentary papyri, both spellings are found during the Ptolemaic period (10 times ⟨ει⟩ and 11 times ⟨ι⟩). The spelling with ⟨ι⟩ is attested, for example, in the lists of items in P.Cair.Zen. IV 59692, 13 (mid III BCE) κλίνη μαλακὴ α, 'one soft

29 See Beekes 2010, 716-717. Herodian (Περὶ ὀρθογραφίας 2.462, 3-6 Lentz) explains that verbs such as κλίνω and κρίνω are written with ⟨ι⟩ in the root and not with ⟨ει⟩, because they do not belong to the group of –ενω verbs which have a future form with ⟨ε⟩ in the stem (cf. pres. κτείνω, fut. κτενῶ).

30 See Chantraine 1970, 544.

31 E.g. κλεινοπετῆς in P.Hels. I 2, 22 (ca. 195-192 BCE) and κλινοπετῆ in P.Tebt. III.2 960, 3-4 (II BCE) and κλεινήρη in BGU I 45, 14 (203 CE) and κλινήρης in P.Hamb. IV 240, 14 and 20 (119-120 CE). For the distribution of these different lexemes with a similar meaning in literary and documentary sources from the Ptolemaic and Roman periods see Maravela 2018, 22-24.

32 The attestations for literary papyri are based on the results in the *DCLP* at www.litpap.info, accessed November 2018.

bed', P.Dryton 38, 27 (mid II BCE) πόδες κλίνης δ, 'four legs of a bed', and P.Giss. Univ. I 10, 2.6 (145-116 BCE) κλίνη σπαρτότονος α, 'one bed slung on ropes'. The spelling with ⟨ει⟩ is found, for example, in the letters P.Cair.Zen. III 59484, 11-12 (mid III BCE) ὥστε μὴ ἁρμόσαι κλείνηι, 'so that they (i.e. the carpets) do not fit a couch', P.Tebt. III.1 765, 1-2 (153 BCE) βουλόμενος [ἀ]π̣ο̣στεῖλαι ε[ἰς] τὸ ἱερὸν κλείνην καὶ τύλην, 'intending to send a bed and a cushion to the temple', and SB XVIII 13168, 5 (123 BCE) πλὴν στρώματος ἑνὸς καὶ κλείνης τορυνευτῆς α, 'except for one matrass and one turned bed'.

During the Roman period, the spelling with ⟨ει⟩ becomes much more frequent with 30 attestations against 5 with ⟨ι⟩. The spelling with ⟨ι⟩ is still used to refer to a concrete object, just as during the Ptolemaic period, see e.g. in καὶ κλίνας δύω, 'and two beds', among some items that should be bought in the private letter SB VI 9636, 19 (135-136 CE), and κιβωτ̣[ὸν … καὶ] κλίνην μία[ν], 'a chest and one bed', among the items under sale in BGU XV 2481, 10-11 (138-161 CE). The spelling ⟨ει⟩ is found in similar contexts, such as in inventory lists in BGU XVI 2669, 4-5 (21 BCE-5 CE) ἐν οἰκίσκωι κλείναι β, 'in a small room: two couches', BGU VII 1666, 14-15 (I CE) κλείνας β καὶ τρά[π]εζα, 'two couches and a table', and P.Oxy. XII 1449, 41 (213-216 CE) κλείνη ξ̣[υλ(ίνη), 'a wooden couch', in a return of temple property.

The large number of attestations with the spelling ⟨ει⟩, however, is caused by a different sense of the word. The lexeme κλίνη can also be used for the dining couches at a *theoxenion*, a banquet or sacred meal held in a temple or sanctuary.[33] By metonymic extension, these couches come to refer to the event itself (previously called περίδειπνον). The spelling κλείνη is found referring to such an event in 18 dinner invitations from Oxyrhynchos, e.g. ἐρωτᾷ σε Χαιρήμων δειπνῆσαι εἰς κλείνην τοῦ κυρίου Σαράπιδος ἐν τῷ Σαραπείῳ αὔριον, 'Chairemon invites you to have dinner at a banquet of the lord Sarapis in the Sarapeion tomorrow', in P.Oxy. I 110, 1-3 (II CE). A reference to the meaning 'banquet' is also found in a letter from the Arsinoite nome in which Ptolemaios informs his father about a banquet in the honor of Sarapis ὅτι σιωπητικοῦ τῆς κλείνης (δραχμαὶ) κδ, 'the novices' fee for the banquet is 24 drachmas', and ἄλλη γὰρ δίμηνός ἐστιν ⟨ἕ⟩ως τῆς κλείνης, 'for it is another two months until the banquet' in P.Mich. VIII 511, 16-18 and 3-4 (first half III CE).

Although both spellings of κλ(ε)ίνη 'bed, couch' are used during the Ptolemaic and Roman periods, the variation between ⟨ι⟩ and ⟨ει⟩ does not seem to be entirely accidental. For the new more abstract meaning of 'banquet', the spelling with ⟨ει⟩ is preferred without exception. In this case, the new meaning of the lexeme seems to have aided the spread of a new standard spelling.

33 See Montserrat 1992.

6 Derived Nouns in –(ε)ιον

Even though almost every lexeme containing the phoneme /i/ can be spelled in various ways in documentary papyri, some elements seem more vulnerable to *itacism* than others. Variation is especially common with derived nouns in –(ε)ια and –(ε)ιον, as already observed by Palmer, because variant spellings may have been present in the Greek language for some time.[34] He suggests some general principles to decide about the orthography of nouns in –(ε)ια, but fails to find a consistent solution for the nouns in –(ε)ιον:

> No satisfactory solution is possible in the choice between –ιον and –ειον, the suffixes which characterize *inter alia* names of establishments, workshops, &c., since Attic, too, possessed both suffixes (see p. 56). It is true that the two forms are often distinguished by the position of the accent; but here, too, analogical displacement has blurred the original distinctions.... If we have no indication of the position of the accent, the problem is insoluble, and only an arbitrary decision is possible: in MGr. –ειό (derived from –εῖον) is characteristic of 'establishment' names, and this justifies us, perhaps, in interpreting such nouns in –ιον, ειον, &c., in our texts as –εῖον.[35]

The suffix –ιον with accent on the antepenultimate is used for denominative nouns in a wide variety of meanings, such as the place connected to a person or *nomen agentis*, instrument, means, household objects, materials, affiliation by category or similarity, and to form diminutives.[36] The Attic suffix -εῖον (corresponding to -ήιον in Homer and Ionic) with accent on the penultimate is similar in form and meaning and seems to alternate with –ιον in post-classical Greek.[37] The suffix –εῖον may be particularly productive in papyri to form a noun denoting a certain place of action, such as a workshop, as also referred to by Palmer (see above).[38]

The two suffixes can be very difficult to keep apart, especially in rare words or new formations. Palmer's conclusion that "only an arbitrary decision is possible" in some of these cases may be true when a modern scholar intends to choose a single orthographic form for the lemma of a lexeme with attestations

34 Palmer 1945, 52-58; 70-77.
35 See Palmer 1945, 4-5.
36 See Chantraine 1933, 54-68 and Moulton 1929, 341-344.
37 See Chantraine 1933, 60-61.
38 See also Moulton 1929, 344.

spanning more than two thousand years. Synchronically, however, it might be possible to identify some of the orthographic conventions for individual lexemes that are followed by scribes and scholars at various moments in time.[39]

6.1 *γλωσσοκομεῖον and γλωσσοκόμιον*

The difficulty to separate the two suffixes –ιον and –εῖον can be illustrated by derivations from the noun γλωσσόκομον. The lexeme γλωσσόκομον is regularly found in papyri, already from the third BCE (e.g. γλωσσόκομα γ '3 chests' in a list of pledged items in P.Worp 13, 44) until the sixth century CE (e.g. γλωσόκομον (sic) χάρτ(ων) 'box for documents' in a description of the props used on stage in SB XXVI 16648, 17, cf. Perrone 2011, 142 n. 51).[40] The derived noun γλωσσοκομ(ε)ιον is only found in documentary papyri, the medical works by Galen and accounts of its spelling and meaning by lexicographers and grammarians. In Pollux' *Onomasticon* (10.153-154 Bethe), the noun is mentioned with a reference to Lysippus' *Bacchantes*, where it serves as a 'case to keep the reeds or tongues of musical instruments' (see also LSJ s.v.), compare also the entry in Phrynichus:

> γλωττοκομεῖον (Lysipp. fr. 5): ἐπὶ μόνου τοῦ τῶν αὐλητικῶν γλωττῶν ἀγγείου. ὕστερον δὲ καὶ εἰς ἑτέραν χρῆσιν κατεσκευάζετο, βιβλίων ἢ ἱματίων ἢ ἀργύρου ἢ ὁτουοῦν ἄλλου. καλοῦσι δ' αὐτὸ οἱ ἀμαθεῖς γλωσσόκομον.[41]
>
> γλωττοκομεῖον (Lysipp. fr. 5): only the box for the reeds of flutes. Later it is also applied to other usages, for books or cloths or money or whatever else. The ignorant call this γλωσσόκομον.

Phrynichus adds here that the word actually has a much wider use than the one in the literary reference and that this secondary usage is very similar in meaning to γλωσσόκομον. This more general meaning indeed corresponds to what we find in papyri and Galen. Preisigke translates γλωσσόκομον 'Kästchen für Wertsachen' and γλωσσοκομεῖον as 'Schmuckkästchen'.[42] It is unclear whether there would be a significant difference in size or form between these two objects, but it is possible that γλωσσοκόμιον was understood as a diminutive form

39 Since accents are not visible in documentary papyri and the contemporary pronunciation can be difficult to establish with certainty, the accent is left out during the discussion of ambiguous cases in the following sections.

40 On the meaning of γλωσσόκομον in the papyri see also Vandorpe, P.Dryton, p. 283.

41 *Praep. Soph.* p. 58, 8-11 Borries. Translation by author.

42 Preisigke 1925, 299.

of γλωσσόκομον by some.[43] On the other hand, Galen (*In Hipp. libr. de fract. comm.* ii. LXIV, XVIII.2 p. 502 Kühn) uses the word γλωσσόκομον for a type of wooden box fixed around the leg to heal fractures and adds that it makes no difference whether it is called γλωσσόκομον or γλωσσοκόμιον.

Even though both words are attested several times in documentary papyri, strikingly, the spelling γλωσσοκομεῖον is never found. All five attestations of the derived noun, ranging from the second century BCE until the sixth century CE, consistently spell γλωσσοκόμιον.[44] Editors, on the other hand, always regularize and supplement the spelling γλωσσοκομεῖον, as in the Lysippus fragment, probably following dictionaries and/or Palmer.[45] Photius, summarizing an earlier work of the grammarian Helladius, also rejects the variant spelling (and pronunciation) of the -ιον suffix with antepenultimate accentuation:

> Ὅτι τὸ γλωσσοκομεῖον κυρίως μέν ἐστι τὸ ἀγγεῖον ὃ τὰς αὐλητικὰς ὑποδέχεται γλώσσας· οἱ δὲ νῦν καταχρώμενοι καὶ ἐπὶ τῶν ἕτερά τινα δεχομένων τιθέασι τὴν λέξιν. Καὶ τοῦτο μὲν ἀνεκτόν, οἱ δὲ προσδιαστρέφουσι καὶ τὸν τόνον καὶ τὸν χρόνον· δέον γὰρ προπερισπᾶν τὴν παραλήγουσαν μακράν, οὗτοι καὶ συστέλλουσι καὶ προπαροξύνουσιν.[46]
>
> The γλωσσοκομεῖον in the proper sense is a box in which the reeds of flutes are collected, but now users making excessive use of it also apply the word to containers of other items. And this is acceptable, but they also pervert the accent and vowel length. For while it should have a circumflex accent

43 The adjective μέγα 'big' is added to P.Tebt. II 414, 21 (II CE) τὸ γλωσόκομον (sic) τὸ μέγα, 'the big case', while the adjective μικρός, 'small', is added to derived noun γλωσσοκόμιον in P.Oxy. LIX 4005, 6 (VI CE) μικ̣ρὸν δὲ γλωσ̣σ̣ο̣κ̣ώμιον (sic) καταξίωσον ἀγοράσαι τῇ ἀδελφῇ σου Φοιβαδίᾳ, 'please buy a small casket for your sister Phoebadia'. The abbreviation γλωσσόκο(μον) μι(κρὸν) ἐν ὧι βυ(βλία), 'a small casket containing sheets of papyrus', which was kept inside a larger box in P.Dryton 42, 12 (134 BCE), may have referred to either one of the nouns. Most references do not give an accurate account of the relative size of the two objects.

44 See BGU VI 1300, 9 (210 or 193 BCE), BGU III 824, 9-10 (97-98 CE; *BL* VIII, 34-35), P.Lond. II 191 (p. 264), 14 (103-117 CE), P.Cair.Masp. I 67006 V 64 and 89 (ca. 567 CE) and P.Oxy. LIX 4005, 6 (VI CE).

45 Palmer 1945, 56. The spelling with ⟨ει⟩ is found in LSJ, Sophocles 1914, Preisigke 1925, and the most recent *DGE*. Only in *DGE*, two examples (in an inscription and on a papyrus) are given of the orthographical variant with ⟨ι⟩ amongst other (more extreme) examples of attested variant spellings. The spelling with ⟨ει⟩ seems also preferred by Herodian (Περὶ ὀρθογραφίας 2.588, 11 Lentz), according to the *epitomes* by Choeroboscus, possibly because he understood the noun to be derived from the verb κομέω, 'to take care of'. The suffix of nouns derived from verbs in –ω is explained to be spelled with ⟨ει⟩ (Hdn. Περὶ ὀρθογραφίας 2.458, 17-20 Lentz).

46 *Bibl.* 279, 532a, 6-12 Henry. Translation by author.

on the long penultimate, some both shorten it and give it an acute accent on the antepenultimate.

The use of the lexeme for containers of various items seems to have coincided with the pronunciation of an acute accent on the antepenultimate syllable and shortening of the penultimate syllable, as expected for derived nouns with the suffix –ιον. The shortening of the vowel of the penultimate would also be consistent with the spelling ⟨ι⟩ in the papyri. Thus it seems likely that we are dealing here with a noun γλωσσοκόμιον, derived from γλωσσόκομον with the suffix –ιον. This noun γλωσσοκόμιον may have been similar in form and meaning to another derived noun γλωσσοκομεῖον, which we only know from the literary reference discussed by grammarians. This other noun seems to have been formed with the suffix –εῖον, perhaps with a more elevated meaning. For all we know, the usage of this other noun seems to have been much more limited than the post-classical Greek form that is found in documentary papyri and Galen. There may be no need to identify these attestations of the word in common usage with the single literary occurrence in Attic comedy, as grammarians have led us to believe.

6.2 *νοσοκομεῖον and νοσοκόμιον, 'hospital'*

A similar formation of the verb κομέω 'to take care of' and the suffix –(ε)ιον is found in νοσοκομεῖον 'hospital' or 'place for taking care of the sick'. According to the orthographic principles by Herodian, the suffix of nouns derived from verbs in –ω is spelled with ⟨ει⟩ (Hdn. Περὶ ὀρθογραφίας 2.458, 17-20 Lentz) and one could also easily identify the use of the suffix –εῖον with a place of action.[47] Dictionaries agree on the spelling νοσοκομεῖον, only Preisigke mentions an alternative spelling in his supplement.[48]

The concept of hospital and the word νοσοκομεῖον were introduced during the late fourth century CE, but it seems to have taken until the sixth century until an institution with this name was put into practice at a larger scale.[49] The lexeme appears 50 times in papyri dated to the sixth and seventh centuries.[50] Only once, we have a doubtful occurrence of the spelling with ⟨ει⟩, eleven

47 See Palmer 1945, 57.

48 Cf. LSJ s.v., Lampe 1961, 922, and Sophocles 1914, 786; Preisigke 1931, 262.

49 See Miller 1985, 25; van Minnen 1995.

50 Considering this rather strict chronological distribution of the attestations of the lexeme, a date to the sixth or seventh century should be reconsidered for the few examples with (uncertain) paleographical dates to earlier periods. The handwriting of PSI I 84 seems to fit a date to the sixth-seventh century better than the fourth-fifth, cf. also its parallel P.Oxy. XVI 2055, dated to the sixth century. The dating of SB I 4869 (IV-VII), SB I 4903 (IV-VII) and SB I 4904 (IV-VII) could be narrowed down to the sixth-seventh century.

other documents contain 15 attestations of the spelling νοσοκομιον.[51] The remaining attestations concern an abbreviated or incompletely preserved form of the word, invariably supplemented as νοσοκομεῖον by the editors.

Since the attestations of νοσοκομιον clearly outnumber any evidence for the use of νοσοκομεῖον and they are found in various places in Egypt (Arsinoite, Hermopolite and Oxyrhynchite), it seems that νοσοκομιον should be understood as the standard spelling in the sixth and seventh century papyri based on documentary evidence. Just as for the derived noun γλωσσοκόμιον, the consistent spelling of νοσοκομιον in documentary papyri suggests a derivation with the suffix –ιον. Whether the word was also pronounced with an antepenultimate accent at the time is more difficult to establish with certainty.[52]

6.3 *γραμματεῖον and γραμμάτιον*

The variation between the γραμματεῖον and γραμμάτιον poses a more complex case of the spelling of the suffix. Since the works of Herodian and Pollux, grammarians and lexicographers have provided explanations for the meaning and spelling of this lexeme. A prominent idea in these works is that there are two separately derived nouns, γραμματεῖον and γραμμάτιον, of which one has a diminutive meaning and the other does not. Derivatives from nouns in –μα without a diminutive meaning are spelled with ⟨ει⟩ and a penultimate accent (e.g. γράμμα/γραμματεῖον), while derivatives of the same nouns with a diminutive meaning (e.g. γραμμάτιον) are spelled with ⟨ι⟩ and an antepenultimate accent (Hdn. Περὶ ὀρθογραφίας 2.458, 29-33 Lentz).

While the spelling and meaning of the diminutive γραμμάτιον, 'small letter', is relatively straightforward, the meaning and spelling of the non-diminutive

51 SB I 4668, 4 (678 CE), a contract written in the capital of the Arsinoite is read as τῷ εὐαγεῖ νοσοκομείῳ in the edition. This spelling, however, was not present in the *editio princeps* by Wessely in 1888 (*Revue égyptologique* 5, p. 139, no. 33), but it only appeared in a re-edition published by the same editor in 1889 (*Pariser Papyri*, p. 125, no. 33) and is taken over in SB I. Unfortunately, no photograph is available of this text to check the suspicion that this sudden change in spelling from one edition to the other may have been accidental.

52 Due to the lack of evidence for accentuation, it is difficult to be sure about the position of the accent. At first, one would be inclined to assume an antepenultimate accentuation for nouns with the suffix –ιον, as also assumed for γλωσσοκόμιον (see 6.1). The Modern Greek νοσοκομείο has a penultimate accentuation in accordance with the spelling with ⟨ει⟩, but this does not exclude the possibility of an antepenultimate accentuation (νοσοκόμιον) in earlier periods. On the other hand, the difference between post-classical and Modern Greek may only have affected the spelling and not the position of the accent in pronunciation (νοσοκομίον ⟩ νοσοκομείο). Just as for γραμματίον, the spelling ⲛⲟⲥⲟⲕⲟⲙⲓⲟⲛ is commonly found in Coptic without omission of the ⟨ο⟩, cf. 6.3.5. If this lack of evidence is to be taken as an argument, it would point towards a penultimate accentuation at the time.

suffix –(ε)ιον have been subject to variation and change in post-classical Greek. According to the dictionaries (see e.g. LSJ and *DGE* s.v.), the core meaning of τὸ γραμματεῖον, 'that on which one writes', refers to writing tablets and, more specifically, to 'written documents' of various types, such as bonds, contracts and testaments. Especially in this last meaning, the lexeme is 'frequently spelled γραμμάτιον' according to LSJ s.v. 2. Preisigke even has separate entries for the lexeme in both spellings with roughly the same meaning 'Schriftstück, Urkunde'.[53] Does this mean that these were indeed two nouns derived with different suffixes in similar meanings or that there was one derived noun attested in different spellings?

6.3.1 A Scribe's Office

The first observation that can be made is again a noticeable difference in attestations between the Ptolemaic and Roman periods. During the Ptolemaic period, the lexeme is only attested once. P.Corn. 1, 9 (257 BCE) contains a daily record of the oil for lighting provided by the finance minister Apollonios to various people and places in his service, such as the εἰς τὸ Ἀθηναγόρου λογιστήριον, 'for the accounting office of Athenagoras' (ll. 4-5), and Φίλωνι εἰς τὸ σιτοποεῖον, 'to Philon for the bakery' (l. 11). One of the places mentioned several times is εἰς τὸ Ἰατροκλέους γραμματεῖον, 'for the scribe's office of Iatrokles' (ll. 8-9, 41-42 and 51). This seems to be a physical place where the scribe Iatrokles was working. The meaning of the suffix –ειον as 'place of action' derived from γραμματεύς, 'scribe', is mentioned by the grammarians since Herodian and γραμματεῖον is often used as an example to illustrate the semantics behind this type of derivation:

> Τὰ ἀπὸ τῶν εἰς ε͞υς διὰ τοῦ ει͞ον γενόμενα οὐδέτερα μονογενῆ διὰ τῆς ε͞ι διφθόγγου γράφεται καὶ προπερισπᾶται, κουρεύς κουρεῖον, κναφεύς κναφεῖον, γραμματεύς γραμματεῖον, βαλανεύς βαλανεῖον, βαφεύς βαφεῖον.[54]
>
> The neuter forms in -ειον with one gender derived from forms in -ευς are written with the diphthong ⟨ει⟩ and a penultimate accent, e.g. κουρεύς ('barber') κουρεῖον ('barber's shop'), κναφεύς ('fuller') κναφεῖον ('fuller's shop'), γραμματεύς ('scribe') γραμματεῖον ('scribe's office'), βαλανεύς ('bathman') βαλανεῖον ('bathing room'), βαφεύς ('dyer') βαφεῖον ('dyer's house').

53 Preisigke 1925, 307-308.

54 Hdn. Περὶ ὀρθογραφίας 2.458, 11-13 Lentz. Translation by author.

In these examples, the suffix –ειον functions as a locative derivative (e.g. γραμματεῖον) of agent nouns (e.g. γραμματεύς). This analogical explanation works very well for the example in the Ptolemaic papyrus (see *supra*), but it seems to have limited use to establish the spelling of the noun in later periods, since γραμματεῖον is not attested any more in this meaning in documentary papyri after the third century BCE.[55]

6.3.2 Tablets and Papyrus

The derived diminutive γραμματείδιον is explicitly referred to as τοῦ σημαίνοντος τὴν μικρὰν δέλτον, 'meaning a small tablet' by Herodian (Περὶ ὀρθογραφίας 2.488 21-26 Lentz). In correspondence with that interpretation, Orus supposedly has said:

> γραμματεῖον· οὐ τὸ μικρὸν βιβλίον λέγεται, αλλ' ἡ μικρὰ δέλτος.[56]
>
> γραμματεῖον does not refer to a small roll, but to a small tablet.

When Pollux (*Onom.* 4.18 Bethe) discusses various words for the writing tablets used by teachers, he mentions that Herodotus calls a double tablet δελτίον δίπτυχον (Hdt. 7.239), the Attic writers γραμματεῖον δίθυρον, while Homer (*Il.* 6.169) has πίνακι πτυκτῷ. The noun γραμματεῖον as 'writing tablet' in Attic could indeed be another derivation from the noun γραμματεύς, 'scribe', but this etymology does not need to exclude other writing materials.[57] Whereas tablets served as scribal tools for a long time, the precise material on which one writes

55 The locative meaning of 'scribal office' or 'record office' seems to have been taken over by the female derived noun γραμματεία in the Roman period, which used to refer to the post of a scribe. For example, when Menches is appointed as village scribe in P.Tebt. I 10, 1-2 (119 BCE) Μεγχῆι τῶι ὑπὸ τοῦ διοικητοῦ καθεσταμένωι πρὸς τῆι κωμογραμματείαι Κερκεοσίρεως, 'Menches, having been appointed by the *dioiketes* to the office of village scribe of Kerkeosiris', and in the letter of recommendation P.Petrie Kleon 83, 3-6 (ca. 260-236 BCE) καλῶς [οὖν] ποιήσεις φροντίσας ὡς ἐνδεχομένως περὶ αὐτοῦ εἰς τὸ ἐπιγραφῆναι αὐτῶι γραμματείαν οὗ ἄν σοι φαίνηται, 'please, try all that is in your ability to make sure that a scribal post is arranged for him wherever you think fit'. This becomes extended to refer to the physical office itself as well as the taxes in support of a record office (see Wallace 1938, 277-278). Most of the attestations are either spelled with ⟨ει⟩ or they are abbreviated, but incidental spellings with ⟨ι⟩ occur as well, e.g. P.Coll.Youtie I 26, 4-5 (156 CE) εἰς ἣν γεωργοῦμ(εν) βασιλ(ικὴν) γῆν οὐκ ἔλ⟨λ⟩ασσον β (ἀρταβῶν) περὶ γραμματίαν μητροπόλ(εως), 'for the crown land which we farm at a rent of no less than 2 *artabas* in the area of the scribal office of the metropolis'. The use of this lexeme spelled with ⟨ει⟩ is continued in the Modern Greek γραμματεία, 'secretariat'.

56 B 58 Alpers. Translation by author.

57 See also Chantraine 1933, 60.

may not have been an essential part of the meaning of this lexeme throughout this period.

Tablets were used in Egypt as well, but none of the attestations in papyri seems to refer to a writing tablet strictly speaking. One of the attestations of γραμματ(ε)ιον from the Roman period, gives an indication to the type of material that was used:

> τὸ γραμματιον ὃ διεπέμψας{τε} μοι δι' Ἀλεξάνδρ[ο]υ τοῦ καψαρίου ὑπόβροχον ἠνέχθη.[58]
>
> the document which you sent to me through Alexandros the *capsarius* (i.e. the one who watches the clothes in the baths) was brought wet.

Since the document is argued to have become too wet to read its contents, it must have been written with ink on a more vulnerable type of material, such as papyrus. The word γραμματεῖον in the papyri is, therefore, more likely to have referred to 'a written document' of some sort, which could have been written by scribes on various kinds of materials.

6.3.3 Juridical Documents

Soon after the reappearance of γραμματ(ε)ιον in the corpus of papyrus documents, the lexeme seems to have been applied to a more specific type of writing, namely a juridical document.[59] Around the middle of the second century, the lexeme appears for the first time in one of the juridical clauses of a loan contract, in a phrase added between the execution clause and validity clause:

> τῶν ἀπολύσεωι δαπ̣α̣ν̣ῶ̣ι̣ καὶ γρα[μ]μ̣α̣τ̣ι̣ω̣ν [π]άντων ὄντων πρὸς ἀμφοτέρ̣ο̣υ̣ς ἐξ ἴσου.[60]
>
> all expenses and documents of discharge are paid by both in equal shares.

58 P.Strasb. IV 260, 1-3 (161 CE). Translation by author.

59 P.Genova II 62v (98) reads γρ( ) Ἐπαφροδείτου in the endorsement of a loan contract, which is interpreted by the editor as γραμματ(ε)ιον Ἐπαφροδείτου, 'deed of Epaphrodeitos'. If this supplement is correct, this would be earliest attestation of the lexeme in the Roman period and it would immediately firmly connect the use of this lexeme to a juridical context.

60 SB XIV 11599, 12-17 (155 CE). Translation by author.

By the third century CE, it is also found in the validity clause of contracts, besides the more popular χειρόγραφον 'manuscript, bond', to refer to the document at hand:

> τὸ δὲ γραμματιον τοῦτο ἁπλοῦν γραφὲν ἔστω κ̣ύ̣ριον.[61]
>
> this deed, written as a single copy, shall be valid.

The same applies to the endorsement of a contract in SB XIV 12190v (297 CE) as γραμματεῖον Ὡρείωνος, 'deed of Horion'. Even in some private letters and petitions, references seem to point to the interpretation as contract, e.g. in the petition P.Cair.Isid. 62, 22 (297 CE) γραμματιων (l. γραμματιον) τῆς ὑπαλλαγῆς, 'deed of security'.[62] This usage of the lexeme is also attested in contemporary lexica. Pollux (Onom. 8.140 Bethe) mentions it in a list of terms referring to various types of contracts, such as συγγραφή, συνάλλαγμα, συμβόλαιον, συνθήκη and ὁμολογία. Hesychius also connects the word to various lexemes with the same meaning, such as συμβόλαιον (Lex. Σ 2295 Hansen) and χειρόγραφον (Lex. X 291 Hansen-Cunningham). The original meaning referring to writing material and, by metonymic extension to the document itself, very soon seems to have acquired an even more specialized meaning by its almost exclusive use in legal contexts in documentary papyri.

6.3.4 Spelling Variation

During the third century CE, the lexeme is still only used occasionally and both spellings are found in equal numbers (5 times spelled with ⟨ι⟩ and 5 times with ⟨ει⟩), but attestations become increasingly more frequent in papyri from the fourth century onwards. The increased use of the lexeme in juridical contexts seems to coincide with a more consistent spelling. Out of all attestations of the lexeme during the fourth to sixth centuries CE, 189 are written with ⟨ι⟩ and only 79 with ⟨ει⟩. Just as with the spelling of the cardinal number τρισκαιδέκατος (section 4), however, there are significant geographical differences in spelling during the Byzantine period.

In the Oxyrhynchite nome, the spelling with ⟨ι⟩ (45 times) seems to have become the norm. During the later fourth, fifth and sixth centuries, the spelling

61 SB IV 7358, 16-17 (277-282 CE), see also *BL* 7, 193. Translation by author.

62 Other early attestations in private letters, such as P.Bagnall 12, 2-5 (ca. 115-130 CE) and P.Mil.Vogl. II 76, 16-19 (II CE), are less explicit, but they also seem to concern official, perhaps juridical, documents.

with ⟨ι⟩ is used without exception in the Oxyrhynchite.[63] In the Hermopolite nome, there is much more variation in the spelling of this lexeme, as both spellings appear in equal quantities (29 times) during the fourth to sixth centuries. Interestingly, the spelling with ⟨ι⟩ is mainly found in witness subscriptions (23 out of the 29 attestations) in the Hermopolite, whereas the spelling with ⟨ει⟩ also occurs in the parts of a contract commonly written by a professional scribe, such as the execution and validity clauses and the subscriptions by the parties (18 out of the 29). In practice, this means that both spellings may occur in the same document dependent on the person who wrote that part. For example, in BGU XVII 2687 (Hermopolis, early VI), the spelling with ⟨ει⟩ is found in the validity clause of the contract and the subscriptions by the party (Aurelius Victor written for him by Aurelius Zacharias from Hermopolis) and the first witness (Flavius Taurinus from Hermopolis), while the second witness (Aurelius Theodosis from Hermopolis) writes μαρτυρῶ τῷ γραμματίῳ, 'I witness the deed' (l. 6) spelled with ⟨ι⟩.[64] Judging from his handwriting, Aurelius Theodosis was clearly able to write, but that does not mean that he followed the local orthographic norms of the professional scribes in the Hermopolite nome.

The situation is more difficult to assess for the seventh century, since more than half of the attestations are abbreviated by this time (41 out of the 70). Especially the scribes in the Oxyrhynchite are very consistent: all but two of the attestations are abbreviated. Still, the original spelling γραμματεῖον may have regained some of its normative value. While the spelling with ⟨ι⟩ is still found in the subscription to an acknowledgement of debt in P.Oxy. LXXV 5070, 20 (605-606 or 620-621 CE), the spelling with ⟨ει⟩ is attested in the validity clause of an acknowledgement of debt in P.Oxy. LXXII 4930, 21 (614 CE). In the Hermopolite, the spelling with ⟨ι⟩ is no longer found at all during the seventh century.

63 The spelling γραμματεῖον is attested in only four texts from the Oxyrhynchite and these attestations all date to the early fourth century. They happen to be attested in other genres than contracts, where there may have been less consistent scribal practices, see P.Oxy. LX 4075, 17, 19 and 21 (daybook, 318 CE), P.Oxy. LIV 3757, 17, 22, and possibly 13 and 19 (proceedings, 325), P.Princ. II 77, 13 (petition, early IV CE, see *BL* IX 220) and *PSI* V 452, 5 and 13 (petition, first half IV CE, see *BL* VII, 235).

64 The spelling γραμματίῳ in l. 7 was read by mistake by the editor of *BGU* XVII 2687: I read γραμματείῳ on the digital image. The *epsilon* has also been overlooked in the edition of *CPR* IX 3 (V-VI CE): γ̣ραμ⟨μ⟩ατιῳ in l. 4 should be read as γ̣ραμ⟨μ⟩ατείῳ (based on digital image). Variation in spelling by the witnesses is also found in *BGU* XII 2185 (ca. 512 CE), *CPR* VII 40 (492 CE), P.Gen. IV 190 (522 or 523 CE) and P.Jena II 17 (ca. 515 CE).

6.3.5 Orthography and Accentuation

The formalization of the derived noun γραμματ(ε)ιον to the more specific meaning 'contract' in juridical contexts may have provided the opportunity to spread a different spelling, and perhaps pronunciation, as the norm in certain contexts. Local scribal practices managed to spread the spelling with ⟨ι⟩ widely in legal documents between the fourth and the seventh centuries CE. An additional piece of information about the pronunciation in the later period is offered by its spelling as a loanword in Coptic during the seventh and eighth centuries. Both the spellings with ⟨ι⟩ and ⟨ει⟩ are found in Coptic,[65] but the variant spelling ⲅⲣⲁⲙⲙⲁⲧⲓⲛ (commonly found for other loanwords in –ιον, such as ⲕⲉⲣⲁⲧⲓⲛ for κεράτιον, 'carat') is absent.[66] This makes it likely that the accent was, at least at that time, pronounced on the penultimate syllable rather than on the antepenultimate, preventing the omission of the omicron in the final syllable. This practice is likely to have been applied also to the Hermopolite in earlier periods, where the spelling with ⟨ει⟩ always seems to have been the norm. The chronological and geographical variation between γραμματεῖον and γραμματίον could then have been purely orthographic in nature rather than reflecting an actual difference in pronunciation.

The comments by grammarians and lexicographers suggest that the spelling and pronunciation of the words γραμμάτιον and γραμματεῖον were considered particularly ambiguous from the Roman period onwards and explanation was needed in order to distinguish between the diminutive (γραμμάτιον) and non-diminutive (γραμματεῖον or γραμματίον) meaning of the words in written discourse.[67] This would be necessary in a situation in which the word for 'document', γραμματίον, is spelled in the same way as the diminutive γραμμάτιον by some language users and perhaps confused in pronunciation. This practice may have been behind the consistent spelling with ⟨ι⟩ in the Oxyrhynchite district—and possibly other areas—between the fourth and seventh centuries.

65 See e.g. Förster 2002, 153-154.

66 I would like to thank Alain Delattre for bringing this to my attention.

67 The twelfth century poet and grammarian Tzetzes teaches the difference between the two lexemes in his *Chiliades*: γραμμάτιον δὲ μάθε νῦν καὶ τί τὸ γραμματεῖον· γραμμάτιον τὸ γράμμα μέν, ὁ χάρτης γραμματεῖον, 'but now learn what the words γραμμάτιον and γραμματεῖον mean: γραμμάτιον is the letter, whereas the document is γραμματεῖον' (*Chil.* 231, 845-846 Leone). The stress on the difference in accentuation between the diminutive form and the derivative in –εῖον could help to keep the two forms apart in written and spoken discourse.

7 Conclusion and Discussion

Modern studies on Greek orthography stand in a long tradition of ancient scholarship with its own criteria to identify 'correct' language use. When contemporary language use diverges from the traditional one, grammarians and lexicographers seem to become increasingly productive to reconstruct and explain the traditional spellings to their contemporary audience. This does not mean that scribes at the time, such as the ones producing the thousands of documents on papyrus in Egypt, always followed their example. Close study of the attestations in documentary sources may reveal an understanding of the orthography of a lexeme which is different from the one preserved to us in grammatical and lexicographical works (e.g. γλωσσοκόμιον, νοσοκομίον, γραμματίον). The classical literary tradition and historical reconstructions, however, continue to influence judgements of spelling by modern editors, even in cases where orthographic variation is in fact very limited or almost non-existent in contemporary documentary papyri (e.g. τρισκαιδέκατος, γλωσσοκόμιον, νοσοκομίον).

This study also revealed some patterns behind the introduction and spread of orthographic variation and change in post-classical Greek. Historical changes in orthographic practices often seem to coincide with other changes in the use of a lexeme, such as a specialization in meaning (e.g. κλείνη, γραμματίον) and/or its application in fixed formulae (e.g. τρισκαιδέκατος, γραμματίον). In this way, the alternative orthography becomes connected to the use of the lexeme in its new context. It is this new package of form and meaning that gets adopted by other scribes and spreads through the community. In Egypt, the historical change from Hellenistic kingdom to Roman rule seems to mark the innovation and spread of some of these alternative forms (e.g. τρισκαιδέκατος, κλείνη), while the Byzantine period seems characterized by more regional scribal practices (e.g. τρ(ε)ισκαιδέκατος, γραμματ(ε)ίον). The cases of variation and change discussed in this paper advance beyond idiolects. Each of the new orthographies becomes part of standard practice in (part of) Egypt during several centuries. In the history of the Greek language, however, most of them may be referred to as temporary changes. When a specific tradition or context of use was discontinued, new orthographic norms could be re-established at a later point in time.

What, then, constitutes standard orthography? Can we define the standard by looking at how many people actually used it, how skilled we think they were or for how long a form has been in use? Lexemes attested in documentary sources often exhibit some degree of orthographic variation. Almost all orthographic norms have attested exceptions, but that should not distract the

scholar from observing the general tendencies. Close study may reveal some patterns of use, but not always a definite change accounting for the spelling in post-classical Greek at a larger scale. It requires a reasonable amount of evidence and thorough comparison of the attestations to deduce these orthographic changes in post-classical Greek, but this kind of analysis could change our ideas about the standard spelling in this period and rectify our judgements about the scribes who actually applied contemporary norms consistently. Even though the editorial practice to regularize alternative spellings may have been helpful to identify possible candidates for orthographic change in this study, I hope to have shown that the regularization of spelling variation in historical periods is a much more complex undertaking than often assumed.[68]

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