This article analyses orthographic variation in the Linear B tablets from the Mycenaean palace of Pylos. Despite the general consistency in spelling found in Linear B texts from all sites, variation was in certain cases both permissible and entirely normal, even within the work of a single writer. Examining the patterns of orthographic variation found in the texts from Pylos, along with the factors which may have influenced this variation, sheds light on how the Mycenaean scribes were taught to write and how they applied this training in the process of creating their documents.

Abbreviations

acc. = accusative
C = any consonant
dat. = dative
d. = dual
f. = feminine
gen. = genitive
H = hand (identifying a scribe)
instr. = instrumental
KN = Knossos
loc. = locative
m. = masculine
n. = neuter

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nom. = nominative
pl. = plural
PY = Pylos
R = /r/ or /l/
s. = singular
TI = Tiryns
V = any vowel

1. Introduction

The Linear B writing system, used to write administrative documents on clay tablets in Late Bronze Age Greece (c. 1400–1200 BCE), shows a high degree of consistency across the various palatial and administrative sites at which it is attested. The similarity in the repertoire of signs, orthographic rules, language and document formatting practices at sites across Crete and the central and southern Greek mainland, and over a period of c. 200 years, demonstrates clearly that the writers of these texts were trained in a shared set of conventions of writing and record-keeping. However, the variation which does exist within the Linear B texts – not only between different sites, but within documents from the same site, and even within the work of individual writers – provides key evidence for the ways in which the writing system developed and was employed within the Mycenaean administrative systems, as well as for the development of the Mycenaean Greek language. This paper focuses on one particular aspect of writing practices, namely orthographic conventions. The Linear B texts display a remarkable orthographic consistency in many respects, despite the complexity of the conventions in use for the representation of Mycenaean Greek with this writing system; nonetheless, in certain contexts orthographic variation is both permitted and frequent. Analysing the ways in which this variation appears in the work of individual Mycenaean scribes can shed light on both the method(s) of training by which they learned to write and the decisions they made in the course of creating their documents.

The site of Pylos, located in south-western mainland Greece, was chosen for this study because the vast majority of its c. 1,000 tablets are securely associated with the site’s final destruction early in the twelfth century BCE; because Linear B tablets were not long-term

1 See e.g. Duhoux (2011) 95; Melena (2014) 91.
2 See e.g. Duhoux (1987), comparing Cretan and mainland Linear B; Thompson (1996–7), (2002–3) and (2021), on linguistic variation; Petrakis (2017), on variation in ideograms.
3 The use of the conventional term ‘scribe’ to refer to the writers of the Linear B documents is not intended to make any claim about the exact status of these individuals (who may have been palatial administrators, writers assisting the administrators, and/or workers whose role also involved recording their production: see, respectively, Bennet (2001) 29–31, Palaima (2011) 122–3 and Kyriakidis (1996–7) 219–20. Nor is it intended to imply that their status, work or training was necessarily comparable to that of ‘scribes’ from other contemporary cultures.
4 This destruction is now dated to the beginning of the Late Helladic III C period, which started c. 1200/1180 BCE: Vitale (2006) 190–1, 200; Vitale et al. (forthcoming); Davis et al. (forthcoming). The vast majority of tablets were
documents, but were generally kept for no more than a year as part of the palace’s yearly administrative cycle, these texts all belong to a period shortly before the palace’s destruction.\textsuperscript{5} They represent the work of at least thirty writers, who have been identified chiefly through palaeographic analysis of their handwriting, although features such as subject matter, document formatting, orthography and language also play a role.\textsuperscript{6} The Pylos tablets therefore offer the chance to study the writing practices of a single, contemporaneous community of writers, who are likely to have frequently interacted in the course of their work.

2. Scribal training

No Linear B documents describe the work or training of their writers, and no certain ‘school’ or practice texts are attested.\textsuperscript{7} We therefore have only indirect evidence for how Mycenaean scribes learned to write and to keep administrative records, from the features we can observe on their documents. The division of the Pylian scribes into three palaeographic ‘classes’, based on the similarities of their handwriting to three ‘major’ scribes (H1, H21 and H41), has long been viewed as evidence for three traditions of scribal training at this site, originating from three different teachers;\textsuperscript{8} recently, however, the validity of this division has been challenged,\textsuperscript{9} and two new studies of the Pylos tablets eliminate the ‘class’ as a palaeographic classification.\textsuperscript{10} Similarly, it has been argued by Yves Duhoux, on the basis of an analysis of spelling variation at Pylos, that two different orthographic traditions can be identified at this site: focusing on five ‘major’ scribes, Duhoux argued that their levels

\textsuperscript{5} Bennet (2001) 27–30. One unpublished tablet from Ayios Vasileios contains the previously unknown term po-ro-pe-ru-si-nwa /properusinwa/ ‘from the year before last’ (Vasilogamvrou et al. (forthcoming)), demonstrating that information could at times be kept for more than a single year, whether or not this involved documents being kept for this length of time (cf. the use of the term pe-ru-si-nu-wo/-nu-wa/-nwa/perusinwos, -a/ ‘last year’s’ to indicate information transferred from the previous year’s records).

\textsuperscript{6} See SP 20–30, and section 3 below.

\textsuperscript{7} The ‘Room of the Chariot Tablets’ at Knossos has been argued to be a ‘school’ or training place (Chadwick (1968) 17–21; Duhoux (2011)), but, following Driessen (2000), is more generally regarded as a genuine administrative deposit, probably of earlier date than the rest of the Knossos tablets. One tablet from this deposit may, however, be a practice text (KN ν(1) 114: Chadwick (1968) 20; Duhoux (2011) 96–101). For a general discussion of the issue of how Mycenaean scribes may have learned to write see Palaima (2011) 113–21 (who suggests that the training system may have been a form of apprenticeship rather than schooling).

\textsuperscript{8} SP i88–9 and Palaima (2011) 116; see also Duhoux (2011) 103.

\textsuperscript{9} Godart (2012); Olivier (2012). On the complexity of the distribution of palaeographic variants across these classes see Judson (2020b) 181–95.

\textsuperscript{10} PTT; LSP. See section 3.
of shared orthographic choices in cases where variation was possible divided them into two ‘orthographic communities’ (H1, H2, and H21 vs. H41 and H43). In this article, I revisit the issue of Mycenaean orthographic training by analysing the orthographic variation (or consistency) found between writers and within individuals’ work, while taking into account their widely varying levels of attestation of written sequences in which such variation is possible, in order to determine the level of significance which can be attached to a given scribe’s use or lack of use of (a) particular orthographic option(s). I demonstrate that, despite the consistency shown by writers of Linear B in following the majority of its orthographic conventions, variation is entirely usual in certain circumstances, and that this points to a single orthographic tradition in which writers are taught multiple orthographic options for use in those circumstances. I also investigate the extent to which non-phonemic factors may have influenced the use of different spellings, and demonstrate that, although some possible individual or group preferences can be seen in the spelling of particular lexemes and morphological features, on the whole the patterns of orthographic variation suggest a system in which writers were taught the spelling(s) of phonemic sequences rather than of lexemes.

3. Scribal attributions at Pylos

At time of writing, two new studies of the Pylos tablets have recently proposed changes – in different ways – to the scribal attributions previously in use (those of SP), presented respectively in PTT and in LSP; a third new edition, PT3, largely follows PTT but with some modifications, mostly in line with LSP. All of these largely retain the same attributions to SP’s main scribes (H1–H4, H6, H11–H15, H21–H26, H31–H34, H41–H45), although LSP renumbers these by adding 600 (so that H601 = H1) and merges the original H615 with H614, H633 with H623, and H619 with H634; there are also differences of opinion over the attribution of small numbers of tablets to many of these scribes, as well as over the existence of newly identified scribes. In this article, I use the SP/PTT/PT3 numbering, since this is more consistent, and thus more easily comparable, with other

11 Duhoux (1986) and (2011) 103; see further section 9.
12 A preliminary analysis of variation in the use of a selection of these signs was presented in Judson (2019), in which I investigated this variation from the perspective of the writing system’s diachronic development. All of the data used in this study has been updated and reanalysed following the publication of the new Pylos editions (section 3).
13 Note that I focus in this article exclusively on writers’ choices between different orthographic options for representing the same phonemic sequence; apparent instances of spelling variation which are likely to be due to linguistic differences are therefore excluded.
14 The latter, by Louis Godart, largely but not entirely corresponds to Godart’s earlier attributions in the other recent corpus, ARN. Where ARN and LSP diverge, I cite the LSP attributions without comment unless the difference is crucial to the discussion.
15 On these proposed mergers see LSP 18, 179–83. As they are not universally agreed on – only PT3 follows LSP in this respect, and then only for H23/H33 and H19/34 – I continue to refer to these scribes by their original numbering, but discuss the impact the mergers would have on my argument where relevant.

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previous publications. Unless otherwise mentioned, all of these editions, along with LSP, agree on the scribal attribution of all tablets discussed in this article; in order to proceed on as firm a basis as possible, tablets and scribes over whose attribution or existence there is significant disagreement are excluded from the analysis, and therefore do not appear in the figures or lists of examples. (Disputed attributions which would be of particular significance to my argument, such as LSP’s proposed merger of certain scribes, will be discussed when relevant). Similarly, unless otherwise noted, readings of texts follow those presented in PTT throughout.

4. The Linear B syllabary and orthographic conventions

The phonographic component of the Linear B writing system consists of eighty-seven syllabic signs (Table 1), each representing an open syllable (a vowel, or one or more consonants followed by a vowel: e.g. a, me, dwo); there are also c. 150 ideograms – signs which represent items or commodities being recorded, e.g. MUL ‘WOMAN’, OLE ‘OIL’ – which, since the focus of this article is orthography, will not be further discussed here.

Many Mycenaean Greek phonemes are not differentiated in the ‘core’ syllabary, which contains signs representing pure vowels and consonant–vowel syllables (the ‘extra’ signs will be discussed below). The series of signs transcribed r- in fact represent both /t/ and /l/; there is no series for /h/; and with the exception of the d-series (/d/), voiceless, aspirated and voiced stops are not distinguished graphically (so that k-series signs have the values /kl/ , /klh/ and /gl/; p- = /pl/, /plh/, /bl/; q- = /kw/, /kwh/, /gw/; t- = /tl/, /th/). The j- and w-series represent both the phonemes /j/ and /w/, and the non-phonemic glides [y] and [w] arising between /i/ or /u/ and a following vowel. In addition, Mycenaean Greek has many consonant clusters and word-final consonants which cannot be straightforwardly written with a syllabary whose signs represent only open syllables; as seen in the word ti-ri-po /tripos/ ‘tripod’, such consonants must either be omitted (‘partial spelling’, as in -po for /-pos/), which is standard for word-final single consonants) or written with a CV sign containing a ‘dummy’ vowel (‘plene spelling’, as in ti-ri- for /tri-/).

16 This includes tablets attributed by SP to ‘stylus groups’ – groups of tablets which shared a writer but which could not be either certainly assigned to or disassociated from identified scribes – but now identified by all the new editions as scribes in their own right. In these cases, and others where the numbering differs between editions, I use the PTT numbering for ease of reference and include alternative numbers on first mention, e.g. ‘H5 (SP: S733-Cii, LSP: H652)’. ‘-’ indicates that a tablet is unattributed.

17 For full details of the differences between the various editions see CoPY.

18 Linear B syllabograms are transcribed in italics; ideograms in SMALL CAPS; syllabic signs used ideographically in CAPITAL ITALICS; and word-dividers as commas. Uncertain readings are indicated by underdots, and breaks at the beginnings or ends of lines by ] and [: erased signs are enclosed in double brackets. Phonemic interpretations of Mycenaean Greek signs and words are given between forward slashes.

19 If /b/ existed in Mycenaean Greek, which is not certain: Thompson (2005).

20 The status of /j/ in Mycenaean Greek is, however, uncertain, and it may have been already largely lost: see Lejeune (1972b) 168–9; Bartonéék (2003) 139.
Table 1. The Linear B syllabary. Phonemic values of extra signs whose transcriptions are not transparent are given in brackets (R = /r/ or /l/). The Linear B font is ‘Alphabetum’, created by Juan-José Marcos (http://guindo.pntic.mec.es/~jmag0042/alphaeng.html).

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Undeciphered signs

*18 *19 *22 *34 *47 *49 *56 *63 *64 *65 *79 *82 *83 *86
A complex set of conventions governs the use of plene or partial spelling, which depends on the nature of the consonant cluster being represented. Clusters whose first element is a stop are represented in full, as in ti-ri- for /tr-/; while clusters of a non-stop followed by a stop are represented partially (e.g. wo-do-we /wordowan/ ‘rose-scented’, n. nom.-acc. s.), as are geminates (e.g. o-pe-to-sa /opʰellonsa/ ‘owing’, f. nom. s.). The spelling of clusters of two non-stops varies in a way which cannot easily be summarised or accounted for by their phonetic properties: for instance, the clusters /sm/ and /sw/ are represented in full (e.g. do-so-mo /dosmos/ ‘religious contribution’; a-si-wi-ja /Aswia/, toponym), but /s/ plus a stop is not (e.g. ta-to-mo /stathmos/ ‘pen (for animals)’). What is important here is not the precise details of all these spelling conventions, nor the possible underlying reason(s) for this complex system,21 but the consistency with which they are applied. There is no significant orthographic difference in this respect between documents from different Mycenaean sites or between individual writers, and relatively few exceptional spellings can be identified,22 showing clearly that writers at all of these sites were trained in a shared set of highly consistent orthographic conventions.23 Variation involving these core signs is widely found in only two circumstances: in the spelling of the cluster /wy/ as either wi-jV (with the dummy vowel i arising from the following semivowel /y/) or u-jV (with u representing /w/), and in the representation of clusters whose second element is /w/, in which case the variation is not between partial and plene spelling but between two different forms of the latter. The man’s name /Widwohios/, for instance, is spelt both wi-do-wo-i-jo (with the dummy vowel taken from the following /o/, as is usual in plene spelling) or wi-du-wo-i-jo (with u as the dummy vowel based on the following /w/).

Additionally, however, the same name may be spelt with one of the ‘extra’ signs, dwo, used to represent this consonant cluster in place of the core plene spelling: wi-duo-i-jo. The existence of these fourteen ‘extra’ signs (Table 1) and their alternation with signs from the core syllabary account for most of the systematic orthographic variation present in the Linear B texts. As well as ‘complex’ signs replacing a plene spelling with two core signs, as in the case of dwo ~ do-wo/du-wo or pte ~ pe-te, other extra signs (the ‘doublets’) supply specific phonemic values which are not differentiated by the core syllabary: e.g. a₂ represents /ha/, otherwise written only with the core sign a; pu₁ represents /pʰu/, aspiration being otherwise unmarked.24 In principle, each of these extra signs may therefore alternate with one or more equivalent core spellings. Such variation is well

21 For full accounts of these conventions and discussions of the various attempts to provide a phonological explanation for them see Woodard (1997), chapters 2–4; Consani (2003).
22 See nn. 80 and 132 for discussions of some of these exceptions.
23 The only situation in which variation between plene and partial spelling is relatively widely found is in the representation of word-final consonant clusters: e.g. itʰôdraIts/ ‘breastplate’ is written both to-n (following the convention that final consonants are not represented) and to-na-ka (following the usual practice of representing all stops). In these cases, clearly, writers adopted different strategies for dealing with a conflict between two existing orthographic conventions. See Meißner (2007) 106–10; Petrakis (2016) 78–88.
24 On the value of this sign /pʰu/ only, not /pʰu/ and /bu/, see e.g. Thompson (2005); Judson (2017a).
known, and indeed has often been key to identifying the values of these extra signs in the first place; in this article, however, I investigate in greater depth the extent to which this orthographic variation exists within the Pylian community of writers and in the work of individual scribes, the details of how and where this variation occurs, and the implications of scribes’ orthographic practices for our understanding of how they learned to write in Linear B. I discuss in turn instances in which the spelling of particular sequences is highly consistent despite the possibility of variation, indicating the existence of, at least, strong collective preferences, if not actual orthographic conventions, relating to the representation of these sequences (section 5); cases in which there is some degree of variation but collective or individual preferences still appear to exist (section 6); and cases in which variation between two or three different orthographic options is entirely usual, both collectively and individually (section 7). I then analyse the levels of consistency or variation seen in scribes’ spelling of particular lexical items and morphological elements (section 8), before concluding with a discussion of the way in which Linear B spelling may have been taught at Pylos (section 9).  

5. Orthographic consistency: au, a₃, pte

In some cases, clear overall preferences for one particular spelling are visible even where the writing system in principle allows for variation. The diphthong /au/, for instance, which is always written out in full as \((C)a-u\) when following a consonant (e.g. \(n\-a\-u\-d\-o\-m\-o\) /naudomoi/ ‘ship-builders’), could in principle be written either \(a-u\) or with the extra sign \(au\) in word-initial position. In practice, however, the latter is the only one found (as in, for example, the man’s name \(a\-u\-k\-e\-w\-a\) /Augēwās/). This is the case not only at Pylos (where twenty-six to twenty-eight examples of \(au\) are known, written by least six different scribes: H2, H12, H21, H22, H32, H41), but across the entire Linear B corpus. The use of \(au\) to represent initial /au-/ thus appears to be as consistent an orthographic convention as those described above for the use of plene or partial spelling.

25 See e.g. Panayotou (1987) and (1992), on variation between the complex signs and their corresponding core spellings; Duhoux (2007), on ‘orthographic flexibility’ in Knossian Linear B; Palaima (2020), on \(a\₃\) and the RyV signs.

26 For instance, Mabel Lang’s identification of \(d\-w\) from the alternation \(t\-m\-i\-d\-e\-w\-e\- / t\-m\-i\-d\-w\) (Lang (1958) 189; see section 7).

27 Throughout this article, examples of particular signs and phonemic sequences have been identified by using DÂMOS in conjunction with the current editions of the Pylos texts (see section 3) and, unless otherwise specified, following the interpretations given in DMic and DMic Supl.

28 PY Na 568.B (H1); Vn 865.1 (SP: Ci; PTT²: H48; LSP: H654); Xn 990.[1] (-).

29 PY An 192.4 (H22); Jo 438.23 (SP: Ci; PTT²: H2; LSP: H602); Ta 711.1 (H2).

30 Of the two certain examples of word-initial \(a\-u\-\), one, \(a\-u\-q\-e\), is clearly an error for \(o\-u\-q\-e\) /ou-kʷe/ ‘and not’; the other, \(a\-u\-\-n\-a\), is obscure, and could represent either \(/a\-u\-\)/ or (as is usually assumed) /ahu-/ (KN Sd 4402.a, Np(1) 286: Lejeune (1972a) 185). It is, however, possible that initial \(/a\-u\-\)/ could be spelt differently when followed by another vowel; many of the fourteen examples of the sequence \(a\-u\-\-\)/ are obscure, and could represent either \(/a\-w\-\)/ or \(/a\-u\-\-\)/. There are no instances of *\(a\-u\-\-\)- at Pylos are obscure, and could represent either \(/a\-w\-\)/ or \(/a\-u\-\-\)/. There are no instances of *\(a\-w\-\)/.
Diphthongs in -i are, unlike those in -u, not usually represented in full: /oi/, for instance, is usually written only as o, and the sequence o-i normally represents /o(i)hi/ (e.g. in the o-stem dative plural ending). There are some exceptions to this at Knossos and Mycenae in word-medial position: e.g. ko-to-i-na ~ ko-to-na /ktoina/ 'plot of land'.31 This spelling is not, however, apparently used at Pylos, where all securely interpretable examples of medial (C)V-i represent /Vhi/: e.g. po-si-da-i-jo-de /Posidahion-de/ 'to the sanctuary of Poseidon'; te-i-ja /thehiai/ 'divine' (f. dat. s.); wi-du-o-i-jo /Widwohios/ (man’s name).32 The use of the extra sign a3 to represent /ai/ when this is not preceded by a consonant (i.e., usually in word-initial position) similarly appears nearly completely consistent at this site, where a3 is used at least fifty-one times by eleven different scribes (H1, H2, H11, H14, H21, H32, H34, H41, H42, H43, H45). The only certain examples of initial /ai-/ spelt in a different way are in the term a-ja-me-no /aiaimenos, -a/ 'inlaid',33 where the use of j- to indicate the glide between the /i/ and the following vowel seems to have made it redundant to use a3 to mark the diphthong,34 although of course further examples may exist which are not currently securely identifiable. The only direct alternation between a3 and a is found in the terms referring to the two ‘provinces’ of the Pylian territory, known as the ‘Hither Province’ and ‘Further Province’: de-we-ro-a3-ko-ra-i-ja /Dewero-aigalahia/ ‘the area this side of Mt Aigaleon’ ~ pe-ra-a-ko-ra-i-jo /Perâ-aigalahion/ ‘the area on the far side of Mt Aigaleon’.35 The latter is also spelt pe-ra3-ko-ra-i-ja and pe-ra-ko-ra-i-ja /Perâaigalahia/;36 the one clear exception to the otherwise apparently consistent use of a3 therefore shows a writer putting more emphasis on the boundary between the two elements of the compound/collocation than on the representation of the diphthong.37

The complex sign pte is attested thirty-three to thirty-four times at Pylos in the work of at least eight different scribes (H1, H3, H6, H13, H15, H31, H32, H43), several of whom have multiple examples: H43 has written the term ra-pte(-re) /raptēr(es)/ ‘leather-worker(s)’ twelve times, and H3 has at least five instances of the same term,39 while H32 has eight examples of di-pte-ra /diphthera(i)/ ‘hide(s).40 By contrast, the only term at Pylos in which the sequence

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32 Fn 187.2 (H2). Te-i-ja: Fr 1202.B (H2). Wi-du-o-i-jo: Ep 539.12 (H1); also spelt wi-du-w-o-i-jo (Jn 415.3, H2) and wi-du-o-i-jo (Ae 344, H22; An 5.2, - [SP/PT: Cii]).
33 PY Ta-series (H2).
34 Only two terms have been suggested to contain a- representing initial /ai-/ not followed by another vowel, and both are personal names with no secure interpretation: a-ki-to(-jo) /Aigisthoi, -oyo/ or /Alkithoi, -oyo/? (dat./gen.: Fn 79.14, 867.4, H45; Fn 50.1 [SP Cii, PT3 S324-Cii, PT7/LSP -]); a-ne-o /Aineos/, /Aneho¯n/, or /Aneios/? (Es 648.1, H1; Es 650.8B, H11 [SP/PT: Cii]; LSP: H653).
35 Ng 319.1 (H1); On 300.8 (SP: S600 Cii; PT7⁻: -; PT5⁻: H47; LSP: H653).
36 On the use of ra3 vs. ra for /Rai/, see section 7.
37 Ng 332.1 (H1); Pa 398.a (H2; SP: S349 Cii; LSP: H656); cf. Melena (2014) 55 n.66, 60; Palaima (2020) 5 n. 8.
38 As H14 does not have any examples of either pte or pe-te = /pte/, LSP’s proposed merger of H614 and H615 (see section 3) does not affect this discussion.
40 Ub 1318.1.1.1.2.3.3.4-7.
pe-te might represent /pte/ is the man’s name a-pe-te-u (H2),\textsuperscript{44} for which suggested interpretations include /Apteus/, /Arpeteus/ and /Ampeuteus/.\textsuperscript{42} If the first of these interpretations is correct, then it might be noteworthy that this is written by a scribe who is not attested as using pte; however, since this is a personal name, its interpretation is evidently not secure, and the other suggestions in which pe-te represents /pete/ are equally likely. Either way, unless chances of attestation are responsible for the loss of many more examples of pe-te = /pte/, there seems to be at least a strong preference for the use of the extra sign over its core equivalent, and potentially even a site-specific orthographic convention to this effect, in contrast to the variation at Knossos between pte-re-wa and pe-te-re-wa /ptelewās/ ‘made of elm’.\textsuperscript{43}

6. Orthographic preferences, with some variation: pu₂, a₂, /wy/

In other cases, the preference for one orthographic option, although still present, is less strong: for instance, in the use of the extra sign pu₂ to represent /bhū/ (e.g. pu₂-te-re /p̄bhutērēs/ ‘planter’),\textsuperscript{44} as opposed to the core sign pu (= /pū/, /bhū/, and perhaps /bū?: n. 19). Nine or ten scribes have used pu₂ (H1, H2, H3, H4, H6?, H15,\textsuperscript{45} H23, H24, H25, H43); of these, the only scribes with more than one example of this sign, H1 and H2, have used it at least eight and seven times, respectively. There are, however, at least three certain or very probable examples of /bhū/ being written with pu: the ethnic adjective a-pu-ka (H21), in which the value of pu is guaranteed by its alternation with the spelling a-pu₂-ka(-ne) (H1),\textsuperscript{46} and the man’s name pu-ti-ja (H15, H22), which similarly alternates with pu₂-ti-ja (H1, H2).\textsuperscript{47} H22 may have a second instance of pu = /bhū/, if the equation of the two men’s names pu[ ]-a₂-kō (H22) ~ pu₂-si-jā-kō (H2) is accepted,\textsuperscript{48} while H2 has two suggested examples in the men’s names pa-pu-so (/Pamphusos/? and pu-te-u (/Pb̄huteus/ or /Pb̄hteus/?), although such etymological interpretations of names are of course not secure. It is likely that there are further examples of pu = /bhū/ in obscure terms which cannot

\textsuperscript{41} Jn 692.2, 725.[20].
\textsuperscript{42} pte-we (PY La 623, H13) has been suggested to be the dative of the same name (Melena (2000–1) 366; Nakassis (2013) 352), but there is no contextual reason to connect the two, especially given the uncertainty over the dating of H13’s tablets (see n. 4).
\textsuperscript{43} pte-re-wa: KN Se- and So-series; pe-te-re-wa, So 894.1.
\textsuperscript{44} PY Na 520.B (H1); cf. pu-te /p̄butêrē/ ‘planter’, KN Uf(3) 835.b, Uf(3) 987, Uf 5726.
\textsuperscript{45} As H14 does not have any examples of either pu₂ or pu = /bhū/, LSP’s proposed merger of H614 and H615 (see section 3) does not affect this discussion.
\textsuperscript{46} a-pu-ka: PY Aq 218.15, a-pu₂-ka(-ne) (s./pl.): PY An 656.13.20, 657.13.
\textsuperscript{47} pu-ti-ja: An 340.10 (H22); Qa 1294 (H15); pu₂-ti-ja: An 565.13 (H1); Jn 601.3 (H2). The numerous connections between the An-, Jn- and Qa-series strongly suggest that all of these refer to the same person (Nakassis (2013) 89–94, 139–40).
\textsuperscript{48} An 340.7; Jn 310.17. Again, the connections between these series make it likely that these refer to the same person (n. 47). The variation between ja and a₂ reflects a difference in pronunciation (either between /y/ and /h/ or between /h/ and an intervocalic glide).
currently be identified, and that the apparent strength of some writers’ preference for pu₂ may at least partially be the result of skewed data; but even if this apparent preference is a true reflection of Pylian orthographic practices, variation is still permitted and, at least for some scribes, normal. In fact, H15 – the only scribe who has certainly used both spellings – has done so in adjacent words in the entry pu-ti-ja, a-pu₂-we ‘pu-ti-ja (name), at a-pu₂-we (toponym)’. 49

a₂, representing /ha/, shows a similar pattern of use to pu₂. This sign is attested 154 to 157 times at Pylos, written by at least sixteen to seventeen scribes: H1, H2, H5 (LSP: H652; SP: S733-Cii), H6, H14, H15 (merged with H14 by LSP/PT³), H18 (LSP: H657; SP: S1217-Cii), H21, H22, H24, H25, H26, H31, H32, H34, H42 and H43. Again, although there are many possible examples of /ha/ being written with its alternative spelling, the core sign a, relatively few of them are securely identifiable, due to uncertainties over their etymological interpretation or a lack of context to confirm possible spelling alterations. For the purposes of this analysis, I have restricted the list of examples of a = /ha/ to the few whose etymology or spelling alterations make them secure or highly probable:

• tu-we-a /tʰuwehɑ/ ‘perfumes’ (H1) 50
• we-a-re-ja /wehaleyɑ/ ~ we-a₂-re-jo /wehaleyos/ ‘decorated with crystal’ (f./m. nom. s., both H2) 51
• ka-ra-a-pi /k(a)rahappʰi/ ‘with heads’ and se-re-mo-ka-ra-a-pi /seîrēmo-k(a)rahappʰi/ ‘with the heads of sirens?’ (both H2) 52
• we-a-re-pe /wehaleipʰes/ (H19) ~ we-ja-re-pe /weyaleipʰes/ (H2, H18), adjective describing perfumed oil 53
• a-ne-u-te ~ a₂-ne-u-te (toponym: both H21) 54

49 Qa 1294.
50 PY Un 267.3; the interpretation is guaranteed by the morphology (s-stem n. nom.-acc. pl. in /-ha/).
51 Ta 642.1; Ta 714.1.
52 Ta 702.2; Ta 708.2A. These are often interpreted without the /h/, but etymologically /h/ < */s/ should be present (/k(a)raha-/ < */krh₂-s-/: EDG s.v. káro), and there is little good evidence for the loss of intervocalic /h/ having begun at Pylos (see Colvin (2006)). Most of the alternations on which arguments for the beginning of this change are based (Ruijgh (1967) 55–6; Meißner (2007) 101–2) are better explained as due to other factors: e.g. the loss of intervocalic /h/ in i-e-re-u ~ i-j-re-u ‘priest’ is probably due to metathesis /heireus/ > /hi're'euς/ (< */iser-/; -e-: EN 74.16, 659.4; H1; je- elsewhere passim in this root). The only such alternation for which no better explanation is available is pi-ni-te- ~ pi-j-re-te- /prihe(n)ter-/ > /priye(n)ter/ ‘sawyer’ (< */pris-/; -e-: Fn 7.4.10, H3; je-: An 207.5, H43), and this does not seem sufficient evidence to posit this as a widespread process at the time of the Pylos tablets.
53 we-a-re-pe: Fr 1215.1 (H19; SP: S2109-Cii; LSP/PT³: hand merged with H(6)34); Fr 1223.1.2 (SP: H44; PTT²: ); PT³: H18; LSP: H657). we-ja-re-pe: Fr 1205 (H2); Fr 1217.1, 1218.1 (H18; SP: S2107-Cii; LSP: H657; note that this hand may have used both spellings of this term, depending on the attribution of Fr 1223). This term’s second element is clearly /-aleipʰes/ ‘unguent’; the interpretation of the first element as /wey-/ > /weh-/ is obscure, and the only one which accounts for the alternation between -ja- and -a-.
54 Cn 40.7.13; Cn 599.2. a₂-ne-u-te has been suggested to be a mistake influenced by the presence of a₂-pa-tu-u-te on the same tablet (Ilievska (1959) 121–2, n. 40), but since the former actually precedes the latter this is unlikely.
• we-]je-ke-a ∼ we-je-ke-a₂ (n. nom.-acc. pl. s-stem adjective describing wheels: both H26)\textsuperscript{55}

Even with this highly restricted list, Table 2 shows that almost all of these are written by scribes who have also used \textsuperscript{a}_2; the exception, H19, is not likely to be significant since only three tablets are attributed to this scribe (and if the merger of this hand with H634 is accepted, then this hand has in fact used both spellings). Moreover, of the seven scribes with more than one or two examples of \textsuperscript{a}, four also have identifiable examples of \textsuperscript{a} = /ha/; three of these have spelt the same word with both \textsuperscript{a} and \textsuperscript{a} (H2 we-a-re-ja ∼ we-a₂-re-jo, H2₁ a-ne-u-te ∼ a₂-ne-u-te, H2₆ we-]je-ke-a ∼ we-je-ke-a₂), while H₁ has written the s-stem neuter nominative–accusative plural ending /-ha/ with both \textsuperscript{a} (tu-we-a) and \textsuperscript{a}₂ (a-ke-a₂ /angeha/ ‘jars’).\textsuperscript{56} The most significant counter-example is H₅, who has thirty-three attestations of \textsuperscript{a}₂ and no identifiable examples of \textsuperscript{a} = /ha/. It is worth noting that all of this scribe’s examples of \textsuperscript{a}₂ are in the two neuter plural adjectives me-zo-a₂ /medzoha/ ‘larger’ and me-u-jo-a₂ /meiwyoha/ ‘smaller’, used throughout the Sh-series of tablets listing armour, a highly formulaic series of texts which are the only ones attributed to this scribe; such a formulaic context involving the frequent repetition of these two adjectives, presumably within a relatively short period of time, might well particularly encourage consistency in spelling. H₁₅’s three to four examples of \textsuperscript{a}₂ (or up to six if LSP’s merger of this scribe with H₁₄ is accepted)\textsuperscript{57} and H₄₃’s five examples\textsuperscript{58} are more varied across a series of personal and place names and appellatives, but these numbers are not high enough to necessarily represent a significant preference for this spelling. Overall, then, the pattern by which scribes with larger numbers of examples of /ha/ mostly show some variation in the spelling of this sequence implies that this variation is entirely usual, and would be expected to appear in the work of other scribes if examples of \textsuperscript{a} = /ha/ could more easily be securely identified. The frequency of attestation of this sequence in any given scribe’s work is, naturally, a combination of the number of tablets attributed to them (H₁, H₂ and H₂₁ are amongst the scribes with the largest numbers of surviving tablets), the types of documents the scribe worked on (H₅ and H₂₆ both frequently use neuter plural s-stem adjectives in their records of armour and wheels), random chances of survival, and equally random chances of whether a word’s context or the existence of a spelling alternation allows its phonemic interpretation. It is, therefore, entirely probable that a much higher degree of variation is hidden by the difficulty of identifying secure examples of \textsuperscript{a} representing /ha/.

\textsuperscript{55} Wa 11₄₈.₂; Sa 7₈₇.A, 7₉₁, 8₄₃. The similar context makes the alternation reasonably secure even though we-]je-ke-a is incomplete and the adjective’s precise interpretation is obscure.

\textsuperscript{56} Vn 1₃₀.₂.

\textsuperscript{57} H₁₅: me-nu-a₂ (appellative, Qa 1₂₉₃, 1₃₀₁); a-pi-a₂-ro /Ampʰihalos/ (man’s name, Qa 1₂₉₇); e-ma-a₂ /Hermahai/ ‘Hermes’ (dat., Un 2₁₉.₈₇) (this tablet is attributed to H₁₅ by all editions except LSP, who attribute it only tentatively to the merged H₁₄/H₁₅). H₁₄: ]a₂-te-we/ (toponym, Mn 1₃₇₁.₁), wa-a₂-te-pi (toponym, Mb 1₃₇₇).

\textsuperscript{58} a-pi-a₂-ro (man’s name, Ea 1₉₉, 2₇₀, 9₂₂.₂), a₂-e-ta (man’s name, An 2₆₁.₄), wa-a₂-te-we (toponym, An 2₀₇.₉).
A rather different pattern appears in the spelling of the sequence /wy/ as either wi-j- or u-j-. This cluster mainly appears in two groups of words: forms of the comparative adjective /meiwy-/ ‘smaller’, and words formed from the root /Diw-/ ‘Zeus’: di-u-jo ~ di-wi-jo(-de) /Diwyon(-de)/ ‘(to) the sanctuary of Zeus’, di-wi-je-u /Diwyaus, -ewe/, ‘priest of Zeus’ (nom./dat.); di-u-ja /Diwyawo/ (man’s name); di-u-ja-jo /Diwyiaioi/ at the sanctuary of Diwyas. Although both spellings are attested in each of these groups, and frequently in the same terms, individual scribes appear in this case to be consistent in their spelling: most notably, H1 has seventeen

Table 2. Representations of /ha/. In this and all following tables a question mark indicates that either the reading of a sign or its scribal attribution is uncertain.

<table>
<thead>
<tr>
<th>Scribe</th>
<th>a₂</th>
<th>a = /ha/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>51 + 1?</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>18 + 1?</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
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<td>4</td>
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<td>5</td>
<td>2</td>
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<tr>
<td>6</td>
<td>3 + 1?</td>
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<td>7</td>
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<td>8</td>
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<tr>
<td>16</td>
<td>1</td>
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<tr>
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<td>1</td>
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<td>1</td>
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<td>1</td>
<td></td>
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<tr>
<td>27</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

59 There is no good evidence to suppose this to be linguistic variation between /wiy/ and /wy/: cf. Melena (2014) 100. In other cases of variation involving the j- and w-series signs, it is much less clear whether this is orthographic or linguistic variation, so these are omitted from this discussion. See e.g. Meißner (2007) 97–106; Melena (2014) 101–2, 115–23.
60 me-wi-ja /meiwyos/, n. nom. s.: Ta 641.2.3.3 (H2). me-u-jo-a /meiwyoha/, n. nom. pl.: Sh-series, passim (H5, eleven examples).
61 di-u-jo: Tn 316 v.8 (SP/PT³: H44; PTT²: H44B; LSP: H663); di-wi-jo-de, Fr 1230 (SP/PTT²: ; PT³: H153; LSP: H614?); Mb 1366 (H14?: attribution certain in SP/PTT²/PT³, tentative in LSP).
62 An 656.[2], Cn 3.2, Es-series passim (thirteen examples): all H1.
63 Na 406.B (H1).
64 di-u-ja: Cn 1287.6 (H31); Tn 316 v.6 (SP/PT³: H44; PTT³: H44B; LSP: H663). di-wi-ja: An 607.5 (H1).
65 Tn 316 v.4 (SP/PT³: H44; PTT³: H44B; LSP: H663).
examples of the wi-j- spelling (in di-wi-je-u/-we, di-wi-ja-wo and di-wi-ja), while H5 has eleven of the u-j- spelling (in me-u-jo-a₂; cf. this scribe’s consistency in the use of a₂, as discussed above); H2 has three of wi-j- (me-wi-jo) and may have also used u-j-, if the interpretation of po-ro-u-jo as /Plowyos/ or /Prowyos/ (man’s name) is correct.\(^6^7\) Given this uncertainty, and the fact that there are no attestations of a single scribe writing both /meiwyo-/ and terms derived from /Diw-/ , it is unclear whether the consistency seen in at least H1 and H5 represents these writers’ individual preferences for the spelling of /wy/, within the context of overall variation in the representation of this cluster, or preferences for the spelling of particular lexemes or lexical stems (see further section 8).

7. Regular orthographic variation: ra₃, /CwV/, /RRV/

As discussed above, scribes at Pylos are generally consistent in their representation of diphthongs in -i; the exception is in the spelling of /Rai/ sequences, spelt with either the extra sign ra₃ or the core sign ra (or, when followed by another vowel, the sequence ra-jV, where j- denotes the glide between the i and the following vowel). Again, instances of ra = /Rai/ can be hard to identify, but the following secure or probable examples can be identified based on spelling alternations, etymology and/or morphology:

- a-pi-e-ra /Ampʰiherai/?, woman’s name, probably dat. (H12)\(^6^8\)
- au-to-x₃₄-ta-ra, woman’s name, probably dat. (H2)\(^6^9\)
- di-pte-ra /diphʰerai/ ‘hides’, f. nom. pl. ~ di-pte-ra₃ (H32)\(^7^0\)
- do-e-ra /dohelai/ ‘slaves’, f. nom. pl. (H42)\(^7^1\)
- e-ru-ta-ra /eruhʰrai/ ‘red’, f. nom. pl. (H31, H32)\(^7^2\)
- ke-sa-da-ra /Kessandrai/, woman’s name, dat. (case certain in H3, probable in H1, H14 and H21)\(^7^3\)
- ki-ma-ra /Kimarai/?, a-stem f. nom. pl. ethnic adjective or title (H4)\(^7^4\)

\(^{6^7}\) po-ro-u-ro: Jn 725.5 (H2), Jn 658.5 (H21); as a personal name, it is difficult to securely interpret this term. H21 also has a possible example of the wi-j- spelling in ]-te-wi-jo-te /Rewyontes/?, nominative plural participle derived from a noun in /-Reus/ (Aq 64.1).

\(^{6^8}\) An 1281.8.13. This tablet contains a list of people to whom craftsmen are allocated (see e.g. Lupack (2008) 471), whose names therefore ought to be in the dative (as au-ke-i-ja-te-we on 1281.4.0.21 certainly is). However, since the a-stem nominative and dative singular are homographous, a nominative of rubric cannot be entirely ruled out.

\(^{6^9}\) Fn 187.10. Listed amongst a series of recipients of grain, of which all those whose case is certainly identifiable are in the dative: cf. n. 68.

\(^{7^0}\) Ub 1318.1.1.2.3.4.

\(^{7^1}\) Ae 303.

\(^{7^2}\) Ub 1315.1; Ub 1318.3.

\(^{7^3}\) ke-[j]a-da-ra is certainly dative on An 435.2 (H3), where she is the indirect object of -da-sa-to /da(s)ato/ ‘allocates’ (Nakassis (2012) 279–81). On Fg 829 (H1), Fg 368 (H21) and Mn 1368.2.3 (H14), she is the recipient of various goods, so a dative is most likely but a nominative of rubric is possible (see Shelmerdine (1998–9) 315, 325). ke-sa-da-ra also appears on Mb 1380 (H14), whose context is unclear.

\(^{7^4}\) Aa 63.
• o-ka-ra: a-stem m. nom. pl. noun referring to soldiers (≈ o-ka-ra3; both H1)\(^75\)
• pe-ra-ko-ra-i-ja /Perāigolahia/, the ‘Hither Province’ (H7)\(^76\)

Table 3 shows that, of the eleven scribes who have certainly or probably used ra for /Rai/, five (H1, H2, H4, H21 and H31) have also used the sign ra3;\(^77\) many have also used ra-jV for /RaijV/, but this appears to be a consistent practice like that of using a-jV for /aįjV/, never *a3-jV (section 5). Those who have used only one of these spellings mostly have just one or two examples; the exceptions are H18 (LSP: H657; SP: S1217-Cii), who has five examples of the word /elaiwon/ ‘olive oil’ spelt e-ra3-wo,\(^78\) and H32, who has written the word ‘hides’ /diphtherai/ as di-pte-ra up to six times, and the word /eruthrai/ ‘red’ as e-ru-ta-ra once (see above). In both cases, this seems to indicate a personal spelling preference, at least in these particular words; contrast the practice of H31, who has not only used both spellings but has done so in two consecutive words in agreement with each other: di-pte-ra, e-ru-ta-ra /diphtherai eruthrai/.\(^79\)

We have seen above that clusters of a consonant followed by /w/ can be written in up to three different ways: in plene spelling using a dummy vowel taken from the following vowel (CV-wV); in plene spelling using the dummy vowel u (Cu-wV); or using one of the extra signs with a CwV structure (due, duo, nwa, two; tue is not found at Pylos). It is therefore necessary to look in this case not only at variation between spellings with the extra signs or plene spellings, but also between the two different versions of the latter, including for /CwV/ sequences which do not have corresponding extra signs. Table 4 shows the spellings of all identifiable examples of /CwV/ sequences by scribe.\(^80\) In many cases, the same /CwV/ sequence is attested with all possible spellings: /dwo/ appears as do-wo, du-wo and dwo; /t(b)wo/ as to-wo, tu-wo and two; /kwe/ as ke-we and ku-we; /nwo/ as no-wo and nu-wo; /dwa/ perhaps as both da-wo and du-wo; and /kwo/ perhaps as both ko-wo and ku-wo. Others show a lesser degree of variation: /dwe/ appears only as de-wo and dwe, never *du-we; /nwa/ as nu-wa and nwa but never *na-wa; and /swi/ only as si-wi, never *su-wi. If this is not due to chance, then in these cases scribes may have avoided certain spellings; however, for the sequences with three orthographic options, this does not translate into consistency but only into the use of two possible orthographies instead of three. There is

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75 o-ka-ra: An 657.13b, o-ka-ra3: An 519.4, 654.18, 657.4; Cn 3.3.
76 Pa 398.a; see section 5.
77 See also Palaima (2020) 5–7. I see no reason, however, to regard the example of ra, by H4 on Aa 61 as another, unknown, sign, as very tentatively suggested by Palaima (2020) 10–13.
78 Fr 1217.1, 1218.1, 1225.1, 1240.1, 1242. However, note that this word is spelt e-ra-wo on Fr 1223.1, attributed to this scribe by LSP and PT3 (SP: H44; PTT2: -).
79 Ub 1315.3.
80 The sequences /rw/ and /lw/ are excluded as these are normally represented in partial spelling, with only two possible exceptions at Pylos: ka-nu-we-qe /karwei-κκε/ or /karuει-κκε/ ‘and with nut-shaped decoration’ (Ta 721.1, H2); a-ru-wo-te /Halwontei/ (toponym, An 657.8, H1). The former may be influenced by the presence of /-u-/ in other forms of the word, while in the case of the latter, the morpheme boundary between the root /Hal-/ and suffix /-wont-/ might have influenced this spelling: see Consani (2003) 1023, and n. 132 below.
also no consistency between these three sequences as to which option is apparently avoided (the CV-wV option is not attested in the case of /nwa/, but in the other two cases it is the Cu-wV option that does not appear). Moreover, disregarding the following vowels, it can be seen that there is similarly no overall consistency or apparent strong preference for a particular spelling of any given /Cw/ cluster: /dw/, /tw/ and /nw/ are all spelt with both of the possible plene spellings as well as the relevant extra signs, while /kw/ (for which no extra sign is available) is spelt with both kV-wV and ku-wV. /sw/ is only spelt with sV-wV, but as this is the least commonly attested of any of these /Cw/ clusters (three to six examples), this can be plausibly attributed to chances of attestation or identification. It is therefore clear that there is no overall orthographic preference in the representation of these sequences.

Similarly, looking at individual scribes’ usages shows that they frequently use multiple spellings, even for the same /CwV/ sequence:81 H1 uses all three options for /dwo/;82 H2 uses ku-we and ke-we for /kwe/, both in the same word, pa-ra-ku-we/pa-ra-ke-we;83 H32 likewise uses both nu-wa and nwa in the term pe-ru-si-nu-wa/pe-ru-si-nwa-o;84 and H41 uses both du-wo and dwo for /dwo/ in different forms of the numeral ‘two’.85 Less certain

Table 3. Representations of /Rai/

<table>
<thead>
<tr>
<th>Scribe</th>
<th>ra₃</th>
<th>ra = /Rai/</th>
<th>ra-jV = /RaⁱjV/</th>
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<td>8</td>
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<td>10 + 1?</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
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81 Cf. Panayotou (1987) and (1992). However, there is no evidence to support Panayotou’s conclusion that the variation between extra signs and plene spellings represents a difference between allegro and lento pronunciations of /CuV/ sequences: all the interpretable examples of the CuV signs are etymologically /CwV/.

82 ne-do-wo-ta-de /Nedwonta-de/ (toponym, ‘to Nedwons’), An 661.13; du-wo-jo-jo /Dwoioio/ (man’s name, gen.), An 656.11; du-wo-u-pi /dwoupβi/ ‘two’ (instr.), Ep 613.1.4, 704.7; wi-dwo-i-jo /Widwohios/ (man’s name, nom.), Ep 539.12.

83 Ta 714.1.3, 715.3; Ta 642.1. This term is a dative or instrumental singular noun in /-Kwe(i)/ referring to a material, but its precise interpretation is uncertain.

84 pe-ru-si-nu-ua /perusinwai/ ‘last year’s’, f. nom. pl., Ub 1316.b; pe-ru-si-nu-o /perusinwahon/, f. gen. pl., Ub 1317.

examples include H1’s, H2’s and H3’s possible uses of two different spellings for /nwo/, involving terms whose interpretations and/or readings are uncertain, and H26’s possible use of both dwe and de-we for /dwe/ (both in the same adjective /termid-went-/).87

### Table 4. Representations of /CwV/ sequences, with the number of examples of each spelling given in brackets

<table>
<thead>
<tr>
<th>Scribe</th>
<th>/dw/</th>
<th>/tw/</th>
<th>/kw/</th>
<th>/nw/</th>
<th>/sw/</th>
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<td>1</td>
<td>da-wa (1)</td>
<td>to-wo (2)</td>
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<td>no-wo (2?)</td>
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<td>17 + 2?</td>
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<tr>
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<td>tu-wo (1)</td>
<td>ke-we (1)</td>
<td>no-wo (1?)</td>
<td>si-wi (1)</td>
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<tr>
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<td>ku-we (3)</td>
<td>no-wo (1?)</td>
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<tr>
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<td>du-wo (2)</td>
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<td>nu-wa (2 + 1?)</td>
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<td>tu-wo (5)</td>
<td>ko-wo (1)</td>
<td>no-wo (1?)</td>
<td>si-wi (1?)</td>
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<td>dwo (2)</td>
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<td>4</td>
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<td>43</td>
<td>two (4)</td>
<td></td>
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<td>nwa (1)</td>
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<td>5</td>
</tr>
</tbody>
</table>

86 H1 and H2 have certain instances of nu-wo: H1: ke-se-nu-wo /Ksenwôn/ (man’s name, nom.?), Cn 286.1; H2: pe-ru-si-nu-wo /perusinwon/ ‘last year’s (n. nom. s.), Ma 216.3, 244.2[2], 330.2, 378.2, 397.2; sa-ri-nu-wo-te /Salinwontei/ (toponym, dat.-loc.), Mn 456.9. An example of the latter is also restorable for H1: sa-ri-nu[-wo]-te, Na 544. Both scribes’ possible instances of no-wo = /nwo/ are in the toponym e-ri-no-wo (gen. e-ri-no-wo-to, dat.-loc. e-ri-no-wonte), which may well be formed in /-n-wont-/ (H1: Eq 213.2, Na 106.B; H2: Mn 456.8). H3 has uncertain examples of e-ri-no-wont-te (An 427.1) and sa-ri-nu-wont-te (An 424.2).

87 The adjective /termidwenta/ (‘fitted with endings’, n. nom.- acc. pl.: referring to wheels) appears as te-mi-dwe-ta on Sa 791 and 793, which are universally attributed to this scribe. Sa 1266, on which the dual form of this
Moreover, even scribes who appear to be consistent in their usage of one spelling for a particular /CwV/ sequence do not show any overall consistency. For instance, H21 has consistently used tu-wo for /t(h)wo/ (five examples in two different terms, o-tu-wo-we and a₂-pa-tu-wo-te), but has otherwise used either CV-wV spellings (de-we, ko-wo; do-wo?, no-wo?, si-wo?) or in one case an extra sign (nwa). The only scribes who could be said to be at all consistent on the basis of the available data have very few examples: H23, for instance, has used an extra sign when available (nwa) and otherwise only CV-wV spellings (ko-wo, si-wo?), but this is based on only three examples. H43 has only used extra signs (two four times, all in the man’s name o-two-wo-o; nwa once), and – as the only scribe known to have used two – may even have been the creator of this sign (H1 has spelt the same name with to-wo, including on the verso of the same tablet as H43’s o-two-wo-o). However, with no other instances of /Cw/ by this scribe, it is difficult to say whether this is evidence for a strong overall preference for the use of extra signs. Given the small numbers involved and the patterns of variation seen in other scribes – not only those with larger numbers of examples, but also others with very few examples who nonetheless show variation, such as H32 – it seems most likely that these are illusions of consistency created by the chances of attestation and interpretation.

The situation is more complicated with the signs ra₂ and ro₂. Spelling alternations with the plene spellings ri-ja and ri-jo show that when the Linear B writing system was created these signs represented the /RyV/ sequences /rya/, /lya/ and /ryo/, /lyo/, respectively: e.g. me-re-ti-ra₂ ∼ me-re-ti-ri-ja */meletryai/ ‘women who grind flour’. However, a sound change subsequently took place in Mycenaean Greek by which /Ry/ became /RR/, so that me-re-ti-ra₂ ∼ me-re-ti-ri-ja would actually have been /melet(i)rrai/ when all of the extant tablets were written (with ra₂ now representing /RRa(i)/, and ri-ja functioning as a conservative spelling for this sequence). This sound change is demonstrated by the use adjective is spelt te-mi-de-we-te (/termidwente/), is attributed only tentatively to this hand by all editions except LSP.

88 o-tu-wo-wo /Orthwōwës/ (man’s name, nom.), Jn 658.7; a₂-pa-tu-wo-te (toponym, dat.-loc., in /t(h)wo-/, Cn 599.3-4.5-7.

89 ne-de-we-e /Nedwehei/ (toponym, dat.-loc.), Cn 595.3; o-pu-ko-wo-ko /ampukworgoi/ ‘women working on headbands’, Ab 210.B; ne-do-wa-te /Nedwontei/ (toponym, dat.-loc.), Cn 4.5; e-ti-ni-wo-te (cf. n. 88), Cn 4.5; ki-si-wi-j-a /Kswiai/ ‘women from Chios’, Ab 194.B; ti-nwa-si-ja (f. nom. pl. ethnic adjective, ‘women from *ti-nwa-to’), Ab 190.B.


91 o-two-we-o /Orthwowhehos/ (man’s name, gen.), An 261.2.3.4.5; ti-nwa-si-jo (s.?, see n. 89), Ea 810.

92 o-to-wa-wo-~o, An 261 v.7; o-to-wa-<we>-, Un 616 v.4.

93 The sign tₐ₁ /tya/ is not included in this discussion since there are only four examples by two scribes (H2 and H3), though note that H2 has spelt toponyms in /t(h)ja/ with both tₐ₁ (e.g. ra-ₐ₁-ₐ₁-taᵢ-a; Jn 829.[14], Ma 216.1) and the plene spelling ti-ja (e.g. a-si-ja-ti-ja: Jn 750.1, 829.16).

94 me-re-ti-ra₂: Ab 789.B (H21); also me-re-ti-ra₂-o (*/meleyryahôn/, gen. pl.), Ad 308 (H23). me-re-ti-ri-ja: Aa 764 (H1), Aa 62 (H4).

95 On the possibility that -ti-ra₂ represents /-tirra/ rather than /-trra/ see e.g. Lejeune (1997) 211.
of ῥα₂ in the term ἀ-κε-ῥα₂-τε, interpreted from context as /agersantes/ ‘gathering’ < */agersantes/ (cf. Attic ὑγεῖοντες), showing that at this point the outcome of both */rs/ and */ry/ was /rr/. ⁹⁶ Hence, ῥα₂ and ῥο₂ alternate not only with ῥι- iota and ῥι-βο, but also, since geminate consonants are not usually distinguished by the script, with the single core signs ῥα and ῥο (e.g. the man’s name τα-ῥα₂-το ~ τα-ῥα-το, shown by context to refer to the same landholder), ⁹⁷ as well as – for the sequence /RRai/ – with ῥα₃ (e.g. ze-ρα₃-ρα₃ /Dzepʰurrai/ < */Dzepʰuriai/ ‘women from Zephuria (Halikarnassos?)’. ⁹⁸ There are therefore in principle three different ways of spelling /RRo/ and four of /RRa/. ⁹⁹

Table 5 shows examples of ῥα₂/ρο₂ and identifiable instances of ῥι-ια/ἱ-ιο, ῥα₃ and ῥα/ιο representing /RRa/ and /RRo/: this includes those which directly alternate with ῥα₂ and ῥο₂ as well as those which can be identified etymologically and/or by comparison with other alternations. The latter includes all instances of ῥι-ια and ῥι-ιο appearing word-finally in nouns and adjectives formed in -Ῥιας, -Ῥια/, since the use of ῥα₂ and ῥο₂ in this context (e.g. με-τε-τι-ρα₂, above; po-πυ-ρο₂ /porpʰurrό/ < /porpʰuriό/ ‘purple’) ¹⁰⁰ shows that these had undergone a process of yodisation (/Ｒυ/ > /Ｒυ/) and thus also been subject to the change of /Ｒυ/ > /ＲＲ/. ¹⁰¹ Examples of ῥι-ια, ῥι-ιο, ῥα and ῥο whose interpretation is very uncertain are not included; there may well therefore be more instances of each of these spellings of /ＲＲ/ than are able to be identified.

As can be seen, the vast majority of scribes with more than one identifiable example of /ＲＲ/ have used at least two, if not all three, different types of spellings (the ῥι-ιV plene spelling, the extra ιV₂ signs and the spellings with ῥα, ῥο or ῥα₃ – these last three are grouped together as ιV₃ since they all treat the geminate in the same way). The two scribes with the largest number of examples, Η₁ and Η₂¹, have each used every possible spelling for /RRa/ and /RRo/ apart from ῥα – which, given this level of variation, is probably due to chances of attestation and/or identification. ¹⁰² H2 may, perhaps, prefer

⁹⁷ τα-ρα2-το: passim in Η1’s En and Η4¹’s Eo-series; τα-ρα-το: Eo 247.6 (H41; corresponding to En 74.15), An 192.10 (H22). See Nakassis (2013) 380.
⁹⁸ Aa 61 (H4). Cf. also κυ-τε-τα₁ /Κυτʰἐραι/ ‘women from Kythera’, Aa 506 (H1), Ab 562 (H2¹): this is generally interpreted as /Κυtʰἐραι/, but an ethnic adjective of this type should be */Κυtʰἐραι/ > /Κυtʰἐραι/. Palaima (2020) 11–13, following Ruijgh (1967) 366, argues against the interpretation of these two terms as containing geminate /τι/; however, the assumption that ῥα₃ can represent either single or geminate /Ｒ/ just as its corresponding core sign ῥα does is much less difficult than assuming an unusual formation of these ethnic adjectives in /Ｒ-ος, -α/.
⁹⁹ For demonstrations that this spelling variation is, at the period of the tablets, purely orthographic – rather than representing differences in pronunciation – see Lejeune (1997) 211–12 and Jiménez Delgado (2011); cf. also Panayotou (1992).
¹⁰¹ In the following discussion, when words of this type appear in DMic/DMic Supl. with the form /ＲＲ/ or /ＲＲ/, I include both this original form and the yodised version.
not to use the \( rV_3 \) spellings, since their single example of this type of spelling is an erased example of \( ro \) which has been replaced with \( ro \),\(^{103}\) but they have still used both the \( ri-jV \) and \( rV_2 \) spellings;\(^{104}\) equally, the decision in one instance to replace a core spelling with an extra sign does not necessarily mean the former was always considered incorrect by the writer.\(^{105}\)

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Table 5. Representations of \(/RRV/\)

<table>
<thead>
<tr>
<th>Scribe</th>
<th>( ri-ja )</th>
<th>( ri-jo )</th>
<th>( ra )</th>
<th>( ro )</th>
<th>( ra )</th>
<th>( ra )</th>
<th>( ro )</th>
<th>No. of relevant examples</th>
</tr>
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<td>1</td>
<td>4</td>
<td>14</td>
<td>15</td>
<td>4 + 1?</td>
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<td>6</td>
<td>45 + 1?</td>
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\(^{103}\) Examples include \( a-ke-ti-ri-ja-i /askt(i)rraih/ ‘women who decorate textiles’ (dat. pl., Fn 187.15); \( mi-ta /mi(\)ta\)/ ‘women’s name, \( \text{Cn} \ 600.3\); \( pa-ku-ro2 /Pakhullos/? (man’s name, \( Aq \ 218.10\); \( o-pe-ro-te /ophellontes/ ‘owing’ (m. nom. pl., \( Aq \ 218.1\).)

\(^{104}\) Examples include \( a-ke-ti-ri-ja-i /askt(i)rraih/ ‘women who decorate textiles’ (dat. pl., \( \text{Fn} \ 187.15\); \( mi-ta /mi(\)ta\)/ ‘women’s name, \( \text{Cn} \ 600.3\); \( pa-ku-ro2 /Pakhullos/? (man’s name, \( \text{Cn} \ 600.3\); \( pa-ku-ro2 /Pakhullos/? (man’s name, \( \text{Jn} \ 750.8\).

\(^{105}\) See Judson (2020a) 541–3.
The remaining scribes with five or more examples of /RRV/ have all used at least two different types of spelling (H23, both rV and rV(3); H41 and H43, both rV and rV(3), perhaps also rV(3)\(^{107}\) with the sole exception of H24, who has six instances of the rV spelling only. Although this could indicate an individual preference for the use of these extra signs, note that this is, of course, the most reliably identified of the three types of spelling, and these six examples are in just two terms: tu-ro\(_2\)/TU+RO\(_2\) (turros/ ‘cheese’,\(^{108}\) and the man’s name e-ke-ra\(_2\)-wo.\(^{109}\) It is therefore doubtful whether this is strong enough evidence for a preference on the part of this scribe for the use of rV spellings in general.

The only other scribe who appears from the attested data to be consistent is H12, with a single example each of ri-ja and ri-jo,\(^{110}\) and this is certainly not enough evidence to be significant, especially considering that at least three other scribes with similarly small numbers of examples have used multiple spellings (H4, H6, H22; probably also H15).\(^{111}\) With the potential exception of occasional individual preferences (such as H2’s possible avoidance of using rV(3)-type spellings), individual variation in the spelling of /RRV/ sequences seems to be as acceptable and normal as that in the presentation of /CwV/ sequences.

8. Are there lexical and morphological influences on orthographic practices?

It is clear, as discussed in section 4, that the Mycenaean scribes’ orthographic training included learning the correct way(s) to represent particular phonemic sequences; it has also been argued that they must have similarly been taught the (single) correct spellings

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\(^{106}\) Examples include a-ke-ti-ra\(_2\)-o /askēt(i)rra(h)ōn/ ‘women who decorate textiles’ (gen. pl., Ad 290 and 666) and ze-pxi-\(_2\)-ra-o /Dzephurr(a)hōn/ ‘women from Zephruria (Halikarnassos)’ (gen. pl., Ad 664).

\(^{107}\) H41’s examples include ta-ra\(_2\)-to (Eo 351.2, 444.5, 471.2) ~ ta-ra-to (Eo 247.6: man’s name, interpretation obscure); si-ri-jo-jo (man’s name, gen. s., presumably in /-Rios/ > /-RRos/ if this reading is correct, Eb 159.b); ko-tu-ro, /Kourhon/ (man’s name, Eb 892.2, 899.4); o-pe-to /ophel(l)lin/ ‘owing’ (m. nom. s., Eb 495.1). H43’s examples include e-\(\_\)-tu-ri-jo /epiwestris/ > /epiwest(i)rros/ ‘tailor’ (Ea 52); ku-ro, /Kulloi/? (man’s name, dat., Ea 814. a); ze-pxi-\(_2\)-to /Dzephurros/ (man’s name, Ea 50).

\(^{108}\) Un 718.4.4.8.12. The transcription TU+RO\(_2\) indicates a ligature of syllabic signs used ideographically.

\(^{109}\) Er 880.[1], Un 718.2; see section 8.

\(^{110}\) e-\(\_\)-ti-ri-ja /Esth(i)llai/ > /Esth(i)llai/ (woman’s name, dat., Vn 851.9); te-\(\_\)-te-ri-jo-ne (man’s name, dat., presumably in /-Rion/- > /-RRion/-, Vn 851.13).

\(^{111}\) H4: me-\(\_\)-ti-ri-ja /melet(i)rrai/ ‘women who grind flour’ (Aa 63); ze-pxi-\(_2\)-ra /Dzephurrai/ ‘women from Zephruria (Halikarnassos)’ (Aa 61); re-ke-to-\(\_\)-te-\(\_\)-jo /lekē(s)stro(h)eron /lekekē(s)stro(h)eron ‘festival of making the bed’ (Fr 343). H6: tu-tu-pi-ti-ja /struptēras/ ‘alum’ (gen. s., Un 443.1); ku-ri-\(\_\)-u-\(\_\)-na (man’s name, accusative, Un 853.1); ku-ri-jo /Kuprios/ > /Kupiroi/ (man’s name, Un 443.1). H15: /ke-ri-ja-\(\_\)-jo (Qa 1292) and e-\(\_\)-ke-\(\_\)-na-\(\_\)-wo-ne (Un 219.1 [?]; on the attribution of this tablet, see n. 57), both alternative spellings for e-\(\_\)-ke-\(\_\)-na-\(\_\)-wo (see Nakassis (2013) 243-4, and section 8 below); a-ke-ti-\(\_\)-ja-i /askēt(i)rraih(i)/ ‘women who decorate textiles’ (dat.pl., Un 219.4 [?]). Following LSP’s merger of H15 with H14 would give this hand one certain example of ni-ja (Qa 1292), uncertain examples of ni-ja and ni-jo (Un 219.4; ja-\(\_\)-ni-jo, toponym or adjective, Mb 1387), and an uncertain example of ra (Un 219.1). H22: examples include qa-ra\(_2\) /Kallais/ (man’s name, An 192.16) and ta-ra-to (man’s name = ta-\(\_\)-ra-to [n. 97], An 192.10).
of individual words – at least of vocabulary items, with personal and place names being less likely to be included in lists of spellings to be learned and therefore potentially more subject to individual variation. Scribes could in principle have also been taught that particular morphological features had one correct spelling. Examining the words and morphemes which appear multiple times in the dataset for this study shows, however, that the situation is considerably more complicated than this picture of scribes learning lists of correct spellings implies.

In some cases, the available data does suggest that scribes may have individually or collectively preferred a particular spelling for a given lexeme, even when there is widespread variation in the representation of the relevant phonemic sequence overall (i.e. for the sequences discussed in section 7). For instance, although /nwa/ may be spelt both nwa and nu-wa, the former is consistently found in the ethnic adjective ti-nwa-si-j/-ti-nwa-ti-j- across seven examples written by at least five scribes, despite the variation between the assimilated and unassimilated forms of this word; the toponym e-ri-no-wo(-to, -te), probably formed in /-n-wont-/ is similarly never spelt with *nu-wo (up to five examples by four scribes). Terms deriving from the verbal root /op'hell-/ ‘owe’ (< */opheln-/ are consistently spelt with r0 rather than r2 (nine examples by three scribes, including six by H1); conversely, /turros/ ‘cheese’ is always spelt with r2 (five to seven times, by at least two scribes), as is the man’s name ko-tu-ro2 /Kotullo¯n/? (four to five times, by three scribes). In other examples of repeated consistent spelling, the term is attested in only a single scribe’s work, so it is not clear whether this is an overall preference or only that of the writer in question: e.g. H2 has consistently spelt the adjective /perusinwon/ ‘last year’s’ as pe-ru-si-nu-wo (three to five examples), while the toponym a2-pa-tu-wo-te (formed in /-t(h)-wont-/ appears with this spelling four times in H21. Note that this group of consistently spelt terms includes words of all kinds – personal and place names as well as vocabulary items.

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112 Palaima (1998–9) 211, 213, 221. The implications for which Palaima argues regarding linguistic variation within the Linear B texts are beyond the scope of this paper.

113 H1 (Aa 699), H13 (La 633; on this scribe see n. 4); H21 (Ab 190.B), H23 (Ad 684), H43 (Ea 810); also Fn 324.12 (SP: S324-Cii; PTT: ; PT: H31; LSP: H631) and Jo 438.21 (SP: Ci; PTT: ; PT: H2; LSP: H602).

114 On this variation, see Thompson (2002–3) 344-55.

115 H1 (Eq 213.3; Na 106.B), H2 (Mn 456.8), H3 (An 427.1), H21 (Cn 4.5).

116 Indicative: o-pe-ro-si/-op'hellinsi/ ‘they owe’: Nn 228.1 (H1). Present participles: o-pe-to /op'hellon/, m. nom. s.: Eb 149.1, Ep 613.1 (both H1), Eb 495.1 (H41). o-pe-to-sa /op'hellonsa/, f. nom. s.: Ep 704.7 (H1), Eb 338.B (H41). o-pe-to-ta /op'hellonta/, m. acc. s.: An 724.3 (H1). o-pe-to-te /op'hellontes/, m. nom. pl.: An 724.6 (H1). For the geminate liquid in this root, deriving from */ln/, cf. Aeolic and Arcadian ὀκέλλω. Although the spelling of all of these terms could in principle represent not /-ell-/ but /-ēl-/, as in Attic–Ionic ὀκέλλω (see e.g. Lejeune (1972b) 153–4), Mycenaean most probably shares the geminate outcome with Aeolic, as it does in the case of */Rs/ and */Ry/.

117 tu-ro2/TU+RO2 (see n. 108): Un 1185.2.2 (H1); Un 718.4.12 (H24); Un 1177.4 (SP: Ci; PTT: ; PT: H6; LSP: H606).

118 Cn 436.6 (H1); Jn 432.2 (H2; changed from [r0], see section 7); Eb 839.[A], 892.A, 1347.1 (H41).

119 Ma 216.3, 244.[2], 330.2, 378.2, 397.2.

120 Cn 599.3-4.5-7.
In other cases, individual scribes appear to have a preference for the spelling of a particular word which is nonetheless spelt differently by other writers: see, for example, the discussion in section 6 of scribes’ preferences for the spelling of /wy/ with wi-j- or u-j-, which could in fact be a preference for particular representations of the word /meiwyo-/ ‘smaller’ and of words built to the root /Diw-/ ‘Zeus’. The man’s name /Ortíówiês/ (gen. /-wehos/, dat. /-wehi/) is spelt four times as o-two-we-o by H43, but (probably) twice as o-to-wo-<we>-ô by H1, including on the same tablet as H43. As mentioned in section 7, the word ‘olive oil’ /elaiwon/ is also written five times as e-ra3-wo by H18 (although the alternative spelling e-ra-wo appears on a tablet attributed to this scribe by LSP and PT3). Terms which appear in different spellings by different scribes, but with only one or two examples, could likewise reflect individual writers’ preferences; equally, however, these writers may also have used alternative spellings in documents which are not preserved. Examples we have already seen include the names wi-duo-i-jo ~ wi-do-wo-i-jo ~ wi-du-wo-i-jo (each spelling appearing only once by any given scribe: H1, H22 and H2; n. 32) and pu₂-ti-ja ~ pu-ti-ja (likewise: H1 and H2; H15 and H22; n. 47), and the toponym pe-ra₂-ko-ri-i-ja ~ pe-ra-ko-ra-i-ja ~ pe-ra-a-ko-ra-i-ja (the first spelling appears twice in H1, the second and third once each in H7 and on On 300.8 respectively; nn. 35 and 37). Moreover, we have also frequently seen instances of a single writer spelling the same word in two different ways: o-ka-ra₂ ~ o-ka-ra (H1; n. 75); ta-ra₂-to ~ ta-ra-to (H41; n. 97); pa-ra-ke-we ~ pa-ra-ku-we (H2; n. 83); pe-ru-si-nu-wo ~ pe-ru-si-nwa (H32; n. 84); and perhaps te-mi-dwe- ~ te-mi-de-we- (H26; n. 87). Most strikingly, the name of one of the highest-status individuals recorded at Pylos – perhaps even the wanax (‘king’) – is variously spelt e-ke-ra₂-wo~, ej-[e]-ra₂-u-na, e-ke-ra-<wo>-ne and e-ke-ri-ja-wo, with the last two spellings probably being used by the same scribe. Note that this category, again, includes both vocabulary items and names. Although individual writers or the whole community of Pylian scribes may therefore have had preferred spellings for particular lexemes in some cases, there is no clear pattern overall suggesting that this was consistently or even most commonly the case, and certainly not that writers were routinely taught a single ‘correct’ spelling for specific words of any kind. It has been argued that the spelling variation in the name e-ke-ra₂-wo (et al.) ‘indicate[s] that no consensus had yet been reached within the palatial bureaucracy about how to spell the name of one of the most, if not the most, important individuals within the community’, reflecting his relatively recent acquisition of this status; but the

121 An 261.2.3.4.5; An 261 v.7 and Un 616 v.4. The name also appears as o-to-wo-we-i in H12 (Vn 851.9) and o-tu-wo-we in H2 and H21 (Jn 725.5, 658.7).
122 See n. 78.
123 H1, however, has consistently written ta-ra₂-to (four times in the En-series).
125 Palaima (1998–9) 221; see also Petrakis (2008) 396 n. 26 (arguing for a very different status for e-ke-ra₂-wo, but potentially a similarly recent involvement with the Pylian administration).
evidence of similar variation in other words suggests that the scribal community of Pylos would never have required, or even necessarily desired, such a consensus.

The situation is similarly complex when it comes to considering the possibility of preferred spellings for particular morphological features. The clearest possible example of this is in the use of ra3, which frequently appears in a-stem nominative plurals (such as di-pte-ra3/dipʰerai/ ‘hides’, ku-te-ra3/Kutherrai/ ‘women from Kythera’), but is never found in dative singulars (for examples of these spelt with -ra see section 7) – a distribution that may reflect a deliberate choice to use this sign to distinguish (albeit in restricted contexts) between these two case-forms. Some scribes appear to have an individual preference for the spelling of the feminine agent suffix /-t(i)rra/: H21 has five examples of ra2 in feminine plural agent nouns, and H23 has six; H1, on the other hand, has used both spellings. Note, however, that these are always spelt with either the plene spelling -ri-ja or with ra2: for example, the term denoting ‘decorators of textiles’ appears as a-ke-ti-ri-ja∼a-ke-ti-ra3 in the nominative /askêt(i)rrai/, a-ke-ti-ra3-o in the genitive /askêt(i)rrahôn/ and a-ke-ti-ri-ja-i in the dative /askêt(i)rraihi/: see section 7). Perhaps the historical spellings were more likely to be retained in this context as they more clearly represent the agent suffix, whereas in the spelling of other feminine plural nouns in /-RRai/ with -ra3 or -ra (as in di-pte-ra3/-ra and ku-te-ra3) the emphasis, if any, is on marking the plural ending rather than the stem formation.

The morphological features which could potentially be relevant to the use of the CwV signs vs Cu-wV and CV-wV are the presence or absence of morpheme boundaries within the sequences in question, and/or the use of particular suffixes such as the productive adjectival suffixes /-went-/ and /-wont-/. The latter has been argued to be a factor contributing to the invention of those CwV signs which were new creations in Linear B, and there are a small number of possible examples of morphological features, including the presence of morpheme boundaries, affecting spelling. However, there is no clear

126 See nn. 70 and 98.
127 See Melena (2014) 60; Judson (2017b) 120.
129 E.g. a-ke-ti-ri-ja (Aa 717) ~ a-ke-ti-ra3 (Aa 815).
130 a-ke-ti-ri-ja-o: Aa 717 (H1), Aa 85 (H4), a-ke-ti-ra3: Aa 815 (H1); Ab 564 (H21). a-ke-ti-ri-ja-o: Ad 290, 666 (H23). a-ke-ti-ri-ja-i: Fn 187.5 (H2); Un 219.4 (H15).
132 As mentioned above (n. 80), the unusual plene spelling of an /Rw/ sequence in a2-ru-wo-te/Hal-wontei?/ (toponym, An 657.8, H1) might have been influenced (if this interpretation is correct) by the morpheme boundary between the liquid and glide. Compare the similar plene spelling in the perfect participle a-na-tu-wo-a/arar-woha/ (‘assembled, fitted (with)’, KN Ra(1)-series), which may be influenced by the morpheme boundary and/or the reduplication; cf. also the varying treatment of the boundary between compound elements in the name of the ‘Further Province’ (section 5). On these and other further possible examples of morphology influencing spelling see Viredaz (1983) 147; Woodard (1997) 71–2, 102 n. 31; Consani (2003) 113–14; Meißner (2007) 104–5; Melena (2014) 40–1. Note, however, that the levels of certainty of the etymological interpretations of these
pattern for the use of particular spellings for these suffixes: terms containing both /-went-/
and /-wont-/ are attested with multiple spellings (e.g. te-mi-due-ta ～ te-mi-de-we-te /termid-
went-a/: n. 87; a2-pa-tu-wo-te, toponym in /t(h)-wont-/, vs ne-do-wo-ta-de /Ned-wonta-de/ ‘to
Nedwōn’). The perfect participle suffix /-wos, -woh-/ is found with all three possible
spellings, as seen in the name wi-du-wo-i-jo ～ wi-do-wo-i-jo ～ wi-duo-i-jo /Wid-woh-ios/ (the
only other example of this suffix is te-tu-ko-wo-a2 /tetukh-woh-a/ ‘finished’). Similarly,
all three spellings are found both where the /CwV/ sequence crosses a morpheme
boundary and where it does not. Of the seven different lemmata in which the
/CwV/ signs appear, four involve a morpheme boundary within the /CwV/ sequence (two adjectives, te-
mie-ta /termid-went-a/ and pe-ru-si-nwa-o /perusinw-āhōn/, and two names, wi-duo-i-jo
/Wid-woh-ios/ and o-two-we-o /Orthw-o¯wehos/) while three do not (dwo /dʒo/ ‘two’,
the
name e-nwa-ri-jo and the ethnic adjective ti-nwa-si-j/ti-j/). Alternative spellings for
several of these have already been noted (wi-du-wo-i-jo/wi-do-wo-i-jo, ti-mi-de-we-te, o-to-wo-
<we>-o/o-to-wo-wei/o-tu-wo-wei, du-wo-u-pi); as can be seen here and in the other examples
above, there is similarly no clear pattern in the use of the Cu-wV and CV-wV plene
spellings in these contexts. The synchronic transparency of these suffixes and morpheme
boundaries may have varied – it seems possible, though not certain, that the formation of
vocabulary words containing productive suffixes such as /termid-went-/ could have been
morphologically transparent to a Mycenaean writer, but highly unlikely that this would
have been the case with a name such as /Widwohios/ – but no different orthographic
treatment of words along these lines can be observed. Overall, with a few exceptions (the
apparent choice to use word-final ra3 only to mark nominative plural forms; possible
individual preferences for particular spellings of the feminine agent noun suffix), scribes
seem to have made their own – varying – choices in spelling these morphological
features just as they did for the spelling of complete lexemes.

9. Conclusions: learning to spell in Linear B

Despite the overall consistency of most Linear B spelling conventions, the results of this
study show a complex picture in situations where the writing system in principle allows
for two or more different spellings. In such cases, it is rare for only one option to occur
in practice – the only possible examples of this at Pylos are the exclusive use of au (not a-
au-) for word-initial /au/, the almost entirely consistent use of a2 for initial /ai/, the
restriction of medial V-i sequences to the representation of /Vhi/ rather than /Vi/, and the

examples vary considerably; for difficulties with some of these examples and some alternative explanations see e.
133 a2-pa-tu-wo-te: Cn 599.3.4-5.7 (H21). ne-do-wo-ta-de: An 661.13 (H1); also ne-do-wo-te /Ned-wontei/ (dat.-loc.), Cn 4.6
(H21).
134 Sa 682 (H26).
135 Ub 1315.3 (H31); Eb 338.B, Eo 278 (H41).
136 An 724.12 (H1).
(exclusive?) use of pte rather than pe-te. In all other cases, variation between and/or within the work of different scribes is entirely normal: even where there appears to be an individual or collective preference for a particular spelling, some variation still occurs (as seen with the use of a₂/a, pu₂/pu and wi-j/-u-j-), while in others there is constant variation between two or even three options (as seen for ra₃ and the CwV and RRV signs). The high level of variation in these cases may lead us to question how far scribes’ apparent individual or collective preferences in other cases are a real phenomenon and how far they are due to the nature of the writing system: it is inevitable that examples of (for instance) /ha/ spelt with a or of /pte/ spelt pe-te will be harder to securely identify than examples which are unambiguously represented by a₂ or pte. If anything, then, the true level of variation is likely to be higher than the data presented here has shown; it is possible that the orthographic practices presented as ‘consistent’ in section 5 should really be seen as (strong) preferences with some variation, while those presented in section 6 as showing a strong preference for the use of extra signs over their core alternatives might in reality be closer to the level of variation seen in section 7.

However, even assuming that the relatively restricted securely identifiable evidence used in this study is representative of the real situation, some forms of orthographic variation can be seen to be fundamental components of the Linear B writing system as a whole, and must therefore have been learned as such. Note that there is no clear correlation between the origins of the extra signs – some of which were inherited from Linear A, while others were new creations in Linear B – and the level of variation shown in their use: both inherited signs (au, pu₂, nwa, ra₂) and newly created ones (a₃, ro₂, ra₃ and the remaining CwV signs; the status of pte is debated) are found at all three levels of variation.¹³⁷ The level of flexibility present in the spelling of particular sequences is therefore not simply a product of the incorporation of extra signs into the writing system at different points in its development, and variation cannot be attributed to newer signs being less fully established as orthographic options. Nor is there evidence to posit separate orthographic traditions in the training of different groups of scribes, as identified by Duhoux (1986). The only case where there is no certain example of individual variation, despite the existence of overall variation, is that of /wy/, spelt wi-j- by some scribes and u-j- by others, and, as said above, this could be ascribed to preferences for the spelling of the (relatively few) lexemes in which this cluster appears rather than for the spelling of the sequence per se; equally, chances of attestation and/or interpretation may have played a part. In the majority of types of spelling variation, the consideration of not just the attested spelling(s) in any individual scribe’s work, but also of their overall number of identifiable examples of the relevant phonemic sequences, demonstrates clearly that the latter is the main determining factor in whether writers appear to have been consistent in their spelling: scribes with higher numbers of relevant examples almost always show

¹³⁷ See Judson (2017b).
variation, and apparent consistency is nearly always the result of a relatively low number of (identifiable) examples.

All of this therefore points not to separate orthographic traditions used in teaching different groups of writers but to a single tradition, learned by all writers at Pylos, which included certain acceptable and normal forms of orthographic variation (of course, this does not necessarily mean teaching by a single individual). At the time of writing of the Pylos tablets, trainee scribes must have learned that, for instance, /dwe/ could be spelt as any of de-we, du-we or dwe, or that /ha/ could be spelt as a₂ or a. Within any community of practice, however, learning may take place through interaction with other members of the community as much as through formal teaching. Some form of teaching, however this is envisioned, must certainly have occurred in order to convey the basic orthographic conventions of the writing system; however, situations in which communal preferences can be seen despite the existence of some variation seem less likely to be due to this kind of instruction. Rather, individual preferences for (e.g.) the representation of /ha/ by a₂ rather than a could have converged to form a communal preference, which could then be passed on to learners interacting with (texts written by) more experienced writers, without the existence of such a preference ever necessarily being formally taught. The general favouring of the less ambiguous/more precise extra sign in these cases is potentially indicative of the writers’ mindsets: they would aim for clarity for the sake of future readers (themselves or others) in many cases, but would not always feel it necessary since contextual cues and a knowledge of the palatial administrative system would in most cases be perfectly adequate for a Mycenaean reader to read a core spelling correctly. However, the fact that such a mindset does not seem to have applied in the cases of the complex signs or of ra, again leads to a question of how far this apparent preference for some of the extra signs may be merely a result of the relative difficulty of identifying their core alternatives. This difficulty likewise leaves it ultimately unclear whether cases such as that of pte vs pe-te, with the apparently (almost) exclusive use of a single spelling, represent an orthographic convention that was taught as such, or a communal preference that developed and was transmitted through interactions with other writers and their work in the way suggested above.

Finally, although there is some evidence – particularly from the representation of diphthongs – to suggest that the spelling of certain case-endings was a feature of writers’ training, by and large the orthographic tradition clearly focused on the spelling(s) of phonemic sequences rather than that of specific lexemes or morphological features. Instances of particular words being consistently spelt in the same way by individual or multiple scribes are not so frequent or widespread as to be necessarily due to this having

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138 On learning within communities of practice in general see Lave and Wenger (1991); on archaeological applications of this concept see e.g. Dobres (2000), esp. chapters 5–6.

139 The general nature of the Pylian scribes’ orthographic training, as demonstrated by this study, is in principle equally compatible with any of the various formats which have been envisaged for that training (e.g. a form of schooling or of apprenticeship: see n. 7).
being taught as the only correct spelling; if not due to chances of attestation, they are again likely to be the result of the development of individual or communal preferences in the course of scribes’ work and interactions with each other.\footnote{Of course, interactions with other writers or their texts and observation of their preferences will not always have led to scribes following those preferences. In the most extended example we have of one scribe interacting with another’s work – H1’s creation of summary landholding documents from H41’s preliminary texts – H1 can be seen in many cases to be deliberately making different decisions from H41 about various aspects of text presentation, including orthography (see Salgarella (2019) 74–81; Judson (2020a) 538–9, 541).} Largely, however, the evidence of widespread variation – even within the same word in the work of a single writer, sometimes on the same tablet – implies that writers generally applied their knowledge of the Linear B orthographic conventions for phonemic representation to words as they wrote them, rather than accessing a mental lexicon of correct spellings. The question of how to spell a particular word could therefore be approached differently at different times, depending not just on the writer’s training but also on the word’s context, the potential desire to emphasise a particular feature of the word (such as a case-ending) or a whole variety of other, now unreconstructable, aspects of the writer’s mindset at that particular time. Occasionally, we can see the process of decision-making as writers changed their minds (as in H2’s replacement of ⟦ro⟧ with ro2: section 7), while similar decisions can also be seen in occasional deviations from standard spellings under the influence of other factors such as analogy or morphology (nn. 80 and 132), and in cases where two different orthographic conventions come into conflict (n. 23).

Further work on other aspects of Pylian writing practices will be needed to establish how this single orthographic tradition, which required consistency in phonemic representation in many cases but permitted variation in others, compares with scribes’ training in other practices – in particular, that of palaeography, given the ongoing debate over whether the scribes of Pylos can be divided into ‘classes’ representing separate training groups (as recent work has suggested may equally not be the case: section 2). However, this analysis of orthographic variation has shown that writers generally made on-the-spot choices as to the best spelling to use in the context of the particular text they were writing, influenced by their training in the writing system’s conventions, by the practices of other members of their community, and by a wide variety of other orthographic, linguistic and administrative factors. It thus adds to the growing picture of these writers’ practices in and attitudes towards their writing: whether in the context of orthography or in other aspects of their writing practices – such as creating new signs,\footnote{See e.g. Palaima and Sikkenga (1999); Judson (2017b); Petrakis (2017).} formatting and editing their own or others’ documents,\footnote{See e.g. Palaima (1999); Karagianni (2015); Nakassis (2018); Judson (2020a).} developing new and individual administrative techniques\footnote{Palaima (1999); Salgarella (2019).} or representing varying aspects of their spoken language\footnote{Thompson (2021).} – the Mycenaean scribes were practical, flexible writers, employing a range of strategies for the optimum presentation of their administrative documents, and making full use of rather
than being constrained by the conventions by which they had learned to use the Linear B writing system.

Works cited


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