

# Secondary Criteria for Identifying Scribal Hands: Interdisciplinary Considerations

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# Secondary Criteria for Identifying Scribal Hands: Interdisciplinary Considerations

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I. J. GELB in discussing the formal investigation of writing distinguishes between palæographer and epigrapher in terms of tools and materials: “The epigrapher is interested chiefly in inscriptions incised with a sharp tool on hard material, such as stone, wood, metal, clay, etc., while the palæographer studies mainly manuscripts on skin, papyrus, or paper, written in drawn or painted characters.”<sup>1</sup> Gelb’s distinction suggests that, although palæographer and epigrapher may be interested in writing for the same reasons and therefore may ask the same questions, each must use different methods of research specifically adapted to the materials that he is studying in order to reach valid answers to those common questions. Accepting this need for adaptation, the approaches used by palæographer and epigrapher may still be very similar; and one can profit from an understanding of the other’s investigative techniques and procedures.

In this paper I shall address a problem common to students of writing on all media, the attribution of anonymously written documents to individual scribes. I shall deal in particular with the criteria that have been developed to identify the scribal hands of clay tablets written in the Linear B script. My own research has focused upon the 1112 tablets from the site of Pylos and has had the advantage of being preceded by similar studies of Linear B inscriptions from four other sites.<sup>2</sup> Still, I discovered a need to explain and to standardize methods for research of this type, and I am convinced that an explanation of the procedures used in this research will be of interest to scholars working with other kinds of texts.<sup>3</sup>

For example, E. G. Turner has stressed the importance of scribal identification to the papyrologist and, more generally, the palæographer in the context of separating scholarly texts from school texts and the work of one scholar from that of another.<sup>4</sup> Gelb has indicated that the study of scribal schools and individual styles in cuneiform and Hittite hieroglyphic inscriptions should be “a fertile subject for future investigation” (p. 230). S. Dow, who gave the first significant impetus to the identification

of individual masons on Greek stone inscriptions, has pointed out the considerable benefits, both historical and strictly epigraphical, to be derived from such work.<sup>5</sup> S. V. Tracy's detailed study of the corpus of extant inscriptions attributable to a single Athenian stonecutter of the late second-early first century B.C. has proved Dow's point.<sup>6</sup> Otherwise, the identification of hands has been important in the study of materials and subjects as diverse as Athenian ostraka of the early fifth century B.C. and magical inscriptions on lead and talc from Cyprus (second century A.D.).<sup>7</sup>

In regard to Mycenæan clay accounting records, the attribution of texts to scribal hands forms the basis for further study of scribal organization at a given site. From the ascription of texts to hands, one knows the subjects and archival types of documents with which each scribe worked. If the location of tablets is known, one can study their groupings. This in turn leads to the identification of departments within the given architectural unit. The function of each department can then be ascertained by studying the kinds of texts it contains, the scribes who wrote the texts, the physical remains found in association with the texts, and the relationship of the department to other departments. One then knows not only what texts individual scribes wrote, but also where they worked and how they interacted.

The preceding examples illustrate the significant results gained by identifying the distinct hands responsible for writing anonymous documents, regardless of the materials used. Each scholar, of course, takes the actual style of writing, *i.e.*, the way that individual characters are formed upon the writing surface, as his fundamental criterion for the identification of hands.<sup>8</sup> But the same scholars have been careful to emphasize the subjectivity of this criterion and the consequent need not only to explain evidence of this type with thorough care, but also to consider what may be called secondary criteria.<sup>9</sup> Secondary criteria should have special relevance for scholars working with different writing materials. For, whereas the type of material significantly affects the way signs are written, secondary factors may be entirely free from such influence.

Still, I shall begin my treatment of the methods used for the study of Mycenæan documents with an example of interdisciplinary relevance that refers directly to materials and tools. In working with the clay tablets, I had considered myself fortunate because the incision of the stylus into the moist clay preserved such significant details as the order of crossing strokes, the angle at which the stylus was held, the depth of the incision, and, allowing for variation in the consistency of the clay at the time

of incision, the actual width of the stylus. The last three details often helped to confirm identifications made on other grounds.

However, I have since learned that H. T. Wade-Gery was able to isolate the work of a single mason on four stone inscriptions from the fifth century B.C. on the basis of the blade lengths of the chisels used to inscribe the stones.<sup>10</sup> But Tracy has pointed out that extenuating factors such as the replacement of worn-out tools and even sharing of the same tools by different masons make it hazardous to use this as the sole or even as a major criterion for identifying the work of a single mason.<sup>11</sup> Evidence derived from the writing instrument must be considered a secondary criterion. The epigraphical lesson applied to clay tablets confirms my decision to use measurements of the angle, width, and depth of the stylus's incision only as secondary evidence. Reed, bone, or wooden styluses might have been borrowed, misplaced, dulled, or broken even more readily than metal chisels.

As I have mentioned, one can identify the writing styles of different scribes by the significantly different forms of signs that they use. The difference can be (see Figure 1): a.) in the conception of a sign; b.) in the order of component strokes; c.) in the number of elements; d.) in the position of elements relative to one another; e.) in the shapes of the elements. Yet there are secondary factors that will cause a scribe to depart occasionally from his normal way of writing a sign.<sup>12</sup> The order in which strokes are written may be changed because of a scribe's desire to clarify the elements of a sign or simply as a momentary aberration in writing style that cannot be explained.<sup>13</sup> Other minor variations in the forms of signs within a single hand may occur. The causes of such variations on clay tablets should have a general relevance.

Scribes can be experienced or inexperienced. At any moment they may be fresh and alert or fatigued and distracted. They may be working slowly or hurriedly and with familiar or unfamiliar subjects. All these factors can affect the way a scribe writes at different times. Less subjective, more strictly epigraphical conditions that influence the way a scribe writes his signs can be noted. The forms of a sign may vary within a single hand in the following circumstances (see Figure 2):

a.) When the size of the sign varies. This is very obvious in the Ma series (Hand 2) where *wi* occurs in an elaborate shape when written large (1.7–1.8 cm.) in word-units, but in a simpler version when written smaller (0.7–0.8 cm.) as a ligature to ideogram \*152.

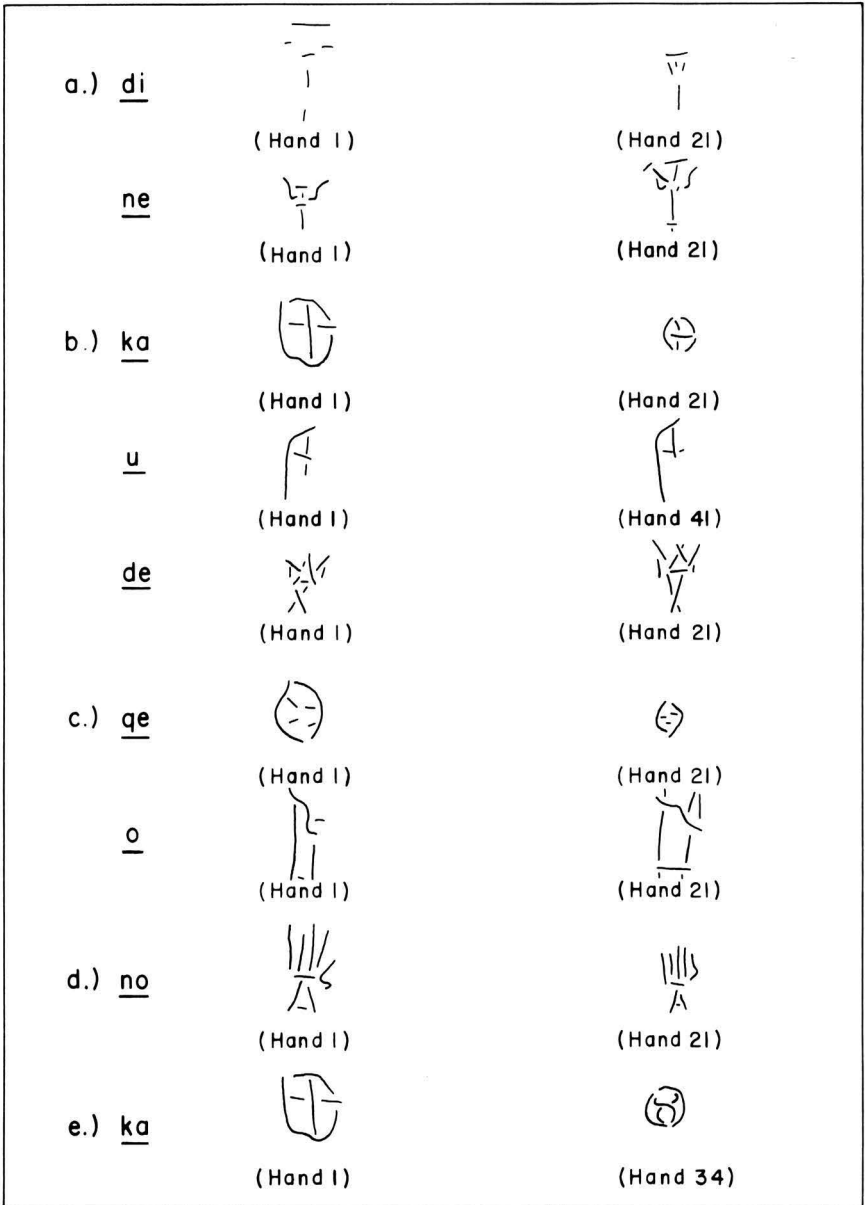


FIGURE 1. Examples of Significant Sign Variations.

a.) <u>wi</u>	(Ma 335.1)	(Ma 221.2)	e.) <u>o</u>	(Ad 390)	(Ad 315)
b.) <u>o</u>	(Ea 780)	(Ea 776)	<u>AES,M</u>	(Jn 693)	(Jn 693)
<u>qo</u>	(Ea 781)	(Ea 802.a)	(Jn 658)	(Jn 658)	
<u>ru</u>	(Ea 782)	(Ea 801)	f.) <u>ki</u>	(Ta 711.2)	(Ma 221.1)
c.) <u>ma</u>	(Ta 642.3)	(Ta 715.1)	<u>ro</u>	(Aa 76)	<u>TA</u>
d.) <u>mi</u>	(Eb 416.1)	(Eb 464.1)	(Aa 76)	(Aa 76)	
<u>e</u>	(Eb 842.2)	(Eb 1186.A)			
<u>mo</u>	(Eb 1186)	(Eb 846)			

FIGURE 2. Examples of Insignificant Sign Variations.

b.) When the sign occurs in words of different importance. In the Ea series (Hand 43) the shapes of several signs are more elaborate when the signs occur in initial position in the anthroponyms that head these records of landholdings.

c.) When rule-lines are alternately present and absent. This affects chiefly signs with horizontal base strokes like *ma*.

d.) When the repetition of strokes or their presence is not vital for the recognition of a sign. In the Eb series (Hand 41) *mi* occurs with and without internal strokes; *e* with one or two horizontal strokes; *mo* with and without cross-strokes in the upper left element. Also, complex and unmistakable ideograms often have slight differences that imply neither a difference in scribal hand nor a difference in meaning.

e.) When frequent use of a sign, usually in formulaic contexts, leads to simplification or degeneration of its form. The sign *o* occurs forty-six times on the forty tablets of the Ad series (Hand 23) chiefly because the short formula of this series requires the use of the genitive plural of feminine nouns. The scribe consequently uses a simplified version of the sign on all but two tablets (Ad 315, 380). In the Jn series texts by two different scribes (Jn 693 [Hand 2] and Jn 658 [Hand 21]) show a similar simplification of the frequently repeated ideograms AES and M.

f.) When a sign is consciously embellished because a scribe momentarily recollects the ideal form, or archetype, of the sign. In the Ta series Hand 2 writes *ki* in a shape that is more ornate than his characteristic shape. He seems to have been influenced by this sign's resemblance to a vase since the Ta tablets are inventories of vases. Bennett describes this process as follows: "If—a large if—the scribe is often conscious of the object a sign might originally have represented, he might at times find the stylized pattern he normally writes somehow lacking, and add a bit of realism from a fresh observation or recollection of the object."<sup>14</sup>

g.) When a sign is found in different positions on a tablet. In the set of Tablets Aa 60–98 the scribe (Hand 4) writes signs with straight vertical elements except at the extreme right of the tablets where these elements become curved. This is due to the change in position of hand and stylus.

Such secondary factors must be considered carefully in order to identify the writing style of a scribe correctly. This is especially true when

dealing with texts, such as the Linear B tablets, that are not intended to be permanent or public records. The scribes of public documents generally show greater concern for their appearance, and so writing upon them is usually neater, more uniform, and often elegant.<sup>15</sup>

Identification on the basis of writing style can be confirmed or made doubtful by other secondary criteria. The Linear B texts often fall neatly into groups by subject matter and relative archival importance. One must then be particularly careful to note those cases where a stray tablet that does not fit in with a scribe's normal work is ascribed to him for graphic reasons.<sup>16</sup>

Well-defined sets of tablets often share the same physical characteristics. The Mycenæan scribes of Pylos in fact seem to have made their own tablets. Some prefer long, narrow, tapering tablets; others wide, rectangular tablets. Edges may be flat, curved, or uneven. A few scribes from Pylos share with scribes from Thebes the distinctive technique of molding their tablets around a piece of straw or cord either to facilitate the manufacture of the tablets or to reinforce the final product.<sup>17</sup> The clay, too, usually has a uniform texture and composition within a defined set of tablets.

The secondary criterion of physical characteristics can be used in meaningful ways. Four scribes (Hands 1, 4, 21 and 23) work with different aspects of records involving servant women and their monthly rations. The tablets attributed to each scribe are clearly distinct in size, shape, and composition as well as subject. Yet a single tablet by Hand 23 (Ad 684) resembles so closely the tablets of Hand 4 that it must have been borrowed. This establishes a close working relationship between the two scribes.

Again, two scribes with very similar writing styles (Hands 41 and 43) work with records of landholdings. Hand 43 works with preliminary tablets (Ea series) that contain simple formulae and numerous spelling mistakes. By contrast Hand 41 works with more complicated and coherent records (Eb and Eo series) and has very accomplished writing skills. There is a clay label (Wa 784) found with the Ea documents of Hand 43 that by writing style could be assigned to either Hand 41 or Hand 43. However, the fine clay of the label matches that of the tablets of Hand 41 and is very distinct from the granular clay with white inclusions of which the Ea tablets of Hand 43 are made. Since the labeling of tablets at Pylos is an indication of higher administrative responsibility, the secondary criterion of physical characteristics here leads to the conclusion that Hand

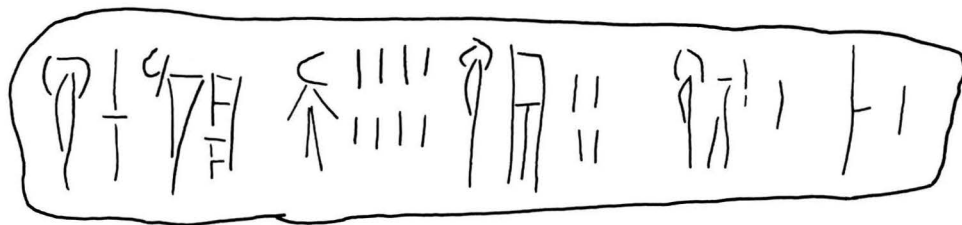


41, the more important scribe, used the clay of his own tablets to make a label for the preliminary set of Hand 43.

Yet another secondary criterion is what I call format. Scribes often have distinctive ways of placing information upon tablets. In the Linear B inscriptions varying factors include rule-lines, spacing, size of signs, the presence or absence of punctuation, the arrangement of entries, and occasionally how a tablet is turned from front to back. These factors are especially significant, and obvious, when scribes work with related subject matter. One example will suffice (see Figure 3). Aa 354 written by Hand 1 and Ab 372 written by Hand 21 record different categories of information concerned with the same group of women. Hand 1 writes the sequence: ko-ro-ki-ja WOMEN 8 ko-wa 4, in evenly spaced characters of the same size. Hand 21, however, affixes an additional place-name (pu-ro) in taller characters at the beginning of his text. Then, with considerable spacing and variation of the height of signs, he lists information parallel to that on Aa 354: ko-ro-ki-ja WOMEN 9 ko-wa 2. The variation in height may have a semantic significance that Hand 1 considered unnecessary to stress.

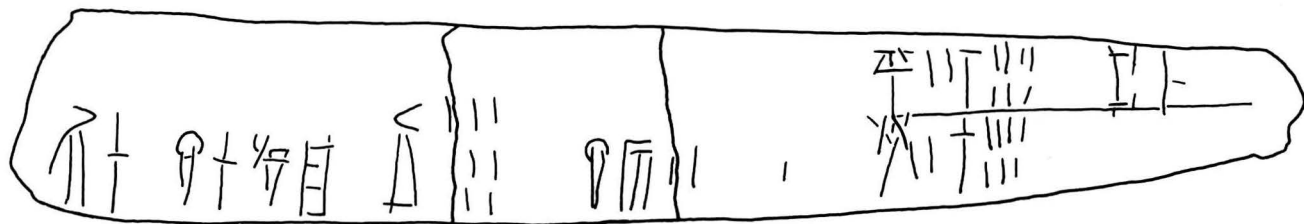
A final secondary criterion that can be widely applied is variations in spelling and formulae. The meaning or cause of such variations must be carefully studied. Mycenaean scribes received different kinds of training and worked with different subjects in different locations. This diversity is partly responsible for the different spellings and formulae that are found in texts written by different scribes. At Knossos, for example, where scribes trained and worked in independent units, there are many examples of spelling variations between scribes working in different units.<sup>18</sup> Training in separate graphic traditions seems to have produced distinct orthographical as well as stylistic peculiarities. Moreover, preliminary research suggests that even scribes trained in separate traditions might develop common idiosyncratic spellings from working with the same subjects in the same location.<sup>19</sup>

One must, however, treat the evidence furnished by spelling and formulae very cautiously. Spelling variations need not indicate a difference in training, location of work, or even scribal hand. Three scribes at Mycenae (Hands 57, 58a, 59) have many differences in spelling and formulae. But their writing styles, and in fact the writing styles of all the scribes at this site, are not distinct enough to be attributed to training in different traditions.<sup>20</sup> On the other hand a scribe at Thebes working with the same subject in a coherent set of tablets spells the same word differently on different tablets.<sup>21</sup>



(Hand 1)

Aa 354



(Hand 21)

Ab 372



FIGURE 3.

These examples illustrate the need for caution when using spelling and formulaic differences to check the identification of scribal hands. One must be sure that the “variants” in question are sufficiently controlled by context, *i.e.*, by occurrence in a fixed position, in a repeated formula, together with the same associated word-units, or in relation to the same subject. Moreover, one must realize that external factors can influence spelling and formulae. There are many apparent spelling variations that are plain misspellings. P. Ilievski has classified many such mistakes in the land documents at Pylos, where the tedium of repeating set phrases resulted in haplography, dittography, and more complicated spelling errors within single hands.<sup>22</sup> A second external factor is the source of the information that a scribe records on any given tablet. A scribe who is transcribing information from other tablets may occasionally “borrow” a spelling different from his own. He may also receive information aurally from different sources. Here dialect and pronunciation could affect spelling.<sup>23</sup> Third, many spelling variants in Linear B stem from the existence of alternate signs, called doublets and complexes, within the actual writing system.<sup>24</sup> The scribe from Thebes mentioned above used the alternate signs  $a_3$  and  $a$  in the same word on different tablets.<sup>25</sup> There are also cases where a scribe substitutes a rarer alternate sign for a simple sign after first writing and erasing the simple sign. This indicates a lack of orthodoxy in the spelling of words in which doublets and complexes could be used.<sup>26</sup> The ornate shapes of most of these alternate signs might also have affected the frequency of their use. In cuneiform documents scribes are known to have used signs with simple shapes in place of related signs with complicated shapes.<sup>27</sup>

These then are the more important secondary criteria that I have used to check the ascription of Linear B texts to an individual hand:

- a.) existence of epigraphical conditions that might produce graphic aberrations;
- b.) subject matter and relative documentary importance of the texts;
- c.) physical characteristics of tablets;
- d.) format used to record information;
- e.) variations in spelling and formulae.

If my discussion of these criteria has suggested any new approaches to students of other types of writing, the purpose of this paper has been served.

## NOTES

1. I. J. Gelb, *A Study of Writing*, 2nd ed. (Chicago: University of Chicago Press, 1963), p. 22. Abbreviations of journals will follow the guidelines of *American Journal of Archaeology*, 82 (1978), 5–10.
2. I thank the Fulbright Foundation and the Archaeological Institute of America for their generous support. I am indebted to the Greek Archaeological Service for permission to study the Linear B tablets. I thank Marsha Gallo for expert execution of drawings and figures. For the results of this work see Thomas G. Palaima, "The Scribes of Pylos," Diss. University of Wisconsin 1980. A thorough bibliography of epigraphical work on the tablets from all five sites is found on pp. 177–180.
3. Brief explanations of the methods used to distinguish scribal hands are found in: Emmett L. Bennett, ed., *The Mycenae Tablets*, Proceedings of the American Philosophical Society, No. 97:4 (Philadelphia: American Philosophical Society, 1953), pp. 440–441; Bennett, ed., *The Mycenae Tablets II*, Transactions of the American Philosophical Society, NS 48:1 (Philadelphia: American Philosophical Society, 1958), p. 90; Jean-Pierre Olivier, *Les Scribes de Cnossos: Essai de classement des archives d'un palais mycénien*, Incunabula Graeca, No. 17 (Rome: Edizioni dell' Ateneo, 1967), pp. 26–41.
4. Eric G. Turner, *Greek Papyri: An Introduction* (Oxford: Oxford University Press, 1968), pp. 88–96.
5. Sterling Dow, Introd., *The Lettering of an Athenian Mason*, by Stephen V. Tracy, *Hesperia Supplement*, No. 15 (Princeton: American School of Classical Studies, 1975), p. xxiii. Dow's seminal works in this area are: *Prytaneis: A Study of Inscriptions Honoring the Athenian Councillors*, *Hesperia Supplement*, No. 1 (Athens: American School of Classical Studies, 1937); and "The First Enneëteric Delian Pythais: IG II<sup>2</sup>2336," *HSCP*, 51 (1940), 111–124.
6. S. V. Tracy, *The Lettering of an Athenian Mason*, pp. 12–129.
7. Oscar Broneer studied the ostraka in "Excavations on the North Slope of the Acropolis," *Hesperia*, 7 (1938), 228–243. The magical inscriptions were treated by Pierre Aupert and David R. Jordan, "Magical Inscriptions on Talc Tablets from Amathous," Archaeological Institute of America Convention, New Orleans, 30 Dec. 1980, *Abstracts*, Vol. 5, p. 1.
8. Aupert-Jordan, p. 1; Broneer, p. 232; Dow, Introd., *Lettering*, pp. xviii–xix; Gelb, p. 230; Olivier, *Les Scribes*, p. 29; Tracy, pp. 3–4; Turner, p. 92.
9. For example, Dow, Introd., *Lettering*, pp. xix–xxi; Tracy, pp. 3–11; Turner, pp. 89 and 92.
10. H. T. Wade-Gery, "A Distinctive Attic Hand," *BSA*, 23 (1935), 122–135.
11. Tracy, p. 9, note 21, citing C. G. Higgins and W. K. Pritchett, "Engraving Techniques in Attic Epigraphy," *AJA*, 69 (1965), pp. 367–371. On this point see Michael Walbank, "Criteria for the Dating of Fifth-Century Attic Inscriptions," *Phoros: Tribute to Benjamin Dean Merriitt*, ed. D. W. Bradeen (Locust Valley: J. J. Augustin, 1974), pp. 168–169, note 21.
12. See Olivier, *Les Scribes*, pp. 29–32, for examples of differences in the order and number of strokes in signs within individual scribal hands at Knossos. See also Bennett, "Some Local Differences in the Linear B Script," *Hesperia*, 35 (1966), 300–301.

13. Reinforcement occurs when the initial attempt to write a sign seems unsatisfactory to the scribe. An example is discussed by Bennett, "Textual Note: PY An 607," *Minos*, 7 (1961), 7. Olivier, *Les Scribes*, p. 30, documents seemingly random differences in the order of crossing strokes in two signs within scribal hands at Knossos.
14. Bennett, *Hesperia*, 35 (1966), 301.
15. The Linear B tablets deal exclusively with records of workshops, storerooms, and administrative bureaus. A concise account of the general nature and function of these tablets is given by Emmett L. Bennett, "Anonymous Writers in Mycenæan Palaces," *Archaeology*, 13 (1960), 26–32. Tablets containing less important information are sometimes carelessly manufactured and inscribed. Public inscriptions offer a marked contrast in these respects. The script itself often becomes a decorative element, and mistakes in shapes and spellings are corrected or let stand with a view to the overall appearance of the finished product. See, for example, Antony E. Raubitschek, *Dedications from the Athenian Akropolis: A Catalogue of Inscriptions of the Sixth and Fifth Centuries B.C.*, ed. with the collaboration of Lilian H. Jeffery (Cambridge, Mass.: Archaeological Institute of America, 1949), pp. 452–453 *et passim*.
16. For example, Mb 1406 differs in find-spot, subject, format, and physical features from the rest of the many tablets assigned to Hand 43, Palaima, "Scribes," p. 123.
17. This technique is used consistently by Hand 41 (series Eb and Eo), Hand 26 (series Sa) and S 733 Cii (series Sh). It can be observed on tablets from Thebes, *e.g.* Ug 5 and Ug 17. I thank Mrs. Demakopoulou of the Thebes Museum for allowing me to inspect the tablets.
18. Olivier, *Les Scribes*, pp. 98–100, lists these variations. He discusses scribal specialization in pp. 131–136. Bennett notes that a single scribe's work has not yet been detected in two separate complexes at Mycenæ, *The Mycenæ Tablets III*, ed. John Chadwick, Transactions of the American Philosophical Society, NS 52:7 (Philadelphia: American Philosophical Society, 1962), p. 70. The same holds true at Thebes and Tiryns.
19. The linguistic evidence presented by Yves Duhoux, "The Teaching of Orthography in Mycenæan Pylos," 1st International Mycenæological Congress: Pre-Mycenæan and Mycenæan Pylos, Athens, 10 Dec. 1980, fits this interpretation.
20. The differences in formulae and spelling are discussed by Bennett in *The Mycenæ Tablets*, p. 98, and *The Mycenæ Tablets III*, pp. 69–70.
21.  $a_3$ -ki- $a_2$ -ri-ja (Of 25.1) and  $a$ -ki- $a_2$ -ri-ja (Of 35.2).
22. Petar Ilievski, "Non-Greek Inflexions or Scribal Errors in the Mycenæan Texts," *Živa Antika*, 15 (1965), 45–59.
23. See Godfrey R. Driver, *Semitic Writing from Pictograph to Alphabet*, ed. S. A. Hopkins (Oxford: Oxford University Press, 1976), pp. 69 and 237, for aural and ocular mistakes in cuneiform texts. Chadwick, "The Linear B Documents as Historical Evidence," *Colloquium Mycenæum: Actes du sixième colloque international sur les textes mycénien et égéens*, Chaumont, 7–13 Sept. 1975 (Geneva: Librairie Droz, 1979), p. 28, hypothesizes that an oral-aural process may have produced formulaic differences in the land documents (E-series) at Pylos.
24. See, for example, those listed by Alfred Heubeck, "Remarks on the Sign-Doublets  $ro_2$ ,  $ra_2$ ,  $ta_2$ ," *Colloquium Mycenæum*, pp. 256–257.

25. At Pylos Hand 21 has a parallel: *a-ne-u-te* vs. *a<sub>2</sub>-ne-u-te*.
26. Michel Lejeune, "Les Syllabogrammes B et leur translittération," *Minos*, 11 (1970), 77, cites three cases where scribes at different sites use *au* over an erased *a*. Jean-Louis Perpillou, "Repentirs des Scribes," *RPh*, 51 (1977), 237–248, treats this phenomenon in full.
27. Driver, *Semitic Writing*, p. 38.