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# Scribes as Editors: Tracking Changes in the Linear B Documents

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A wide variety of edits can be identified in the Linear B administrative documents from Mycenaean Greece. The writers of these documents (the Mycenaean scribes) can be seen to have made changes to their texts by erasing, rewriting, or adding signs, words, or whole entries. The edits include not only correcting errors and updating information (as might be expected for these administrative documents) but also a wide variety of changes that affect the texts' presentation rather than their content, such as alterations to their layout, textual structure, and orthography, and even the forms of individual signs. By analyzing these edits and the motivations behind them, this article sheds light on the priorities of the Mycenaean scribes in creating and using their administrative documents and the choices they made in the process of doing so. The results demonstrate that despite these records' short-term nature (tablets were kept for no longer than a year) they were not merely rough or preliminary texts over which relatively little care was taken but were active documents designed for ongoing use and consultation within the Mycenaean palatial administrations' yearly administrative cycles.<sup>1</sup>

## INTRODUCTION

This article investigates the ways in which the writers of the Linear B tablets made changes to their documents, what these edits reveal about the scribes' choices and priorities in creating and using these administrative records, and the impact these findings have on our understanding of the role played by the tablets in the Mycenaean administrative systems.<sup>2</sup> These originally

<sup>1</sup> This paper was written during a Research Fellowship in Classics at Gonville and Caius College, Cambridge. Previous versions were presented at the Cambridge Aegean Archaeology Group Conference, McDonald Institute for Archaeological Research, Cambridge (June 2018); the Philological Society's Early Career Researcher Forum, Wolfson College, Oxford (March 2019); and at the joint 15th Congress of the Fédération internationale des associations d'études classiques and U.K. Classical Association annual conference, University College London (July 2019). I am grateful to the participants of the Cambridge Classics Postdoc Work-in-Progress Seminar for their helpful comments on a draft, and to John Bennet, *AJA* Editor-in-Chief Jane Carter, and Dimitri Nakassis for their detailed and constructive feedback. I also thank Dimitri Nakassis for generously supplying the photographs of the Pylos tablets illustrated in this paper, and Sharon Stocker and Carol Hershenson of the Department of Classics, University of Cincinnati, for their kind permission to use these photographs. The Linear B font used in this paper is Alphabetum, created by Juan-José Marcos (<http://guindo.pntic.mec.es/jmag0042/alphaeng.html>). Translations are my own.

<sup>2</sup> The Linear B tablets from the sites discussed here are located in the following museums: Knossos: Archaeological Museum of Heraklion and Ashmolean Museum, Oxford (excavated between 1900 and 1905); Mycenae: National Archaeological Museum, Athens, and Archaeological Museum of Nafplio (excavated in 1954 and 1958); Pylos: National Archaeological Museum, Athens (excavated between 1939 and 1963); Thebes: Archaeological Museum of Thebes (excavated in 1982 and 1993–1995); Tiryns: Archaeological Museum of Nafplio (excavated in 1978). For full details, see the relevant corpora (*infra* n. 4).

unfired clay tablets, recording people and goods under the control of the Mycenaean palaces of Late Bronze Age Greece (ca. 1400–1200 BCE), are written in the Mycenaean Greek dialect, which is related to, but not the direct ancestor of, the Greek dialects known from later periods. “Linear B” refers to the writing system used on these tablets (equally unrelated to the later Greek alphabet), which combines syllabograms (signs representing syllables consisting of a vowel, or one or two consonants followed by a vowel: e.g., *a*, *di*, *pte*) with ideograms (signs representing the people, animals, items, or commodities being counted in these records: e.g., MUL “WOMAN,” OVIS<sup>m</sup> “SHEEP (MALE),” AES “BRONZE”), a decimal number system (<sup>1</sup> = 1, <sup>-</sup> = 10, <sup>o</sup> = 100), and a series of weights and measures signs (“metrograms”). The only form of punctuation is the word divider (,), optionally used to separate individual words.<sup>3</sup>

It is generally agreed that the Linear B tablets were relatively short-term documents. Because no time references appear in the texts other than month names and terms such as “this year” (*to-to we-to* /to(t)to wetos/ or *za-we-te* /tsāwetes/),<sup>4</sup> “last year” (*pe-ru-si-nu-wo*, *pe-ru-si-nu-wa/-nwa* /perusinwos, -a/), and “every year” (*we-te-i-we-te-i* /wetehi-wetehi/),<sup>5</sup> the

tablets must normally have been discarded after an administrative cycle of no more than a year.<sup>6</sup> Individual deposits of Linear B tablets (those found together in the same archaeological context) therefore date from a period of less than a year, before they were accidentally fired in the burnt destruction of the building in which they were kept (this does not mean, however, that all tablets from the same site are necessarily contemporaneous with one another).<sup>7</sup> Although terms such as “archives” are conventionally used to refer to large collections of tablets,<sup>8</sup> the tablets are not archival documents in the modern sense of the term (i.e., documents that preserve information through long-term storage).<sup>9</sup>

This short-term status has often led to the Linear B tablets being viewed as preliminary documents, to be superseded by longer-term administrative records written on perishable materials such as papyrus or parchment, with the term “pre-archives” used to refer to the temporary storage of clay tablets that would ultimately be transcribed onto truly archival documents.<sup>10</sup> In my opinion, it has been convincingly demonstrated

<sup>3</sup> Linear B syllabograms are transcribed in *italics* and ideograms in SMALL CAPS (these are conventionally transcribed in an abbreviated Latin form; English equivalents are also given throughout this article); CAPITAL ITALICS are used for syllabic signs used ideographically or as abbreviations (e.g., ZE = /zeugos/ “pair”). Phonemic interpretations of Mycenaean Greek words are given between forward slashes, as in /zeugos/. Word dividers are transcribed as commas.

<sup>4</sup> Unless otherwise specified, readings are given in accordance with the most recently published corpus of transcriptions for each site: Knossos (KN): Melena and Firth 2019; Pylos (PY): Olivier and Del Frio 2020; Mycenae (MY) and Tiryns (TI): Melena and Olivier 1991; Thebes (TH): Aravantinos et al. 2005. Phonemic and semantic interpretations are given in accordance with Aura Jorro (1985–1993) or (for the newer tablets from Thebes) the glossary in Aravantinos et al. 2001.

<sup>5</sup> *to-to we-to*: PY Aq 64.2, .5–.7, .13–.16. *za-we-te*: KN Fh 5451.a; PY Ma 225.2a. *pe-ru-si-nu-wo et al.*: KN Dp 7742.[1?], So(2) 4442.b; MY Oe 111.1, Ue 652.2.4B; PY Ma-series, Ub 1316 and 1317. *we-te-i-we-te-i*: PY Es 644.1–.13. In text references of the form PY Aq 64.2, PY = site abbreviation (Pylos), Aq = series prefix denoting the text’s general topic (a prefix in *italics* denotes an uncertain series attribution; a number in brackets following this prefix denotes a more specific subdivision within the series), 64 = tablet reference number, and .2 = line number. This form of line numbering refers to a page-shaped tablet, orientated vertically; lines on long, thin horizontal palm-leaf

tablets, usually with two lines of writing, are referred to as .A and .B (when there is a central ruled line) or .a and .b (when there is no ruling). When referencing tablets with writing on two sides, *r.* = recto, *v.* = verso. Uncertain readings are indicated by underdots: *a*, MUL; breaks at the beginnings or ends of lines by ] and [; and erased signs by double brackets: [a].

<sup>6</sup> Bennet 2001, 27–30; cf. Pape et al. 2014, 177. There is evidence in some cases for the previous year’s records being consulted in order to write the current year’s (as implied by, e.g., the references to *pe-ru-si-nu-wo o-pe-ro* /perusinwon op<sup>h</sup>elos/ “last year’s debt” in the PY Ma-series: see Killen 1984); presumably the older records were discarded soon after the necessary information had been transferred, since otherwise there would be no way of distinguishing between these two groups of documents.

<sup>7</sup> E.g., most of the tablets from Pylos are contemporaneous, since they are all associated with the site’s final destruction at the Late Helladic IIIB2/C transition or in the early part of the Late Helladic IIIC period, ca. 1190–80 BCE (Mountjoy 1997; Vitale 2006, 190–91, 200), but other sites have preserved deposits from multiple destructions. For summaries of the chronology of Linear B tablets, see Driessen 2008; Del Frio 2019a, although note that the relative and absolute chronology of the various deposits of tablets from Knossos is particularly controversial.

<sup>8</sup> As in, e.g., the “Archives Complex” at Pylos, which contained the majority of tablets from this palace at the time of its destruction.

<sup>9</sup> On the problems of terminology in studying so-called archives in the ancient world, see Brosius 2003; on Linear B archives, with particular reference to Pylos, see Palaima 2003.

<sup>10</sup> See, e.g., Driessen 1994–1995, 244; 1999, 206–9, 221–26; Palaima 2003, 169–72; 2011, 116.

that longer-term documentation was not necessary for the year-to-year administrative system evidenced by the tablets.<sup>11</sup> Although there is indirect evidence for writing on perishable materials in Linear A, the parent script of Linear B, other significant differences between the administrative and writing practices associated with these two writing systems suggest that documentation on perishable materials may well be one of the many Linear A practices that did not continue in Linear B.<sup>12</sup> However, this article does not attempt to answer this question, which cannot be done with any certainty. Rather, it demonstrates that the ways in which these writers edited aspects of their texts show them to be more than rough or temporary documents: regardless of the existence or nonexistence of any longer-term forms of documentation, the clay tablets were still active documents designed for ongoing use during the yearly administrative cycle. This study therefore pursues both a more detailed picture of the processes by which the Mycenaean scribes produced their Linear B records,<sup>13</sup> and a greater overall under-

standing of the ways they used these records within the palatial administrative systems.

The most famous example of a Linear B tablet that shows evidence for significant changes made during the writing process is PY Tn 316 (fig. 1), a tablet listing offerings to various deities that was originally interpreted as a record of a ritual involving human sacrifice during a state of emergency in the final days of the palace of Pylos,<sup>14</sup> and that was described by Chadwick as “the most disgraceful piece of handwriting to have come down to us,” a “muddle” that can only be explained as a hastily written record composed so soon before the palace’s destruction that there was no time to make a “fair copy” (whether on clay or another material).<sup>15</sup> This interpretation is, however, no longer generally accepted. The text has been shown to record a regular religious ceremony<sup>16</sup> and its unusual layout to be the product of the process by which its writer or writers worked out the best way to record and display a relatively complex set of information,<sup>17</sup> while the level of erasures and changes seen in the text is comparable to those seen in other texts.<sup>18</sup>

The original approach to PY Tn 316 assumed that erasures and rewrites are evidence of rapid writing in a potentially chaotic situation and that such texts could not be final versions of administrative documents.

<sup>11</sup> Bennet 2001, 27–30.

<sup>12</sup> Perna 2011. The evidence for Linear A being written on perishable materials consists of flat-based clay nodules that preserve the impression of the folded parchment documents they were used to seal; such flat-based nodules are almost entirely absent from the Linear B corpus, with the exception of a small number of early examples from the Knossos Room of the Chariot Tablets, which may or may not have had a similar function (Weingarten 1988, 10–11; Driessen 1990, 64–65; Hallager 2005, 245, 252–53; Krzyszkowska 2005, 217–18; Mouthuy 2017, 210, 212–14). The wide range of nonadministrative inscription types seen in Linear A is similarly absent from the Linear B record (again with a small number of possible exceptions: see Del Frio 2019b, 169).

<sup>13</sup> The term “scribe” is conventionally used for the writers of the Linear B tablets, who worked in a context in which literacy was highly restricted in terms both of the number of users (up to ca. 40 identified writers at Pylos [Palaima 1988, 172; Olivier and Del Frio 2020, 371–76]; at least 50 and perhaps up to 100 at Knossos [Olivier 1967, 101–2; Melena and Firth 2019, 459–80]) and of the purposes for which it was used (almost exclusively as part of the palatial administrations). The exact status of these individuals is debated. They have variously been argued to be officials working as part of the administrative system (see, e.g., Bennet 2001, 29–31), writers assisting these officials (Palaima 2011, 122–23), or even in some cases craftspeople producing items for the palaces (Kyriakidis 1996–1997, 219–20). The use of “scribe” in this study is not intended to imply any particular interpretation of these writers’ positions within the palatial administration.

<sup>14</sup> See, e.g., Chadwick 1976, 89–96; Baumbach 1983, 33–34.

<sup>15</sup> Chadwick 1976, 90.

<sup>16</sup> On the likely role of the people listed on this tablet as cult officials rather than sacrifices, see Sacconi 1987. For evidence that Tn 316 had already been filed in the Archives Complex prior to the palace’s destruction and that other tablets that show no sign of any emergency proceedings were written in the intervening period, see Palaima 1995.

<sup>17</sup> The incomplete recto represents the first stage of this process, the result of which was the unusual format of the verso: see Bennett 1979, 232–34; Palaima 1995, 626–28; 1999, 439–43; 2011, 64–72. Godart (2009) suggests that this process was split between two scribes, one who wrote the first part of the recto and a second who was responsible for the distinctive layout and who began using this on the recto but then quickly changed to the verso; cf. the attribution of the recto and verso to H44A and H44B, respectively, in Olivier and Del Frio 2020. N.B.: “H” followed by a number indicates attribution to a specific scribal hand; the attribution appears in parentheses at the end of a tablet reference. A hyphen (-) indicates that the tablet is not attributed to any scribal hand. Unless otherwise discussed, scribal attributions are given in accordance with the most recent corpora (supra n. 4); on Pylos, see also Palaima 1988; on Knossos, see also Olivier 1967; Driessen 2000; infra n. 35.

<sup>18</sup> Palaima 1999, 445–49; 2011, 68–70.

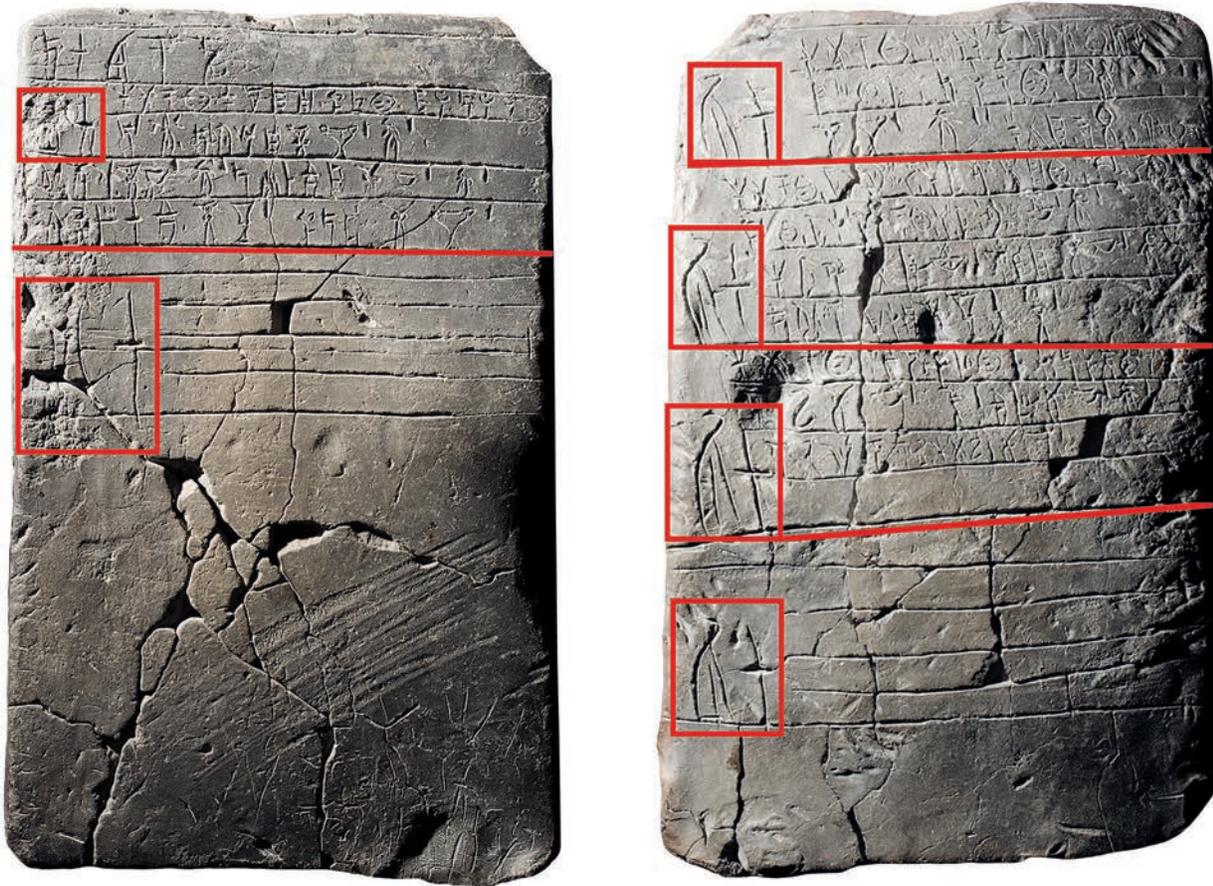


FIG. 1. PY Th 316: *left, recto; right, verso*. Individual entries are separated by horizontal red lines. The headings *pu-ro* “Pylos” ( $\mu\text{r}\text{o}$ ) are outlined in red. Note the heading’s increase in size from the second section of the recto onward, more clearly demarcating the entries. This second recto section is otherwise left blank, suggesting that the writer or writers decided to switch to the verso with this new format (courtesy of The Department of Classics, University of Cincinnati; annotations by author).

Assumptions of this kind have equally been at work in previous systematic studies of the changes made by the Mycenaean scribes to their texts.<sup>19</sup> Although these studies have included important explorations of the processes by which these writers created their documents,<sup>20</sup> they have focused largely on the errors

that the scribes made and in some cases corrected, and on the unconscious causes of these errors, rarely specifically exploring the conscious motivations behind the corrections.<sup>21</sup> The assumption that Linear B was ill-suited to writing Mycenaean Greek and that

<sup>19</sup> E.g. Ilievski (1965, 47) states that “the scribe had to finish the tablet quickly, for otherwise the clay would get dry and it would be impossible to write on it. These conditions contribute to the considerably higher number of errors in Linear B texts [than in later inscriptions on stone].” For other studies of errors, see Chadwick 1958; Perpillou 1977; Maurice 1985; Consani 2003, 57–72.

<sup>20</sup> For instance, Perpillou (1977) analyzes different scribes’ orthographic choices; Maurice (1985, 39–49) identifies texts that may have been completed in two distinct stages of writing; and Consani (2003, 70) discusses whether or not texts are likely

to have been produced by dictation. For similar discussions of errors and corrections made by writers of other ancient writing systems, see, e.g., Consani 1997 (Linear A); Marchesini 2004 (Italic inscriptions); Worthington 2012, 44–64, 88–163 (Akkadian cuneiform; this work also has some discussion of deliberate changes, although its focus is on changes made by copyists to another author’s transmitted text: see pp. 127–40); Busse 2016, 63–68 (Hittite cuneiform); Rhodes 2018 (alphabetic Greek inscriptions).

<sup>21</sup> The exception is Perpillou (1977), who does focus on corrections and changes but discusses a relatively small group of examples, mainly those where scribes have changed the spelling of particular words. See “Orthographic Edits” below.

therefore writers using this writing system would have been particularly prone to errors has also played a similar role in these previous studies.<sup>22</sup> It has more recently been demonstrated, however, that the errors seen in the Linear B texts are of types that occur in any written text because of general psycholinguistic processes (such as accidental repetitions or omissions of signs, or the substitution of the intended sign with a phonetically or graphically similar one) rather than being produced by any characteristic of this particular writing system.<sup>23</sup>

Texts may be, and frequently were, changed for many reasons that do not involve the correction of an error. The potential of such edits to contribute to our understanding of the processes by which documents were created and their administrative purposes has often featured in discussions of particular tablets or series.<sup>24</sup> We have already seen in PY Tn 316 an example of a document's format being altered in the process of writing not because the original layout was somehow wrong but as a reflection of the writer or writers' concern for the record's structure.<sup>25</sup> Similarly, in cases where the spelling of a word has been changed, the original spelling may have been a permissible but (at least in these cases) disfavored option rather than an orthographic mistake. Tablets' contents could also be altered, not because of an initial mistake in writing but because of the receipt of new information. Previous suggestions that such updates could have taken place a considerable length of time after the texts were first written, once the clay had at least partially dried, are now supported by recent experimental work showing

that this can be done by wrapping the tablet in a damp cloth to rehydrate the clay; traces of this method can be seen on some tablets with identifiable edits.<sup>26</sup> For example, tablets in the Knossos DI-series of sheep records show evidence of editing using this method to update their information when sheep recorded as missing in the original versions of the texts were replaced.<sup>27</sup> Alterations to an original version of a document made in the process of copying its information onto a second tablet, whether by the original writer or another scribe, also demonstrate editing as part of the administrative process of transferring and summarizing information.

In all these cases, analyzing the edits that can be identified on the Linear B records enables a reconstruction not just of the processes by which the texts were originally created but also of the subsequent interactions that their writers and other scribes had with them. Our direct evidence for the activities of the Mycenaean scribes is necessarily restricted to the finished results of their writing practices; editorial work on their own and others' tablets, however, provides indirect evidence for the otherwise invisible reading practices that must have accompanied the scribes' writing and shows the status of the Linear B texts as living administrative documents subject to ongoing use, consultation, and alteration. This article therefore builds on the previous work on corrections and edits discussed above to provide the first systematic analysis of the editing processes seen in the Linear B tablets and their significance for our understanding of the administrative activities of the Mycenaean scribes.

#### IDENTIFICATION AND CLASSIFICATION OF EDITS

In principle, detecting instances of editing in the Linear B tablets is relatively straightforward: erasures, made with the flat end of a stylus, leave characteristic marks on the clay that are visible even when written over, and erased signs often remain at least partially

<sup>22</sup> Ilievski (1965, 46) asks, "If such numerous errors are inevitable in one relatively perfect script of about 20–30 phonetic signs [the alphabet], how much more can we expect errors in the primitive Mycenaean script of about 90 syllabic signs[?]" Maurice (1985, 30) sees errors as arising because of the writing system's nature as "sténographique" (shorthand) and "tachygraphique" (used for rapid writing).

<sup>23</sup> Consani 2003, 57–72; see also Consani 2016; Marazzi 2016.

<sup>24</sup> See, e.g., Smith 1992–1993 (on the PY Jn-series); Halstead 1996–1997, 191–92; 1999, 152–53 (both on the KN DI-series); Palaima 2000 (on the PY Ta-series); 2001, 156, 159 (on PY Ma 244 and Jn 829).

<sup>25</sup> Nakassis (2018, 52) observes that "it is common for Mycenaean scribes to organize texts in ways that are not only efficient but also elegant. This is most easily visible in texts that bear evidence of extensive erasure and rewriting, where we can see the scribe struggling with how to best organize the information."

<sup>26</sup> Pape et al. 2014 (based on Pape 2002); for earlier suggestions of this method, see, e.g., Palaima 1988, 40; Driessen 2000, 59.

<sup>27</sup> First suggested by Halstead 1996–1997, 191–92; 1999, 152–53; discussed on the basis of recent experimental work by Pape et al. 2014, 178, 181–83. The addition of check marks (×) to show that information had been confirmed is another well-known instance of tablets being edited after partially drying, as shown by the much shallower strokes with which these marks are often written (see Palaima 1988, 58; Bennet 2001, 29).

visible (fig. 2). Such edits are indicated throughout this article in the form “[original erased text]” > “final text,” with the transcription followed by a phonemic interpretation (between forward slashes) and a translation (in quotes). However, establishing the reason for the erasure and rewriting depends on being able to read the erased text, which it is frequently impossible to do with any certainty, especially when the erasures have been written over. Moreover, identifying where extra elements have been added to a text without any erasure being involved (indicated throughout in the form “original text before additions” > “final text”) is only possible when the added elements either do not conform to the text’s general formatting (e.g., a sign or word is squeezed into a small space between previously written signs or words) or are composed of noticeably thinner and shallower strokes (implying writing at a later stage after the clay has partly dried).<sup>28</sup> For instance, in an entry on the Knossos tablet KN Ga(2) 423.B (H136)<sup>29</sup> (see Text 1 on pg. 530) the second of the two vertical strokes representing the number 2 (“”) is fainter than the first (hence the reading of 2 as uncertain) and is therefore perhaps a later addition to an original entry of AROM 1. On PY An 657.13 (H1) (fig. 3), the toponym *o-wi-to-no* (𐀓𐀠𐀗𐀓) has been inserted between *o-ka-ra* (𐀓𐀠𐀗𐀓: a noun referring to a type of troops) and VIR 30 “MEN: 30” (𐀠𐀓), with the first two signs (𐀓𐀠) written above the last two (𐀗𐀓) in order to fit into the small available space.

The corpus of examples of edits on which this study is based is restricted to instances where both an original and a final text may be identifiable, where “original” refers to either an erased text or a text before the addition of one or more extra elements without erasure. In most cases, I have based the identification of edits on the readings and notes in the most recently published corpora, supplemented by my own examination of the published photographs and drawings, the Pylos photographs of tablets available online,<sup>30</sup> and my own photographs from previous autopsies (it has

not been possible to conduct any further autopsies for the purposes of this study). Because of the nature of the data, it is not possible to conduct any reliable quantitative analysis of the relative frequency of these different types of edits nor a comparison of their use by different scribes or at different sites.<sup>31</sup> Some types of edits are more or less likely to be identifiable than others because of inherent features such as their position on the tablet and are therefore very probably over- or under-represented in the corpus. For instance, changes to quantities form the largest single category of identifiable edits for the simple reason that they are comparatively easy to detect: numerals have a relatively simple form and consistent layout and, since they appear at the ends of lines or entries, generally have some blank space around them in which erasure marks and erased signs may be visible. Conversely, changes to individual sign-forms are extremely difficult to identify securely (see “Graphic Edits” below). Chance also plays a large role in determining whether both the original and final text of an edit are legible, so it is not necessarily significant for the reconstruction of the scribes’ priorities in creating their texts that some of the examples discussed below are representative of a larger group of similar edits while others are rarer or unique. This study does not, therefore, include the complete corpus of all the possible examples of each type of edit; instead, I analyze a selection of the most secure or probable examples in a qualitative analysis of the different ways in which the Mycenaean scribes can be seen to have edited their texts and the varying purposes and motivations that underlay these edits. Although this study includes the correction of mistakes, it focuses chiefly on edits that represent a choice between multiple acceptable options, since these have the potential to tell us much more about the deliberate decision-making processes at work on the part of the writers than the correction of unconscious errors can. I first discuss the type of edits that relate most clearly to the administrative function of the Linear B tablets,

<sup>28</sup> It is also necessary to be cautious when analyzing possible examples of edits in texts that are described as palimpsests in the corpora, since it is not always clear whether any legible erasures belong to the final or original text (which may or may not have borne any relation to each other if the tablet was entirely erased and reused).

<sup>29</sup> On scribal hand references, see *supra* n. 17.

<sup>30</sup> Judson et al. 2016.

<sup>31</sup> The fact that usable examples of edits were found at Knossos, Pylos, Thebes, Mycenae, and Tiryns (i.e., the sites with the largest numbers of tablets preserved), with the number at each site approximately correlating with its total number of tablets, implies that editing is likely to have been a standard practice at all sites using Linear B. Pape et al. (2014, 182) similarly conclude that “it is certainly possible—and arguably probable—that erasures and re-inscriptions on Linear B documents were significantly more frequent than has hitherto been recognised.”

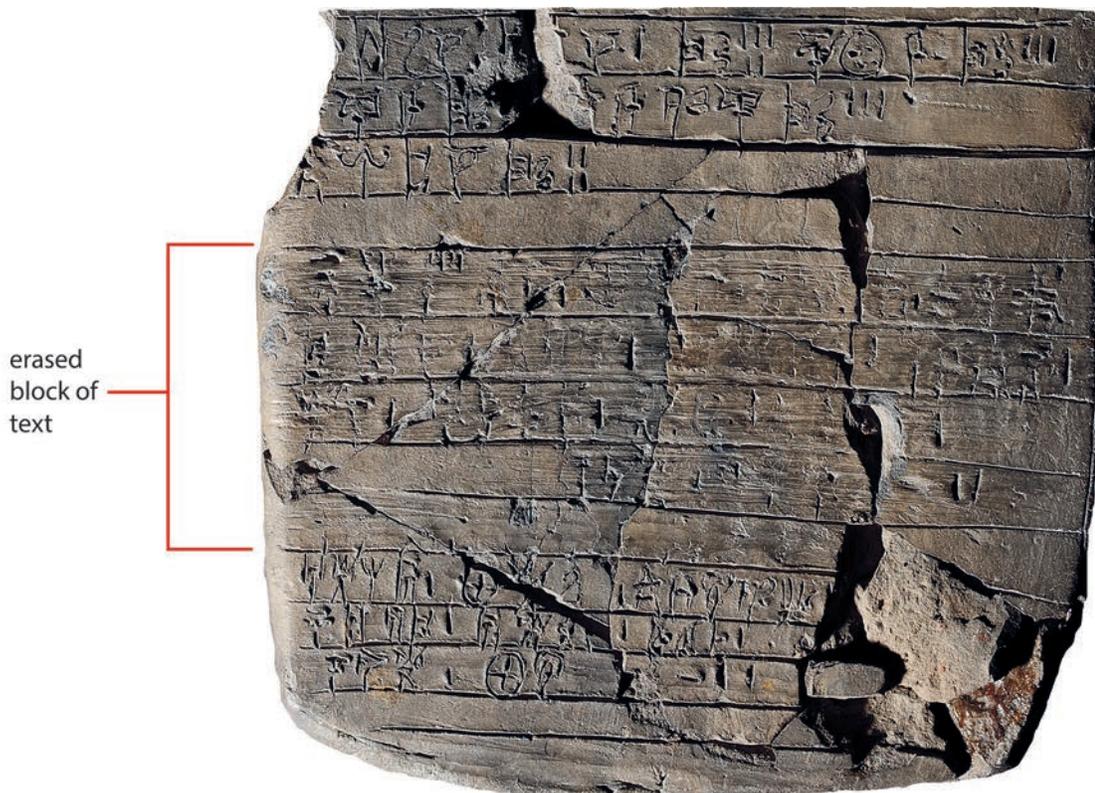


FIG. 2. Lower half of PY Jn 725 (.14–.27) with a block of erased text (.18–.22). The erasure marks are visible over traces of the original signs (courtesy of The Department of Classics, University of Cincinnati; annotation by author).



FIG. 3. PY An 657.13 (detail): *o-ka-ra* VIR 30 > *o-ka-ra*, '*o-wi*'-*to-no* VIR 30 (𐀓𐀓𐀓, 𐀓𐀓𐀓𐀓 𐀓 𐀓). As indicated by the single quote marks in the transcription, the *o* and *wi* (𐀓𐀓) are positioned above the *to* and *no* (𐀓𐀓) (courtesy of The Department of Classics, University of Cincinnati).

namely those affecting the texts' content (including the words, ideograms, and numerals present in the text), with a particular focus on instances of scribes editing or interacting with one another's documents. I then analyze edits relating not to the texts' content but to their presentation, including those affecting the format of the whole or part of a document, the syntax

and structure of entries, the orthography of particular terms within the text, and even the graphic form of individual signs. Finally, I draw overall conclusions as to what this study of edits tells us about the processes involved in the scribes' creation and ongoing use of the Linear B administrative documents.

Text 1. KN Ga(2) 423.B (H136)

ko-ri-ja-do-no AROM 2 [   
 “coriander: AROMATIC SUBSTANCE: 2 units”

Text 2. KN Dd 1283.B and Dd 5692.A (both H117)

[[OVIS<sup>f</sup>] > OVIS<sup>m</sup>: “[SHEEP (FEMALE)] > SHEEP (MALE)”

Text 3. PY Cn 328.9 (H1)

[[OVIS<sup>x</sup>] > CAP: “SHEEP (GENDER UNKNOWN) > GOAT”

Text 4. PY Jn 415.7 (H2)

AES [[M] > AES L 1 M 4 “BRONZE [[M units] > BRONZE L units 1 M units 4 (ca. 34 kg)”

Text 5. KN Sc 241 (124-δ)

]EQU [[‘ZE’ 1] > ]EQU ‘MO’ 1: “HORSE: PAIR: 1” > “HORSE: SINGLE: 1”

Text 6. PY Ta 721.2 (H2)

ta-ra-nu , > ta-ra-nu-we: /<sup>th</sup>rānus/ “footstool” > /<sup>th</sup>rānuwes/ “footstools”

Text 7. KN Da 1098.A (H117)

OVIS<sup>m</sup> 10[[9] [[o OVIS<sup>m</sup> 1] > OVIS<sup>m</sup> 110   
 “SHEEP (MALE): 109; *missing*: SHEEP (MALE): 1” > “SHEEP (MALE): 110”

Text 8. PY Ad 690 (H23)

VIR [[4] ko-wo 4 [[o VIR 3] > VIR 10 ko-wo 4   
 “MEN: 4; boys: 4; *missing*: MEN: 3” > “MEN: 10; boys: 4”

Text 9. PY Jn 658.10 (H21)

[[ko-ma-ḏo-ṛo AES M 5]: “to *ko-ma-do-ro* (man’s name): BRONZE: ca. 5 kg”

## EDITS TO THE TABLETS' CONTENTS

In the context of an administrative system recording people and goods, edits that materially alter the information conveyed by the documents are not unexpected. Edits of this type include deleting, changing, or inserting individual words, ideograms, or entire entries; changing the linguistic features of items in a text, such as a noun's gender or case; or changing the quantity of items recorded (which may involve changes to metrograms, numerals, or the grammatical number of nouns or adjectives referring to the items). Any of these content-related edits may of course be motivated by the need to correct an error, for instance by replacing a word or ideogram mistakenly included because of its similarity to the intended text or via an accidental repetition of a preceding element. For example, on two Knossos sheep tablets, KN Dd 1283.B and Dd 5692.A (both H117) (Text 2) the ideogram representing "female sheep" has been incorrectly written, and then erased and replaced with the one representing "male sheep."<sup>32</sup> Similarly, on the Pylos livestock tablet PY Cn 328 (H1), which records a mixture of sheep and goats, .9 contains the entry seen in Text 3. Here the entry of sheep on the line immediately above (.8) has led to a mistaken repetition of the "sheep" ideogram in place of the intended "goat." As well as accidental repetitions, terms may be omitted and later inserted (see fig. 3). Uses of the wrong term or ideogram may also occur with less closely related elements that nonetheless play a similar functional role. For instance, on the landholding tablet PY Eb 862.B (H41), the writer has first described the origin of the landholding tablet in question as  $[\text{pa-ro}, \text{da-mo}]$  /*paro dāmoi*/ ("from the community" or "from the local authority") and then replaced this with a term denoting a different landholding mechanism, *ka-ma-e-u* /*kamaheus*/ ("holder of a *ka-ma* landholding"); the exact interpretation of *ka-ma* is unknown).<sup>33</sup>

Examples are also attested of scribes initially using the wrong case or gender of a noun or adjective. For instance, on PY Cn 131.5 (H1), the man's name *po-ro-u-te*- $[\text{u}]$  /*Plouteus*/ (nominative) has been changed to *po-ro-u-te-we* /*Ploutewei*/ (dative), which is the case required by the preceding preposition *pa-ro* /*paro*/

"from."<sup>34</sup> Similarly, *ko*- $[\text{wa}]$  /*korwai*/ "girls" has been changed to *ko-wo* /*korwoi*/ "boys" on KN Ag 90 (H124-A)<sup>35</sup> and KN Ak(1) 614.C (H103). Scribes also made and corrected mistakes in numerical calculations or estimations, as seen, for example, on PY Jn 415.7 (H2) (Text 4). In this totaling entry for a list of bronze allocations, after writing the ideogram AES "BRONZE," the scribe began entering a quantity of between 1 and 29 kg, as is shown by the use of the metrogram  $[\text{M}]$ . One M unit, ca. 1 kg, equals 1/30th of an L unit, ca. 30 kg; M 29 (ca. 29 kg), is therefore the maximum quantity that could be represented following M; for larger quantities, an L metrogram would be required.<sup>36</sup> On realizing that the total was in fact larger than initially thought, the scribe then changed this to L 1 M 4 "ca. 34 kg."

However, since tablets could be edited a considerable time after their original writing by rehydrating the surface,<sup>37</sup> we should consider this as a possibility and look for examples of edits that seem to fit the profile not of an error being corrected but of the writer updating administrative information, however short or long a time after the initial writing of the tablet this may have taken place.<sup>38</sup> It is often impossible to distinguish between immediate corrections of incorrect information versus updates based on new information, as can be seen in KN Sc 241 (124- $\delta$ ) (Text 5)<sup>39</sup> and

<sup>34</sup> See Consani 2003, 62 n. 13. Olivier and Del Frio (2020) tentatively suggest that the correction may have been made by a different (unidentified) hand rather than by H1.

<sup>35</sup> The hand number 124 at Knossos refers to all tablets originating from the Room of the Chariot Tablets (on which, see Driessen 2000). Within this, some tablets are attributed to individual scribes (indicated by Roman letters, e.g., H124-A); to "stylus groups" (groupings of tablets that were written by the same person but cannot be certainly identified with or distinguished from the known hands, indicated by numerals: e.g., S124-4); or to "supplementary groupings," for which identification as written by the same individual is even less certain (indicated by Greek letters, e.g., 124- $\alpha$ ): see Melena and Firth 2019, 466–69.

<sup>36</sup> On the Mycenaean weight system, see *Docs*<sup>2</sup>, 54–58; Melena 2014, 154–56.

<sup>37</sup> See Pape et al. 2014.

<sup>38</sup> In most cases, determining whether edits are likely to have been made during the initial writing process or sometime afterward would require autopsy to establish (e.g.) whether some signs were written when the clay had partially dried, resulting in shallower strokes, or whether any traces of rehydration can be seen.

<sup>39</sup> See Consani 2003, 61.

<sup>32</sup> See Consani 2003, 61.

<sup>33</sup> See de Fidio 1981, 8; Consani 2003, 63.

PY Ta 721.2 (H2) (Text 6).<sup>40</sup> Such changes could result from the scribe accidentally writing *ZE* “pair” or *ta-ra-nu* “footstool,” or from the scribe later realizing or being informed that, in fact, a single horse was being issued, or more than one footstool was present (or, in the latter case, realizing almost immediately that time and space could be saved by recording these footstools together).<sup>41</sup> Nonetheless, it is still possible to identify tablets on which a process of updating has taken place. We have already discussed the likelihood that edits in the Knossos D1-series represent the updating of information relating to flock composition, and the same may well be true of at least some of the many other edits to the quantities, sexes, and ages of sheep listed throughout the other D-series tablets. Probable examples of such updates can be identified most easily when a related series of edits appears on a tablet, demonstrating a multistage process of updating information: for example, on KN Da 1098.A (H117) (Text 7), a quantity of missing sheep (designated as *o*, short for *o-pe-ro* / *op<sup>h</sup>elos*: “deficit, missing”) has been erased and the total number of sheep present altered.<sup>42</sup>

A similar process of updating information in another context is exemplified by the personnel tablet PY Ad 690 (H23) (Text 8), which records the sons of a group of *a-pi-qo-ro* / *amp<sup>h</sup>ik<sup>w</sup>oloi* / “women attendants” at Pylos. An original entry listing four men, four boys, and three men who are “missing” has been changed to list a total of 10 men, with the “missing” entry deleted. Presumably, at some point H23 at Pylos was made aware that the missing three men, plus another three, were in fact present, while H117 at Knossos similarly established that the missing sheep had been supplied.<sup>43</sup> Such updates seem most likely to have taken place sometime after the original writing of the text, to allow time for the required people, sheep, or other goods to be supplied, although it is not possible to demonstrate this without autopsy.

Similarly, on PY Jn 658 (H21), which belongs to a series listing allocations of metal to smiths at various locations and contains 16 entries of smiths receiving

ca. 5 kg of bronze (*AES M 5*) each, a 17th entry has been erased on .10 (Text 9). The total on .11 has been altered from *L 3 M 25* (ca. 115 kg) to *L 2 M 20* (ca. 80 kg) by erasing the surplus units. Since the correct total before the erasure on .10 would have been *L 2 M 25* (ca. 85 kg), it seems that the scribe has both corrected the mistake in arithmetic, which produced *L 3* (ca. 90 kg+) instead of *L 2* (ca. 60 kg+), and updated the total based on the information that *ko-ma-do-ro* was not in fact receiving any bronze in this round of allocations.<sup>44</sup> These erasures were perhaps made by wetting and smoothing the relevant areas with a finger, since they show traces of the original signs similar to those seen in a test tablet erased by this method.<sup>45</sup> Again, although it is not possible to prove how long after the original writing of the tablet this happened, a need to rehydrate the surface would imply a gap of at least a few hours, if not a longer period, during which a different decision about bronze allocations was made.

The PY Jn-series also provides examples of more extensive editing practices, involving the transfer of information (with or without making changes to its content or format) from earlier to newer documents. The creation of this series of records, of which all but two are by H2, was (as described by Smith) “a continuous process involving transcription and correction of old information onto new tablets”;<sup>46</sup> this is evidenced by a comparison of the “working document” PY Jn 725, in which information relating to smiths at multiple locations has been recorded by H2 in a preliminary fashion, to the “final” tablet PY Jn 692, which lists allocations to smiths at just one of these locations, *na-i-se-wi-jo*.<sup>47</sup> Both the erased block of text on Jn 725.18–.22 (see fig. 2) and Jn 692 record the distribution of a total of *AES M 12* (“BRONZE: ca. 12 kg”) among the same eight smiths at *na-i-se-wi-jo*, but 725[.18–.22] lists only the names of the smiths and the total amount of metal to be distributed while 692 distinguishes between the

<sup>40</sup> On PY Ta 721.2, the edit is shown not by erasure but by the original word-divider still being present under the *-we*.

<sup>41</sup> See Palaima 2000, 237.

<sup>42</sup> See Halstead 1999, 152.

<sup>43</sup> The simple deletion of entries that recorded missing people, animals, or objects without providing a correction to the preceding numeral may be related to this: e.g., [*o-pe-ro* VIR 8] “missing: MEN 8” (PY Ad 679, H23).

<sup>44</sup> For the reading of *L 2*, with the original third unit erased, see Bennett et al. 2013; this seems plausible on the basis of the photograph in Judson et al. 2016. Olivier and Del Frio 2020 read *L 1*, probably corrected from [3]; if this reading is correct, then the scribe has also made a mistake in the final total as well as the initial one. Olivier and Del Frio also tentatively suggest that .11 may have been written by a different, unidentified scribe, rather than by H21.

<sup>45</sup> Pape et al. 2014, 181, fig. 19.3.

<sup>46</sup> Smith 1992–1993, 216.

<sup>47</sup> Smith 1992–1993, 191–98.

two smiths who are in fact receiving bronze in this distribution and the six who are not. H2's erasure of the preliminary record (which, judging by the fact that many of the signs remain visible and by the prominence of the erasure marks, may have taken place after the tablet had at least partly dried, without rehydrating the clay)<sup>48</sup> shows this part of the recording process to be complete; the other entries on Jn 725 do not correspond to any other known tablets and were presumably still awaiting transfer to a final record at the time of the palace's destruction.<sup>49</sup>

The addition of information by a second scribe to documents originally written or begun by a first likewise demonstrates the existence of an administrative process that involved multiple stages of recording, whether these took place in quick succession or over a longer period of time.<sup>50</sup> Although instances of this practice include those that appear to involve the correction of an error or the updating of information (e.g., Pylos H1 may have added an ideographic entry, VIR 1 "MAN: 1," to H21's PY Cn 595.2; the shallowness of the strokes in this addition implies this was done after the tablet had partly dried),<sup>51</sup> as well as many whose purpose is unclear,<sup>52</sup> the most relevant cases for the purposes of this article are those in which it may be possible to reconstruct a wider administrative reason for the second scribe's additions. Pylos H1, who was the most prolific scribe at Pylos and is generally acknowledged to have had some form of supervisory role over the work of at least some other scribes,<sup>53</sup> provides

evidence for the administrative purpose behind some edits of this type. For instance, this scribe has added a list of the total number of men in each of four groups termed *ke-ro-si-ja* (/geronsiā/ "council of elders"?) to PY An 261 v.4–.7, whose recto and first two lines of the verso are by H43 and list various members of these groups individually. Since the total numbers listed in each *ke-ro-si-ja* are larger than the number of men listed individually, this is not a simple summary of this tablet; H1 has clearly added extra relevant information from elsewhere (probably from PY Un 616 v.1–.4, assuming this identical text to have been written before An 261 v.4–.7).<sup>54</sup> We may therefore be able to see H1 here making an administrative decision to incorporate this extra information into a preexisting document so that it would be recorded in a more logical or easier-to-find location.

In some cases, collaboration between two scribes on the same documents can be seen to form part of an entirely regular administrative process. The rectos of the Knossos Lc(2)-series tablets, written by H113, list production targets for cloth and records of the amount of wool necessary to make it, while the versos, written by H115, each contain a single entry of a smaller quantity of wool designated as *to-u-ka* /*touk<sup>h</sup>ai*/ "for the preparation" or "finishing," probably referring to some form of decoration of the cloth once it had been produced.<sup>55</sup> The recurrence of this format throughout the entire series of documents shows that this sharing of tablets between two scribes who recorded different stages of administration was an integral part of the process of setting and recording these textile production targets.

Although no other series of tablets provides evidence for two stages of recording regularly taking place on a single tablet in this way, the E-series of

<sup>48</sup> The appearance of this erased area is quite different from any of those produced in experiments involving rehydrating the surface of a dried tablet (Pape et al. 2014, 180–81).

<sup>49</sup> See esp. Smith 1992–1993, 191–98; also Lejeune 1961, 430–31; Lindgren 1973, 62.

<sup>50</sup> See Maurice 1985, 41–43; Bennet 2001, 28–29.

<sup>51</sup> See Maurice 1985, 41–42; Palaima 1988, 52. Palaima attributes this addition to H1; the attribution is made more tentatively in Olivier and Del Freo 2020. Other instances of H1 certainly or possibly intervening on others' tablets include PY Cn 656, on which H1 continues a record begun by H21, and Cn 599.8, on which H1 appears to have erased and replaced an original entry by H21 (Palaima 1988, 52).

<sup>52</sup> E.g., MY Ge 603 shows close collaboration between two different scribes: H58a (who wrote the beginning and end of .1 and the ends of .2–.7) and H59 (who wrote the middle of .1 and the beginnings of .2–.7), but the precise relationship between them and the order of writing the various parts of the tablet (all of which are over erasure) is not clear. See Maurice 1985, 43; Varias García 1993, 259, 261.

<sup>53</sup> See Palaima 1988, 51–52, 58. However, for a demonstra-

tion that H1 is not simply the chief scribe at Pylos, see Kyriakidis 1996–1997, 219–20, 224; 2011, 136–38.

<sup>54</sup> Palaima 1988, 58; cf. Maurice 1985, 42. On H1's supposed correction of H43's spelling on .1 of this tablet's recto, see "Orthographic Edits" below. For other examples of interventions by H1 on tablets written by other scribes, see Palaima 1988, 51–52, 58; supra n. 51. For a list of similar examples at Knossos, see Olivier 1967, 97.

<sup>55</sup> KN Lc(2) 481, 483, 504, 512, 581, 7319, and 7377; only Lc(2) 7433, tentatively attributed to both this series and to H113?, lacks the text by H115 on the verso (446, previously also tentatively classed as Lc(2), has been reclassified as belonging to the X-series of tablets without ideograms in Melena and Firth 2019). See Killen 1979, 163–64; Nosch 2014, 381, 384; cf. Maurice 1985, 42.

landholding tablets at Pylos similarly show a systematic collaboration between scribes working at different stages of a recording process, in this case with information being transferred from one group of tablets to another.<sup>56</sup> H1 compiled summary records (the Ep- and En-series) based on H41's preliminary documents (the Eb- and Eo-series). The connection between the two groups of tablets is indicated by the identical nature of their information as to the lessees' and lessors' names, titles, and landholdings.<sup>57</sup> However, H1's documents are not simple transcriptions of H41's, as the syntax of individual entries and the structure of the overall records have been significantly altered. These will be discussed in detail below; the key point here is that the E-series at Pylos, like the KN Lc(2)-series and other examples discussed above, provides evidence for administrative procedures in which scribes had systematic ongoing interactions with either their own or others' documents.<sup>58</sup>

<sup>56</sup> It is generally assumed that the process shown by these groups of tablets, whereby information initially collected as individual entries on palm-leaf tablets was collated onto larger page-shaped tablets, was a regular one in Mycenaean record-keeping (see, e.g., Palaima 2010, 360); it is rare, however, for both the preliminary and the summary tablets to be preserved.

<sup>57</sup> See Bennett 1956, 1983; de Fidio 1981; Palaima 1988, 102; Del Frio 2005, 84–103, 106–44. For discussion of some cases in which administrative changes to the content of these records may have been made by H1, see Jiménez Delgado 2005. It has also been suggested that there may have been three stages to this recording process, although only two are preserved for any given landholding entry (de Fidio 1981; Bennett 1983, 42; Del Frio 2005, 119–20; Salgarella 2019a).

<sup>58</sup> A similar process may be seen in PY Jn 658 (H21) and Jn 725.1–10 (H2), which both list allocations of bronze to smiths at *e-ni-pa-te-we*: these are usually regarded as different stages of the same record but there is no general agreement as to which record is based on the other. 658 has been viewed as the final record because of its inclusion of the amounts allocated to each individual smith, whereas 725 lists only the smiths' names and the total quantity of metal (Lejeune 1961, 430–32; Lindgren 1973, 62–63; Nakassis 2013, 75). However, 658's poorer state of preservation has led to the suggestion that this was the preliminary record, already discarded at the time of the palace's destruction (Smith 1992–1993, 203–4; cf. Lang 1966, 411–12). A third possibility taking both of these factors into account, along with the two texts' differences in content (658 lists 16 smiths receiving a total of L 2 M 20 [ca. 80 kg] of bronze; 725 lists 27 smiths receiving L 2 M 18 [ca. 78 kg]) is that 658 is a finished record relating to a previous bronze distribution, discarded now that a more recent allocation is being recorded (cf. Bennet 2001, 28).

## EDITS TO THE PRESENTATION OF TABLETS

Many edits can be identified that alter only the way in which the information is presented. Such edits include those affecting the overall layout of the text, the spelling of particular terms, or even the form of individual signs. This section will examine each of these different aspects of textual presentation in turn, demonstrating that the format of records as well as their content was an issue of concern to the Mycenaean scribes.

### *Formatting Edits*

We have seen above that a considerable amount of effort went into devising a format for the text of PY Tn 316 that would effectively present this record's information (see fig. 1). Examining the kinds of changes to the formats of texts across the whole Linear B corpus similarly shows that the level of concern seen in this tablet for the clear and efficient layout of information is far from being unusual.<sup>59</sup> Naturally, alterations to a document's layout are often made for the purely practical reason of fitting in all of the necessary text by altering the overall format of the tablet's ruling or the size or placement of all or part of the text. Both types of changes are exemplified by PY Ta 708.2A–.2B (H2) (fig. 4): on the second line the scribe has begun a full-sized entry and then divided the remainder of the line in order to fit in both the rest of this entry (on .2A) and a subsequent entry (on .2B).<sup>60</sup> Such edits are even sometimes carried out on the level of individual signs: on KN De 1381.A (H117) (fig. 5), for example, a full-sized  $\llbracket$ OVIS $\rrbracket$  "SHEEP (GENDER UNKNOWN)" has been replaced by a smaller OVIS<sup>f</sup> "SHEEP (FEMALE)," squeezed in under the preceding numeral to allow space for the following numeral. Similar methods of ensuring that all the necessary information can be included are, of course, frequently seen, with no editing involved, when scribes decrease the size of their signs or continue an entry above the first part when insufficient space is available. In other cases, clay is cut away from the edges of tablets to remove blank spaces.<sup>61</sup>

<sup>59</sup> On the Mycenaean scribes' concern for their documents' format, see also Bennet 2001, 29; Karagianni 2015, 48–54; Marazzi 2016, 157–66; Nakassis 2018, 51–52.

<sup>60</sup> See Palaima 2011, 68–70.

<sup>61</sup> On the cutting of tablets, see Palaima 1988, 52, 66; Driesen 2000, 49; Tomas 2013.



FIG. 4. PY Ta 708, a palm-leaf tablet with three entries. The writer began the second of these as a full-sized entry on .2, before dividing this line in two to fit in a third entry (courtesy of The Department of Classics, University of Cincinnati; annotations by author).

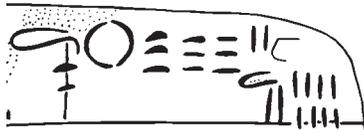


FIG. 5. KN De 1381.A: OVIS<sup>m</sup> 192 [[OVIS<sup>s</sup>]] > OVIS<sup>m</sup> 192 OVIS<sup>f</sup> 8: “SHEEP (MALE): 192 [[SHEEP (GENDER UNKNOWN)]] > SHEEP (MALE) 192 SHEEP (FEMALE) 8” (𐀓 ○ ≡≡≡ 𐀓 ≡≡≡). OVIS<sup>s</sup>: the gender is unknown as only the head is visible, above the entry of OVIS<sup>f</sup> 8, but presumably this was also OVIS<sup>f</sup> (drawing by author, after CoMIK).

However, many formatting edits are not strictly necessary in terms of the content of the text; rather, they demonstrate the writer’s concern for its overall appearance. Some of these changes have no significant impact on the layout of the subsequent text, and so appear to have been made purely out of a desire for neatness, for its own sake.<sup>62</sup> For instance, on KN Db 1340 (H117) (fig. 6, left), the scribe has redrawn the right-hand end of the central horizontal ruled line so that it divides the tablet more evenly into two lines, even though no text was required at this end of the lower (originally smaller) line. On KN As 40.6–9 (H101) (see fig. 6, right), the right-hand ends of the ruled lines have similarly been neatened (redrawn to be straighter) although this affects the position only of the ideographic entry (𐀓 ' VIR 1: “MAN 1”) on .6.

More often, however, formatting edits show the writer considering the ease of a future reader’s consultation of the text. Such concerns in the layout of Linear B texts have often been stressed, particularly with regard to the frequent practice of aligning the ideographic entries on each line of page-shaped tablets in columns to provide visual clarity as to the structure of the record.<sup>63</sup> This is illustrated by PY An 610 (fig. 7), in

<sup>62</sup> On the aesthetic basis for scribes’ arrangements of texts, see also Nakassis 2018, 51–52.

<sup>63</sup> See, e.g., Bennet 2001, 29; Karagianni 2015, 50, 53;

which the format of the tablet has been altered to fit in all the entries. There is one entry per line in .2–.5, two entries per line in (probably) .6–.13 and .15, and three on .14. Even with the change of format, the ideograms and numerals have still, as far as possible, been lined up in neat columns (the exception being .14, where a third entry has been squeezed in). Of course, such arrangements could also be chosen because of a desire for neatness in addition to consideration of future readers.<sup>64</sup> However, similar concerns for the prominence of ideograms can be seen on palm-leaf tablets on which part of the central horizontal ruling has been erased to allow the ideogram to be written over the full height of the tablet (e.g., MUL “WOMAN” on KN Ai(3) 825, H204; LANA “WOOL” on KN Od 8202, -) and on texts where the writer has shifted the position of an ideographic entry to separate it more clearly from the rest of the text. This is seen, for instance, in KN Da 1353.A (H117) (Text 10; fig. 8). The original entry of OVIS<sup>m</sup> 100 (𐀓 ○: “SHEEP (MALE) 100”), which is shown in figure 8 by the fainter strokes at the beginning of the upper line .A, has been erased and an identical entry written farther to the right in a more visually prominent position (a position that is characteristic of the ideographic entries in the KN D-series in general).

Texts were also edited to conform to conventions that made them easier to consult or compare to other documents: for instance, when entries for TUN “CORSELET” needed to be added to the records of issues of chariots on KN Sc 217 (124-γ) and 260 (124-β), these entries were not written at the ends of the records but were reinserted into their usual position in this series before the CHARIOT ideogram<sup>65</sup> to ensure

Marazzi 2016, 157.

<sup>64</sup>Nakassis 2018, 51–52.

<sup>65</sup>KN Sc 217: ]ta BIG 1 EQU ZE 1 > ]ta TUN 2 BIG 1 EQU ZE 1: “-ta (name): CORSELET 2; CHARIOT 1; HORSE PAIR 1.” KN Sc 260: ]jo BIG[ > ]jo TUN 1 BIG[ : “-jo (name): CORSELET 1; CHARIOT[.”

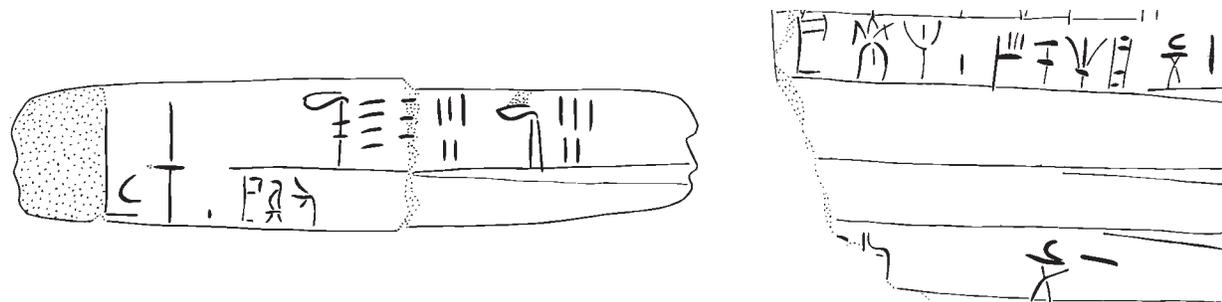


FIG. 6. Adjustments to ruling of tablets: *left*: KN Db 1340; *right*: KN As 40.6–9 (drawings by author, after CoMIK).

the consistency of records throughout the series. Numerals that were not originally written according to the standard conventions were similarly rearranged on, for example, KN Dd 1425.A (H117), which originally had the numeral 15 written with the 5 indicated by five vertical strokes in a row instead of the usual arrangement of two rows of strokes (𐀆𐀆); in changing the 15 to 16, the scribe also rearranged the units into the conventional layout (𐀆𐀆).

Edits like these, which increase the visual prominence or ensure the consistency of the ideographic entries, imply that the ability to immediately pick out and identify the ideograms (which provide an immediate indication of the topic of the record) and the numerals (which would be needed for, e.g., the compilation of a total or summary document) were considered to be particularly important factors in the composition of Linear B documents, as might be expected in the context of administrative records. However, further formatting edits also show writers paying careful attention to the overall experience of future readers consulting their documents. Throughout the PY Jn-series of bronze allocation tablets, H2 regularly left blank lines to separate different blocks of text, providing a clear visual indication of the structure of the record.<sup>66</sup> Alterations to a tablet's original layout to provide this visual aid to the reader are also attested. For instance, on PY Jn 693, the ruling of the original .8 was altered, dividing this line to produce a narrow blank line between the preceding entries of smiths receiving bronze allocations and the following entry of those who are not receiving allocations (*a-ta-ra-si-jo* /*atalansioi*/) on .10. A similar effect has been produced on PY Jn 389 (H2)

(fig. 9) by erasing the entire entry originally written on .8 ([*to-so-de*, *ka-ko* AES M 27]: /*to(s)sosde* *k<sup>h</sup>alkos*/ “so much bronze: BRONZE ca. 27 kg”) and moving it to .9: this edit presumably took place immediately after the original inscription of .8 as there is no indication of any other text having been erased from .9 or the following lines. The totaling line is thereby clearly marked out for anyone who might later consult the record (.10 of this tablet has then also been left blank to provide a similar visual break between the total on .9 and the list of smiths to whom no bronze was allotted on .11–.13).

The general convention in Linear B records (unlike in Linear A)<sup>67</sup> that individual words or entries are, if at all possible, not split across more than one line presumably had a similar basis in a concern for readability and the ease of visually analyzing the structure of the document and the number of different entries. Text 11 (PY Un 267, H1; see pg. 540) shows a scribe ensuring that words were not divided over two lines, even at the cost of multiple edits. In two cases, incomplete words at the end of a line have been erased and inserted on the following line.

The wide variety of edits discussed here, in which the chief motivation is clearly the ease of reading and understanding the text, demonstrates that the writers of these tablets assumed that they or other readers would continue to engage with these texts after their initial creation, whether by simply reading them or by updating or copying them. As remarked above, the Mycenaean scribes' reading practices are necessarily invisible to us except where they can be inferred from the indirect evidence of their written texts: in providing such evidence, these formatting edits remind us that

<sup>66</sup> See Smith 1992–1993, 180.

<sup>67</sup> See Duhoux 1999, 229; 2017, 209–18.

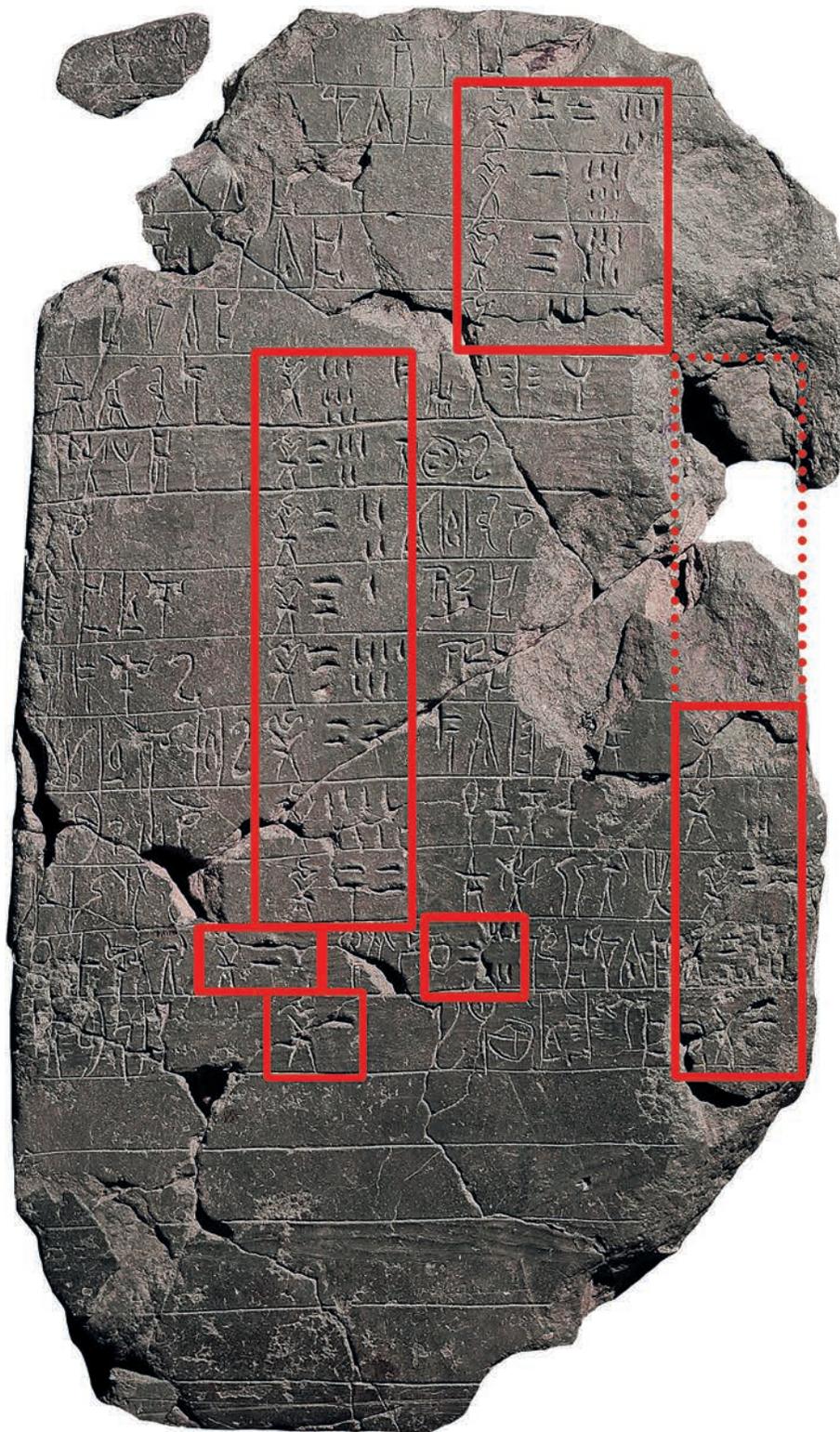


FIG. 7. PY An 610. The positions of the ideographic entries listing numbers of men ( $\nu\text{IR } \text{N}$ ) are indicated in red. Note the alignment of the ideographic entries in a single column on .2–.5 and in two columns on .11–.13 and .15 (and probably .6–.10, each of which would have had a second ideographic entry at the right-hand end; the likely approximate position of these is indicated by the dotted red line), while three entries have been fitted onto .14 (courtesy of The Department of Classics, University of Cincinnati; annotations by author).

## Text 10. KN Da 1353 (H117)

- .A            [[OVIS<sup>m</sup> 100]] OVIS<sup>m</sup> 100  
 .B a-ri-ko, / da-\*22-to,  
 “a-ri-ko (man’s name), at da-\*22-to: [[SHEEP (MALE): 100]] SHEEP (MALE): 100”

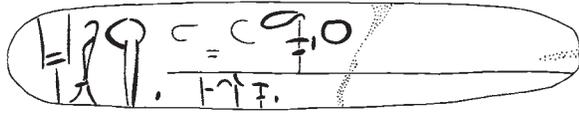


FIG. 8. KN Da 1353 (see Text 10; drawing by author, after CoMIK).

such reading practices will have been just as central to the operation of the Mycenaean administrations as the practices involved in writing the tablets.<sup>68</sup>

#### Syntactic and Structural Edits

Edits that produce a difference of syntax or text structure, but not of meaning, can be considered to relate to the text’s linguistic presentation, just as formatting edits relate to its visual presentation, and therefore provide further evidence for scribes’ careful consideration of their arrangement of textual information. The most systematic example of this is found in Pylos H1’s creation of summary landholding records (the En- and Ep-series), which (as previously mentioned) are based on preliminary documents written by H41 (the Eb- and Eo-series). H1’s texts show systematic alterations to the way in which the information acquired from H41’s earlier records is presented. In addition to using different sizes and shapes of tablets at different stages of recording,<sup>69</sup> H1 has consistently edited both the syntax of individual entries and the structure of entire records, as exemplified by tablets PY Eo 274 (H41) and En 74 (H1), parts of which are

<sup>68</sup> On reading practices as embodied engagements with written texts, see Bennet 2013, 335–36; on possible Aegean Bronze Age reading practices and literacy, see Finlayson 2014, 194–205.

<sup>69</sup> H1 used palm-leaf tablets (recording single landholding entries) for the Eb-series and page-shaped tablets (recording multiple entries) for the other series. H41’s preliminary page-shaped tablets in the Eo-series are smaller and contain entries relating to fewer different lessors of land than H1’s summary En-series. Salgarella (2019a) suggests that these Eo-series tablets may themselves have been based on an initial series of palm-leaf tablets, similar to the Eb-series, that are not preserved; see also supra n. 57.

reproduced in Texts 12 and 13 in transcription and in translation. The references to “seed” and “grain” in these texts specify the amount of land held, measured in terms of the seed to be sown on it.<sup>70</sup> In the preliminary tablet Eo 274.2–.7, H41 used the phrase *e-ke-qe o-na-to* / (h)ek<sup>h</sup>ei-k<sup>w</sup>e onāton/ (“(s)he has a lease”). H1 consistently altered this phrase throughout to *o-na-to e-ke* / onāton (h)ek<sup>h</sup>ei/, with no difference of meaning,<sup>71</sup> and added *to-so-de pe-mo* / to(s)son-de spermo/ “this much seed” before the indication of the quantity of land (GRA “GRAIN”).<sup>72</sup> Moreover, H1 has also restructured the entire record. Though retaining (with a slight change of word order) the heading indicating that the contents refer to *ki-ti-me-na ko-to-na* / ktimena ktoina/ “cultivated(?) land” belonging to *a<sub>3</sub>-ti-jo-qa* / Ait<sup>h</sup>iōk<sup>w</sup>os/ (genitive), H1 then added a second heading on .12 (Text 14) in order to allow the phrase *pa-ro a<sub>3</sub>-ti-jo-qe* / paro Ait<sup>h</sup>iōk<sup>w</sup>ei/ “from Ait<sup>h</sup>iōk<sup>w</sup>s” to be omitted from each individual entry.<sup>73</sup>

<sup>70</sup> For a summary of the Mycenaean volume measurement systems, the methods used in reconstructing the approximate values of the different metrograms, and possible calculations for how measures of seed would translate into areas of land, see Melena 2014, 156–60. On the identification of the GRA ideogram, translated here only as “GRAIN,” as representing either wheat or barley, see Palmer 2008 (with further references).

<sup>71</sup> On H41’s use of *-qe* /-k<sup>w</sup>e/ “and” in an apparently non-connective function in the phrase *e-ke-qe o-na-to*, and on the changes made by H1 to the syntax of H41’s entries, see Salgarella 2019a. Salgarella (75, 77, 79–83) argues convincingly that this use of *-qe* originated as a “filing device” pragmatically linking related records on separate palm-leaf tablets.

<sup>72</sup> On the various different syntactic constructions used in the E-series, see de Fidio 1981, 27–38. I think it unlikely, however, that H1’s changes to H41’s texts are due to comparison with earlier texts that ultimately formed the source for both the Eo- and En-series (de Fidio 1981, 45–46). Such texts could of course have existed (supra nn. 57, 69), but, given H1’s general consistency in using a different syntactic construction from H41, it is more plausible to attribute H1’s changes simply to this scribe’s individual preferences.

<sup>73</sup> For a detailed discussion of the interpretation of *o-da-a<sub>2</sub>* and of H1’s use of this term in these records in place of H41’s nonconnective *e-ke-qe* (supra n. 71), see Salgarella 2019a, 74–81; 2019b.



FIG. 9. PY Jn 389. Line .8 has been erased to provide a visual break between the allocations of bronze made to smiths and the total amount of the bronze allocated. There is also a blank line below the totaling line to separate off the smiths without allocations of bronze (courtesy of The Department of Classics, University of Cincinnati; annotations by author).

The order of entries has also been altered (as indicated by the numbers at the right-hand side of Text 13 that show the correspondence between the entries on En 74 and those on Eo 247), and, in certain cases, a different spelling is used for what are clearly the same words (e.g., *i-pa-sa-na-ti* vs. *e-pa-sa-na-ti* or *ta-ra<sub>2</sub>-to* vs. *ta-ra-to*).<sup>74</sup> Thus, although H1 has not edited the actual tablets produced by H41, the creation of these summary landholding records by H1 still clearly involves an editorial process consisting of a complex series of decisions. While some of these decisions seem simply to reflect personal spelling or syntax preferences, others are evidently based on a thorough consideration of the best way to structure and present these entries as part of a collection of related administrative information.

#### Orthographic Edits

Like the edits to the contents of tablets discussed above, changes to the spelling of particular words may be motivated by errors, such as the accidental omission of a sign seen on KN L 693.2 (H103) (Text 15). Orthographic edits correcting other types of errors can

<sup>74</sup> de Fidio 1981, 14–19, 25–27; Del Frio 2005, 108–10, 114–15, 120–22, 224. See “Orthographic Edits” below.

similarly be identified:<sup>75</sup> for instance, those caused by the persistence of a consonant from a preceding syllable<sup>76</sup> or the anticipation of a following syllable,<sup>77</sup> or by the accidental repetition of a sign,<sup>78</sup> or by the graphic similarity of two signs.<sup>79</sup>

However, the spelling conventions of Linear B frequently permit multiple different orthographic

<sup>75</sup> On these types of errors in general, see Ilievski 1965, 45–50; Maurice 1985, 31–39; Consani 2003, 60–62, 64–65.

<sup>76</sup> E.g., on PY Ep 212.4 (H1), *ko-to-[[kə]* > *ko-to-na* (/ktoina/ “piece of land”), [[kə] was probably written because the scribe mistakenly repeated the first syllable of the word or replicated the *ko* that appears on the line immediately above. Similarly, on TH Fq 236.3 (H304), *to-tu-[[to]* > *to-tu-no* (man’s name), [[to] may have resulted from the persistence of the preceding consonants.

<sup>77</sup> E.g., on KN L(1) 5949.b (H103), *]a<sub>3</sub>-tu-[[ta]* > *]a<sub>3</sub>-tu-ti-ja* (female ethnic adjective?), in which the vowel of [[ta] may anticipate the *-ja* (Consani 2003, 62 n. 9).

<sup>78</sup> E.g., on TH Gp 184.1 (H306), *to-pa-[[pa]* > *to-pa-po-ro-i* (dative plural appellative, probably /torpāp<sup>h</sup>oroihi/ “for the basket-carriers”: see Duhoux 2002–2003, 197–98; Palaima 2006, 140).

<sup>79</sup> E.g., on TH Fq 277.4 (H305), one of the cross-strokes of the syllabogram *to* T̄ has been erased to produce the required, and graphically very similar, metrogram T̄.

## Text 11. PY Un 267.1–5 (H1)

.1 o-do-ke, a-ko-so-ta	(h)ō(s)-dōke Alksoitās	This is what Alksoitās gave
.2 tu-we-ta, a-re-pa-zo-o	T <sup>h</sup> uestāi aleip <sup>h</sup> azoōi	to Thuestās the perfume-maker:
.3 tu-we-a, a-re-pa-te [[ze-so-me]]	t <sup>h</sup> ue(h)a aleip <sup>h</sup> atei [[dzessome]]	aromatic substances for perfume
		[[to be boil]]
.4 ze-so-me-no [[ko-ri]]	dzessomenōi [[kori]]	to be boiled: [[cori]]
.5 ko-ri-a <sub>2</sub> -da-na AROM 6	korihadna AROMATIC 6 units	coriander AROMATIC
		SUBSTANCE ca. 600 liters

## Text 12. Eo 247 (H41)

.1 ]a <sub>3</sub> -ti-jo-qo, ki-ti-me-na, ko-to-na	to-so-de pe-mo,	GRA I [ T 5 V 4
.2 ]e-ko-to, te-o-jo, do-e-ro, e-ke-qe, o-na-to, pa-ro, a <sub>3</sub> -ti-jo-qe, ko-to-no-o-ko,		GRA T [ 1
.3 ko-ri-si-ja, te-o-jo, do-e-ra, e-ke-qe, o-na-to, ki-ti-me-na, ko-to-na, a <sub>3</sub> -ti-jo-qe,		GRA T 5
.4 i-pa-sa-na-ti, te-o-jo, do-e-ra, e-ke-qe, o-na-to, pa-ro, a <sub>3</sub> -ti-jo-qe,		GRA T 2
.5 ku-*63-so, te-o-jo, do-e-ro, e-ke-qe, o-na-to pa-ro, a <sub>3</sub> -ti-jo-qe,		GRA T 1
.6 ta-ra-to, te-o-jo, do-e-ro, e-ke-qe, o-na-to, pa-ro, a <sub>3</sub> -ti-jo-qe		GRA T 1
.7 we-te-re-u, i-je-re-u, e-ke-qe, o-na-to, pa-ro, a <sub>3</sub> -ti-jo-qe,		GRA T 5
.8	<i>margo</i>	

## Translation:

- .1 Ait<sup>h</sup>iōk<sup>ws</sup>’ cultivated(?) land: so much seed: GRAIN ca. 150 liters
- .2 Hektōr the servant of the god has a lease from Ait<sup>h</sup>iōk<sup>ws</sup> the landholder: GRAIN ca. 10 liters
- .3 Korinsia the servant of the goddess has a lease from Ait<sup>h</sup>iōk<sup>ws</sup>: GRAIN ca. 50 liters
- .4 *i-pa-sa-na-ti* the servant of the goddess has a lease from Ait<sup>h</sup>iōk<sup>ws</sup>: GRAIN ca. 20 liters
- .5 *ku-\*63-so* the servant of the god has a lease from Ait<sup>h</sup>iōk<sup>ws</sup>: GRAIN ca. 10 liters
- .6 *ta-ra-to* the servant of the god has a lease from Ait<sup>h</sup>iōk<sup>ws</sup>: GRAIN ca. 10 liters
- .7 Westreus(?) the priest has a lease from Ait<sup>h</sup>iōk<sup>ws</sup>: GRAIN ca. 50 liters
- .8 *margin*

## Text 13. En 74.11–18 (H1)

.11 a <sub>3</sub> -ti-jo-qo, ko-to-ṇa, ki-ti-me-na, to-so-de, pḗ-mo	GRA 1 T 5 V 4 = 247.1
.12 o-da-a <sub>2</sub> o-na-te-re, e-ko-si, a <sub>3</sub> -ti-jo-qo, ko-to-na	
.13 e-pa-sa-na-ti, te-o-jo, do-e-ra o-na-to, e-ke, to-so-de pe-mo	GRA T 2 = 247.4
.14 ku-*63-so ṭḗ-o-jo, do-e-ro, o-na-to, e-ke, to-so-de, pe-mo	GRA T 1 = 247.5
.15 ta-ra <sub>2</sub> -to, te-o-jo, do-e-ro, o-ṇa-to, e-ke, ṭo-so-de, pe-mo	GRA T 1 = 247.6
.16 we-te-re-u, i-e-re-u, o-na-to, e-ke, to-so-de, pe-mo	GRA T 5 = 247.7
.17 e-ko-to, te-o-jo, do-e-ro, o-na-to, e-ke, to-so-de, pe-mo	GRA T 1 = 247.2
.18 ko-ri-si-ja, te-o-jo, do-e-ra, o-na-to, e-ke, to-so-de, pe-mo	GRA T 5 = 247.3

## Translation:

- .11 Ait<sup>h</sup>iōk<sup>ws</sup>’ cultivated(?) land: so much seed: GRAIN ca. 150 liters
- .12 In relation to the above(?): the leaseholders have land belonging to Ait<sup>h</sup>iōk<sup>ws</sup>
- .13 *e-pa-sa-na-ti* the servant of the goddess has a lease: so much seed: GRAIN ca. 20 liters
- .14 *ku-\*63-so* the servant of the god has a lease: so much seed: GRAIN ca. 10 liters
- .15 *ta-ra<sub>2</sub>-to* the servant of the god has a lease: so much seed: GRAIN ca. 10 liters
- .16 Westreus(?) the priest has a lease: so much seed: GRAIN ca. 50 liters
- .17 Hektōr the servant of the god has a lease: so much seed: GRAIN ca. 10 liters
- .18 Korinsia the servant of the goddess has a lease: so much seed: GRAIN ca. 50 liters

## Text 14. En 74.12 (H1)

o-da-a<sub>2</sub> o-na-te-re , e-ko-si , a<sub>3</sub>-ti-jo-qo , ko-to-na  
 /hō(s)-d-a(r)-ha(?) onātēres (h)ek<sup>h</sup>onsi Ait<sup>h</sup>iōk<sup>w</sup>os ktoinan(s)/  
 “in relation to the above(?): the leaseholders have land belonging to Ait<sup>h</sup>iōk<sup>w</sup>s”

## Text 15. KN L 693.2 (H103)

e-pi-ki-to-[[ja]] > e-pi-ki-to-ni-ja  
 /epik<sup>h</sup>itōnia/, nominative plural noun relating to textiles

renditions of a particular phonemic sequence. Changes from one spelling to another in such cases reflect not the correction of mistakes but writers' choices between (in principle) equally valid orthographic options. These edits therefore demonstrate a level of concern for the presentation of texts even down to the level of the precise representation of individual words. Such a process can be seen at work in the change in spelling of the (originally non-Greek) woman's name *e-pa-sa-na-ti* > *i-pa-sa-na-ti* (PY Eo 247.4, H41);<sup>80</sup> another example of *i-pa-sa-na-ti* by the same hand is found on Eb 1345.A. That this change of *e-* > *i-* is a choice between orthographic options and not a correction is made clear by H1's spelling of the same name as *e-pa-sa-na-ti* on subsequent records (i.e., PY En 74.13, Ep 212.5) based on the preliminary tablets of H41. Thus *e-/i-pa-sa-na-ti* must be a single person whose name began with a vowel perceived by Mycenaean Greek speakers to be similar to both /e/ and /i/. Apparently, H41 preferred the spelling in *i-*, and H1, although working from the tablets written by H41, deliberately chose the spelling in *e-*.<sup>81</sup> Both scribes were clearly aware of the two different orthographic options for representing this vowel, and each chose in accordance with personal preference, albeit one perhaps more hesitantly

than the other.<sup>82</sup> It is important, however, to note that variation in spelling, with different scribes choosing between different orthographic options, is far from being limited to words of non-Greek origin. A much higher degree of variation is seen, for instance, in the man's name *e-ke-ra<sub>2</sub>-wo* /Enk<sup>h</sup>errāwōn/? also spelled *e-]ke-ra<sub>2</sub>-u-na*, *e-ke-ra-<wo->ne* and *]e-ke-ri-ja-wo*,<sup>83</sup> and further examples of similar edits in Greek names and vocabulary words discussed below.

The example of *e-/i-pa-sa-na-ti* demonstrates that a thorough understanding of both the term in question and the context in which it appears is necessary to determine whether a given orthographic edit represents a correction of an error or a choice between two options. The same applies to edits whereby scribes have replaced signs from the core Linear B syllabary with their equivalent extra signs. The latter are a small group of signs that can be used instead of certain core signs, either to specify a more precise phonemic value (signs of this type are known as doublets; e.g., the core sign *a* can represent /a/ or /ha/, while the doublet sign *a<sub>2</sub>* is used to specify /ha/) or to represent a consonant

<sup>80</sup> See Perpillou 1977, 248; de Fidio 1981, 8; Consani 2003, 62 n. 10. The *i-* was written over the *e-* without erasure; it is not possible to say whether this was done immediately or after completing the whole word or entry.

<sup>81</sup> As Thompson (2002–2003, 338–44) has demonstrated, alternations of this kind occur only in words of probable non-Greek origin and cannot be satisfactorily described by a sound law; they do not therefore constitute a dialectal isogloss between the supposed “normal” and “special” Mycenaean dialects (on which, see also Thompson 1996–1997).

<sup>82</sup> A similar situation may be seen with the spelling of the theonym Artemis, which is spelled as *a-ti-mi-te* on PY Un 219.5 (H15: /Artimitei/, dative) and *a-te-mi-to* on PY Es 650.5 (H11: /Artemitos/, genitive). The latter may have been altered from an original *a-[[t̥i]]*, although the reading of the erased sign is not certain (the visible traces on the photograph in Judson et al. 2016 are compatible with *t̥i*, but also with, e.g., *ε* or *pi*, while the whole text is also probably a palimpsest).

<sup>83</sup> *e-ke-ra<sub>2</sub>-wo(-no, -ne)*: PY An 724.5 and 610.13 (H1); Er 880.[1] and Un 718.2 (H24). *e-]ke-ra<sub>2</sub>-u-na*: PY Un 853.1 (H6). *e-ke-ra-<wo->ne*: PY Un 219.1 (H15). *]e-ke-ri-ja-wo*: PY Qa 1292 (H15). On the identification of these as the same individual, see Nakassis 2013, 243–44; on the name's possible etymology, see García Ramón 2014; for one possible explanation for this spelling variation, see Palaima 2002, 221.

cluster with a single consonant-consonant-vowel sign, known as a complex sign, rather than a sequence of two consonant-vowel signs (e.g., /pte/ can be spelled with the complex sign *pte* or as *pe-te*). Several cases can be identified where a scribe has initially written or begun writing the core spelling with consonant-vowel signs and then changed to the extra spelling instead; the most secure of these are:<sup>84</sup>

- (1)  $[[a]] > a_2\text{-}ke\text{-}te\text{-}re$  (KN V(1) 118, S124-4: /hasketēre/? “healers,” dual)
- (2)  $[[a]] > au\text{-}ke\text{-}wa$  (PY Ta 711.1, H2: /Augēwān/, man’s name, accusative)
- (3)  $[[a]] > au\text{-}wi\text{-}ja\text{-}to$  (MY Au 657.2, H62: man’s name)
- (4)  $ko\text{-}tu\text{-}[[ro]] > ko\text{-}tu\text{-}ro_2$  (PY Jn 431.2, H2: /Kotullōn/?, man’s name)
- (5)  $pe\text{-}[[te\text{-}rē]] > pte\text{-}re\text{-}wa$  (KN So(1) 4429.b, H130: /ptelewās/ “(made) of elm,” genitive); the *pe*  $\mathfrak{D}$  has been altered to produce *pte*  $\mathfrak{M}$ , and the following *-te-rē*  $\mathfrak{D}\mathfrak{H}\mathfrak{Y}$  erased and replaced with *-re-wa*  $\mathfrak{Y}\mathfrak{M}$  (fig. 10).<sup>85</sup>

Note that all of these edits are in the direction of replacing a core spelling with an extra one, that is, in the direction of greater specificity (in the case of a single core sign being replaced with a doublet:  $a > a_2$ ,  $ro > ro_2$ )<sup>86</sup> or of greater economy of space (in the case of a sequence of two core signs being replaced with a complex sign: *pe-te*  $>$  *pte*,  $a\text{-}[u] > au$ ).<sup>87</sup> The



FIG. 10. KN So(1) 4429.b (detail):  $pe\text{-}[[te\text{-}rē]]$  ( $\mathfrak{D}\mathfrak{H}\mathfrak{Y}$ )  $>$   $pte\text{-}re\text{-}wa$  ( $\mathfrak{M}\mathfrak{Y}\mathfrak{M}$ ). The first sign has been altered from *pe* to *pte* without erasure, and the second and third erased (drawing by author, after CoMIK).

frequently cited example of an edit in the opposite direction,  $[[two]] > tu\text{-}wo$  on PY An 261.1, is based on an extremely dubious reading; I do not regard it as a probable example.<sup>88</sup> In most cases, however, the patterns of use of each of these possible spellings at individual Mycenaean sites show that these edits are, nonetheless, not corrections of mistakes but expressions of scribes’ individual or collective spelling preferences.<sup>89</sup> For instance, although the use of *pte* for /pte/ appears to be preferred fairly strongly at Knossos, where there are 24–27 examples of this extra sign compared to only two identifiable instances of *pe-te* representing /pte/,<sup>90</sup> the latter clearly still remains an acceptable option. It is noteworthy that one of the examples of *pe-te* = /pte/ is in the same word, /ptelewās/, the spelling of which H130 altered from *pe-te* to *pte* on KN So(1) 4429.b (example 5 above). There is, even more clearly, no particular preference at Pylos for the use of  $ro_2$  vs. *ro* (and also *ri-jo*) to represent /RRo/:<sup>91</sup> the spelling

<sup>84</sup> On this topic in general and the following examples, see Perpillou 1977, 237–45; see also Palaima 2011, 68–70 (on example 2); Varias García 1993, 456 (on example 3).

<sup>85</sup> As H130 consistently used *pte*- in all other examples of this term (So(1) 4437, 4440.b, 4448, 4449), Perpillou (1977, 242) suggests that the altered So(1) 4429 may have been the first tablet in this series to be written.

<sup>86</sup> Since  $ro_2$  is replacing a core sign in the example given above, it is functioning there as a doublet; in other circumstances, it functions as a complex sign replacing the sequence *ri-jo* (see Duhoux 2008, 246–47; infra n. 91).

<sup>87</sup> Further reasonably plausible examples of these types of edit include  $si\text{-}ja\text{-}[[pu]] > si\text{-}ja\text{-}pu_2\text{-}ro$  (KN As(2) 1516.11, H101: man’s name);  $]-[[tā]] > ]\text{-}ta_2\text{-}mō$  (KN X 9338.1);  $[[ma\text{-}ra]] > ma\text{-}ra_3\text{-}wa$  (PY Eb 866.B, H41: /Marraiwā/?, woman’s name);  $di\text{-}[[pe]] > di\text{-}pte\text{-}ra\text{-}po\text{-}ro$  (PY Un 219.6, H15: /dip<sup>h</sup>therap<sup>h</sup>orōi/ or /dip<sup>h</sup>therapōlōi/, “hide-carrier” or “hide-seller,” dative, if this is not part of the original text before the tablet’s reuse as a palimpsest);  $e\text{-}[[ri]] > e\text{-}ro_2\text{-}qo$  (PY Ea 29, H43: man’s name). Other examples discussed by Perpillou (1977, 238–42) are not included, as the erased signs are either very uncertainly identified or not included in the corpora at all (cf. infra n. 88). See also de Fidio 1981, 14–19.

<sup>88</sup> PY An 261.1 reads  $]we\ ke\text{-}ke\text{-}tu\text{-}wo\text{-}e$  or  $]we\text{-}ke\ ke\text{-}tu\text{-}wo\text{-}e$ , with the first *ke* (now generally interpreted as belonging to the first word: Bennett et al. 2013; Olivier and Del Frio 2020) written by H43 and the remainder of the line written by H1 (who also wrote v.4–9; otherwise the rest of the tablet is by H43). This has often been explained as H1 correcting H43’s idiosyncratic use of *two* instead of *tu-wo* (*two* otherwise appears only in the man’s name *o-two-we-o* /Or<sup>h</sup>wōwehos/, genitive, on lines .2–.5 of this tablet): see, e.g., Lejeune 1971, 336–37; Perpillou 1977, 242–44; Maurice 1985, 42; Consani 2003, 56. However, the reading of  $[[two]]$  is highly doubtful; although it has been referred to as a reading by Bennett (Lejeune 1971, 336–37), the presence of an erasure on this line is only mentioned once by Bennett (1955) without identifying any of the erased signs.

<sup>89</sup> Cf. the statement that all of these are “choix faits entre des options a priori également légitimes” (choices made between options that are a priori equally legitimate; Perpillou 1977, 237). On this kind of spelling variation in general, see Duhoux 1986; Panayotou 1987, 1992; Judson 2019.

<sup>90</sup> *pe-te-re-wa* /ptelewās/ “(made) of elm,” KN So 894.1; *tu-ru-pe-te*[-*ri-ja* /struptēria/ “alum,” KN X 986 (cf. *tu-ru-pte-ri-ja*, PY An 35.5, Un 443.1; TIX 6.b).

<sup>91</sup> R = /r/ or /l/, which are not graphically distinguished by

used frequently alternates even within the work of a single scribe.<sup>92</sup> Similarly, it is difficult to say whether the change of  $[[a]] > a_2$  (which is an extremely rare sign at Knossos, perhaps due to the Greek loss of /h/ being underway or already complete at this site)<sup>93</sup> is a conservative hypercorrection to a spelling representing an earlier pronunciation<sup>94</sup> or a selection between two options that were both still current. Either way, the use of *a* in example 1 above is very unlikely to have been incorrect.<sup>95</sup> Only in the case of  $[[a]] > au-$  can we perhaps speak of a correction, since the spelling *a-u-* for /au-/, which is possible in principle (based on the regular spelling of /eu-/ and /ou-/ as *e-u-* and *o-u-*),<sup>96</sup> appears to be at least strongly disfavored if not actually incorrect, with no certain examples of this in the entire Linear B corpus.<sup>97</sup>

the Linear B writing system. Many, although not all, instances of /RRo/ in Mycenaean originate from \*/Ryo/, which underwent a sound change to produce a geminate liquid, hence the use of both *ri-jo* (which would have originally represented /Ryo/) and *ro* for this sequence (geminate consonants are not standardly distinguished in Linear B). See, e.g., Lejeune 1997, 211–12; Jiménez Delgado 2011.

<sup>92</sup> The scribes with the largest number of attested tablets (H1, H2, H21, H41, and H43) have all probably used at least two if not three of these spellings. For instance, H1 has *ko-tu-ro<sub>2</sub>* /Kotullōn/? (PY Cn 436.6), *o-pe-ro-sa* /op<sup>h</sup>ellonsa/ (PY Ep 704.7: “owing,” feminine nominative singular participle), and *de-u-ka-ri-jo* /Deukaliōn/? (PY An 654.12: man’s name). For further discussion of similar types of orthographic variation, see Judson 2019.

<sup>93</sup> Meißner 2008, 513.

<sup>94</sup> Driessen 2000, 178.

<sup>95</sup> There are possible examples of *a* representing /ha/ in the Room of the Chariot Tablets, the relatively early deposit from which KN V(1) 118 comes, e.g., *e-qe-a-o* /hek<sup>w</sup>ehāhōn/ (KN V 56.b, H124: feminine genitive plural noun, probably related to the title *e-qe-ta* /hek<sup>w</sup>etai/ “Followers”); *we-we-e-a* /werweheha/ (KN L 178, H124-X: “woolen,” neuter nominative/accusative plural); however, it is evidently not possible to be sure if /h/ was in fact present in any of these terms at this point.

<sup>96</sup> E.g., *e-u-ke-to-qe* /euk<sup>h</sup>etoi-k<sup>w</sup>e/ “and she claims” (PY Eb 297.1, Ep 704.5); *o-u-wo-ze* = /ou-wordzei/, “she is not working” (PY Ep 704.7).

<sup>97</sup> Note that this applies to word-initial position only, since medially a diphthong would normally follow a consonant and therefore be represented as *CV-u*. The only examples of word-initial *a-u-* are *a-u-ta-na* (KN Np(1) 286, H124-E [formerly classified Xd 7649: see Melena and Firth 2019]), which may represent /ahu/, although the term is obscure, and *a-u-qe* (KN Sd 4402.a, H128), which from its context is clearly an error for *o-u-qe* /ou-k<sup>w</sup>e/ “and not” (Lejeune 1972, 185).

The changes of  $[[ro]] > ro_2$  and *pe-[[te-]] > pte*, and probably also  $[[a]] > a_2$ , appear, therefore, to reflect the orthographic preferences of the individual scribes involved, comparable to the different spelling choices made by H1 and H41 in the PY E-series.<sup>98</sup> It is, however, difficult to establish whether these scribes consistently preferred the spellings *ro<sub>2</sub>*, *pte*, and *a<sub>2</sub>*, or whether these edits represent one-off choices about the spelling of these particular terms on these particular texts. None of these scribes (Pylos H2; Knossos H130 and S124-4) have any certain example of the core spellings they have erased in these cases (*ro* = /RRo/, *pe-te* = /pte/, or *a* = /ha/, respectively), suggesting that they may have consistently preferred to write these sequences with the extra signs *ro<sub>2</sub>*, *pte*, and *a<sub>2</sub>*, but the level of significance which can be ascribed to these absences varies depending on the number of the texts attributed to these scribes (the lack of certain examples of *ro* = /RRo/ in H2, with about 80 tablets, is more likely to be significant than the lack of examples of *a* = /ha/ in the stylus group S142-4, with only six attributed tablets). Given the low numbers of tablets attributed to some of these hands, and the level of spelling variation seen in other hands,<sup>99</sup> the absence of such spellings could merely reflect chances of attestation (or our inability to identify examples of these sequences spelled with the core spelling). It remains equally possible, therefore, that these edits simply represent isolated decisions. Either way, a significant proportion of the attested examples of this type of orthographic edit are not corrections of mistakes but expressions of personal preferences on the part of individual scribes that, whether or not they are found in all of the texts produced by that scribe, were at least strong enough to merit an alteration of the original spelling in these particular cases. Even where the Linear B writing system allowed for orthographic variation, then, scribes took care over their selection of what they felt to be the most appropriate spelling in a given situation. Changes from core signs to the more specific extra signs could again show a concern for future readers’ ease in identifying the word in question.

<sup>98</sup> E.g., *e-i-pa-sa-na-ti*, or (an example involving a choice between core and extra spellings) the obscure man’s name *ta-ra<sub>2</sub>-to/ta-ra-to*, which is consistently spelled with *-ra<sub>2</sub>-* by H1 (En 74.15, 659.6.10.13), while H41 uses both spellings (*ra<sub>2</sub>*: Eo 351.2, 444.5, 471.2; *ra*: Eo 247.6). On this and other instances of spelling variation in the E-series, see de Fidio 1981, 14–19.

<sup>99</sup> Supra n. 92.

### Graphic Edits

It is often apparent that scribes have taken particular care over the forms of individual signs, especially in tablet headings, where signs are frequently larger and more elaborate.<sup>100</sup> In at least a few cases, this care can be seen to have extended to editing small details of a sign's graphic form. This type of edit is very difficult to identify, since it generally involves the final form of the sign being written directly over the original form, which obscures the fine details of the original (although a scribe could write a sign and then decide to alter its form by the addition of further strokes with no erasure involved, such a situation is effectively impossible to detect). In identifying possible graphic edits, I have considered examples where only one or two signs have been erased and the same sign or signs written (more or less) over them. Not all such examples, however, are necessarily graphic edits. For instance, the two edits on PY Un 6 r.3–.4 (H6) of  $\llbracket\text{OVIS}^f\rrbracket > \text{OVIS}^f$  (“SHEEP (FEMALE)”) show no obvious changes to the forms of the ideograms but are a clear alteration of the layout; these two ideographic entries have been moved farther to the right, leaving more space between them and the preceding entries. This edit is therefore better classed as a change of format than a change of sign-form.

In other cases, although no other obvious motivation for the edit can be seen, the reading of the original sign is too uncertain or too little is visible of its original form to identify the change as certainly being a graphic edit. For instance, if the readings of  $ta-\llbracket r a_2 \rrbracket > ta-ra_2-to$  (PY Eo 351.2, H41: man's name)<sup>101</sup> and  $wa-ke-i-\llbracket j \varrho \rrbracket > wa-ke-i-jo$  (KN Vc(1) 191, H124-S: man's name) are correct, these would both seem most likely to be graphic edits relating to the forms of the original  $\llbracket r a_2 \rrbracket$  and  $\llbracket j \varrho \rrbracket$ ; however, these readings are uncertain, and the visible traces are insufficient to establish whether the original forms of these signs, if correctly identified, differed significantly from the final versions.

Only a very small number of probable graphic edits can, therefore, be identified:

- (1)  $\llbracket\text{TUN}\rrbracket > \text{TUN}$  “CORSELET” (KN Sc(3) 252, H124-I; fig. 11): a slight difference in form be-

<sup>100</sup> On the “aesthetic sense” implied by such elaborate renditions of signs, see Nakassis 2018, 53–54.

<sup>101</sup> For this reading, see Bennett and Olivier 1973–1976; no reading is given for this erasure in Olivier and Del Frio 2020.

tween the erased and final version is visible (the original version, at left, had narrower and taller shoulder-pieces).<sup>102</sup>

- (2)  $te-qa-jo / \text{T}^{\text{h}}\text{ēg}^{\text{w}}\text{aiōi}/$ , man's name in the dative formed from the toponym Thebes (TH Wu 47.β, γ??; fig. 12):<sup>103</sup> the right-hand loop of the  $-qa-$  ( $\text{ϕ}$ ) has been redrawn higher up than the original version.<sup>104</sup> The editors of this text comment that this change “vise davantage à la beauté du graphisme qu'à la lisibilité” (aims more at the beauty of the writing than at its legibility).<sup>105</sup>
- (3)  $a-\llbracket k \varrho \rrbracket > a-ko-to$  (KN Sc(2) 7610, H124-G?: /Aktōr/, man's name):<sup>106</sup> traces compatible with the head of  $ko$  ( $\text{ϕ}$ ) are visible above the final version of this sign, and it seems plausible that this represents a “first attempt” at this sign<sup>107</sup> with a smaller head positioned higher up than the final version. It is not clear whether this first attempt was actually erased or merely written over.

<sup>102</sup> Vandenaabeele and Olivier 1979, 36, suggest that the differences seen in the top part of TUN throughout this series reflect real differences between various types of armor, so that figure 11 (KN Sc(3) 252) would be an edit of the tablet's content, not (merely) of the sign's form. Other archaeological discussions of Mycenaean armor, however, do not view these relatively slight differences as significant (unlike the difference between the Knossian and Pylian armor ideograms, TUN  $\text{ϕ}$  and ARM  $\text{ϕ}$ : see, e.g., Snodgrass 1965, 99–105; Molloy 2012, 288), and they appear to be at least partially correlated with scribal hand (Driessen 1988, 150; 2000, 64–65; Firth and Melena 2016, 347). I therefore regard it as most plausible that TUN simply represented a generic corselet with variation in its form being purely a paleographic feature. Other instances in which TUN may have been erased and rewritten, and which therefore might similarly be graphic edits, include Sc(3) 226 and 254 (H124-I) and Sc 5070 (H124-F). The possible reasons behind the relatively high frequency of erasures in this series (on which, see Chadwick 1968, 19–20; Driessen 2000, 59) are beyond the scope of this article.

<sup>103</sup> Although their short texts do not allow the Theban sealings to be securely attributed to scribal hands, they have been divided into groups showing paleographic similarities, designated by the Greek letters  $\alpha$ – $\kappa$  (Piteros et al. 1990, 146; Aravantinos et al. 2005).

<sup>104</sup> Piteros et al. 1990, 117; Melena and Olivier 1991. This is not mentioned by Aravantinos et al. 2005, but a trace compatible with an erased right-hand loop (as shown in fig. 12 herein) can be seen in the photographs in Piteros et al. 1990, 117 and Aravantinos et al. 2002.

<sup>105</sup> Piteros et al. 1990, 136.

<sup>106</sup> Formerly Xd; reclassified by Melena and Firth 2019.

<sup>107</sup> As this is termed by CoMIK; Melena and Firth 2019.

Given the difficulties inherent in attempting to identify such edits, the existence of even this small number of identifiable examples demonstrates that the Mycenaean scribes were sufficiently concerned with the forms of individual signs that they would on occasion erase and rewrite them in order to produce what they perceived to be a better sign-form; it seems probable that more edits of this type exist than can be discerned, at least without a systematic autopsy of possible examples. In none of these examples did the original form of the sign pose any difficulty of identification to a reader; like the use of elaborate forms in headings or the formatting edits aimed purely at a neater appearance, the decisions to make these graphic edits seem, therefore, to have been purely aesthetic ones.

### CONCLUSIONS

The systematic analysis that I have presented, of the edits carried out by the Mycenaean scribes on both their own and others' administrative texts, has shown that these are underpinned by a wide variety of motivations. Updates to the information that tablets contained provide evidence for these texts' status as living administrative documents, particularly in cases where the changes may well have happened a significant length of time after the texts were originally written.<sup>108</sup> The transferal of information from one document to another, whether by the original writer or another scribe, similarly provides evidence for ongoing interactions with the Linear B records, which often also included editorial work in updating or restructuring the information in question. The care taken in many cases over the text's visual clarity and structure, or over the spelling of individual words, shows a concern on the part of the writers for their records' readability and ease of consultation in the future. All of this evidence for such concerns is a reminder that although the scribes' writing of texts is the only part of the administrative recording process for which we have direct evidence, reading and interacting with their own and others' texts will also have formed an equally important part of their work.

Moreover, scribes can also be seen to have edited their work for more than purely practical reasons: some presentation-related edits go beyond a consid-



FIG. 11. KN Sc(3) 252 (detail): [[TUN]] > TUN "CORSELET" (𐀓) (drawing by author, after CoMIK).



FIG. 12. TH Wu 47.β (detail): *qa* (𐀑). The original right-hand loop has been erased and rewritten higher up (drawing by author, after Piteros et al. 1990, 117).

eration of future readers to show a concern for the appearance of signs or entire tablets for their own sake, as seen, for instance, in examples of neatened ruling that do not significantly affect the text's layout, and in small changes to the forms of individual signs. Other edits reveal the preferences of individual writers for particular spellings or syntax in contexts where multiple options are equally valid. The identification of these kinds of edits suggests that similar concerns and preferences were widely present as the Mycenaean scribes created their texts. In approaching the Linear B documents, we should therefore bear in mind that, although systemic factors such as an administrative need for accurate information or clear legibility are likely to be easier to reconstruct than more personal, idiosyncratic preferences, the latter will nonetheless have played an equally crucial role in the scribes' creation of their texts.

This analysis of scribal choices and priorities goes beyond providing insight into the creation process of individual texts to demonstrate that, whether or not longer-term records in other media existed, the clay tablets were not merely preliminary documents.<sup>109</sup> The care taken by the scribes not only over keeping their texts' contents accurate and up-to-date but also over ensuring a clear and reader-friendly text structure and layout demonstrates that in the context of a yearly administrative cycle, the lifespan of the tablets as active administrative records was long enough to necessitate

<sup>108</sup> As also pointed out by Pape et al. (2014, 182–83), based on their experimental study and a case study of the KN DI-series as tablets which are likely to have been updated over time.

<sup>109</sup> Pape et al. (2014, 183) argue that similar considerations to those presented here imply the lack of any such longer-term documents.

a significant degree of effort and thought going into their creation: hence the Mycenaean scribes' frequent actions as editors, as well as writers, of their Linear B documents.

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