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Stolk, J.V.

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THE SPELLING OF HOMOPHONOUS MORPHEMES: SCRIBAL CORRECTIONS OF ⟨O, Ω⟩ IN GREEK DOCUMENTARY PAPYRI

JOANNE VERA STOLK

FACULTY OF HUMANITIES, LEIDEN UNIVERSITY, THE NETHERLANDS

Interchanges of ⟨o, ω⟩ are commonly found in Greek documentary papyri and some of them were even corrected by the ancient scribes. In this paper I show that the majority of those corrections affected the interchange of ⟨o, ω⟩ in morphemes, such as confusion between the case endings of the second declension in -o/-ω and -ov/-ων and the suffix vowel of the oblique cases of the ν-, ντ-, ρ-, τ-stems of the third declension. Correction may be prompted by a change of mind on the exact formulation of the phrase, adapting the choice of morphemes accordingly, or a result of contemporary variation in spelling within the paradigm of the third declension. For the second declension endings, I argue that the later correction of homophonous morphemes by the scribes themselves indicates that these interchanges were not due to poor spelling skills but were rather a result of cognitive limitations during language processing, as has also been shown for spelling errors to grammatical homophones in modern languages.

Keywords: spelling; morphemes; scribes; corrections; Greek documentary papyri; postclassical Greek

1. *Introduction*

When the pronunciation changes and previously different phonemes become pronounced in the same way, spelling those sounds becomes increasingly more difficult. The vowel mergers taking place in postclassical Greek have led to variation in spelling in Greek papyri from Egypt. These vowel interchanges do not only give us information about the sound changes in the spoken language, but may also have consequences for the morphological interpretation of the written language.

Vowels are important to distinguish between the different verb and case endings in Greek. For example, Dahlgren and Leiwo (2020) have

shown the impact of phonology on verb semantics. The reduction of unstressed vowels in Egyptian Greek led to confusion between the forms πέμψον (aorist imperative of “to send”), πέμψαι (aorist infinitive of “to send”) and πέμπε (present imperative of “to send”). All probably became pronounced as [ˈpemp̥sə] and written variably as πέμψον, πέμψων, πέμψεν and πέμψε by Petenephothes, one of writers of ostraca from Mons Claudianus (Dahlgren and Leiwo 2020, 293). Changes in phonology can thus lead to grammatical homophones, i.e. morphological forms with the same pronunciation but a different spelling, in this case the present and aorist imperative and aorist infinitive. Similarly, phonological changes may have an impact on the spelling of homophonous case endings. For example, in P.Oxy XVI 1880 (427 CE), line 13, we read ἐπομνύμενος θεων των παντωκράτωρα “swearing by God the Almighty”, where the endings of θεων and των are spelled with omega as if they were genitive plurals (θεῶν, τῶν) instead of the homophone accusative singular endings θεόν and τόν (see Stolk 2021, 290).¹

Interestingly, there are also several corrections by the scribe in this papyrus (P.Oxy. XVI 1880). In line 4, ἄρχωντος was corrected to ἄρχοντος (see Figure 1) and in line 11 ἐαυτων was corrected to ἐαυτόν (see Figure 2).

In the first one, in line 4, the omega of ἄρχωντος was crossed out and replaced by omicron above the line (see also Stolk 2021, 311), while in the second one, in line 11, the omega of ἐαυτων was transformed into an omicron by closing the top with a half circle. These corrections show that whoever made them at the time was indeed aware of the difficulties of the spelling of these homophonous endings and attempted to correct them later.



Figure 1. P.Oxy. XVI 1880, 4 (TM 22016): ἄρχωντος corr. to ἄρχοντος. © Courtesy of The Egypt Exploration Society and the Faculty of Classics, University of Oxford.



Figure 2. P.Oxy. XVI 1880, 11 (TM 22016): $\pi\rho[\delta]\varsigma \acute{\epsilon}[\alpha]\upsilon\tau\omega\upsilon\acute{\nu}$ corr. to $\pi\rho[\delta]\varsigma \acute{\epsilon}[\alpha]\upsilon\tau\acute{\omicron}\nu$. © Courtesy of The Egypt Exploration Society and the Faculty of Classics, University of Oxford.

Ancient corrections have received little attention in the past. Only recently, revisions in petitions from the Roman period (Luiselli 2010) and private letters from the Byzantine period (Papathomás 2018) have been explored, but there are many more awaiting further study of their linguistic and scribal properties. A first collection by the author and Mark Depauw of all scribal corrections in Greek documentary papyri amounted to more than 37,000 attestations currently under annotation by the author in a TM database. A preliminary study of the corrections of ⟨ι, ει⟩ showed that they can inform us about the scribal awareness of phonological mergers and changing attitudes over time (Stolk 2019).

In this paper, I examine the scribal corrections of ⟨ο, ω⟩ in order to observe the interaction between phonology and morphology more closely. When did scribes decide to correct their spelling? Are interchanges of grammatical homophones more likely to be produced, but perhaps also more likely to be corrected than homophonous graphemes in non-morphological positions? Could scribal corrections shed some light on the role of morphology in Greek spelling production in the papyri?

2. *Spelling production*

Interchanges between ⟨ο⟩ and ⟨ω⟩ start to become frequent from the second century BCE onwards in documentary papyri (Mayser and

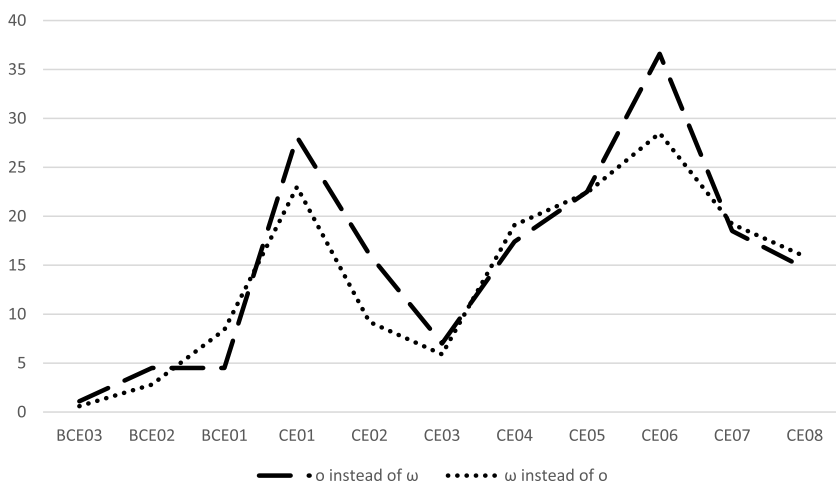
Schmoll 1970, 73–76; Teodorsson 1977, 233–234). Both ⟨ο⟩ and ⟨ω⟩ feature in morphologically significant positions (e.g. case and verb endings) as well as in non-morphologically significant positions (e.g. in word stems) and interchanges in both directions are found in all linguistic contexts. Gignac (1976, 275–277) concludes, therefore, that the confusion of ⟨ο⟩ for ⟨ω⟩ as well as ⟨ω⟩ for ⟨ο⟩ is a result the loss of quantitative distinction between /ο/ and /ο:/. This phonological analysis, however, does not fully explain the choices made in spelling production.

According to the dual-route model for spelling, spelling can be produced directly from the orthographic memory of the writer (when available) or assembled *ad hoc* by converting each phoneme into a grapheme (see e.g. Barry 1994, Tainturier and Rapp 2001, Grainger and Ziegler 2011). Since Modern Greek has an inconsistent mapping of phonemes to graphemes (Georgiou et al. 2012), especially this second method of phoneme-to-grapheme conversion easily leads to high rates of (phonologically acceptable) spelling errors (Protopapas et al. 2013). Even though a phoneme, like /ο/, can be expressed by multiple graphemes, namely ⟨ο⟩ and ⟨ω⟩, the choice for a certain grapheme during conversion does not have to be entirely random. For instance, ⟨ο⟩ and ⟨ω⟩ have different proportional distributions: 74% for ⟨ο⟩ vs. 26% ⟨ω⟩ in Modern Greek (Protopapas and Vlahou 2009, 997) and these type of frequency patterns and orthographic probabilities can be used by the writer when making spelling choices (Ellis 2017). A large part of these inconsistent phoneme-to-grapheme mappings in Modern Greek were already existent or at least under development in postclassical Greek. This modern approach can thus also be applied to postclassical Greek in order to try to understand spelling production in the papyri, as I have done for ⟨ε, αι⟩ and ⟨ο, ω⟩ in a previous article (Stolk 2021). I will briefly repeat here the results of this study that may be relevant to the current inquiry.

In the Greek documentary papyri, ⟨ο⟩ (62%) occurs also more frequently than ⟨ω⟩ (38%) and this may partly explain why ⟨ο⟩ is written more frequently instead of ⟨ω⟩ than vice versa (Stolk 2021, 296). Also, specific linguistic contexts may influence grapheme selection. Most of the time, the direction of interchange of ⟨ο⟩ and ⟨ω⟩ is related to a specific context (Stolk 2021, 298–299). This does not seem to be the case for interchanges after σ-, before -ν and word-finally, which are, not coincidentally, typical morpheme positions for both ⟨ο⟩ and ⟨ω⟩. In these linguistic contexts, both spellings are frequently attested and may both look

familiar to the writer. When writers are aware of morphological patterns they can use this knowledge to construct the standard spelling of inflected forms by analogy (Kemp 2006), but this might also result in other types of variation. For example, the omega in the nominative singular of nouns in the third declension, such as παντοκράτωρ “almighty”, may be replicated in the oblique forms by analogical levelling resulting in παντοκράτωρα instead of παντοκράτορα (cf. the example mentioned in section 1 above; see Stolk 2021, 305–306).

Apart from the linguistic context, there are also chronological differences. Graph 1 shows the percentage of editorial regularizations of ⟨o, ω⟩ in all Greek documentary papyri per century.² We can observe that interchanges are still very uncommon during the third century BCE and start to appear during the second century BCE. This is why the merger of the sounds is commonly reconstructed around this period (see 1. Introduction). Only during the Roman period, we see a rapid increase in ⟨o, ω⟩ interchanges. There is a clear lower point during the third century CE. This cannot be the result of the high number of texts for that period, since the absolute number of interchanges is also lower than for the first, second and fourth century. It may be related to scribal awareness of the issue, but it is also likely to be at least partly related to the type of texts (and backgrounds of the scribes of those texts) that we have preserved from that century.



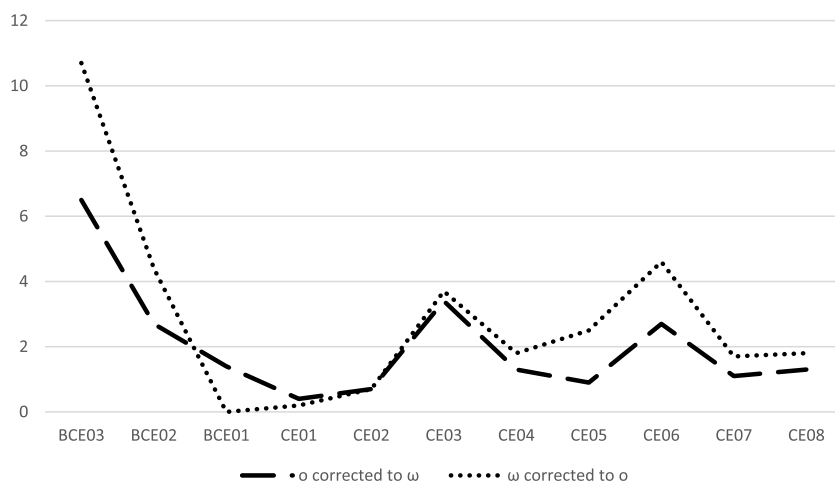
Graph 1. Percentage of texts with interchanges of ⟨o, ω⟩ per century.

For example, there are many more contracts from the Roman and Byzantine periods than from the Ptolemaic period and contracts tend to contain relatively high numbers of non-standard spellings (see Stolk 2020).

3. *Ancient corrections*

The interchanges of ⟨ο, ω⟩ can now be compared to the number of corrections of these interchanges. A total of 114 instances of ⟨ο⟩ corrected to ⟨ω⟩ and 133 of ⟨ω⟩ corrected to ⟨ο⟩ can be found among the corrections by ancient scribes in Greek documentary papyri collected in Trismegistos.³ This will be the corpus for quantitative analysis in this section and qualitative analysis in the following section.⁴ In Graph 2, these corrections are normalized against the total number of interchanges of the same feature.

The chronological spread of the corrections in Graph 2 complements the distribution of the texts with interchanges in Graph 1 to some extent. For example, in the third century BCE, when interchanges are generally still quite rare, they tend to be noticed and corrected. The same trend was also observed for interchanges of ⟨ι, ει⟩ (Stolk 2019). While interchanges seem to have been generally less frequently found in papyrus documents from the third century CE, corrections of interchanges are precisely more



Graph 2. Percentage of interchanges of ⟨ο, ω⟩ corrected per century.

common during that century (also in absolute numbers). The corrections thus seem to show some sort of relation between the numbers of interchanges and the general awareness of those interchanges at the same time. Confusion about the spelling of ⟨o, ω⟩ abounds in the texts we have from the sixth century, especially those of ⟨o⟩ instead of ⟨ω⟩. The corrections show that the scribes at the time may indeed have been less aware of this interchange, since corrections of ⟨o⟩ to ⟨ω⟩ are also less frequently made than in the opposite direction.

What kind of spellings are the scribes typically correcting? The majority of these corrections of ⟨o, ω⟩ concern morphemes: 76 out of the 114 corrections to ⟨ω⟩ (67%) and 97 out of the 133 corrections to ⟨o⟩ (73%) are in morpheme position, mostly nominal endings.⁵ Especially in the word-final position and at the end of the word before -v, where also interchanges could easily go both ways, corrections seem to be most common. In [table 1](#), the numbers of corrected interchanges for these (nominal) morphological categories in which most corrections are found are compared to the general interchanges of these categories found in Greek documentary papyri.

Out of the categories mentioned in [Table 1](#), interchanges are most common for the use of the dative singular -ω instead of the less frequently attested ending of the nominative/accusative singular neuter -ο ([Stolk 2021](#), 302). Among the corrections, the genitive plural -ων instead of the nominative/accusative singular neuter and accusative singular masculine -ov seems to be most commonly noticed and corrected by the scribes (5.4%). Apart from corrections to these (frequently occurring) case

Table 1. Most frequent interchanges and corrections of ⟨o, ω⟩ in nominal case endings.

Morpheme	N		Morpheme	N	
	interchanged (o instead of ω)	corrected (o corr. to ω)		interchanged (ω instead of o)	corrected (ω corr. to o)
Nouns			Nouns		
dat.sg. -ω	433	11 (2.5%)	nom/acc. sg. -ο	481	13 (2.7%)
gen.pl. -ων	1129	31 (2.7%)	nom/acc. sg. -ov	819	44 (5.4%)

endings, there is only one more morphological category that is often corrected, namely the suffix vowel of the ν-, ντ-, ρ-, τ-stems of the third declension (23 examples of ⟨ω⟩ corrected to ⟨ο⟩ in oblique cases and 10 examples of ⟨ο⟩ corrected to ⟨ω⟩ in nominative and oblique cases). For some lexemes, the omega of the lengthened grade in the nominative singular is conventionally found in the oblique case forms as well, e.g. in ἀγών, ἀγῶνος “battle” and Σαραπάμμων, Σαραπάμμωνος “Sarapammon”, but for most nouns the omicron is the regular spelling in the oblique cases, e.g. ἡγεμών, ἡγεμόνος “leader” and ρήτωρ, ρήτορος “public speaker”. Although this is a frequent declension pattern, also used in the present (ὄν, ὄντος “being”) and perfect (εἰδώς, εἰδότος “knowing”) participles, the morphological inconsistency in spelling both within and across the paradigms could easily lead to analogical levelling.

Corrections of ⟨ο, ω⟩ are thus commonly found in morphological positions. But are these corrections of morphemes really more common than you would expect based on the general interchanges of ⟨ο, ω⟩ in morphological and non-morphological positions? The total number of corrections of ⟨ο, ω⟩ in the case endings mentioned in [table 1](#) together with those in third declensions stems described above amounts to 132 in our corpus of 247 corrections, which equals 53%. The total number of interchanges in the same morphological positions amounts to 3408 out of the total of 14,868 interchanges of ⟨ο, ω⟩ (based on the corpus of Stolk [2021]), which equals only 23%. Corrections thus seem more common for the variation found in these nominal endings and this shows that morphology is a relevant factor when it comes to the spelling production of phonologically merged sounds. In these morphological positions a writer may hesitate between two options that are not only phonologically identical, but also both morphologically plausible and even frequently attested. Straightforward reproduction from the orthographic memory is not possible for grammatical homophones. Additional knowledge of the grammar of the intended phrase is necessary to decide which of the two forms is appropriate in the specific context.

4. *Corrections in context*

The quantitative overview in the previous sections shows that corrections of ⟨ο, ω⟩ occur mostly in morphological positions, but the motivations for these corrections may have varied.

During the third century BCE interchanges of ⟨o, ω⟩ are still rare. When they do occur, a significant number of them are corrected (see [Graph 2](#) above). Occasional interchanges at this time are likely to be motivated by something other than just phonology. For example, the correction of ⟨ω⟩ to ⟨o⟩ in ἔχομεν in the phrase *χρεῖαν γὰρ ἔχομεν* | *[εἰς τὸν ἀμπελῶνα* “for we have need (of it) for the vineyard” in a letter to Zenon (PSI VI 567, ll. 16–17; 254 BCE) may have been a change of mind from writing the verb in the first person singular ἔχω “I have” to the plural ἔχομεν “we have” during writing (see [Figure 3](#)).

It is difficult to say with certainty when this correction was made. If the omega was indeed part of the accidental production of the singular ἔχω, the correction may have been made even before continuing with the new ending of the word ἔχομεν. This type of correction, i.e. the transformation of one letter into another one, however, can also easily be made afterwards, for example straight after finishing writing ἔχωμεν with a mistaken vowel or even later.

The corrections in SB VI 9201 (203 CE) all seem to have been added simultaneously after the text was finished. The papyrus preserves a receipt of repayment of two loans to Chairemonis alias Cyrilla by Ploutiaine alias Eudaimonis. The father of Ploutiaine and the brother and grandfather of Chairemonis are all called Chairemon. As Chairemonis is also the alias of the mother of Chairemonis, these particular names feature frequently in the receipt. The receipt has been composed in the first person *cheirographon*-style and was probably written by a professional scribe. Chairemonis does subscribe the receipt in her own hand (ll. 34–48), as does her husband as her guardian (ll. 48–49). In her subscription, Chairemonis spells her name as Χαιρημονίς (l. 34) and the ending of the other party’s alias as [Εὐδαι]μονίδα (ll. 39–40), both with omicron. In the body of the receipt, however, the (oblique cases of the) names Χαιρημονίς, Εὐδαιμονίς and Χαιρήμων are spelled with ⟨ω⟩ first, but corrected later into ⟨o⟩.

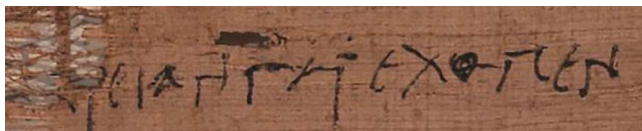


Figure 3. PSI VI 567, 16–17 (TM 2181): *χρεῖαν γὰρ ἔχομεν*: ω corr. to ο.
© Florence, The Biblioteca Medicea Laurenziana.

The corrections (see two of them in [Figure 4](#)) take the shape of a large half circle closing the top of the omega and transforming it into an omicron. They are clearly visible in lines 5, 10, 12 and 18, and possible, but difficult to see in the image, in the remaining attestations of these names in lines 1, 8 and 24. In the apparatus of the first edition (Wolff 1940, 619), it was noted that in these names in lines 5, 10, 12 and 18 “ω seems to have been corrected from ο”. This order of events seems unlikely, though, as the omegas fit the space and seem to have been written out carefully in the same style as the rest of the word, while the large bows closing the omegas and transforming them into omicrons were fitted on top of the letters only later. The corrections have been ignored in the reprint in SB VI, where the omegas are printed throughout without any comment in the apparatus. The omegas were originally also taken over in the online edition at papyri.info. They were corrected to omicrons (also in lines 1, 8 and 24) by Dieter Hagedorn in 2012, but it remains unclear from the online edition that we are in fact dealing here with scribal corrections. The hand of the corrector is difficult to identify. Based on the color and thickness of the ink it seems unlikely to have been Chairemonis herself, but rather the same scribe as the body of the contract. Apparently, the scribe decided to adapt the spelling of all of these names after finishing the document, perhaps noticing how Chairemonis spelled her own name or thinking of more general conventions for writing these names (or both). The spelling with ⟨ο⟩ is more common than with ⟨ω⟩ in (the oblique cases of) these particular names in the corpus of documentary papyri, but there clearly seems to have been some variation in the spelling of those names (Stolk 2021, 305–306). In this case, this resulted in later reconsideration and consistent correction of the relevant forms.

In P.Oxy. I 135 (579 CE), a deed of surety, there are multiple corrections and most of them concern the same endings. Seven out of the nine corrections are even in the same three lines (ll. 20–22), in which it is

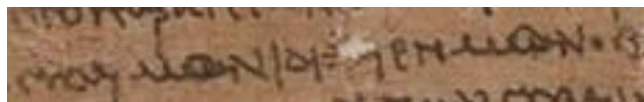


Figure 4. SB VI 9201, 5 (TM 17870): Εὐδαμωνίδι Χ[α]ιρήμωνος corr. to Εὐδαμωνίδι Χ[α]ιρήμωνος. © Beinecke Rare Book and Manuscript Library, Yale University.

stated that Aurelius Pamouthios will stand surety for Aurelius Abraham to remain at the estate:

καὶ μηδαμῶς αὐτὸν καταλεῖψαι τὸ (corr. ex -ω) αὐτὸ (corr. ex -ω) κτῆμα μήτε μὴν
| μεθίστασθαι (corr. ex. μεθε-) εἰς ἕτερον (corr. ex -ων) τόπον (corr. ex -ων), ἀλλὰ
καὶ ἐπιζητούμενον (corr. ex -ων) | αὐτὸν (corr. ex. -ων) πρὸς ἐμὲ παρὰ τῆς ὑμῶν
ὑπερφυείας

and that he shall in no way leave the same estate or move to another place, unless he is demanded to me by your magnificence ...

This phrase contains three sets of corrections, all made by adding a half circle on top of the omega to turn it into an omicron:

- (i) the apparent dative singular endings in τῷ αὐτῷ instead of the accusative singular neuter ending in the phrase τὸ αὐτὸ κτῆμα “the same estate” (see [Figure 5](#)),⁶
- (ii) the apparent genitive plural endings in ἑτέρων τοπῶν instead of the accusative singular endings in the phrase εἰς ἕτερον τόπον “to another place”,
- (iii) and similarly, the apparent genitive plural endings in ἐπιζητουμένων αὐτῶν instead of the accusative singular endings in the phrase ἐπιζητούμενον αὐτόν “him being demanded”.

These corrections affect exactly the case endings in which ⟨o, ω⟩ are most commonly interchanged and also often corrected (see sections 2 and 3 above). All four endings -ω, -ο, -ων and -ον are frequently attested in Greek, but -ω and -ων happen to be twice as frequently attested in documentary papyri than their equivalents with omicron (see [Stolk 2021](#), 302–303). This frequency pattern may also have led

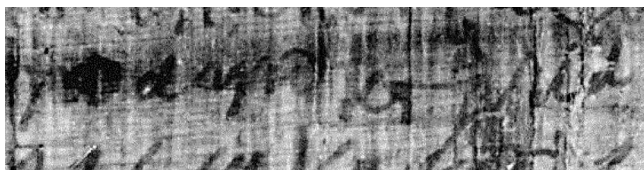


Figure 5. P.Oxy. I 135, 20 (TM 20774): τῷ αὐτῷ κτῆμα corr. το τὸ αὐτὸ κτῆμα. © Cairo, Egyptian Museum CG 10018.

to the initial confusion by the scribe of this deed, slipping into the most frequent pattern rather than thinking about grammar. Either the same scribe or someone else did realize the grammatical inconsistencies in the phrase and corrected it later by closing the omegas. There are two other interesting interchanges of ⟨ο, ω⟩ in the same document: ἐπωμνύμενος instead of the expected ἐπομνύμενος (l. 10), and παραδωσεως instead of παραδόσεως (l. 28). Similarly to the more frequent case interchanges, frequency and analogy could have played a role in these cases. The augmented ἐπωμνύ- could have been analogical to the finite past forms of the verbal paradigm, while the string παραδωσ- is also more frequently attested in documentary papyri than παραδοσ-. While ἐπωμνύμενος apparently escaped the attention of the corrector, παραδωσεως was corrected to παραδόσεως in the same manner as the case endings.

Another combination of very similar corrections is found in the contemporary SB XX 15008 (578 CE), a lease of two rooms (ll. 14–17):

ἐν τῇ πρώτῃ στέγῃ | τόπον (corr. ex -ων) ἓνα ἀνεωγμένον εἰς λίβα | καὶ ἐν τῇ
δευτέρᾳ στέγῃ τόπον (corr. ex -ων) ἓνα | ἀνεωγμένον/ (ο corr. ex -η) εἰς
νότον (corr. ex -ων) \ (καὶ) ὑποπέσσιον ἐν⁷

on the first floor one room opening to the west and on the second floor one room opening to the south and one room under the stairs

The three corrections of ⟨ω⟩ to ⟨ο⟩ were made by altering the second half of the omega, for example in line 15 by writing a large open omicron through the second belly of the omega, or in line 16 by an oval-shaped blob of ink in the same position (see Figure 6 below).

Although linguistically these corrections are very similar to the previous text, there is one palaeographical advantage here. The corrections to these

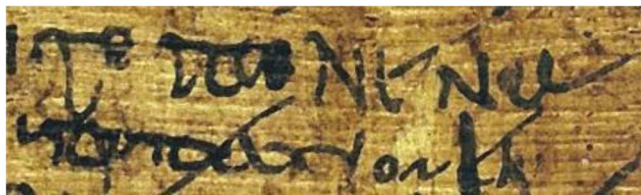


Figure 6. SB XX 15008, 16 (TM 23844): τοπων ἓνα corrected to τόπων ἓνα with the added ὑποπέσσιον ἐν underneath. © Prague, National Library of the Czech Republic.

lines do not only concern single letters, but also the addition of a short phrase \(\kappa\alpha\iota\) ὑποπέσσιον ἐν/ between line 16 and 17. Based on the use of ink and handwriting, it seems likely that the corrections were all made by the same hand as the main text (see Figure 6 above). This shows that the scribe was aware of the morphological distinctions, but accidentally slipped into writing the more frequent ending -ων in those instances. The endings -ov and -ων are used appropriately in the rest of the lease contract and no non-standard spellings of ⟨o, ω⟩ remain after correction.

5. *Interpretation of the results*

After the loss of the quantitative distinction between ⟨o⟩ and ⟨ω⟩ in pronunciation, variation in spelling arises in the documentary papyri. While variation between ⟨o, ω⟩ is found in all linguistic contexts, corrections of this particular feature seem to be more limited. The majority of the corrections affect ⟨o, ω⟩ in morphemes, especially in the case endings -o/-ω, -ov/-ων and the suffix vowels of the ν-, ντ-, ρ-, τ-stems of the third declension.

There may have been various motivations for the correction of these vowels in morpheme positions. Morphemes allow for more variation than root vowels and correction may be prompted by a change of mind on the exact formulation of the phrase, adapting the choice of morphemes accordingly, as seems to have been the case in the first example cited in section 4. The variation in vowel usage within paradigms, particularly for the ν-, ντ-, ρ-, τ-stems of the third declension, may have led to analogical levelling, for example in the spelling of personal names such as Εὐδαίμων, leading to Εὐδαίμωνος instead of Εὐδαίμονος and Εὐδαίμωνις instead of Εὐδαίμονις. This type of contemporary variation exposes the writer to multiple options, and this may result in hesitation, confusion and/or correction, as observed in the second example in section 4.

Examples 3 and 4 in section 4 showed corrections of multiple second declension endings in part of the text. The second declension case endings -o/-ω and -ov/-ων are grammatical homophones: differently spelled morphological forms with the same pronunciation. Studies on grammatical homophones in modern languages show that these particular forms are connected to a high error risk and these types of errors

seem to occur even in the writing of experienced writers (Sandra, Frisson and Daems 2004; Fayol, Largy and Lemaire 1994). The spelling production of grammatical homophones is more time consuming than other graphemes and when not enough working memory is available during writing (due to focus on the contents, formulation, or distractions), the most frequent form tends to be produced (Sandra, Frisson and Daems 2004; Fayol Largy and Lemaire 1994). This could also apply to spelling and correction of homophonous morphemes in Greek documentary papyri. Interchanges of grammatical homophones, such as the case endings -o/-ω and -ov/-ωv, are commonly found in the corpus and they seem to feature even more prominently among the corrected instances studied in this paper. If those corrections were made by the writers themselves, this means that they were aware of the morphological differences between the two forms and that any mistakes were not due to poor spelling skills. Rather, as was established for modern languages, due to limited processing resources at a given moment the writer may have produced a context-inappropriate spelling accidentally. In both examples cited at the end of section 4, the interchanges resulted in the production of the more frequent -ω and -ωv for -o and -ov, respectively, and they occurred almost all in the same lines and not in the rest of the document. The writer may have been distracted writing this particular section and when the mistakes in this part were finally noticed, they were all corrected at the same time.

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Notes

1. Papyrus editions are cited according to the abbreviations found in the *Checklist of Editions of Greek, Latin, Demotic, and Coptic Papyri, Ostraca, and Tablets*, see <https://papyri.info/docs/checklist> and/or TM numbers, see www.trismegistos.org. Translations are my own, unless specified otherwise, but may be based on the original edition.
2. Based on the editorial regularizations (in text and apparatus) in all published documentary papyri in the DDbDP (www.papyri.info; state 2016) and annotated in TM Text Irregularities: Modern Regularizations (state May 2023; see Depauw and

- Stolk 2015). The absolute numbers of interchanges have been normalized against the total number of texts for each period. [Graphs 1](#) and [2](#) are weighted graphs; see Van Beek and Depauw (2013) and compare also similar graphs for the interchange and corrections of ⟨ι, ει⟩ in Stolk (2019).
3. Query of “o instead of ω” and “ω instead of o” in TM Text Irregularities: Ancient Corrections (state May 2023), based on all published and digitized Greek documentary papyri in the DDbDP (www.papyri.info; state 2016).
 4. The corrections can be found in the following texts, in chronological order: o corr. to ω in TM 8859, 2815, 1229, 3629, 65863, 5545, 44722, 16541, 16066, 78620, 13539, 13539, 9911, 13511, 15650, 20969, 19611, 13464, 9085, 20607, 41552, 19504, 12262, 78583, 11963, 28842, 28842, 19426, 27679, 79993, 26864, 140180, 31770, 21740, 170064, 31173, 18707, 15456, 14250, 14034, 31731, 12607, 31541, 45297, 11134, 78285, 15479, 30449, 30514, 31719, 22459, 10352, 131247, 16854, 20080, 17700, 21445, 15267, 12300, 12300, 16856, 12309, 22412, 32354, 32628, 21392, 20874, 35594, 24876, 35059, 19038, 36006, 18418, 22120, 18905, 22120, 22120, 36222, 19025, 18911, 15311, 140188, 18914, 19012, 18452, 19702, 19748, 19702, 92177, 36006, 19024, 18905, 21374, 35625, 70210, 19706, 18418, 15319, 18428, 19696, 36528, 21478, 36832, 36832, 37874, 37914, 129760, 70344, 39103, 22009, 21488, 39103, 19806, 70283, and ω corrected to o in TM 3259, 690, 2181, 3649, 3487, 3410, 3449, 12269, 25080, 25080, 21242, 11308, 19510, 9087, 20630, 14343, 13535, 27766, 27118, 30922, 21821, 45297, 13563, 10564, 10564, 31127, 11214, 17870, 23540, 17870, 17870, 17870, 17870, 17870, 13558, 17870, 17870, 21562, 47280, 45289, 17496, 34278, 10331, 33329, 13052, 16442, 17721, 16856, 20080, 17329, 20080, 21993, 20080, 12300, 32409, 22465, 21871, 92437, 22155, 114283, 18738, 22016, 22016, 15841, 22070, 16107, 92440, 92440, 35728, 35142, 35626, 78212, 38011, 21361, 22080, 17579, 36006, 19678, 20774, 23844, 23844, 37901, 19706, 35951, 22032, 65114, 21132, 92177, 20774, 20774, 20774, 20774, 22777, 36279, 36279, 19025, 19025, 22159, 36551, 22187, 20774, 19746, 20774, 18996, 38232, 23844, 41000, 36530, 19024, 19024, 19025, 18430, 22025, 16402, 38164, 97131, 78188, 37851, 37851, 37512, 37512, 37571, 36183, 128911, 16811, 39103, 37513, 39103, 37513, 39269, 36199, 38709, 19796.
 5. Morphological annotation of these instances was manually added by the author. The graphemes are also found in verbal endings (e.g. -ω, -ομεν), but less frequently. The frequency of interchange of ⟨o⟩ and ⟨ω⟩ in verbal endings is also much lower than in nominal endings (cf. Stolk 2021, tables 5 and 7) and corrections of interchanges are thus expected to be less frequent as well. Out of the different types of verbal endings, the corrections of -ωμεν to -ομεν (first person plural) seem most common (7 examples).
 6. The correction points towards the interpretation τὸ αὐτὸ κτήμα “the same estate” here rather than τὸ αὐτοῦ κτήμα “his estate”, as was written just before in ll. 15–16: ἐφ’ ᾧ τε αὐτὸν | ἀδιαλείπτως παραμεῖναι καὶ διάγειν ἐν τῷ αὐτοῦ κτήματι “so that he shall continually abide and stay on his estate”.
 7. Text and corrections are taken from Kramer (1989; reprinted as SB XX 15008), in which some of the readings, including the correction ἀνεωγμένω/ (o corr. ex -η)

were improved from the first edition, apart from the correction of νότον (corr. ex -ων), which was already noted in P.Flor. I 15, but omitted in Kramer (1989) and SB XX. In the edition by Kramer the corrections are printed in a misleading way, e.g. τόπ[ω]ov. The omega was not deleted and then the writer continued with a following omicron, but the omicron was in fact written through the original omega.

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