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The Two Pens of the Scribe:
Egyptian Influence on Alphabetic Writing Culture
in the Iron Age Southern Levant

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Near Eastern Languages and Cultures

by

Brian Donnelly-Lewis

2023

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ABSTRACT OF THE DISSERTATION

The Two Pens of the Scribe:
Egyptian Influence on Alphabetic Writing Culture
in the Iron Age Southern Levant

by

Brian Donnelly-Lewis

Doctor of Philosophy in Near Eastern Languages and Cultures

University of California, Los Angeles, 2023

Professor William M. Schniedewind, Chair

This dissertation explores connections between early alphabetic writing culture and Egyptian writing practices in the southern Levant beginning at the end of the Late Bronze through the Iron Age (13th – 6th centuries). This exploration intends both to posit the direct inheritance of various aspects of alphabetic writing culture from Egyptian writing practice and to shed light on documentary and writing practices in the southern Levant from the much well understood, and better materially attested, corpus of Egyptian. The dissertation combines anthropological and sociolinguistic views of writing, viewing writing as both human technology and visual communicative media, as broad theoretical frameworks for the investigation of

writing as a “culture” and to provide some framework for beginning an investigating into its “origin” in the southern Levant.

As human technology, written objects are here viewed as emblematic of the choices of actors in deliberate engagement with the material world. As such, epigraphs are viewed as material culture and themselves pieces of writing as a technological system. Thus, evidence is not limited to the epigraphs for their linguistic content but expands to include linguistic evidence related to writing and the evidence of writing associated material culture that shed light of the activity of writers (weights, seals, etc.). Aspects of production and use of materials are integral to understanding written objects as material culture. As such, linguistic, technological, and material data are brought together to describe the material processes of bringing a text into being, with a focus on the ways in which particular materials both index and generate socially significant meaning in the community of writers.

As visual communicative media, written objects are here viewed as the creative products of writers who make distinct choices about the way in which a written object appears and how a text ultimately comes into being. As such, the letters on written objects become emblems of the techniques writers use, the postures they embody, and assumptions that they must make in constructing a written text. The method of drawing a letter (orthography; ductus), the final appearance of the letter (typography; allography), the use and integration of notation systems and associated symbols (numerical, metrological, and mathematical), the color and size of the letters (semiotics of typography), the direction of the letters, and the organizational plan of letters and written sigla (format and layout) are all valuable evidence for understanding writing culture as *indwelt* and shaped by writers themselves. These two aspects of writing culture undergird parts one (material) and two (practice) of the dissertation, respectively.

The dissertation argues that Egyptian influence can be shown in both regards. From the material basis for writing, which includes the distinct writing lexicon (pen, ink, and palette) to the meaning and organization of visual aspects of writing, the influence of Egyptian writing culture on the communities responsible for proliferating the early alphabet at the end of the 2nd and beginning of the 1st millennium was pervasive and original. Appreciating the depth and breadth of the influence of Egyptian writing practice on alphabetic writing communities in the southern Levant during Late Bronze and Iron ages encourages further inquiry into cross-cultural exchange between Egypt and the Levant at the level of literature and religion.

This dissertation of Brian Donnelly-Lewis is approved.

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Aaron A. Burke

Sarah P. Morris

Thomas Schneider

William M. Schniedewind, Committee Chair

University of California, Los Angeles

2023

To my readers and fellow writers

“Because one who does not know how to write thinks it no labour, I will describe it for you, if you want to know how great is the burden of writing: it mists the eyes, it curves the back, it breaks the belly and the ribs, it fills the kidneys with pain, and the body with all kinds of suffering. Therefore, turn the pages slowly, reader, and keep your fingers well away from the pages, for just as a hailstorm ruins the fecundity of the soil, so the sloppy reader destroys both the book and the writing.”

Florentius of Valerianica, *Moralia in Iob*

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Abbreviations

<i>BASOR</i>	<i>Bulletin of the American Schools of Overseas Research</i>
<i>HeBAI</i>	<i>Hebrew Bible and Ancient Israel</i>
<i>IEJ</i>	<i>Israel Exploration Journal</i>
<i>JA EI</i>	<i>Journal of Ancient Egyptian Interconnections</i>
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt</i>
<i>JBL</i>	<i>Journal of Biblical Literature</i>
<i>JEA</i>	<i>Journal of Egyptian Archaeology</i>
<i>JJAR</i>	<i>Jerusalem Journal of Archaeology</i>
<i>JNES</i>	<i>Journal of Near Eastern Studies</i>
<i>JSSEA</i>	<i>Journal of the Society for the Study of Egyptian Antiquities</i>
<i>NEA</i>	<i>Near Eastern Archaeology</i>
<i>PEQ</i>	<i>Palestinian Exploration Quarterly</i>
<i>TA</i>	<i>Tel Aviv</i>
<i>VT</i>	<i>Vetus Testamentum</i>
<i>ZÄW</i>	<i>Zeitschrift für Ägyptische Sprache und Altertumskunde</i>
<i>ZDPV</i>	<i>Zeitschrift des Deutschen Palästina-Vereins</i>

Biblical Abbreviations

Gen	Genesis	Eccl	Ecclesiastes
Exod	Exodus	Song	Song of Songs
Lev	Leviticus	Isa	Isaiah
Num	Numbers	Jer	Jeremiah
Deut	Deuteronomy	Lam	Lamentations
Josh	Joshua	Ezek	Ezekiel
Judg	Judges	Dan	Daniel
Ruth		Hos	Hosea
1 Sam	1 Samuel	Joel	
2 Sam	2 Samuel	Amos	
1 Kgs	1 Kings	Obad	Obadiah
2 Kgs	2 Kings	Jonah	
1 Chr	1 Chronicles	Mic	Micah
2 Chr	2 Chronicles	Nah	Nahum
Ezra		Hab	Habakkuk
Neh	Nehemiah	Zeph	Zephaniah
Esth	Esther	Hag	Haggai
Job		Zech	Zechariah
Ps (Pss)	Psalm(s)	Mal	Malachi
Prov	Proverbs		

Archaeological Abbreviations

T.	Tell ^{or} Tel
Kh.	Khirbet
H.	Horvat
O.	Ostrakon
P. (p-)	Papyrus

Linguistics Abbreviations

Akk.	Akkadian
Ar.	Arabic
Arm.	Aramaic
Gk.	Greek
Eg.	Egyptian
Heb.	Hebrew
Syr.	Syriac
Ug.	Ugaritic

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This dissertation was a long time coming, even when I did not know it. It spawned from conversations and thoughts drawn out over years, ultimately centering around two important classes – Northwest Semitic Inscriptions with my advisor William Schniedewind and an Iron I archaeology seminar with Aaron Burke. In searching for a paper to write for Northwest Semitic Inscriptions, Bill encouraged me to look at the Khirbet Qeiyafa Ostrakon – an enigmatic and undeciphered text. He graciously offered to contact Greg Bearman to inquire about unpublished images of the ostrakon that he might have. This led to an unprecedented opportunity to work closely with the early epigraphic material from Qeiyafa, which in turn spurred on my interest in, and truthfully knowledge of, early Iron age alphabetic texts. In the year that followed, as I considered questions surrounding the growth and development of the early alphabet that I might pursue in my dissertation, I was caught quite unexpectedly by a broad and challenging topic – the alphabetic inscriptions and their relationship to Egyptian imperialism in the Late Bronze age. Conversations in the Iron I archaeology class with Aaron and some of his, then forthcoming, work prompted me to ponder the question of the Egyptian influence on those early writers who would ultimately carry forth traditions later taken in and adopted in the kingdoms of Israel and Judah. This prompted a seminar paper that, in some broad ways, was a germ of the present work.

This work, however, has grown considerably from its earliest days, and it has benefited greatly from a number of people whose intellectual capacity is only exceeded by their generosity in carefully commenting on this work and shaping it into what you see before you. Thus, as of first importance, I thank all of the members of my committee.

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In all my time at UCLA, I have had the distinct privilege to work in a truly collegial environment. My cohort at UCLA, both in Hebrew Bible and Archaeology, as well as the faculty of the department have given to me more than I could possibly return. I especially thank David Brown for conversations of mutual interest on topics related to our dissertations, lunches that brought a welcome break from study, and ultimately keeping me sane through the end of my graduate career. Nadia Ben-Marzouk contributed heavily to my thinking about technology, social practice, and the intersection of craft with identity in the ancient world and how this may impact writing practice in the late 2nd and early 1st millennia. Jonathan Wimmerman always generously shared his time and expertise with me, especially at random times with strange questions about Egyptian literature, hieratic signs, and the vagaries of Egyptian grammar and writing.

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Outside of UCLA, this dissertation benefited from conversations with great friends. To my two best friends, Quinn and Robb, I share a special thanks. The gratitude that I have for both

of these men is immeasurable. To Quinn, I owe thanks for a wild and exceptional variety of intellect. Few people can move from challengingly intellectual to humorously absurd as defly, and with as much charisma, as him. To Robb, I likewise owe many thanks. He is a voracious reader, a generous and caring man, and a great friend. The variety of topics we can discuss is almost as extensive as the number of inside jokes we have developed over the years. Thanks to you both for many years of friendship and many more to come.

Likewise, the dissertation was greatly enriched by colleagues who I now hope to count as friends. In the past few years, discussing epigraphy with Stefan J. Wimmer, including our serendipitous meeting at the epigraph conference in Jerusalem, has been of great benefit. He is owed thanks for entertaining and engaging with my nascent theories (and sometimes papers). I also thank Drew Longacre for discussing the problems of experimental epigraphy and the prospects for reconstructing ancient writing practices.

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לב אדם יחשב דרכו ויהנה יכין צעדו
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- 2019 “Conscious and Unconscious Aramaisms: Language Contact and Language Ideology in the Hebrew of Daniel” in *Sign, Speech, and Society in the Ancient Near East: 100 Years of Ancient Near Eastern Studies in Prague*, 16-19 September at Charles University (Prague, Czech Republic)
- 2020 “The Origin of the Hebrew *nitpa’al*: A Sociolinguistic Proposal” in the Linguistics and Biblical Hebrew Section, December 7th at the Society of Biblical Literature Virtual Annual Meeting
- 2021 “A New Collation and Translation of the Khirbet Qeiyafa Ostrakon Based on the Multispectral Images” in the Ugaritic Studies and Northwest Semitic Epigraphy Section, November 20-23 at the Society of Biblical Literature Annual Meeting (San Antonio, TX)
- 2021 The Azarba’al Spatula (KAI 3), A Debt Receipt from Ancient Byblos: Linguistic Notes for a New Translation and Interpretation. *Semitica* 63: 29-43.
- 2022 The Origin of the Hebrew *nitpa’al*: A Sociolinguistic Proposal. *Journal For Semitics*: 31.1:1-18.
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Introduction

Writing is a part of daily life. The way we work, the way we live, the way we communicate is governed by the tyranny of this one practice, writing. If we are not writing, we are reading what others wrote. If we are not reading, we are experiencing the panoply of letters that paint our textual world. Writing, and text, have become so ingrained in our culture and daily life that we almost do not notice it. Few would recognize it as being secondary to the human experience. In our literate world, writing is not viewed so much a culture as it is an aspect of our culture—and a particularly integral aspect at that. Yet even in our overtly textualized world, the process of writing is still, in itself, a way of doing things. While we might not recognize it, writing is not just a part of our culture; writing is a culture all on its own. Things like where we expect to see writing, how we expect it to look, what we expect about the character, style, format, and even color of writing either when we are producing it or observing it are all aspects of a ‘culture’ of writing to which we were all unconsciously encultured and now act as agents of its proliferation and evolution. To this extent, an investigation into the origins and development of writing as a culture, even in the west, would yield surprising and important results, as undoubtedly the facets and features of writing as a culture in the Americas in the not-so-distant past, and Europe before that, continue to influence and even guide our practices and perceptions to this day, though with vast and transformational changes in technology.

The same observations could be made of writing in ancient contexts as well. While in these contexts literary was far lower and writing significantly more restricted, ancient peoples engaged in writing, to some degree, and experienced writing, in some way, in their daily lives.

Those particular folks who were engaged in the deliberate and continual activity of writing in the ancient world were absorbed in, much as we are, an explicit writing culture, a way of doing things that, in many ways, was an unconscious inheritance. In the ancient world, it is not always easy to pinpoint the origin and development of writing as a culture, the where and when of the inherited practices and assumptions that guide the production of written texts. Further, in the case of the alphabetic writing culture of the southern Levant, this question has never been considered in detail. For this reason, the present study seeks to locate the origin of alphabetic writing culture, looking to Egyptian writing practice to explain a variety of features of writing in the southern Levant that often go unobserved or under-considered, features such as the tools of writing, the materials on which things are written, the aesthetic form of writing, its organization, direction, and coloration. All of these features, it will be argued, are in some ancestral way influenced by the culture of writing known from Egypt.

Before we begin our investigation, however, we must first gain some awareness of the work that has already been done, however little and peripheral to our thesis, the theoretical background for approaching writing as a culture, and finally the goals and scope of our study. We will begin by briefly considering the rationale for the study, a discussion of why the Egyptian orientation of writing in the southern Levant imposes itself as an avenue of inquiry and what others might have already contributed that lends credence and explicit support for the thesis. This discussion will then lead to a theoretical consideration of writing as a culture, and how we might leverage the data, linguistic, biblical, and epigraphs, to describe a writing ‘culture’ and even more direct us to its point of origin. It will be argued that we must understand writing in particular ways, as technology, as visual communicative media, and as a task done in common, in community, a culture. It should be briefly stated at the outset that in this dissertation,

with the theoretical framework in place, inscriptions from the southern Levant will only be occasionally considered for their grammatical or paleographic features, as important as these may be. Much rather, we will view inscriptions as material artifacts of writing practice—products of conscious agents who, working with the technology of writing, embedded their deliberate choices and learned assumptions about their work into the final product itself and passed down these certain ways of doing things to their students, and their students after them. This theoretical discussion will provide a rationale for the outline of the dissertation, which examines writing culture in three parts, material, practice, and society, over nine chapters.

0.1 Rationale for the Study: Egyptianizing Alphabetic Writing in the Levant

The Egyptian origin of the alphabet as a technology is well known. Whether the inventors themselves were Egyptians or semitic-speaking peoples is much debated; however, that the alphabet is a technology that (1) first appears in Egyptian contexts (in the Sinai) and (2) is graphically based on Egyptian hieroglyphs is, at this point, beyond doubt.¹ As such, investigating the relationship between Egyptian writing practice and alphabetic writing practice seems only natural. Yet, the earliest period of alphabetic writing present two problems as a starting point for the investigation.

¹ Beginning with Gardiner's recognition of the Hieroglyphic origin of the alphabet (1916), and in more recent years detailed discussions elucidated by Sass (1988), Hamilton (2009, 2015), and Goldwasser (2010, 2011, 2015, 2017). Recently, Glenn Schwartz has published a few small inscriptions from Umm el-Mara that he claims are alphabetic and from the Early Bronze Age, but his arguments are unconvincing on multiple levels (Schwartz 2021). Similarly, evidence of early alphabetic in the Levant, like the Megiddo ring or Gezer jars, are likewise dubious (see Sass 1988; *pace* Rollston 2020). The Gezer jars in particular resemble forms of potter's marks known from all around the Near East (cf. Haring 2018) while at times also resembling early alphabetic forms. From all images and drawings that I have seen, the Megiddo ring is a curiously difficult case, certain forms resemble alphabetic while others are difficult to assign any alphabetic value. Rollston, on the basis of his own examination of the ring, believes it to be alphabetic though never offers a reading (2020).

First and foremost, evidence for alphabetic writing hitherto discovered in Egypt comes from ‘non-institutional’ contexts. That is, all of the inscriptions discovered thus far are, what can be most properly classified as, *graffiti*—a genre category that does not lend itself to a study of writing as an intentional culture. While a study of graffiti, or found-language, might yield intriguing insights into how these texts operated socially and culturally, the features of these inscriptions cannot be recruited to describe any sort of ‘writing culture,’ and certainly not any writing culture that impacts the later writing communities of the Iron Age southern Levant.

Secondly, the so-called “Proto-Sinaitic” inscriptions, while incredibly important for the early history of the alphabet, are ephemeral. They inspire no immediate institutional adoption and, as has often been observed, the impact of the development of the alphabet in this early period is not felt in the Near East until much later.² To this extent, several publications have discussed the life of the alphabet between its short-lived appearance in Egypt and the Sinai until its ultimate adoption by the Iron Age polities in the Levant.³ Whatever the exact life of the alphabet in this period might have been, the alphabet, from an evidentiary standpoint, exists on the periphery until the Late Bronze–Iron Age transition in the final third of the second millennium. During this time period, then, is when we begin to see the sort of institutional adoption of the alphabet that enables us to properly investigate the specific relationship between Egyptian and Levantine writing culture.

² Here I assume the traditional date of the Middle Bronze age for the dating of the Proto-Sinaitic inscriptions, as opposed to Sass’s recent down dating (see Darnell et al. 2005; Goldwasser 2011, 2017; Naveh 1987; *pace* Sass 2004-2005).

³ Lemaire 2008 and Koller 2018.

Here we should make it abundantly clear that the interest of this study is not on the ‘Egyptian origin of the alphabet,’ but on the Egyptian origin of Levantine writing culture. That is to say, the origin we are tracking is not the alphabet itself but rather writing culture, the materials and practices that define the activity of writers in a given society. As such, we are concerned with the periods wherein we see the rise of institutional practices, beginning with the early alphabetic inscriptions of the Late Bronze Age-Iron Age transition into the Iron II. We will consider then the evidence of writing culture from this broad period and the connections that might profitably brought to the fore between Egyptian and Levantine writing culture. This includes, most prominently loanwords into Semitic (i.e., Hebrew) as well as the features of the early epigraphs that evidence practices known also in Egypt. Here we will highlight some of the evidence that we will resource from prior studies, noting especially how the evidence from these studies impel the present study.

First, we should consider the lexical data. It has been long recognized that the words for several writing materials and implements in the Hebrew Bible derive from Egyptian.⁴ Words like “ink,” “scribal palette,” and several words for “papyrus” and “reeds,” are Egyptian loanwords. This evidence alone is suggestive of an Egyptian origin for scribal practice.⁵ Thus, Zhakevich, in his study of scribal tools in the Hebrew Bible, concludes on the basis of these words that, “[Ancient] Israel’s writing technology, as a development of Canaanite writing practices, was essentially Egyptian in nature.”⁶ In one way, then, Zhakevich’s study provides important

⁴ For the various studies of Egyptian loanwords, including those that highlight the Egyptian impact on the Hebrew writing lexicon, see note 1 of chapter 1 below.

⁵ Zhakevich 2020; cf. Noonan 2019.

⁶ Zhakevich 2020: 176

background and rationale for the present investigation. His study is, however, conflictingly both much broader and much more limited than the present study. Zhakevich sets out not to investigate the Egyptian origin of writing culture in the Levant but to “present a lexicographical analysis of Biblical Hebrew terms related to Israel’s technology of writing, and to draw conclusions on the origin of ancient Israel’s writing practices.”⁷ In this way, Zhakevich’s study comes in contact with the present study but, in remaining a lexicographical exercise, does not investigate the archaeological, inscriptional, or Egyptian comparative evidence beyond a few salient points. Instead, per the goals of his project, he presents a study of all terms for scribal tools both those of an Egyptian origin and those not. While he does attempt to provide archaeological commentary, his investigation is limited, often simple but useful notations of attestations of artifacts or examples of what they may have looked like with little meaningful added discussion. Zhakevich’s recognition of the concentration of scribal tools in biblical Hebrew with an Egyptian origin is however important for us, though his focus on a broad semantic study of scribal tools brackets out questions of writing practices and materiality, both of which can be recruited as evidence for the Egyptian origin of writing and will be in this dissertation.

Beyond the attestation of loanwords, another fact that impels an investigation of the Egyptian origin of writing culture in the southern Levant is the unique adoption of hieratic numerical notation in the southern Levant. Like loanwords above, the Egyptian origin of the numerical notation system present in inscriptions from the ancient southern Levant has long been recognized, and often suggested to be an indicator of significant Egyptian influence on writing

⁷ Zhakevich 2020: 2 [clarification mine].

culture and practice in the southern Levant. Studies by Wimmer and Goldwasser have opened the discussion of the significance of this, though usually with special reference to the origin of the adoption of hieratic numerals and the unique paleography associated with them.⁸ The examination of hieratic numerals has never, to my knowledge, been brought into a broader discussion about writing and writing culture in the southern Levant. Thus, it is important to consider the adoption of hieratic numerals and their potential Ramesside origin in the context of the many examples of hieratic writing from the Late Bronze Age Levant as well as the growing number of alphabetic inscriptions from the same period. Doing so provides both a rationale for the study, as well as, one of its contributions, examining the relationship between written Egyptian in the Levant and contemporary alphabetic. In discussions of early Iron Age inscriptions, the evidence for Egyptian practices, writing hieratic in ink, is often left out. Incorporating these data is necessary for reconstructing the origins of alphabetic writing culture in the Levant as it provides a profound link between the later Iron Age epigraphs from the kingdoms of Israel and Judah and the Late Bronze Age Egyptian administration—partly by way of the hieratic numerical notation system.

The recognition that Egyptian writing practice in hieratic from the land of Israel directly precedes alphabetic writing practice is, then also, a rationale in itself. But when connected to practices of alphabetic inscriptions from the early Iron Age (I-II), the importance of this data becomes more acute. In the past, comments have been made in passing referring to the variety of practices seen in the early Iron Age that may be Egyptian in origin, or at least parallel writing practices known from Egypt. Schniedewind has drawn specific attention to the inscriptions of

⁸ Wimmer 2008; Goldwasser 1984; 2016

Kuntillet ‘Ajrud as an example.⁹ The use of both red and black ink, red being the hand of the instructor and black being the student, is a practice known in Egypt.¹⁰ In addition, Hoftijzer and van der Kooij recognized the potentially Egyptian nature of the red rubrics in the Deir Alla plaster texts.¹¹ The coloration of ink, and its use, is but one part of a whole. Less noticeable details like how a text is written at the mechanical and material level, the organization, format and layout, of an inscription, as well as the direction of writing offer additional evidence that the traditions of writing, the writing culture, that Levantine scribes inherited is thoroughly indebted to Egyptian writing culture and practice. Therefore, the remainder of this dissertation will be devoted to analyzing the various ways in which alphabetic writing culture adopts and adapts writing culture from Egypt.

Before we move to analysis, however, it is important to briefly outline some theoretical considerations that will provide the background for our investigation. In the next section, I will offer a view on writing that considers its features as (1) visual communicative media (a sociolinguistic phenomenon) and (2) as technology embedded within society (a sociotechnical phenomenon) in order to describe synthetically writing as a ‘culture’ and how we might go about investigating its constituent parts from the textual artifacts that remain.

0.2 Theoretical Considerations: Investigating Ancient Writing Culture

As we mentioned at the beginning, writing in highly literate societies, like our own, is an assumed part of daily life, infrequently considered as a culture in and of itself. As such, it can be

⁹ Schniedewind 2019a: 25-37.

¹⁰ Schniedewind 2019a: 28-29.

¹¹ Hoftijzer and van der Kooij 1976; cf. Blum 2016 and Schniedewind 2019.

difficult to conceptualize the regular task of writing as being governed by a culture or constituent itself of a culture. Further, if it is difficult to conceptualize how exactly to describe writing as a culture, then how might we go about investigating writing culture in ancient society? In the brief theoretical considerations to follow, I will provide in broad detail two theoretical perspectives on writing that I believe can provide us with a minimally sufficient framework for our investigation.

Below I will outline (1) a view of writing as visual communicative media, a sociolinguistic phenomenon. This will aid us in conceptualizing writing as not only social practice but also as visible language that communicates in multiple modes, its materiality, visual and spatial aspects. I will outline also (2) a view of writing as technology that acknowledges the sociality of technology, that writing involves the activation and activity of multiple parties engaging in the material world. In short, texts are the material artifacts of writers who used tools and materials that had to be acquired in, with, and by social networks. While this may sound overtly complex, tying these two theoretical perspectives together, and allowing them to undergird the present dissertation, will provide us with sufficiently complex categories to describe writing, through written objects, as a culture. And while we are not after a ‘theory of everything’ in describing writing culture in the southern Levant, the theoretical discussion should provide us with something of a holistic sense of the contours of the ways in which we might investigate the material culture that is writing in a fresh and compelling way.¹²

¹² Both Boyes (2021a, 2021b) and Piquette and Whitehouse (2013) are much more interested in developing theory around an archaeology of writing. While their insights are invaluable in many ways, I prefer to avoid expounding on all aspects of the theory here, where it does not serve the purpose of elucidating extant evidence.

0.2.1. Writing as Visual Communicative Media

Writing is visible language. And yet, for quite some time in linguistics writing was ignored. The perspective of linguists was to laud the value of spoken language over the written word, which was considered of little to no use for linguistic investigations.¹³ When the written record was considered in linguistic investigations, it was considered a simple representation of oral language, a near-transcription system to be resourced by historical linguists for the reconstruction of invented proto-languages.¹⁴ In many ways, writing is still viewed this way in certain disciplines. However, recently the study of language in society, sociolinguistics, has begun to consider writing as a sociolinguistic phenomenon, attempting to understand how writing operates as language and semiotic resource in social contexts.¹⁵ This trajectory has led to a consideration that written language is multi-modal, in that it communicates beyond its linguistic content, in, as it were, different ‘modes.’ Everything from a text’s materiality (what it is made of), the space that a text inhabits (both in the material world and on a material object), the appearance and visuality of the text (how does it look and who is supposed to see it) are objects of study in contemporary studies of writing as a social object.¹⁶ These features often lead back to the writers themselves and the choices made in inscribing a text. This perspective problematizes the study of written text, as traditional models of how and what a text is have prioritized its linguistic and grammatical content, ignoring concerns about what material a text was written on and in many regards how it might operate as an object.

¹³ Coulmas 2003, 2013.

¹⁴ Coulmas 2003, 2011; cf. Campbell 2013.

¹⁵ Coulmas 2013; Lillis 2017; Sebba 2006, 2009.

¹⁶ See Lillis 2017.

The theoretical perspective on texts as more than support for grammatical and linguistic content provides us with the necessary categories for the study of specific artifacts and supplies analogs for how writing communicates in a variety of cultures and across time. As such, a sociolinguistic theory of writing, that prioritizes writing and text as visual communicative media, is useful for guiding an analysis of ancient texts. The theory allows us to integrate the traditional data, paleography and linguistic content, into a discussion of how a text is formed and operates in its social context, all leading back to the deliberate choices of writers. In this regard, the visual and spatial aspects of text are particularly important for our investigation. Understanding that the visuality of texts is one important aspect of how a text communicates meaning permits us to discuss the ways in which visual features such as directionality, organization, and coloration communicate meaning in a social context. For us, this social context is circumscribed to the community of writers. While the external features of inscriptions are important to consider as objects of appreciation and visually evocative for non-literate people, we cannot pursue an investigation of the visuality of inscriptions in this dissertation. We are much rather focused on how these visual features communicate meaning within a community, in this case we are after how they communicate learned practice and agency. How does a writer reify the expectations of his community by what he writes and where might we see deliberate alteration (see 0.2.3 Writing as Culture below). Many of the specific details of the theory associated with the spatial and visual features of writing are explicated in the introductions of the appropriate chapters below.¹⁷

¹⁷ For specific theoretical discussions see chapters below: Orthography as practice (Chapter 4); Writing Direction (Chapter 5); Numbers and Measures as Orthography (Chapter 6); Organization and Textual Segmentation (Chapter 7); and Coloration and Visual Appearance (Chapter 8).

Beyond the merely visual features, the theoretical background provides context to consider writing as material. As such, it provides us with the categories to consider how and why material matters in writing. What material an inscription is written on is communicative of meaning. Further, what materials are regular and what are abnormal is likewise communicative. Material indexes what purpose a text might serve in a given community, in public, or in a private context. Understanding writing as a material practice is not only an aspect of a sociolinguistic framework of writing but brings us into conversation with a view of writing as a technological innovation that operates in and because of social networks.

0.2.2. Writing as Technology

Writing is the act of introducing language into the material world. Writing involves the ‘bringing-into-being’ of something. As we have discussed, this something is more than merely a message, a representation of oral language, much rather what is written upon, where the writing or written object exists in the social space, and how it is written are all messages as well. Writing then it is an act of constructing or reconstructing an object. The material and production of texts are then important aspects of their being, supplying their *Sitz im Leben* and *raison d’etre*, as it were. Writing involves specific tools employed by trained technicians who apply their specialized knowledge to create novel instances of physical language. In this very important way, writing is technology. Writing is, however, only infrequently accounted as a technology. As the theorist Walter Ong writes,

“the fact that we do not commonly feel the influence of writing on our thoughts show that we have interiorized the technology of writing so deeply that without tremendous effort we cannot separate it from ourselves or even recognize its presence and influence [...] we take writing so much for granted as to forget that it is a technology.”¹⁸

¹⁸ Ong 1982; 1986

And yet, writing is, in point of fact, a technology. It is a thing, invented at a particular point and though ever-changing and evolving with time and culture; but nevertheless, it is a material technology. As such, we must reckon with writing as an act that involves tools, technicians, and social networks that make it possible. This is important in considering writing in ancient societies where knowledge of writing was reserved for those who had need of it. This is rather different than Ong's account of our world, where texts are ubiquitous, writing is widely democratized, and literacy is life. When we consider the ancient context, however, contemporary anthropological theory concerning technology can provide a powerful analytical framework.

Technology in modern anthropological perspective has moved toward emphasizing the sociality of human technology over against its utilitarian function (how writing exists over what it does).¹⁹ This means that technology is discussed through the lens of agents in “social engagement with the material world.”²⁰ These agents, in our case writers, rely on social and material systems to bring things into being. Pfaffenberger, borrowing from the studies in the history of science, presents the view that “technology is a sociotechnical system.”²¹ In his view, a sociotechnical system is “the distinctive technological activity that stems from the linkage of techniques and material culture to the social coordination of labor.”²² Technology as a sociotechnical system views technology in the whole network of social, political, and economic motivations that bring about a technology and its acceptance. For us, we seek to understand how written objects evidence this sort of technological interaction, viewing the material processes and

¹⁹ See Dobres 2000, 2010, Pfaffenberger 1992.

²⁰ Dobres 2000: 96.

²¹ Pfaffenberger 1992.

²² Pfaffenberger 1992: 497.

attendant social networks that bring a text into being. As such, we assume that, much like any other technology, writing does not exist in a vacuum, and neither do writers. The material resource needed to bring a written object into being are as important as those aspects we have highlighted about the final product (its visual communicative features). Further, the materiality of texts presumes social networks needed to acquire the proper resources (papyrus and ink). Pfaffenberger describes sociotechnical systems in narrow terms (technique) as “the system of material resources, tools, operational sequences and skills, verbal and nonverbal knowledge, and specific modes of work coordination that come into play in the fabrication of material artifacts.”²³ But beyond this, in a larger definition, Pfaffenberger describes a technology as thoroughly embedded in larger social systems as well, defined as legal, political, and cultural.²⁴ As such, we should be concerned with how writers fit into this complex web, defined as they are by their literary products.

In these ways, an ‘anthropology of technology’ is, I would argue, uniquely applicable to writing as a material technology, as unlike other material products, through writing the actors themselves can communicate in both implicit and explicit ways. But just as writing in content is communicative, like non-textual artifacts, textual artifacts index a multiplicity of choices, assumptions, motivations, and gestures. Likewise, the material production of an inscription, like for instance the fabrication of textiles, metals, and all sorts of other objects, denotes a larger scale of social networks, organization of labor, and acquisition of materials, all of which are a major part of what constitutes a writing ‘culture.’

²³ Pfaffenberger 1992: 497.

²⁴ Pfaffenberger 1992: 498.

0.2.3 Writing as a Culture

Writing is a technology, and writing is a visual communicative medium, but writing is more than both of these. Writing is a culture. And as a culture, writing is socially situated, not just in its materiality or within and among the social networks that make it function but as the shared property of a community. Writing has a tradition of identity and practice that must be learned. In this way, Theresa Lillis observes a foundational truth about writing. She states, “when we write, we don’t just write, but we write *something* in ways which we have come to learn as, in broad terms, recognisable as writing, and more specifically ‘acceptable’ or ‘appropriate’ to specific uses.”²⁵ This view of writing, as learned and contextual, then accords well with anthropological understandings of how communities of practitioners and crafts people operate, in a community of practice. Theorists Jean Lave and Etienne Wenger present the concept of a community of practice as a way to understand learning in the communal contexts, within networks of practitioners.²⁶ Wenger describes that “collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise.”²⁷ This concept is important because it refocuses our attention on writing on the writers themselves.²⁸ It is the writers who learn certain practices and ways of creating texts. It is the writers who are situated in particular contexts. These writers exist in vertical and horizontal relationships, vertical to those whom they have learned their practices from and those whom they might pass them on

²⁵ Lillis 2017: 101.

²⁶ See Lave and Wenger 1991; Wenger 1998.

²⁷ Wenger 1998: 45.

²⁸ Similar to Dobres’ goals in moving from technologies to social agents (2000, 2010; cf. Boyes 2021).

to, and horizontal to those who exist and practice the same trade at the same time. As such, just as we have defined writing as a technology and writing as visual communicative media to embrace the concept that writing signifies beyond its grammatical content, writing points most specifically to the writers behind the text, who in turn point us to their community, in and through time.

Concepts embedded in both a community of practice model of learning and a sociolinguistic approach to writing, are repertoire negotiation and competency. That is, both theoretical approaches recognize that (1) writers make deliberate choices among a variety of options but that (2) some choices are not acceptable as an established standard or norm. Thus Lillis refers to something that is “recognisable as writing” and “acceptable.”²⁹ In the same way, a community of practitioners are governed by a “regime of competency” that can act as determinative for those engaging in the practice.³⁰ Thus, while it is possible, through deliberate choice, to subvert or alter the standard norms of practice for those at the highest levels of competency, the community at large is strictly governed by these norms.³¹ Lillis defines these as ‘conventions’ that “are often unstated, yet powerful, rules surrounding what can be written (by whom and where),” and I would add how it is to be written.³²

These concepts are important, as if we seek to discuss what writing culture is, we should begin with the assumption that no acts or choices involved in the production of a text are accidental. In discussing a written object, then, we are forced to consider what it was written

²⁹ Lillis 2017: 101.

³⁰ Wenger 1998: 136-137.

³¹ Wenger 1998: 137, 153..

³² Lillis 2017: 101.

with, what type of object or material is it written on, how did the writer go about forming the text and even the letters, where is the text on the object, where does it begin, where does it end, how is the text segmented, how does it appear, what is its purpose, and ultimately why were all these choices made. Describing writing as a culture, learned in community, then provides us with a framework to answer the last question in this list. The writer made these choices either in keeping with learned norms of writing or in deliberate alteration of them. If we can establish norms of writing in a writing culture, then, we can move backward and forward in time to examine the origin point and points of deliberate change.

A recognition of writing as culture, however, comes with the recognition that it is complex. It involves the complex deliberate action of actors at the intersection of their chronological (vertical) and communal (horizontal) contexts. Because our investigation is concerned with the chronological origin point, we will focus efforts on describing writing culture chronologically. The communal interaction of textual artifacts (recontextualization, rewriting, and intertextuality) are beyond the scope of this dissertation but constitute an intriguing avenue of inquiry for future research.³³

0.2.3.1. Theoretical Addenda—Scribes vs Writers: On the Use and Meaning of Terms

There is an important matter of terminology to be discussed here, at the outset of the study, that is, the use of the term ‘writer’ as opposed to the popular, and much more common term, ‘scribe.’ In this dissertation, I prefer the terms writer and writing culture, though at times scribes and scribalism or scribal culture may enter into the discussion. I do this for a few reasons. Principally, my preference for the terms writer and writing culture allow us to avoid a dense

³³ See Lillis 2017: 100-123.

discussion of what a scribe is, how it might differ from any common literate individual, and how the term scribe as a professional label is problematic in the Near East. Further, I can avoid a discussion of ‘scribal identity,’ or ‘scribal culture,’ which presumes the reading, interpretation, and reuse of texts throughout time. These are notions of writing activity that are, of course, part of writing as a culture, to some degree, but would lead down the path of composing something of a theory of everything about not only writing tools, materials, and practices, but also roles in society, self-identification, interpretation, copying, reuse, and reimagination of textual traditions. Consider Leutcher’s recent definition of scribal culture (i.e., scribalism) wherein he states that, “scribal culture [is] the universe of ideas that provided context for understanding texts and the very process of their production and preservation.”³⁴ In short, the terms writer and writing culture are sufficiently vague so as not to conjure up unnecessary notions of scribes in the process of the composition of the Hebrew Bible while at the same time sufficiently focused to prioritize the actual written materials (i.e., epigraphs) themselves.

More to the point, the term scribe is so frequently invoked in discussions of the composition, redaction, compilation, and copying of the Hebrew Bible that it has freighted with assumptions about “scribes” and “scribalism” that, on the one hand, should be challenged in future work, but on the other hand, I would prefer to leave aside for the time being. This is evidenced by the proliferation of the discussion of scribes and scribalism in the past decades (fig. 1.1. below), as the growing recognition of scholars is that scribes were the figures behind the composition of the Hebrew Bible.

³⁴ Leutcher 2021: 1.



Fig. 0.1: “Scribalism” n-gram in Google Books³⁵

To this extent, any self-conscious investigation of writers in the ancient Levant becomes a search after ‘scribes.’ These studies often assume who and what a scribe was, predicating their understanding primarily on Mesopotamian analogs that turn out to be at once useful but nevertheless insufficient (Carr 2005, 2011, van der Toorn 2007, and Milstein 2016). In some of these studies, overtures are made toward Egyptian parallels as well but with less than satisfactory results. The issue here is not that appeal is made to Mesopotamian works, as this rich material can undoubtedly shed light on the texts of the Hebrew Bible, but that the particular persona of the Mesopotamian scribe is often unconsciously imported into the southern Levant without a recognition of the difference between the material and media used by scribes, not to mention the traditions of writing practice that inhere uniquely in alphabetic scripts. Discussions of writing in

³⁵ While ‘scribalism’ has been used in other related disciplines, the vast majority of recent references are in studies of the Hebrew Bible or Early Judaism. See the following: <https://tinyurl.com/scribalism20182023>; for credit to google ngram, Michel et al. 2010.

the ancient southern Levant in this way, are almost always divorced from a study of the actual textual artifacts.³⁶

A second reason to avoid the term scribe in this study, is to avoid assumptions about literacy, the activity of literate individuals, and the complexity of their identity. As regards literacy, the discussion around this topic in the ancient southern Levant is complex and the history of scholarship is lengthy.³⁷ Nevertheless, we will simply recognize that the definitions of literacy often provided by past scholarship are insufficient to cover the breadth of what literacy actually is, how it operates, and who gets to be considered literate.³⁸ We will here quote Allon and Navrátilová who succinctly state, “[a]ll scribes may be assumed to be literate to some extent, but it is a logical fallacy to assume that all literate people were scribes.”³⁹ As to the activity of literate individuals, it has been assumed that ‘scribe’ was somehow a title that circumscribed the profession of an individual—that a literate individual might only be called or call themselves a scribe if, like a modern worker, they engaged in the unique task of the continual production of texts at an elite level.⁴⁰ However, as has been recognized recently in studies of writing and

³⁶ In certain cases, however, when education is in view, the epigraphs become central to a discussion of scribes, (Lemaire 1981; Rollston 2006, 2010; and Schniedewind 2019a, *forthcoming*).

³⁷ A few key sources touching on the subject of writing and literacy include: Young 1998; Hess 2002; Rollston 2006, 2008, 2010; Demsky 2014; and Lemaire 2015.

³⁸ See “New Literacy” studies like Street 1984, 1995, and 2001.

³⁹ Allon and Navrátilová 2017: 2.

⁴⁰ That is, as was the case in Egypt, those who considered themselves scribes might have been diffused among a variety of professionals that we might not be inclined to call scribes (Allon and Navrátilová 2017). For this reason, assigning the scribal professions, such as it was, only to those who were “respected member(s) of the elite class,” (Rollston 2010: 85) as is sometimes the case risks the importation of a presentist reading of writing in culture, whereby high skills in the literary arts, and even literacy, necessitates ‘elite’ or ‘privileged’ status (Baines 2007, Eyre 2013; cf. Pinarello 2018).

Writing in early periods in the Levant may have been a quasi-mystical practice, associated with esoteric practitioners, and the biblical text may reflect this (Schniedewind 2004). But, writing as a mystical art brings with it positive connotations, perhaps of elite and prestige, but also negative ones (Price 2020). As such, a description of

scribes at Ugarit and in the Egyptian New Kingdom, there is some difficulty in describing an individual as a scribe. Literate people engaged in a variety of tasks and wore, as it were, a variety of hats.⁴¹ In this way, the question of the activity of individuals, and whether they might be, or be called, a scribe, is caught up in the discussion of identity, and whether there was such a thing as a ‘scribal identity’ in the ancient Levant. Because this has become a problematic notion in the Near East broadly, it is best at present to avoid the use of the term. This is not to say that there were not scribes, nor that there might not have been a unique ‘scribal identity,’ either in the Near East more broadly or in the southern Levant, but rather that the concerns and texts under consideration in this study need not contribute to this discussion at this time.⁴² Our focus is on the knowledge that trained writers employed in writing. Whether these individuals were scribes *par excellence* is not important.

scribes, which we have already suggested is problematic as a term, as both respected and elite, ignores the variable perception of literacy in low-literacy environments (Price 2020; cf. Mandell 2018) and the variability of level of skill associated with the self-ascription of ‘scribe’ as a title (see n. 39 below)

⁴¹ Boyes succinctly addresses the question of ‘scribes’ and the various roles a literate individual might play, as it pertains to Ugarit. He states, “To call those who had completed such education (in learning to write) ‘scribes’ is to blur together a wide range of professions and ranks, from the genuine professional writers whose purpose was to take notes or draft legal tablets, to diplomatic messengers-cum-ambassadors, priests and high priests, exorcists and diviners, senior politicians and administrators, professional philologists and other career scholars” (2021: 20). He cites useful studies that likewise problematize the definition of scribes including Carr 2005 (for the southern Levant); Pinarello 2018 (for Egypt); and Mouton and Roche-Hawley 2015 (for Ugarit). See also Schniedewind *forthcoming* which addresses the variable professions and communities of writers (as scribes) in the ancient Levant.

⁴² To be forthcoming about my own inclinations, I am not sure that there was any sort of unified ‘scribal’ identity in the Levant prior to, perhaps, the late Judean Monarchy, at which point writing and religion in the Levant become uniquely centered in Jerusalem. Prior to this, it seems to me that writing was more probably diffused among various communities, comprising individuals north and south, and across various professions. Though they may have referred to themselves as ‘scribes,’ though we do not have much evidence for this, this self-ascription would have not likely appealed to a central identity as a scribe (as these communities were likely characterized by the circulation of different traditions and documents, though their education at the primary levels may have been the same; see Schniedewind 2019, *forthcoming*, for the southern Levant and Ragazolli 2010 for Egypt). This does not mean that no unified ‘scribal’ identity could not have existed but that I am simply, as of yet, unconvinced.

0.3 Objectives of the Dissertation

This dissertation seeks to understand writing culture in the ancient southern Levant in light of writing practices from ancient Egypt. The primary evidence for writing culture in the southern Levant will be the extant epigraphs, and to a much lesser degree the Hebrew Bible. In view of this agenda, and the limited amount of evidence available, this dissertation will compile as many of the relevant features of writing culture in the southern Levant that can be illuminated by Egyptian practice as possible. The principal goal is to show how deeply indebted writing culture in the southern Levant is to Egyptian writing culture; the material, practice, and socialization of writing are all features that indicate that alphabetic writing culture in the southern Levant derives from Egyptian writing culture—at least in its most basic elements.

Guided by our theoretical framework, the dissertation will proceed through a series of questions that outline, in broad, aspects of writing as a culture, moving from the materials that writers use all the way to the appearance of the final product. The goal will be to paint as maximal a portrait as possible in the space provided of how alphabetic writing practices reflect Egyptian writing practices, in both explicit and implicit ways. The discussion of the technology of writing (including the artifacts, raw materials, and languages) and the practice of writing ultimately center around writers themselves—the people. Thus, in the conclusion, the dissertation will seek to open up the question of who these early writers were, in hopes that future investigations will be able to offer a more comprehensive overview than can be provided here. Nevertheless, the dissertation hopes to build a framework for reorienting discussions of writing and writing culture in the southern Levant, looking toward Egypt as a parallel that can be further resourced to understand how writers produced and reproduced texts.

0.4 Outline of the Dissertation

The dissertation will proceed through two major parts that outline two major aspects of writing culture—material and practice. As a whole, the dissertation will be constituent of eight chapters of analysis with a ninth chapter detailing a few broad conclusions of the work and questions for future research.

Part one, material, will devote time to a discussion of the technology of writing as the basis for writing culture. The first chapter, “What to Write With,” will discuss pen, ink, and palette as tools of the ancient scribe. Considering the linguistic data for the Egyptian origin of these words (for an Egyptian etymology suggested for פּ “pen” see chapter 1 below), the analysis will contribute an understanding of these tools as raw material resources and emblems of socialized knowledge: for the pen, situated learning, for the ink, labor organization, and for the palette, symbolism and identity. The second chapter, “What to Write On (I),” will discuss the choice of particular ceramic materials for inscription, in this case bowls, as evidence of learned practice in a continuity community of writers. This chapter will examine evidence of hieratic practice in the Late Bronze Age, moving through early alphabetic material from the second half of the second millennium to the well-known epigraphs of the kingdoms of Israel and Judah to show a continuation of scribal practice in the choice of materials for inscription at least into the mid-Iron II. The third and final chapter in part one, “What to Write On (II),” will again examine the material for inscription but this time from the perspective of daily practice showing that southern Levantine writing culture was predicated on papyrus writing and that papyrus was an integral part of a writer’s conception of documents and textual artifacts. While not much evidence remains of papyrus from the Iron Age southern Levant, it is argued that indirect

evidences at the material and textual level suggest that papyrus was a regular material for writing practice in the Iron Age.

Part two, entitled practice, dives deeply into an examination of the ‘drawing up,’ as it were, of texts in the ancient southern Levant. The first chapter in part two, and the fourth chapter overall, examines the earliest epigraphs to understand orthographic practice as it relates to the ductus and aesthetic of early writing. The goal is twofold, (1) to discuss the preparation of the reed pen (cf. chapter 1) and (2) to appreciate aspects of aesthetic that might signal similarities and differences between writing alphabetic in ink and writing hieratic in ink. The next chapter of part two, the fifth chapter overall, describes the movement of writing and the visual perspective of letters. It presents the argument that even in early alphabetic practice, there is a preference for movement of inscription from right to left, with a few well-known examples written left to right. It is argued that this practice derives from the use of the rush pen and the posture of scribes when writing in ink on papyrus (not any external standard). The third chapter of part two, the sixth chapter overall, examines the use of hieratic numerals and symbols as part and parcel of orthography and training in writing. It is argued that literacy and numeracy are linked, and thus the adoption of hieratic numerals and associated symbols represents powerful evidence for the Egyptian heritage of alphabetic writing culture.

The dissertation then proceeds to an investigation of the visual strategies of writing practice. The fourth chapter of part two, and seventh overall, examines how writing is spatially organized, arguing that the organization of text on an inscription is, like directionality, an embodied practice. It is argued that the organization of textual content as well as the segmentation of text, both spatially and visually, by way of word dividers, could have originated in Egyptian practice, though it is acknowledged that much more work must be done in this

regard. Various word dividers seen in alphabetic texts are discussed as possible reappropriations of sigla from Egyptian writing, though the specific mechanics of the translation are not, at this time, fully understood. The final chapter of part two, and the eighth chapter overall, discusses the use of color in writing—red and black ink in alphabetic texts and its Egyptian background. This chapter argues that the choice of coloration and its employment in textual artifacts is not just a result of the technological adoption of Egyptian tools but also a learned association of meanings between colors and particular practices in writing. Focusing on Deir Alla and the inscriptions from Kuntillet ‘Ajrud, the chapter identifies similarities in how the writers are using color to signal meaning, whether to present the pedagogical distinction between writers (master and apprentice) or to highlight particularly important aspects of a composition, to be recognized as divine, pronounced aloud, or even performed. The use of bichrome ink, it is argued, is no coincidence but rather a natural consequence of the adoption of Egyptian materials and practices, which in turn necessitates embedded meanings.

The dissertation will conclude with some brief reflections of the results of the study as well as overtures toward future avenues of research. This chapter will introduce the complexity of investigating Egyptian origins in the Levant.⁴³ It will be briefly presented that writing cannot be divorced from the social organizations that leverage it as tool for communication and that writers play a special role in the legitimization of political and social order.⁴⁴ As such, the conclusions will hope to provide further avenues of inquiry, and additional complexities, with a

⁴³ See Burke 2020; 2022.

⁴⁴ See Sebba 2007

view toward additional work in describing the early writers of the southern Levant in a holistic fashion, from material to writing culture.

Part One: Material

Chapter One What to Write With: Tools, Their Origin, and the Transfer of Knowledge

Introduction

Linguistic and cultural contact between Egypt and the Levant goes back centuries, even millennia, before the use of the alphabet. This deep history of cultural entanglement is reflected in a broad and diverse body of loanwords.⁴⁵ Some loans like פרעה “Pharaoh” (Eg. *pr-ʿ* - פֿרעה) and יאר “the Nile” (Eg. *itr.w* - יֵאֵר) are more or less to be expected in basic cultural and political interaction between peoples. In this way, a number of loans associated with trade and specialized goods are likewise expected in the lexicon of Hebrew and Northwest Semitic more broadly.⁴⁶ But some words betray a deeper layer of interaction between Semitic and Egyptian speakers in the ancient Levant, a depth and duration of linguistic interaction that signifies not only the adoption of mere lexemes but the adoption and transmission of knowledge—practices and procedures. For this reason, the present chapter will explore the Egyptian loanwords in the Hebrew lexicon related to scribal tools and practice with a view to the material production, practices, and, when possible, the social significance behind these words in light of Egyptian evidence.

Before we begin, however, we must recognize the long history of studies on Egyptian loanwords in the Hebrew Bible. Past studies of loanwords often focus on phonology with one of

⁴⁵ Lambdin 1953; Muchiki 1999; Noonan 2019; Breyer 2019; and Zhakevich 2020. Though see Schneider’s critique of Muchiki and Kilani’s critique of Breyer, two review articles that rigorously analyze these studies and identify reasons to use these sources only with the most extreme caution (Schneider 2001: 155-162; Kilani 2021: 1-9). As such, reference will only be made to these sources if necessary. For references to studies of loanwords hereafter the preference will be to cite the most recent (most trustworthy) studies.

⁴⁶ Noonan 2016, 2019; note especially the use of Egyptian loanwords for technical details in the Tabernacle narratives (Donnelly-Lewis 2022).

two goals: (1) to determine whether a word can reasonably be considered a loanword, as opposed to a native word, and (2) to describe loanword integration in the recipient language.⁴⁷ These are worthy goals but represent a first-order level of analysis of loanwords. For our purposes, we are concerned with a second-order sociocultural analysis (e.g., how a loanword is viewed or used in a given speech community). Therefore, we will not concern ourselves with either debating the legitimacy of loanwords as such or describing the phonetics of their integration into the recipient language. These issues will only be discussed if they become particularly relevant because either (1) a loanword's status is heavily debated or (2) a loanword has been previously unrecognized. Otherwise, the discussion will focus on what can be gleaned about the meaning and significance of these loanwords as emblematic of the transfer of technical knowledge.

1.0 The Scribal Tool Kit

Examining the specialized vocabulary of writing tools (pen, ink, and scribal palette) in Hebrew yields some surprising results. This chapter will explore what can be gleaned from the existence of Egyptian loanwords for specialized scribal tools. In keeping with the guidelines laid out in the introduction, special interest will be given to understanding loanwords as indicative of the cultural and technical transfer, understanding writing technology to be part of a sociotechnical system that engages questions like: what materials were necessary for the production and manufacture, how were materials produced, who produced them, and what do they mean in and for society.⁴⁸ In this way the loanwords become more than examples of linguistic contact but

⁴⁷ Lambdin 1953 and Noonan 2019; Zhakevich (2020) takes a different tact but nevertheless does discuss, at length, the potential of the phonetic correspondence and the phonetic integration of the loanwords. Unlike Lambdin and Noonan, however, Zhakevich does discuss issues of archaeological and historical significance.

⁴⁸ Pfaffenberger 1992.

signal a much broader level of interaction, which will be borne out in the remainder of this dissertation.

1.1. Pen (פֶּן): An Egyptian Loanword?

The etymology of Hebrew פֶּן is something of a mystery. In the past proposed Semitic cognates have been offered for the etymology of Hebrew פֶּן, including Akkadian *ḥaṭṭu* and even forms of the later Arabic root غوط (*ḡ-w-ṭ*).⁴⁹ Neither of these are, however, generally accepted as a definitive cognate to Hebrew פֶּן for a few good reasons that we should briefly review.

In the first case, the proposed Akkadian cognate *ḥaṭṭu* assumes that the word, though frequently attested in Akkadian literature, is itself a West Semitic loanword, beginning with a guttural consonant that has been received in Akkadian as /ḥ/.⁵⁰ The phonetic connection is not impossible, but it is hard to imagine that, given the wide chronological and geographic distribution of *ḥaṭṭu* in Akkadian, the word is originally of West Semitic origin. In Akkadian we should expect a correspondence of WS /ʕ/ to Akkadian /ʕ/ or /-/, not /ḥ/.⁵¹ A second reason to reject the proposal pertains to the semantic incongruency. The word *ḥaṭṭu* generally translates to “staff” or “specter” but never “pen.”⁵² Thus, the association between Akkadian *ḥaṭṭu* and Hebrew פֶּן seems highly unlikely, if not impossible.

⁴⁹ Zhakevich 2020: 124; for Akkadian *ḥaṭṭu* see *CAD* Ḥ: 153-156 and for Arabic غوط (*ḡ-w-ṭ*) see Lane 1968: 6:2309.

⁵⁰ See for instance Akk. *ḥamqu* rendering West Semitic √*mq* (PS *√*mq*), “valley” at Mari (ARM 2.107 and 3.30; *CAD* Ḥ:70). Many other examples of West Semitic guttural consonants being received as /ḥ/ in Akk. can be adduced (see also Rainey 1996 and Rainey, Schniedewind, and Cochavi-Rainey 2015).

⁵¹ Huehnergard 2002: 12; sometimes /ʕa/ is written /ḥa/ in Akkadian, but this is not one of those cases (Huehnergard 2011: 409-415).

⁵² *CAD* Ḥ: 153-156.

The second proposal, from Arabic غوط (*ġ-w-ṭ*), offers a bit of promise but is, like *ḥaṭṭu*, unlikely for semantic reasons. Phonetically, the roots match. It is possible that Hebrew ט is derived from a hypothetical PS **ġṭ* as Hebrew ט represents both PS **ʕ/* and **/ġ/*.⁵³ Consider Arabic غزة and Hebrew עזה for ancient and modern Gaza. Nevertheless, in spite of the phonetic plausibility of a connection, there are good reasons to reject a connection on semantic grounds.

The Arabic root in its verbal form can mean, “to sink,” “become depressed,” or even “to hollow out.”⁵⁴ In this instance, one could argue for a semantic narrowing from a proposed PS **√ġwṭ* “hollow/dig out” → “incise” → “write (by incising);” a similar narrowing may have taken place with the root *√hrt*, whereby a basic meaning in the verbal root specialized into a nominal form as follows “to scratch” → “incise” → “write (by incising); writing implement.”⁵⁵ But even here the relationship between attested cognates of חרט (such as Syr. ܚܪܬ; Tigre *ḥaraṭata*) with the meaning “to scratch, incise” and the meaning of חרט in the Hebrew Bible is difficult to trace out.⁵⁶ The Hebrew word חרט may mean “chisel” in late texts (e.g., e.g., from Qumran), but seems to denote something different in earlier texts.⁵⁷

⁵³ Blau 2010; Huehnergard 2002; Reymond 2018.

⁵⁴ Lane 1968: 6:2309.

⁵⁵ DCH 3:316 where חרט is glossed as “stylus,” though as Zhakevich points out, this is problematic (2020: 133-135). In the Dead Sea scrolls, חרט is attested as “chisel” (Zhakevich 2020, VanDyke 2022; both citing 1Q33 XII:3 and 4Q382 XXV:4). A Punic inscription (KAI 81) seems to contain a word meaning something like “sculptures,” which would lend credibility to the reading of חרט as “chisel” (i.e., a device for sculpting), but unfortunately key context is missing and the interpretation is uncertain (*DNWSI*: 404; Donner and Röllig 1968: 98-99). Additionally, semantic narrowing is a well-known phenomenon in historical linguistics (see Campbell 2013: 223-224).

⁵⁶ Payne-Smith 1998: 157; Leslau 1958: 22.

⁵⁷ DCH 3:316; see especially VanDyke who reasons that חרט denotes a “rush pen” in Exod 32:4 and Isa 8:1 (2022 and *forthcoming*), though her argument that עט denotes a “reed pen” cannot be maintained (see both 1.1.2. Pen (עט) from Eg. *ᶜr* – A New Proposal and 1.1.3.2. Rush and Reed – A Distinction with a Difference, below).

A second issue with the Arabic proposal (غوط [g-w-t]) is that it is difficult to say whether the meaning “hollow out” is a basic or extended meaning of the word.⁵⁸ The root in several uses can mean “to sink, depress” and in the admittedly limited collection in Lane’s classic lexicon, these uses seem to predominate. Overall, the proposal on semantic grounds seems forced. One would have to suppose that Hebrew left no remnants whatsoever of any root PS * \sqrt{gwt} other than the noun טע. Thus, while a connection with Arabic غوط is not impossible, it is also not probable. For these reasons, it has been generally recognized that there is no good Semitic etymology for Hebrew טע. This leads to the question that has been raised on occasion by scholars, could it be a loanword? Here we should explore two options for an Egyptian origin for Hebrew טע.

1.1.1 Pen (טע) from Eg. ϵt —A Review of Quack’s Recent Proposal

Joachim Quack in a recent article has presented intriguing new evidence that Hebrew טע may be a loanword from Egyptian, specifically from an Egyptian word (ϵt) found in Demotic texts.⁵⁹ In his presentation of the data, he persuasively shows that ϵt in late Ptolemaic texts denotes a writing implement. He cites Demotic texts from the Temple of Edfu to show this. One text he translates as follows, “eingraviert in Ewigkeit, vortrefflich für die Unendlichkeit“ [...] kopiert mit dem ϵt des.”⁶⁰ Still another text translated from Demotic by Quack shows that a writing implement is clearly in view. He offers the translation, “Deine drei Finger, leg die Binse zwischen sie! Deine zwei, mögen sie ein Auflager(?) bilden.”⁶¹ The grip described in the text,

⁵⁸ Lane 1968: 6:2309.

⁵⁹ Quack 2022; *Wb* 1: 237.

⁶⁰ Quack 2022: 85 [abridgement original].

⁶¹ Quack 2022: 86.

Quack argues, is accurate to the hold necessary for a pen. Thus, it should be beyond a doubt that Egyptian 't is a writing implement. But is it related to Hebrew טע?

Quack's proposal that Egyptian 't is a writing implement is convincing. What is less convincing is his connection to Hebrew טע. This is due in part to the fact that his analysis is based on late Demotic texts, as he readily admits, none of the attestations of Egyptian 't precede the Ptolemaic period. He states, "Als Handschrift geht kein Zeugnis vor die Ptolemäerzeit zurück[.]"⁶² Recognizing this difficulty, he presents the option that Egyptian 't as attested in these late texts is derived from an ancient Egyptian 't hitherto unattested in prior strata of the language. He notes in defense that Egyptian 't cannot be a late development for the better known Egyptian word for "rush pen" Egyptian 'r (𓆎) due to the phonological impossibility.⁶³ Further, he states that both 't and 'r occur in the ritual of Entering the Chamber of Darkness, dating to the Ptolemaic period and therefore must represent separate lexemes.⁶⁴ He provides these comments in order to suggest that 't is older than the documented attestations and that, due to its exact phonetic correspondence to Hebrew טע /'t/, it should be viewed as the likely source of the term attested in the Hebrew Bible.

While Quack's proposal is certainly fascinating, the date of his examples make it difficult to accept his conclusion that Hebrew טע derives from Egyptian 't. While it is certainly possible that Egyptian 't is a more ancient lexeme than its attestations suggest, I find that there is a much more interesting origin for Egyptian 't, one that still involves Hebrew. Like Quack, I am inclined

⁶² Quack 2022: 86.

⁶³ Quack 2022: 87.

⁶⁴ Quack 2022: 87; I am unfamiliar with this text and therefore use the name Quack gives it. He cites Jasnow and Zauzich 2005.

to argue that Hebrew רע derives from Egyptian, but a derivation from late Egyptian ‘r is not the likely source. In what follows, I will offer a previously unexplored proposal to see Hebrew רע as derived from Egyptian ‘r.⁶⁵

1.1.2. Pen (רע) from Eg. ‘r—A New Proposal

The first level of analysis with any proposal to identify a loanword is phonological correspondence. On the face of it, it may seem that Hebrew רע cannot reasonably derive from Egyptian ‘r, but developments in the phonology of ancient Egyptian over the past few decades, I argue, make the derivation possible. Scholars of Egyptian now understand the articulation of Egyptian 𓆎 (transliterated “r”) to have been closer to something like a voiced apical alveolar tap /r/ than a voiced trill /r/ in antiquity.⁶⁶ The evidence is twofold. First, the variegated reception of Egyptian “r” as both /d/ and /r/ in loanwords into Semitic. One of the best examples of this will be discussed below, as the ‘dental-like’ tapped articulation of Egyptian /r/ is preserved in the reception of Egyptian 𓆎𓆏𓆏𓆏 (ry.t) as Hebrew דר (dāyo).⁶⁷ Second, the reception of Semitic /d/ in Egyptian writing as “r”.⁶⁸ The latter has been shown in a number of examples by Schneider, including Semitic /‘bd/ written in Egyptian as /‘pr/.⁶⁹ The evidence shows that the reception of Egyptian /r/ in Semitic was something like a voiced dental stop /d/, and the voiced dental stop /d/ in Semitic was understood by the Egyptians to be something like their “r” (Eg. /r/).

⁶⁵ *Wb* 1: 208.

⁶⁶ Allen 2013: 40; Hoch 1994: 430; Loprieno 1995: 33; Schneider 1999: 155-158; and Puest 1999: 127-129.

⁶⁷ Schneider 1999; Quack 1992.

⁶⁸ Allen 2013: 40; Schneider 1999: 155-156; cf. Hoch 1994.

⁶⁹ Schneider 1999: 155; cf. Schneider 1998.

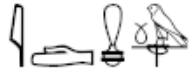







Heb. ט ← Eg. /d/	
<p>אֲטֹן 'aṭun</p>	 <i>idmi</i>
<p>אֲבִנַּט 'abnaṭ</p>	 <i>bnd.w</i>
<p>טֵנֶה <i>tene'</i></p>	 <i>dni.t</i>

Fig. 1.1: Reception of Egyptian <d> as Hebrew ט (produced by the author)

Understanding the underlying phonological correspondence between Hebrew and Egyptian, we can safely say that, on occasion, Egyptian <r>, realized as phoneme /r/ (equivalent to a voiced apical alveolar tap) was heard by Semitic speakers as most closely resembling their own /d/ (realized as a voiced dental stop). Taking this a step further in order to suggest a reception of the Egyptian <r> (phoneme /r/) in 'r as *ṭet* in Hebrew טע, we should first recognize that if Egyptian /r/ can be received as a voiced dental stop /d/, it is quite possible that such a phoneme might be written with *ṭet*. This is because the reception of Egyptian  <d> is received with both *dalet* and *ṭet* in Hebrew.⁷⁰ Consider the loanwords in figure 1.1 above. The Egyptian sounds /r/ and /d/ may well have been indistinguishable to Semitic speakers in certain phonetic environments. This seems to have been the case with Egyptian  (*ry.t*) and

⁷⁰ See examples in Noonan 2019: 35-36, 51-52, 71-73, 86-87, 110-111, and 208-209. There is some argument that Egyptian <d> was received in Hebrew with ט because the underlying phoneme was an emphatic consonant (something like a voiced emphatic dental stop /d'/), but Allen has offered sound reasons to reject this interpretation (Allen 2013: 48-49).

Hebrew דָּי (dāyo). What Semitic speakers heard in this case was most equivalent to their own /d/, perhaps an approximate /~d/ transcribed by ד. This, I would suggest, makes it more than reasonable that Egyptian /r/ was received the same way in עַ from ‘r, as an approximate dental stop /~d/. In this case, then, the only difference between the correspondence of Egyptian  (ry.t) and Hebrew דָּי (dāyo) and Egyptian ‘r () and Hebrew עַ (‘et) would be the choice of transcription, using *ʾet* instead of *dalet* for /~d/.

In context, we might say that the recognition of the loan status of the Hebrew word for ink (דָּי) adds more than phonological evidence for this proposal. The borrowing of ink, in addition to the terms for writing palette (Heb. תַּקָּט | Eg.  - *gsti*, see below) and papyrus (whether or not it is specifically writing papyrus; see chapter 6 below), contribute outside support for the proposal, and perhaps increase the likelihood that the word for pen would have been borrowed as well. The unique style of writing with ink and pen was itself derived from Egypt and seems to have induced the broad adoption of terms associated with the writing system (see chapter herein). The adoption of groups of words with associated technologies would not be uncommon in the world’s languages and might rather be expected (consider the frequent clustered borrowing of English information technology terms, “computer,” “keyboard,” “router,” etc).⁷¹ Thus, if it is deemed phonetically possible, as we have attempted to argue above, then a derivation of Hebrew עַ from Egyptian ‘r presents an attractive origin for a word that has no good Semitic etymology.

⁷¹ See for example Cabanillas et al 2007. Technological words often stand at the intersection of the two major causes of lexical borrowing, need and prestige (Carling et al 2019; cf. Haspelmath 2009; Tadmor and Haspelmath 2010).

EXCURSUS: Borrowing and Reborrowing—Concerning Egyptian ‘t in Ptolemaic
Demotic Texts and Judean Scribal Activity in Egypt

If, as we have suggested the origin of Hebrew טע is to be found in Egyptian ‘r, then how might we assess Quack’s evidence that Egyptian ‘t can denote a writing implement in Ptolemaic Egyptian texts? As we have already noted, Quack points out that, “‘t kann nicht als (lautlich ohnehin unplausibel) Weiterentwicklung aus ‘r gedeutet werden.”⁷² Further, Quack notes that both terms, Egyptian ‘r and ‘t occur in the ritual of Entering the Chamber of Darkness, presumably denoting writing implements.⁷³ On these bases there can be no explanation internal to Egyptian for ‘t. Perhaps the term requires an explanation external to Egyptian.

The coexistence of Egyptian ‘r and ‘t in the ritual of Entering the Chamber of Darkness in addition to the sudden attestation of Egyptian ‘t may be evidence that ‘t is a loanword. But a loanword from where? I would suggest that Egyptian ‘t is a loanword from Hebrew טע, mediated by an Aramaic speaking community in Egypt, possibly a Judean one. This phenomenon, known as ‘reborrowing,’ is a well-known, if not often overlooked, contact induced linguistic change. Though no systematic study of ‘reborrowing’ has been conducted, and in many reviews of lexical borrowing it is not singled out as a phenomenon separate from the regularities of lexical borrowing in generally, the world’s languages are filled with examples of words loaned into one language and then borrowed back, or reborrowed.⁷⁴ In some cases of reborrowing, there can be a

⁷² Quack 2022: 87.

⁷³ Quack 2022: 87.

⁷⁴ Most every review of lexical borrowing does not consider the issue of reborrowing as a separate phenomenon. This is due in part to the fact that reborrowing is simply a sign of ongoing interaction of a sustained duration between two speech communities. There is nothing particularly unique about reborrowings vis-à-vis (pristine) borrowings other than the fact that the word being borrowed was original to the language now borrowing the term in its altered state.

slight semantic shift in the use and meaning of the terms, but this is not always necessary. In certain cases, loanwords into one language can be loaned back (reborrowed) at a different point in time with the same, or nearly the same meaning. This phenomenon has been documented in at least two cases with Northwest Semitic and Egyptian, as Noonan notes that Hebrew תחרר, originally from Egyptian *dhr* is attested as a loanword in Egyptian *thr*.⁷⁵ Similarly, Hebrew קלחת, originally from Egyptian *qrh.t*, is reborrowed in Egyptian as *krht*.⁷⁶ Thus the borrowing of Hebrew טע, whose origin we have suggested is Egyptian 'r, could reasonably have been reborrowed as 'ṭ in later Egyptian.

The vector for this proposed 'reborrowing' of a Hebrew term into Egyptian might be similar to the vector of the borrowing of Egyptian terms into Hebrew in the Iron Age, scribes working in close contact. From the end of the 2nd and beginning of the 1st millennium, Egyptian scribes interacted with their Semitic counterparts in the Levant and in the Late Bronze Age there is plentiful evidence that Egyptian scribes were garrisoned in the Levant.⁷⁷ Egyptian scribes during the New Kingdom, garrisoned in the Levant and likely traveling and corresponding back and forth between the Levant and Egypt, knew Northwest Semitic languages and borrowed several terms, while apparently loaning several of their own.⁷⁸ These bilingual scribes are perhaps

⁷⁵ Noonan 2016: 64-65; 2019: 306.

⁷⁶ Noonan 2019: 306.

⁷⁷ The archaeological evidence discussed in Morris 2005; in addition to some 42 Hieratic inscriptions that have to date been discovered in the southern Levant (Wimmer 2021; Wimmer *forthcoming*). Levy convincingly shows that the distribution is suggestive of Egyptian populations in the southwestern edge of the Levant (Levy 2017).

⁷⁸ Apparently transcribing Northwest Semitic incantations into Egyptian script (Shisha-Halevy 1978; Steiner 1992) and borrowing several words (Hoch 1994). The knowledge of Northwest Semitic is evidence in Papyrus Anastasi I, whatever the exact nature of the words are (Fischer-Elfert 1986; for a discussion of the translation of a northwest Semitic portion of the text [pAnastasi I 23, 2-7] see Schneider 2008: 198-202).

responsible for the tightly knit nexus of Egyptian loan terms related to writing evidenced in the Hebrew lexicon.

At a later point in Egyptian history, the reverse situation occurs, as evidence attests to the presence of Judean scribes in Egypt.⁷⁹ That scribes during this period could switch between scripts, and likely languages, is exemplified by a few important texts. The example *par excellence* is Papyrus Amherst 63, which is a borrowed Semitic hymn in the Aramaic language but written in Demotic script.⁸⁰ The documents from Elephantine, which are mostly written in Aramaic for the Judean community there, contain a fragment bearing an Egyptian text transcribed into Aramaic script.⁸¹ A Demotic word-list from Tebtunis, admittedly much later than the Elephantine examples, contains several words of Semitic origin related to craft activity.⁸² These examples display the linguistic and cultural interaction between Semitic speaking, Judean, and Egyptian scribes through the late periods of Egyptian history. Thus, Quack's recognition, I would argue, is a unique and fascinating example of 'reborrowing,' whereby Hebrew טע originally from Egyptian 'r was loaned back into Egyptian as 't.

1.1.3 Hebrew טע from Egyptian 'r as Transfer of Knowledge

If, as I have argued, Hebrew טע derives from Egyptian 'r, then it tells us something additional about the development of writing technology in the Levant. The borrowing of a term like "pen" is indicative of the borrowing of the technology itself. In addition, it implies the transfer of

⁷⁹ See Kratz 2020: 60-64; cf. Porten 2002.

⁸⁰ See Steiner and Nims 2017 and van der Toorn 2018.

⁸¹ Vittmann 2003: 117-119; Quack 2017: 29.

⁸² Tait 1982: 210-217; Steiner 2000: 191-194.

technologies closely associated with the pen, and upon which the proper use and maintenance of the pen rely (see discussion of “ink” below). This is then suggestive of the borrowing of practices and assumptions necessary for the proper operation of those technologies and even perhaps the social systems that support these technologies.⁸³ This is nowhere more evident than with the pen.

1.1.3.1 The Egyptian Rush: The Pen of Ancient Israel

It has been commonly recognized that the ‘rush pen’ (perhaps better “rush-brush”) used in ancient Egypt saw broad adoption throughout the Levant.⁸⁴ And yet, few material remains have been discovered. One of the best-known examples is an Aramaic pincase found at Elephantine dating to the fifth century B.C.E, which contains rush brushes.⁸⁵ The field mainly relies on strong indirect evidence for the Levantine adoption of the Egyptian rush. This indirect evidence comes from two sources (1) iconography and (2) epigraphy. Neo-Assyrian representations of scribes display differences between Aramaic scribes and their cuneiform counterparts, showing some difference in the implements used.⁸⁶ The Bar Rakib inscription from Zincirli displays an Aramaic scribe carrying a pen case that very much resembles the Egyptian style (see discussion in 1.3 below with Bar Rakib [fig. 1.8]). Longacre notes the thinness of the pens depicted in the Bar Rakib inscription to suggest that this is additional evidence in favor of the adoption of the rush pen.

⁸³ Pfaffenberger 1992; Lemonnier 1986.

⁸⁴ Haran 1980; van der Kooij 1986; Lehmann 2020; Lemaire 1992.

⁸⁵ Longacre 2021: 18; van der Kooij 1986: 75, 90.

⁸⁶ Longacre 2021: 14-15 who cites Reade 2012.

The second major source of indirect evidence is epigraphic remains from across the Near East. Gerrit van der Kooij, in his pioneering dissertation, has shown that epigraphs written in Aramaic and Hebrew were composed with a brush-like implement, which though prepared differently than the Egyptian rush, can nevertheless be identified as a “rush pen.”⁸⁷ Likewise, studies of later epigraphs show the continuation of the use of the rush by Aramaic scribes in the 4th and 5th centuries.⁸⁸ Eventually, the rush is overtaken by the use of the Greek reed pen (καλαμος). In this regard, it is important to note that it is sometimes overlooked that there were two pens, rush and reed, at use in the ancient Levant, and in ancient Israel specifically. This error results from an inadequate disambiguation of the distinction between these pens that we should briefly explain.

1.1.3.2. Reed and Rush—A Distinction with a Difference

The “rush pen” is made from species of the genus *Juncus*.⁸⁹ Examples have been discovered in Egypt made from either *Juncus rigidus* and *Juncus acutus*.⁹⁰ The thin stalk of this plant from which pens were made measures about 1.5-2.5 mm in width. A scribe, having successfully harvested the rushes, would have to prepare them for writing. The scribe would cut the end of the rush obliquely, though other styles of preparation were possible, before bruising the fibers to

⁸⁷ van der Kooij 1986; cf. Lehmann 2020.

⁸⁸ Longacre 2021.

⁸⁹ As pointed out by Longacre (2021: 12 n. 23), it is often said that the rush pen was *Juncus maritimus* but this species of the genus *Juncus* is native to Europe and not Africa (Germer 1985: 200).

⁹⁰ Germer 1985: 200-201; cf. Longacre 2021: 12-13 n.23.

produce a short, taut brush-like implement.⁹¹ This is harder than it may sound.⁹² In my own experience, this task requires some skill, as the small increments, millimeters and centimeters, make precision a must. In addition, bruising the fibers can be a challenge. The supposed traditional method of preparation, by chewing, does not always, or easily, result in a usable brush and can frequently make the fibers unstable and difficult to write with. Even Kidd noted in his own examination that chewing seems “both unnecessary and, considering the ink, messy.”⁹³ Thus, it is possible that the bruising was done by softly hammering or pressing one end. Whatever the exact nature of the preparation, chewing or hammering, the result is a brush like implement that can smoothly move across the writing surface, akin to painting, (see Chapter 4 below for analysis of its use).

⁹¹ Through both my own experiments and the examination of a number of pictures of Hieratic papyri and ostraca, there seem to be slightly different ways to prepare the pen. These differences would still result in a usable rush, though with differences in appearance of the strokes. Thus, Tait’s description that the end was cut ‘obliquely,’ is adequately vague (Tait 1988). Similarly, the language of ‘bruised and frayed,’ for the writing end is adequately vague (Tait 1988; Kidd 2013). In some cases, there seems to have been an intentional pressing of the nib to provide the greatest width with a relatively flat nib. This results in a very calligraphic appearance common to Hieratic papyri, making broad vertical and horizontal strokes contrasting with light, thin diagonals. In other cases, the end does not appear to have been not flattened, and this gives, perhaps, a less elegant appearance. Among the examples I have seen, the differences are most evidence between the so-called ‘book hands’ and ‘administrative hands,’ though this is only an impression and would require more research.

⁹² What follows in this paragraph are the author’s own reflections on the difficulty of preparing a rush pen, which though made easier by instructional pamphlets, requires some, often overlooked, skill.

⁹³ Kidd 2013: 242.

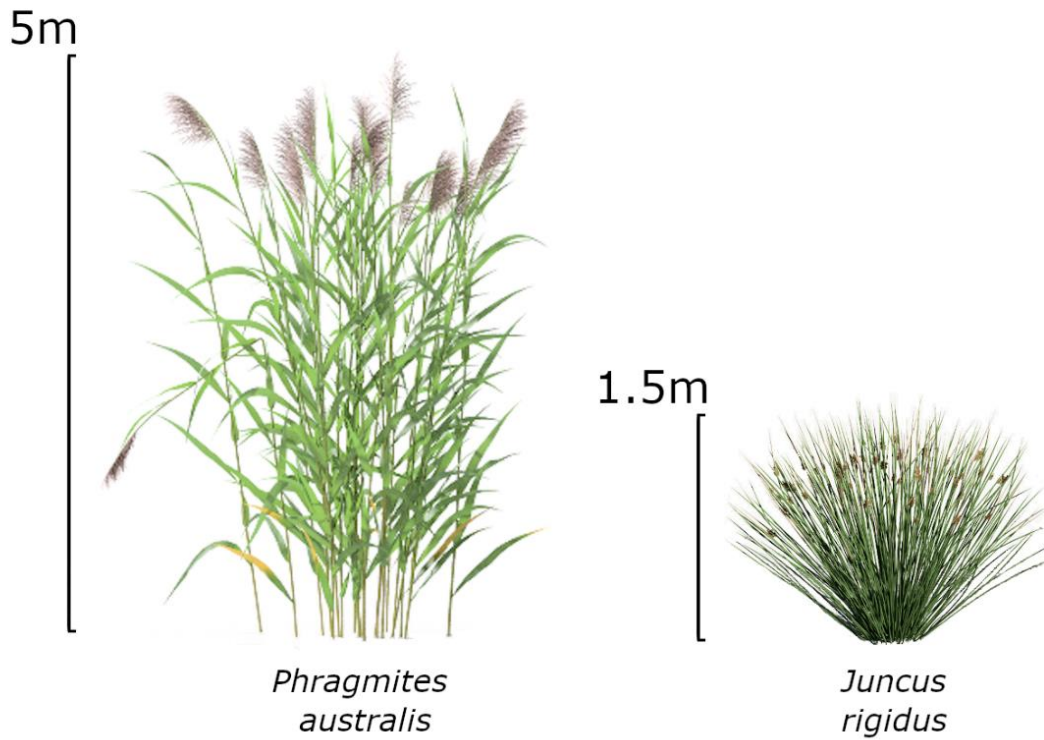


Fig. 1.2: *Phragmites australis* (reed) and *Juncus rigidus* Desf. (rush) (produced by the author)

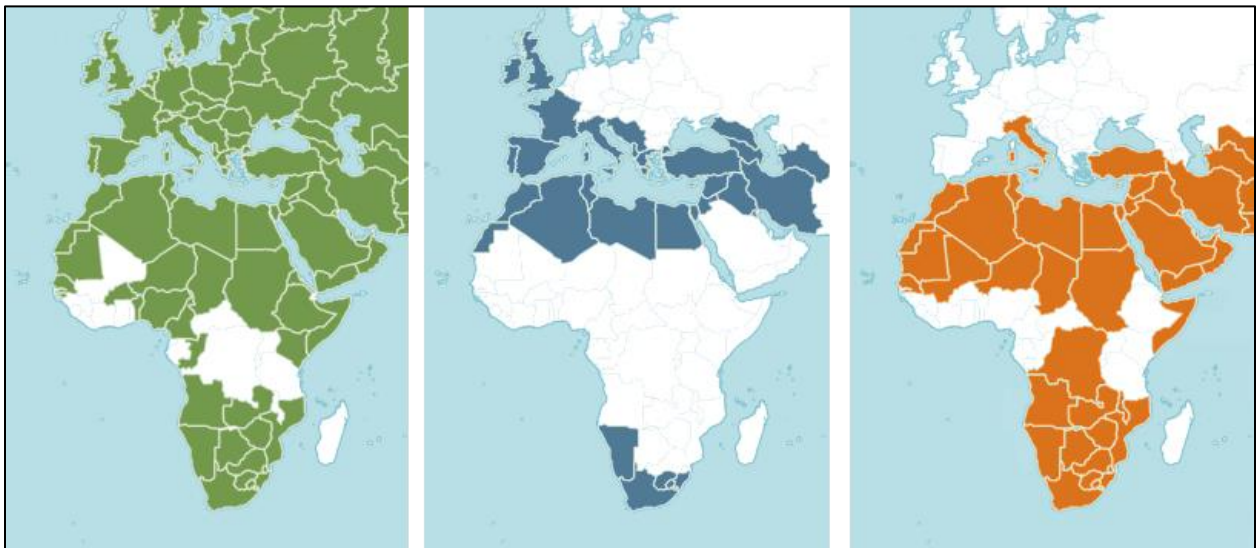


Fig. 1.3: Map of the current Eurasian and African distribution of *Phragmites australis* (Green), *Juncus acutus* L. (Blue), and *Juncus rigidus* Desf. (Orange) (adapted from Kew Backbone Distributions by the author)⁹⁴

⁹⁴ Kew Backbone Distributions (KBD), The International Plant Names Index and World Checklist of Vascular Plants 2022. Published on the Internet at <http://www.ipni.org> and <https://powo.science.kew.org/>.

The “reed” pen is made from the *Phragmites australis*.⁹⁵ The thicker stalk of the *Phragmites australis* is contrasted with the thinner rush pens made from the varia of the genus *Juncus*.⁹⁶ As such, the preparation for the common “reed” pen differs from that of the “rush” pen. First, the thicker stalk of the *Phragmites australis* would be cut down into the form of a tip which could vary in width.⁹⁷ Unlike the rush, which holds a viscous ink in the fray of its fibers, the tip of the reed pen would have to be split to facilitate the storage of a liquidous ink.⁹⁸ Over time, the reed pen would become dull, requiring its repeated sharpening to continue to produce smooth, slender even strokes.⁹⁹ Various other important details about the differences in the nature of writing are delineated nicely in Longacre’s work, but go beyond our needs here.¹⁰⁰

⁹⁵ Longacre 2021: 13.

⁹⁶ The current distribution of *Phragmites australis* is broad enough to suggest that it was available in ancient Egypt and ancient Israel (Srivastava, Kalra, and Naraian 2014), thus its name “common reed.” The exact extent is unknown in ancient times, though the evidence of basketry discovered in Egypt suggests it was indeed common (Wendrich 2000: 255). The distribution of *juncus rigidus*, however, was probably restricted to northern Africa and the Levant as it is to this day. Evidence of baskets from Egypt

⁹⁷ Longacre 2021: 13.

⁹⁸ Longacre 2021: 13.

⁹⁹ Longacre 2021.

¹⁰⁰ See Longacre 2021.

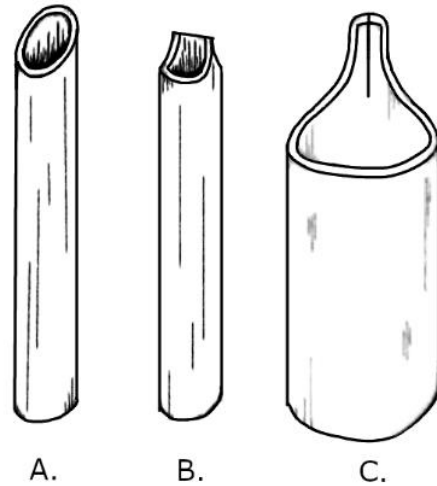


Fig. 1.4: Pen Tips: (A.) oval-shaped rush tip, (B.) chisel-shaped wide-nibbed rush tip, (C.) split nib reed tip (drawn by the author after Longacre 2021: fig. 3)

Understanding the variety of differences, the two implements should not be conflated. They are different technologies, requiring different practices and different materials (including different inks).¹⁰¹ Here it is important to note that they are distinguished not only in material and practical ways but also by time. The distinction between these pens (especially as concerns the ancient Near East) is distinctly diachronic. Epigraphic remains up unto the 4th century BCE strongly suggest that Aramaic scribes, and by extension Hebrew and other Levantine writers, used a form of the Egyptian rush in the early 1st millennium, prior to adoption of the reed pen in the late centuries of the 1st millennium.¹⁰² Thus, while on occasion there has been some confusion, it is highly unlikely that any inked alphabetic material in the early 1st millennium Levant would have been written using any implement other than the Egyptian-style rush, though

¹⁰¹ Clarysee 1993; Kidd 2013; Longacre 2021 cf. Christiansen 2017: 185.

¹⁰² van der Kooij 1986; cf. Longacre 2021, especially 12-20.

developments and changes in the preparation of the pen and angle of inception changed over time.¹⁰³

1.1.4 The Pen and (Technical) Scribal Knowledge

The adoption of the technology of the Egyptian rush in the ancient Levant is perhaps one of the most important aspects of the Egyptian origin of alphabetic scribalism. As will be argued throughout this dissertation, the adoption of an Egyptian-style pen (and ink) is determinative for a number of features that arise in alphabetic writing (ductus, layout, materials, etc.). This is partly due to the material and physiological constraints imposed on the writer by use of the Egyptian rush (see Chapter 2 below) but goes far beyond this. The Egyptian rush is quite difficult to use and, in many ways, not intuitive.¹⁰⁴ In addition to, as Tait says, “lengthy practice,” a scribe learning to use the rush would have needed to apprentice under a master.¹⁰⁵ As such, the adoption of the Egyptian pen is a veritable emblem for the adoption of a system of learning, the participation in a system of writing which includes the organization of writing, the use of writing, and even reflections on and reinterpretations of the meaning of the written word, knowledge that echoes throughout the history of alphabetic writing in the Levant.¹⁰⁶

The practice of writing with the rush pen, which will be explored in the next chapter, involves postures, gestures, and dispositions unique to the scribal arts in Egypt. Thus, in much the same way that the materiality of pressing wedges into clay formed unique habits and

¹⁰³ See van der Kooij 1986 and Lehmann 2020.

¹⁰⁴ Tait 1988: 478.

¹⁰⁵ Tait 1988: 478.

¹⁰⁶ These conclusions on scribal apprenticeship are perhaps best described as the result of a ‘community of practice.’ (Wenger 1998; cf. Lave and Wenger 1991).

assumptions for cuneiform scribes, the adoption of the Egyptian-style pen by Levantine scribes could not but reproduce the habits and assumptions associated with writing in Egypt, even if differing in graphic form and many times content.¹⁰⁷ The implications of the transfer of the technology of writing and thusly the habits and practice of writing will constitute the next three chapters of the dissertation, but at present we should continue to explore the relevance of other Hebrew terms for scribal tools that were borrowed from Egyptian to investigate what insights they might hold.

1.2 Ink (דִּי) from Egyptian *ry.t*

The Hebrew word for ink, דִּי (*dāyo*), occurs only once in the Hebrew Bible, but other semitic attestations include Aramaic, Syriac, Mandaic, and Arabic. The word has long been recognized as a loanword from Egyptian 𓂏𓂏𓂏𓂏° (*ry.t*), though the reason for its reception in Hebrew and other Semitic languages as דִּי (*dāyo*) was not always evident.¹⁰⁸ Lambdin offered that the form דִּי must have arisen through a scribal error, whereby ר was written as ד. This, it was argued, would explain the incongruency between the Egyptian pronunciation *ry.t*, with initial /r/, and the Hebrew pronunciation *dāyo*, with initial /d/.¹⁰⁹ This theory, however, has since been rejected for two main reasons. First, the attestations in Aramaic, Syriac, Mandaic, and Arabic all preserve a pronunciation with initial /d/ (דִּיֹּט in Aramaic¹¹⁰; دواه in Arabic¹¹¹) meaning that the theory of scribal error would have to suggest that all of these attestations arise from a single scribal error in

¹⁰⁷ See Crisostomo 2019: 77.

¹⁰⁸ Also in Aramaic, Syriac, and Mandaic; see Noonan 2019. For *ry.t* see *Wb* 2: 399.

¹⁰⁹ Lambdin 1953: 149.

¹¹⁰ Sokoloff 2002: 328.

¹¹¹ Lane 1968: 3.940.

one verse in Jeremiah.¹¹² This is an implausible conclusion. The second reason that this theory is now rejected is because of the reception of Semitic /d/ in Egyptian as /r/, which evidences that Egyptian /r/ was pronounced in a way similar enough to Semitic /d/ so as to result in transcriptions that confuse the two.

As observed earlier, relatively recent advances in the phonology of ancient Egypt have further shown that Egyptian “r” was pronounced something like a voiced apical alveolar tap /ɾ/. This is supported by the evidence of Semitic words in Egyptian, of which Schneider has collected several instances of Semitic /d/ represented by Egyptian /r/, and even a Hittite loanword with /d/ written in Egyptian as /r/.¹¹³ Thus the representation of Egyptian *ry.t* in Hebrew ירד (*dəyo*) is evidence of the peculiar articulation of Egyptian “r” as /ɾ/ and confirms its status as a loanword from Egyptian.

1.2.1 Ink (ירד) from Egyptian *ry.t* as Transfer of Knowledge

Like the pen before it, the borrowing of the Egyptian word for ink holds deep significance for understanding the origin of writing culture in the southern Levant. As we have made pains to state, the borrowing of terms like this can imply the borrowing of the technology and the practices to maintain and reproduce it. In the case of ink this means not only the acquisition of materials but the processes necessary for its production, and perhaps even the correct contexts for its production.

Unlike the pen, discussed above, which can and must be resourced and prepared by a single scribe, the production of ink may have involved a variety of social networks. This means

¹¹² Additional reason to reject this theory comes from Noonan who notes that the Hebrew and Aramaic forms must have been borrowed independently (2019: 87).

¹¹³ Schneider 1999: 155-158.

the production of ink may imply social contexts in which both the technological knowledge is passed down, the materials are readily available, and there is need of its production. Let us consider first the process and materials necessary for the production of ink in Egypt as evidenced by Egyptian documents and classical authors before considering how this might be brought to bear on the scant evidence from the southern Levant.

1.2.1.1. The Production of Ink in Ancient Egypt

In Egypt, writing practice two pigments of ink were regularly in use, black and red. The black ink, Egyptian *ry.t* (𓆎𓆑𓆑𓆑), was made of carbonized organic material, often by burning wood to produce charcoal (Eg. *d'b.t* | 𓆎𓆑𓆑𓆑).¹¹⁴ Christiansen refers to one ostrakon from Deir el-Medina that may elude to the *ry.t* of *ht dd(i)* or “ink (of) wood-pine,” perhaps the first mention of ink production in an Egyptian document.¹¹⁵ In spite of the wide use and production of ink in ancient Egypt, no self-reflective descriptions of the process exist. Much of what can be known must be drawn from classical sources like Philo, Pliny the Elder, Vitruvius, and Dioscorides.¹¹⁶ Though some interpretation is involved in ascertaining exactly the formula and process described in these sources, modern experimentation and examination of ancient texts has given us an adequate grasp of the production of ink in antiquity.¹¹⁷ In spite of the difficulties that must be overcome in describing the ancient processes, a rather succinct description that comes from Dioscorides’ *Materia Medica* in the 1st century CE, helps us understand the material composition of black ink. This text states,

¹¹⁴ Lucas 1922; Leach and Tait 2000: 238-239; Christiansen 2017: 171-172; cf. Lee and Quirke 2000: 108. See *Wb* 5: 536-537.

¹¹⁵ Christiansen 2017: 171-172; cf. Černý 1935.

¹¹⁶ Christiansen 2017; Autran et al. 2021.

¹¹⁷ Ghigo, Rabin, and Buzi 2019: 69-70; cf. Christiansen 2017.

The black ink with which we write is made from soot collected from torches. Three *oungiai* of soot are combined with one *oungia* of gum. It is also made from soot of pine resin and from the painter's soot mentioned above.¹¹⁸

The carbon material chosen for the production of ink was varied. Resins and botanicals were often used in the production of black ink. In particular, the use of incense for the production of ink was, as Christiansen states, a "time-honoured practice in Egypt."¹¹⁹ Medical and funerary papyri from the New Kingdom on refer to writing with "frankincense," "dry frankincense," "fresh incense," "soot of frankincense," and "myrrh."¹²⁰ This tradition of using incense for the production of ink continued into the practices of the Egyptian Coptic church, as one scholar records a recipe for ink provided to him by a Coptic priest. He states,

The recipe is as follows: Put a quantity of incense on the ground, and around it place three stones or bricks, and resting on these an earthenware dish, bottom upwards, covered with a damp cloth; ignite the incense. Carbon is formed and is deposited inside the dish, from which it is removed and made into ink by mixing with gum *Arabic* and water.¹²¹

The production of ink by religious specialists, for both medico-magical and religious purposes, is evident in the number of texts that contain, sometimes strange, collections of ingredients for the production of ink.¹²² Many of these are later Greek papyri but preserve ancient traditions and methods that harken back to early times in Egyptian history.

¹¹⁸ Christiansen 2017: 174 (translating Dioscorides *Materia Medica* 5:162; see Christiansen 2017: 174 n. 31).

¹¹⁹ Christiansen 2017: 175.

¹²⁰ Christiansen 2017: 175.

¹²¹ Lucas 1922: 13-14; cf. Christiansen 2017: 175 n. 38

¹²² Christiansen 2017: 180-182

In addition to carbon-based ink, another relatively common type of black ink was produced with trace metallic elements like copper, iron, and lead.¹²³ Many of these examples, however, come from papyri of the late period in Egypt, or even decades and centuries after. However, chemical analysis of inks from inscribed textiles from Deir el-Medina may show that mixed inks were in use at an early period in ancient Egypt, perhaps used parallel with black carbon-inks dependent upon the support.¹²⁴ Inks with metallic elements are somewhat less productive for use on papyrus but may have slightly better binding qualities when used on skins which were available in ancient Egypt, those less frequently used.¹²⁵

Aside from black ink, another pigment of ink was used in the bichrome writing of ancient Egypt, red ink. The red ink used in ancient Egypt was referred to euphemistically as *ry.t wꜥꜥd.t* (𓏏𓏏𓏏), which might be literally translated as ‘green ink.’¹²⁶ The reason for this euphemism has been the subject of some argument.¹²⁷ Whatever the reason for the circumlocution, this ink was a frequent part of writing practice and used for a variety of purposes, ritual, religious, and educational (see Chapter 8 below).¹²⁸ The production of red ink proceeded in much the same fashion as black ink described above. The principal difference being that the red ink derived

¹²³ Mocella et al. 2015; Christiansen et al. 2017a, 2017b; Brun et al. 2016; Autran et al 2021; cf. Christiansen 2017: 182-188

¹²⁴ Festa et al comments on this stating, “why this mixture was employed is not known, but perhaps it was more resistant than other ink solutions, e.g., carbon ink, to water and friction, since clothes intended for daily use were exposed to both on a regular basis.” (2019: 6)

¹²⁵ Ashton 2008: 51. Metallic elements could also be incidental, a product of the area of the workshop (Christiansen 2017; see below). Another reason for the inclusion of metallic elements in inks seems to have been their drying properties (Christiansen et al. 2020: 27834). For the availability of skins in ancient Israel, and the likelihood that papyrus was preferred see Haran 1980, 1982, and 1983.

¹²⁶ Quack 1998: 7-8.

¹²⁷ See Quack 1999.

¹²⁸ Posener 1951; cf. Griffiths 1972 and Ritner 1993

from red ochre.¹²⁹ This, like the soot for black ink, would be mixed with a binding agent (likely *gum Arabic*) and dissolved in water.¹³⁰ Both red and black inks would be dried and pressed into cakes and placed in the scribe's palette. Red ink, like black ink, was in use for the duration of Egyptian history, though the meaning of each differs in important ways.

As dried cakes in the scribal palette, the inks would require an ample mixture with water to produce a useable, yet viscous, ink for writing.¹³¹ This differs from later Greek and Roman practice. The reed pen used by writers during the Greek and Roman periods, as described above, were split to facilitate the storage of ink.¹³² This ink was more dilute and liquidous, stored in inkwells, requiring only that the scribe dip the pen before writing.¹³³ In contrast, the mixture of water and dried ink cakes with the brush-like rush pen required the 'painting' of letters onto a surface.¹³⁴ The viscous ink produces a deeper black brushed onto the surface with a much more clear ductus, as the layers of thick ink lay one on another, rather than the later liquid ink which fuses together before drying.¹³⁵

1.2.1.2 The Location of the Production of Ink in Ancient Egypt

Ink production is a complex process, as we have outlined, requiring specialists to mix the ingredients and networks of trade to acquire the materials. As such, Egyptian evidence, both

¹²⁹ Tait and Leach 2000: 238-239; Christiansen et al. 2020.

¹³⁰ Christiansen 2017: 170-171 and Christiansen et al. 2017: 209 note that the use of *gum Arabic* could be substituted on occasion with different types of binders, other resins and glues that were current in Egyptian paints (see also Newman and Serpico 2000: 476-477).

¹³¹ Clarysse 1993: 189; Kidd 2013: 242-243.

¹³² Longacre 2021.

¹³³ Clarysse 1993; Longacre 2021.

¹³⁴ Tait 1988; Clarysse 1993; and Kidd 2013.

¹³⁵ Angles 2019; Longacre 2021.

linguistic and archaeological, suggest that these inks were produced in workshops.¹³⁶ To date, however, no dedicated workshops have been found for the production of ink. This is probably because ink production was an extension, or biproduct, of a workshop dedicated, in large part, to the production of something else entirely. Pliny the Elder in describing the production of ink uses the term *officina* “workshop” to describe the place of production.¹³⁷ Dioscorides as well as Egyptian sources from the late period refer to the acquisition of soot from both glass-working shops and various sorts of metallurgists (coppersmith, goldsmith, etc) for refined inks and pigments of various colors.¹³⁸

Various activities like metal working and clothes dying, which in Egypt were often tied to the temple workshops, were related to the production of ink.¹³⁹ And while external workshops dedicated to a variety of task were involved in the production of the materials for ink, the evidence of medico-magical texts from ancient Egypt (Greek and Demotic from the Late period) may indicate that ink production was the purview of priests and religious specialists, whether they merely oversaw the process or were involved themselves is irrelevant.¹⁴⁰ The medicinal use of the products often required for the production of ink (incense, gum, and various botanicals) in conjunction with the content of the extant descriptions of ink (spells, alchemy, etc.) and the

¹³⁶ See Christiansen 2017 and Christiansen et al. 2017a.

¹³⁷ Christiansen 2017: 173

¹³⁸ Christiansen 2017: 187

¹³⁹ Christiansen 2017: 187

¹⁴⁰ Christiansen et al. states, “Considering the complex composition of the bulk of red inks analyzed here – and the amount of raw materials needed to supply a temple library – it seems unlikely that the priests, who wrote the manuscripts, manufactured the inks themselves. Rather, they must have acquired them or overseen their production at specialized workshops much like the Master Painters from the Renaissance. As such, it is important that a magical spell inscribed on papyrus, which was found together with the abovementioned alchemical treatise, refers to a red ink that was prepared inside a workshop (Greek: *εργαστηριον*).” (2020: 27834); cf. Christiansen et al 2017a which treats the documents from the Tebtunis ‘Temple Library’ (also Christiansen 2017 *passim*).

contexts (i.e., temples) is further evidence that ink production and use were the purview of elite, literate cult specialists who had access to the necessary materials (or those who could produce the materials) on hand and the skills to put them to use. Ink production in ancient Egypt was a byproduct of the combination of cultic and craft activities.

1.2.2.1 The Production of Ink in Ancient Israel

Not much is known about ink in ancient Israel. No documents describing the production or materials used in ink are known and the word יִי itself is a *hapax legomenon* appearing only in the book of Jeremiah (36:18). Much of what we know about ink in ancient Israel then, its materiality and production, must be assumed from the Egyptian and classical evidence. And there is good reason to believe that the Egyptian and Classical descriptions of the materials and production of ink in those cultures holds true for ancient Israel as well. In the first place, scribal practice of writing in both red and black inks is known in a few places in the southern Levant, most especially from Kuntillet 'Ajrud and Tell Deir Alla (see Chapter 3 below).¹⁴¹

Unfortunately, no chemical analysis of the Kuntillet 'Ajrud (non-invasive XRF or otherwise) has been undertaken. Fortunately, however, a chemical analysis of the ink used at Deir Alla was conducted, showing it to be carbon-based ink similar to the basic ink used in ancient Egypt.¹⁴² Egyptian black inks also show traces of metallic substances, either as deliberate inclusions for coloring or drying of inks and the same appears to be true in the later Lachish letters (Iron IIC), which may evidence a mixed carbon-metallic ink, apparently with traces of iron.¹⁴³ As in Egypt,

¹⁴¹ For Kuntillet 'Ajrud see Ahituv, Eshel, and Meshel 2012 and in Hebrew, Ahituv, Eshel, and Meshel 2015; For Deir 'Alla see Hoftijzer and van der Kooij 1976. Additional inscriptions in red ink were found at Tel Malḥata (Beit-Arieh 2013; Nir-El et al. 2013) and Tel Rehov (Ahituv and Mazar 2020; Mazar and Ahituv 2011; in Hebrew 2013; see fig. 1.6 below).

¹⁴² Mosk 1976: 21-22; the same is true of the corpus from Arad (Gopher 1981: 180)

¹⁴³ Lewis 1938a; 1938b.

the inclusion of metallic elements in the carbon-based inks may be a result of the place of their production (a metallurgists shop?) or may be a result of their being deliberately mixed in.¹⁴⁴ In either case, the little chemical data that exists for the inks of the southern Levant indicate that they are broadly similar to inks from ancient Egypt.

Another reason to suppose that the production of ink was similar in both cultures is the evidence for hieratic writing in the Levant. Inked inscriptions in hieratic have been found as far north as Tel Bet Shean, where a prominent Egyptian garrison was situated during the Late Bronze Age.¹⁴⁵ Though never subject to chemical analyses, these hieratic inscriptions (over 40 in total) attest to the use of both inks, red and black. While black ink is the most frequent, one example from Tel Sera‘ (TSHI 4) is written in red ink.¹⁴⁶ While it is possible that Egyptian ink was imported to sites of Egyptian garrisons in the Levant, it seems more likely that the pigments and inks necessary for the production of texts were resourced locally, requiring local ‘know-how.’

Finally, the linguistic evidence for the wide distribution of the *ry.t* as a loanword in Semitic languages suggests that not only the product “ink,” but the practice of its manufacture and the practice of its use were broadly known, and that this knowledge was Egyptological in origin, perhaps having been introduced to the Levant by Egyptian craftsmen, scribes, and religious functionaries during the periods of Egyptian imperialism.¹⁴⁷

¹⁴⁴ Christiansen 2017: 167-195; Christiansen et al 2020: 27834.

¹⁴⁵ For distribution see Wimmer 2021, *forthcoming*; Levy 2017; for Beth-Shean fragments see Wimmer 1994, 2009; for Bet Shean see Mazar 2009.

¹⁴⁶ Wimmer, personal communication. This sherd was unfortunately not published in Goldwasser 1984, but will be included in Wimmer *forthcoming*. In addition, a red-ink inscription classified as ‘Cypro-Minoan’ or ‘Old Philistine’ was discovered at Ashkelon dating to the 11th century (Cross and Stager 2006: 131-134).

¹⁴⁷ Burke 2020; cf. Na’aman 2020

If the importation of the term for ink and the evidence for the use of the ink itself implies that the processes for the production of ink in ancient Israel were of Egyptian origin, then there is one last suggestion about the production of ink in ancient Israel that is worthy of comment. We have already noted that carbon-based ink was at use in the ancient Levant, but there remains an issue in the production of ink to be discussed—the binding agent. In Egyptian the word for the binding agent used in inks is *qmy.t* (𓆏𓆑𓆑𓆑𓆑𓆑), which is derived from the sap of the Egyptian acacia tree (*acacia nilotica*).¹⁴⁸ Notably the Egyptian term for this type of wood, Egyptian *šnd.t* (𓆏𓆑𓆑) was loaned into Hebrew as *חטש* and likely referred to several varia of acacia found in Egypt and the surrounding areas, including the Sinai.¹⁴⁹ In spite of this, the term for the biproduct, the sap of the tree, is not known in ancient Israel. The Egyptian term *qmy.t* was loaned broadly and appears as a loan into Greek *κομμι* and Latin *gummi*, but apparently only comes into the Semitic languages at a very late period reflecting the influence of the Greeks and later Romans (Aram. *קומא* and Syr. *ܩܘܡܐ*).¹⁵⁰ Otherwise, it is unattested in any other Semitic language in any period (Akkadian, Arabic, Hebrew, Ethiopic).¹⁵¹ In ancient Israel words for Egyptian resins are known, the sole example occurring in Exod 2:3, the loanword *חפה* from Egyptian *šft* (𓆏𓆑𓆑) as a sort of pitch, or resinous oil, by which the *חפה גומא* of Moses was adhered.¹⁵² Thus, Egyptian practices and products for adhesive or binding agents were known in ancient Israel, but whether any Egyptian-derived products were involved in the production of ink is difficult to say.

¹⁴⁸ Christiansen 2017: 170-171; Christiansen et al. 2017: 209; Newman and Serpico 2000: 476-477; See *Wb* 5:39.

¹⁴⁹ Noonan 2019; see also *Wb* 4:521.

¹⁵⁰ Christiansen 2017: 171, with references in n. 21; for Semitic examples see Sokoloff 2002 and Payne-Smith 1998.

¹⁵¹ Later Amharic *ኮማ* (*koma*) is unrelated.

¹⁵² Noonan 2019; see also *Wb* 4: 118.

The lack of an Egyptian loan word for the binding agent frequently used in the production of a commodity does not imply, however, that the technology or product was unknown. It is possible, but extremely unlikely, that such words were loaned but unattested in sources or, more likely, that another word described the binding agent used for ink production in ancient Israel.¹⁵³ This binding agent was likely resourced by local specialists, or perhaps imported from elsewhere. In this light, it is perhaps intriguing to note the mention of the distribution of gums recorded in O. Heshbon 4, which refers to distributions of נכאת “tragacanth gum” from the palace to two individuals.¹⁵⁴ While gums and saps have medicinal and gastronomic purposes, both gum acacia (Eg. *qmy.t*) and tragacanth gum (Heb. נכאת) have pigment binding properties that make them the preference of artists to this day.¹⁵⁵ Due to their broad use, however, we should suggest that, though the process for the production of ink in ancient Israel may have derived from Egyptian practices, materials were sourced locally or acquired through existing trade networks by and for local scribes.

1.2.2.2 The Location of Ink Production in Ancient Israel—An Exploration

In ancient Egypt, the location for the production of ink was in workshops, perhaps closely associated with the temple or other cultic activity. As we have mentioned, the production may have been performed or overseen by priests and cultic specialists to ensure the proper use of ingredients and perhaps even quality control. As such, the involvement of priests is due not only to the use of inks for medico-magical purposes or the association of various trades with cultic

¹⁵³ As mentioned, gum Arabic could be substituted with other binding agents, see note 82 above. Historically, gums and resins, however, are preferred.

¹⁵⁴ Cross 1975: 4-5.

¹⁵⁵ See Mayer 1991.

activity but also in part to the odd and almost occultic ingredients described in different Egyptian medico-magical texts. Consider the following from a Greek medical papyrus,

The hide is inscribed with blood of an ass from the heart of a sacrificial victim, with which is mixed the soot of a coppersmith. But the leaf of flax is inscribed with falcon's blood, with which is mixed the soot of a goldsmith. But the leaf of the hieratic papyrus is inscribed with eel's blood, with which acacia is mixed.¹⁵⁶

The ingredients here display the curious blend of material necessity (to make ink) and the magical nature of the process. We thus concluded that, in ancient Egypt, ink production and use were, though not exclusively, the purview of literate cult specialists and priests, who, perhaps by virtue of elite patronage, had access to the raw materials to make ink. Because it has been suggested that these cult specialists were supported or even supplied by workshops from which the raw materials to make ink would have been a byproduct, then we should imagine that within this network of the organization raw materials and those who wished to purpose them to new use (i.e., the production ink) were relatively tightly knit. Craftspeople and cultic specialists probably overlapped in social and geographic space. The pigments that were used in ink were also likely used in other activities, such as textile production—as Christiansen notes.¹⁵⁷

In the ancient Levant, a similar sort of complexity must have existed. If ink was produced locally for use, as is probable, a similar sort of large-scale organization of labor and goods would have been necessary—people with access to the proper commodities and materials who had need, and most especially the knowledge of putting it to use. Thus, in searching for the location of the production of ink, gathering together as many threads as possible to show this type of network is necessary. We should attempt to find a location in which, ideally, cultic activity is

¹⁵⁶ PGM IV: 2006-2125; translated by Christiansen 2017.

¹⁵⁷ Christiansen 2017

paired with access to a variety of raw materials and at which literate activity is taking place at a high-level, perhaps with elite or medico-magical associations. While we could attempt to draw these connections at a number of sites in the Levant, with varying degrees of success, one elite compound from Tel Rehov yields intriguing and unique connections that make it an ideal candidate for the location of the production of ink.



Fig. 1.5: Area C, Stratum IV with ‘special finds’ (produced by Jay Rosenberg and Nava Panitz-Cohen, from Panitz-Cohen and Mazar 2022: fig. 1)

In the Levant, several inked inscriptions are known from sacred precincts, some of which attest to nearby incense altars that would have, at the very least, produced the carbonized remains

suitable for the production of ink.¹⁵⁸ The links between literate activity, religious specialists, craft workshops, and cultic activity, however, become most especially apparent in the case of the 9th century finds at Tel Reḥov. Excavations in Area C at Tel Reḥov revealed seven buildings dating to the Iron IIA.¹⁵⁹ These buildings yielded unique and exceptional finds relating to cultic and literate activity in an elite context, including at least three inscriptions found in separate buildings.¹⁶⁰ For our concerns, it is important to note the high number of altars and incense burners, in particular that the carbonized remains of incense and raw materials are primary components in the production of ink.¹⁶¹ It is argued by the excavators that the remains may indicate the presence of priests, and that the smaller buildings (CQ1-3) may have housed these cultic specialists.¹⁶² Building CP seems to have been particularly dedicated to ritual activities, including offertory and feasting rituals. In Building CP, in Room 1, a sherd (Reḥov no. 9) was discovered which bears the name Elisha (עֵלִישָׁא) written with quite large letters in red ink.¹⁶³ Due to the cultic associations of the room, the date of the stratum (IV), and the apparent associations of the site with the Nimshids, Mazar suggests that this could be the very same Elisha known from the Biblical text (2 Kgs 2-15).¹⁶⁴ Whether or not this is the case, the association is intriguing.

¹⁵⁸ The inscriptions from Arad and Kuntillet 'Ajrud especially come to mind (Aharoni 1982; see note 92 above)

¹⁵⁹ Panitz-Cohen and Mazar 2020a; 2022; Mazar 2020a

¹⁶⁰ Panitz-Cohen and Mazar 2020b; 2022; Aḥituv and Mazar 2020; Mazar 2020b; Mazar and Aḥituv 2011

¹⁶¹ Mazar 2020b; Panitz-Cohen and Mazar 2022

¹⁶² Panitz-Cohen and Mazar 2020a; 2022

¹⁶³ Mazar and Aḥituv 2011; Aḥituv and Mazar 2020

¹⁶⁴ Mazar 2016 and Panitz-Cohen and Mazar 2022

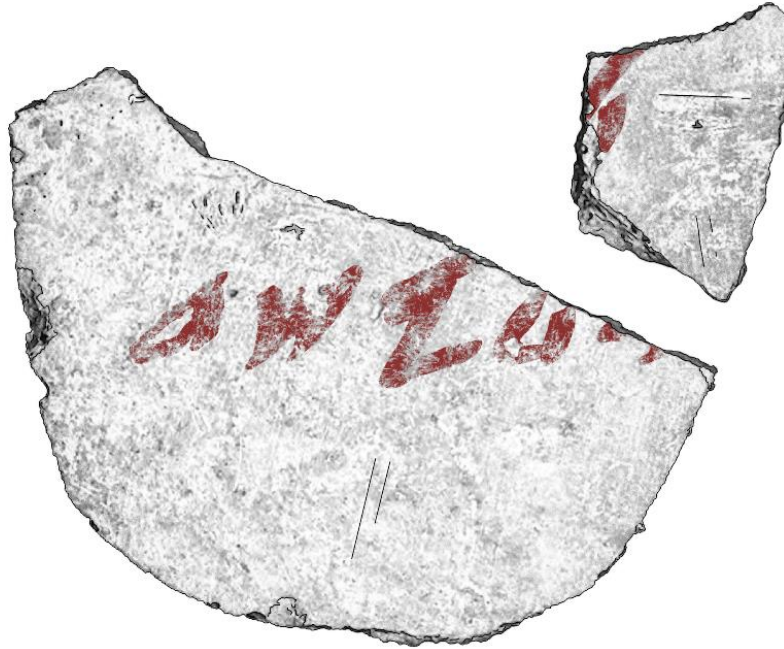


Fig. 1.6: The “Elisha” inscription, Rehov no. 9 (drawn by the author)

The character of Elisha in the biblical text is remembered in a series of *legenda* contained in the book of 2 Kings.¹⁶⁵ Whatever their literary or historical background, these stories represent important details about the figure of Elisha that make the association proposed by Mazar, in light of the finds of the site, something worthy of consideration.¹⁶⁶ Among the stories about Elisha preserved in the biblical text are various medico-magical and alchemical tales; for example, Elishah is said to have restored unproductive waters with salt (2 Kgs 2:19-22), neutralized ‘death’ (poisonous plants) in the pot (2 Kgs 4:38-41), and enacted curious healing rituals, in particular lying face to face and breathing into the Shunamite boy (2 Kgs 4:8-37). With these stories of Elisha in mind, the inscription in red ink bearing, perhaps his name, should cause us to recall the

¹⁶⁵ Rofé 1970: 430-433

¹⁶⁶ Stipp 1987 and Sauerwein 2014 for redaction and literary historical attempts to reconstruct the history of the textual development.

frequent attestation of red ink in magico-medical procedures in Egyptian practice.¹⁶⁷ A New Kingdom magical spell, for instance, ends with instructions written in red ink, directing the cultic officiant: “Dieser Spruch werde gesprochen über 2 Bildern des Thot, die auf die Hand des Patienten zu zeichnen sind mit roter Tinte, das Gesicht des einen gegen das Gesicht des anderen (gewandt).”¹⁶⁸ The connection between cultic activity, writing in red, and the tales of Elisha form an intriguing nexus that deserves further consideration. Perhaps there is insufficient evidence to draw an exact conclusion, but the writing of the name in red seems to be in some way related to cultic activity at the site, and in this quarter in particular.

In Building CQ3, just north of Building CP, another inscription may bring closer religious associations. Another more enigmatic inscription reads, אֵלֶּדֶק־שָׁחֲלִי.¹⁶⁹ In the *editio princeps*, the excavators suggest to read “Elšedeq (son of) Šaḥalī” wherein the patronym שָׁחֲלִי means something like, “my lion (cub).”¹⁷⁰ The noun שָׁחֲלִי “lion” is hitherto unattested as a personal name. The inscription lacks the expected בן “son of” to identify שָׁחֲלִי as a patronym, though this is certainly not an unknown practice (see Samaria ostraca in chapter 2 below). If we consider the cultic associations at this site, it may be possible to read this inscription as, “Elšedeq who entreats (the deity)” or “who intercedes.”¹⁷¹ The relative ׀ is known from northern Hebrew

¹⁶⁷ Griffiths 1972; esp. Ritner 2008.

¹⁶⁸ Thesaurus Linguae Aegyptiae, Magische Papyri Neues Reich, pLeiden I 348, Saying 21; transcription and translation by Katharina Stegbauer. See also saying 22 from the same papyrus (pLeiden I 348) for curing *ahw* disease in the stomach, wherein signs are drawn in red ink on the patient (Thesaurus Linguae Aegyptiae, Magische Papyri Neues Reich, pLeiden I 348, Saying 22, transcription and translation by Katharina Stegbauer).

¹⁶⁹ Mazar and Aḥituv 2011; Aḥituv and Mazar 2020.

¹⁷⁰ Mazar and Aḥituv 2011; Aḥituv and Mazar 2020.

¹⁷¹ The general meaning is something like, “pray (anxiously, sincerely)” or more crudely, “beg.” But on two not insignificant occasions intercession is intended (Exod 32:11, 1 Kgs 13:6).

from a very early period (e.g., e.g., Judg. 5).¹⁷² Additionally, the verb חלה (I) in the biblical text derives from an original \sqrt{hly} and is used on several occasions to refer to the seeking or entreating YHWH (Ex 32:11; 1 Sam 13:12; 1 Kgs 13:6 (x2); 2 Kgs 13:4; Jer. 26:19; Zec 7:2, 8:21-22; Dan 9:13; 2 Chr 33:12).¹⁷³ Consider the following description of a request for healing from the book of Kings,

וַיַּעַן הַמֶּלֶךְ וַיֹּאמֶר | אֶל־אִישׁ הָאֱלֹהִים חֹל־נָא אֶת־פְּנֵי יְהוָה אֱלֹהֶיךָ וְהִתְפַּלֵּל בְּעַדִּי וְתִשָּׁבֵב יָדִי אֵלַי וַיִּחַל
אִישׁ־הָאֱלֹהִים אֶת־פְּנֵי יְהוָה וְתִשָּׁבֵב יָד־הַמֶּלֶךְ אֵלָיו וַתְּהִי כַּבְּרָאשִׁינָה

And the king answered and said to the man of God, “*Entreat* now YHWH your God and make prayers on my behalf that my hand would be restored to me.” And the man of God *entreated* YHWH and the king’s hand was restored to him just as it was before. (1 Kgs 13:6)

While the simpler reading from the *editio princeps* should be preferred, it is nevertheless possible that Elšedeq was a lower cultic functionary living in the complex of buildings north of the cultic Building CP. Whatever the case may be, the associations of writing activity for religious purposes is certainly known in ancient Israel. A rather famous example comes from Numbers 5:23 which describes the writing of a curse in ink on some material (probably papyrus) which is washed away into a cup that the woman accused of adultery is made to drink.¹⁷⁴ That cultic personnel, and priests, may have been especially associated with writing is additionally supported by allusive descriptions in the book of Ezekiel. In Ezekiel chapter nine, a vague description of a heavenly figure describes a “man clothed in linens” (בדים) from Egyptian *bd3*) who has a “scribal palette” (קסת הסופר) from Egyptian *gsti*) on his waist (see 1.3 below). The

¹⁷² Though unknown from inscriptions (Garr 2004), the relative *w* has been argued as a feature of northern Hebrew on the basis of the biblical text (Rendsburg 2002, 2003).

¹⁷³ DCA 3: 228-229

¹⁷⁴ Haran 1982.

poetic yet ambiguous description, “clothed in linens,” seems to be an allusion to priestly garments (e.g., Exod 28:42, 39:28; Lev. 6:10, 16:4, 23, 32).¹⁷⁵ Inscriptions found in and around the vicinity of an area with cultic activity is no surprise. And, whether or not they were writing, the cultic specialists in this compound were involved in ritual activity.

Literate cultic officials were present writing in ink at the compound in the Northwest Quarter of Area C at Tel Rehov and seemed to be attached to elite networks that would have provided access to raw materials and perhaps other materials for writing activity (i.e., papyrus).¹⁷⁶ A hippo-type storage jar was discovered in building CF, just northwest of building CP, that bears an incised inscription with the common ownership formula, לַשְׁקִינִימֶשׁ “to the cupbearer of Nimshi.”¹⁷⁷ The title cupbearer indicates a high official associated with the Nimshid dynasty. The connection between this quarter and, potentially, Nimshid administration seems likely.

The cultic officiants at Tel Rehov, whether priests or the “sons of the prophets” (2 Kgs 4; 9:1-5), would have had access to goods like myrrh, frankincense, and other goods described in the Greek and Egyptian texts used for the production of ink. Additionally, they may have had access to more exotic goods described in these texts (dates, figs, etc.). Area E on another part of the tell yielded an open air sanctuary with perhaps an auxiliary building or residence for cultic personnel.¹⁷⁸ Near this courtyard were metallurgical workshops, and loom weights and wooden

¹⁷⁵ Frequently with $\tau\iota\phi\alpha$ a cultic garment (1 Sam 2:18, 22:18; 2 Sam 6:14; 1 Chr 15:27).

¹⁷⁶ Panitz-Cohen and Mazar 2022.

¹⁷⁷ Mazar and Ahituv 2011; Ahituv and Mazar 2020.

¹⁷⁸ Mazar 2020a; Panitz-Cohen and Mazar 2022.

beams in the Northwest Quarter (Area C) that attest to textile manufacture and perhaps dying.¹⁷⁹ We have mentioned above that O. Heshon 4 makes mention of נכאת “tragacanth gum” being distributed by the palace, an imported commodity with medicinal and pigmenting properties, one of the more preferable binding agents for ink.¹⁸⁰

While there are no texts that describe the place and process of ink production in the Levant, the above attempts to draw together lines of evidence to suggest that high-level literacy activities with perhaps the personnel and material available make at Tel Rehov during the 9th century a suitable place for the production of ink.

1.2.3 Ink (דיו) from Egyptian *ry.t*—Summary

The borrowing of Egyptian *ry.t* “ink” in Hebrew דיו is an important data point in understanding the origin of scribal practice, both writing in and production of ink, in the ancient Levant. It points us toward questions of the resources and materials that are illuminated by both Egyptian and classical sources. Understanding the large-scale nature of labor organization to acquire the raw materials for the production of ink allows us to read inked inscriptions as more than merely linguistic and paleographically important artifacts but as indexical of larger processes and more expansive social networks of knowledge.

The Egyptian sources themselves suggest such a nexus of material culture and provide us with the social contexts in which we might find material and text meeting. They also offer us insight into who would have access to and want of materials for the production of ink—priests and cult specialists. While undoubtedly priests and cult specialists were not the only ones who

¹⁷⁹ Panitz-Cohen and Mazar 2022; See Escobar (2017) and Zawadski (2006) wear a connection between wool-dying, technical manuals, and the Labushtu rituals, a ritual when the cult statue would be reclothed, are made – showing the nexus between raw material, organization of labor, text, and religious ritual.

¹⁸⁰ See note 106 above.

had access and need, nor were they the only literate class, they did have a unique association with the more mystical elements of writing, even in ancient Israel.

1.3 Scribal Palette (קסת) from Egyptian *gsti*

The Hebrew phrase קסת הסופר occurs three times in a single passage in the book of Ezekiel (9:2-3, 11). In the vision, Ezekiel sees a man clothed in linens (בדים, itself an Egyptian loanword) with a “scribal palette” (קסת הסופר) on his waist. The man proceeds to mark (והתוית, lit. “to *tav*”) those around Jerusalem who mourn its abominations. The context itself is intriguing but the inclusion of קסת הסופר in the passage makes it all the more so. It has long been recognized that the Hebrew term קסת derives from the Egyptian *gsti* (𓆎𓅓𓏏) meaning “scribal palette.”¹⁸¹ The palette was part of the typical kit for a scribe in ancient Egypt, and subsequently, it seems, the Levant (see below). In what follows, we will briefly describe what one of these palettes looked like in ancient Egypt and the extralinguistic evidence that such palettes were used by alphabetic scribes. We will then consider the scribal palette as an artifact, and its social significance in ancient Egypt to see whether the associations between the palette and symbols of scribal identity in Egypt were transferred over to the Levant.

1.3.1. The Scribal Palette—A Brief Description

The scribal palette was the material support for the two technologies we have already explored, rush pens and dried ink cakes. Both of these were held in the scribal palettes, perhaps more properly called ‘pen cases.’ Judging from the collection of scribal palettes in the British Museum, they could average around 11-15 inches in length, with some larger examples being

¹⁸¹ Lambdin 1953: 154; Muchiki 1999: 255; Noonan 2019: 194; Zhakevich 2020: 139

about 20 inches long.¹⁸² They vary in width, thickness, and material composition (wood, ivory, stone, and faience).¹⁸³ Some extant palettes that have been discovered were clearly designed for regular use by scribes and writers whereas others may have served various ‘non-functional’ purposes (perhaps better, ‘non-utilitarian’).¹⁸⁴ A typical palette had a longitudinal slot in the center for holding a collection of rush pens and two circular depressions at the top for holding the two inks known from ancient Egypt (see 1.1.2 above). When designed for regular use, the pen case made a handy and practical support both for carrying the fragile rushes and the use of ink in writing. The palette, with pen and ink in place, was an integral part of the scribal kit which featured in addition a leather bag and container for holding papyrus (fig. 1.7 below).¹⁸⁵

¹⁸² Glanville 1932; Parkinson and Quirke give a slightly smaller range of 8-16 inches (20 to 43 cm; 1995: 31).

¹⁸³ Sagrillo 2017: 385; cf. Glanville 1932.

¹⁸⁴ See Sagrillo 2017 and Cashman 2015.

¹⁸⁵ Bryan 1985: 19; Vandier 1964: 164; Parkinson and Quirke 1995: 32-35

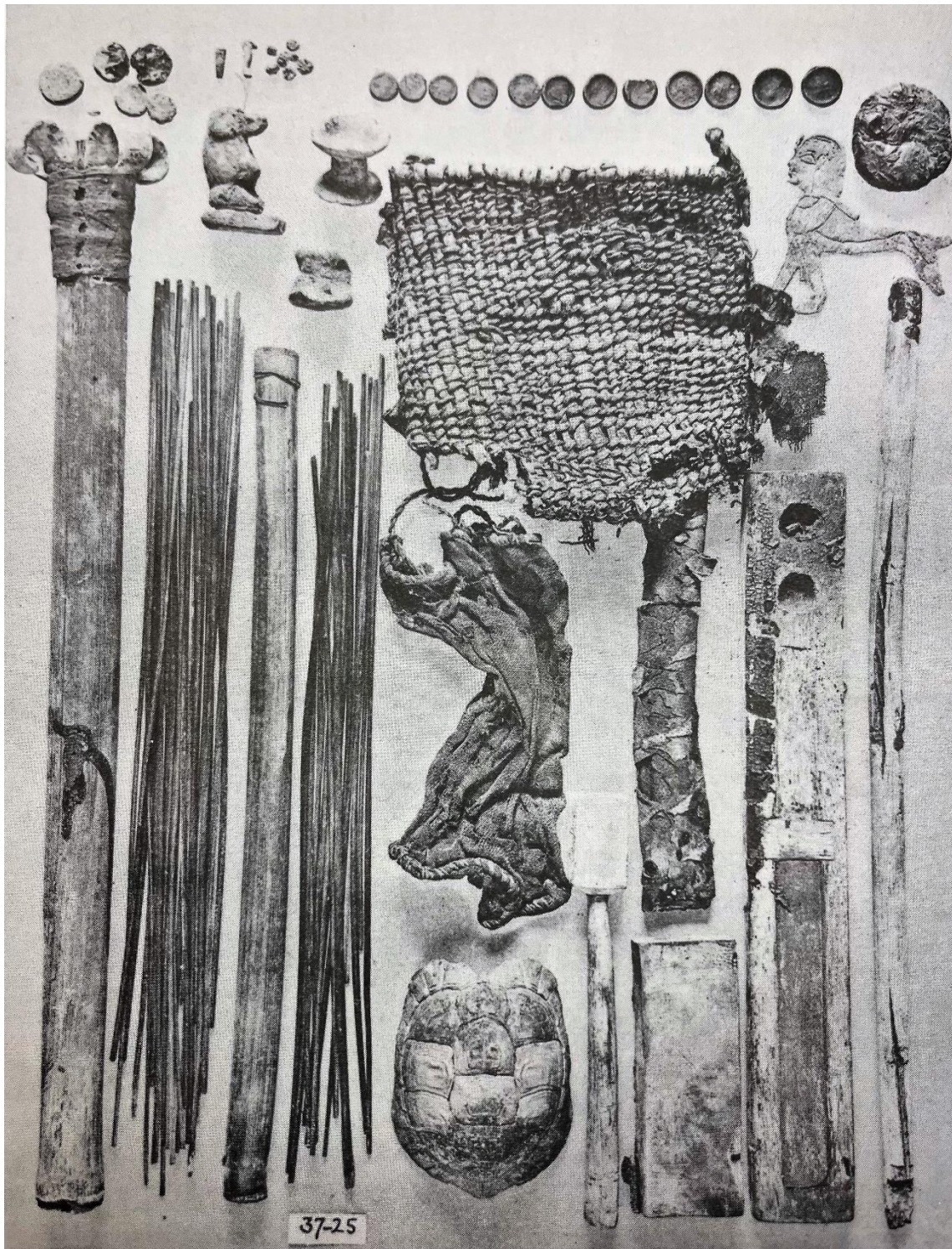


Fig. 1.7: 18th dynasty set of writing equipment discovered by Howard Carter (among the items are pen, palette, bag, and a figurine of the god Thoth as a baboon; from Parkinson and Quirke 1995).

Evidence for the use of the Egyptian-style scribal palette comes from not only the biblical attestation of קסת הספר in the book of Ezekiel, but also iconographic and archaeological data. The sole example of a representation of an alphabetic scribe using an Egyptian-style palette has already been mentioned, the Bar Rakib inscription (fig. 1.9 below), though it will be explored in detail later. Aside from this, however, the only other non-textual evidence for the adoption of the scribal palette is the discovery of the pen case of a writer from Elephantine, inscribed with Aramaic in ink.¹⁸⁶ When taken in conjunction with the evidence for the adoption of the Egyptian-style rush pen, and considering the adoption of Egyptian *gsti* into the Hebrew lexicon as קסת, we can safely assume that the Egyptian style of palette was available and at use in the southern Levant, as a tangible support for the adopted technologies of pen and ink.¹⁸⁷

1.3.2 The Scribal Palette and Its Social Significance

In one sense the palette, as a technological borrowing, could appear as a mere accoutrement to scribal practice, but this would overlook the fact that the scribal palette is a culturally significant symbol in Egypt and consequently a culturally symbolic borrowing in the Levant. In Egyptian Hieroglyphic, the logogram for Egyptian *zh*ʾ (𓂏𓂏) “scribe” is a scribal palette. Scribal palettes in ancient Egypt were often signed or decorated with Hieroglyphic Egyptian writing. For example, the two scribal palettes in fig. 1.8 (below) bear inscriptions of differing ornamentation.¹⁸⁸

¹⁸⁶ Longacre 2021: 14; van der Kooij 1986: 75, 90.

¹⁸⁷ The date of this, however, has been questioned. Quack states that the phonetic correspondences in the borrowing of Egyptian *gst(i)* as קסת indicates that it is a late borrowing in the first millennium (2022: 87-88). Wilson-Wright dates the borrowing similarly to “after 750 BCE” due to the phonetic correspondences (2023: 175-176, 179). However, his argument is unconvincing as the two phonetic sound changes (PS */s/ > /š/ and PS /ʰs/ > /s/) adduced cannot be dated with precision and probably underwent gradual change diffusing through dialects at different times (see Judg. 12:6 [ס\ש]). Further, Wilson-Wright’s linguistic arguments are too heavily reliant on material evidence, as such he presents the date for the borrowing as post 750 BCE because the “material evidence (the Bar Rakib stele) suggests that *qeset* entered the Hebrew lexicon sometime after the mid-eight century BCE” (2023: 175).

¹⁸⁸ Glanville 1932: 55-57; Parkinson and Quirke 1995: 31.

In many ways an emblem of the scribal profession, or at least literacy, scribal palettes, both model and functional, are attested as grave goods for both men and women.¹⁸⁹ Cashman presents evidence to suggest that model scribal palettes were a component of elite gift exchange.¹⁹⁰ As such, it served as a tangible and visual symbol of perhaps both literacy and elite status. The sort of evocative, visual symbolism of the scribal palette then should give us pause to consider the potential symbolism of the scribal palette in the Levant.



Fig. 1.8: 18th dynasty scribal palettes – (Top) scribal palette with hieroglyphic relief (BM EA 12784); (Bottom) scribal palette belonging to Meryra (BM EA 5512).

¹⁸⁹ Bryan 1985; Cashman 2015; Pinarello 2015 (though this source is interested deconstructing the concept of a scribe, seeing it as a modern constructions); Sagrillo 2017; cf. Allon and Navrátilová 2017.

¹⁹⁰ Cashman 2015: 622-623.

While pen and ink have obvious and realized practical purposes, the palette is less so a tool of practicality and more a tool of prestige, a symbol of status and perhaps identity. The identification of the scribe with the tools of the trade is well known in Egypt, where a nexus of symbols, gestures, and postures connect to identifying scribes in art and statuary.¹⁹¹ The same may be true of scribes in the Levant, though less data exists. In this respect the Bar Rakib inscription (fig. 1.9) is important to consider once again. The scribe as depicted is clearly identified by the scribal palette he holds in his left hand and the wax board under his arm. The relief is nevertheless designed to be visually interactive and evocative. The image of the seated king draws upon, as Hogue states, “typical Northern Levantine artistic repertoire for demonstrating kingship” and the whole of the scene appropriates imagery, of a king receiving an audience, already well-known in the region.¹⁹² The monument is laconic, identifying only the king’s subservience to the Assyrian empire, but speaks to the viewer through recognizable motifs. In particular, the objects each figure holds in their left hand are symbolic of each actors’ role and position, the living king and the scribe.¹⁹³ The scribe is dressed plainly in a long tunic, the only things that immediately stand out are the palette and wax board. Drawing on the visual emblem of scribal identity.

¹⁹¹ Allon 2013; Allon and Navrátilová 2017.

¹⁹² Hogue 2022: 41, see also discussion in 28-41.

¹⁹³ Hogue 2022: 28; Van Loon 1986: 246-247.



Fig. 1.9: Bar Rakib (III) inscription (8th century BCE; wikimedia commons, fair use protected under CC BY-SA 4.0)

Considering the cultural and visual significance of the scribal palette, let us return to the few uses of the word קֶסֶט in Ezekiel. These few occurrences are, like Bar Rakib, insightful for understanding the emblematic nature of the scribal palette in the Levant. As we have mentioned above in our discussion of Tel Rehov and the production of ink, the poetic description of the “man clothed in linens” in Ezekiel is an allusion to priestly garments (e.g., Exod 28:42, 39:28; Lev. 6:10, 16:4, 23, 32) to identify a priestly, or in this case heavenly, figure. In the same way, the extended description of the figure as a “man clothed in linen with a scribal palette at his waist,” which is repeated three times (Ezekiel 9:2-3, 11) is intended to signify his activity as a scribe, when he must mark (והתוית) lit. “to *tav*”) those to be spared from the coming judgement.

The symbolic and evocative importance of this extended description, with scribal palette identified, is reinforced by the fact that when the figure is not acting in the capacity of a scribe, he is merely a “man clothed in linens” (Ezek 8-10). Though the data are minimal, both iconographic and textual evidence from the Levant indicate that the scribal palette, after its adoption from the Egyptians, continued to be a culturally important symbol in the Levant, to identify scribes and scribal activity.

Outside of iconographic and textual sources, the archaeological data for the meaning and use of scribal palettes from the Levant is virtually non-existent, the sole example being an ivory pen case inscribed from Megiddo Stratum VIIA dated to the second half of the 12th century.¹⁹⁴ The inscription on the pen case reads as follows,

For the *k3* of the royal messenger to every foreign country, overseer of the stable (who is named) Mighty-is-Amun-of-the-residence; for the *k3* of the troop commander(?)...
Djhutymes(?).¹⁹⁵

While the reading of the name and the title are uncertain, it has been suggested that this Djhutymes is the same figure as the high official identified with the Egyptian garrison at Bet Shean.¹⁹⁶ Djhutymes is identified as the father of Ramesses-user-khepesh who is ascribed the titles ‘royal scribe’ and ‘great steward’ on a door lintel from Building 1500 at Bet Shean, associated with stratum VI, dated to the 12th century.¹⁹⁷ The date, however, gives us little indication as to the meaning of the scribal palette for later alphabetic practices. But, as we mentioned, the scribal palette is one emblem that existed in a nexus of associations used in art

¹⁹⁴ Loud 1939: 11-12 and Harrison 2004: 11.

¹⁹⁵ Translated by James 1966: 175.

¹⁹⁶ Morris 2005: 757 n. 180.

¹⁹⁷ Morris 2005: 756-757; James and McGovern 1993; Mazar 2006: 61-82; Mazar 2009: 12-17.

and iconography to identify scribes and scant evidence that these symbols persist into the Iron Age exists.

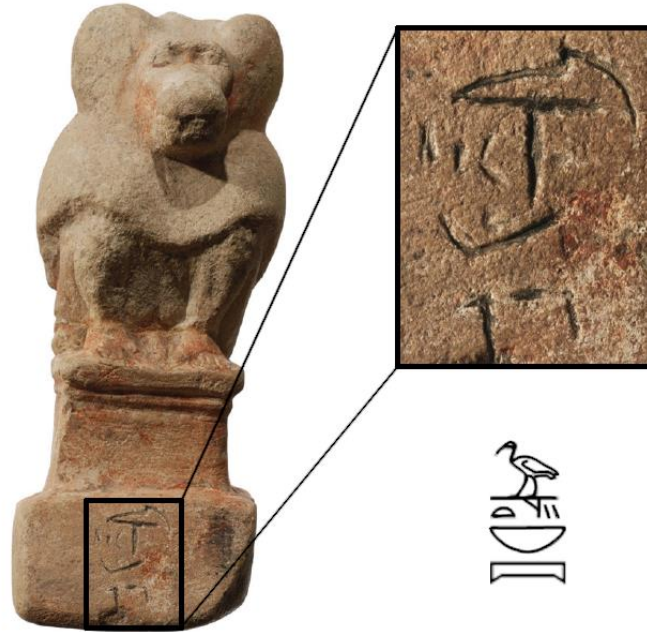


Fig. 1.10: Thoth baboon statue with hieroglyphic graffito from Tel Mique/Ekron (produced from images in Brandl 2016: Photo 7A.1 with hieroglyphic transcription by the author)

In Egyptian iconography associated with scribes, a frequent symbol is the baboon. In fact, in a significant number of statues the baboon is associated with depictions of literate individuals writing.¹⁹⁸ This may be a representation of Thoth (Eg. *dhwtj*), the patron god of scribes in Egypt, in his manifestation as a baboon.¹⁹⁹ It is perhaps significant then that a statue of Thoth, with a hieratic graffito that reads, “Thoth Lord of Heaven,” was discovered in 11th century layers from Tel Mique/Ekron.²⁰⁰ Symbols like the Thoth baboon and the scribal palette are caught up in

¹⁹⁸ Allon 2013.

¹⁹⁹ Allon 2013: 99.

²⁰⁰ Dothan and Regev 2016; Brandl 2016.

unique associations with scribal practice and identity that were perhaps adopted along with the technology as a part of the Egyptian scribal kit (fig. 1.7 above).²⁰¹ The symbolic association between the scribal palette and Thoth goes beyond their mere material association, as one Middle Kingdom text, “the Eloquent Peasant” warns against perverting justice stating, “(May your writing) rush, papyrus scroll, and palette of Thoth (*gsti dhwtj*) refrain from doing wrong!”²⁰² This text displays the close association between the god Thoth and the scribal palette. Thus, the material and symbolic associations between baboon statuary and scribal palettes are an important part of scribal identity. The early attestation of the Miqne statue, like the model palette from Megiddo, makes it difficult to say, however, to what degree the social and symbolic associations of scribal practices were adopted into early or even later alphabetic practice and scribal identity.

The associations between the scribal palette and the depictions of Thoth as a baboon connect provide a fuller picture of the importance of the adoption of the loanword כֶּסֶף in Hebrew along with its material correlate. It reminds us that technologies are meaningful things, imbued with socially and religious significant meanings, drawing into the conversation symbols and objects that would have been part of the communal repertoire of scribes. As we have advocated, the borrowing of technologies, emblemized by the borrowing of words, is an activity of the borrowing of knowledge and networks in as much as it is a borrowing of material artifacts. In this way, the borrowing of scribal technologies has the power to inform identity in unique ways, through its historical and cultural affiliations (see ch. 7 below).

²⁰¹ Burke 2020.

²⁰² Thesaurus Linguae Aegyptiae, pBerlin P 3025 + pAmherst II, “Der beredte Bauer” (version B2), line 71; transcription and translation by Peter Dils. Idiomatic translation from German by the author.

The goal of this section has been to briefly consider to what degree those Egyptian symbolic meanings associated with the scribal palette, and the practice of writing, were adopted by scribes in the Levant. As we have seen, there is evidence to suggest that the borrowing brought with it associations of the object with scribal activity, and perhaps at an elite level (e.g., Bar Rakib III). But the unique meanings associated with scribal practice and the culturally important symbols, like the baboon, are much harder to trace, if they continued at all.

1.4 Summary and Conclusions

In this chapter we have investigated several terms in the Hebrew lexicon related to the scribal tool kit (קסת הספר, עט, דיור). I have attempted to understand the material process of their production and maintenance, as well as how they might signify social meaning, either through large-scale organization of raw materials and labor, networks of knowledge, apprenticeship and practice, or iconic representation (symbolology). Understanding these words as indexical of more than merely linguistic meaning but as emblems of cultural and technological exchange has brought these words back into their material world in the Iron Age southern Levant. This focus on the socially entangled meaning of words, and their artifactual antecedents, displays the manifold ways that the adoption of the Egyptian technologies that undergird writing practice are more than material or linguistic curiosity but emblems of deeper and more long-lasting connections.

Chapter Two What to Write On (I): Agency, Learning in Community, and Writing on Bowls

Introduction

Writing tools establish the preconditions for inscription, the all-important “how” of writing, but another perhaps equally important but often neglected aspect of writing culture is the choice of medium for inscription. While it may seem illusory, what objects are chosen for inscription is a crucial aspect of scribal practice and writing culture in general. The type of materials chosen to be inscribed, as well as the placement of inscription on those objects are emblematic of practices that had to be learned in the community of writers. These aspects of inscriptions are therefore indexical of broader meaning in their contexts. Consider that different media and sites of inscription generate diverse associations of meaning and interpretation.²⁰³ They also often assume different sorts of writing practice. There is an orthography and space to graffiti that defines it as such. Conversely, there is a tightly regulated orthography and material space to legal texts, official administrative documents, or even letters.²⁰⁴ Where these inscriptions are made, their site of writing, and the material upon which they are to be inscribed are all important features to consider when examining norms of practice in a writing culture.

The choice to inscribe one object over another is not intuitive. Some materials may not be conducive to inscription whereas other materials may be chosen for their mere availability and

²⁰³ Lillis 2013 for a basic discussion. Studies that have begun to consider aspects of text location and meaning in light of semiotics and meaning making for ancient Levantine inscriptions are Hogue 2021a, 2021b, 2022a, 2022b; Smoak and Mandell 2016, 2017, 2019a, 2019b; Mandell 2018, 2022a, 2022b; Mandell and Smoak 2018; see also Richey 2020. Recent studies in writing, and in particular ancient writing, are beginning to take new material and contextual approaches to ancient texts outside of the southern Levant. These include Boyes, 2021a, 2021b, Boyes, Steele, and Astoreca 2021; Caputo and Lougovaya 2020, and Piquette and Whitehouse 2013. A fuller theoretical discussion of these sources might obscure the evidentiary goals of this chapter, and thus the reader is directed to them here for convenience.

²⁰⁴ See especially Sebba 2001, 2007; cf. Lillis 2013.

convenience, but the objects upon which writing rests can communicate beyond its mere textual content.²⁰⁵ In this way, just as pen and ink imply networks of production and practice, as well as the need for the material support (i.e., the palette), media are likewise caught up in networks of association, not just in relationship to other objects and different craftspeople and specialists but to the meaning that those media engender. Take, for example, the case of monumental inscriptions from the Levant. As has been recognized on several occasions, these inscriptions imply networks of individuals cooperating toward the production of the text (e.g., scribes, craftspeople, and masons).²⁰⁶ Similarly, they can imply associations with different objects and texts (i.e., drafts, either chalked on the surface of the object or written on a papyrus or ostrakon).²⁰⁷ But at a final level, the choices that accompany the inscription of a monumental text (e.g., what kind of stone, how the stone is formed, what objects and images accompany it, where the text is placed on the stone) also communicate meaning, both agency and learned practice.²⁰⁸ The text inscribed upon a monument communicates, at every level, the conscious negotiation of the individual choices of writers and the traditions of learning, the assumptions, that the come to a text with.

Though less often recognized, ostraca and different types of inscribed ceramics can likewise be caught up in associations not only with different types of media (e.g., papyrus, wax-tablets, writing boards, and monuments; see ch. 3 below) but also with different textual

²⁰⁵ See references in n. 1 above.

²⁰⁶ Richey 2020; Keimer 2015; cf. Hogue 2021a.

²⁰⁷ Keimer 2015; also Richey 2020; for Egyptian practice see Haring 2015 also van Heel and Haring 2003, esp. 1-38.

²⁰⁸ For monuments see Richey 2020: 30-34; for a broad theoretical discussion of agency in writing see Whitehouse 2012; for agency in archaeology see Dobres 2000. See also discussion of material presentation at Palmyra (Hutton and Bonesho 2015)

content.²⁰⁹ Small labels of content would naturally be found written on a sherd that originally belonged to a whole vessel, whereas brief communiques or letters would have been written on semi-disposable fragments of vessels already broken in antiquity. Practice texts might have been reserved for materials that were easily erased, or sherds unsuitable for inscription. As such, chalky, friable limestone might have been the natural choice for practice texts like the Gezer Calendar, but unsuitable for other genres of inscription.²¹⁰ In the same way, the curvature of the Kh. Qeiyafa ostrakon, with its writing on the interior, might have been an inadequate sherd for inscribing with anything other than a text intended for a short duration.²¹¹ The types of ceramic objects for inscription, their condition and materiality, then may play some role in attracting associations with different genres and different writing practices.

Scribal media viewed through the lens of the construction of meaning by deliberate choice is an understudied topic. This chapter will offer a view of alphabetic writing in the southern Levant in the context of its material and spatial placement on an object. The questions of “where” and “on what material” are important to consider in examining writing culture as we have elucidated above. In the previous chapter, we considered the Egyptian background of the writing tools that ancient Levantine scribes used, pen, ink, and palette. The fortunate preservation of Egyptian loanwords in Semitic provided a convenient launching point for our investigation. In this chapter, however, we will take as our starting point the epigraphic artifacts themselves, inscribed materials from the southern Levant, discussing a central point of intersection between Egyptian and Levantine scribal practice, writing on bowls. Other materials for inscription that may index a

²⁰⁹ See studies in Caputo and Lougovaya 2020.

²¹⁰ Naveh 1978; 1982.

²¹¹ See details for the sherd in the *editio princeps* (Misgav, Garfinkel and Ganor 2009).

writer's deliberate choice and have a relationship to Egyptian practice, unfortunately, cannot be discussed at this time. Likewise, we cannot thoroughly investigate the meaning of Egyptian inscribed objects like lintels or doorjambs, royal stele or statuary in respect to Levantine practices of monumentality, as this would constitute another study altogether.²¹² Rather, we must focus solely on the connection between practices in inked writing between the two cultures, both to control the scope of our investigation and to drive home the point that specific practices for and knowledge of inked writing with the rush pen are derived from Egyptian practice.

2.0 Ostraca and Bowl Fragments

Unsurprisingly the most prevalent medium for inscriptions that have survived to this day are ostraca. Ostraca are often our only source of meaningful textual data for the activity of writers in the ancient southern Levant. As such, they constitute the basic material for investigation with regard to ancient writing practice. However, as we have mentioned, spare sherds inscribed with short messages, names, or other minutia, intended for use over a short duration, on material that was likely often chosen only for reasons of convenience, cannot tell us much about either agency or learned practice in the broad sense. Certainly, small ephemeral ostraca constitute some part of writing culture, but without a critical mass of data, we cannot describe their place in a writing culture in a meaningful sense. One exception would be, however, when they may signal other types of media that did not survive to the present day (see ch. 3 on ostraca and papyrus below). But not all ostraca are ostraca, in the sense that not all extant inscriptions were originally only sherds or fragments of vessels. Some may have been, and indeed were, parts of larger vessels which remained complete at the time of their inscription. These sorts of sherds and fragments

²¹² See already some study in Levy 2017 and Sparks 2013.

represent meaningful choices on the part of scribes, and if regularities in content, context, and scribal practice can be identified, then they tell us something about the learned practices of scribes, a fundamental part of writing as a culture.

In what follows we will examine a particular set of inscribed ceramic objects, inscribed bowls, beginning with the material from the Late Bronze Age Egyptian occupation, through early alphabetic evidence, and into the material from the Iron II. Our investigation will focus on their content and context to tease out what evidence they might provide about writers' choices of materials for inscription, the content or genres these objects attract, and the continuation of scribal practice from the Egyptian Late Bronze Age into the Hebrew Kingdoms of the Iron Age.

2.1 Egyptian Writing Practices in the Late Bronze Age Levant

Egyptian imperialism in the Levant during the Late Bronze Age has been well-documented.²¹³ The administration of the imperial apparatus produced a wealth of textual data, including most especially the el-Amarna correspondence.²¹⁴ This cache of valuable texts attests to Canaanite scribes operating under the aegis of Egyptian power during the Late Bronze Age.²¹⁵ However, scribes writing in cuneiform with its attendant material supports, a reed stylus on clay, are not the only evidence for Egyptian authorized writing in the Late Bronze Age. A significant number of textual artifacts from the Late Bronze Age have been found attesting to Egyptian activity and Egyptian literate professionals in the Levant. These include inscribed architecture, royal stele, and hieratic ostraca.²¹⁶ Other elements of Egyptica, such as scarabs and seals of all variety are

²¹³ See Morris 2005.

²¹⁴ See Rainey, Schniedewind, and Cochavi-Rainey 2014.

²¹⁵ Rainey, Schniedewind, and Cochavi-Rainey 2014; Vita 2015; cf. Goren, Finkelstein, and Naaman 2004.

²¹⁶ Levy 2017; Sparks 2013.

likewise known and attest to pervasive Egyptian influence. In fact, the vast majority of the non-sigillary written material coming to us from the Late Bronze Age Levant is Egyptian, with the largest corpus being written in Hieroglyphic.

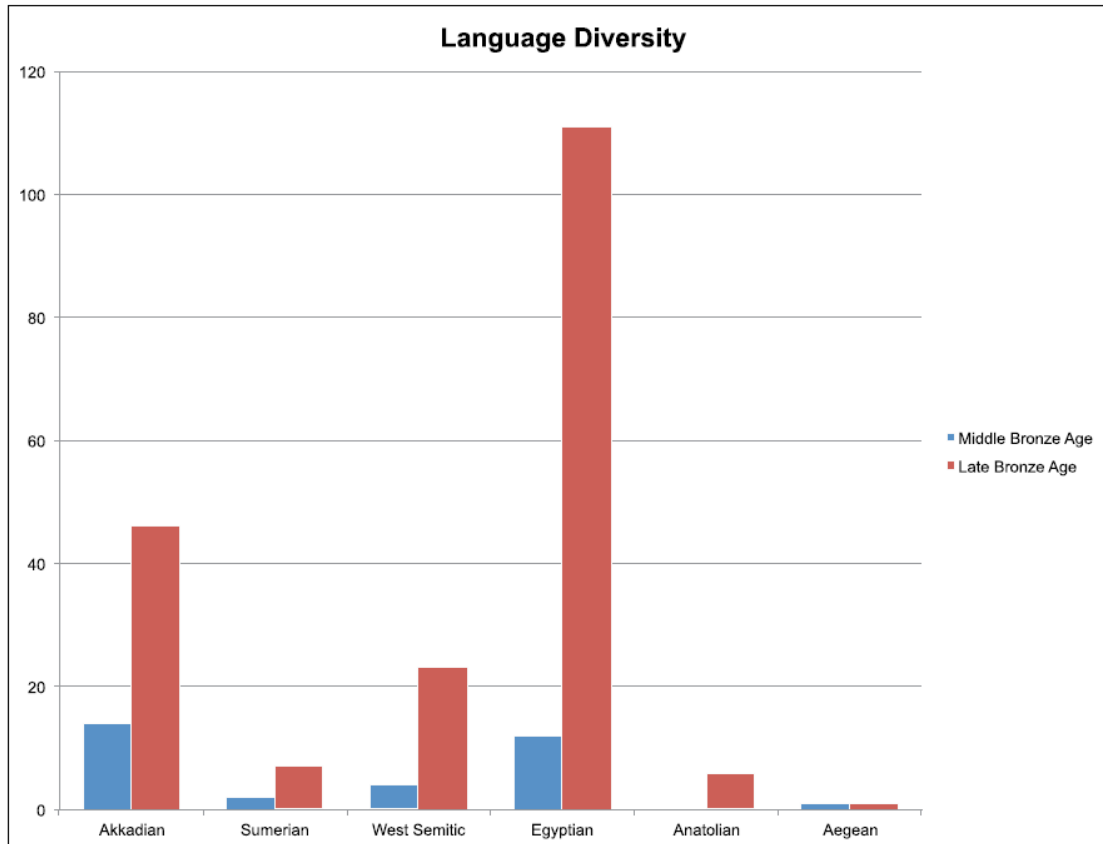


Fig. 2.1: Language diversity represented in the Bronze Age Levant (reproduced from Sparks 2013: fig. 2)

Much of the material we have attesting to Egyptian presence in the land of Israel tells us little about writing culture. Inscribed stele and architectural features can tell us about the textual experience of the Late Bronze Age, as Sparks has noted, but only the hieratic data can tell us something about Egyptian writing culture in the southern Levant, the daily inscriptional practices

and strategies of Egyptian writers based in the Levant.²¹⁷ As such, our discussion of writing materials will focus on the hieratic inscriptions.

2.1.1 Hieratic Inscriptions from the Levant

Most of the inscribed hieratic material from the Levant are sherds and fragments of vessels.²¹⁸

The content of these sherds is almost always administrative with a few literary or religious fragments and at least one that may have been a brief letter or communique.²¹⁹ Unique examples include a sherd from Beth Shean which may bear a reference to the Aqhatu myth, though too much context is missing to make any decision.²²⁰ Another, which we will focus on briefly here, bears what seems to be the end of a line of indirect speech, perhaps an administrative report.²²¹

²¹⁷ Levy 2017; Sparks 2013.

²¹⁸ Wimmer 2008b, 2022.

²¹⁹ Wimmer 2022; For the potential communique see Wimmer 2008b (reprinted as Wimmer 2020: 665-668). For our purposes, I will refer to only Wimmer 2008b to avoid confusion with pagination.

²²⁰ Wimmer 1994.

²²¹ Wimmer 2008b.

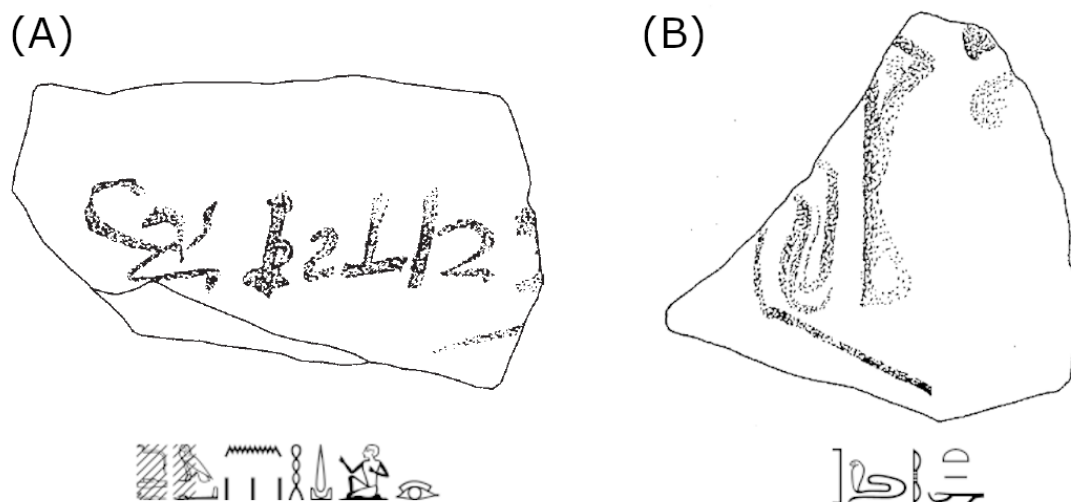


Fig. 2.2: Two hieratic fragments from the Southern Levant with hieroglyphic transcription: (A) O. Askelon (from Wimmer 2008b; 2020) and (B) O. Beth Shean II (from Wimmer 1994)

Outside of the administrative tax receipts that will be discussed below (2.1.2. Hieratic Bowls), the ostracon from Ashkelon (fig. 2.2. (A) above) is the sole example of a sentence in hieratic.²²² The sherd is important because it contains a nominal form of the Semitic root \sqrt{hzy} , often translated as “seer”, written in hieratic as *hd* (𐤠𐤇𐤏).²²³ The term, with this spelling, is unknown in Egyptian. Thus, the occurrence in a hieratic inscription on a piece of locally made pottery from Ashkelon is quite intriguing. The ostracon, as reconstructed by Wimmer, may contain an instance of indirect speech or report. He translates, “H[e said, “The]re is no seer” (*[dd]=f mn hd*).²²⁴ As is visible in figure 2.2, Inscription (A), only the very left-most portions of *m* (Möller 196) are visible, combining with *n*,²²⁵ the first fully preserved sign, to form the

²²² Wimmer 2008b.

²²³ Wimmer 2008b: 66-68; see entries at *DCA* 182; *HALOT* 301: *DNWSI* 357-361.

²²⁴ Wimmer 2008b: 66.

²²⁵ Wimmer 2008b; see Möller: XII and Wimmer 1995b: 237 (type “c”).

particle of nonexistence *mn*.²²⁶ Wimmer offers that the small stroke visible below proposed *mn* is the elongated of the viper, /f/, which would support his reconstruction of the beginning of the line as indirect speech, “H[e said,]” (*dd*=f).²²⁷ This reconstruction is reasonable and raising the intriguing question of the nature and purpose of this inscription.

The possibility that this statement was written in the context of a brief report or communique seems more likely than not.²²⁸ Even further, Wimmer states that any assumption that the *hd* in O. Ashkelon would “receive a message from god and convey it to their ruler [...] must remain a matter of speculation[.]”²²⁹ He does, however, cite contextual evidence from the Egyptian Tale of Wenamun and the Aramaic Zakur inscription (KAI 202 A: 12) wherein this is the case.²³⁰ To this, we might add the association between *חזה* “seer” and *נביא* “prophet” in the Hebrew Bible (2 Sam. 24:11; 2 Kgs 17:13; and Isa 29:10). The latter term (*נביא*) is frequent in the Hebrew Bible but is a neologism replacing an earlier term *ראה*, which appears as a synonym of *חזה* (Isa 30:10 *ראה*//*חזה*). In the book of First Samuel, Saul seeks out a “seer” (1 Sam. 9:9). A metalinguistic comment embedded in the narrative explains the curious use of the term “seer” stating,

²²⁶ Wimmer 2008b: 66; for *mn* see *DLE* I: 215; the form is from Middle Egyptian *mn wn* (Allen 2013; cf. Hoch 1997).

²²⁷ Wimmer 2008b; see Möller 263.

²²⁸ Wimmer relays the statement of an anonymous reviewer who “pointed out that the reconstruction of *dd*=f would imply a letter or a brief communication, but that this was improbable since no traces or lines above (or below) are preserved” (2008b: 66 n.4). I do not find this argument compelling. It is true that no lines above the extant line are preserved but that such lines could have existed below cannot be precluded on the basis of this small fragment.

²²⁹ Wimmer 2008b: 68.

²³⁰ As Wimmer (2008b) notes, KAI 202 equates *חזין* “seers” with *עדרן* “prophets” stating “And] B’LŠMYN [spoke] to me through seers and through prophets” (*וידבר*] בעלשמיין אלי [ב]יד חזין וביד עדרן) who relay a divine message to the king. Similarly, the tale of Wenamun speaks of a great ‘*dy* at the court of Byblos through whom the God Amun speaks (COS I: 89-92; Schipper 2005; Wimmer 2008b: 68; Ebach and Rutgersworden 1976).

“Previously in Israel, when a man went to inquire of God, thus he said, ‘Come and let us go to the seer (רֹאֵה),’ for what is a prophet (נְבִיא) today was previously called a seer (רֹאֵה)” (1 Sam. 9:9).

From the biblical text it is clear that prophets, seers, and diviners were called on by kings and officials when consultation of the god was necessary (e.g., 1 Sam. 28:6).²³¹ Thus, it does not seem beyond the evidence, or in the realm of speculation, to suggest that whomever the *hd* is in O. Ashkelon served the same purpose.

This being the case, we must acknowledge the ambiguity presented by the evidence. Much of the first half of the inscription is gone, and we do not know whether the line continued to the left of the break. We likewise must acknowledge that we do not know the nature of the statement. There is an intriguing and perhaps playful association to read the statement preserved in O. Ashkelon, “There is no seer,” in light of the exclamatory rhetorical question asked twice in the biblical text, “Is there no prophet here?” (cf. 1 Kgs 22:7; 2 Kgs 3:11). But whatever we might say about the inscription, the use of ostraca for *ad hoc* purposes, such as short letters or communiques, may connect in some ways to later alphabetic practice. But the use of ostraca for *ad hoc* purposes is not unique, and therefore not indexical of some deeper learned practice of writing culture. The mere availability of sherds makes them ready material support for inscriptions of convenience. As we mentioned, however, non-administrative inscriptions on sherds or ostraca are the minority of the inked hieratic material from the Late Bronze Age

²³¹ In the Deir Alla plaster inscription, Balaam is called an *אִישׁ חֹזֵה אֱלֹהִים*, “a seer of the gods” (Hoftizjer and van der Kooij 1976; KAI 312). It is intriguing to note that in the narrative of 1 Samuel 9, the “seer” (רֹאֵה) who is sought, Samuel, is also often called an *אִישׁ אֱלֹהִים* “man of God” (1 Sam 9 *passim*), perhaps Deir Alla preserves a fuller title for these types of individuals, “a man who sees god/the gods,” that in the biblical text is shortened as “seer” or “man of god.” Whatever the case may be in regard to the titles, the biblical tale in Numbers (22-24), whatever its nature and origin, embeds the social reality that prophets, diviners, and seers were in all likelihood paid professionals sought after by local rulers and leaders (cf. 1 Sam 28).

southern Levant. The vast majority are inked on fragments of bowls; and it is these curious inscriptions that provide us with insight into the Egyptian origin of the choice of media for inscription.

2.1.2 Hieratic Bowls

The practice of hieratic writing on bowls in the southern Levant is an intriguing phenomenon.²³² As a practice of administration, it is the most plentiful of hieratic inscriptions or inked writing of any kind, from the Late Bronze Age.²³³ The practice of writing on bowls is attested by a cache of bowl fragments from sites like Tell el-Farah (S), Tel Sera', and (most importantly) Lachish.²³⁴ This last site provides the most complete hieratic bowl.²³⁵

²³² See Goldwasser 1984; Wimmer 2008b, 2022.

²³³ Wimmer 2022.

²³⁴ Wimmer 2022; Tell el-Farah (S) (Goldwasser and Wimmer 1999), Tel Sera' (Goldwasser 1984), and Lachish (Cerny 1958; Gilula 1976; Sweeney 2004; Magrill, Jasnow, and McCarter 2004; Wimmer 2019; and Wimmer *forthcoming*).

²³⁵ Černy 1958: 132-133; Sweeney 2004: 1601-1607.

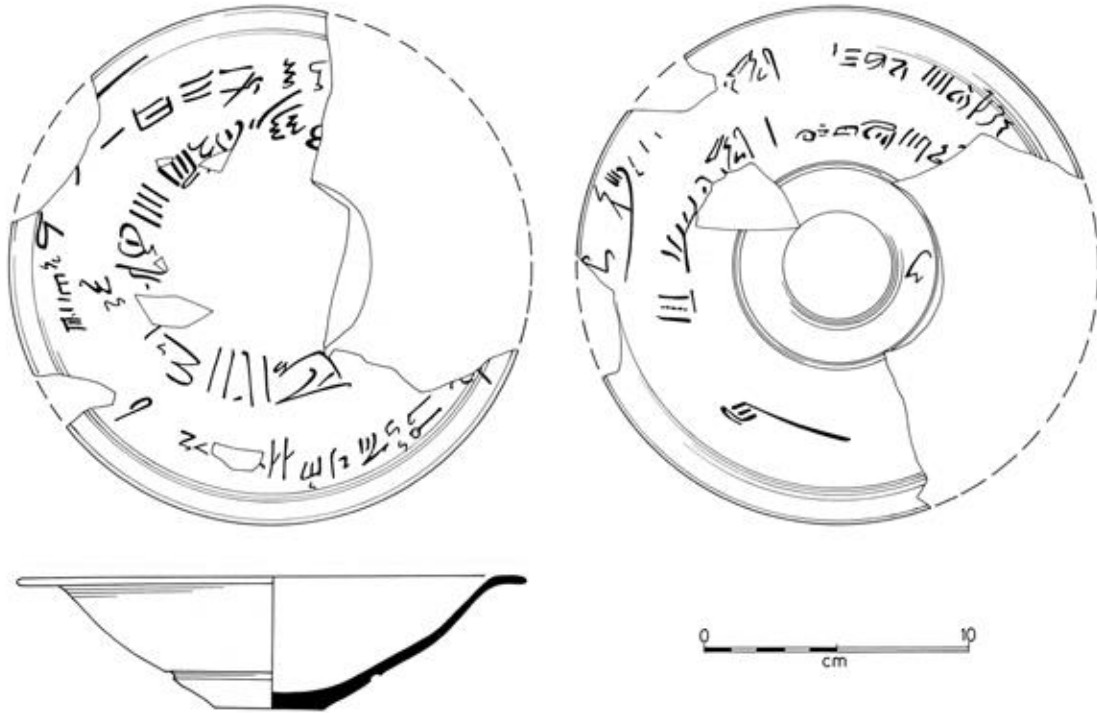


Fig. 2.3: The Lachish (hieratic) Bowl (after Sweeney 2004).

This inscription reads as follows:²³⁶

- Interior (1) The *b-r-t* which is in it²³⁷ ...in regnal year 4, month 4 of the inundation season, day 26, which [...] (2) (The) ruler of Lachish²³⁸ ... wheat/registered...Jaffa(?)²³⁹ 1100 of the harvest tax...1000 (interalia) The one which...
- Exterior: (1) [...] In regnal year 4, month 2 of summer...wheat...420: 1000 (2) [...] Regnal year 4, month 4 of summer, day 1...wheat...300...60...900 (3) 700

²³⁶ Adapted from Sweeney 2004: 1601-1607; see also Černý 1958; Goldwasser 1982; and Wimmer 2019.

²³⁷ Wimmer argues that the line begins with *b-[r]-t nyt m-s* as the “standard opening formula.” (2022: 40-44). Černý (1958) and Sweeney (2004) see the beginning of the line as *m-rnpt* “in the regnal year.”

²³⁸ The reading of Černý for this toponym was “Latish” (1958) whereas Sweeney opts for “Nentisha” (2004). Wimmer, however, presents a full discussion of the epigraphy, concluding in favor of the reading of Lachish (2019: 138-140).

²³⁹ The reading Jaffa here is no more than a suggestion based on the extant signs (Wimmer 2019: 140-144). Though another reading is possible, I have opted to offer this suggestion.

This bowl is important for several reasons. It contains the toponym “Lachish,” potentially the toponym “Jaffa,” and an introductory formula for administrative tax receipts that uses the Semitic ברית written in hieratic Egyptian as *b-r-t* (𓆎𓆏𓆑). More significantly, it provides evidence for the regular use of inscribed complete bowls in the Egyptian administration of the Late Bronze Age Levant. This is crucial for understanding Egyptian inscriptional practices in the southern Levant. So important that Wimmer is careful to distinguish between bowl fragments and ostraca (a distinction often not held in the practice of alphabetic epigraphy).²⁴⁰ He makes this careful and important distinction because of the network of formula and practice that exist between hieratic corpora from the Levant. Of the forty-two hieratic inscriptions from the Levant twenty-seven are bowl sherds.²⁴¹ Of these, in the present state of collation, at least six display the opening formula “the *b-r-t* which is in it.”²⁴² This leads Wimmer to posit that this was the regular opening formula for “the standard harvest tax registration form.”²⁴³ This genre of inscription constitutes the majority of our hieratic evidence from the Levant, and was made up of any combination of the following six components: (1) an opening formula (“The *b-r-t* which is in it”), (2) the date (“In the regnal year...”), (3) the commodity delivered for harvest tax (Eg. *šmw*), (4) the quantity (in *ḥꜣr*, “sack”), (5) the origin of the delivery, sometimes identified by the name (of the ruler), and (6) the name of the scribe and/or the destination of the delivery.²⁴⁴ The attestation of multiple bowls with extant elements of this formula signifies that at multiple sites

²⁴⁰ Wimmer 2008b; 2019; 2022; see discussion in Goldwasser 1984: 83-87.

²⁴¹ Wimmer 2022: 37-39.

²⁴² Wimmer 2022: 40.

²⁴³ Wimmer 2022: 40-43.

²⁴⁴ Wimmer 2022: 40.

of intense Egyptian occupation in the southern Levant, inscribing bowls with harvest tax receipts was engrained in the daily writing practice of the scribal community.

The reasons for choosing bowls for inscription are, however, complex. In Egyptian practice, it would not be uncommon to find complete bowls inscribed. For instance, the so-called letters to the dead are frequently found on complete bowls.²⁴⁵ An administrative text, however, would not be written on a complete bowl. What then are we to make of these hieratic inscribed, as Goldwasser refers to them, ‘votive’ bowls?²⁴⁶ Here Wimmer provides a compelling suggestion. He sees the use of these bowls as symbolic of tax deliveries, bowls being deposited in the temple as was ordinary for Canaanite practice but inscribed in Egyptian to register the amount given.²⁴⁷ He states,

It is conceivable also that a token amount of grain—a handful symbolically taken from the respective delivery—was deposited in the bowl. This symbolic fill of the bowl would be considered a “token of the *brit*”, i.e. an implementation of the tribute as a consequence of the submission to Egyptian supremacy.²⁴⁸

As Wimmer notes, the Egyptian administration of the Levant took advantage of the Canaanite temple and cult, using them as convenient areas for the acquisition of taxes due.²⁴⁹ In this way, the votive bowls reflect how writing is embedded in society, culture, and politics. In one instance, locally produced bowls inscribed with hieratic signal the complex interaction between local Canaanites and the Egyptian imperialists. In another, these bowls display a hybridity

²⁴⁵ See for instance Hsieh 2022: 47-60.

²⁴⁶ Goldwasser 1984: 86.

²⁴⁷ Similar to the discussion already in Goldwasser 1984: 83-87.

²⁴⁸ Wimmer 2022: 43.

²⁴⁹ Goldwasser 1984; Wimmer 2022; cf. Naaman 1981; Wimmer 1990.

between local Canaanite cult practice and Egyptian administrative writing practice. And yet in another way, they show how the choice of material for inscription is highly conditioned by the sociopolitical landscape and these learned practices can be passed down in a writing community.

2.2 Alphabetic Writing Practices

Inscribed material from the southern Levant mostly consists of ostraca, random fragments of pottery conveniently used for writing. As we have mentioned, there is some difficulty in identifying these examples with some sort of deeper connection to writing culture. Most ostraca seem to have been used simply for their availability, and therefore we can read little more into them. Unlike the hieratic material, however, little is made of the fact that alphabetic inscribed ostraca come from different vessels. Whereas hieratic material is separated out into ostraca and bowl fragments, the sorts of vessels from which an alphabetic inked ostrakon may have come is often overlooked in epigraphic studies. To be sure, excavators will often note the types of vessels when inscriptions are written on diagnostic sherds or when inscriptions come to us nearly complete, but as an example of scribal practice little consideration is given to these data by epigraphers.²⁵⁰

In what follows, we will examine bowls and bowl fragments from the corpus of alphabetic inscriptions to show that the selection of bowls for inscription connects to hieratic practice in the Late Bronze Age. Of the earliest alphabetic material we have, bowls, or bowl fragments, constitute a large part of the small but important corpus. Most of these inscriptions are short and provide little detail as to their use or purpose. A few of these bowl fragments, however, I will argue, can be justly interpreted as administrative objects, due to the

²⁵⁰ The type of vessel is frequently mentioned when available, but few draw any significance from it.

administrative nature of the content. The examples that we will examine here are the Lachish Bowl, the Lachish Bowl Fragment and the Qubur al-Walayda Bowl. The examination will suggest that the Egyptian practice of writing on bowls in hieratic was entangled in preexistent Canaanite cultic practices and that both the inscribing of administrative content and the selection of bowls were Egypto-Canaanite practices ultimately continued by later alphabetic scribes. The early alphabetic evidence then displays the first stage in a long scribal tradition of writing administrative content on complete bowls that continued into the Iron II.

2.2.1. Early Examples: Lachish Inscriptions

The Lachish Bowl Fragment and the Lachish Bowl, like the Qubur al-Walayda bowl to be discussed later, come from a period and a site that has produced examples of hieratic writing.²⁵¹ As we have mentioned above, Lachish is one of the most important sites for understanding hieratic writing practices in the Late Bronze Age, and one of two sites to have produced substantial amounts of hieratic inscriptions.²⁵² Lachish offers us ten total bowl inscriptions (nine fragments) and the only (near) complete bowl (see fig. 2.3 above).²⁵³ As such, Goldwasser has suggested that all of the Late Bronze Age alphabetic inscriptions from Lachish should be read in light of Egyptian writing activity. This becomes especially apparent when considering the Lachish Bowl Fragment and the Lachish Bowl.

²⁵¹ Černý 1958; Sweeney 2004; see also discussion above.

²⁵² Wimmer 2022; Wimmer *forthcoming*.

²⁵³ Sweeney 2004.

2.2.1.1. Lachish Bowl

The first example worth considering is the Lachish Bowl. While not inked, the Lachish Bowl is the only near complete alphabetic bowl inscription from the Late Bronze Age.²⁵⁴ As such, it merits first and special attention in our examination of the interaction between Late Bronze Age hieratic and early alphabetic scribal practice.

Discovered in Tomb 527, the Lachish bowl is generally considered one of the earliest alphabetic inscriptions from the southern Levant, though the precise date of the bowl is difficult to identify. After its initial discovery, the inscription was dated on the basis of the ceramic assemblage of the tomb, which Tufnell dated to the end of the Late Bronze Age; she notes that “the small group of pottery (associated with the inscription) appears to be contemporary with Structures II-III in the Fosse Temple. The bowl with the white lime inscription belongs to a type found in Structure II [...] but the imitations of imported wares fall more naturally into the period of Structure III.”²⁵⁵ In the same volume, Diringier, in his paleographic and linguistic analysis of the inscription states, “the bowl may be attributed to the very end of Structure II or the beginning of Structure III,” setting the inscription in the same period, toward the end of the Late Bronze Age.²⁵⁶

More resolution concerning the date of the bowl came with the renewed excavations by Ussishkin. He was able to identify Tufnell’s earlier “Structure III” [Fosse III] as contemporary with site Level VII, dated to the 13th century.²⁵⁷ To my knowledge no recent specific discussion

²⁵⁴ Tufnell 1958.

²⁵⁵ Tufnell 1958: 239.

²⁵⁶ Diringier in Tufnell 1958: 129.

²⁵⁷ Ussishkin 2004: 59-62.

of the finds associated with the Lachish Bowl inscription exist to suggest a date different than the one suggested originally by Tufnell (end of Fosse II to the beginning of Fosse III) which, with Ussishkin’s reanalysis, would put the date for the tomb assemblage and the inscription, at around the end of the 14th to beginning of the 13th century BCE.²⁵⁸ The most recent excavations by the Austrian-Israeli expedition have offered some further refinements to the chronology of the site that are shown in the Table below.

Table 2.1: Late Bronze - Iron I stratigraphy of Lachish (after Webster et al. 2018: 262)

Period	Date (after Ussishkin)	Area S	Area P	Fosse Temple
Iron I	1130-1000/985			
Late Bronze III	1200-1130	VI		
Late Bronze IIB	1300-1200	VII	P-1	III
Late Bronze IIA	1350/1300-1300	S-1	P-2	II
	1400-1350/1300	S-2		
	1450-1400	S-3		

The early date and complete nature of the vessel, not to mention the find spot, represents unique evidence for investigating the use of bowls in the writing culture of the southern Levant and its relationship with Egyptian practice. The find spot and content are suggestive of a votive context that offers associations with the hieratic Egyptian practices for documenting deliveries.²⁵⁹

²⁵⁸ See Ussishkin 2004; the recent excavations have redated some of the stratigraphy but not, seemingly, these late phases of the Fosse temple (Streit et al 2018; Webster et al. 2019; cf. Vainstub et al. 2022).

²⁵⁹ Discovered in Tomb 527 (Tufnell 1958: 129).



Fig. 2.4 The Lachish (alphabetic) Bowl (drawn by the author)

The inscription is short and relatively uncontroversial. It reads as follows:

bšlšt . ym . yrh “On the third day of the month”

The dating formula here (day, month) differs from normative Egyptian practice (year, month, day). Beyond this difference, however, the short label, written on a complete bowl, connects to Egyptian writing practice in a number of significant ways. First, the concern for time and date is something that is well-attested in hieratic bowl inscriptions. For instance, a fragmentary bowl inscription from Lachish (called Lachish hieratic Inscription [LHI] II by Wimmer) contains, in the first line, the bottom half of the *wr* sign, which in the hieratic bowls commonly denotes the origin or destination of the delivery (being sent or received by the “ruler of PN”), but in the second, more readable line, refers to the “last days of the month.”²⁶⁰ Another example, LHI III

²⁶⁰ Sweeney 2004: 1607-1608.

simply preserves the phrase “this day” (Eg. *hrw pn*), which is common in Ramesside administrative texts recording deliveries.²⁶¹ An administrative inscription from Deir el-Medina (KRI IV 398), contains several examples, one line of which describes the quantity of lamps being delivered to the workers “on this day” (Eg. *hbs.w rdi.t r p3 rdi b3k.w m-hrw pn 42*).²⁶² Several times in the Egyptian practice the regnal year is noted along with the month and day (*h3t-sp x 3bd 3h.t x hrw x*). It seems possible that the Lachish Bowl records the exact day when the votive offering was delivered, “on the third day of the month.” This would explain why, though the bowl is almost completely intact, no other letters are visible. It is possible that the name of the month might have been preserved in the lacuna or perhaps which month was intended was known and only the exact day needed to be recorded. Why exactly the date of delivery might have been important in a votive context is, however, unclear.

Goldwasser, in her study of the hieratic inscriptions from the Levant, noted already a connection between this complete bowl and the hieratic bowls from Lachish.²⁶³ The relationship between the context of this bowl and the hieratic bowls remains, however, a bit unclear. The Lachish alphabetic bowl might be taken as evidence that the Egyptian practice of writing hieratic on votive bowls in temple contexts might have been extended by Canaanite writers, who then took the practice of inscribing these bowls and reappropriated the practice for use in broader cultic contexts, like grave goods. Still, the use of a dating formula on the bowl draws curious association with Egyptian record keeping practice. Thus, the Lachish alphabetic bowl may

²⁶¹ Sweeney 2004: 1608-1609.

²⁶² Date given is the fifth year of the first month of the inundation, day seventeen (KRI IV 398.7; cf. Sweeney 2004)

²⁶³ Goldwasser 1984: 85.

represent a first example of selecting a votive bowl to write upon, inscribing upon it a quasi-administrative text.

2.2.1.2. Lachish Bowl Fragment

The second example from Lachish perhaps brings us closer to a direct association with hieratic bowl writing. The Lachish Bowl Fragment, discovered in the renewed excavations at Lachish in the 1980s, is a partial fragment of a bowl found in Area S of Level VI, the terminal phase of Late Bronze occupation at the site (see figs. 2.6 and 2.10 below).²⁶⁴ The sherd bears a curious inked inscription that has been hitherto difficult to decipher. This is due in no small part to the fact that the text has no clear starting point in line one and neither a starting nor ending point in line two. What is most unique, however, is the attestation of a few unique letter forms, some of which we will discuss below (see ch. 4). The most peculiar of these letters, however, is letter seven in line two.²⁶⁵ This T-shaped character has attracted no shortage of interpretations, including an ambiguous *gimmel-peh*,²⁶⁶ a *tsade*,²⁶⁷ or a partially preserved *tav*.²⁶⁸ We will briefly analyze the most recent of these suggestions as it is the one that carries the most evidentiary weight, the interpretation of this grapheme as *tsade* proposed by Cross and again by Lemaire.

²⁶⁴ Ussishkin 1983; Lemaire 2004.

²⁶⁵ In my numbering, I will follow the letter numbering left to right as it is in the excavation report (Ussishkin 1983: 155-157).

²⁶⁶ Ussishkin 1983: 157 and Sass 1988: 62.

²⁶⁷ Cross 1984: 74; Colless 1991: 19, 36; and Lemaire 2004: 1599; Hamilton also reconstructed a *tsade*, though of a proposed more archaic form. Hamilton cites the same problematic alphabetic evidence that we will discuss below (Hamilton 2006: 203).

²⁶⁸ Puech 1986: 20; cf. Colless 1988: 60.

2.2.1.2.1. Line Two, Letter Seven as *tsade*

Cross and Lemaire each offered a reading of *tsade*, though their translations and interpretations differ. They do so noting that the form has an analogy in forms of *tsade* known from the el-Ḥadr arrowheads (I-IV; fig. 2.7 below) and the Izbeth Sartah ostrakon.²⁶⁹ The perceived strength of the comparative evidence leads Lemaire, like Cross before him, to confidently state that, “[this letter] is clearly a § [*tsade*]”.²⁷⁰ The reading, in light of the available evidence, is strong; this is confirmed by both Lemaire and Cross’s confident declarations. However, in what follows, I will note a few issues with T-shaped *tsades* that should give us pause and permit exploration of another, more intriguing option.

²⁶⁹ Cross 1984: 74; Lemaire 2004: 1599; for el-Ḥadr I-IV arrowheads, see Milik and Cross 1954: 5-15; Cross 1980: 1-20 (cf. Sass 1988: 76-77 and bibliography therein; as well as drawing of el-Ḥadr I in Pioske 2013: fig. 4). For Izbeth Sartah, see *editio princeps* in Kochavi 1977 and cautious comments by Naveh 1978; Two additional purported “T” shaped *tsades* are Hamilton’s letter six in the Tell el-Ajjul cup (2010: 103-148) and a recent Iron Age inscription from Tell eṣ-Ṣafi/Gath (Ṣafi 20D96C053; Eshel et al. 2022). The form on the Tell el-Ajjul cup may be *tsade*, but the reading is far from certain. As Hamilton admits, there is additional ink below the proposed *tsade* “in the same decorative frame,” frames which otherwise only contain one letter each (proposed letters ten and eleven are stray traces of ink that cannot be certainly designated as separate letters). Hamilton does not entertain the possibility that the traces of ink, which he sees problematically, and without any image, as *aleph*, are the vestiges of the stem or base of a larger letter six. The form incised in Ṣafi 20D96C053 is partial, and a reading of *tsade* (T-shaped or otherwise) does not seem likely (Eshel et al. 2022: Fig. 12).

²⁷⁰ Lemaire 2004: 1599.



Fig. 2.5: The Lachish Bowl Fragment (drawn by the author)

Cross and Lemaire appeal to the *tsade* of the Izbet Sartah ostrakon as evidence for a T-shaped *tsade*, and this inscription does indeed contain a strange T-shaped form of *tsade*. But, it should be cautioned that the inscription contains several other strange and irregular forms of dubious palaeographic worth. In his early evaluation of this text, Naveh concluded, “the ‘Izbet Sartah ostrakon contains the attempt of an unskilled person in the twelfth century B.C. to write and abecedary[...] His confusion of letters and his mistakes seem to be so serious that I would not recommend the drawing of palaeographic conclusions from any of the forms produced by him”.²⁷¹ Without overstating the case, Naveh’s hesitancy is warranted. Letter forms found on the Izbet Sartah ostrakon should be consulted with the utmost caution, understanding that we “cannot know which letter forms are based on the contemporary scribal tradition and which are the

²⁷¹ Naveh 1978: 35.

products of either the writer's poor training or his bad memory."²⁷² In addition, I would add that we should consider the medium for this inscription, incised in limestone, which, though perhaps useful for educational purposes due to its soft, reusable qualities, may have nevertheless exacerbated the writer's infelicities. For this reason, I would consider the Izbet Sartah *tsade* (the only example of *tsade* in the inscription) problematic support for reading T-shaped *tsade* in the Lachish Bowl Fragment.

Four arrowheads from el-Hadr, in contrast, represent stronger evidence for T-shaped *tsade* (consult fig. 2.6 below), though not without controversy of their own. It is important to remember that these inscriptions are non-provenanced, alone a reason for caution.²⁷³ Their early discovery, however, has in general been taken as sufficient reason to accept them as legitimate, though we should note that the question of dating and typology are made difficult by their lack of context, especially as better contexted inscriptions from the early Iron Age come to light.²⁷⁴ Even acknowledging that these inscriptions are most likely both early and legitimate, we still must contend with the irregularity of the letter forms and perhaps even the effect of the materiality on these letter forms.²⁷⁵ Inscribing metal is a laborious process, only made more difficult by letters

²⁷² Naveh 1978: 35.

²⁷³ cf. Rollston 2003; 2004.

²⁷⁴ See already comments by Sass cautioning against the overreliance on the typological method for establishing dates via paleography, especially with a dearth of usable data. He states, "[a]bsolute dates which are based solely on palaeographic criteria should be treated with scepticism, if only because of the paucity of evidence" (Sass 1988: 151). It is worthwhile to consider that as the number of new inscriptions grows, there is a trend toward a recognition of regionalism in scripts, and typology embedded in this regionalism rather than earlier conceptions of supra-regional typology (see Lehmann 2020; cf. idem. 2021: 76* n.3).

²⁷⁵ Sass 1988: 73; Lehmann 2021: 67*; cf. Keimer 2015.

with curves and multiple twisting angles. Consider Lehmann's comments of the *tsades* of the el-Ḥadr arrowheads. He states,

Because of its orthogonal strokes, <Ş> in its archaic linear shape (as for instance in the Gezer calendar) is a tricky letter for embossing in small metal objects. [...] Hence not every inclination, rotation or unexpected bend of a letter here [in the el-Ḥadr arrowheads] is characteristic of a 'not yet stabilized typography', but rather a technically induced allography of a presumably incompetent or less trained 'scribe'²⁷⁶

Given Lehmann's analysis, we might see these four examples of T-shaped *tsades* as a product of practicality, the scribe preferring a reduced, simpler, yet still recognizable, letter form over a possible ideal (archetypal) form due to a confluence of the difficulty of working with metal and, perhaps, the scribe's own inadequacies. This should provide ample reason for caution and suggests that we should not assume that the form of *tsade* on these arrowheads represents anything of a 'regular' typological form.

²⁷⁶ Lehmann 2021: 67*.

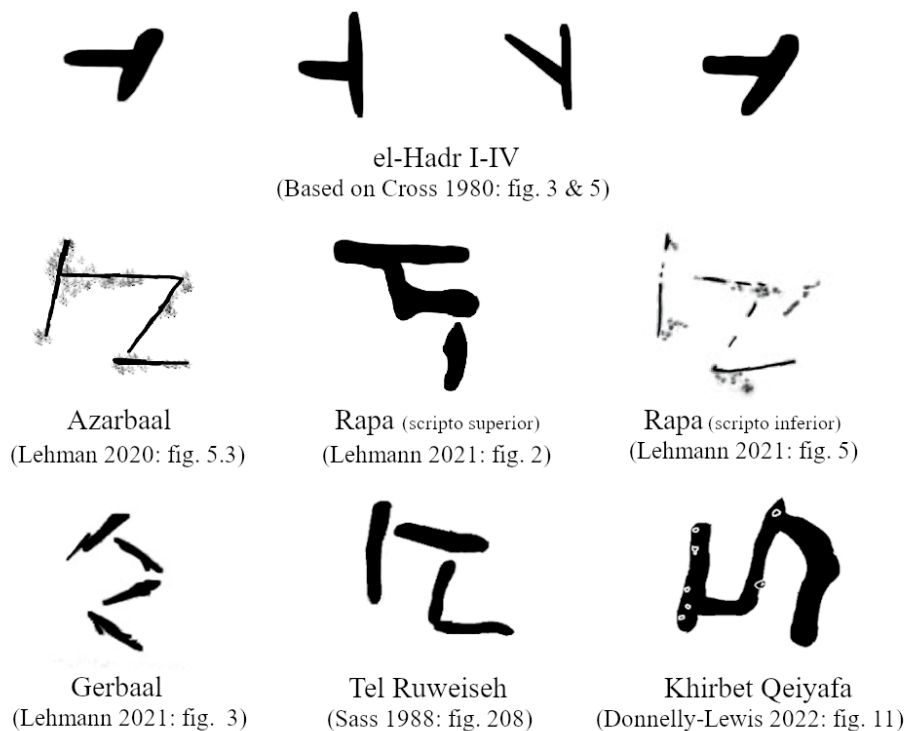


Fig. 2.6. Early examples of *tsade* (redrawn by the author with attribution)

In contrast to the difficulties with the inscriptions cited by Cross and Lemaire, there is certainly evidence for the form of angular *tsade* from several early inscriptions.²⁷⁷ We might counter the examples from the four el-Hadr arrowheads with the angular forms of *tsade* appearing on a number of other unprovenanced arrowheads (Gerbaal, Azarbaal, and Rapa (Wala); fig. 2.6 above).²⁷⁸ Just as mentioned with the previous examples of T-shaped *tsade* in the el-Hadr arrowheads, the legitimacy of the form of *tsades* found on these arrowheads can and

²⁷⁷ Of the early inscriptions from the Levant, see the traditional angular form of *tsade* on a number of other unprovenanced arrowheads (Gerbaal, Azarbaal, and Rapa; Lehmann 2020: fig. 5.2–3; and Lehmann 2021; see also the Pères Blancs arrowhead published by Tarragon 1991), the only provenanced arrowhead from Ruweiseh cited here (Sass 1988: 82-83, cf. fig. 208), and line three of the multispectral collation of the Khirbet Qeiyafa ostrakon (Donnelly-Lewis 2022: figs. 11 and 17) discussed here. In addition, see 10th century inscriptions that include Rehov 7 (Mazar and Ahituv 2011 [also 2013 in English]: fig. 7), the Tel Zayit abecedary (Tappy et al. 2006), and Gezer Calendar (Naveh 1982: 63).

²⁷⁸ Lehmann 2020: fig. 5.2–3; and Lehmann 2021; while the Rapa-Wala arrowhead is unprovenanced, Lehmann has offered some good reasons to consider it as legitimate (2021: 74*-75*).

should be questioned. However, the form of *tsade* here is supported by the only provenanced arrowhead from Ruweiseh.²⁷⁹ In this light, the examples from el-Ḥadr might be less favourable than examples from contemporary arrowhead inscriptions, both non-provenanced and provenanced. At the very least, competing evidence suggests to us that the *tsades* in the el-Ḥadr arrowheads are unique forms, even among the corpus of arrowheads. Thus, the firm pronouncements of Cross and Lemaire concerning the T-shaped *tsade* in the Lachish Bowl Fragment must be tempered. While T-shaped *tsade* is certainly an acknowledged morphology in the early alphabetic period, and may even fit the form in the text here, scholars should feel free to posit other graphemes known from the history of alphabetic writing in the southern Levant to account for the irregular form here.

Turning to a last potential example of an early angular *tsade*, in the recent reevaluation of the inked inscription from Khirbet Qeiyafa, I propose to read a *tsade* in the notoriously difficult line three.²⁸⁰ If the reading is correct, then the example would prove crucial; it would be the only comparative example of *tsade* from an early inked alphabetic inscription. The Qeiyafa *tsade* avoids the necessary entanglements that we have highlighted with previous comparanda: questions of materiality and its role in text production. However, it takes on a different entanglement, in being unclear and difficult and having one additional line as compared to the normal form of angled *tsade*. While examples of T-shaped *tsade* exist in the few examples we have examined, these examples are unique and at times problematic;²⁸¹ they therefore do not

²⁷⁹ Sass 1988: 82-83, cf. fig. 208.

²⁸⁰ Donnelly-Lewis 2022: fig. 11 [letter 3.9].

²⁸¹ We should note that even in the el-Ḥadr arrowheads, the *tsade* is not strictly a “T” – wherein the horizontal stroke is exactly perpendicular with the vertical. In el-Ḥadr I, III and IV (fig. 3), the two segments form an acute, not perpendicular, angle (see drawings in Milik and Cross 1954: 5-15; Cross 1980: 1-20; Sass 1988: figs. 185-197; and el-Ḥadr I in Pioske 2013: fig. 4). While a minor point, it perhaps shows that comparisons between these *tsades* and letter seven in line two of the Lachish Bowl Fragment are not exact in all the details.

represent reason for certitude in reading *tsade* in the reasonably well-executed script of the Lachish Bowl Fragment, rather we should consider that other possibilities may exist.²⁸²

2.2.1.2.2. Line Two, Letter Seven as the Hieratic *kr* Sign

The horizontal “T” shape of line two, letter seven has only one potential explanation as an early alphabetic letter, *tsade*. There is, however, a good corollary for this horizontal “T” form elsewhere in the inscriptional record. Looking to the later Iron II, several Hebrew inscriptions contain a horizontal T-shaped sign graphically similar to letter seven in line two of the Lachish Bowl Fragment—the T-shaped Palestinian hieratic *kr* sign.²⁸³ Consider just one example of this form in Arad 46 (fig. 2.8).

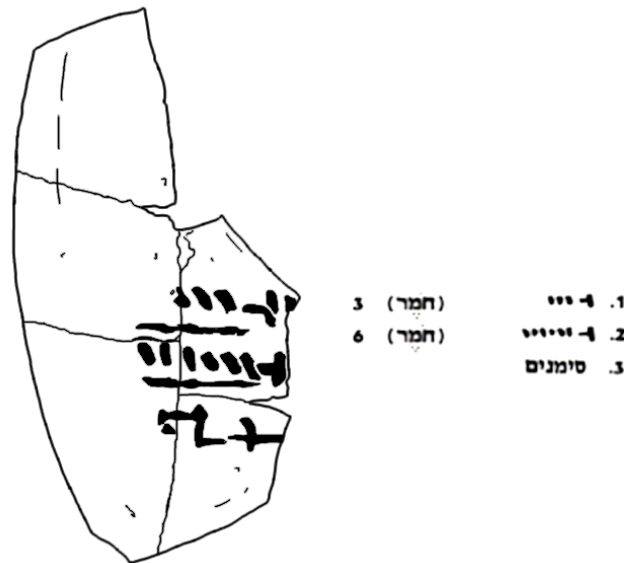


Fig. 2.7 Arad 46 (drawn by the author; interpretation after AI 78)

²⁸² See note 7 above. The epigraphic argument aside, some weight should be given to the fact that both Lemaire and Cross’ linguistic suggestions are difficult to justify. Cross’s suggestion, *yṣ*’ “gallery” lacks sufficient linguistic support (1984: 75). Similarly, Lemaire’s suggested PN “*WHBṢYB*” has, as even he admits, no good West Semitic etymology (2004: 1599-1600).

²⁸³ Wimmer 2008a: 256.

Wimmer’s seminal study of Palestinian hieratic includes a number of tables that bring together all the attestations of hieratic accounting signs in Iron II inscriptions.²⁸⁴ One of these tables compiles a dozen instances of the *kr* sign from Iron II inscriptions (8th-6th century) including texts from Arad (8, 18, 22, and 46), Lachish (22), and Kadesh Barnea (3 and 5).²⁸⁵ The “T” shape of letter seven in the Lachish Bowl Fragment bears undeniable resemblance to the form of Palestinian hieratic *kr* as shown above in Arad 46 (Fig. 2.8 above). This accounting symbol is common in late Iron II inscriptions from the southern Levant but was hitherto unattested from a context earlier than the 8th century.²⁸⁶ Likewise, prior to the discovery and decipherment of the Lachish Jar Sherd, no hieratic accounting symbol was known before the late Iron II, despite Wimmer and Goldwasser’s recognition that the adoption of hieratic numerals seems to have occurred at an early (even Ramesside) date.²⁸⁷ However, the recent decipherment of the Lachish Jar Sherd by Schniedewind, as discussed above, includes the recognition of the hieratic Egyptian *ḥqꜣ.t* sign.²⁸⁸ Thus, the prior attestation of a hieratic Egyptian accounting symbol in an alphabetic inscription from Lachish and the significant number of hieratic inscriptions from Lachish provides strong additional outside evidence for the argument proposed here.

²⁸⁴ Wimmer 2008a: 256.

²⁸⁵ (Wimmer 2008a: 256; see Arad inscriptions (*AI* ad loc.); Lachish Ostrakon; and Kadesh Barnea (Wimmer 2008a). Wimmer lists Arad 46 as a questionable attestation of the *kr* sign. He states, “die Existenz dieses nach links gespiegelten Kor-Symbols [ist] insgesamt fraglich” (2008a: 48). Upon examination of the photographs, I find myself in agreement with Aharoni, though it should be noted that Aharoni does not make a distinction between *ḥmr* and *kr* whereas I follow Wimmer in making this distinction (Wimmer 2008a: 256). In addition, I chose Arad 46 for its simplicity. Usually, the *kr* sign is embedded in a much more complex text and can be difficult to pick out. Arad 46, however, provides minimal distraction and, as Wimmer suggests, may have been a practice text (2008a: 48).

²⁸⁶ See table in Wimmer (2008a: 256) and other examples at Arad [8, 18 and 22] in Aharoni 1982.

²⁸⁷ Goldwasser 1991; 2016; Wimmer 2008a: 274-278.

²⁸⁸ Schniedewind 2020.

2.2.1.2.3 Interpreting *kr* in Line Two: A (Tentative) Proposal for Translation

Previous translations have been offered by Cross, Puech, and Lemaire. Both Cross and Puech attempted to read the inscription as a cultic text, suggesting that it was the record of an installation of a stele or gift for a god with minor differences in the reading of the first word of line two. Lemaire, in contrast, views the inscription as containing a PN and a patronymic in line two.²⁸⁹ Nevertheless, in most translations scholars agree upon the reading of 'L'B in line one, either taken as a divine name²⁹⁰ or as a personal name.²⁹¹ In Cross's reading, the line after 1.4 is a line divider; however, Puech interprets it as *waw* and sees more ink after, suggesting *shin-mem-[shin]* to complete line one.²⁹² While it is difficult to say whether either reading is correct, Cross's is to be preferred as the more careful analysis and his reading of the fifth letter of line one as a word or line divider, may be supported by the recent interpretation of a similar short vertical in the Khirbet Qeiyafa ostrakon.²⁹³ In agreement with Lemaire, it seems more likely to me that 'L'B is a PN and thus, line one may contain the name of a devotee (in a cultic context) or a taxpayer (in an administrative context). There may, however, be the appearance of scant traces

²⁸⁹ Lemaire 2004: 1599.

²⁹⁰ Cross 1984: 74-75; Puech 1986: 21.

²⁹¹ Lemaire 2004: 1597-1600; due to the rectangular shape of the first and third letter of line one, Ussishkin in the *editio princeps* originally suggested *het* (1983: 153-157), so too Sass, in a later study, read *het* here (1988: 62; cf. Colless 1991). Despite its "boxy" appearance, I tend to agree with the majority reading of *aleph* (Cross 1984; Puech 1986; and Lemaire 2004), recognizing that the form is irregular. Nevertheless, Cross, Sass, and later Lemaire all appeal to the *aleph* of the Khirbet Raddana handle as an example of a similar *aleph*, but I am wary of explaining an irregular letter form by way of another irregular letter form. In addition, I do not find the comparison to be truly warranted. The Kh. Raddana *aleph* displays a slight, but noticeable, rounding of the head of *aleph*, whereas the *aleph* of the Lachish Bowl Fragment is quite pronounced in its rectangularity (Cross and Freedman 1971: fig. 1). Thus, I find it most prudent to consider the irregular *aleph* here as simply an idiosyncrasy of the style of this writer (for an analysis see ch. 4 below, esp. 4.## and fig. 4.##).

²⁹² Puech 1986: 21-22.

²⁹³ Donnelly-Lewis 2022: fig. 14 (letter 2.4).

of ink beyond this line. Perhaps this is yet again an instance of a personal name, vertical divider, and patronym, but the inscription is too faded to make any sure decision.

As discussed above, the second line of the inscription is more fragmentary than the first. Broken on each side, the start and end point of the line cannot be determined with any certainty, and thus any attempt at translation remains tentative. With this in mind, the missing context at the ends of the line does not prevent a few suggestions about what words may be represented by the extant letters, in hopes that limiting the potential readings may help build a circumstantial case for interpreting the ostrakon and situating the occurrence of *kr* in line two in an understandable context. In order to puzzle out the possibilities, we should begin with a maximal set of possible readings in hopes of exploring all possible interpretations. Taking the published studies as the baseline, and adding the possibility of *resh* to letters 4 and 6,²⁹⁴ we can suggest the following for line two.

Table 2.2: Potential readings for line two of the Lachish Bowl Fragment

1	2	3	4	5	6	7	8	9
?	B	Š	W-Q-R	H	‘-W-Q-R-?’	Ī (<i>kr</i>)	Y	B

In both the preliminary and final excavation reports, Ussishkin and later Lemaire transcribed the letters from left to right.²⁹⁵ Given what remains of line one and the orientation of the letters, this is the expected direction of writing.²⁹⁶ Taking stock of the information available

²⁹⁴ See note 3 on forms of *resh* during this period.

²⁹⁵ Ussishkin 1983: 155; Lemaire 2004.

²⁹⁶ See also the evaluation of Sass who, on the basis of the letter orientations (especially *bet* [1988:62]) concludes that “it is almost certain that the inscription is not written boustrophedon fashion” (63).

to us, we can attempt to piece together some reasonable lexemes composed of the extant letters. To begin, we should consider that, when searching for nouns, *kr* as a unit of measurement normally implies a commodity and when searching for verbs implies a semantic range of activities commonly associated with those commodities (taking, giving, receiving, paying etc). This information provides some circumstantial constraints for us, so we need not supply possible lexemes at random but only those that conform to the expected semantic range of lexemes delimited by their association with *kr*.

Surveying the letters, the first suggestion we can make comes at the end of the line (letters eight and nine). If we assume that at least one letter is missing (as many previous scholars have), the end of the line may be the beginning of a verb, either from $\sqrt{bw}?$ or \sqrt{ybl} (PS $*\sqrt{wbl}$). The semantic domain of both of these verbs, as attested in several of the Semitic languages, is a verb of motion meaning “to bring” or “to carry.”²⁹⁷ The verb $\sqrt{bw}?$ in the C stem is frequent in the Hebrew Bible as a multivalent verb of motion, but would be difficult to read here. The verb \sqrt{ybl} is far less common, but occurs in a few places referring to gifts or tribute brought to YHWH (Isa 18:7; Ps. 68:29; and Ps. 76:11).²⁹⁸ In the economic lexicon of Ugaritic, this same verb, *ybl*, is attested denoting payment for taxes or tribute.²⁹⁹ In its nominal form in both Ugaritic and Hebrew it can also refer to the produce of the land, i.e., crops.³⁰⁰ Theoretically any of the above options might fit. The *kr* in the Hebrew Bible is frequently a measurement of grain or flour (1

²⁹⁷ PS $*\sqrt{wbl}$ = Akk. *wabālu* (CAD A(1): 10-31), Arm. *ybl* (DNWSI: 431), Heb. *ybl* (HALOT: 383), Ug. *ybl* (DULAT: 935-936).

²⁹⁸ One example refers metaphorically to the peoples of the exile as an offering (מנחה) being brought (יובלון) to YHWH (Zeph 3:10).

²⁹⁹ DULAT 935-936.

³⁰⁰ DULAT 936; HALOT 382.

Kgs 4:22, 5:11; 2 Chr. 2:10, 27:5). Thus, its being brought, either in payment or in offering makes good sense.

We should note here that the reading *yod* is to be preferred over the reading of *resh* by Ussishkin.³⁰¹ Several epigraphic evaluations, as exemplified by their drawings, indicate that the top right of letter eight is open like *yod* and unlike *resh*.³⁰² Thus, *yod* and *bet* followed by an additional letter is the best epigraphic understanding of the end of the line, and therefore we need not posit lexemes beginning with *reš* and *bet*.

Reading either a noun or verb from $\sqrt{bw}?$ or \sqrt{ybl} at the end of the line seems, at least, reasonable given the attestation of *kr*, and yet, working out from here becomes very difficult. Toward the beginning of the line, the combination of letters $bš^{w/q/r}h$ (2-5) could be construed in a few ways, especially if we allow for the possibility that *heh* represents a pronominal suffix.³⁰³ One might wish to see *bet* as part of a lexeme now broken at the left edge of the ostrakon. This is

³⁰¹ Ussishkin 1983: 155.

³⁰² See especially Cross 1984; cf. Sass 1988 and Lemaire 2004.

³⁰³ Lemaire reads the second visible letter (labeled letter three here) as *nun* with a word divider touching on the right side. He reasons this on two bases: (1) *shin* in the Late Bronze Age is “generally vertical” and (2) the last stroke of the letter “does not seem to be written as the other parts of the letter” (Lemaire 2004: 1599). One must question his assertion that *shin* is “generally vertical” in the Late Bronze age, resting as it does on only two examples from the Late Bronze age – the Lachish Ewer and Lachish Bowl. Much rather, the multi-positionality of letter forms (facing left, right, up, or down) is a feature both between and within Proto-Canaanite inscriptions; see most recently the well-executed 12th-11th century text from Khirbet er-Rai with upside down *bet* and likely *yod* (Rollston et al 2021). As to Lemaire’s second contention, that the last stroke “does not seem to be written as the other parts,” his evaluation is idiosyncratic and the resultant reading of *nun* plus a word divider does not account well for the form as it most plainly appears. Instead, the reading seems to be motivated by Lemaire’s interpretation that the second line should be a patronymic (2004: 1599), a reasonable interpretation given the difficulty of the line and the frequent attestations of names and patronyms in the inscriptional record, but nevertheless epigraphically difficult to defend. The plain reading of the letter is *shin*, as evidenced by all other epigraphic evaluations (Ussishkin 1983; Cross 1984; Puech 1986; and Sass 1988) and by the well-documented form of *shin* in early Proto-Canaanite inscriptions (See the Lachish Ewer [Sass 1988: fig. 156]; Lachish Bowl [Sass 1988: fig. 166]; Qubur al-Walayida Bowl [Cross 1980; Greene 2016]; Tell es-Sarem sherd [Ahituv and Mazar 2020]; Khirbet Qeiyafa Ostrakon [Misgav, Garfinkel and Ganor 2009; Donnelly-Lewis 2022]; Khirbet Qeiyafa Ishbaal Sherd [Garfinkel et al. 2015], and Manaḥat Sherd [Stager 1969: 45-52]).

certainly possible. Several epigraphers have noted markings on the left side that seem to indicate that *bet* is not the first letter in this line. For this reason, it is important to understand that any suggestion here is tentative.

Of all possibilities we could offer for the letters preceding *kr* only one is worth noting, in part due to its plausibility: *šq + h /šaḳihu/* “its sack.” It seems to me that the combination *šq + h* presents the most sensible interpretation, if not delimited by a lack of context.³⁰⁴ Taking this combination with the preceding *bet* then might yield something like “in its sack,” which at first glance makes the text no more meaningful.³⁰⁵ However, if we read the whole of line two together with what we have suggested for the end of the line above, the phrase, “in its sack,” may become a bit clearer. Line two from this perspective might be tentatively translated as follows:

]bšqh [] ꞥ yb[l

X] in its sack, [] *kor* (of X grain) brought/offered/paid.”

As we have mentioned, a sliver of ink is visible on the far left of the sherd and provides evidence for an additional letter, or letters, before *bet* in the second line. Unfortunately, this is now only scarcely preserved. While we should shy away from any specific reconstruction here, the possibility that the type of grain being offered, or paid, was originally indicated by the unpreserved left side is noteworthy. This would make the suggested phrase “in its sack” a bit

³⁰⁴ The use of “š” here should not be taken as a comment about phonology, but rather a reference to the appearance of *shin*. The exact phonology here is uncertain.

³⁰⁵ It should be noted that *šq* as a unit of measurement was suggested, and ultimately rejected, by Wimmer for Rehov 3 (Wimmer 2008: 140-141; Wimmer 2022b: 47-70). The irregular grapheme in the center of the inscription appears similar to a Hieratic 70, but ultimately must be an irregular form of *yod* (Wimmer 2022b; Mazar and Aḥituv 2011; cf. Aḥituv and Mazar 2020: 421-423).

more comprehensible. The grain offered or paid was so offered “in its sack.”³⁰⁶ We will revisit this phrase in a moment; however, before we can ruminate on the meaning and purpose of “in its sack,” we should consider the issue of letter six which, as we have already mentioned, is only visible at its head above a break in the ostrakon.



Fig. 2.8: Hieratic numeral “9” with writing angle from Lachish Letter 19 (after Tufnell 1953, drawn by the author).

The only preserved remnants of the broken letter before *kr* in line two is an apparently rounded head, though this is admittedly difficult to see. As identified by several previous epigraphic evaluations, this rounded head could be identified with any number of alphabetic letters, but I would offer that it could also be the rounded or curved head of a hieratic numeral. Several candidates come to mind, but let’s consider just one, hieratic “9.”³⁰⁷ To the left is an example of this numeral from Lachish Letter 19 in the later Iron II period (fig. 2.8 above). The curvature and rounding of the head here might fit the visible ink, though with some difficulty. The writing of hieratic “9” is not wholly consonant with the remnants of ink that appear above

³⁰⁶ The association of “sack” in Semitic languages with payments, sometimes in grain, is attested in both Akkadian (*CAD S*: 168-169) and Ugaritic (*DULAT* 913). See also the regular use of Egyptian *ḥ3r* “sack (of grain)” as a measurement (*Wb* 3: 363).

³⁰⁷ Examples of 9 and 20 from various periods in Egyptian Hieratic and later Iron II Hebrew inscriptions feature heads that might fit, though with some difficulty (for Egyptian see Möller 1965: 55-56 and Wimmer 1995: 435-440; for Iron II Hebrew inscriptions see Wimmer 2008a). I highlight 9 here both for convenience and because it is well-known from later Iron II inscriptions.

the break for letter six, thus the heuristic match is nothing more than a suggestion.³⁰⁸ Because the letter is broken at the bottom we cannot know for certain, but we might expect a hieratic number to accompany a hieratic accounting symbol as is frequently attested from later inscriptions.³⁰⁹ A numeral would fit well in the proposed translation above.

2.2.1.1.4 Summary of the Lachish Bowl Fragment

The Lachish Bowl Fragment is unique as an early alphabetic inscription. Being fragmentary only exacerbates the difficulty in understanding the text and interpreting it. Nevertheless, what we have attempted to describe here is well represented by the evidence of contemporary hieratic inscriptions written on bowls from the southern Levant. Many of these hieratic bowl inscriptions are fragmentary, like our inscription, but tend to come from common bowl types known from the Late Bronze period. The flared-rim bowl upon which our inscription was written is a characteristic bowl of the Late Bronze III at Lachish (consider fig. 2.9).³¹⁰

³⁰⁸ Wimmer has pointed out to me that the form here would have to be irregular to be a Hieratic numeral, but that such irregular and flawed Hieratic writing is known the contemporary Lachish Jar Sherd, wherein the *Heqat* sign appears with three plural strokes written in the form of a line (Stefan J. Wimmer, personal communication).

³⁰⁹ cf. Wimmer 2008a.

³¹⁰ Ussishkin 1983: 155.

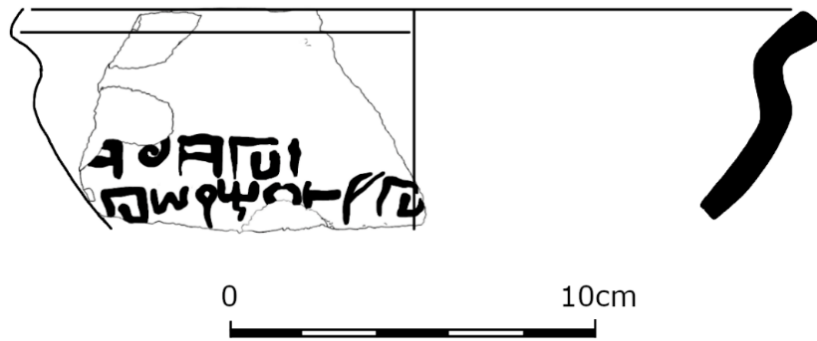


Fig. 2.9: The Lachish Bowl Fragment as pottery (drawn by the author; cf. Ussishkin 1983: Fig.

25)

Extant hieratic inscriptions often record the date, amount of payment, names of individuals involved, and types of grain or any variation thereof.³¹¹ Most of these inscriptions are fragmentary. Thus, missing one or more of these elements is not surprising. The fragmentary and, consequently, laconic Lachish Bowl Fragment offers us some connections to the hieratic bowls, if only a few. In the first line we have a name, whether a PN or DN. If we interpret this as a PN, this could be interpreted as the name of a supplicant, taxpayer, or even the scribe himself, as sometimes occurs in the hieratic bowl inscriptions.³¹² While we are missing the type of grain, perhaps lost due to the break on the far left, we do have the grain amount—at least the amount as it is measured. And if our suggestion to restore either a C stem of *bw?* or the root *ybl* for the end of this line is correct, we might see yet another connection. In a few hieratic bowls, the verb *ini*, a multivalent verb of motion, refers to the grain “that/which was brought” (*ini.t* | Tell el-Farah

³¹¹ Wimmer 2022.

³¹² Names of the scribe appear in Tell el-Farah (S), Fragment A (Goldwasser and Wimmer 1999: 40) and Lachish V (Goldwasser 1991; Sweeney 2004: 1610). Goldwasser, and subsequently Sweeney, notes that in the second case, the name is written in group-writing, common for foreign names in the New Kingdom and presents the possibility that this may have been a Canaanite name (Goldwasser 1991; Sweeney 2004: 1610). Likewise, compare the recent decipherment of the Lachish Jar Sherd in which the second line preserves *samekh-peh-resh*, likely Semitic *spr*, “scribe” (Schniedewind 2020: 137-140). As interpreted by Schniedewind, the first line of the Lachish Jar Sherd may be a personal name (2020: 137).

(S), Fragment A) or which “arrived at the temple” (*ini m-pr* | Tell Sera’ No. 2).³¹³ In this context, *bw?* might make a suitable linguistic parallel to Egyptian *ini*. In sum, the inclusion of the name in line one, the weight of grain indicated by the hieratic *kr* sign, and the potential use of a verb of motion may signal a close connection between this inscription and the contemporary tradition of hieratic grain-tax bowls at Lachish.³¹⁴

We might recruit the Egyptian evidence to explain one last feature of the proposed interpretation, the reading *bšqh* “in its sack.” One common expression in Egyptian harvest tax records, importantly found on a hieratic inscription from nearby Tel el-Farah (South), is the expression “barley as barley” (Eg. *it m-it*). This expression most probably refers to the form of tax payment, in other words, payment in real barley.³¹⁵ My suggestion, “in its sack,” might similarly refer to payment of the tax duties in real grain as opposed to some other means. Making the inscription, again, consonant with phraseology and scribal practice known from the Egyptian material.

Reevaluating the epigraphy of the Lachish Bowl Fragment and tying its potential content in with the broad evidence from hieratic bowl receipts transforms this inscription from being evidence for the early alphabet into evidence for the early alphabetic adoption of Egyptian scribal practices. There are additional ways in which this inscription might index Egyptian

³¹³ See *ini* in *Wb* 1: 90-91; for Tell el-Farah (S), Fragment A; see Goldwasser and Wimmer 1999: 40; for Tel Sera’ No. 2; see Goldwasser 1984: 80.

³¹⁴ Recently Nadav Naaman has, I believe rightly, drawn a comparison between the Iron age administrative practice of recording ration distribution on bowls discovered at Arad and the Late Bronze age administrative practice of recording tax payments in Hieratic on bowls (2021: 222-223; see 2.2.2.1. Arad Inscriptions below). It is possible to view the present inscription from Lachish as perhaps the first example of a tradition, adapted from Hieratic Egyptian practice in the Late Bronze age, that continues into the administrative practices of the early Iron II (see also Na’aman 2020).

³¹⁵ DLE I: 58; Goldwasser and Wimmer 1999: 41.

affinity (see ch. 4 below), but reinterpreting the content in context permits us to suggest that this inscription is an example of the selection of a bowl fragment for writing an administrative text. Just as with Qubur al-Walayda (below), we do not know whether such a text would record taxation or votive offering. In either case, it would display the hybridity of Egyptian authorized scribes operating in the Levant at the end of the Late Bronze Age. Understanding that the evidence is fragmentary and the resources for interpretation are limited, we should settle for a holistic argument, that the sum of the data points to the probability that this inscription stands in the tradition of bowl writing in the Levant.

2.2.2. Early Example: Qubur al-Walayda Bowl

The Qubur al-Walayda bowl, discovered in 1977, is considered one of the earliest alphabetic inscriptions from the Levant.³¹⁶ Four fragments of this typical Late Bronze III bowl (see figs. 2.10-11 below) attest to the writing of Canaanite names on complete bowls that I will suggest below have an administrative use.³¹⁷ The text of the Qubur al-Walayda bowl reads as follows:

šmp'l | 'y'l | š (?)[

The inscription begins with two personal names (*šMP'L* and *'Y'L*) separated by a vertical divider, a tradition that continues in the southern coastal plain at least until the end of the 10th century.³¹⁸ What this configuration means, however, is unclear. It has often been suggested that the second name is a patronym and thus “son of” is often written in parentheses; this

³¹⁶ Cohen 1978. The inscription has been dated to the end of the Late Bronze III or beginning of Iron I (Cross 1980; Finkelstein and Sass 2013: 156 n.21; cf. Berlejung 2010).

³¹⁷ Berlejung 2010: 274; Arie 2018: 9-10.

³¹⁸ Cross 1980, Berlejung 2010; Greene 2016. For this tradition see Safi Bowl (Maeir et al. 2014) and the most recent inscriptions from Safi (Eshel et al. 2022).

interpretation seems likely, given similar examples in other better represented corpora (see Samaria Ostraca below). What follows this personal name, ŠMP'L (son of) 'Y'L, is problematic. The end of this inscription is broken and different interpretations have been suggested for the last two letters. Let us briefly consider the options for the end of the inscription here.



Fig. 2.10: Qubur al-Walayda Bowl in representing pottery (drawn by the author)

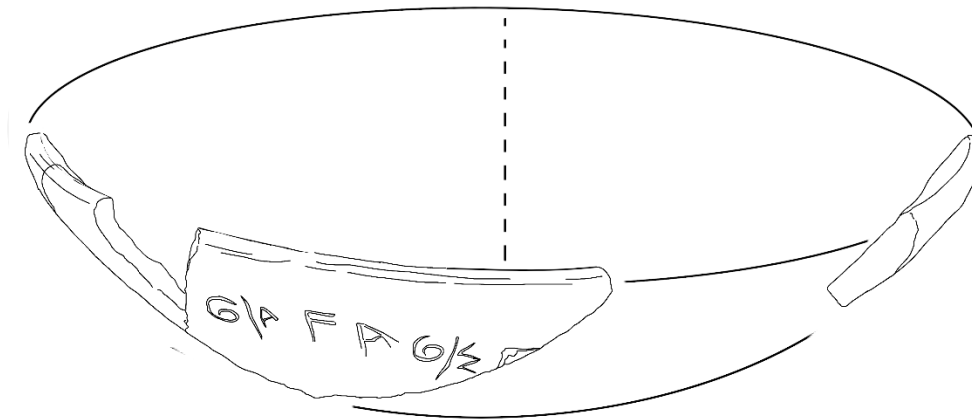


Fig. 2.11: Qubur al-Walayda Bowl with approximate circumference based on the remaining sherds (drawn by the author)

Cross noted already in 1980 that a faded vertical divider stands between the rightmost *lamed* and *shin*, separating this from what comes before it.³¹⁹ This standalone *shin* has attracted a few suggestions, including as a well-known abbreviation of *šql* or reading *shin* as *šu*, “sheep.”³²⁰ This latter reading can be rejected on contextual grounds, but the former makes good sense. Bracketed on both sides by dividers, this *shin* can scarcely be interpreted as anything but an abbreviation for a *šql*. Judging from this, it has been suggested that the last angular strokes might be seen as a hieratic numeral (5 or 10).³²¹ Greene has noted problems with this proposal on epigraphic grounds, and thus it should be considered unlikely.³²² Analyzing the RTI images of the inscription he concludes three things,

(1) There exists a distinct ridge between the final vertical and horizontal strokes; this ridge demarcates both the extent of the width of the vertical stroke and the length of the horizontal; (2) the scribe responsible for producing this inscription was talented enough that incisions intended to be joined do not have any ridges between them (compare both *šins*, *mem*, *pe*, both *alephs*, and *yod*); and (3) these two incisions represent components of two distinct graphemes—most likely, a word divider followed by a trace of a final grapheme.³²³

These epigraphic observations should give us pause before rushing to consider the last symbol a hieratic numeral, though I would not categorically exclude it.³²⁴ Nevertheless, even if the

³¹⁹ Cross 1980; cf. Greene 2016 for RTI confirmation.

³²⁰ Cross 1980: 215-216.

³²¹ Cross 1980 who suggests 10 and Berlejung 2010 who suggests 5.

³²² Greene 2016.

³²³ Greene 2016: 43.

³²⁴ Greene also cites Wimmer’s cautious comments about the early date and the lack of attestations of Hieratic numerals from this period (see Wimmer 2008a: 91; Greene 2016: 43). The recognition of hieratic 5 in the Lachish Jar Sherd, however, now provides evidence for the existence of early hieratic symbols and numerals in alphabetic texts (Schniedewind 2020).

interpretation of the last few strokes in the Qubur al-Walayda bowl as hieratic numeral fails to be convincing, the whole of the inscription in context may still draw us into conversation with Egyptian scribal practice.

As mentioned, the inscription bears a personal name and a patronym. These are separated by a vertical dividing line. This is followed by a scantily preserved further vertical line separating the names from a noticeable *shin*, an abbreviation of weight *sheqel*. What comes after this is a mystery, but we should consider that the combination of a name with an abbreviation for a weight of something suggests perhaps the identification of a commodity, which has not been preserved.³²⁵ Due in part to the fragmentary nature of the inscription, what the text of the inscription means in context has not often been considered. I would offer that the extant data can reasonably be read as the beginning of an administrative note inscribed on a whole bowl, detailing an offering or tax given. Let us consider the inscription in light of the context at the site and the few other (hieratic) inscriptions that we have there.

2.2.2.1. Hieratic at Qubur al-Walayda and the Interpretation of the Alphabetic Bowl

The Qubur al-Walayda bowl comes from a pit that yielded only Late Bronze III pottery, suggestive of its 12th century date.³²⁶ Qubur al-Walayda was the site of an Egyptian residence during the 13th-12th centuries and yielded two inked hieratic inscriptions.³²⁷ The first of these was an ostrakon perhaps containing a list of rations (Eg. *di.w*) for slaves with names that may be

³²⁵ cf. Greene 2016 who noted the same possibility.

³²⁶ See note 49 above.

³²⁷ Wimmer, Lehmann, and Niemann 2014; though the excavators suggest, based on an analysis of the find spot of the Qubur al-Walayda Bowl and the synchronisms with the present excavations, that the alphabetic inscription predates the Egyptian residence and thusly hieratic at the site (2014: 347; cf. Lehmann et al 2010).

Canaanite.³²⁸ Both names are spelled in group writing, the typical Egyptian orthography for foreign names, and given the context Semitic (i.e., Canaanite) names are certainly likely.

The two extant names on the list are both identified as “slaves” (Eg. *ḥm*). The name of the first is spelled *b-d-n-t-r* (𓇧𓇳𓇰𓇱𓇲𓇳) and the second *m-p-r* (𓇔𓇕𓇖𓇗𓇘). Thomas Schneider is quoted by the authors of the *editio princeps* for offering two reasonable Semitic derivations for the names. His suggestion to read the second name *m-p-r* as Semitic *mapeli* “(the deity) performs wonders,” is rather convincing and more probable than non-Semitic readings discussed in the publication.³²⁹ For the first name, Schneider suggests a derivation from a proposed Semitic *be-šinnat – ‘el*, “In the shelter of god,” though this name is unattested.³³⁰ I, however, would offer a different derivation that we might briefly consider before continuing to discuss the extent of the hieratic inscriptions from Qubur al-Walayda and their relationship to the Qubur al-Walayda Bowl.

EXCURSUS: Second Name in the Qubur al-Walayda Hieratic Inscription No. 1

Schneider’s suggestion for the first name is intriguing and creative. As such, it should be considered a real possibility. However, I would like to briefly offer a suggestion that the first name might be better read as *b-šl + θr* (perhaps vocalized /b^{i/a}šil-θawr/) “in the shade of the (divine) bull.” The phoneme /θ/ in Semitic as documented by Hoch is realized as “s” or “š” in several Egyptian attestations but not enough, to my mind, to be determinative (*n* = 13).³³¹ Considering the problem of this phoneme, Hoch devotes several well-reasoned pages to the

³²⁸ Wimmer, Lehmann, Niehmann 2014.

³²⁹ Wimmer, Lehmann, Niehmann 2014: 345.

³³⁰ Wimmer, Lehmann, Niehmann 2014: 345.

³³¹ Hoch 1994: 433; cf. treatment of /t/ in 402-405.

articulation of the Semitic phoneme /θ/ in various languages and its transcription in Egyptian. He notes the particular difficulty of identifying the articulation and the variability of phonetic development in Semitic languages, ultimately concluding, “In short, the writings with Egyptian *s* probably represent [t], and the writings with Egyptian *š* probably indicate that the source language had undergone the merger /t/ and /š/.”³³² The uncertain tenor of this concluding sentence is only amplified by the accompanying note which adds, “although there may be exceptions, since Egyptian did not have [t], and it may—as with other phonemes—have been transcribed with more than one Egyptian grapheme.”³³³ The variable transcription of Semitic /θ/ in several languages, Aramaic (ܐ, ܨ, and ܢ) and Akkadian (š and t), I would offer, presents a significant problem for an absolutist interpretation of Egyptian transcriptions of the phoneme, if Semitic transcription practices themselves are not consistent. This is further exacerbated by the lack of data available.³³⁴ Given this, I would argue that the Egyptian transcription in this inscription from Qubur al-Walayda should be read as preserving an example of PS /θ/ before its shift to /š/ written with Egyptian “t.” In light of the evidence collected by Hoch, this would be admittedly unique, but as we have reasoned here, not impossible.

Beyond the phonetic correspondences and their attendant difficulties, there are good onomastic arguments to be made in favor of reading the name as *bšlθr*. First, the root √θwr is known as a divine element in personal names from Ugarit and in the *Balu* myth as an epithet of the god *'Ilu*.³³⁵ One name, *'LTR* (/ilθôr/) “Ilu is a/the (divine) bull” is especially important to

³³² Hoch 1994: 404-405.

³³³ Hoch 1994: 405 n.22.

³³⁴ See Hoch 1994: 402-405 who already noted these difficulties.

³³⁵ KTU 1.2 I 33; *DULAT* 65, 916; See also Sivan 1984: 281.

note. In light of my proposal for name one (*BŠLΘR*), the equation between El and the “(divine) bull” in the Ugaritic personal name could make the proposed name here, *bšlθr* (Eg. *b-ḏ-n-t-r*), a hitherto unattested variant of the much more familiar name *bšl’l* “in the shade of ‘El (<or> the god)” known from the Hebrew Bible (בצלאל in e.g., Ex. 36:1, 37:1, 38:22) and in a shortened form from Arad 49 (see below).³³⁶ While we cannot be certain, I would offer that this reading and interpretation may be superior to those previously offered, connecting the name preserved here with a well-known Canaanite divine epithet for the god El (Ugaritic *’Ilu*) known in personal names and a later, well-attested, Hebrew name.



Fig. 2.12: Qubur al-Walayda hieratic bowl fragment with hieroglyphic transcriptions (after Wimmer, Lehmann, and Niemann 2014: Inscription 2)

³³⁶ The name in Arad 49 is often taken to be vocalized *bašal* (like בצל “onion”) but in context a shortened form of the priestly name *b^wišil* (בצל) is more likely (see below). Consider that the next name in the list is Korah (Heb. קרה; cf. Exod 6:21, 24 and Num. 16 throughout).

Though the first inscription from Qubur al-Walayda, that we have just discussed, is intriguing and important, the second inscription is crucial for a contextual discussion of the Qubur al-Walayda (alphabetic) bowl.³³⁷ This inscription (fig. 2.12 above) is a fragment of a bowl that bears what Wimmer has identified as a typical element of the “standard harvest tax registration form” that appears on several other hieratic inscriptions from the Levant.³³⁸ The few signs extant on the sherd read, “[...] which is in it [...]” (Eg. *nty im-s*).³³⁹ The body sherd is a fragment of a bowl and given the albeit fragmentary, linguistic content, it can be suggested that this was originally part of a complete hieratic taxation bowl.

This small hieratic inscription from Qubur al-Walayda should inform our interpretation of the Qubur al-Walayda bowl. The inclusion of a name followed by a weight, and further content which is lost to us, should suggest that rather than standing in the tradition of the inscribed prestige bowls of the later Iron Age, as supposed by Greene,³⁴⁰ the inscription is better understood as a Canaanite reappropriation of the Egyptian bowl inscribing practice.³⁴¹ In this light, the divider after *shin* can perhaps be read in light of accounting practices from the later Iron Age, where hieratic numerals and symbols are combined with alphabetic abbreviations. Here the practice of placing an oblique vertical after the *bet* abbreviation for the *bath* measurement may illuminate the bracketing of *š* for *šql* in the Qubur al-Walayda bowl.³⁴² This

³³⁷ Wimmer, Lehmann, and Niemann 2014.

³³⁸ Wimmer, Lehmann, and Niemann 2014: 346; cf. Wimmer 2022.

³³⁹ Wimmer, Lehmann, and Niemann 2014: 346.

³⁴⁰ Greene 2016.

³⁴¹ Cf. Goldwasser 1984; 1991.

³⁴² See Wimmer 2008a; cf. Beth Shemesh Baal Fragments below.

latter suggestion would tie the Qubur al-Walayda bowl to a long history of Egyptian derived accounting.

A connection between the hieratic fragment (No. 2) and the alphabetic inscription makes the selection of a bowl to bear the inscription all the more intriguing. If we read the Qubur al-Walayda bowl as has been suggested here, in light of the hieratic evidence for harvest tax bowls and in light of the archaeological context as evidence for Egyptian occupation, the material becomes the enactment of a learned association between the inscription of administrative content, either taxation or offering, and complete bowls.³⁴³ Inscribing a bowl with an administrative text would then be a continuation of the Egyptian hieratic practice. Its being incised after firing may additionally represent that the adoption of this practice was hybridized and made for use, not only with a different script, but a different method of inscription.³⁴⁴

2.2.2.2. Summary: Early Examples of Bowl Writing

The Qubur al-Walayda bowl, the Lachish Bowl Fragment, and the Lachish Bowl when read in the context of the broad representation of hieratic writing on bowls suggests that the reason for selecting complete bowls for inscription is intertwined with Egyptian writing practice and Canaanite cultic practice. The hieratic bowls themselves represent a hybridization of imperial record keeping coopting resident cultic practice. In a similar way, the Egyptian practice is then reused for alphabetic inscriptional practice during Egyptian occupation. The connection

³⁴³ If the interpretation for the Qubur al-Walayda bowl offered here is accepted, and if the excavators are correct to date this inscription to a time prior to the establishment of the Egyptian residence at the site, what might this mean about the origin of hieratic bowl writing or the relationship between each practice?

³⁴⁴ See discussion of the incised (before firing) hieratic inscription from Tell eṣ-Ṣafi which would be unique among Egyptian inscriptions. As such, Maeir, Martin, and Wimmer suggest a hybridization of Egyptian and Canaanite practice (Maeir, Martin, and Wimmer 2014: 133 esp. n 35).

between strict administration and writing on bowls, however, does not seem to have taken place in the earliest period. Only the Lachish Bowl Fragment and perhaps the Qubur al-Walayda Bowl can attest to ‘administration,’ but the evidence is difficult to manage. We have suggested that the most reasonable interpretation of these two inscriptions is as such, but given the context for the Lachish Bowl (and the Lachish Ewer; see ch. 4 below), it is possible that these inscriptions originally had a connection to religious practice. But the connection between strict administration and bowl writing becomes much more apparent when we consider that the practice of writing on bowls continues even into the later periods of the southern Levantine kingdoms of Israel and Judah in much better attested assemblages.

2.2.3. Writing on Bowls in Judah and Israel

The tradition of writing administrative texts on bowls has been ill-accounted for in later alphabetic. Admittedly few examples of complete or near complete inscribed bowls exist, but the number of common bowl fragments that have been discovered bearing inscriptions of an apparently administrative nature should be considered an important data point. The distinction between bowl fragments and ostraca made with regard to the hieratic material should, in my opinion, be extended to discussions of alphabetic inscriptions not just in the early period of the LBIII-Iron I transition, but well into the Iron II as well.

2.2.3.1. Late Examples: Arad inscriptions

The inscriptions from Arad are one of precious few caches of ostraca that come to us from the Iron II, with some fragments from the end of the Iron IIA (Stratum X).³⁴⁵ Among these ostraca are letters, labels, and administrative lists. These last texts are the ones that we will focus on as

³⁴⁵ See *AI*, 9.

several attest to the writing of administrative texts on bowls (Arad 25, 49, 60, 68, and 72 [perhaps also 51-52]).³⁴⁶ Let us discuss them in detail.

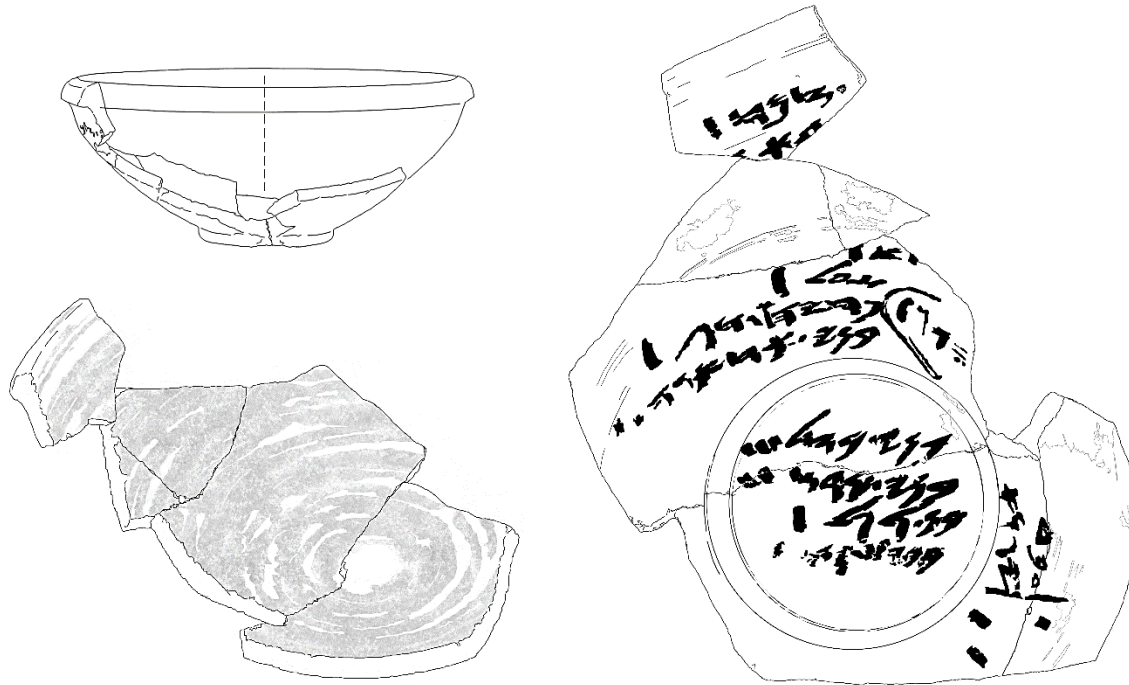


Fig. 2.13: Arad 49 with three views: profile, interior, and exterior (drawn by the author)

One of the most famous inscriptions from Arad is Arad 49 (fig. 2.13 above). This fragmentary bowl now consisting of six pieces fit together is the principal example of how the practice of inscribing bowls with administrative content continues from the Late Bronze Age, from hieratic to early alphabetic, into the administrative strategies of the Iron II.³⁴⁷ Aharoni notes that, “[s]ince we have here a large part of the bowl, and the writing on the sides was done always

³⁴⁶ See *AI* 11-104 and *HAE* ad loc. It is hard to judge whether the inscription comes from a bowl fragment or not. It is often not mentioned what vessel the inscription came from when the total vessel no longer exists. Nevertheless, several of these fragments are certainly parts of more complete bowls while some I believe are bowl fragments (51 and 52) but may be something different. Additionally, other votive bowls have a different purpose and will not be discussed here (For the *qds*-bowls see Smoak 2019).

³⁴⁷ *AI*, 81-84.

with the base down, it appears that *originally the whole bowl* was written on.”³⁴⁸ What is more, the inscription of the whole exterior of the bowl was complimented by some inscription on the interior, though this is now too faint to read.³⁴⁹ Another bowl fragment, Arad 60 (stratum IX), attests to the same practice of inscribing the interior and exterior with administrative content.³⁵⁰ With Arad 60, however, the exterior has largely faded but the interior is well preserved. It details the total weight with some additional information that is difficult to interpret.³⁵¹ One other small fragment, Arad 68, found between the storehouse and the sanctuary at Arad, from the 10th century (stratum X), contains three lines on the interior and two lines on the outside, but the inscription is badly faded and difficult to judge from the photos whether it could be the fragment of a bowl.³⁵² Nevertheless, the reasonably well-preserved examples of Arad 49 and Arad 60 display the practice of administration on bowls, writing on the interior and exterior just as was the case with hieratic practice.

³⁴⁸ *AI*, 81 (author’s emphasis).

³⁴⁹ *AI*, 81.

³⁵⁰ *AI*, 90.

³⁵¹ Judging from the photos, Aharoni’s reading ככל “as a total” is both more sensible and more epigraphically sound than Lemaire’s כפר which overreads a cultic connection (Lemaire 1977). The four verticals after this is somewhat enigmatic. Wimmer’s suggestion of a potential four stroke *heh* seems unlikely (Wimmer 2008a).

³⁵² *AI*, 93.

Table 2.3: The administrative content of the Arad inscribed Bowl (Arad 49; after AI, 81)

Base	
Sons of BṢL 3	בני בצל
Sons of KRḤ 2	בני קרה
Son of GLGL 1	בנגלגל
Sons of KNYHW [...]	...] בני כניהו
Column #1	
...] 1	[...]
...] 1	[...]
...]W'Z 1	ועז[...]
Column #2	
'BR[YHW	עבר]יהו
YHW'B [...]	...] יהואב
...]YHW 1	יהו[...]
Column #3	
Son of] ṢMH	נ.צמח
...]D'L[...]	...]דאל[...]
[...]	[...]
...]' 2	א[...]
Ṣ'L 1	שעל
PDYHW . W(heat) 11	^ פדיהו.ח.(טם)
Sons of 'H' . W(heat) 3	בני אחא.ח.(טם)

The selection of a bowl for inscription, as we have mentioned, is not an intuitive one. As with the early alphabetic bowls, the writing of administrative content on bowls at Arad (23, 25, 41, 47-49, 58, 60, 65) signifies something about scribal practice in the selection of materials for inscription, and for particular genres.³⁵³ In drawing connections between the hieratic bowls and these later alphabetic examples it is important to consider the archaeological context as well.

³⁵³ Arad 25 will be discussed in further detail below, but this bowl was inscribed with administrative content and Hieratic on the interior. AI 50-51; see also Yeivin 1966; 1969; Rainey 1971; Wimmer 2008a. The list above is not exhaustive of all inscribed bowl fragments, nor is it suggestive that all these fragments originally belonged to complete bowls, rather I have culled the most relevant examples to show pieces that were original bowls and some that *might have* been.

Arad 49 comes from a building next to the entrance to the sanctuary, and Arad 60 (as well as 68) come from the locus between the sanctuary and the storehouse.³⁵⁴ At Arad, a small cache of apparently administrative inscriptions (mostly too fragmentary to identify the vessel) come from the sanctuary, some in the Holy of Holies (50-52), one from the entrance (53), and the others from just outside the sanctuary on the western slope (55-57).³⁵⁵ As Wimmer argued with the hieratic bowls, the location of record keeping on administrative bowls was the local temple. The temple was used as the hub for tax collection and registration in the Egyptian administration of the Levant. The find spot of Arad 49, and other bowl fragments from Arad (60), is thus significant in its association with the sanctuary and the nearby buildings.

The connections between the locations of the Arad inscriptions and the proposed context for the hieratic bowls is important—as is the choice of bowls to bear inscriptions of an administrative nature. But even further, the content is suggestive of a direct connection between the two corpora. Aharoni suggests that Arad 49 may be interpreted as “a list of contributions to the sanctuary,” noting that the abbreviation *het* likely for *ḥittim*, “wheat” is supportive of this interpretation.³⁵⁶ Additionally, the totaling of contributions recorded in Arad 60 seems to confirm that this was the purpose of writing on bowls. That the contributions are for the sanctuary specifically, however, may be questioned. The harvest taxes listed on the hieratic bowls may have been received at the temple but were not exclusively used there. Like Arad 60, the hieratic bowls contain calculations of totals and even remainders but were organized for a different

³⁵⁴ *AI* 81, 90, and 93.

³⁵⁵ As mentioned above, it is difficult to tell from the photos but 51 and 52 may be fragments of bowls. See *AI* ad loc.

³⁵⁶ *AI*, 81.

purpose, taxes to be remitted for the use of the Egyptian empire. The list of clans in Arad 49 mirrors in some way the language of tax contributions listed in the Samaria ostraca (see 2.2.3.2. below). Perhaps the contributions recorded on the Arad bowls were destined for distribution elsewhere. We cannot know, but the nexus of connections between the earlier hieratic bowls, the potential early alphabetic examples, and these Arad inscriptions provides evidence that a tradition of scribal practice resident in the Late Bronze Age Egyptian administration of the Levant was transmitted at least down to the 8th century in the southern kingdom of Judah.

2.2.3.2. Late Examples: Samaria Ostraca

The Samaria ostraca are an important collection of inscriptions from the early Iron Age at ancient Samaria, the capital of the northern kingdom of Israel.³⁵⁷ While they have often been studied for their content and paleography, we should briefly consider the Samaria ostraca in this discussion of writing practice and the selection of material for inscription. Of the over one hundred inscriptions discovered, the majority were written on bowls or sherds of bowls, with others on jars.³⁵⁸ The ostraca come from a variety of forms, but the most prevalent is a generic class of bowls with flat bottoms, straight walls, and simple, rounded rims (Ostrakon No. 1 and No. 38 in fig. 2.13 below).³⁵⁹ Tappy notes that both Kenyon and Crowfoot identified fifty of the ostraca with this single class of bowls.³⁶⁰ Another class of bowls used for a small number of inscriptions is described by Tappy as having “a rounded sidewall and ring base” (Ostrakon No.

³⁵⁷ The date and stratigraphy of the site, not to mention the inscriptions themselves, is difficult to navigate. Tappy has, however, done much work to ameliorate the situation, however, it should still be understood that certain aspects of the find spots for the ostraca are difficult to reconstruct (Tappy 2001; 2016).

³⁵⁸ Tappy 2016: 112-133; Also *HAE* ad loc.

³⁵⁹ Tappy 2016: 117.

³⁶⁰ Tappy 2016: 117; citing Crowfoot, Crowfoot, and Kenyon 1976;

26 and 39 in fig. 2.13 below).³⁶¹ The selection of bowls for inscription does not seem incidental. The type of bowl chosen is regularly the generic class described above, but this does not seem to have a connection to content. Still the choice of vessels for inscription displays latent agency, as the type of vessel fragment inscribed seems to have been related to the choice of inscription, jars for the documenting of oil and bowls for the documenting of wine.³⁶² While it seems likely that some of these inscriptions were originally simply small receipts on ostraca, some were clearly written on larger fragments, and I would suggest in the case of the bowl fragments, originally complete bowls.³⁶³

³⁶¹ Tappy 2016: 120.

³⁶² Noegel (2006) makes the intriguing suggestion that the color of the ware (red or gray) is in some way involved in the choice of inscription. Upon an examination of the ostraca, however, the division seems to be at the level of vessel rather than the specific coloration of the ware. Of the original ostraca published by Reisner, those which document oil deliveries (16-21, 53-54 [יך בנבל שמן רחץ], 55, and 59) were written on jar sherds, whereas those documenting wine (1, 3-15, 26, 35, 44) were written on bowl fragments (Tappy 2016; Reisner 1948; 62 is an exception). This is a curious fact, worthy of consideration. And yet, we might caution that the great deal of ostraca do not indicate the commodity delivered at all (2, 22-25, 27-30, 32-34, 36-43, 45-52, 56-58, 61-61, 63-71, 78-81, and 90).

³⁶³ There is a dispute over the interpretation of the Samaria ostraca, as to, as Rainey describes it, their *Sitz im Leben*, and as I might say their *raison d'être* - that is, what they were meant to do and why do they exist. Yadin (1959), followed by Cross (1975), Aharoni (1979), Kaufman (1982) and *HAE* all agree that the Samaria ostraca are representative of some sort of centralized taxation systems. Rainey rejects this interpretation arguing that they were markers of distribution of goods to members of the royal court (1967; 1970; 1979). I understand these inscriptions to be markers of a centralized taxation effort. Further, if, as I argue, some or many of the ostraca are remnants of originally complete bowls, this would further support this conclusion. Additionally, it would show the continuation of the registry of deliveries or contributions from the Late Bronze age material down to Samaria (cf. Arad).

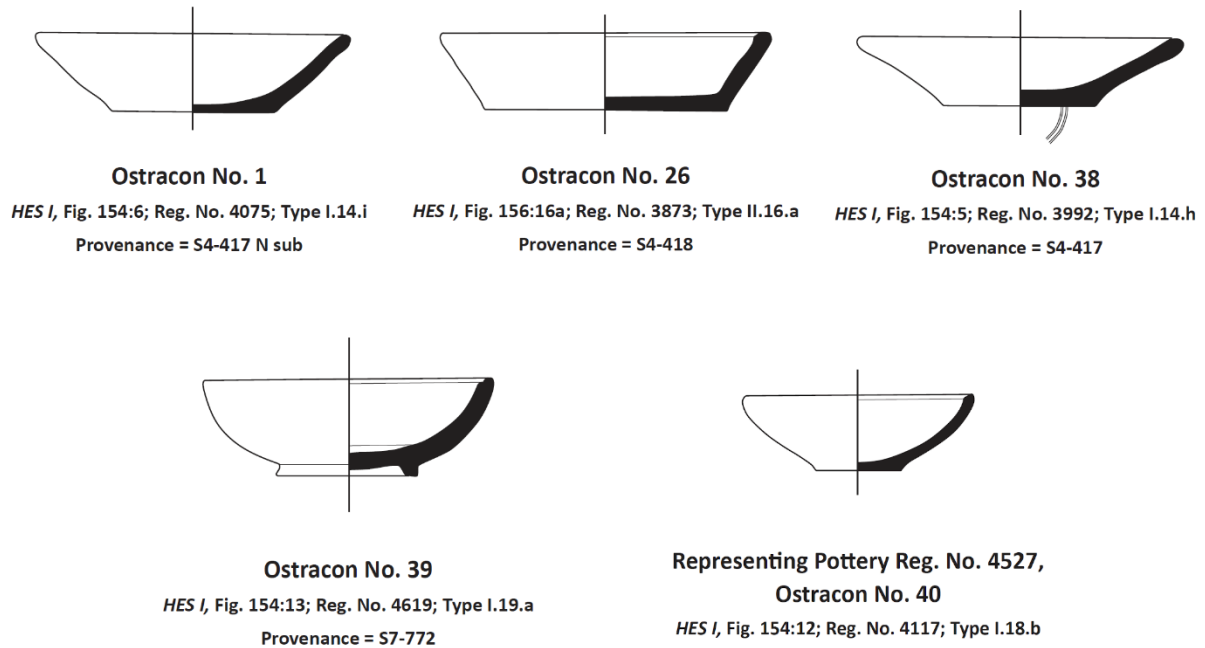


Fig. 2.14: Samaria Ostraca and bowl types (collected from Tappy 2016)

Reisner noted long ago that a few fragments of ostraca seemed to connect, forming rather large portions of vessels. Of these, he suggested connections between three pairs of sherds: Samaria 43 and 44, 45 and 46, and 48 and 49.³⁶⁴ Based upon the facsimiles, the connections of Samaria 43 to 44 and 48 to 49 seem appropriate and important. Tappy rightly expressed some concern about the pairing of Samaria 45 and 46. He notes that in Samaria 46, the inscription runs on the rim of the bowl whereas Samaria 45 runs down the sidewall and onto the base.³⁶⁵ The strange orientation would seem to lead to the conclusion that these pieces do not exactly belong together. Further, he suggested that the recording of multiple ledgers on one originally complete bowl, as suggested by Reisner, would be odd. His rightly noted concerns should be considered in

³⁶⁴ Tappy 2016.

³⁶⁵ Tappy 2016: 114.

light of the broader evidence for bowl writing. The writing of multiple ledgers on a single bowl is known from Arad 49 discussed above as well as the hieratic bowls from much earlier (see Lachish hieratic bowl above). That multiple ledgers might have been recorded on a single originally complete bowl at Samaria may be evidenced by the other connections presented by Reisner (between 43 and 44 and 48 and 49). Further, the bowl fragment of Samaria 12, consisting of two extant pieces, retains one complete primary inscription covering the majority of the sherd, but at the upper left corner the tail of *yod* and *nun* can be seen. The main inscription of Samaria 12 records the delivery of a “jar of aged wine” (*nbl.yn.yšn*). The remnants of *yod* and *nun* likely constituted the end of another ledger of a similar delivery that was recorded on this very same bowl. Thus, though Samaria 45 and 46 represent a dubious example, there is evidence to suggest that multiple ledgers could and likely were written on a single bowl, and that perhaps these were complete bowls.

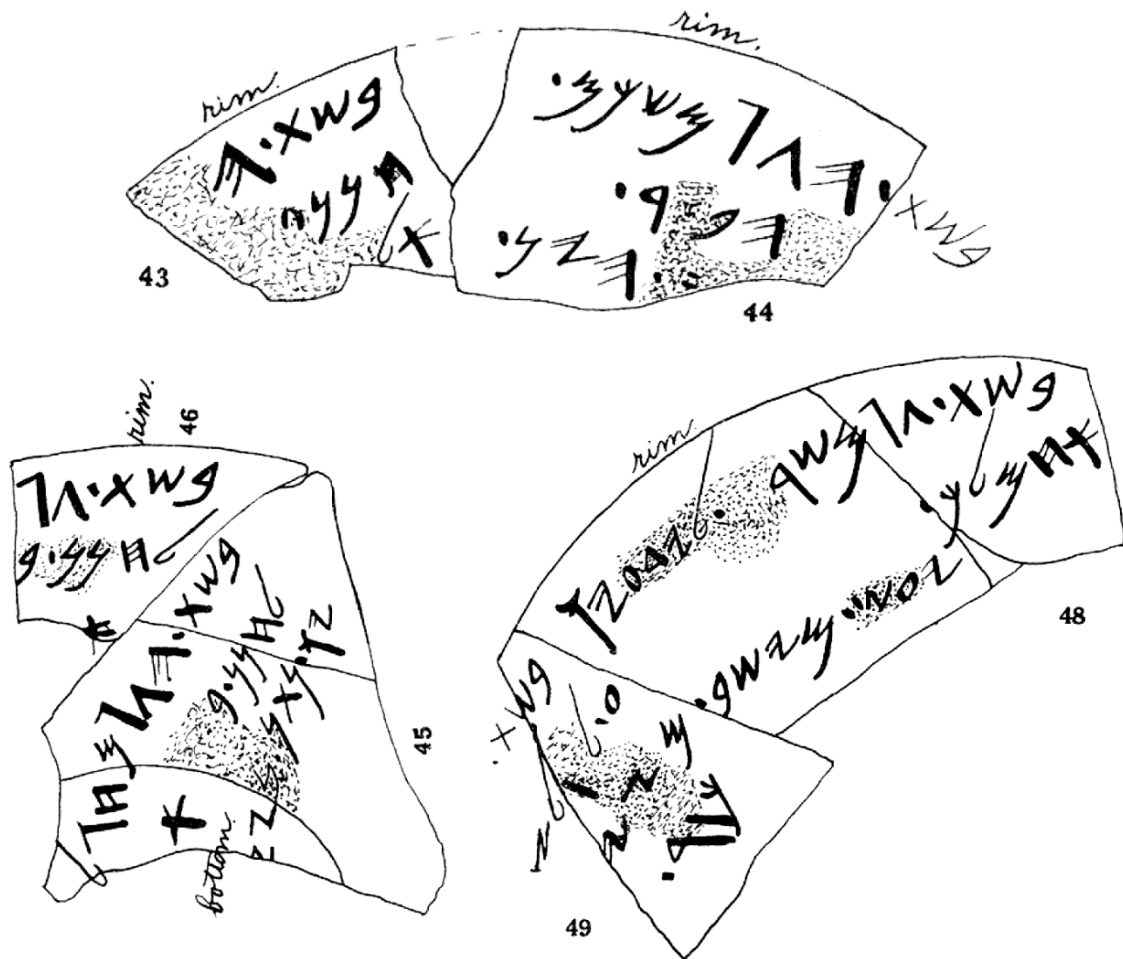


Fig. 2.15: Connections between ostraca fragments from Samaria proposed by Reisner (Reisner 1948: Plate XII).

As mentioned above, it is certain that some receipts were simply written on small sherds for convenience, as epigraphically these messages follow the breaks on the ostraca. Such is even the case with the hieratic material and undoubtedly the administrative content at Arad. And yet, some inscribed sherds seem too large and cumbersome to have been useful ostraca. In these cases, I might be inclined to suggest their having come from a bowl that, when inscribed, remained complete. Several examples from the Samaria ostraca could be adduced but consider one, Samaria 50 (fig. 2.15 above). This inscription was found in two pieces and bears a complete

inscription, “In year 15, to GMR from N‘H. ‘BDYW to ‘RYW”. As can be observed, this bowl fragment is rather large, comprising as it does nearly half of the bowl. It therefore seems too large and cumbersome to have been selected merely for its availability or convenience. Many other similar examples could be adduced.³⁶⁶ This leads to the conclusion that at least some of the Samaria ostraca should be interpreted as bowl fragments that, when originally inscribed, were complete bowls.



Fig. 2.16: Samaria 50 with representing pottery (drawn by the author; vessel type from Tappy 2016: Fig. 52).

2.3. Summary: Selecting Materials for Inscription

Not many complete inscribed bowls exist. The evidence of the near complete hieratic Lachish bowl provides evidence of the interpretation of Goldwasser and Wimmer that complete bowls

³⁶⁶ See *HAE* 103; and introductory discussion to the Samaria Ostraca on 79-89.

were used regularly for administrative purposes. As discussed above, the inscription of these bowls seems to have been a hybridity between Egyptian administrative writing practice and local cultic practice. The sociospatial component then is important. At Arad we may see this sociospatial connection, as the administrative bowl fragments were discovered in close connection to the sanctuary. At Samaria, however, the distinctly administrative nature of these bowls seems to have disassociated them from offertory contexts, though perhaps the style of bowl held some association with offertory contexts.³⁶⁷ Another connection between these artifacts is the fact that all three corpora attest to the inscription of both the interior and exteriors of the bowls. Again, the Samaria ostraca are unique in this regard as only one example of inscription on the interior has been suggested.³⁶⁸ Nevertheless, a convergence of features, of location, material, and practice, bring these bowls into conversation and suggests that the selection of bowls for inscription with administrative context was a practice of writing culture which began in the Late Bronze Age and continued down into 9th or 8th centuries.

The discussion of bowls then is one of central importance to the origin of writing culture in the Levant as it engages the interplay between agency and tradition, deliberate choice, and learned practice within the community. The evidence collected here suggests a connection between the selection of the writing material and what to inscribe it with. Between the hieratic examples and the inscriptions from Arad, this connection moves one step further, from what material to use and what to write on it, to where writers perceive that this writing should take place. And yet, just as anything moves and changes over time, the purpose of the administrative

³⁶⁷ Tappy notes that the best representations of the types of bowls used for the Samaria ostraca are those found in Tombs (2016). In the tomb context these bowls were likely offertory. We must be cautious, however, given that bowls are, quite naturally, common material in general.

³⁶⁸ Tappy 2016.

bowls changes, from holding perhaps a “token” of the tax in the Late Bronze Age and perhaps even at Arad, to being a mere placeholder for commodities for which a bowl was an unsuitable vessel.³⁶⁹ Still, the choice of the material for inscription and the genre associated with it continues for some time, propelled, as it were, by the weight of tradition in the community of writers.

³⁶⁹ Wimmer’s attractive suggestion that the bowl held a “token” of the grain tax would still be possible with regard to the Arad bowl, as it mentions “wheat” (חטה; see above; Wimmer 2021). The Samaria ostraca, however, record olive oil and wine deliveries. The concern for the quality of the oil and wine expressed in the Samaria ostraca make it possible that a small portion of wine or oil might have been poured out into the bowl upon delivery, perhaps to check its quality. Sensory aspects like taste, smell, color and clarity could have been inspected with only a small amount poured into the bowl. On the other hand, the selection of jars for oil might have simply facilitated their storage.

Chapter Three What to Write On (II): Possibilities for Papyrus and the Materiality of Daily Practice

Introduction

The advent of the modern word processor has made us much more cognizant of the fact that writing exists as a part of the material world. Because in the modern context writing often takes place in virtual space, our experience of the act of writing is shaped in ways uniquely associated with the networks of knowledge and assumptions of our ‘information age.’ In this world, writing is affected by the tips of our fingers and erased with relative ease. Writing takes time but not much effort. The tools with which we write, most of the time, are a keyboard and mouse. As such, old words for writing form new meanings around our new medium and generate new metaphors for and categories of thinking about writing. The form of traditional written entities, such as books, and how we refer to them, is reshaped and altered to suit the novelty of our writing practice. While we might refer still to reading a book, whether this book is an eBook, a PDF, or a traditional hardcopy might not be specified. All this is to say that what we write with and what we write on has an enculturating effect, an ability to generate new meaning in our shared culture of writing.

This is important to consider when we approach a discussion of the writing culture in the ancient Levant. The tools should become central to any discussion of what makes up a writing culture, because, after all, as we have said, writing materials have a material effect on our writing culture. Thus, it is somewhat curious that when the writing culture of the ancient southern Levant is considered, either in regard to the Hebrew Bible or the epigraphic evidence, it is often considered in light of scribal education and practice in Mesopotamia (i.e., Mesopotamian writing culture). While Mesopotamian analogs in literature, religion, art, and law certainly provide deep insights and useful data for understanding various parts of the life and culture in the southern

Levant, it is nevertheless only one part of the story. This ‘northern’ orientation to the study of writing culture in the Levant is, by necessity, divorced from the central questions of the material and practical production of texts (what to write with, what to write on, and how to write).

Because, while there may be cultural, religious, and linguistic parallels between Mesopotamia and the southern Levant, the material and media for writing in alphabetic scripts in ink and writing cuneiform script in clay differ vastly.

The differences between the two writing cultures at the material and practical levels mean that the methods for inscription and the organization of written material are, as a consequence, at some level incongruent. Cuneiform scribes developed unique and long-lasting customs for writing and organizing writing. They formed communities around these customs and traditions and built regimes of literacy and competency in accord with the details of their practice. Put succinctly, they organized writing culture, to a large degree, around the material and medium available to them, reed stylus and clay. The importance of writing in and with certain materials has not gone unnoticed in scholarship of the ancient Near East, or in writing about cuneiform specifically. Crisostomo, most notably, has recognized that, in some way, the materiality of writing in cuneiform was generative of a cuneiform scribe’s unique cultural system (i.e., his writing culture). Crisostomo states, “Both in what the scribes wrote and in the activity of reproduction—the physicality of pressing stylus to clay—these scribes internalized particular dispositions and perceptions [...] Simple routines that form the basis of the educational system such as these carry with them the force of entire cultural systems.”³⁷⁰ The routine, common

³⁷⁰ Crisostomo 2019: 76-77. Likewise, William Brown, in a helpful review of Schniedewind 2019 (posted online: <https://thebiblicalreview.wordpress.com>), quotes Crisostomo to draw a close relationship between education and religion in the southern Levant. Differing from both Crisostomo and Brown, however, I am more concerned with the materiality as determinative of habits that are not necessarily cultural or religious in their primary motivation but rather practical. That is, I am concerned with examining the ordinary activities of writers and their shared experience

experience of scribes, pressing wedges into clay, became part and parcel of what it meant to be a scribe in Mesopotamia, and to be a scribe competently.

Material and media are thus rightly recognized as important and central aspects of writing culture. They constitute the shared material of the community, the experience with the material being held in common.³⁷¹ The tools and regular writing materials enculturate writers into a world of writing habits, gestures, and attitudes through the daily experience of writing with and on them. They induced learned associations and principles that govern writing, and writing competently, that in turn produces conceptions of what, where, and how a text exists. Over time they even come to govern the language about writing, shaping and reshaping meaning, generative of evocative metaphors and imagery, all predicated on the shared experience of textualization in and with materials shared in common.

In this final chapter of part one, we will consider the materiality of daily practice of writing in the southern Levant, focusing on what was, in all likelihood, the common material for writing, papyrus. We will first discuss what papyrus is and how it is produced on the basis of the Egyptian evidence. We will offer a few details on the use and ubiquity of papyrus in Egypt, as well as details about the size and quantity of finished products and the various Egyptian terms for papyrus and papyrus documents. We will then move to a discussion of the evidence for papyrus in the southern Levant, considering the possibility of its local manufacture before discussing material and textual evidence for its existence and regular use in the Iron Age. The material evidence will consist of a discussion of the only (as of yet confirmed) legitimate papyrus

with the material, as it pertains to embodied practices like form, direction, layout, and color (see chapters four through eight).

³⁷¹ See discussion in ch. 1 above

document from the southern Levant, from Wadi Murabba‘at. However, most of the discussion of the material evidence will be indirect. As such, the vast amount of indirect evidence for papyrus use cannot be fully explored. We will provide an overview of the reasons to suspect that papyrus was in regular use in the southern Levant before diving into a case study that will aid us in conceptualizing what types of documents might have been written on papyrus. The final section of the chapter will discuss the words for papyrus in Hebrew with an Egyptian origin, analyzing their meaning and use in the context and in light of Egyptian lexical data.

3.1. Papyrus in Ancient Egypt

We move now from a discussion of bowls and bowl fragments to a discussion of the use of papyrus for writing in the southern Levant. In some ways, the Samaria ostraca are an excellent hinge between a discussion of writing on bowls and ostraca and the use of papyrus, as the brevity of the receipts on the Samaria ostraca belie their association with a longer, more permanent papyrus ledger (see 3.2.2.2.2. below). We return to this discussion below, but to begin an investigation of papyrus as writing material in the southern Levant we must first understand the material production of papyrus, its use, and terminology in Egypt.

3.1.1 Papyrus Production in Egypt

The papyrus plant, identified as *Cyperus papyrus*, is native to the tropical environments of the eastern Mediterranean and Nile Valley. The plant type used in ancient Egypt is unknown and thus certain details of its manufacture, like rate of reproduction, remain unknown.³⁷² Varieties of papyrus that grow to this day in Africa take about a year to grow to full size when planted but

³⁷² Parkinson and Quirke 1995: 9-10; Leach and Tait 2000: 227-230.

can regrow in a matter of months.³⁷³ Growth rates are, however, heavily dependent on anthropogenic and environmental factors, but allow for some generalizations to be made about possible features of the ancient plant.³⁷⁴ Quirke and Parkinson note that a papyrus plant can grow as tall as five meters with proper cultivation (fig. 3.1.).³⁷⁵ Papyrus plants grow in low lying water which was readily available all throughout Egypt on the low-lying banks of the Nile.³⁷⁶ The stalk of the papyrus, when fully grown, consists of a firm green outer rind protecting a fibrous, vascular white interior by which the stems feed the flowering brownish plumage at the top.³⁷⁷ This fibrous white pulp is the material from which ancient, and likewise modern, papyrus paper is made.

³⁷³ Kipkemboi and van Dam 2016; Leach and Tait 2000: 235.

³⁷⁴ Kipkemboi and van Dam 2016; Leach and Tait 2000: 227-230.

³⁷⁵ Parkinson and Quirke 1995: 10; see also Kipkemboi and van Dam 2016 and Wiedemann and Bayer 1983: 1220A-1221A.

³⁷⁶ Leach and Tait 2000: 229.

³⁷⁷ Parkinson and Quirke 1995: 10; Leach and Tait 2000: 229.



Fig. 3.1: Papyrus sedge with maximal height (produced by the author)

The process of papyrus manufacture in the ancient world has been the topic of much discussion. The only ancient description of papyrus manufacture is recorded by Pliny the Elder (23-79 CE) in his *Naturalis Historia*.³⁷⁸ Several scholars have noted difficulties in understanding and applying Pliny's description in modern recreations of papyrus.³⁷⁹ Nevertheless, the broad characteristics of his description, when coupled with modern scientific experimentation, are sufficient to reproduce papyrus using pre-industrial means and therefore to provide some insights into both how labor intensive the process was and how specialized the knowledge to produce it.³⁸⁰

³⁷⁸ Pliny *Nat. His.* 13.74-82; See Lewis 1974; Dimarogonas 1995.

³⁷⁹ See Parkinson and Quirke 1995: 13; cf. Wallert 1989: 1; Leach and Tait 2000: 231.

³⁸⁰ Bausch et al. 2022: 4931-4950.

Pliny's description of the process of the production of papyrus is as follows. When the papyrus is full grown, the stalks are harvested from the culm just above water level, allowing the stem of the culm to continue producing stalks for the next harvest.³⁸¹ Each stalk is then cut into segments of the desired length, in antiquity (as in modern day) usually 30cm, though possibly longer.³⁸² The green outer rind is removed, either by cutting or peeling.³⁸³ This green outer rind makes suitable material for baskets and various other things, subject to its own production and preparation process, separate from the process necessary to produce papyrus paper for writing (see discussion in sections 3.2.3.1-2). The removal of the rind exposes the white fibrous interior that would then be sliced lengthwise to form long, thin strips (step three in fig. 3.2).³⁸⁴ The white strips of the interior must be saturated in water to make for flexible material that can be pieced together into papyrus paper. The saturation of the strips enacts a chemical process that makes the papyrus suitable for bonding without pastes or adhesives.³⁸⁵ This process is probably what Pliny refers to when he mentions the "moistening with Nile water" done by papyrus manufacturers in antiquity.³⁸⁶

³⁸¹ Wallert 1989: 1.

³⁸² Wallert 1989: 1. In the Old Kingdom as standard sheet was 48x42cm, thus it must have been desirable to begin with larger segments of stalk (Parkinson and Quirke 1995: 16).

³⁸³ Bausch et al. 2022: 4933.

³⁸⁴ Parkinson and Quirke 1995: 14; Leach and Tait 2000: 231; Wallert 1989: 1.

³⁸⁵ Scora and Scora 1991: 199-201; Leach and Tait 2000:233-234.

³⁸⁶ Pliny *Nat. His.* 13.23; see Dimarogonas 1995: 589-590 for a discussion of this line. For the adhesion, Pliny mentions the use of paste (*Nat. His.* 13.26). Scora and Scora reason that this is intended to refer to the pasting together of sheets in a roll (1991: 201 cf. Parkinson and Quirke 1995: 15; Leach and Tait 2000: 233-234; Wiedemann and Bayer 1983: 1222A).

Once the strips have been soaked, they cannot be allowed to dry before being layered orthogonally, one layer on top of the other. The strips are laid carefully so as to assure that no gaps remained before pressing and then ultimately drying the papyrus.³⁸⁷ The bottom layer of strips, which would constitute the back of the papyrus once it was rolled, were aligned with fibers vertically and the top with fibers horizontally.³⁸⁸ After laying the strips, they must be joined by pressure, and on this point there is some debate. It is unclear whether this was done in ancient Egypt by means of a press, as described by Pliny, or a hammer.³⁸⁹ It has been argued that a 19th Dynasty model letter alludes to the latter process when it describes a soldier who is “laid out, beaten like a papyrus roll.”³⁹⁰ However, Pliny’s later explicit description seems to indicate that a press was used to bond the papyrus together.³⁹¹ Whatever the exact method might have been, these strips, once adjoined made for an individual papyrus sheet (Eg. š ‘t).

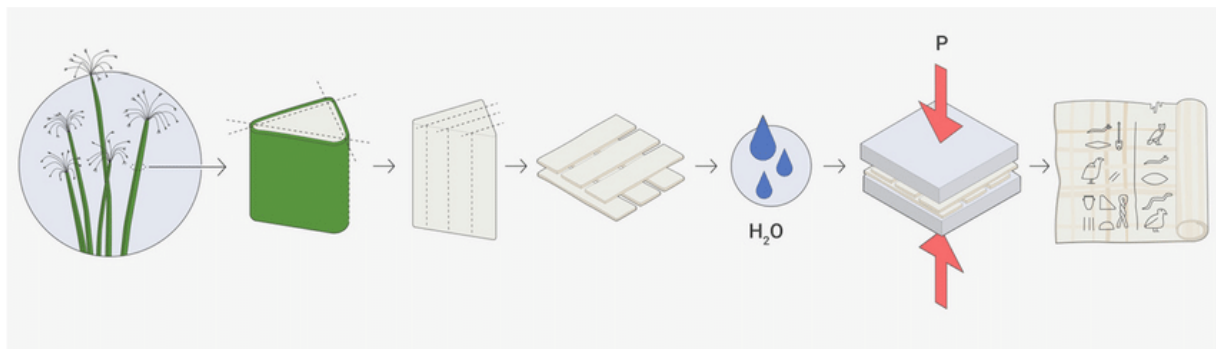


Fig. 3.2: Schematic of the production of papyrus according to Pliny the Elder (from Bausche 2022: fig. 2)

³⁸⁷ Bausch et al. 2022: 4933.

³⁸⁸ Parkinson and Quirke 1995: 14.

³⁸⁹ Parkinson and Quirke 1995: 15; Leach and Tait 2000: 233-234.

³⁹⁰ Parkinson and Quirke 1995: 15.

³⁹¹ Pliny *Nat. His.* 13.23; cf. Bausch et al. 2022.

After the production of a number of sheets, the sheets would be layered right over left for both practical purposes of preservation and the strength of the roll, as well as in accordance with the standard practice of writing, right to left.³⁹² The overlaid sheets would be glued together with a flour paste, hammered smooth, and dried for a final time to create a complete papyrus roll.³⁹³ There is a long tradition of making papyrus rolls in this fashion extending from Pharaonic Egypt to the Arab period.³⁹⁴ The stability of these traditions for papyrus roll making even extend to the approximate lengths of a roll across periods. According to Pliny, a full manufactured papyrus roll in his time was made up of about twenty sheets, and this remains true in later periods.³⁹⁵ For ancient Egypt, it has been argued that evidence from Medinet Habu attests to rolls of twenty sheets in length.³⁹⁶ Leach and Tait note that sheets were a means to an end, being produced particularly for the incorporation into a roll.³⁹⁷ The papyrus roll (in Egyptian *'r.t* or even *šfd*; see 3.1.3 below) was then the final product of manufacture. The harvest of the stalk, preparation of the sheets, are all in service of the production of a clean, complete roll of papyrus ready for writing.

³⁹² Parkinson and Quirke 1995: 15; Eyre 2013: 23.

³⁹³ Leach and Tait 2000: 236. It should be noted that the 19th Dynasty model letter could be understood to refer to this process of binding sheets together, as the language used *'r.t* frequently refers not to an individual sheet, but a clean roll or scroll of papyrus (Haring 2003: 90-92). Nevertheless, it is possible that a hammer was used for both parts of the process.

³⁹⁴ Eyre 2013: 23; cf. Sijpesteijn 2011: 453-454, who notes that the practices of papyrus manufacture did not substantially change with the Muslim conquest of Egypt.

³⁹⁵ Pliny *Nat. His.* 13.23.

³⁹⁶ Černý 1952: 9; Parkinson and Quirke 1995: 16; Eyre 2013: 23 cf. Skeat 1982.

³⁹⁷ Leach and Tait 2000: 236.

Once produced, a papyrus roll's monetary value can be roughly calculated. Eyre, drawing from Janssen's work, notes that a roll of papyrus should cost about two *deben*, which "on any calculation a roll of papyrus cost several day's labour."³⁹⁸ According to Eyre this price was "sufficient to discourage the private user."³⁹⁹ It seems that the calculation of the price indicates that only higher echelons of administration and the wealthy elite could obtain a papyrus roll.⁴⁰⁰ The main cost would be in the supply and distribution.⁴⁰¹ The little data we have for the Pharaonic period, however, should be considered in the light of classical sources, when papyrus was a relatively cheap luxury.⁴⁰²

3.1.2. Papyrus Use in Egypt

While the length of twenty sheets seems to have been a general standard throughout history, the height and width of a papyrus roll varied to some degree from period to period in ancient Egypt (see fig. 3.3 below).⁴⁰³ Tall sheets of thirty or more centimeters in height were, however, always exceptional, even in early periods. While an individual sheet would be prepared to specification, as described above, and could be rather tall, they would often be cut into quarters or halves for regular use.⁴⁰⁴ Sometimes, the size of the papyrus sheet, or roll, was associated with specific types of genres. For instance, Parkinson and Quirke note that literary texts tend to be recorded on

³⁹⁸ Eyre 2013: 26.

³⁹⁹ Eyre 2013: 26.

⁴⁰⁰ Parkinson and Quirke 1995: 19.

⁴⁰¹ Eyre 2013: 27.

⁴⁰² Parkinson and Quirke 1995: 19; Eyre 2013: 26; Skeat 1982: 90.

⁴⁰³ Parkinson and Quirke 1995: 16; Eyre 2013: 23-24.

⁴⁰⁴ Parkinson and Quirke 1995: 16-17; Černý 1952.

half or quarter rolls, whereas several technical texts were recorded on full height sheets.⁴⁰⁵ Full height sheets were rare but seem to have been associated with technical or administrative texts. Letters and short notes would have been produced on half or quarter sheets, sometimes written front and back, and even sometimes utilized as palimpsests.⁴⁰⁶ As a general rule, it does not seem that papyrus was used for training or practice, save at the highest levels of skill. Lower levels of training were mostly conducted on ostraca, whereas practice literary texts would have been written on papyrus but reserved for higher levels of education similar to the genre distinctions apparently made in ancient Mesopotamia. However, the material distinction is important and distinct from Mesopotamian practice. In Egypt, as likely in the Levant, ostraca represented lower levels of practice, *ad hoc* documentation, and other miscellany, whereas those literary products, both practice texts and legitimate literary compositions, would have only been suitable for writing on papyrus.

⁴⁰⁵ Parkinson and Quirke 1995: 16-17.

⁴⁰⁶ Parkinson and Quirke 1995; Černý 1952; cf. Allen 2002; while the Heqanakht Papyri date to the late Middle Kingdom, and thus far before any texts this chapter examines, the exemplary publication of practices in these papyri and the connection, on occasion, with traditions of writing that continue down to the New Kingdom make them a beneficial corpus for comparison, even if chronologically separated from the material under question.

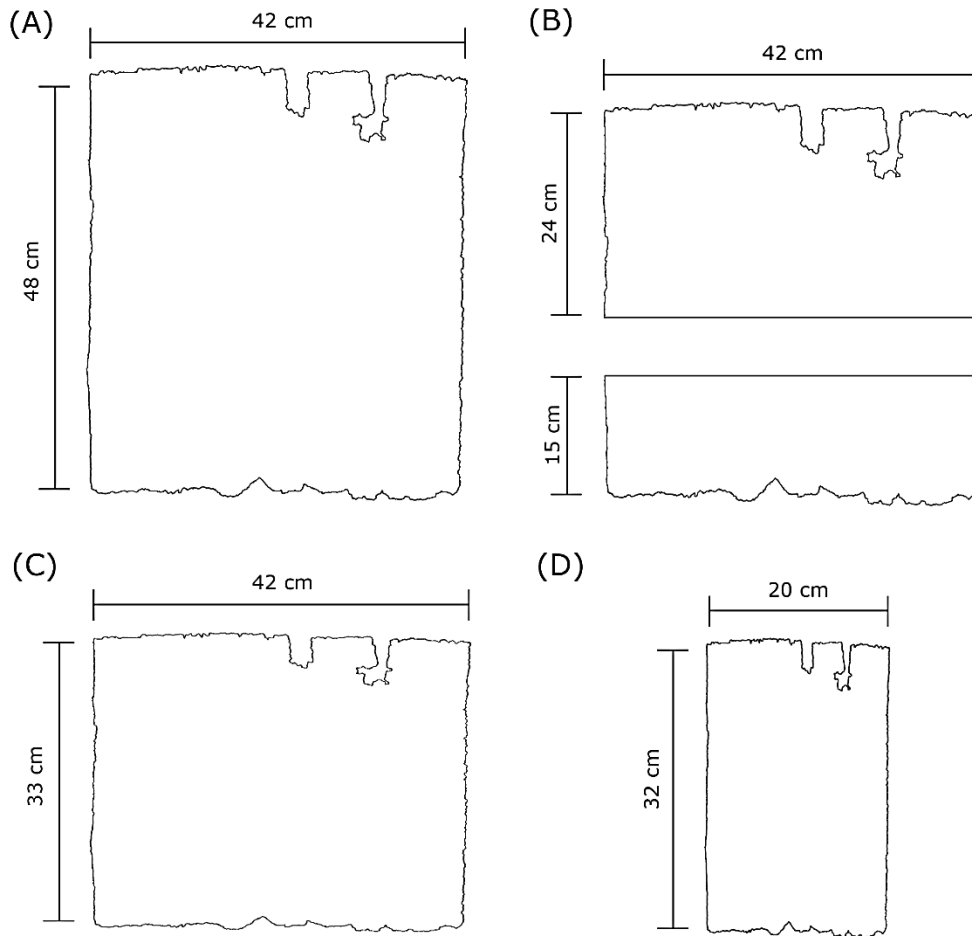


Fig. 3.3: Estimated sizes for papyrus sheets in various periods in ancient Egypt: (A) Old Kingdom; (B) Old Kingdom half (top) and quarter (bottom) sheets; (C) Middle Kingdom; (D) New Kingdom (produced by the author based on description in Parkinson and Quirke 1995)⁴⁰⁷

The words used and the broad genre distinctions, when associated with materials, become particularly important (see 3.1.3 below). Through the course of ancient Egyptian history, the word for an individual sheet of papyrus (Eg. *š'.t*) became synonymous with short compositions like letters or missives, and even further contracts and deeds. Something similar happens with the word for papyrus roll (Eg. *'r.t*), which naturally became synonymous with book or book scroll.

⁴⁰⁷ Freshly produced sheets would have had nice, consistent, straight edges top, bottom, and side, unlike the representation here. The representation of 'sheets of papyrus' with frayed or corroded edges is for artistic effect only.

In these regards, the association between the material and the composition is important. Just as in English or any other language, genres, and terms for these genres, developed specifically to denote content, in Egypt these certain genres were often limited to writing on papyrus. As such, we only need note here that the length and content of a composition and the length of the material (sheet or roll) were intertwined and intermixed in the use and development of a lexicon for written materials.

3.1.3. Terminology for Papyrus in Egypt

Due to its ubiquity, manufactured papyrus and papyrus rolls were called by a number of names in ancient Egypt, sometimes dependent on their use, social context, or content. The most basic terms were: *r.t* “scroll, bookroll,” and *šfd* “scroll, bookroll,” both of which are used to refer to the physical papyrus roll.⁴⁰⁸ The term *r.t* is the technical term for a papyrus scroll in Middle and Late Egypt.⁴⁰⁹ Other terms like *md3.t* “bookroll” and *š'.t* “sheet, letter,” take on particular connotations due to their association with particular types of documents. The former, written with the book roll determinative, has the basic meaning of papyrus bookroll but by the end of the Ramesside period has developed a particularly oracular connotation.⁴¹⁰ Further, it is commonly used of medico-magical or amuletic texts.⁴¹¹ Still other terms refer to papyrus documents, but more broadly papyrus in general (*dm3*).⁴¹² The dominance of materially related terms for papyrus, even when used for documents in general, attest to its place of prominence as writing

⁴⁰⁸ Eyre 2013: 36.

⁴⁰⁹ Haring 2003: 97; cf. 90-92.

⁴¹⁰ Haring 2003: 97-99.

⁴¹¹ p. Edwin Smith; London Medical Papyrus; p. Chester Beatty 5; p. Chester Beatty 6 p. Leiden I 348 p. Budapest 51.1960; p. Boulaq 6

⁴¹² Wb 5: 547.3-9.

material *par excellence*. When an Egyptian scribe or writer envisioned the act of writing for daily practice, they envisioned writing on papyrus.⁴¹³

Beyond this, there are a number of technical terms for specific types of documents determined not by materiality but by genre. For example, the term *hrwyt*, “day book” was used for dated and organized documents, recounting a variety of events.⁴¹⁴ Inventories (Eg. *im.yt-pr*), name-lists, (Eg. *im.y-rn=f*), and all other sorts of documents do not seem to be associated with particular materials but rather content. Still, as we have pointed out, certain text denominatives express a historical meaning shift from specifically related to papyrus to generally all types of writing.

3.1.4. Summary of Papyrus in Egypt

Papyrus constituted the normal writing material for writers in ancient Egypt. Though inscription on ostraca and other sorts of available materials were, of course, common, papyrus continued to be the normative standard from which the culture of writing in Egypt was built. As has been pointed out many times, the sealed papyrus roll (𓂏), was from the late Old Kingdom on, the determinative for objects and words association with writing.⁴¹⁵ The clean papyrus roll was used to keep records of administration, to write commemorative books of the dead, and sometimes to write literary works. A writer, in this case scribe (Eg. *zḥj*), sat down and worked with papyrus regularly. There was a time and place for the use of papyrus and genres associated with papyrus. Yet, no easy boundaries are drawn here. Ostraca, easy, cheap material for writing short notes or

⁴¹³ The iconicity of Hieroglyphic is obvious and undoubtedly constituted a strong part of the Egyptian conception of the written word. Nevertheless, in describing daily writing practice as a writing culture, the ordinary work of writers was not etching into stone but drawing ink on papyrus.

⁴¹⁴ Redford 1986: 101; cf. Haring 2003: 104.

⁴¹⁵ See Leach and Tait 2000: 236.

drafts were sometimes reused. Papyri likewise were wiped (Eg. *ftt*) and reused on occasion. Other materials came into play as well, like writing boards and plaster. Thus, it seems that the use of materials represents a sort of series of spheres of practice, intersecting with one another at certain points but pointing toward a pride of place for papyri documents.

Papyrus as the normal writing material for Egyptian scribes then dictated other material practices and even the meanings of words. The Egyptian word for erasing noted above, *ftt*, refers to the rubbing out ink with water, an act that is uniquely possible with papyrus. The meaning and valency of this verb expands to include all erasing of any writing (see section 3.2.2.3.2 below). A cut papyrus, *š't*, becomes any type of letter, a sealed papyrus roll, *mdš.t*, becomes a book-scroll and even further an oracular document, the regular use of papyrus invades the regular lexicon of writing, such that various forms of writing and writing practice lead back to the practice of inscription on papyrus.⁴¹⁶

3.2. Papyrus in the Southern Levant

That papyrus was used in the southern Levant during the 1st millennium BCE is a generally accepted conclusion in scholarship. And yet, questions of the regularity of its usage, the possibility of its local production, and the earliest period in which we can prove its use are much more difficult to answer. General evidence for papyrus in the ancient southern Levant can be divided into three sources: material culture (both direct and indirect evidence), textual data (i.e., the Hebrew Bible), and purported linguistic evidence (likewise from the Hebrew Bible). Papyrus does not preserve well, especially in the humid climate of the Levant, hence we have only a few,

⁴¹⁶ Haring 2003: 97-99; 112-115; for *š't* as even (ostrakon) letter, 122. Mohsen notes that *š't* is generalized to include “all kinds of communication in epistolary style,” even including practice texts (1970: 15; cf. El-Mohsen 1970: 14-15, 23).

important direct attestations of papyrus for writing in the southern Levant during the Iron Age. We have no extant manuscripts prior to the 7th century at all. This being the case, scholars have used a variety of indirect material indicators to show that papyrus was in use. In the same manner, it has been suggested that the biblical text provides conclusive evidence for the widespread use of papyrus by way of both Egyptian loanwords and textual descriptions of writing. All of these various points of data will be examined here with a view to the daily activity of scribes and the ‘meaning of the medium.’

3.2.1. Papyrus Production in the Southern Levant(?)

As of yet, there is no evidence that papyrus was produced outside of Egypt prior to the classical period. Thus, in asking the question of the potential of papyrus production in the southern Levant, in early periods, we are asking a question that cannot be answered from material remains but requires a circumstantial case that may be more or less convincing.

When discussing the potential of the production of papyrus in the southern Levant, we must remember that the technical details and necessary specifications that make up the process of producing even a single sheet, details and specifications that eluded modern scholars for quite some time, required skilled laborers.⁴¹⁷ Nevertheless, Eyre puts it well when he notes, “The labour involved in harvesting papyrus is considerable, but the manufacturing process is more a matter of care and patience than real skill or manual dexterity.”⁴¹⁸ That is, these skills, once learned, would be easily reproducible. A laborer trained in the basics of papyrus manufacture would be able to produce sheets with relative ease. This may be one reason why papyrus

⁴¹⁷ See Bausch 2022 and Leach and Tait 2000.

⁴¹⁸ Eyre 2013: 25.

manufacture is not depicted in art from Egypt. Among other concerns, the unskilled nature, or as Eyre puts it, “semi-skilled,” of papyrus production is likewise another indicator that production could have easily taken place outside of Egypt without the import of highly-trained technicians.⁴¹⁹ Nevertheless, the ‘know-how’ would have to come from Egypt, as the heartland of papyrus production in the ancient world.

The best period for the transfer of knowledge is, in all probability, the Late Bronze Age. This is the only time where the lines of necessity, access, and ability might intersect. We might reasonably assume that record keeping in the imperial administration, attested by the hieratic fragments from the Levant, was conducted on papyrus.⁴²⁰ Certainly, official letters destined for higher echelons of administration would have been delivered on papyrus. These two reasonable assumptions would constitute the need for papyrus at a site of Egyptian occupation in the Levant. However, need is insufficient reason for the establishment of a local manufacture of papyrus. It is generally assumed that papyrus was imported to the southern Levant, and this is probable, though little evidence attests to it specifically.⁴²¹ The import of papyrus then would be sufficient to supply the need, as we know that specialty goods were imported during this period. Further, the relative cost of papyrus during the New Kingdom is an impediment to an argument from necessity.

The establishment of Egyptian garrisons in the Levant, however, may have provided a desire for cheap usable papyrus on hand. The desire not arising only from necessity but from

⁴¹⁹ Eyre 2013: 25; see also Leach and Tait 2000.

⁴²⁰ See Wimmer 2022 for hieratic; Levy 2015 and Morris 2005 for details of the Egyptian occupation.

⁴²¹ In the “Tale of Wenamun” there is a debated phrase *n’qn* that Erman originally took it to be “feines Papier” (1900: 11; cf. Haran 1982). However, more recent translations opt for “mats of smooth linen” (Simpson 2003: 121) or “smooth linen mats” (Lichtheim 1976: 92). See *Wb* 2:208.10.

availability. Papyrus grows in the land at Lake Huleh in the Galilee, and points further north, but also near the coast at Aphek. It has been briefly suggested that the location of a significant Egyptian official at Aphek might have been due to the availability of papyrus nearby for the manufacture of new usable rolls.⁴²² This is a possible reason for the stationing of an official at Aphek; however, its location on the route from Jaffa to the highlands and routes north-south on the coastal plain and plentiful water source also constitute good reasons for a station at Aphek. Gadot, however, calls attention to a study by Bein and Horowitz in which they determined that the *Cyprus papyrus* plant known there was first introduced in the 2nd millennium.⁴²³ The need then coupled with the availability and location, especially if the plant at Aphek was likewise introduced in the 2nd millennium, provides a relatively strong circumstantial case for the growth and manufacture of papyrus for writing in the Levant.

Papyrus manufacture was suggested by Eyre to be a ‘semi-skilled’ activity, requiring only some basic knowledge and experience with the process but heavy in manual labor. As such, in Egypt it was not a prestigious, recognized profession. This works as a sort of double-edged sword for the circumstantial case for papyrus production in the southern Levant. First, the relatively low-level of knowledge necessary to produce papyrus rolls means that it could have been easily taught to the local Levantine corvee labor who would have been set to the task of producing papyri for the imperial administration. On the other hand, one might question how such low-level, as Eyre states ‘semi-skilled.’ laborers would have found their way to the Levant if not for a need of their craft. Papyrus workers probably worked on plantations dedicated to the production of writing papyrus. If they arrived in the Levant and trained the locals, it may have

⁴²² Gadot 2010: 58

⁴²³ Gadot 2010: 58; Bein and Horowitz 1986.

been as corvee laborers of the ruling Egyptians. The question of the importation of ‘know-how’ is then an open question.

Considering briefly the circumstantial case that can be built for papyrus production local to the southern Levant, it would seem that there is insufficient evidence to make a decision. The strongest evidence being the motivation from necessity, the location of Aphek, and the introduction of papyrus as evidence by the pollen in the Huleh Valley are countered by the need for low-level ‘know-how’ and the relative inexpense of importing the product. It seems possible that Aphek’s location, both geographically associated with Jaffa and ecologically suitable for papyrus, attests to the growth of papyrus for use in the local administration but further investigation is needed. It seems more likely that the southern Levant resourced its papyrus from Egypt, whether at times of Egyptian strength or weakness. The expense of papyrus rolls would have been cheap enough for the local Canaanite elites, even after the recession of Egyptian power, to import the product for use in the building of a new administration in the land.⁴²⁴

3.2.2. Papyrus Use in the Southern Levant

How papyrus was used in the southern Levant is a question that is exceedingly difficult to answer. The lack of extant evidence for papyrus means that descriptions and discussions of papyrus use, the potentials and possibilities, have for the large part been limited. In what follows, we will attempt to draw evidence together to describe the potentials for the use of papyrus in the southern Levant, addressing what material we have (only one papyrus scrap) and looking at the

⁴²⁴ Eyre notes, “Papyrus was made in sufficient quantity and at sufficiently low cost to be used for the detailed recording of the economic activities of all sectors of official life. Nowhere before the modern world can the basic writing material been [sic] more available to the writer than in Egypt[.]” (2013: 26). Given that the production of papyrus took place in the swampy marshes of the Nile Delta, it was readily available for export. The Tale of Wenamun, which debatably mentions papyrus (see note 422 above), retains memory of diplomatic and trade missions on the Levantine coast. Undoubtedly, papyrus moved through the ports of the Levant in all periods.

material that might signal or suggest the existence of papyri now lost. In looking at the material evidence for papyrus use, both direct and indirect, we will also examine what evidence exists in the biblical text for (1) the existence of papyrus documents in the Iron Age and (2) how those documents are described as being used.

Before we begin this discussion, however, a few caveats are in order. First, the discussion here is not intended to be comprehensive, as such a project would undoubtedly comprise its own dissertation; rather, we would like to open up new avenues of inquiry while drawing together past arguments about the possibilities and realities of papyrus in the southern Levant during the Iron Age. Second, in searching for papyrus we must naturally engage in the difficult task of inference, seeing what *might have been* from what *is*. In this regard, it should be recognized that the evidence we draw together in favor of seeing papyrus, at various sites and in various contexts, is circumstantial and relies on the basic intuitive and probabilistic judgements that make historical inquiry possible. In providing this caveat I hope to clarify that the presentation of evidence and the reasoning out of the possibility of papyrus should not be misread as an attempt to present a maximalist case, or that I believe that papyrus was in use and available at all times and all places. The goal is rather to suggest possibilities from the extant data. Undoubtedly the degree to which papyrus was (1) available and (2) in use in the southern Levant was subject to a variety of factors, social, economic, and political. Thus, we do not assume here that papyrus was always available or always in use through the decades and centuries of the Iron Age, only that it certainly was available and was in use sometime(s) and in some place(s) throughout this period.

3.2.2.1. Direct Material Evidence: The Papyrus from Wadi Murabba'at (Mur 17)

Scant evidence of papyrus in the Levant remain despite the assumption of its broad use.⁴²⁵ Only three scraps of papyri have been presented as being (1) from the Iron II (first temple period) and (2) from the southern Levant. Two of these papyri—of supposedly ancient origin—have surfaced only in recent years. The first, now known as the “Jerusalem Papyrus,” was seized from the antiquities market and subsequently published.⁴²⁶ Though the papyrus is of ancient stock, the text reflects infelicities in both paleography and grammar that have generated some skepticism.⁴²⁷ For this reason, it is best to avoid a detailed discussion of it as an authentic reflection of scribal practice. Another even more recently acquired papyrus has, at present, only been discussed in the popular press and awaits formal publication. This piece, like the “Jerusalem papyrus,” also derives from the antiquities market and the alleged chain of custody has been scrutinized.⁴²⁸ As such, this piece also cannot be commented on with any specificity.

Perhaps the only authentic scrap of papyrus to have been discovered coming from the Iron Age in the southern Levant is one purported to be from the caves in Wadi Murabba'at, the Murabba'at papyrus (Mur 17).⁴²⁹ The remnants of the papyrus measure 18.5 cm in width and preserve 9 cm in height.⁴³⁰ The papyrus is a palimpsest, made up of a lower inscription (Mur 17a) that has been partially washed off and an upper, better preserved inscription (Mur 17b). The

⁴²⁵ Climate is often noted in prior discussions of papyrus (Richelle 2017: 9-12; Richey 2020: 35).

⁴²⁶ Aḥituv, Klein, and Ganor 2016; in English Aḥituv, Klein, and Ganor 2017.

⁴²⁷ See comments in Rollston 2017.

⁴²⁸ Reported in HaAretz (<https://www.haaretz.com/archaeology/2022-09-07/ty-article/israel-regains-rare-ancient-hebrew-papyrus-from-first-temple-period/00000183-1728-d6f3-a7ff-ffea08eb0000>); see response from Rollston (<https://blogs.timesofisrael.com/the-old-hebrew-ishmael-papyrus-tapping-the-brakes/>).

⁴²⁹ Milik 1961; Cross 1962.

⁴³⁰ Aḥituv 2008: 213.

lower inscription is supposed to retain the remnants of a letter of which only two lines have been preserved in readable fashion, but the letter contained at least five lines originally. The upper inscription is an administrative list of names. We will discuss each of these texts beginning with the lower inscription, discussing paleographic difficulties to some degree but primarily focused on how the material and practical evidence of papyrus use in Egypt illuminates features of the use of this papyrus.

The lower inscription on this papyrus (Mur 17a) retains vestiges of a letter of unknown content. Due to its being intentionally washed in antiquity, the readings are very difficult and, unfortunately, no recent analysis utilizing the advanced images available online have been undertaken. As such, we will offer a few comments on the basis of these images without conducting a full epigraphic or paleographic analysis, attempting to clarify certain aspects of the inscription before presenting some reflections on scribal practice, drawing from papyrological analyses in Egyptology. My preliminary reading is presented below:⁴³¹

- (1) אמר . א[] ריהו . לב/כ[] א[] אה . שלחת . את שלם ביתך
- (2) ועת . אל . תשמע ל[כ] ל[אשר יד] בר אליך
- (3) הפ[] . אב[] ל[] ל[] כ
- (4) ה[] ורעת[] י[] י[] ו ל
- (5) ב[] . של[] [] כ[] א[] אל . רע[] ד[] ה[]

Because much of the content is unclear, we can only comment in detail on the first two lines, which are much more well established. At the beginning, it has been suggested that an

⁴³¹ The additional readings proposed have sometimes been recognized by other scholars though often not commented on in detail. Unfortunately, for the purposes of this dissertation, this tradition of presentation without elucidation will continue. The papyrus, thanks to recent images, is due a fuller paleographic treatment which the present author will hope to provide in the future.

additional line might be reconstructed, as the epistolary formula extant in line one is both truncated and, in most readings—following Milik—refers to an unspecified person (“to you”). I, however, might venture to suggest that line one of the papyrus is, in fact, the beginning. The truncated form here “Message of []RYHW to...” may be due to its personal use and perhaps part of an epistolary introduction that can be seen in two texts from Kuntillet ‘Ajrud (KAj). Both KAj 3.1 and KAj 3.6 begin the same way, “Message of PN.”⁴³² While both of these introductions have the fuller formula, it is conceivable that the form as present in Mur 17 is a shortened variant of the better known form.⁴³³

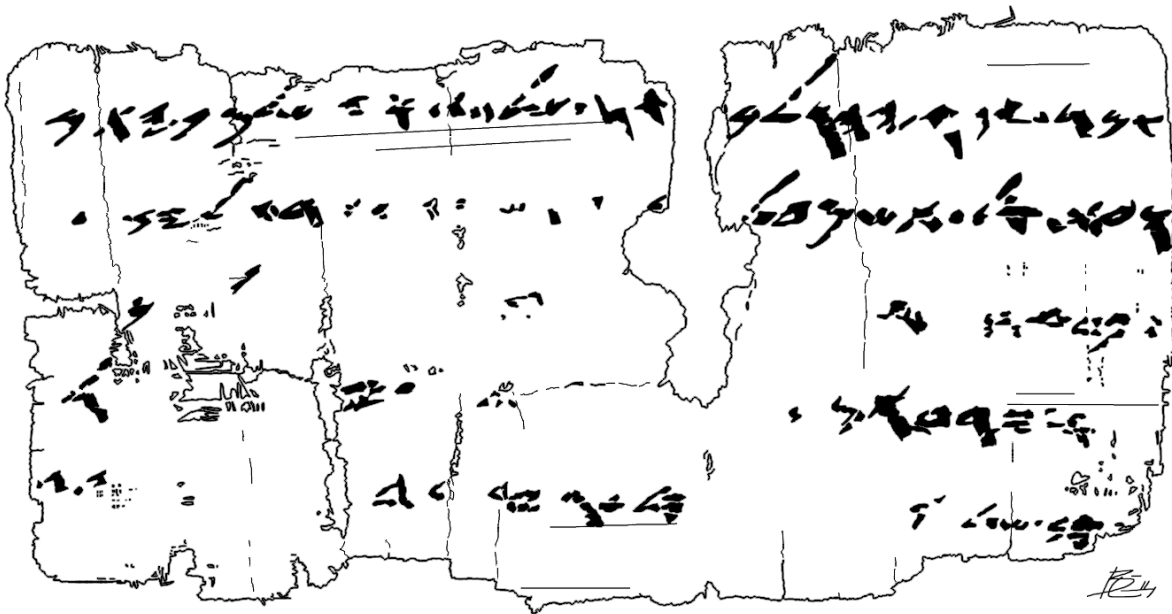


Fig. 3.4: Papyrus Muraba’at – lower inscription (Mur 17a) (drawn by the author)

⁴³² Ahituv, Eshel, and Meshel 2012; cf. Schniedewind 2014, 2019.

⁴³³ Pardee notes similarities and differences between the formula used here and those from Akkadian, Ugaritic, and Phoenician letters (1982: 121-122).

The address, “Message of PN” continues with the addressee indicated by *lamed*. From an examination of the images, it seems that Milik’s strange \aleph “to you” just before the break may be a misreading.⁴³⁴ It is possible to read the text as *lamed-bet*, understanding *bet* to be the beginning of a PN. The characters *bet* and *kap* are very similar in this hand (see the end of line one); with the extant ink both are possible. The gap toward the top of the letter may indicate *kap*, but as shown below, the top ink of *bet* later in the line is effaced and appears similar to *kap*. In either case, I would suggest *lamed* + PN here rather than *lamed* + 2nd Person Pronominal Suffix, “to you.” The PN, I would suggest, continues across the break and ends with the clearly visible *het*. This reevaluation would provide a solution for the strange reconstruction of Milik, wherein he sees, *šlh šlht*, “I have certainly sent...” Pardee notes that this use of a verbal hendiadys is unattested elsewhere and suggests that “the reading (of Milik) may be incorrect.”⁴³⁵ Pardee’s keen reasoning on the basis of grammar is supported by a reevaluation of the inscription from the new images. Milik’s reading of *lamed* after the break is difficult to maintain. From my preliminary examination other letters are possible and *lamed* actually seems unlikely given (1) that *lamed* is quite recognizable in the hand of the inscription and (2) the angle or tilt of the extant ink is inclined rather than declined as we might expect with *lamed*.⁴³⁶ Thus, though I cannot give a definitive reading at this time, I prefer *aleph* and do not believe *lamed* to be likely. Fortunately, the remainder of the line is relatively clear and was accurately accounted for by

⁴³⁴ Aharoni 1970: 30; Pardee 1982: 121-122.

⁴³⁵ Pardee 1982: 122.

⁴³⁶ Terminology in epigraphy and paleography can often be idiosyncratic. For this reason, I will briefly offer that I believe a letter to be either inclined (with a forward leaning stroke as such “\”) or declined (with a backward leaning stroke as such “/”). The latter has sometimes been referred to as ‘recumbent,’ but I find this language unhelpful.

Milik. I would suggest a translation of line one as follows: “Message of []RYHW to B[]’H, I have sent greetings to your house.”

The second line begins the primary content of the letter with the familiar transitional *w’t* “and now.”⁴³⁷ The remainder of the content is difficult to parse out due to its poor preservation. As such, we should reflect for a moment on the purpose and use of this piece of papyrus rather than elaborate on the possibilities for its elusive content. From a material and practical perspective, there are a few quick observations that can be made in light of Egyptian evidence. First, from a material perspective the height and width of this small scrap of papyrus fits what is known from letter writing in Egypt. Parkinson and Quirke provide two examples of small letters, one from the New Kingdom (11.5cm x 6.5cm = BM EA 10101) and one from the early Eighteenth Dynasty (14cm x 8.8cm = BM EA 10107).⁴³⁸ Letters and short communiques were written on short scraps of papyrus or quartered sheets.⁴³⁹ Second, from a practical perspective, the small papyrus might be illuminated by appeals to Egyptian documentary practice. For starters, the inscription being a palimpsest is an intriguing data point. Of course, palimpsests are not uncommon in many periods, and across many cultures, but consider the purpose and use of such a document. Eyre notes specifically that fresh papyrus sheets were used for “official or semi-official purposes,” whereas “reused or carefully used papyrus is typical for private purposes.”⁴⁴⁰ Thus, the first and earlier, now effaced, inscription being a letter when taken with

⁴³⁷ Schniedewind 2022: 143-150; 2023: 216-217.

⁴³⁸ Parkinson and Quirke 1995: 41-42, also see size of papyri in 16-17; cf. Černý 1952: 16; cf. Aramaic practice, *TAD* v.1 (Letters) and Porten 1979: 88-96.

⁴³⁹ Parkinson and Quirke 1995: 40-41.

⁴⁴⁰ Eyre 2013: 27.

these facts suggest that this is precisely the reason the scrap was prepared, by some, probably wealthy, individual to send a private message to someone else. Being a private letter, the text external relationship between the writer and the recipient might account for the truncated form of the greeting.⁴⁴¹ The parties are already well acquainted, and the original sender may be of higher social status than the recipient, therefore perhaps no grand introduction is necessary. The letter merely begins with the simple “Message of” formula.

That this letter was indeed sent may be indicated by trace letters on a small portion of the back (see fig. 3.5).⁴⁴² Papyrus letters were often addressed after being folded, sometimes also being tied and or sealed.⁴⁴³ Letters attested in Egypt, both in hieratic and those in Aramaic, are known to have been addressed with the name of the recipient after folding.⁴⁴⁴ These vary in length, from mere mentions of the addressee, the writer and the addressee, or even the writer, addressee, and a brief summary of content.⁴⁴⁵ In contrast, writing on the back can be for, perhaps, recording the receipt of a document. The Adon Papyrus sent from the Levant to Egypt bears a Demotic inscription on the back that states, “What the Great One of Ekron gave

⁴⁴¹ Consider here the example of KTU 5.9, a model letter that begins *thm* PN, “Message of PN.” (see Schniedewind 2023: 206). Further, note the truncated Egyptian epistolary form used in a letter from father to son, among other examples, which begins *dd(.n)* (Sender) *n* (Recipient), “(Sender) says to (Recipient)...” (El-Mohsen 1970: 47-50).

⁴⁴² This was noted by Milik in the *editio princeps* (1961: 91).

⁴⁴³ Parkinson and Quirke 1995: 41-43; cf. Allen 2002: 3-14; El-Mohsen 1970: 24-29.

⁴⁴⁴ For Egyptian Parkinson and Quirke 1995: 41-43; Allen 2002; El-Mohsen 1970. For Aramaic see *TAD* v.1 (Letters).

⁴⁴⁵ Most Aramaic letters from Egypt have the sender and the recipient, the papyri from Hermopolis also have GN *ywbl* “To be delivered to GN” (*TAD* A2.1-7), one letter may contain just the recipient (*TAD* A5.3), and some of the “Letters of Arsames” have just the sender (*TAD* A6.3-4, 7, 10-13).

to...[“.⁴⁴⁶ The scant traces of ink on the back of our letter are likely the illegible traces of an address.

Another possibility for the ink residue on the back, however, is to interpret the remains as the continuation of the letter. It was common for a writer to continue onto the back of the papyrus if need be, though writing on the back had disadvantages.⁴⁴⁷ Most of the Aramaic examples from Elephantine contain messages on the back even apart from the address. Likewise, Egyptian epistolary examples bear inscription on both sides.⁴⁴⁸ Had the writer needed additional space, flipping the papyrus over was the obvious choice. At the far-left edge of the reverse of the Wadi Murabba‘at papyrus there may be some vestiges of ink but it is nearly impossible to make anything out. Just this sort of practice, writing on front and back, which is common with papyri was one of the evidences, persuasively adduced by Haran in his work on the materiality of scrolls decades ago.⁴⁴⁹ He argued, on the basis of Ezekiel 2:9-10, in which the prophet consumes a scroll with writing on front and back, that the tacit assumption here is the regular material for writing was papyrus, as writing on the back of skins is not known from this period.⁴⁵⁰ If we are inclined to see ink on the far left edge of the reverse, then this would constitute the exact sort of evidence Haran points to. However, on the basis of the presently visible ink, it seems more likely that the back most probably only contained an address—though the possibility of continued writing remains intriguing.

⁴⁴⁶ *TAD* A1.1:10; KAI 266.

⁴⁴⁷ Cerny 1952: 18; Porten 1979: 88-90.

⁴⁴⁸ See for example the Middle Kingdom Heqanakht papyri (Allen 2002) and various New Kingdom Letters (El-Mohsen 1970).

⁴⁴⁹ Haran 1982: 171.

⁴⁵⁰ Haran 1982: 171-172.

Another indication that the letter was sent is that noticeable crease marks on the papyrus, which point to its having been folded in antiquity. In the *editio princeps* Milik noted two different strategies for folding, “Le text B (list de personnes) fut probablement plié verticalement trois fois, de droite à gauche [...] Le text A (letter) fut plié, lui aussi, plusieurs fois dans le sens vertical et aussi horizontalement[.]”⁴⁵¹ Again the examples of the Adon Papyrus and Egyptian letters are useful for understanding the material practice.⁴⁵² Letters for delivery were written and then prepared, either simply by folding or by rolling before folding.⁴⁵³ Often the letter was tied, or tied and sealed, with an address facing outward (see fig. 3.5 below). The example in figure 3.5 below shows an elaborately folded letter from the New Kingdom written in vertical columns (BM EA 10549).⁴⁵⁴

⁴⁵¹ Milik 1961: 93.

⁴⁵² *TAD* A1.1:10.

⁴⁵³ El-Mohsen 1970: 24-29; Allen 2002: 8.

⁴⁵⁴ Parkinson and Quirke 1995: 43 fig. 28.

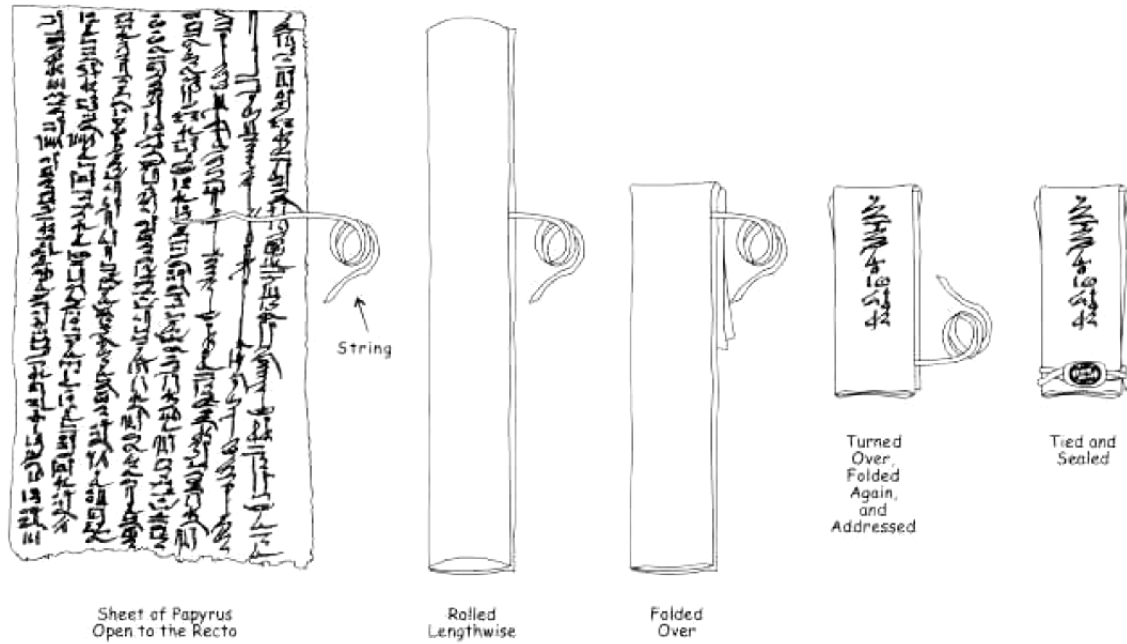


Fig. 3.5: Exemplary artistic representation of letter rolling and folding of Letter III of the Heqanakht Papyri (Middle Kingdom; after Allen 2002: 8, fig. 5)

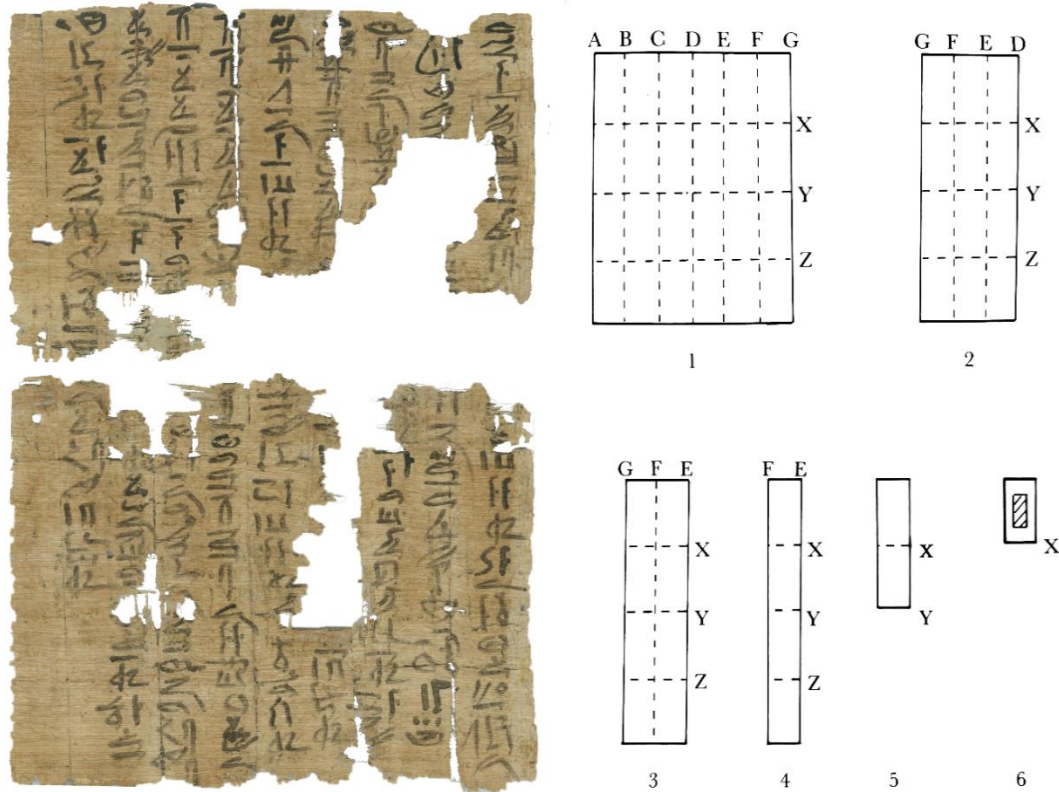


Fig. 3.6: Papyrus (EA 10549) with reconstructed folding techniques (New Kingdom; image of EA 10549 Copyright of the Trustees of the British Museum, used under creative commons license [CC BY-NC-SA 4.0], background removed by the author; folding reconstruction after Parkinson and Quirke 1995: 43, fig. 28).

The evidence of crease marks and the vestiges on ink on the reverse both indicate that the short personal letter (Mur 17a) would have been folded, addressed, and delivered, whereupon the new owner washed and rubbed out (Heb. מחה, see below) the letter, though fortunately for us not enough to make it wholly illegible.⁴⁵⁵ This second writer then applied a short administrative list perhaps recording rations given to individuals, the upper inscription (Mur 17b). This would

⁴⁵⁵ For a possible example of such a scenario, see Allen's comments regarding the palimpsest, Letter P, of the Heqanakht papyri (Allen 2002: 141).

accord with Cross' original recognition of difference between the "elegant cursive" of Mur 17a, the letter, and the "crude cursive" of Mur 17b, the list (fig. 3.7 below).⁴⁵⁶

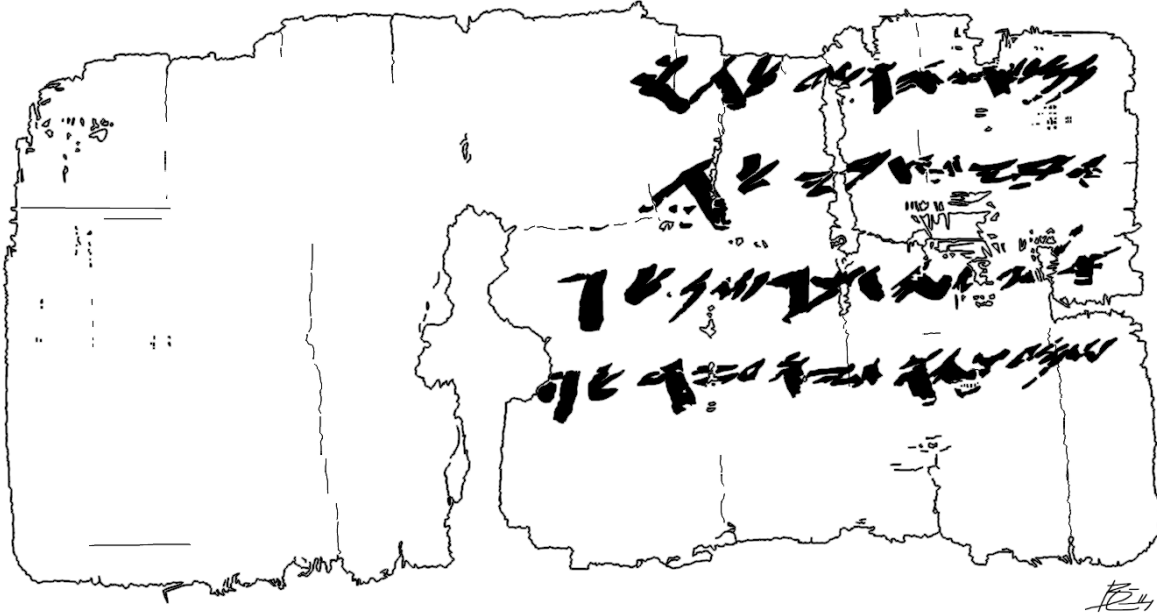


Fig. 3.7: Papyrus Muraba'at – upper inscription (Mur 17b) (drawn by the author)

The list of the upper inscription is preserved rather well. A few paleographic adjustments to the traditional readings need to be made but cannot be commented on at present. This aside, there has been some difficulty in interpreting the content. The list of names is accompanied by a difficult to understand sign, followed by hieratic numerals, the characteristic numeric system of the Hebrew kingdoms of the southern Levant, Israel and Judah.⁴⁵⁷ We will address the specific issue of hieratic numerals and symbols later (chapter 6 below). For now, we should only comment on matters of practice, of which one aspect about the upper inscription bears

⁴⁵⁶ Cross 1961: 34.

⁴⁵⁷ Wimmer 2008a; see ch. 6 below.

connection to papyrus writing practice known from Egypt—the orientation in respect to the lower inscription.

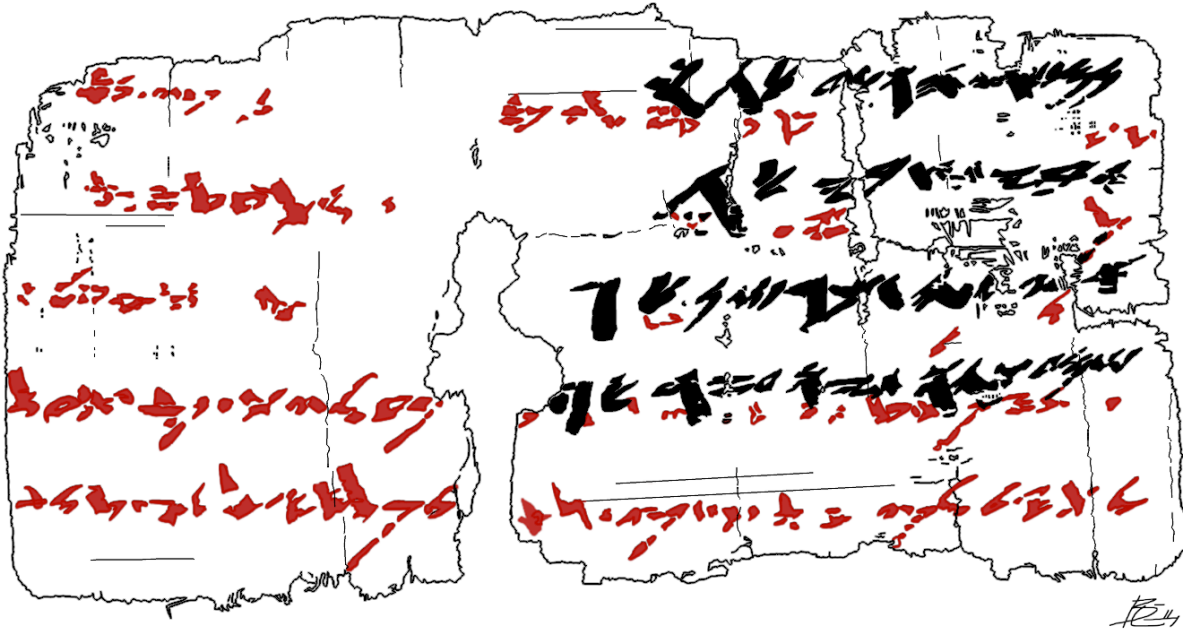


Fig. 3.8: Papyrus Muraba'at – upper and lower inscriptions superimposed (Mur 17a, red; Mur 17b, black) (drawn by the author)

The upper inscription (Mur 17b) is written upside down in regard to the lower inscription (Mur 17a), as can be seen in figure 3.8 above. This sort of orientation practice is known from several palimpsest letters from Egypt, where the secondary writer, after washing off the primary inscription, turned the letter 180° to begin writing.⁴⁵⁸ In literature on Egyptian writing, however, the reason for turning the papyrus after washing and writing, as it were, upside down, has not been commented on. It seems to me that the reason for this practice may be to avoid confusion in overwriting an inadequately effaced prior inscription as we have with Mur 17a and b. That is, the

⁴⁵⁸ See the Heqanakht papyri, letters II-IV (Allen 2002: 7-9).

scribe would not want their letters confused with those that came before it, thus as a precaution began in the opposite direction. Nevertheless, negotiating how to use materials and how to write on them is an important part of writing practice. As we have stated before, and will again, these practices are not intuitive. Certainly, some broad similarities might be accounted for as a result of similar writing conditions or necessity but the practice of beginning a secondary inscription upside down should not be overlooked as an aspect of learned practice. The writer may have had a pragmatic notion in mind, as we have opined above, to avoid confusion, but that multiple writers across time and geographic location should have the same practices may be indicative of a singular point of origin for such practices.⁴⁵⁹ This origin point need not be ancient, in this case, but may reflect the sharing of practices between Egyptian, Aramaic, and Hebrew writers in the Iron Age.

The papyrus from Wadi Murabba'at (Mur 17) provides important evidence for the use and reuse of papyrus, as it may indicate learned practices with the material, such as folding, washing, and even the practice of writing upside down between two inscriptions. Further, that the letter was a private letter of some, probably wealthy, individual in the 7th century sent and delivered may be evidence that the use of papyrus for communication, not to mention for administration, was widespread. This interpretation would be consonant with what has been observed about the large cache of bullae discovered from the waning centuries of the Judean monarchy, to which we now turn.

⁴⁵⁹ See comments in n. 37 above on the date of the Heqanakht material; this should caution against reading too much into this practice, though the connection is intriguing. Among the Heqanakht papyri that are palimpsests, Letter P is the only example where the same direction is used in both the upper and lower inscription. (Allen 2002: 14); Fragment B is likewise a palimpsest though with secondary inscription curiously perpendicular (90°) to the original inscription (Allen 2002: 14).

3.2.2.2.1. Indirect Material Evidence in the (Early) Iron Age (I-IIA)

Past discussions of papyrus have recruited several lines of evidence to argue for the presence of papyrus as regular material in the Levant, most prominently, the evidence of sigillary.⁴⁶⁰

However, in the earliest periods even indirect evidences of writing on papyrus is difficult to come by. To be sure, the high number of seals and bullae, especially from the period of the Judean monarchy in the Iron IIB-C, attests strongly to the presence of papyrus documents in use in the southern Levant.⁴⁶¹ The continued discovery of bullae and bullae fragments in excavations suggest that more writing on papyrus was taking place than perhaps has been previously recognized in this period.⁴⁶² Reich, Shukron, and Lernau comment on these data, stating “the large number of seals and bullae found in our excavations points to the existence of an administrative and commercial centre close to the rock-cut ‘pool’ during the late ninth and early eighth centuries BCE.”⁴⁶³ And yet, reaching back to the 10th, the evidence is minimal.⁴⁶⁴

Nevertheless, anepigraphic bullae and the existence of inked ostraca aid in establishing that papyrus was, in all probability, a regular medium for scribes even in an earlier period.⁴⁶⁵ The

⁴⁶⁰ Richelle 2016.

⁴⁶¹ See discussions in Richelle 2016 and Richey 2020.


⁴⁶² See the recent excavations in the city of David and Ophel in Jerusalem (Mazar and Ben-Arie 2015; Mazar and Ben-Arie 2018), as well as past excavations of bullae in Jerusalem (Shiloh 1986), Lachish (Aharoni 1975), and Samaria (Crowfoot 1957).

⁴⁶³ Reich, Shukron, and Lernau 2007a: 162; Reich, Shukron, and Lernau 2007b: 37

⁴⁶⁴ See Richelle’s intriguing attempt to answer the question, “Could any Hebrew literature have been written prior to the Eighth Century BCE?” While he makes an intriguing argument, his compilation of the data (bullae, ostraca, stele, etc.) only emphasizes the problem of the lack data in the earliest periods (2016:6-9). Thus, he concludes of the extant data, “in view of the concrete material conditions regarding the writing and the preservation of texts, no conclusion can be made based on the quantitative approach; the dearth of inscriptions dating to the early royal period does not constitute a reason to doubt the possible existence of literature at that time” (2016: 21). While Richelle does bring together some compelling circumstantial arguments for the existence of a writing culture in these earlier periods, the lack of data remains an abiding problem.

⁴⁶⁵ Lehmann 2008: 146; Finkelstein and Sass 2013: 195-196; Richelle 2016: 35-36.

degree to which papyrus was regularly available during the earliest periods (Iron I to IIA) is, however, debatable.⁴⁶⁶

The sole textual witness to the use of papyrus in the early Iron Age is the mention of Tjekerbaal, ruler of Byblos, consulting the “daybooks” (Eg. *r.t hrw* | )⁴⁶⁷ in the Report of Wenamun. The relevant portion states, “He (Tjekerbaal) had a journal roll of his forefathers brought and had it read out in my presence. A thousand *deben* of silver and miscellaneous items were found (entered) in his (journal) roll.”⁴⁶⁸ Though this has been recognized as a crucial witness to the use of papyrus in the Levant, it is important to note that Wenamun is generally understood to be a literary text.⁴⁶⁹ This certainly has some effect on its importance for historical reconstructions of life outside of Egypt in the early Iron Age.⁴⁷⁰ Still,

⁴⁶⁶ See the comments of Wilson-Wright, “The use of papyrus as a writing medium thus depended on the strength of the Levant’s economic and diplomatic ties with Egypt. When such ties were weak, as in the early Iron Age, Israelite scribes presumably used other writing surfaces, such as ostraca. Thus, even if Israelite scribes did use papyrus during the Late Bronze Age at sites like Lachish, the withdrawal of Egyptian hegemony in the mid-eleventh century BCE may have forced them to abandon this practice as well as any Egyptian word for ‘papyrus’ they may have borrowed. Only when Sheshonq reestablished contact between Egypt and the Levant in the mid-tenth century BCE could Israelite scribes (re)acquire the use of papyrus as a writing medium” (2023: 176). While the idea that Egyptian imperialism must be the environment by which trade between Egypt and the Levant takes place can be disregarded, his note that ties between Egypt and the Levant factor into the discussion of the use and availability of papyrus is correct. That Wenamun’s diplomatic mission to the Levant is imagined in the early Iron Age, albeit from the literary perspective of in all probability the 22nd dynasty (see Schipper 2005), means that such missions, even at times of relative weakness, were somewhat regular and that the resident Canaanite elite engaged in international economic exchange. In particular, sites in the north of Canaan, including Phoenicia, continue to thrive in the early Iron Age (“New Canaan;” see Finkelstein 2003: 75-84; cf. Mazar 2008: 88-90). Considering the price of papyrus (discussed in section 3.1.1 above), it seems reasonable that the commodity would have continued to be exchanged even as the perceived balance of power between Egypt and the Levant shifted.

⁴⁶⁷ *Wb* 1: 209.1; spelled in this text *r.w hʒ.w*. This spelling of Eg. *hrw* “day” has been argued to be an indication of its date (Winand 2011: 548).

⁴⁶⁸ Translation from Simpson 2003: 120. For his “journal roll,” I prefer “daybook” for reasons that will become clear below.

⁴⁶⁹ For a short overview of the debate see Winand 2011: 541-543; for a lengthier discussion Schipper 2005: 6-40.

⁴⁷⁰ Winand’s comments ring true, “It is perfectly clear that history is not in essence excluded from literature. But the real issue is not here. The problem with literary texts is that one never knows where history ends and where fiction begins. This means that a fact in a literary text can be accepted as historically relevant only if it is corroborated by another sources” (2011: 544). Nevertheless, Schipper admits to a potential historical core (ein historischer kern) on the basis of the names of figures being attested externally (2005: 328-329). Schipper argues that the text may have

the literary reference in Wenamun should be considered alongside other indirect evidence for the early use of papyrus, even if it may reflect the concerns and sociopolitical conditions of a later writer.

A few epigraphic arguments can be made in favor of seeing papyrus as a regular medium in, even the early, Iron Age. Reinhard Lehmann has argued that the monumental scripts of Byblos display the influence of ‘flat-writing.’ He has presented the case that the development of forms seen in the early Byblian royal inscriptions are induced by the regularity of writing, as he says “flat,” on papyrus.⁴⁷¹ Beyond this, the use of proper ductus in early inked ostraca is likely another indirect evidence of the availability of papyrus. As we will discuss in the next chapter, inscriptions like Kh. er-Rai, Kh. Qeiyafa, and in all probability the Beth Shemesh ostrakon point to outside of themselves to the existence of other documents, some probably in papyrus, for the use of inked writing. In this regard too it is important to point out the technical and material realities of writing in ink and the production of ink (see chapter 1 above). The production of ink, as evidenced by the early inked inscriptions just mentioned, involves preexisting social networks, networks of material resource acquisition and networks of ‘know-how.’ The process of leveraging those social networks to use ink likely implies high levels of need and higher echelons of accounting or administrative need. Whether this has any bearing on ‘state-level’ structures is unimportant, likewise unimportant are concerns of ‘literacy’ as if a single definition existed. Rather, that inked writing persists and evolves into unique aesthetic traditions that

been based on an oral tale from the late 21st dynasty that was reworked to suit the political intentions of the later writer (2005: 329-333).

⁴⁷¹ See Lehmann 2008.

emerge in the Iron II is indirect evidence of the use of papyrus, to a greater or lesser degree in the early Iron Age.

All of this indirect evidence points to the probability that papyrus was part and parcel of writing culture in the southern Levant from the Late Bronze Age down to the end of the Iron II. However, the artifacts from this period provide relatively little information to our understanding of how papyrus functioned in the writing culture of the southern Levant. As such, we will turn to a more synthetic approach, taking a case study of the activity of one writer in the Negev, at Arad, in an admittedly late period (Iron IIC), to describe the uses of papyrus in the writing life (or culture) in the southern Levant from a time in which many have assumed the textualization of ancient Israel and Judah's greatest literary works to have taken place.

3.2.2.2.2. Indirect Material Evidence in the (late) Iron Age: From Ostraca to Papyri(?)

While we move here from the earliest periods of the Levant (Iron I-IIA) to later periods, evidence from bullae become much firmer.⁴⁷² This period being the only time from which we have documentable papyrus documents likewise supports the thesis that papyrus was a regular medium. But what might have been written on papyrus, where, why, and by whom are larger questions. To even attempt an answer to these questions, we must recruit circumstantial evidence and drawn Egyptian understandings of the relationship between inscribed artifacts into the discussion. We will turn to one site that sees a proliferation of writing activity in the late Iron Age (and even earlier) from which we can reason the existence of a few potential papyrus documents to understand the ways that papyrus may have operated (based on Egyptian analogs) in the documentary tradition of the ancient Levant.

⁴⁷² Note 463 above lists finds of bullae, most of which are Iron IIB-C.

Few ‘archives’ have been discovered in the southern Levant, even as it relates to ostraca.⁴⁷³ Certain well-known caches of ostraca provide unique insight into small segments of time, however, often identifying the individual writers, their life and activity, is difficult.⁴⁷⁴ One unique cache of inscriptions from Arad coming from two different loci, in what Aharoni reasoned were two different strata (see fig. 3.9 far below; Locus 637, Stratum VI = Nos. 1-19; Locus 779, Stratum VII = Nos. 31-32, and 34),⁴⁷⁵ preserves the writing activities of one individual, Eliashib.⁴⁷⁶ In this house alone were discovered the twenty-two ostraca just noted, as well as three seals of Eliashib (Nos. 105-107), two inscribed *šql* weights (No. 9-10), and an engraved *Tridacna* shell vessel along with what Aharoni called “delicate wares.”⁴⁷⁷ From this

⁴⁷³ As a caveat, the ostraca from Eliashib’s residence, in my opinion, are not truly an “archive,” but more so a temporary archive. Veenhof draws from archival sciences to define an archive as, “records accumulated during the time a particular task was performed by an institution or person” (1986: 7). This definition is sufficiently vague so as to employ the term for the apparent temporary storage of letters.

⁴⁷⁴ Caches of ostraca include the well-known Lachish Letters (Torczyner 1938), Samaria Ostraca (Reisner 1948, Kaufman 1966 [full collection in *HAE* 1: 79-110]), and the material from Arad (*AI*; including Eliashib’s ‘archive’ [Nos. 1-19, 31-32 and 34; with the likely addition of an earlier cache represented now only by four examples 24-25, 27, and 29]). These caches are undoubtedly the accident of destruction and therefore only give us a snapshot of the latest period and little from the activity of writers in previous periods. Hence, we must be careful what conclusions we draw about early periods and the relative absence of evidence on the basis of the mass of data from the last decades of the Judean monarchy (Millard 2005: 314-315).

⁴⁷⁵ Mazar and Netzer are correct in reconfiguring these strata. All the of the materials from Eliashib’s archive (No. 1-19, 31-32, and 34) along with the seals (Nos. 105-107) and the *šql* weights (Nos. 9-10) are from the same stratum, stratum VI (Mazar and Netzer 1986: 87-89). Likewise, the sherds from Locus 374 on the western slope (Nos. 24-25, 27, and 29) should be assigned to this stratum.

⁴⁷⁶ As I will mention below, there is good reason to assume that the small collection of inscriptions found in a dump on the Western Slope outside of the fortress during Stratum VI are also to be connected with Eliashib (Locus 374; Nos. 24-25, 27, and 29; *AI*: 182).

⁴⁷⁷ *AI*: 56; for the *Tridacna* shell vessel see Brandl 1984. It is curious to note the shell here and the association between cosmetics, pigments, and the mixing of ink. While a valuable item like this would have probably served other purposes, the mixing of red and black can be done conveniently in shells and shell-like vessels (see section 1.2.1 above).

breadth of material, we get a sense of the writing career of one individual, the commander of the fortress of Arad.⁴⁷⁸

We have a wealth of data about the life and activity of Eliashib at the Arad fortress, though undoubtedly not the sum of his activities there, literate or otherwise. Nevertheless, we do know that his duties were varied, between the organization and mobilization of individuals, and perhaps more importantly in the missives, the receipt and distribution of commodities. He is commanded to keep detailed accounts of the storehouses and to make record of them. One inscription from Arad records the command of a superior who tells Eliashib to “write the name of the day,” (Arad No. 1 *ktb šm hym*) on a certain distribution. As Aharoni notes, the dating formula used in the inscriptions seems to correspond to this practice of “writing the name of the day,” in that most inscriptions only record the day of the month (No. 8, 9, 17 and 32).⁴⁷⁹ The recording of dates mentioned in letter No. 1 from Arad, in connection to the economic lists found in Eliashib’s house (No. 31 and 34), as well as those ostraca from the sherd dump on the western slope (Locus 374; Nos. 24-25, 27, and 29) which are probably to be associated with Eliashib (No. 24 is a letter written explicitly to Eliashib), point to the practice of general record keeping.

Inferring that papyrus documents existed based on existing ostraca is nothing new. In scholarship on Egypt it has long been thought that ostraca, as cheap, disposable material, made the perfect material to jot short notes or write drafts that would later be collated into a papyrus

⁴⁷⁸ See Schniedewind 2019a:63-72, which discusses the “commander of the fortress” in the context of the practice inscriptions from Kuntillet ‘Ajrud. Likewise, Schniedewind 2019b for “commander of the fortress” in general.

⁴⁷⁹ *AI*: 34. The exception is Arad No. 7 that notes “the second of the month, in the tenth month” (*AI*: 22). Arad No. 20 is likewise probably associated with the activity of Eliashib and states, “In the third year, (in the) month of Şah” (*AI*: 40).

document.⁴⁸⁰ However, this should not always be viewed as the case. Several ostraca show signs of reuse (palimpsests) and others signs of being stored, valued, and used as primary texts rather than drafts for papyrus documents.⁴⁸¹ Still, Allam concludes that the use of ostraca in an official capacity were probably relegated to lower levels of administration or use for local concerns.⁴⁸² Official documents for higher levels of administration would often have demanded papyrus as the material of choice.⁴⁸³ In his study on ostraca as drafts at Deir el-Medina, van Heel provides instructive caution when recruiting ostraca as evidence for papyrus documents. He states,

Some ostraca were clearly discarded, some were used as drafts, and some were kept, so perhaps one should not want to attempt to force each and every ostrakon into an assumed role as a draft, and allow for a number of roles to be performed by the ostrakon, that of having served as a draft or mother copy being only one of these.⁴⁸⁴

His caution, however, is against a maximalization of the data (i.e., not every ostrakon is a draft).

Like Allam before him, however, he concludes that the evidence from the extant papyri suggests

⁴⁸⁰ Černý 1973; Allam 1968; van Heel 2003; Eyre seems to have adhered to this sort of consensus in earlier work (1980), but in later work pushes back against it (2013: 251-252). He states, “The mass of texts on ostraca were ends in themselves, and not drafts: not preparatory notes nor compositional drafts for reports of record[...]The writing of a document can often be an end in itself. These does not need to be some later reference need in the mind of the writer” (2013: 252). While there is certainly something to be said about orality in administration in oral dominant cultures and something to be said about the symbolic nature of documents as emblems of legitimacy (see “The Affective Life of Documents” in Navaro-Yashin 2012 for modern analogs), Eyre’s notion that “the mass of texts on ostraca were ends in themselves,” as apparent aids to memory for a local administrator or mere symbols of power without any apparent practical use or purpose in a larger administrative schema, in the opinion of this author, minimizes the data too drastically. Writing, from time immemorial, is record keeping – and record keeping for the purpose of reference. (Woods 2010a: 17; 2010b: 33-34; Baines 2004: 161-162; Stauder 2010: 142-144 cf. MacArthur 2010: 115-121). As many have pointed out, using for example the passage from Wenamun discussed above, daybooks and other sorts of documents were deliberately intended to be referenced in the future; these texts had long-term purpose and a practical application (Haring 2003: 101-104; Redford 1986: 97-103, 121). Thus, while Eyre’s push back against seeing all ostraca as drafts is important, in the opinion of this author, he pushes too far.

⁴⁸¹ Allam 1968: 121-122; van Heel 2003: 4-5, esp. 4 n.24; cf. Eyre 2013: 30.

⁴⁸² Allam 1968: 123-128.

⁴⁸³ van Heel 2003: 3.

⁴⁸⁴ van Heel 2003: 5.

that, in several cases, ostraca did indeed serve as drafts or notes for later collation into a papyrus document. Among the evidence he recruits is archaeological data of dumps and archives, both of which are suggestive of the purpose of inscribing the ostraca.⁴⁸⁵ It is my argument that we see both of these, an ostraca dump and an archive, at Arad. Taken in connection with general administrative practice then, we can suggest that at Arad, official documents were drawn up on papyrus with economic and general administrative content.

Returning to the discussion of dating then, it is curious to restate that the only record of the date is the day of the month without specifying which month. Drawing from Egyptian administrative practices, this might suggest that records were kept for the purpose of later collation at the end of each month. That is, the ostraca at Arad, both economic and epistolary, were a means to an end rather than an end in-and-of themselves; they were to be kept as a temporary material memory support for later inclusion in a papyrus ledger. In Egyptian scholarship, as mentioned above, there is an understanding that ostraca could, and often did, operate as temporary notes or drafts to be compiled into a later documentary source. Van Heel, in an extensive discussion of drafts at Deir el-Medina, offers the reflections of Posener-Kriéger on Old Kingdom accounting texts from Abu Sir. She states,

Among the former, some of the most important are the monthly account-tables which record the daily items of temple income with their sources. Obviously written at one time and not daily, these accounts were no doubt based on other documents, the most interesting of which are the daily accounts in which items of income and their sources were entered day by day in tables of a less elaborate type; but these lists themselves, to judge from the regularity of the script and the neatness, must have been copies from notes.⁴⁸⁶

⁴⁸⁵ van Heel 2003: 7-18; cf. Černý 1931.

⁴⁸⁶ van Heel 2003: 6 quoting Cenival and Posener-Kriéger 1968: xiv.

Allam, as mentioned above, has suggested that ostraca use was for the purpose of low level administration in Deir el-Medina, whereas higher level administration would have taken place on papyrus.⁴⁸⁷ While separated by a large amount of time, Deir el-Medina being Ramesside and Arad VI being late Iron IIC, the former provides a powerful analog for the latter; Deir el-Medina is home to a vast amount of administrative, or non-literary ostraca, and provides a glimpse into the stratification of administrative writing practices.

Closer to the time period of the material from Arad, the Demotic tale, “The Instruction of Onkhsheshonqy” reflects, in an imaginative way, the relationship between materials in the creation of texts. The tale’s protagonist, Onkhsheshonqy, is thrown in jail at which point he requests writing materials (palette and scroll) to write down his eponymous instructions, intended for the edification of his son. Pharaoh permits that a “palette be taken to him” but states, “Do not have taken to him a papyrus scroll.”⁴⁸⁸ Onkhsheshonqy proceeds to write his instructions “on sherds of the pots which they would take in to him” in lieu of available papyrus.⁴⁸⁹ The story is nevertheless preserved on papyrus. The story then in some way literarily reflects on the use of ostraca as one material medium that not infrequently precedes writing on papyrus. Embedded in this story is something of a literary reflection of the use and purpose of materials, the potential for the permanence of ostraca on the one hand and the process of collecting truly important ostraca into a larger text composition.

⁴⁸⁷ Allam 1968: 123-128; cf. van Heel 2003: 1-5.

⁴⁸⁸ Simpson 2003: 503-504.

⁴⁸⁹ Simpson 2003: 505.

Returning to Arad, we can make some reasonable inferences about the possibility of papyrus at the fortress. Taking the dated ostraca from Eliashib's archive, we should suggest that some, if not most, of the ostraca present in his archive were stored in order to be later compiled or otherwise referenced, perhaps at the end of each month, being collated into, in all probability, a papyrus document. The potential papyrus document (month or year report) may have been subsequently delivered to the central administration in Jerusalem or stored in the fortress for future audit. In Egyptian writing culture, the 'month-end' and 'year-end' report was one type of regularly kept administrative document and Černý suggested, many decades ago, that two copies might have been drawn-up, one for the central administration and one for the local record.⁴⁹⁰ His suggestion is difficult to prove but has been suggested as a solution for why ostraca would be subsequently dumped. Nevertheless, regular administrative documents such as the 'month-end' and 'year-end' report were a necessary component of the administration of the state in Egypt and likely Judah.

The present cache of letters at Arad, containing primarily economic content (No. 1-19), are then probably to be interpreted as a temporary reference collection yet to be collated just before the destruction of the fortress. That this is the case can be reasoned on the small collection of economic documents; this includes two letters of apparent logistical value, one of which is addressed to Eliashib, discovered in a dump on the western slope of the site (Locus 374; Nos. 24-25, 27, and 29).⁴⁹¹ One inscription (No. 24) is nearly completely effaced on the front, the remnants of Eliashib's name are visible near the top of the inscription, while the back retains a

⁴⁹⁰ Černý 1973: 226-227, "This papyrus diary, a veritable chronicle of the Tomb, was kept in the scribe's office for future reference, but a copy or extract from it was sent at intervals to the office of the vizier[.]"

⁴⁹¹ *AI*: 46-50, 53, and 55 [p. 182 for details of the locus and find].

letter addressing economic and logistical duties, similar to the general nature of the content of ‘Eliashib’s Archive’ (Nos. 1-19).⁴⁹² Still another (No. 27) contains an effaced list of names, perhaps of ration divisions, not unlike the economic list of names recording the distribution of wheat (חטת) in Arad No. 31.⁴⁹³ The apparent discarding of these materials is important, as it points to the disposable nature of the documents. The discard of ostraca in a dump is a sign that the ostraca are no longer of logistical value, and in Egypt, this has been reasonably interpreted as their having been collected into papyri.⁴⁹⁴ At Arad, the dump indicates that there had been, by the time of the destruction of the site, at least one collation of material on ostraca made by Eliashib. The ostraca we have as of yet discovered among his archive should then be understood as likewise temporary. Eliashib as commander of the fortress undoubtedly had need to report the monthly and yearly administration of the fortress. Some of this could have been done with *ad hoc* letters written on ostraca, such as those directives that he himself received, but it seems unlikely that this was the sum of the interaction. Further, if we can impose Allam’s categorization of ostraca as indicative of lower-level administration, then the directives sent and received on ostraca only represent the most basic aspects of the administration of the site. Eliashib’s three seals, undoubtedly a sign of his status as commander of the fortress, served purposes other than the sealing of baths of wine (No. 4, 7, and 17). They show the need for communication and verification via official channels in the administration of the Arad fortress.

⁴⁹² *AI*: 46-49.

⁴⁹³ *AI*: 53, 56-59.

⁴⁹⁴ van Heel 2003: 7-18.

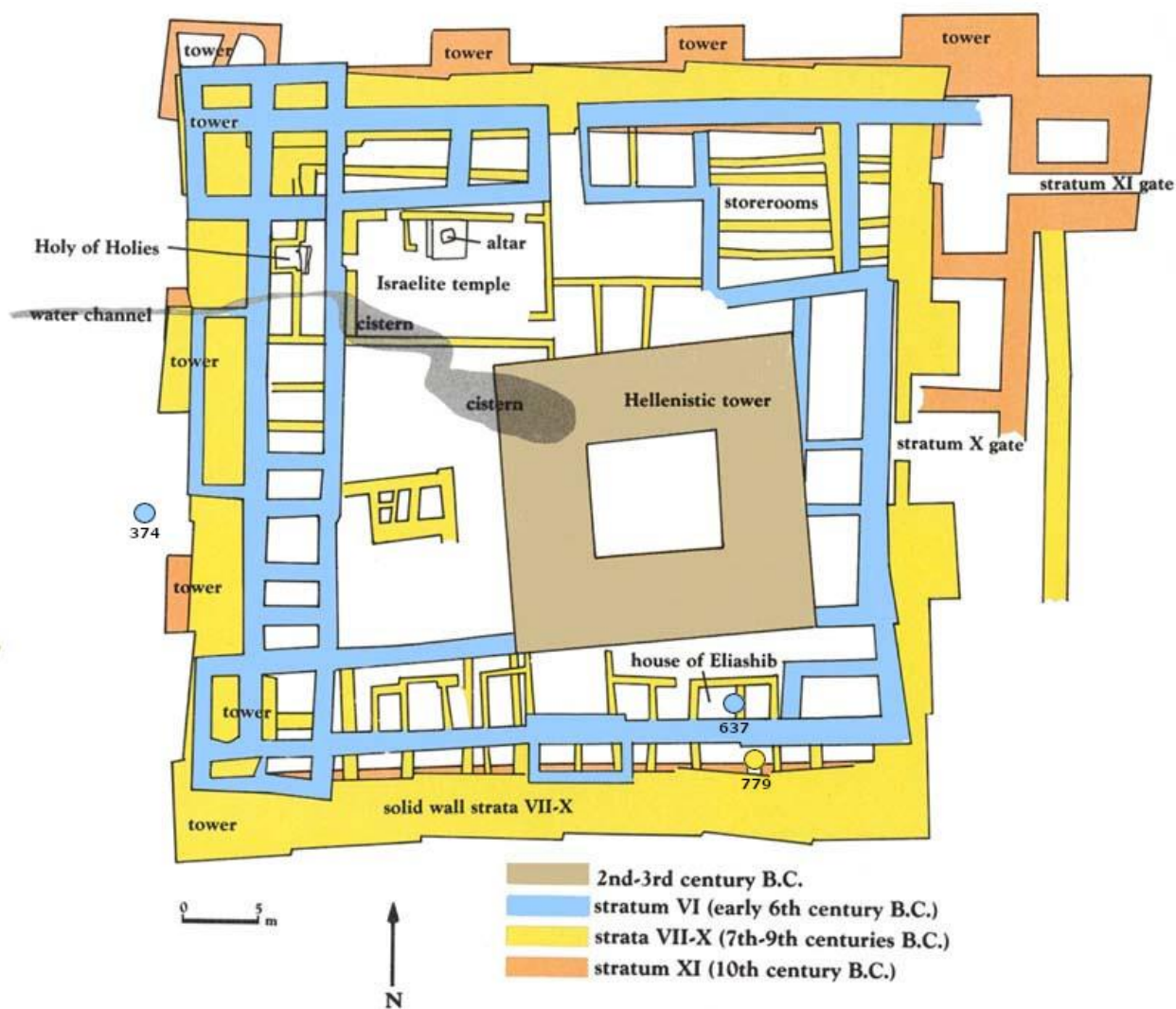


Fig. 3.9: Plan of the Israelite fortress at Arad with loci of relevant ostraca (after Aharoni, Herzog, and Rainey 1987; loci indicated by the author).

It is possible that the messages on ostraca were of lesser, logistical concern, and that, as we have discussed above, official letters to the central administration were written on papyrus and sealed.⁴⁹⁵ Perhaps the sigillary discovered in Eliashib’s house served this purpose. We

⁴⁹⁵ Here it would be convenient to recruit the loan status of *ḥtm* (חֲתָם from Eg. *ḥtm*) as suggestive of Egyptian influence on writing practice, but as Wilson-Wright has satisfactorily shown, the loan is archaic and therefore unrelated to later alphabetic writing practice (2023: 166-168).

cannot be sure. The roughly contemporary papyrus from Wadi Murabba‘at is evidence that letters on papyrus, even palimpsests, were in use in the Levant during this period. Similarly, the Adon papyrus referenced above would support the idea that letters of some official consequence, especially delivered from long distance away and addressed to the highest echelons of administration, were likely written on papyrus. While admittedly the only example of such a papyrus, given the quotidian concerns of most letters on the Arad ostraca, it is reasonable to suppose that more official correspondence was written on papyrus now since lost.

Even beyond letters, if the ostraca found in Eliashib’s archive, as well as Eliashib’s dump on the western slope, are to be taken as notes for collection and collation, what types of papyrus documents might they suggest were drawn-up at the fortress. While we have no papyrological evidence to work with, as a useful analog we can continue to draw into the discussion the better represented documentary tradition of Egypt. From this tradition, there are two text types that are worthy noting here. The first is the name list (Eg. *im.y-rn=f*).⁴⁹⁶ The record of names is well-attested in Egypt, though infrequently as a stand alone document.⁴⁹⁷ Normally, the name list is recruited in a larger document, the list of names serving some specific purpose such as a list of legal witnesses or workers in a specific activity.⁴⁹⁸ However, one text refers to the “scroll with the name list (*šfd m im(.y)-rn=f*)” to be delivered to an administrative office.⁴⁹⁹

⁴⁹⁶ Haring 2003: 86-87; cf. van Heel 2003: 18-27; Eyre 2013: 36.

⁴⁹⁷ Haring 2003: 86.

⁴⁹⁸ Haring 2003: 86-87; van Heel 2003: 18-27; cf. Redford 1986: 103-121 wherein name-lists are components of various daybooks (see discussion of the ‘daybook’ below).

⁴⁹⁹ Scharff 1924: 33; see also Ingelore Hafemann, *Thesaurus Linguae Aegyptiae*, Brief, Illahun, pBerlin 10037 A-C, Brief eines Beamten an Hor-em-saf.

The listing tradition in the southern Levant is quite well-known from the epigraphic record and the Hebrew Bible.⁵⁰⁰ In this vein, the two lists of names associated with Eliashib may have served the purpose of drawing up a more significant name list, either as a stand-alone document or as a part of another document. Unfortunately, no discernable organizational structure to the lists at Arad can be defined (e.g., by rank, position, or profession). This is unlike at least one example of an Egyptian name list from Deir el-Medina, where the profession of the individual is mentioned and a distinct order arises: chief of workmen, scribe, workmen, guard, young men, slavewomen, doorkeepers, and doctor.⁵⁰¹ There may be some organization in name lists preserved in the Hebrew Bible and this likely reflects that some organizational strategy existed in Iron Age Israel and Judah.⁵⁰² The well-known list of Solomon's officials (1 Kgs 4:1-19) is but one of these lists from the Hebrew Bible. Another short example, the name list of David's retinue in 2 Sam. 20:23-25, is worth consideration for its organizational structure.⁵⁰³ The small segment of verses represents a narrative interruption, splitting two narrative pericopes, listing names with some inconsistency (some names have patronym, others do not, as is the case in many actual epigraphic lists) followed by the title of the individual in, seemingly, descending order:

⁵⁰⁰ For epigraphic lists see Mendel-Geberovich 2014; for lists in the Hebrew Bible see Scolnic 1995; likewise curious economic lists identified by Levine in Numbers (1965: 307-318). Schniedewind interestingly notes that the list in Num. 7:12-88 identified by Levine is surrounded by an *inclusio* (2019: 91).

⁵⁰¹ Haring 2003: 87; van Heel 2003: 23.

⁵⁰² For discussion of epigraphic lists and their relation to the Hebrew Bible see Mendel-Geberovich 2014: 40-44; and from an educational context Schniedewind 2019: 70-94.

⁵⁰³ The final verse (v. 26), not included above, represents a later editorial insertion marked with the phrase "and also" (וְגַם); further the verse does not accord with the grammar of the preceding list. The list proceeds without any verb, as would be proper for an administrative list, whereas the last verse (marked by וְגַם) includes a verb. It not only introduces a, seemingly unnecessary, verb but also the figure of David, who is notably missing from the previous short list. For identifiable editorial insertions see Fishbane 1985.

Joab	Overseer of the Whole Army of Israel ⁵⁰⁴
Benaiah son of Jehoidah	Overseer of the Cherethites and Pelethites
Adoram	Overseer of the Forced-Labor
Jehoshaphat son of Ahilud	Recorder(?)
Sheva	Scribe
Zadok and Abiathar	Priests ⁵⁰⁵

The practice of making name lists in alphabetic dates all the way back to the early Iron Age. The Beth Shemesh ostrakon lists several names with dots, sometimes one, sometimes two, or even three, next to each of the names, which has been connected to some Egyptian practice of recording workdays.⁵⁰⁶ Whether lists like this imply their collation into papyrus documents is less certain. Nevertheless, name list documents are one type of papyrus document that Eliashib could have composed, using the extant ostraca (Nos. 24, 27, and 31) among undoubtedly others discovered in the fortress (Nos. 22-23?), if indeed these texts were used as textual drafts or notes to be drawn up into a more official list for the Judean administration.⁵⁰⁷

⁵⁰⁴ This verse says, אֵל כָּל צְבָא יִשְׂרָאֵל, though I think it is possible that this should be עַל כָּל צְבָא יִשְׂרָאֵל and have translated in accordance with this view. However, it is intriguing to consider the use of -ל in epigraphic lists which Mendel-Geberovich believes indicates the captain or leader (2014: 340-341). In this respect, if Mendel-Geberovich is correct, אֵל כָּל צְבָא יִשְׂרָאֵל may reflect a variation on the practice of identifying the leader or captain in military lists with -ל, in this case using אֵל. This variation is not reflected in the epigraphic material but not, I believe, an unreasonable suggestion.

⁵⁰⁵ Priests are here listed last which may reflect a bias of the Deuteronomist but also may signal their being lower-level cultic officiants. In an Egyptian name list mentioned by Haring (P. Turin Cat. 1932 + 1939) the list places, at least as Haring seems to communicate, the “high priest of Amun” in the first position, only followed after by overseers and chiefs (Haring 2003: 87).

⁵⁰⁶ See Sass 1988: 64-65, esp. 65 wherein he cites Yeivin (1939: 111) for his suggestion of a potential Egyptian connection.

⁵⁰⁷ Nos. 22-23 were found in the storehouse and date to Stratum VI (*AI*: 44-45, 182). Though not explicitly related to the find spots for Eliashib’s writing activity, they potentially impact the discussion.

The wealth of data from the archive of Eliashib is much more properly associated with a different, but common, form of papyrus document known from Egypt, the “daybook” (Eg. *ʿr.t hrw* and Eg. *hrwy.t*).⁵⁰⁸ Redford in his study of daybooks concludes on the basis of the textual examples that “*hrwy.t* (and its variants) denotes a document which records an event or series of events by dates.”⁵⁰⁹ While most of material from Eliashib’s archive consists of letters, as we have mentioned already, these letters pertain to the exchange and delivery of goods and commodities at the fortress. There is good reason to believe that such economic and logistical activity needed to be recorded. Eliashib is commanded to “write the name of the day” on a particular delivery (No. 1, line 4).⁵¹⁰ Eliashib’s group of letters yet to be collated into a papyrus document, probably a daybook, may have provided valuable information about the movement of goods and people, totaling of sums (as is already indicated on Arad No. 31 from Eliashib’s house), incoming (No. 25) and outgoing goods (No. 1-19). Perhaps the enigmatic ostrakon, Arad No. 34, which bears exclusively two columns of hieratic accounting symbols, served as notes for giving the exact totals in a papyrus document that would have contained more information.⁵¹¹ That totaling, accounting, weighing and measuring were among the manifold duties of Eliashib

⁵⁰⁸ See discussions of daybooks in Redford 1986: 103-120; Haring 2003: 87-89; and Eyre 317-321. For Eyre, again, documents are temporary. He states, “the ordinary diary is a working document, illustrating day-to-day administrative practice, but unlikely to be used for long-term reference, and often reused once its immediate purpose was complete. This contrast with a document created for record and later archival reference” (2013:317). Eyre is undoubtedly correct to point to the temporary nature of some, even long, administrative documents, as examples of palimpsests show their reuse, and he does permit a category of texts that may have been stored for future use. But for him, the “ordinary diary,” or daybook, was temporary. The question of reuse, which he rightly raises, however, is more complicated. Reuse of an administrative document may occur for a number of reasons, not all of which attest to the temporality of the documents themselves.

⁵⁰⁹ Redford 1986: 101; cf. Haring 2003: 104.

⁵¹⁰ *AI*: 12-14, also comments on p. 34.

⁵¹¹ *AI*: 62-64; see Wimmer 2008: 42-46 for an analysis of this ostrakon; cf. *editio princeps* in Yeivin 1966: 153-159.

is evidenced not only from the inscriptions discovered in his archive but also from two inscribed *šql* weights discovered there (No. 9-10).⁵¹²

The flexibility of the daybook in Egyptian documentary practice means that we could imagine almost any range of valuable intel being collated from the large number of ostraca in Eliashib's archive. Redford notes,

a day-book could contain copies of official correspondence, the itemized list and specific amounts of food-stuffs and other commodities doled out to the army, or received in payment by an institution; it might contain official directives or edicts, the daily "acts" of the necropolis, or the dated depositions of litigants.⁵¹³

In the daybooks listed by Redford, both those with the official title and those he selects as examples without bearing the title explicitly, a wide variety of content is listed. For instance, the Kahun Daybook is said by Redford to begin with "apparently the transcript of a letter," before continuing to totals and other notations of the movement of ships and goods.⁵¹⁴ Further, one text refers to the deposit of a letter into "the daybook of the temple," and another so-called 'daybook' consists exclusively, from the extant material, of transcribed letters.⁵¹⁵ Economic content the name lists we have mentioned above are often incorporated into daybooks.⁵¹⁶

⁵¹² Measurement in *šqls* is only mentioned in one letter (No. 16) and possibly referenced in another fragment from the western sherd dump (No. 29), which retains vestiges of the hieratic numeral 10 followed by the word "silver." (AI: 30-31, 55).

⁵¹³ Redford 1986: 102.

⁵¹⁴ Redford 1986: 103-104.

⁵¹⁵ Redford 1986: 97-98 and 105-107.

⁵¹⁶ Redford 1986: 103-120; Haring 2003: 87.

The Hebrew Bible provides evidence that daybooks were part of the writing culture of the southern Levant. For example, scholars have pointed out the frequent source citation in the Deuteronomistic history (DtrH), referencing סֵפֶר דְּבָרֵי הַיָּמִים לְמַלְכֵי יִשְׂרָאֵל (1 Kgs 11:41; 15:31; 16:14, 20, 27; 22:39; 2 Kgs 1:18, 10:34; 13:8, 12; 14:15, 28; 15:11, 15, 21, 26, 31) and סֵפֶר דְּבָרֵי יְהוֹנָדָה (1 Kgs. 14:29; 15:7, 23; 22:45; 2 Kgs 8:23; 12:19; 14:18; 15:6, 36; 16:19; 20:20; 21:17, 25; 23:28; 24:5), as an example of record keeping in the ancient southern Levant. That these documents were likely daybooks is indicated both by the apparent content and, I would argue, even by the literal translation of the name. The name for the document referenced in the DtrH translates literally to “the book (or papyrus scroll; see below) of the daily deeds of the kings of Israel/Judah.”⁵¹⁷ The Egyptian terms, *hrwy.t* and the more elaborate term used in the Tale of Wenamun, *ʿr.(t) hrw*, both incorporate the Egyptian word for “day,” *hrw*.⁵¹⁸ In the first case by way of a *nisba*-formation and in the second adjectivally, *ʿr.(t) hrw* meaning literally “the papyrus scroll of the day.”⁵¹⁹ These daybooks probably played a central role in the administration of the southern Levant just as they did in Egypt. In fact, the writer of Psalm 139 poetically reflects on the administration of God stating, “On your *scroll* (סֵפֶר) were written, every one of them, the *days* (יָמִים) that were formed for me.” The passage plays on the daily journals or

⁵¹⁷ The apparent content differs from king to king and likely reflects the realia of the textual source(s). In discussing textual “notebooks,” van Heel refers to *P. Greg* which consists of a “day-to-day record of what the administration [...] considered worthy of being reported” (2003: 3). Similarly, Redford reflects on the “widely-spaced dates throughout the year” in Louvre Papyrus E 3226, stating, “The reason [for the dated events] obviously is because only on those days did the activity of interest to the scribe take place[.]” in this case the dates of deliveries (1986: 110). Furthermore, the regnal formulae contained in the books of the kings has been understood to reflect record-keeping such that the shifts in these formulae have been tied to distinct redactions of the Deuteronomistic History (Bin-Nun 1968; Halpern and Lemaire 2010). These documents, which I style as daybooks here, have sometimes been understood to be “annals” (Schniedewind 2019: 71) or “king-lists” (Bin-Nun 1968).

⁵¹⁸ See note 467 above for a discussion of the peculiar spelling in this text.

⁵¹⁹ See Redford 1986: 97 (“rolls of days”); cf. Eyre 2013: 36 (“day(book)”). See also discussion of the Egyptian term *ʿr.t* in Haring (2003: 90-92).

accounts of scribes, imagining the administration of the heavenly realm operating in the same capacity as the earthly.⁵²⁰

As a final note on inferring papyrus use from ostraca and material remains, we can make one last appeal, this time to the site of Mešad Ḥashavyahu. The fascinating and unique ostrakon from Mešad Ḥashavyahu records the plea of a harvester who has had his garment taken away for apparently not fulfilling his quota of grain.⁵²¹ He pleads with the commander of the fortress at Mešad Ḥashavyahu to instruct a certain Hoša‘yahu ben Šobay to return his garment, appealing twice to his having “measured” (MH line 5 [wykl], 6 [kl] and 8 [klt]) the harvest “as always” (*kymm*). The appeal of a harvester to the commander of what was in all likelihood an Egyptian controlled fortress designated to oversee the port of nearby Yavneh is intriguing.⁵²² In a forthcoming article, Quinn Daniels argues persuasively that the location of *ḥsr ‘sm* was somewhere in the Judean hill country.⁵²³ If this is the case, then it begs the question as to why this letter is sent to Mešad Ḥashavyahu. And further still, what can the commander of this far away fortress do about an inland dispute?

I would present that the answer may lie in the literate activity and duties of the ‘commander of the fortress, who much like we have argued for Eliashib, would have been responsible for record keeping. Alongside the longer, better known inscription recording the harvester’s plea, a

⁵²⁰ The concept of a heavenly ledger is of course common. (See Paul 1973). A further example comes from Ps. 56:8 wherein the Psalmist states, “You have recorded my flight, put my tears in your bottle, is it not in your record (book)?” The term ספרה is a hapax legomenon, perhaps a poetic form, a dialectal feminine (cf. פשתה vs. פשת), or a specific genre of text (record book [for accounting]?).

⁵²¹ *editio princeps* in Naveh 1960; see also *HAE* 1: 315-329 and Ahituv 2008: 156-163.

⁵²² Fantalkin 2001; Na’aman 1991; 2005; Daniels *forthcoming*.

⁵²³ Daniels *forthcoming*.

few other finds at the site illuminate the activity of the commander of the fortress at Meṣad Ḥashavyahu.⁵²⁴ Among the epigraph finds were six other, short and fragmentary inscriptions with apparent economic content, in addition to an inscribed four-*šql* weight.⁵²⁵ If this commander served a similar role as Eliashib, then we should assume he was responsible for recording the receipt of taxation and distribution of rations at the site. Further, he was likely responsible for recording the movement of people and ships in and out of the port of Yavneh.

In Egyptian daybooks as collected by Redford there is a particular interest in the movement of people and ships in several texts associated with ports.⁵²⁶ If we can reason out of the, albeit scant, remains of ostraca in connection to the wealth of data around Eliashib at Arad, then we might suggest that there were papyrus ledgers being drawn up at Meṣad Ḥashavyahu. This is made more probable by the Egyptian nature of the site, and the consistent and continued Egyptian concern for record keeping. This then adds another layer to the appeal of the reaper. The grain he harvested and assiduously measured was destined in all probability for the port of Yavneh. His appeal to the commander of the fortress then is an implicit appeal to someone who would know whether the proper amount was delivered, someone who could potentially check the record and thus justify his complaint and rectify the wrong. As we have mentioned above, daybooks (Eg. *hrwy.t*) were a written record that could be consulted in the future to settle disputes. Haring concludes of the evidence for daybooks in Egypt that, “*hry.t* or ‘*r.t hry.t*’ was the name of a dated record that could be filed for future reference. [...] The information retrieved from such documents (daybooks) helped in settling disputes, as the Turin ostrakon and the story

⁵²⁴ Naveh 1962a; cf. Naveh 1962b; Fantalkin 2001.

⁵²⁵ Naveh 1962a: 28-30 [inscriptions], 31-32[weight]; *HAE* 1: 330-334.

⁵²⁶ Redford 1986: 103-120.

of Wenamun seem to indicate.”⁵²⁷ This provides, to my mind, background for the reaper’s plea from Mešad Ḥashavyahu and, perhaps, another indirect evidence for the regular use of papyrus in the southern Levant.

3.2.2.2.3. Material Evidence: Summary

The evidence for papyrus use in the southern Levant during the Iron Age is relatively strong, in spite of the lack of data. The indirect material is strongest in the late Iron II but indirect material and epigraphic markers do exist in earlier periods. Among the additional evidence not considered here is most especially the writing of the Deir Alla plaster texts, which reflect practices associated with writing on papyrus in Egypt and may have been composed considerably earlier.⁵²⁸ Further, additional sites are worthy of close investigation in a fuller publication—most especially Samaria. Consider the comments of Crowfoot concerning the seals and bullae at Samaria, “the concentration of these in the area where most of the ivories were found suggests, as already stated, that a room was nearby in which the archives of the northern kingdom had been kept, a sort of chancellery.”⁵²⁹ What is more, the Samaria ostraca discussed in the last chapter constitute a sort of ostraca dump outside of the walls of the supposed “Ostraca House.”⁵³⁰ Given what we have argued about Arad, we might be tempted to interpret this collection (representative of only three years of administration at Samaria) as temporary notes from different years of administration, disposed of after collection into a ‘year-end’ report.

⁵²⁷ Haring 2003: 104.

⁵²⁸ See chapter eight below; cf. Millard 1989, 2008; Lemaire 1991, 2015.

⁵²⁹ Crowfoot 1957: 85.

⁵³⁰ See Tappy 2016.

As we conclude this section, it is important to note that much more data needs to be evaluated in regard to the indirect evidence for papyrus in the ancient southern Levant. Further, many more investigations are needed to investigate a wide variety of avenues of inquiry, the relationship of seals, to bullae, to ostraca, and their consequence for understanding the amount of (potential) papyrus. That the sites with the largest hoards of bullae are Jerusalem, Samaria, and Lachish is no accident and probably reflects the sending and receipt of official documents written on papyrus within higher echelons of administration. In contrast, fortresses like Arad and Meşad Hashavyahu yield weights, ostraca, and sometimes seals but not, to my knowledge, bullae. A further investigation of the relationship between these objects and their geographic location with considerations of the network of administrative order that undoubtedly obtained in the Iron Age is worthwhile. All of this points to the use of papyrus, reasoning out the type of papyrus that might have been drawn up, their potential use, and, even further, how we might see remnants of them in the Hebrew Bible. But some of these tantalizing questions will have to wait for fuller discussions in future works.

For now, we should return to the question of the meaning of the material in writing culture; what do both the indirect and direct evidence for papyrus in the southern Levant signal to us about the role and use of papyrus in the Iron Age southern Levant? This is difficult to answer. The direct evidence evinces practices that we know from Egypt, folding and reuse, in addition to surprising writing practices such as writing upside-down when re-inscribing a papyrus. Indirect evidence from bullae and ostraca may attest to the use of papyrus in high echelons of administration, for record keeping and sending diplomatic letters. Not discussed here, but important to note, is the practice of sealing deeds and contracts to which bullae may also attest.

The Hebrew Bible uses the word ספר to denote deeds (Jer 32:10-12, 14, 16) and there is good reason to believe that, in at least these contexts, the deed is written on papyrus.

If the linguistic and archaeological connection between Egyptian daybooks and the ספר היהודי/ישראל/מלכי ישראל/יהודה is correct, then it tells us that papyrus was important for regular administrative recording. Thus, in many ways the material influences the craft. Writing in ink with a reed pen on papyrus comes with a particular set of administrative assumptions and perhaps even understandings of how documents and materials work together, from ostraca drafts to papyrus accounts. But here we must allow for some agency in ancient practice. For our part, ostraca make poor writing material and therefore must have been temporary (at least in large part). But the temporality of documents, being temporary or long-term, and their function lies very much in the hands, and minds, of ancient writers.

Consider the difference implied when the writer of Lachish Letter No. 4 refers to his writing on a wax-tablet. The writer states, “I have written on a wax-tablet according to everything that you sent to me.”⁵³¹ While ostraca are already considered rather *ad hoc*, used as needed for convenience, the association with a wax-tablet here highlights the especially immediate nature of the notes that the writer must communicate back to the writer’s superior. Wax-tablets were important for small, short notes that had to be easily updated as needed.⁵³² The historical context for this letter, the Babylonian conquest, contributes to our understanding of the need for this wax-tablet. In war, situations change rather rapidly, ostraca were necessary for letters, but the continual updating of status via small notes required a more malleable medium,

⁵³¹ Aḥituv 2008: 69-76; cf. *editio princeps* in Torczyner 1938 and epigraphic commentary in *HAE* 1:419-422.

⁵³² Cammarosano et al. 2019: 130-134.

one more easily changed at a moments notice.⁵³³ The materiality of both the ostrakon, on which the letter was written, and the wax-tablet mentioned in the letter, then, are indicative of choices on the part of writers, in this case motivated part by necessity and part by availability. But these are not always the drivers of writing practice. Writers often choose materials for inscription based on what they have learned and their experience with those materials.⁵³⁴ The variety of writing surfaces available means that writers undoubtedly held both conscious and unconscious ideas about how, when, and where to use certain materials. Thus, ostraca and papyrus, which have perceived spheres to temporality and permanence respectively, could both transform into temporary mediums, into palimpsests, as we have already seen. Thus, the meaning of the material is located somewhere in the extremes, ostraca do not preserve literature and papyrus do not preserve practice, but everywhere in-between, the meaning of the medium lies in the hands of the writer.

3.2.2.3. Textual Evidence: Allusions to Papyrus in the Hebrew Bible

Textual evidence for the use of papyrus as regular writing material in the southern Levant comes to us primarily from the descriptions of writing in the Hebrew Bible. Fortunately, textual evidence for papyrus as the regular writing material of scribes is relatively strong, and much of the evidence has been collected and discussed in previous studies by Menaḥem Haran.⁵³⁵ As such, we will review Haran's evidence adding to it comparative details and expanding with

⁵³³ Cammarosano et al. 2019: 130-134.

⁵³⁴ An interesting contrast with Egypt and connection to Mesopotamia is the use of wax tablets known from at least the Late Bronze Age in the southern Levant (Loud 1939: 20, pl. 57; Cammarosano et al. 2019: 147; for the dating of Stratum VIIA see Finkelstein 2013: 1334-1336). The degree to which these wax tablets are used is unknown as no additional material evidence has been identified from the southern Levant. The reference in Lachish Letter No. 4 is the only other indication that wax tablets were used or available in the southern Levant.

⁵³⁵ Haran 1981, 1982, and 1983.

additional texts when necessary. Haran's argument in favor of papyrus relies on two sets of data (1) depictions of writing in the Hebrew Bible (Jer. 36:23, and Ezekiel 2:9-10) and (2) the lexical semantics of Hebrew מחה "to erase, blot out."⁵³⁶ Let us examine these two sets of arguments in hopes of expanding where available.

3.2.2.3.1. Descriptions of Writing in the Hebrew Bible

The writers of the Hebrew Bible infrequently reflect on their own task, and as such we are left with few passages that describe the action or activity of writers. While the biblical text is quite interested in documents, the description of these documents and material details are conspicuously missing. As such, arguments about the nature of the material with which ancient writers in the Iron Age southern Levant plied their craft must rely on the occasional notation of actions or activities related to writing. Of these a few texts imply writing on papyrus.

The most famous of these passages details the destruction of a scroll of Jeremiah written by Baruch the scribe (Jer. 36:4). The relevant portion of the text reads, "when Jehudi had read three or four columns, he cut it with a scribal knife and cast it into the fire of the brazier until the entire scroll was consumed in the fire of the brazier" (Jer. 26: 23). Two relevant facts about the materiality of the scroll in question can be drawn from this text: (1) the scroll burns easily and (2) was cut with a scribal knife (תער ספר). In Haran's conception, both of these facts accord well with papyrus.⁵³⁷ However, some scholars have questioned the second fact, arguing that the description of cutting is more well suited to skins than papyrus. Consider the argument of Avi-Yonah who states, "If the writing had been on a papyrus scroll, the king could have easily have

⁵³⁶ Haran 1982.

⁵³⁷ Haran 1982: 163.

torn it up [...] There would have been no need to “cut it with a penknife.” It must therefore have been a roll of more durable material.”⁵³⁸ Avi-Yonah’s argument is, however, confusing in light of the archaeological use of scribal knives in Egypt, and the well-documented fact that Egyptian scribes wrote exclusively on papyrus.⁵³⁹ The use of the scribal knife in ancient Egypt was explained long ago by Černý.⁵⁴⁰ Further Koller’s exploration of the semantics of cutting tools in biblical Hebrew has brought additional evidence to bear, particularly as it pertains to the Egyptian examples of scribal knives.⁵⁴¹ Thus, the contention that the depiction of cutting here is somehow determinative of parchment or skins as opposed to papyrus cannot be maintained. At the same time, Haran’s contention is the more likely of the two but not absolutely confirmed by the description in the passage.⁵⁴²

The other passage drawn into the discussion of the possibility of papyrus use constitutes much stronger evidence. Ezek. 2:9-10 provides a description of written products that accords well with what we know of writing practice using papyrus. The evidence of Ezek. 2:9-10 corresponds to evidence of papyrus writing from Egypt, in both Egyptian and Aramaic. Ezekiel 2:9-10 describes a vision in which the prophet receives a scroll which he is supposed to eat. The relevant passage states, “And I looked, and behold, a hand was stretched forth to me, and behold, in it, was a book scroll. And he spread it out before me and it was written on the inside and the outside, and written therein were lamentations, moaning, and woe” (Ezek. 2:9-10). As we have

⁵³⁸ Avi-Yonah 1994: 18-19.

⁵³⁹ See Koller 2012: 223-236; as well as Parkinson and Quirke 1995 and Eyre 2013.

⁵⁴⁰ Černý 1952.

⁵⁴¹ Koller 2012: 223-236.

⁵⁴² Later scribes working in leather likewise used knives (Tov 2004: 33-36).

already discussed, writing on the interior and exterior, or front and back, was common of papyrus letters, both from Egyptian corpora and Aramaic letters discovered in Egypt.

In contrast, writing on both sides of skins is not well attested until later periods. So-called *opisthographs* do exist among the corpus of Qumran material but none of these predate the 2nd century.⁵⁴³ Among the corpus of Aramaic material, there is a noticeable division between the materials and common writing practices. Porten observes, “unlike the papyrus letters, the parchments were never written on the verso (except for the external address).”⁵⁴⁴ Whereas the common Egyptian practice of writing on both sides of papyri is attested, skins, it would seem, are only adopted at a later point. The reason for this is not clear, as Tov states, “from a technical point of view, there were no major impediments to writing on both sides of the material from the Judean Desert. Yet, the flesh side of the leather probably had to be prepared in a special way for this purpose—most leather documents were inscribed only on the hairy side of the leather.”⁵⁴⁵ Thus, the arguments of Haran in this regard remain relatively secure. Scribes down to the 4th and 5th centuries maintained different inscriptional practices with different materials. Writing practice then follows material, but what of writing ‘words’?

3.2.2.3.2. Wipe, Wash, or Erase? The Lexical Semantics of מָחָה in Comparative Perspective

In addition to the textual descriptions of written documents, Haran makes a lexical semantic argument on the basis of the word, מָחָה “to erase, blot out.”⁵⁴⁶ In doing so, he appeals

⁵⁴³ Tov 2004: 73-94; Tov 2002: 369-464.

⁵⁴⁴ Porten 1979: 92.

⁵⁴⁵ Tov 2004: 69.

⁵⁴⁶ Haran 1982.

several texts throughout the Hebrew Bible. The example of Num. 5:23 contributes evidence that acts as a sort of bridge between his two main arguments, that of the biblical descriptions and the lexical semantics of מַחָה. This text describes a ritual wherein a priest writes curses on a scroll to be washed off (מַחָה) into the “waters of bitterness.” The woman accused of adultery is then supposed to drink this water as a way to either indict or exculpate her. The association between מַחָה and water in this passage is one point of interest for Haran. He points to the common association between water and מַחָה in the Hebrew Bible (Gen. 6:7; 7:4, 23; 2 Kings 21:13; Isa. 21:13, and 44:22), ultimately tying this to passages such as Exod. 32:32-33 wherein YHWH states, “He who has sinned against me, him will I wash out, *’emḥennû*, from my book.”⁵⁴⁷ The language, invoking water with erasure, is presented as evidence that the normative scribal practice was undertaken on papyrus.

In Egyptian writing practice, washing and rubbing, either with a wet cloth or fingers, or even licking, was the normative practice of expunging ink from papyrus documents in Egypt.⁵⁴⁸ In contrast, errors in skins were cut or scraped out, as pointed out by Haran.⁵⁴⁹ Cutting and patching, of course, was also possible with papyrus, but the operative, and efficient, method of erasure was washing.⁵⁵⁰ As such, the common word for erasing in Egyptian was *ftt* (𓆎𓆏𓆑). In writing, the word is accompanied by F20 “tongue” determinative and also sometimes the A2 “man with hand to mouth” sign, suggesting that licking or spitting were somehow original to the

⁵⁴⁷ Following Haran 1982: 169. Modern translations generally render ‘blot out’ to the same effect.

⁵⁴⁸ See Parkinson and Quirke 1995: 47

⁵⁴⁹ Haran notes that מַחָה “to wash” is used generally to mean “erase” in Biblical Hebrew whereas גָּרַג “to scrape” is used in Mishnaic Hebrew (1982: 170; cf. Koller 2012: 228-229).

⁵⁵⁰ Parkinson and Quirke 1995: 47.

meaning. The application of this biological, liquid to the surface of the papyrus to wash or wipe it away. Generally, the word *ftt* like מחה is associated with water and erasure. In one Late Ramesside Letter Djhutymose writes, “Now as for the documents upon which the rain had poured in the house of the scribe, Horsheri my (grandfather), you brought them out, and we discovered that they had not become erased (*ftt*).”⁵⁵¹ Consider the similarity to Isa. 44:22, which states, “I have washed away (מחית) your sins like a cloud, your transgressions like mists.”⁵⁵² The association in both texts, one a literal report of meteorological realities, the other a poetic allusion to it, is between being washed away or erased by water.

In spite of the strength of the argument on biblical bases, some have questioned the reasoning, drawing on epigraphic evidence for the root מחה to argue against the association between erasure by water and the common use of the verb. In a brief article, Robert Duke points out that the root מחה appears in a few inscriptions, a graffito from En-Gedi, Kh. Beit Lei, and Nimrud, which should inform the general semantics of the term in the Hebrew Bible.⁵⁵³ The various contexts contain curses on ‘anyone who erases,’ the inscription. Being in each case incised or otherwise etched into hard material, Duke concludes, “Menahem Haran argued that the root מ.ח.מ makes a clear reference to papyrus. However, the use of this word, on materials as diverse as ivory and limestone, shows that there was no clear connection between the use of this word and the materials that were used for writing.”⁵⁵⁴ These examples of the verbal root from

⁵⁵¹ Wente 1990: 191; cf. Černý 1939: 17.

⁵⁵² Following Haran 1982: 169. *pace* Lam 2016.

⁵⁵³ Duke 2007: 147-148; For *editio princeps* Bar-Adon 1975 (En Gedi), Naveh 1963 (Kh. Beit Lei), and Millard 1962 (Nimrud); see also Aḥituv 2008: 235-239 ; Dobbs-Allsopp et al. 2005: 126 (Kh. Beit Lei) and 150-151 (En Gedi); *HAE* I : 173-175 (En Gedi) and 249 (Kh. Beit Lei).

⁵⁵⁴ Duke 2007: 149.

inscriptions and graffiti on ivory and limestone add additional evidence to determine the semantics of the verb, but does the materiality conclusively disprove Haran’s basic argument?

While Duke raises an important lexicographic point, that a “narrow appeal to the biblical text” is insufficient to determine the semantics of a root when it is also attested in epigraphic material, his disassociation of מחה from “water removal” overreads the situation.⁵⁵⁵ Consider the parallel to monumental erasure as represented by the Akhenaten Boundary Stele. These texts provide a guarantee of the permanence of the monument, declaring “It (i.e., *the inscription*) shall not be obliterated (*ftt*); it shall not be washed (away) (*i’y*); it shall not be hacked out (*krr*); it shall not be (white)washed with plaster; it shall not go missing.”⁵⁵⁶ This guarantee employs three verbs that we should consider. The first, *ftt*, we have already discussed as the common word for erasing ink from papyrus, yet here used on an monumental relief inscribed in stone. We will return to this point later. The second verb, *i’y* (לַיַּשׁ) bears an obvious association with water or removal by water, washing or wiping. While used in several idioms, the verb’s literal meaning, “to wash,” is attested from several contexts where no other meaning is possible.⁵⁵⁷ Only the third verb, *krr*, seems moves away from connotations of erasure by water, though this is not entirely clear.

This word, *krr* (כַּרַּר) is identified by Hoch as a Semitic loanword.⁵⁵⁸ He offers a potential derivation from a proposed Semitic \sqrt{grp} (**garapa*), or another reasonable etymology

⁵⁵⁵ Duke 2007: 149.

⁵⁵⁶ After Murnane and van Siclen 1993: 103.

⁵⁵⁷ *Wb* 1: 39.2-17

⁵⁵⁸ Hoch 1994: 188

on the basis of Semitic \sqrt{qlp} .⁵⁵⁹ The first proposed etymology, from \sqrt{grp} , has a clear and obvious association with water, and thus might fit the tenor of the preceding verbs. Hebrew גרף occurs once in the Hebrew Bible in the archaic song of Deborah (Judg. 5:21) where it is used to describe the Kishon “sweeping away” the enemies.⁵⁶⁰ Attestations of the root in Aramaic, Arabic, and Syriac provide similar evidence, where sometimes washing and water are in play but with general semantics also related to removal, but often in later periods.⁵⁶¹ While this is a possible etymology for the word, the second offering by Hoch is much more compelling.

The second proposed etymology is from Semitic \sqrt{qlp} .⁵⁶² The oldest attestations of the root, Akkadian *qalāpu*, display the verb in contexts describing the skinning of animals, the peeling of skins, and even the stripping of metal.⁵⁶³ Other attestations of the root in Aramaic and Syriac likewise describe scraping and peeling of various materials.⁵⁶⁴ One passage from Lamentations Rabbah, though admittedly quite late, is relevant to our discussion as it deals with the erasing of an engraved inscription. The text discusses a tradition that the Israelites were some sort of weapon at Mt. Sinai, upon which the name of God was engraved (חֲקוּק). The interpretation is that by their sins (quoting Exod. 33:6) the name was lost. The explanation for how such an engraving was removed states, “the rabbis say an angel descended and stripped it

⁵⁵⁹ Hoch 1994: 188.

⁵⁶⁰ *HALOT*: 204.

⁵⁶¹ For Arabic (Lane 1968: 2:411); Aramaic (Jastrow 1903: 272); for Syriac (Payne-Smith 1998: 79).

⁵⁶² Hoch 1994: 188; he adds what he believes to be a bi-form \sqrt{glp} , but for our concerns, we will limit the discussion to \sqrt{qlp} .

⁵⁶³ *CAD Q*: 58-59.

⁵⁶⁴ For Aramaic (Jastrow 1903: 1381); for Syriac (Payne-Smith 1998: 507).

(the name) off (רַבֵּן אֲמַרֵי מֵלֶאֶךְ הִיָּה יוֹרֵד וּמִקְלָפֹר).⁵⁶⁵ The semantic domain of stripping and peeling, while not explicitly tied to effacing or erasing inscriptions outside of one late context, makes \sqrt{qlp} a more probable candidate. Further evidence for this etymology comes from the Hieroglyphic writing of *kṛp* with the D40 “Arm Holding Stick” determinative that can be associated with tools and weaponry.⁵⁶⁶ Thus, Murnane and van Siclen’s translation of *kṛp* as “to hack out” in the context of the stelae.⁵⁶⁷

Despite the third verb having, in all probability, no association with erasure by water, the first two verbs, both with clear water connotations, speaks to a larger point of lexical semantics, the generalization meanings.⁵⁶⁸ In the Egyptian examples, it is clear that the meaning intended by all of the verbs is “to erase” or otherwise efface in any fashion. Hence the text continues to describe the covering over or losing of the stela.⁵⁶⁹ And yet, the first two verbs employed as general methods of erasure are, in their basic meaning, associated with washing or erasing by water. This is reflective of the normative experience of scribes working with papyrus, where the operative means of erasing a word or whole composition is done by washing. In this way, rather than proving Haran’s argument to be “faulty and needing to be discarded,” Duke’s appeal to the inscriptional data might be seen as further evidence of Haran’s basic thesis. Just as the operative words for erasure by washing were generalized in Egypt, מַחָה in the southern Levant, with the

⁵⁶⁵ Cited in Jastrow 1903: 1881; text available on Sefaria
(https://www.sefaria.org/Eikhah_Rabbah%2C_Petichta.24?vhe=Midrash_Rabbah_--_TE&lang=he)

⁵⁶⁶ See spellings of another Semitic loanword in Egyptian, *bš(ʿ)* “axe,” often with D40 (Hoch 1994: 110-111; *Wb I*: 478. 12-13). Hoch notes that this term, “usually designates a tool for stone working[.]” and “designates a weapon in P. Leiden I 343: (1, 12)” (1994: 111).

⁵⁶⁷ Murnane and van Siclen 1993: 103.

⁵⁶⁸ Campbell 2013: 223.

⁵⁶⁹ Murnane and van Siclen 1993: 103.

apparent meaning of erasure by washing, has been generalized to mean “erasing (of any writing).”⁵⁷⁰ This might then be taken as an indirect indication that, much like in Egypt, regular writing practice in the southern Levant took place on papyrus.

3.2.2.3.3. Textual Evidence: Summary

While the evidence for papyrus as regular material is limited, it is compelling. Descriptions like those in Jeremiah may not be an absolute indicator of papyrus but should be taken in concert with the other, more robust evidence. The textual descriptions in the Hebrew Bible as well as the lexical semantics of מִחָה connect to material practice in important ways and signal the understanding of textualization in the Iron Age revolved around the regular use of papyrus. Even titles for texts in the Hebrew Bible (see סֵפֶר דְּבָרַי יָמִים above) like סֵפֶר חֲזוֹן נְחֻם (Nah. 1:1) connects in an interesting way with the title of the Deir Alla text, which exhibits signs of a papyrus origin and connects linguistically to the document title known from Egypt (Eg. *md̪.t*; see further discussion in chapter 8 below). Certainly, more intriguing connections could be found that would signal an assumption of papyrus on the part of the writers of the Iron Age portions of the biblical text. Unfortunately, however, in this short chapter other depictions or writing and terms for writing cannot be evaluated fully and must be left for another time. For now, we should evaluate one last proposed piece of evidence for the use of papyrus in the Levant, taking after Egyptian practice—words for papyrus with Egyptian origins.

3.2.3. Terminology for Papyrus in the Southern Levant

It has also been offered that the evidence of Egyptian loanwords for papyrus and reeds in the Hebrew lexicon can be meaningfully applied to writing culture and practice. To this effect,

⁵⁷⁰ In Campbell’s discussion, he lists the example of Finnish *raha*, “money” which derives for a term for “pelts” or “skins.” The regular trade in skins expanded the meaning, ultimately shifting it to the general “money.” (2013: 223).

several words for papyrus and reeds in the Hebrew lexicon have been identified as borrowings from Egyptian. Words such as אהו “sedge reeds” from Egyptian *ḥ(y)* (𓆎𓆏𓆐𓆑), גמא “wild papyrus, papyrus stalk” from Egyptian *qmʿ* (𓆎𓆏𓆐𓆑), ערות “reeds (of the Nile)” from Egyptian *r.t* (𓆎𓆏) and סוף “wild reed, reed marsh” from Egyptian *twfy* (𓆎𓆏𓆐𓆑).⁵⁷¹ The Egyptian origin of these words is well established by previous studies, and therefore I will not rehearse the linguistic or phonological details here.⁵⁷² Instead, I will discuss the uses in context to determine of what worth they are for describing the Egyptian origin of alphabetic writing culture in the southern Levant and what indication they might give us of the nature of writing practice, if any.

3.2.3.1. Loanwords and Foreignisms: Evaluating the Egyptian Linguistic Connection

The use of the terms mentioned above in the Hebrew Bible is quite restricted. None of the four widely recognized Egyptian loans for reeds and papyrus are used in contexts in the Hebrew Bible that would suggest usable writing papyrus or any association with scribal practice. Rather, the terms אהו (Gen. 41:2, 18; Job 8:11), גמא (Exod 2:3; Job 8:11; Isa 18:2, 35:7), ערות (Isa 19:7) and סוף (Exod 2:3, 5; 10:19, 13:18, etc.) are almost always used as botanical terms, to describe some sort of wild plant, and these often in foreign narrative contexts.⁵⁷³ Case and point, of the combined thirty-seven attestations of these terms (twenty-nine of which are סוף, in every case but one in the phrase ים סוף) only three verses do not have Egypt or its surroundings directly in view. This fact requires us to consider briefly theoretical perspectives on loanwords that might inform

⁵⁷¹ Lambdin 1953; Noonan 2019; Zhakevich 2020.

⁵⁷² See discussions in both Noonan 2019 and Zhakevich 2020. For a detailed discussion of the phonology of גמא and its relationship to Eg. *qmʿ* see Wilson-Wright 2023. His dating is, I believe, too dependent on the presupposed completeness of the linguistic record (2023: 164 n. 4).

⁵⁷³ cf. Wilson-Wright 2023: 163 n. 2.

our characterization of the data, which might hopefully direct future evaluations of loanwords in the Hebrew Bible toward a more productive and nuanced discussion.

Almost all prior examinations of loanwords in the Hebrew Bible, of any kind but especially those we will discuss here, have not adequately addressed loanwords and loan formations on a theoretical level, that is, as examples of linguistic contact.⁵⁷⁴ Even some of the most advanced studies on loanwords to have come out in recent years have not considered much of the present sociolinguistic research on loanwords in anything other than a passing manner. But sociolinguistic approaches to loanwords, as individual lexical emblems of linguistic contact, have much to offer studies of loanwords in the Hebrew Bible. What concerns us here, however, are the general divisions that have been established in regard to how loanwords are used and what they mean to a speech community.

Scholarship on loanwords in recent years has established important categories for analyzing loanwords and investigating the motivations for their borrowing. The most basic category is often called ‘necessary borrowing,’ defined as such because the words which are borrowed serve some immediate practical function (i.e., designating some object or idea entirely novel to the recipient culture).⁵⁷⁵ The second category is often called ‘prestige borrowing.’ In this type of borrowing, a word is valued for its cultural significance, being borrowed into a language because of external pressures rather than internal need.⁵⁷⁶ Beyond these, however, there is another distinction, perhaps more important for our discussion, that borrows language from

⁵⁷⁴ Noonan offers some commentary on contact linguistics, but his primary concern is phonology as is evident from the majority content of the volume (2019).

⁵⁷⁵ Haspelmath 2009; Winford 2003; Carling et al 2019.

⁵⁷⁶ Carling et al 2019.

German linguistics scholarship. This is the distinction between ‘loanwords’ and ‘foreignisms’ (Ger. *Fremdwörter*).⁵⁷⁷ While words of the former sort (i.e., loanwords) are terms that have been borrowed for one reason or another, need or prestige, and subsequently integrated into the native lexicon, the latter category, foreignism, describes words that have been loaned just the same but retain their foreign character either phonetically, semantically, or in use. Foreignisms are loaned but not nativized. Something of their character retains their ‘foreignness’ of meaning. That is to say, words and phrases considered ‘foreignisms’ take on a sort of *je ne sais quoi*.⁵⁷⁸ Something about these words is recognizable as foreign. In this way, the division between loanwords and foreignisms describes the way a word is used and how it is perceived.⁵⁷⁹ Working on the Egyptian material, Marwan Kilani has attempted to sketch out some guidelines for interpreting the perception of loanwords and identifying foreignisms. Two of these guidelines are helpful for us. A non-native lexical item may be a foreignism if (1) it is attested in foreign expressions or (2) “attested only in contexts related to foreign realities.”⁵⁸⁰ In our investigation of the Egyptian loanwords, it is important to pay attention to when and how words are used in context and what the underlying semantic range of a term is.

⁵⁷⁷ Haspelmath 2009: 43.

⁵⁷⁸ The phrase as listed in Thomas Blount’s *Glossographia Anglicana Nova* probably represents a more accurate picture of how integrated the phrase is and was in English in spite of its known foreign origin. He writes, “*Ie-ne-sca-y-quoy* (four French words, contracted as it were into one)” (Blount 1656). The writing as I have it is a correction to proper French orthography common in writing practice today (for a discussion of the phrase’s history, see Scholar 2005).

⁵⁷⁹ Unfortunately, too little work has been done into cross linguistic characterizations and perceptions of language. Perceptions of language even down to individual words, however, have begun to constitute a particularly interesting field of study, folk linguistics (see Niedzielski and Preston 2000). Somewhere between a literary analysis and folk linguistics as a subdiscipline of sociolinguistics constitutes the approach here. I say this because, as noted above, the category of ‘foreignism’ has something to do with the perception of speakers (i.e., non-linguists) about a word, which is distinctly the task of folk linguistics.

⁵⁸⁰ Kilani 2019: 170.

Given the distribution of the words אָחוּ, גִּמְאָ, עֵרֶוֶת and סוּף, it seems more appropriate to characterize all of these terms as ‘foreignisms’ rather than ‘loanwords’ in terms of their use. For the large part, these words are used merely to connote Egyptian items that are, as indicated by their use, foreign by nature or that a native speaker of Hebrew would only encounter in a foreign context. Though phonetically nativized, the terms still bear a semantic affinity with a foreign, in this case Egyptian, culture and more specifically a foreign land. Consider a contemporary example, the connotations of the following words for ‘seasonal-’ or ‘dried-’ riverbed, and where a speaker might be expected to deploy or encounter them: *arroyo*, gully, or *wadi*. While all English lexical items, their nature as foreign is recognized and employed in the appropriate contexts, the American southwest, the American south, and the Middle East. Further, in English writing, we have conventions for identifying them as foreign (i.e., with *italics*).⁵⁸¹

The same sort of geographical concerns seems to govern the attestations of the proposed loanwords for papyrus and reeds. Only the last of the loanwords, סוּף, seems to have been nativized, in this case by way of a toponym. The other terms, however, clearly denote wild plants specifically associated with Egypt.⁵⁸² The deployment of these terms in the Hebrew Bible, then, suggests that the writers knew these terms as foreign words, or at least that they denoted, semantically, some association with plants that were foreign (i.e., Egyptian) in nature. This, when taken in connection with the fact that Hebrew attests to words for papyrus and reeds of

⁵⁸¹ Likewise, ancient Egyptian has an orthographic convention for indicating foreignness, by way of group writing. See analysis in Kilani 2019.

⁵⁸² The term אָחוּ has been recognized as a particularly archaic borrowing on the basis of phonology (Noonan 2019; Zhakevich 2020). A difficulty then arises in calling it a ‘foreignism’ rather than a ‘loanword.’ Thus, in my use of ‘foreignism’ I assume that words that indeterminately denote foreign things in use (i.e., where the semantics of a word cannot be divorced from its foreign connotation) constitutes a ‘foreignism,’ in that they retain something of what is recognizably foreign to the language community.

Semitic origin (אבה, בצה, גבא, הציר, קנה), makes it difficult to derive anything meaningful for a discussion of writing practice from the attestations of these Egyptian loanwords (foreignisms) in the Hebrew Bible. Thus, while words for papyrus and reed plants of Egyptian origin exist in the lexicon of Northwest Semitic, they add little to an understanding of the relationship between Egyptian and Levantine scribal practices. This is not to say that manufactured papyrus in the Levant was not an Egyptian product, but rather that the evidence of Egyptian loanwords in Hebrew contributes little to the conversation. In spite of this, some have still offered a connection between at least one of these words and manufactured papyrus for writing.

3.2.3.2. Manufacturing an Egyptian Connection: גמא from Egyptian *qmʿ*

Zhakevich, in his study of the semantics of scribal tools in ancient Hebrew, notes that the term גמא refers in two separate places to what he calls “manufacturable papyrus.”⁵⁸³ The first example comes in Exodus 2:3 and refers to the use of גמא as material for baby Moses’s basket. The second comes from Isa. 18:7 in reference to boats coming from Nubia. Zhakevich argues that these examples of ‘manufactured’ papyrus may be taken, by extension to, as evidence that גמא might also have referred to manufactured papyrus for writing. He states, “it is not difficult to imagine how this same word could also have been the ancient Hebrew term that designated manufacturable papyrus utilized to make writing material.”⁵⁸⁴ Let us briefly examine the uses of גמא in detail before discussing why Zhakevich’s suggestion, though intriguing, cannot be maintained on technological grounds.

⁵⁸³ Zhakevich 2020: 40-42; cf. Wilson-Wright 2023.

⁵⁸⁴ Zhakevich 2020: 42

The term גמא twice refers to wild reeds (Isa 35:7 and Job 8:11) and twice to materials in ‘manufactured’ products, baskets and boats (Exod. 2:3 and Isa. 18:7). When גמא is employed adjectivally it qualifies other Egyptian loanwords, both in Exod 2:3 and in Isaiah 18:7. This is a noteworthy fact. The products are ‘manufactured’ in the broadest sense of the word, to be sure, but they are of foreign manufacture, in both contexts the foreign objects are manufactured using the proper foreign material.

In the first example, Exod. 2:3, the phrase תבת גמא describes the *ad hoc* production of a basket to deliver the baby Moses safely down the river Nile. The noun here, תבה, is a long-recognized loanword from Egyptian *db.t*, “box” (𓆎𓆑𓆑).⁵⁸⁵ The term has a curious and restricted use in the Hebrew Bible found only in this passage in Exodus and in the flood narrative of Genesis 6-9 (the latter being clearly allusive). The combination of these two Egyptian terms in the Exodus text is, however, intriguing.⁵⁸⁶ Here the Egyptian evidence for the use of *qmʿ* is illuminating. One section in the educational text Papyrus Lansing (BM EA 9994), sometimes entitled “Be a Scribe,” contains a list of commodities that ends with three types of fibrous grasses, ‘*nb.w* “Alfa grass,” *qmʿ* “papyrus,” and *rdm* “Cypress grass,” all described as “produced in a fashion suitable for baskets.”⁵⁸⁷ The more general definition of *db.t* in Egyptian as “box,

⁵⁸⁵ See Noonan 2019 with bibliography.

⁵⁸⁶ The LXX simply states, ελαβεν αυτω...θιβιν. This latter word, θιβις, is known here and in three other texts, those these outside texts do not help to define the meaning much more precisely, appearing exclusively in lists (*LSJ* 801). For instance, one example, from the Zenon papyri, reads as follows: ἀπολελοίπαμεν ἃ παραδέδωκεν Χάρμος Ἀπολλοδότῳ. ἐν θίβει νάρδου μαρσίππια ἐσφρα(γισμένα) ε... “We have left behind the things that Charmos gave to Apollodotos (which include the following): In a *box*, 5 sacks of nard which have been sealed...” (P.Cair.Zen 59069.2b-5; accessed at <http://papyri.info/ddbdp/p.cair.zen;1;59069>; translation by the author).

⁵⁸⁷ Lichtheim 1976: 172-173 translates this “produced by the basketful,” (1976: 172-173) but I have followed Peter Dils’ “produziert mit der Eignung zum Korb” presented here in an explanatory English translation (*Thesaurus Linguae Aegyptiae*, pLansing = pBM EA 9994 10.10-11.7: “Ein Landsitz für den Lehrer” line 11, 6). That papyrus had to be prepared for use to make baskets is indicated by Pliny’s comment about the peeling of the rind mentioned below.

basket” explains why the Hebrew term might require qualification that it was a specific type, or material type, of basket, being prepared from גמא.

The second example, Isa 18:7, employs the phrase כלי גמא to describe vessels that come from “across the rivers of Kush” (מעבר לנהרי-כוש). Like Exod 2:3 above, again גמא is paired with an Egyptian loanword, כלי from Egyptian *q(w)r*.⁵⁸⁸ The use of גמא here is slightly different than the example in Exod. 2:3, as the object in question is undoubtedly much larger. Still, it operates in much the same fashion, qualifying a particularly Egyptian, in this case Nubian, object built with the appropriate material. The most expansive lexicon of the Egyptian language, the *Wörterbuch der Aegyptischen Sprache*, notes a special use of *qmʿ* that is particularly intriguing in light of the context of Isa 18:7. The dictionary offers the phrase “nubische Binse” (𓂏𓂛𓂏𓂛𓂏𓂛) as a unique formation.⁵⁸⁹ The vessels referred to by Isaiah might have been of a special foreign type. In context, the loanword is then perhaps only appropriate and necessary in order to communicate the precise type of vessels, attempting to evoke a particular image in the mind of the hearers (and later readers) of the certain Nubian style of the vessel.

Judging only from the uses here, Zhakevich’s contention that גמא was the word for “manufacturable papyrus” is certain; however, I find that his second contention, that this reasonably implies papyrus for writing, to be still unproven and in any case unlikely. Nothing from the context of the above verse (Exod. 2:3 or Isa. 18:7) would indicate that the term might have extended in such a way. All uses in the Hebrew Bible are consonant with the Egyptian semantic range, used in the proper context to describe items of Egyptian origin.

⁵⁸⁸ Jones 1988: 147.

⁵⁸⁹ *Wb* 5: 37

Another thing to consider in a semantic discussion of ꜥꜥ is the meaning of Egyptian $qm\dot{s}$ and the material ‘know-how’ that determined the words use and meaning. Egyptian had multiple words for differing types of papyrus and reeds, some of which accorded exclusively with the features of their manufacture and use (e.g., *itr* “papyrus for rope,” *inp* “Papyrus ship(?)”, and *db\dot{s}* “papyrus reed float [for fishermen and harpooners]”).⁵⁹⁰ As such, Egyptian words for workable writing papyrus, such as those we have mentioned above (*r.t* “scroll,” *md\dot{s}.t* “document”; *\dot{s}fd.w* “papyrus scroll,” and *\dot{s}.t* “sheet, letter”) would have been much more likely to be loaned for the exact manufactured product in question, especially if we imagine them having been resourced from particular craftspeople and workshops. To this extent, it is important for us to discuss the fact, which will become quite obvious, that the Egyptian construction of boats and mats using papyrus reeds would not have been manufactured to the appropriate specifications for writing papyrus and resourced parts of the papyrus stalk that are quite unsuitable for writing. The distinctions in words used might be sufficient to display this, but we should briefly consider the technical processes required for each product. As we have discussed the production of writing papyrus above, we will only restate aspects of the process of production as it becomes relevant.

The use of $qm\dot{s}$, and subsequently ꜥꜥ , to indicate material for the construction of boats and even baskets implies something quite different than the process for the production of the specialized papyrus product suitable for writing (see 3.1.1, above). In this way, Zhakevich’s, and subsequently Wilson-Wright’s, definition of ꜥꜥ as “manufacturable papyrus” is, in a sense, true but not remotely in the sense that is intended. Let’s consider what technical details are missed in the linguistic analysis.

⁵⁹⁰ *itr* = *Wb* 1: 147; *inp* = *Wb* 1: 96 cf. Jones 1988:130

Beginning with the Exodus passage again, baskets and mats of various sorts in ancient Egypt were known to be made from a variety of materials including the *Cyperus papyrus*.⁵⁹¹ When papyrus was used, the producers would resource either the full culm of the papyrus or simply the green outer rind.⁵⁹² Thus, Pliny the Elder notes that “[out] of the rind (of the papyrus), they make sails and mats, as well as cloths, besides coverlets and ropes.”⁵⁹³ Several techniques were employed to produce baskets and mats many of which depended on the flexibility of the material in question. Thus, what is probably to be understood from *סמל* in the context of Exod 2:3 is the use of either the complete culm of the papyrus, which seems more likely for a waterborne craft, or the peeled green rind, both common in Egyptian basketry, not the form for writing papyrus.

In the Isa. 18:7 passage, the use of *סמל* likewise cannot refer to anything understandable as writing papyrus. The passage refers to particular types of vessels made of the buoyant stalks of papyrus. These *סמל* would have to have been the harvested stalk of the papyrus reed that would have composed the hull of the ‘manufactured’ papyrus vessel.⁵⁹⁴ In this sense, *קמס* is ‘manufactured,’ but, while certainly unintentional, the use of manufactured in “manufactured papyrus,” as a gloss for *קמס* or *סמל* creates the unintentionally absurd impression that a compilation of sheets of papyrus made up the substance of the vessels described here. Rather, what is described here is a technology of ‘manufactured’ reed boats that are known from the

⁵⁹¹ Wendrich 2000: 254-255.

⁵⁹² Wendrich 2000: 255.

⁵⁹³ Plin. Nat. 13.22, 3-4.

⁵⁹⁴ Ward 2006: 119

earliest periods in Egypt as the basic vessel for fishing the Nile.⁵⁹⁵ Stalks of reed and papyrus would have been harvested, bundled together, bound and pitched (cf. the depiction of the ‘basket’ of Moses).⁵⁹⁶ In this way, the *qmb* of floating vessels could be described as ‘manufactured,’ but in a way far different from the processes used to make papyrus sheets and rolls. That there were many uses of papyrus in the construction of boats for the hull, cords, and sails is attested not only by the Egyptian lexicon, but also by classical authors. For instance, Herodotus in his description of an Egyptian ship (Gr. Βαρις from Eg. *byr*)⁵⁹⁷ refers to the various uses of reeds, grasses, and papyrus for different components of the vessel, uses that have ancient origins.⁵⁹⁸ Similarly, Pliny the Elder comments on the variety of uses for papyrus and reeds in his *Natural History*, stating at the outset that “from the papyrus (stalk) itself they construct boats.”⁵⁹⁹ What is described here fits well the uses of אגל in Hebrew but clearly does not describe papyrus manufactured to specifications for writing.

There is another material aspect worthy of consideration in discussing the semantics of אגל and Egyptian *qmb*, the color of the product. Egyptian depictions of papyrus are always white and Pliny refers to high quality papyrus according to its ‘brilliance’ or ‘whiteness’ (Latin *candor*).⁶⁰⁰ We do not need to restate the details of the manufacture of writing papyrus here but it suffices to say that the coloration difference between the two final products should also be considered. The

⁵⁹⁵ Hendricks and Vermeer 2000: 35; Ward 2006: 119; Vinson 1994; 2013: 8-9.

⁵⁹⁶ Ward 2006; Vinson 2013.

⁵⁹⁷ Vinson 1998: 252-253; with reference to Vinson 1993; cf. Jones 1988: 136

⁵⁹⁸ Herodotus Book II, 96 as quoted in Vinson 1998

⁵⁹⁹ Plin. Nat. 13.22, 3-4.

⁶⁰⁰ Cerny 1952; Bausch et al 2022: 4942-4944; Pliny *Nat. His.* 13.24

green exterior rind characterizes the identification of the papyrus as both wild entity and when prepared, “suitable for baskets.”⁶⁰¹ Likewise, the whole stalks used in the construction of boats and some baskets would likely retain the natural coloration. Words have uniquely associated meanings with the materials that they denote and their appearance. Both sheets of paper and wooden boards can be described as ‘manufactured or manufacturable wood,’ but only in a theoretical sense. No English speaker would miss the significant difference between the quality of manufacture and processes required to bring them into being. Likewise, that we describe manufactured wood products as wooden and harvested trees also as wood likely arises from the visual similarities between the two. In this regard, paper is differentiated not only by process but visual outcome, being, like ancient Papyrus, white. A similar sort of semantic association may have been at play with גמג. The papyrus reed, though manufactured in some general sense, retains qualities associated with the wild product and thus worthy of designation with the same word.

3.2.3.3. Summary of the Evidence from Egyptian Loanwords

None of the traditionally identified Egyptian loanwords for papyrus or reeds in the Hebrew Bible can be associated with writing papyrus. However, lexical borrowing occurs in different forms. While the terms most commonly used for “(writing) papyrus, book scroll” in Egyptian, *r.t* (𓂏𓂛), *šfd.w* (𓂏𓂛𓂏𓂛), and *dm* (𓂏𓂛𓂏𓂛) are not found in Hebrew, nor in any other Semitic languages, loan formations, such as calques, may be formed when necessary. Recently Elizabeth vanDyke has argued that גליון in Isaiah 8:1 is a calque of Egyptian *š.t*, whereby גליון, from the verb גלה “to cut,” means something like “that which is cut off (from a papyrus roll)” similar to

⁶⁰¹ See note 587 above.

the meaning of Egyptian $\check{s}^{\prime}.t$ from the verb \check{s}^{\prime} “to cut.”⁶⁰² This suggestion fits the context well and makes for, perhaps, the only example of an Egyptian derived word for a papyrus document.

The lack of Egyptian derived words for papyrus, outside of potentially גליון, should lead us to consider two possibilities. The first of which is the possibility that the words were loaned but unattested in available sources. This is admittedly speculative but has to be considered in light of the fact that the words for ink and scribal palette appear a total of four times in the Hebrew Bible, with ink occurring only once and scribal palette being restricted to one visionary context in Ezekiel. While it is true that lexical borrowing of the word for ink could be inferred on the basis of Aramaic and Arabic, the same is not true for scribal palette, which is unattested in other Semitic languages but nevertheless appears in Hebrew. The second, more probable, option is that a native word was used for “papyrus, book scroll.” The long-recognized association of ספר with documents of many kinds, and most especially papyrus book-scrolls, would seem to indicate that the word already filled this space at the time when words for Egyptian ‘scribal’ tools were being loaned into Hebrew.⁶⁰³

All in all, the Egyptian words for papyrus and reeds that entered the Hebrew lexicon can tell us nothing about scribal practice but do evidence substantial interaction between Egypt and the Levant was lengthy and deliberate. The Hebrew אהו from Egyptian $h(y)$ indicates a borrowing

⁶⁰² vanDyke *forthcoming*. She also points to the similarity of the Greek τόμος which is a derivation of the verb τέμνω, “to cut.” For my perspective, it seems that both the Hebrew and Greek terms are not calques per se (which implies mediation by bilingual speakers) but linguistic approximates developed due to the similarities of the physical properties of cutting papyrus rolls into sheets.

⁶⁰³ See Haran 1981, 1982, and 1983 for ספר as book-scroll; see the work of Tania Notarius on the history of Northwest Semitic *sipr*- wherein she argues for a borrowing from East Semitic (Akkadian) *špr*. (Notarius 2021; 2023; see also 2020 – though her contention concerning שבט ספר in Judg. 5: 14 cannot be maintained).

before the lenition of /w/ in Egyptian.⁶⁰⁴ In contrast, ערוֹת, if it can be reasonably assumed to be the feminine plural of a proposed ערה*, is argued by several to be evidence of a post-New Kingdom borrowing, as the feminine *-t* of *'r.t* apocopates in Egyptian post-1300 B.C.E.⁶⁰⁵ Thus, the several terms for papyrus, though they may superficially seem related to the semantic domain of scribal materials, are, for the large part, only helpful in understanding that Egypto-Levantine linguistic contact existed, and existed for centuries.

3.3. Conclusions: The Meaning of the Medium

The importance of papyrus as the medium for writing should not be overlooked. As mentioned above, materiality has an enculturating function. Traditions of writing on and with certain materials influences perceptions of writing and written documents, which in turn determines agency. In this way, I have argued that concepts of writing influence writing vocabulary in Egyptian and in the southern Levant. While we have much less evidence of papyrus writing in the Levant than in Egypt, due to the physical environment no doubt, we have strong indirect indications that papyrus was in use, influencing and shaping writers.

As we move from materials to practice, papyrus represents an important bridge. As the experience of a writer working with papyrus shapes the practice and methods of inscription even on material not specifically associated with papyrus. Further, the tools, specifically chosen and designed for papyrus, were nevertheless used on ostraca and plaster. Thus, as we move through questions of “how to write” and “what writing looks like,” we will resource our knowledge of papyrus and the conclusions offered here, that writing on ostraca and plaster is a reflection of

⁶⁰⁴ Noonan 2019; Zhakevich 2020.

⁶⁰⁵ Noonan 2019; Zhakevich 2020; cf. Allen 2020.

practices developed, even in the Levant, for regular religious, administrative, and literary writing on papyrus.

Part Two: Practice

Chapter Four How to Write (I): Ductus, the Use of the Pen, and Orthography as Handiwork

Introduction

Writing is a highly conditioned activity. We learn to write through deliberate instruction, and the degree of formality with which we write is highly dependent on the disposition of our teachers. This being the case, when we learn how to write we are inculcated by our teachers with a package of specific, almost unquestionable writing practices that circumscribe the basic assumptions about the proper appearance and form of writing. This is necessary to ensure that (1) our writing is readable by a contemporary audience and (2) it takes on an appearance that is at once pleasing and easily interpretable in its context. When we learn about writing, we learn how to produce written language at the very minute level of manual dexterity and physical action. We are so trained that we do not need to question whether our hand should rest on the writing surface or be elevated, or how to grip the pen, or even what level of pressure to apply to ensure that our writing is visible and appealing. We understand implicitly to write in such a way that certain letters have the appearance of ‘hanging’ from the lines on our paper, or that certain letters should reach up toward the previous line. We know what the letters *should* look like and engage in implicit evaluation of our own penmanship and that of others. We develop conventions of writing letters, the order of strokes, their size, length and width, and where to place them in relationship to one another. To some degree, the style and form of our penmanship is dependent upon the tools that we use and the materials upon which we write.

The same facts are true when we approach writing in the ancient Levant. Ancient writers, like their modern counterparts, were dependent on the skills and techniques they learned in

elementary education to form letters and arrange a text. Writing with certain materials assumes postures and gestures that go beyond the final product. Where to place the hand, where to begin a text, how the implement moves on the writing surface, are all crucial considerations when approaching ancient writing as practice, and as culture.

Because the minute details of orthographic practice (see technical discussion below) are so deeply entangled with visual practices of writing, the study of “how to write” is broad enough to encompass three chapters. In the present chapter, we will discuss orthographic practice, or orthography, in the epigraphs from the southern Levant, focusing on those which might closely bear resemblance to Egyptian practice of orthography, early alphabetic inscriptions. The goal will be to examine how the Egyptian origin of the tools discussed in chapter one can inform our understanding of the ductus and style of early alphabetic inscriptions. All the while, we will highlight the unique nature of alphabetic writing by means of its appearance and organization, appreciating these texts as exemplars of a new, emerging tradition of writing that in many ways breaks from the tradition of hieratic writing in ink. But before we can begin an analysis of the epigraphs, we should consider what we mean by orthography and how we can examine writing as ‘handiwork.’

4.0.1. The Examination of Writing: What is Orthography?

In order to begin an investigation of ‘how to write’ we must understand the dimensions of our task, what questions can and should be explored and what types of evidence we might look for. To begin with, we must define what an ‘orthography’ is. Orthography as has been defined by theorists of written language has two different but related definitions: (1) the phonetic representation of a language in its writing system (e.g., shallow v. deep orthography) and (2) the

modes for producing a writing system for a language.⁶⁰⁶ The first definition has often been called to mind in larger discussions of Semitics and how the growth of the alphabet reflects various traditions of phonemic representation.⁶⁰⁷ While certainly an important category for consideration, the relationship between phonemes and graphemes does not intersect with our concerns in this study. Yet, the second definition of orthography proves much more valuable for an investigation of writing on the level of basic production and learned assumption. In this definition, orthography includes studies of both chirography, that is handwriting, and spelling conventions. Both of these subcategories have implications for the study of ancient writing but for our purposes only orthography as chirography has meaningful implications.

4.0.1.1. Orthography as Chirography: Writing by Hand

The study of orthography includes the study of handwriting. Orthography in this regard is perhaps the most common form of analysis of ancient inscriptions, commonly referred to as paleography. Paleography, and epigraphy more broadly, is interested in issues of letter morphology, letter stance, and the individual characteristics of ‘scribal hands.’⁶⁰⁸ As such, whole dissertations have been written dealing with orthography as paleography (or historic handwriting analysis), but for our investigation, we want to look beyond the letter forms to the much more difficult to describe practice of drawing up a text.⁶⁰⁹ Orthography as chirography implies much

⁶⁰⁶ Sebba 2001, 2007, and 2009; see summary definition in Lillis 2015: 24. See also Coulmas 2003 and to a lesser extent Coulmas 2013.

⁶⁰⁷ For instance, it has generally been argued that the twenty-two letters of the later national scripts comes from a dialect with only twenty-two phonemes (i.e., Phoenician; for example Rollston 2010), but this assumption has been problematized on occasion (Lehmann 2012).

⁶⁰⁸ See the classic explication of this method in Cross 1982 and the follow-up by Zuckerman 2003.

⁶⁰⁹ To some degree, the concerns here are much like those addressed in Wahl 1971, van der Kooij 1976 and 1986, and more recently Lehmann 2008, 2020; though Lehmann certainly offers paleographic conclusions. Wahl characterizes it well when he offers, “I am interested not so much in the shape of the characters as in the causes behind the shapes, namely the direction and the order in which the strokes were made in writing these characters” (1971: 9). For our

more than the traditional epigraphic method usually offers. There exists a complex of specific practices and assumptions embedded in the process of learning to write by hand (chirography) that require our attention if we are to understand the impact of the tools of the writer on his work.

While appreciating and resourcing paleographic details when necessary, we will concern ourselves with practices of handiwork in connection to the tools of the writer and how they learned to put, as it were, pen to papyrus. One of these practices of writing is hand position, which refers to the positionality of the writing hand in spatial relation to both the writing implement and writing surface.⁶¹⁰ With regard to the writing implement, hand position is described as the position of the hand relative to either end of the implement, front (toward the tip) or back.⁶¹¹ With regard to the writing surface, hand position determines the writing angle, which itself is more properly defined as the angle created between writing surface and writing implement during the process of inscription. This is what van der Kooij and Lehmann refer to as the “angle of inception.”⁶¹² While sometimes difficult to reconstruct, understanding the role of

mission here, we are concerned with the shapes to some degree (as they relate to the overall appearance) but not to offering a paleographic schema of these inscriptions, as if any were possible given the small dataset.

⁶¹⁰ See van der Kooij 1986: 6, 26.

⁶¹¹ This is no small distinction. Consider that in contemporary culture in America writing hand position is learned (socialized) as a front position. That is, we are taught to hold a pen or pencil at a position toward the tip and allow our hand to rest on the writing surface. In contrast, a paint brush is held in a relative medial position and the hand is raised. For this, and other, reasons few would associate the practice of writing with the practice of painting. But even in spite of the differences, there are similarities in practice. A standard artist’s brush, while held in a medial position, is nevertheless held with a ‘pencil grip’ (hereafter pencil grasp). The pencil grasp is contrasted with various stages of grip in children ‘gross’ or ‘palmer’ grasp which involves grasping the implement by the whole hand. Even among pencil grasp there are multiple practices: dynamic tripod, dynamic quadrupod, lateral tripod, and lateral quadrupod (Schwellnus et al. 2012). While these matters of ephemera are certainly beyond the evidence available for investigations of ancient writing practice, recognizing the variability in ‘handiwork’ with modern writing systems enables us to better understand how complex embedded, learned practices for ancient writing might have been. In this regard, though certainly not a perfect evidence base, iconographic evidence from the Near East could serve to provide additional context for historic writing practices (van der Kooij 1986; Sirat 2006).

⁶¹² van der Kooij 1976: 6, 26; as well as Lehmann 2020: 84-85.

the hand behind the pen informs our understanding of the postures and gestures of writers as they produce an inscription.

Another embedded practice in writing is the movement of the pen, order and organization of strokes, commonly referred to as ductus. Van der Kooij provides a definition of ductus in inscriptions as, “the linear nib-tip movements and other movements made by the implement on the writing surface in order to form characters [and] the movement of the nib-tip from one stroke to another, without leaving a trace on the surface[.]”⁶¹³ To further elaborate, ductus refers holistically to the movements of the pen on the writing surface, including the sequence of strokes, their direction, and the relationship between each stroke. This last category refers to the process of inscription, whether the scribe leaves the implement on the writing surface between strokes or lifts it. Van der Kooij calls the former kind of ductus, cursive writing, which will be familiar to the reader, and the latter, interrupted movements, which involves letter composition by separate lines created by the regular lifting of the writing implement.⁶¹⁴ We, however, will adopt the opposition of cursive and intermissive writing (ductus), as this provides a better framework for the chirographic practices of alphabetic writing in all its script forms (e.g., alphabetic cuneiform).⁶¹⁵

⁶¹³ van der Kooij 1976: 4. While van der Kooij helpfully defines five components (material, implement, technique, ductus, and typology) of what he calls a ‘writing pattern,’ in keeping with modern theoretical perspectives on writing we will refer to his ‘writing pattern’ as orthography. I separate out issues of materiality (van der Kooij’s first two components) from issues of orthography, insofar as orthography means chirography. While materiality impacts, and we might say determines, orthographic practice, orthography covers an overlapping but broader set of activities in writing as social practice (see Sebba 2007 and Lillis 2017).

⁶¹⁴ van der Kooij 1986: 6.

⁶¹⁵ Cursive has no historically established antonym in the English language. Non-cursive is sometimes employed as the antonym for cursive but fails to sufficiently capture the unique features of what we are calling, intermissive writing. Further, in the near east, and ancient world in general, there are unique issues related to scripts for writing systems which are unable to be written cursorily without fundamentally transforming the script (e.g., cuneiform). Therefore, it seems inappropriate to take ‘cursive’ as the etymological baseline for its own antonym. For this reason, I suggest the opposition of cursive and intermissive. When describing cursive and intermissive writing, we must

Practices of hand position, writing angle (such as it can be discerned), and ductus are instrumental to understanding ancient orthography on the level of text production. Such practice, as we have stated time and time before, are not intuitive and to some degree predicated on the nature of the tools of the writer and how the writer has been taught. As such, we can attempt to describe writing handiwork as a part of the ancient writing culture.⁶¹⁶ Analyzing orthography as chirography is then focused on the individual technical practices of writers in performing the task of writing. As such, we might extend handiwork to include the postures and positions of writers when they set to the task of writing. The hand is motivated or impeded by sitting, kneeling, or standing, how the writing surface is held in one's hand or where it is laid, all of these are considerations that these three chapters will touch upon, though undoubtedly only scratching the surface.

4.0.1.2. Orthography as Spelling: Orthographic Regimes

As we described above, orthography in the definition often employed in the modern context, that of orthography as spelling, does not really come into play in our investigation.⁶¹⁷ However, one phrase is important for us to consider. Orthography as spelling has been considered in light of

differentiate between ductus and script. Cursive ductus refers to the writing of an individual letter wherein the writer does not lift the implement from the writing surface. Cursive script refers to the writing of an individual word wherein the writer does not lift the implement (save where convention demands [e.g., Arabic]). Intermissive ductus refers to the writing of an individual letter wherein the writer lifts the implement from the writing surface after the composition of individual separate lines that together make up the letter as a whole. The opposite of cursive script, however, is not 'intermissive script,' but rather, as is conventional in English, print. Therefore, a printed script is the writing of an individual word wherein the writer composes each letter individually – unconnected from either the preceding or following letter. Yet since this is the normative form of word writing in most of world's writing systems, we do not need to explicitly qualify printed scripts as such. To provide an example of the terminology in use, we might describe Ugaritic writing as a (print) alphabetic script employing an intermissive (i.e., cuneiform) ductus as opposed to conventional Arabic writing which is a cursive alphabetic script employing a cursive ductus.

⁶¹⁶ See van der Kooij 1976 and Lehmann 2020 for studies, particularly of writing angle and ductus.

⁶¹⁷ For studies of orthography as spelling see Sebba 2007 and Coulmas 2003.

institutions and institutional space, reflecting on the graphic representation of phonemes in the inventory of a language (or the specific representation of allophones) but also on the conventional practices of spelling as a social act.⁶¹⁸ This aspect of orthography is called by the theorist Mark Sebba, an “orthographic regime.”⁶¹⁹ While ancient inscriptions are normally assumed to represent a shallow orthography (approaching one phoneme to one grapheme), orthographic regimes can be seen in the specific institutional choices to represent or not represent vowels, to change or retain spellings as the language changes, and to adopt or adapt new graphemes to represent phonological changes in the language. The language of ‘orthographic regimes’ is striking and represents well the role of society in the production of text. For this reason, we will adopt the language with a slightly different focus. For us, an ‘orthographic regime’ will refer to that particular force of convention that drives writing (see ch. 1 above). Combining this concept, in some ways, with Wenger and Lave’s definition of a ‘regime of competency,’ we will assume that the shared repertoire of gestures, postures, and actions among writers established a sort of internal, communal standard for understanding how to form a text and how the text, in final form, should appear.⁶²⁰ As such, the handiwork of drawing up an inscription (form and appearance of letters, present chapter; direction of writing, chapter 5; numeration; chapter 6; organization; chapter 7; and coloration; chapter 8) will be considered a representation of a ‘regime of orthography,’ understanding that the regime in question is not the

⁶¹⁸ See Sebba 2007; especially “Orthography as Social Practice” (26-57).

⁶¹⁹ Sebba 2007: 41.

⁶²⁰ Wenger 1998: 136-137.

top-down standard of a modern literate post-Westphalian nation-state but rather the effective discipline of long-term shared conventions in the community of writers.⁶²¹

4.1. Approaching Orthography in Early Inscriptions: Influence of the Rush Pen

The technology of the rush pen was discussed earlier (see chapter 1, section 1.1 above), including its Egyptian origin and likelihood that Hebrew (רש) is a loanword from Egyptian ‘*r.t*’ (see 1.1.2 above). We discussed there the preparation for the use of the rush (see 1.1.3.2 above) in order to contrast the rush pen, the pen of Iron Age writers, from the reed pen used in later periods.⁶²² The careful preparation of the pen, cutting and softening the end, requires some skill. Even before one begins writing, skills must be acquired, through experience and apprenticeship, to prepare to perform the task of writing. This is often left-behind or forgotten in the analysis of inscriptions. While below the explicit consideration of much of the scholarship on inscriptions, there is an aspect of knowledge not just of writing but of the preparation for writing that once forgotten is not easily replicated *de novo*.⁶²³ Hence, when we see well-executed inked

⁶²¹ This brings up an important question of ‘standardization’ in alphabetic scripts from the Levant. The language of standardization and non-standardized has been used in a rather lax fashion in past scholarship. The language of standardization, while certainly unintentional, can conjure up ideas of a king or bureaucrat dictating norms of the community of writers, and this is almost certainly never the case in the ancient world – even when kings were literate. Rather when we think of standardization, we should think of an internal standard, formed by the community of writers over time, this sort of standard functioning in the dialectic of convention and invention whereby learned practices can be subverted at the top levels to create new norms for the community (Lave and Wenger 1991; Wenger 1998), but otherwise are governed by prior norms and modes of operating. That is not to say that there were not external forces for implementing a standard. There may have been ways of operating that became, as it were, the ‘industry’ standard such as the use of the chisel-shaped wide-nibbed pen (van der Kooij 1986; Lehmann 2020). Changes in technology and competing methods undoubtedly influenced the decisions of communities of writers in the ancient world.

⁶²² Longacre 2021.

⁶²³ It should be remembered that the writing practices inherent in Egypt developed over centuries and stabilized. The appearance of inked writing the Levant, I would argue, assumes an origin and continuity in that tradition, though growing into its own tradition in an entirely different sort of system of representing language. Beyond this, idiosyncratic developments take place in the alphabetic tradition that never took hold in Egypt, such as the introduction of the *chisel-shaped* wide-nibbed pen. Thus, when we see early inked inscriptions such as those from Lachish, Khirbet er-Rai, Beth Shemesh, and Kh. Qeiyafa, inscriptions which date to the LBIII/Iron I, it should inform us that a larger community of writers and readers existed during this time than has traditionally been assumed. That is, a community of scribes (or perhaps communities) were needed to pass the knowledge of writing

inscriptions, only occasionally found, these inscriptions signify a continuation of apprenticeship and traditional knowledge about writing that goes beyond the written word itself.

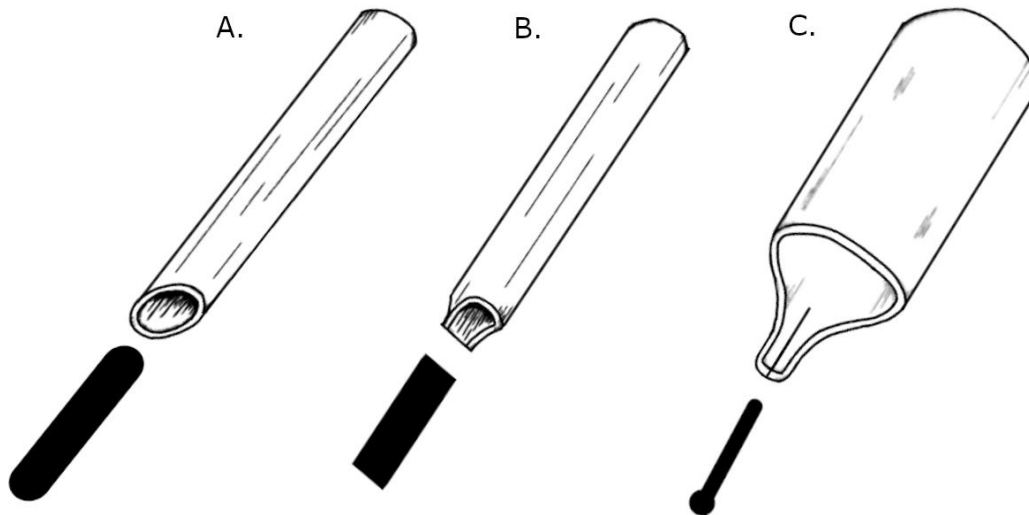


Fig. 4.1: Pen types with artistic representation of stroke styles: (A.) oval-shaped rush tip, (B.) chisel-shaped wide-nibbed rush tip; and (C.) slip-nibbed reed pen (drawn by the author; cf. Longacre 2021: fig. 3)

Once the pen is diligently prepared, the oval-shape of the end of the rush brush is able to easily produce alternative strokes of varying width automatically, but stroke width is still heavily dependent on the skill of the writer.⁶²⁴ A writer was able to emphasize certain strokes with broad thick brush strokes, while also creating attractive ligatures by way of thin strokes (see fig. 4.1). For inexperienced writers, such ligatures were more difficult to perform and required some practice. It seems that adjusting the grip of the pen, as well as the angle of the implement, could result in differing formations of ductus and differing (allographic) forms for individual signs.

along, not just the alphabetic script but all of the material and orthographic practices that we have discussed and those we will discuss.

⁶²⁴ Tait 1988: 477; see note 629 below.

It is important to note that these facts contrast with what van der Kooij has noted about the later *chisel-shaped wide-nibbed* pen, which also produced strokes of varying width automatically but responded poorly to changes in angle of the writer's wrist and arm.⁶²⁵ Further, Lehmann has argued that the change in the preparation of the implement, cutting into a chisel-shape rather than an oblique cut (see fig. 4.1 above), meant that the primary mechanism of control of the pen was the fingers.⁶²⁶ Whereas Egyptian scribal practice, which resembles more closely brushing letters, as one does when painting, relied on dynamic wrist control to produce letters, allowing for more flexibility in the movement of the arm, wrist, and fingers, Lehmann argued that the introduction of the *chisel-shaped* pen required stability.⁶²⁷ Lehmann looks to van der Kooij's work on "the angle of inception" (i.e., how to hold the pen in relation to the surface) in Iron Age epigraphs to argue that the 'national' script variants of the Iron II are the result of learned practices of this 'angle of inception.' That is, writers in different communities, different centers of writing, learned certain practices of writing, which includes the angle of inception, that are determinative of the particular paleographic features that define the so-called national scripts.⁶²⁸ While, an analysis of Lehmann's thesis is not the question here, his focus on orthographic practice as an embodied practice (where the hand is, where the hand holds the pen, where the pen is in relation to the surface, etc.) is instructive, and his broad conclusions are compelling.

⁶²⁵ van der Kooij; cf. Lehmann 2020.

⁶²⁶ Lehmann 2020: 84-87.

⁶²⁷ Lehmann 2020; Sirat 2006

⁶²⁸ Lehmann 2014; 2020.

In a similar way, the Egyptian rush pen was likewise dependent on hand position but more reliant on pen grip and pressure. Therefore, as we have mentioned, a skilled scribe was able to deftly produce a number of stroke sizes regardless of directionality if so desired.⁶²⁹ For example, it is recognized that administrative hieratic hands of the New Kingdom emphasized vertical strokes, whereas later Egyptian scribes writing in Demotic would emphasize horizontal strokes all the while using the same traditional implements of Egyptian practice, the rush brush.⁶³⁰ Stroke variation with the Egyptian rush was in many ways determined by certain practices of ductus and desired aesthetic rather than wholly by the automatic constraints of the cut of the nib.

The rush pen was, however, difficult to use for a novice. Variation in width of strokes, difficulties with coloration (light and dark strokes), and even deftness and skill in the manual production of strokes meant that a writer required, as Tait says, “lengthy practice” before acquiring the skills necessary for advanced use.⁶³¹ Nevertheless, even for advanced hands the form of the rush pen was given to certain mechanical processes that delimited its usage. For instance, Tait states rather emphatically that “the Egyptian rush pen virtually cannot be used to draw a stroke from bottom right to top left.”⁶³² For this reason, in hieratic practice there was an avoidance of circular signs. This fact is true even in later Iron Age scripts, where the standard ductus involves the decomposition of signs like *tet*, for instance. The material features of the

⁶²⁹ Tait states, “The oval end of the pen was able to produce an automatic variation between thick and thin strokes. *However, the scribe was able to override this effect by turning the pen in his grip or changing the position of his hand in writing.* The pen also readily responded to variations in the pressure applied to it, because of its brush-like nature and overall resilience. In this way, especially thin or especially thick strokes could be drawn[.]” (1988: 477).

⁶³⁰ Tait 1988: 477-478.

⁶³¹ Tait 1988: 478.

⁶³² Tait 1988: 479

rush, whether Egyptian-style or later *chisel-shaped* do not change much, the operative difference is what is possible with each implement and the traditions that guide its use.

A few differences should be highlighted here to draw broad guidelines for our investigation. As mentioned above, and in chapter one, the rush pen in the Egyptian style is cut obliquely. In contrast, the *chisel-shaped* pen used by later Levantine writers was cut at a 90° angle.⁶³³ This results in a few paleographic distinctions. First, the ratio of width to thickness will never be exact. In van der Kooij's study of Aramaic paleography, he notes ratios of 2:1, 3:1, and even 5:1. What this means is that as the pen moves vertically and horizontally there will be an automatic differences in stroke width, with some small variations. This impacts ductus, as van der Kooij notes, "the chisel-shaped tip make the a-stroke broad (wide stroke), b narrow, c crescent-shaped and d half-wide."⁶³⁴ These particular aspects of ductus cannot, however, be observed in the Egyptian-Style pen. Consider that there is a near 1:1 ratio in the strokes of the *ini* (W25) sign in the hieratic ostrakon from Tell el-Farah. The slanted strokes, which van der Kooij labels a (\) and b (/) correspond roughly to the horizontal stroke at the top (—).⁶³⁵ This would not be possible with the *chisel-shaped* pen. A second observation is the importance of the 'angle of inception' in inscriptions written with the *chisel-shaped* pen. The angle of the slant of each letter, its incline we might say, is an important aspect of the paleography of alphabetic scripts written with the *chisel-shaped* pen, but, to my mind, does not enter into the discussion of writing with the Egyptian pen.⁶³⁶ Thus in examining the ductus, and what I will call aesthetic

⁶³³ van der Kooij 1986: 90.

⁶³⁴ van der Kooij 1986: 95.



⁶³⁵ See van der Kooij 1986: 22-25; cf. 1976: 58.

⁶³⁶ van der Kooij 1986; Lehmann 2020.

practice, of epigraphs written with the Egyptian-style pen, these differences should be considered.

4.1.1. Orthography as Embodied Practice: Pen Hold and Posture

These differences in the mechanical use of the two pens are important to consider, but we should briefly dwell on the effect of the material on its user, i.e., how the pen must be held and the postures that writing implement and surface enforce on writers. These too are part of writing as a culture.

The pen hold was generally vertical and accords with the general posture of writers in ancient Egypt. The most common depiction of writers (or scribes) in Egypt is seated, with tight kilt able to provide support for the papyrus (fig. 4.2 below).⁶³⁷ From this position, a near vertical pen hold allows for maximum flexibility in moving right to left across the papyrus. Further, this posture requires the writer to hold the pen and hand above the writing surface without undue strain on the back, being hunched over, as it were. This posture determines other aspects of writing practice that will be explored in the next chapter. The hand being held above the surface creates the impression that one almost paints letters onto the papyrus. Thus, in Egypt there was a very clear connection between writing and drawing. Thus, the Egyptian term $z\bar{h}3.w$ () “scribe”⁶³⁸ is modified to form the title $z\bar{h}3.w-qdw.t$ () “draughtsman” (lit. scribe of drawings [*qdw.t*]).⁶³⁹

⁶³⁷ Allon and Navrátilová 2017: 1; cf. discussion of a statue of a scribe in Allon 2013.

⁶³⁸ *Wb* 3: 479.14-481.4.

⁶³⁹ Allon and Navrátilová 2017: 1; for $z\bar{h}3.w-qdw.t$ (*Wb* 3: 480.11 and 5: 81.3-7); for *qdw.t* (*Wb* 5: 81.2-9).

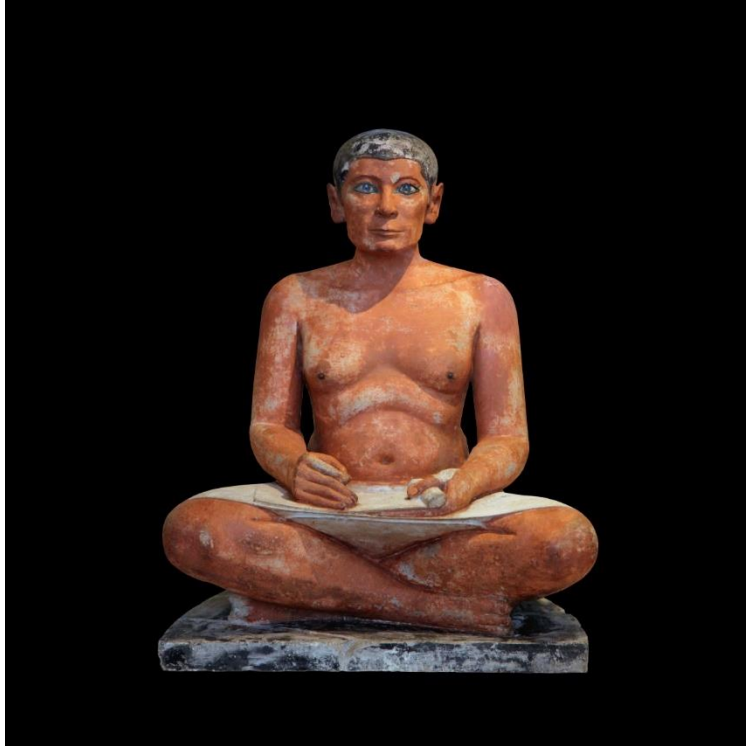


Fig. 4.2: Statue of a Seated Scribe, 4th Dynasty from Saqqara, currently located in the Louvre E 3023 (Photo Credit: Rama, [CC BY-SA 3.0 FR](#), via Wikimedia Commons.)

Though there is a common association between writing and art, such associations might have become more evocative when the postures, gestures, and movement of writing and painting are the same, even if the tools are at times different.⁶⁴⁰ To this degree, it may be worthwhile to consider the association between drawing and writing practice at Kuntillet ‘Ajrud,⁶⁴¹ or the connection between image and writing in the early Lachish Ewer.⁶⁴² Curiously van der Kooij observes that, “It is particularly clear in this last text (Lachish Ewer), and it may well be

⁶⁴⁰ Painting undoubtedly involved different tools, though the title *zḥḥ.w-ḡdw.t* suggests that there is close association between the two practices. See discussion of the figural ostraca from Deir el-Medina (Cooney 2013).

⁶⁴¹ Talley Ornan pointed out that the drawings at Kuntillet ‘Ajrud have parallels in neo-Assyrian palatial art (2015). As such, it should be recognized that writing and drawing were not strictly divided in Cuneiform practice either (Reade 2012), though the materials are perhaps less conducive to the task.

⁶⁴² See Mandell 2018: 270. While Mandell presents the option that the inscription was “executed secondarily,” her second option, that the text is a “supplement” to the imagery is more likely.

presumed at in the others (Beth Shemesh Ostrakon and Sarepta Jar), that the script was written with a tool that was also used for drawings.”⁶⁴³ However, it should be remembered that the Lachish Ewer is anomalous in a number of ways, being one of the earliest examples of alphabetic inscriptions, and probably partakes in Levantine ceramic and artistic traditions not previously recognized.⁶⁴⁴ Still, the association of practice and boundaries between art and writing is a topic worthy of more consideration.⁶⁴⁵

In describing the pen hold, or grasp, we have a surprising amount of iconographic data. In Egyptian representations of writers, they are pictured holding the pen with thumb, index, and sometimes middle finger above the writing surface.⁶⁴⁶ Likewise, Neo-Assyrian reliefs depict the holding of the pen between thumb and index finger.⁶⁴⁷ The use of the thumb and index finger, with the optional use of the middle finger, was the common grip for writers in Egypt writing with the rush and apparently, we might assume, continued into the alphabetic practice of later writers.

⁶⁴³ Van der Kooij 1986: 235.

⁶⁴⁴ The red writing, for instance, rather than connecting to the deliberate use of red ink in Egyptian practice (see ch. 8 below), is probably a bi-product of a local Canaanite tradition in the Late Bronze Age (Daniel Master, personal communication).

⁶⁴⁵ Kidd opines on the differences between Egyptian and Greek writing practice and the potential ideological meanings that might be associated with each. He states, “with such striking physical differences between these two practices of writing, one wonders whether there were also conceptual differences between Egyptian rush-writing and Greek reed-writing. That is, would Ptolemaios, for example, in writing the Egyptian of this letter with a reed and not a rush, have considered himself to be writing in a ‘Greek’ way?” (2013: 243-244). In a similar way, we might ask what the conceptualization between the trades, scribe and draughtsman/painter, might have been given the similarities between the practices. To this extent, Allon and Navrátilová confront this same problem asking, “Even if a scribe happened to hold them [writing equipment], they rarely tell whether he saw himself as doing so, and whether he perceived his action as specifically scribal” (2017: 12). In regards to the interplay between the tools and scripts in the context of the end of the Late Bronze Age and early Iron Age, our question is further complicated by wondering, ‘how Egyptian did early alphabetic writers consider themselves, if at all?’ For an exploration of the Egyptian connection to early alphabetic writing see Burke 2020; further for the entanglements of identity, see Burke 2022.

⁶⁴⁶ van der Kooij 1976: 36-37, who cites Janssen 1952.

⁶⁴⁷ van der Kooij 1986: 90; cf. common grip described in Sirat 2006: 366.

The Egyptian pen was guided by the fingers and wrist to smoothly move across the surface.⁶⁴⁸ The pen was gripped back from the tip, generally with the hand elevated from the surface.⁶⁴⁹ To a large degree, the flexibility of the material being written on determined the pen hold. Because Egyptian writer's common material was the flexible, yet durable, papyrus resting the hand on the surface was not always practical.⁶⁵⁰ The hand elevated from the surface was thus common practice for Egyptian scribes, freeing up the hand, wrist, and arm to manipulate the pen while the off-hand could shift the sheets of the roll of papyrus across the body. While we should be careful what sort of evidence to recruit from iconography, it is worthwhile to consider that the angle of the pen to writing surface seems to indicate some variability but was generally perpendicular.⁶⁵¹

In many ways, the materials, rush pen and papyrus, were determinative of action. The pen grip being similar between the two traditions speaks not only to something learned but also to a practical concern of handling the implement. The raised hand likewise stands at the curious intersection of materially induced practicality and convention. As mentioned, scribes did not necessarily need to elevate their hand from the surface but doing so had its practical benefits in writing right to left. As we move to an analysis of the epigraphs themselves, some of these aspects of practice will fade into the background but should constitute the ground from which we will attempt to describe similarities and differences in the emerging tradition of early alphabetic.

4.2. The Early Use of the Rush Pen: Analysis of the Early Alphabetic Inscriptions

⁶⁴⁸ Sirat 2006: 384.

⁶⁴⁹ See van der Kooij 1976: 37 who notes other positions.

⁶⁵⁰ Sirat 2006: 367.

⁶⁵¹ van deer Kooij 1976: 37.

The earliest inked inscription discovered to date, as I will call it, the Lachish White Slip Sherd (fig. 4.3), comes from Area S of the Austrian-Israeli excavations at Lachish and dates to some time in the fifteenth century BCE.⁶⁵² This inscription is a unique and important find but provides little data to work with. As a whole early inscriptions, like the Lachish White Slip Sherd, the Lachish Ewer, and the Sarepta sherd, are difficult to analyze.⁶⁵³ In the later two cases, the letters are crudely written on pottery, in the case of the Lachish Ewer, with the same implement for the decorations.⁶⁵⁴ As such, we cannot be sure whether the writer's pen or painter's brush were used to inscribe these objects—or if any significant conceptual or technological differences existed at the time. The Lachish White Slip fragment, unlike the Ewer and Sherd, has no decoration but remains likewise difficult to analyze. Not only is the content undeciphered, but the letter forms attest to the variability of alphabetic in early periods.⁶⁵⁵ The few letters are drawn in a fairly robust fashion and the apparent *nun* thins ever so slightly as it moves toward the end of the tail. In all likelihood this inscription was written by a professional handling the common Egyptian rush pen given the appearance and the reasonable execution. This inscription, and its inscriptional style, should then be connected with the recent discovery of a hieratic inscription from Lachish dating to the same period.⁶⁵⁶ What the role of the Egyptian inscription is at this

⁶⁵² Höflmayer et al. 2021: 708-713.

⁶⁵³ *editio princeps* for Lachish Ewer (Gaster 1940: 49-54); for Sareptah see Sass 1988: 71 (who cites Teixidor 1975: 101). Another inked inscription from Lachish from the Starkey-Tufnell excavations is likely a pseudo-inscription or an example of practice writing (Gaster 1940: 55-57).

⁶⁵⁴ Originally the notes of Starkey in Tufnell, Inge, and Harding 1940: 47; but later van der Kooij 1986: 235; cf. Mandell 2018.

⁶⁵⁵ See the form of *dalet* and *bet* in particular. For variability in letter forms in early alphabetic, see Hamilton 2006 and 2015.

⁶⁵⁶ Wimmer et al. 2022.

period is a question mark but shows an important relationship between Lachish and the Egyptian New Kingdom.

Textual sources point to Lachish as an important site in the southern Levant with ties to Egyptian interests in the Levant during the 14th-15th centuries.⁶⁵⁷ Papyrus Hermitage 1116A, a document which dates to the reign of Amenhotep II (1427-1401 B.C.) records rations given to foreign envoys and lists Lachish.⁶⁵⁸ Uniquely, the reference to Lachish is but one of two southern sites in the Levant, with Ashkelon being the second, and is listed separately from the eleven other cities mentioned. Nevertheless, the impact of this small, but tantalizing, evidence from the earliest period of the Late Bronze on later alphabetic traditions is unknown. Is this inscription representative of the beginning of a long tradition of influence and interaction between Egyptian and Levantine scribes, writing with pen in ink on papyrus, that ultimately births the later alphabetic scripts of the Iron I-IIA? We do not, as of yet, know. More data is required to answer this question.

⁶⁵⁷ Ussishkin 2004: 58; Webster et al. 2019: 88-89; cf. Streit et al. 2018. Lachish was probably similar to Megiddo in this period. Megiddo was heavily under the influence of Egypt and likely hosted an Egyptian official or Egyptian troops but was nevertheless a fundamentally Canaanite city (see Mazar 2002; Martin 2011).

⁶⁵⁸ Ussishkin 2004: 58; Webster et al. 2019: 88-99, Epstein 1963: 49-56.



Fig. 4.3: The Lachish White Slip Sherd (after Höflmayer *et al.* 2021: fig. 7; credit J. Dye; turned 90° by the author).

Beyond this early example, a few examples from the end of the Late Bronze Age down through the Iron IIA attest to the use of ink and the rush pen, prepared in the Egyptian style. Like the Lachish White Slip Fragment, these early inked inscriptions partake in a unique aesthetic tradition of robust letters, almost mechanically formed to be drawn with the full width of the pen. This seems to be unlike the more fluid cursive of most of the hieratic fragments from the Levant and may attest to the fact that the alphabetic script has already formed some traditions of practice in the obscure generations that precede its emergence as the script of the Levantine polities. Otherwise, it might simply represent the practiced hand of a writer experienced with the implement but unfamiliar with the form and orientation of the novel alphabetic script. Whatever the case, the impact of the rush pen in the alphabetic hand, as we will see, does not produce the same calligraphic style that characterized examples of Ramesside hieratic but impacts the ductus and appearance of early alphabetic nonetheless.

In the following analysis, we will look at the few inked inscriptions that we have from LB III to Iron IIA. Most of the inscriptions we will discuss have been found in scientific excavations from which rough dates can be estimated, though not without some debate. One, however, that we will consider in an excursus (the Beth Shemesh Ostrakon) can only be dated roughly on the basis of paleography. We will examine aspects of ductus and aesthetic appearance of letters, appreciating the unique aspects of the early alphabetic tradition while drawing in hieratic data, when possible, to explain certain, peculiar features that arise in these, at times, enigmatic inscriptions.

4.2.1. The LB to Early Iron Age: Kh. er-Rai and the Lachish Bowl Fragment

Few early alphabetic inscriptions in ink hail from the Late Bronze to early Iron Age horizon. Further, of the total inscriptions in ink from early periods, few can be said to have been crafted by a writer with reasonable experience with the implement. Here, only two inscriptions stand out, both for their ductus and the relative skill with which they were executed. These are the Kh. er-Rai inscription and the Lachish Bowl Fragment which we will consider in turn.

The Kh. er-Rai inscription, recently discovered and published, is a significant addition to the collection of early alphabetic inscriptions. The inscription dates conservatively to the beginning of the 11th century, though the excavators argue in the *editio princeps* for a 12th century date.⁶⁵⁹ The date of the inscription is said to be hedged in on both sides, a *terminus ante quem* of 1050 BCE due to the radiometric dating of the upper Iron I level and a *terminus post quem* of 1130 BCE due to the bell-shaped bowls that the excavators identify as the most

⁶⁵⁹ Rollston et al. 2021: 4-6.

characteristic form but one completely absent from Lachish VI (1200-1130 BCE).⁶⁶⁰ While the context of the probe should not be seen as wholly decisive because of the few forms represented, these reasonable barriers make it possible to date the inscription to the late 12th-early 11th century with confidence, situating it among some of the earliest alphabetic inscriptions known from the land (Qubur al-Walayda Bowl and the four inscriptions from Lachish).⁶⁶¹ While scholarly and popular discussion around this inscription has involved the excavators' reading of the personal name, *YRB 'L*, we should call to attention aspects of the ductus, in particular stroke width and letter formation.

The extant letters of this inscription are consistent and clear (fig. 4.4 below). The letter *resh* is particularly rectilinear, with stroke width consistently broad, using as it would seem, the whole edge of the nib of the pen. The forms appear to be written, as is typical, verticals first into the direction of writing. The rectangular strokes do not seem to be drawn intermissive but evince slightly curved edges, indicating a more cursive style by which the writer does not remove the implement from the writing surface. Other than a slight fluctuation at the turn of the initial downstroke of the *bet*, the width of the strokes of both *bet* and *resh* remains consistent (~1.5-2 mm). As Rollston remarks in the *editio princeps*, the center of *ayin* is drawn with a ductus

⁶⁶⁰ Rollston et al. 2021: 6.

⁶⁶¹ On the dating of the Qubur al-Walayda Bowl, see Wimmer, Lehmann, and Niemann 2014: 347. It is suggested there that the Qubur al-Walayda Bowl predates the establishment of the Egyptian residency in Field 1, level 1-5 in which Hieratic fragments were found (cf. Lehmann et al. 2010). The Qubur al-Walayda Egyptian residence seems to be related to other residences established during the 20th Dynasty as a means to exert control in the southern Levant (Lehmann et al. 2010; see also Oren 1984; Blakely 2018; and most recently Ganor and Weissbein 2022).

It is possible that this inscription is earlier. The specimens from Lachish can more or less be dated, though the question of the date of the Lachish Ewer and the Lachish Bowl should be revisited (Lachish Bowl, Tomb 527 = Diringier 1958: 129; Tufnell 1985: 239; and Lachish Ewer = Tufnell, Inge, and Harding 1940: 47).

consistent with later writing practice.⁶⁶² The left side of the *ayin* itself displays no disconnection, as far as the images reveal, whereas the right side, admittedly obscured by the break, is slight. The writer may have pulled the stroke around right-to-left and top-to-bottom to execute the difficult circular stroke. This suggestion may be supported by the appearance of *lamed* as a consistent whole, pulled across and around. All this is to suggest that the writer made considerable effort to compose his letters correctly, evincing some facility with the implement.



Fig. 4.4: The Kh. er-Rai inscription (drawing by the author)

Stroke consistency, based on the most proficient hands, seems to be the most desirable aesthetic quality in early alphabetic inscriptions. An almost lapidary appearance with the use of the full surface of the pen, pulled across the writing surface. As we opined, this may be an aesthetic preference, or it may be the result of a writer familiar with inked writing but unfamiliar with the formation of the specifically alphabetic letters. The decomposition of circular strokes

⁶⁶² Rollston et al. 2021: 11.

was common in hieratic writing as it also became in early alphabetic writing.⁶⁶³ One would think that the material constraints of the implement should produce this too in early alphabetic writing, but for some reason it does not. This may speak to something more important to consider about the alphabetic tradition in the transition from the Late Bronze to Iron Age, the implement in skillful hands working with an underdeveloped script.

The second inscription we should look at is the Lachish Bowl Fragment. In general, the peculiarity of the ductus of the Lachish Bowl Fragment has been noted since its first discovery.⁶⁶⁴ In particular, the forms of *aleph*, *bet*, and *heh* have been recognized for their irregularity, and, in the last two cases, their archaic quality.⁶⁶⁵ Like Kh. er-Rai, the ductus is rectilinear in form with a preference for stroke consistency in that almost lapidary style. In spite of some letter forms being affected by the state of preservation, the forms are relatively consistent. Areas where stroke width differs are the leftmost strokes of *bet*, most acutely in line one but also in line two, and the sole attestation of *aleph*. The ‘tongue’ of *yod* is also thin and delicate, but it is unclear whether this is a deliberate feature of the ductus or due to the state of preservation. The broad strokes of the letters, however, seem to attest to what we have already seen in the Kh. er-Rai inscription, the use of the whole nib of the Egyptian-style rush. The most peculiar of the forms, however, may not attest only to the use of the Egyptian-style rush, but to the imitation of Egyptian-style forms. Let us consider the forms of, first, *bet* and then *aleph* in this inscription.

⁶⁶³ Tait 1988; Wahl 1978 and van der Kooij 1986.

⁶⁶⁴ See *editio princeps* in Ussishkin 1983; and more recent Lemaire 2004.

⁶⁶⁵ Cross 1984: 72.

Among the forms of the inscription, *bet* appears particularly archaic. The form stands in distinction when compared to any other form known for *bet* from this period (see fig. 4.5 below). As Hamilton pointed out, this form takes its shape from the Egyptian enclosure sign (O4).⁶⁶⁶ All descendent forms of *bet* in the Levantine alphabetic tradition are derived from this sign. The normative form of *bet* with a triangular head is much better attested and sees evolution in the periods just following the end of the LB to early Iron I. This form, however, open on the interior with rectilinear head is not attested elsewhere and sees no further evolution in the Levantine scripts.⁶⁶⁷ Due to its peculiarity, Hamilton believed the form here to be indicative of an ancestral form “in the Hieroglyphic stream.”⁶⁶⁸ Let us investigate his claim that this particular form recalls an archaic hieroglyphic form in order to advance a different, but intriguing hypothesis.

⁶⁶⁶ Hamilton 2006: 46-47.

⁶⁶⁷ The Kh. er-Rai *bet* is similar in one regard, this is the open interior. Otherwise the form stands in the tradition of *bet* that continues into the Iron II national scripts.

⁶⁶⁸ Hamilton 2006: 47.

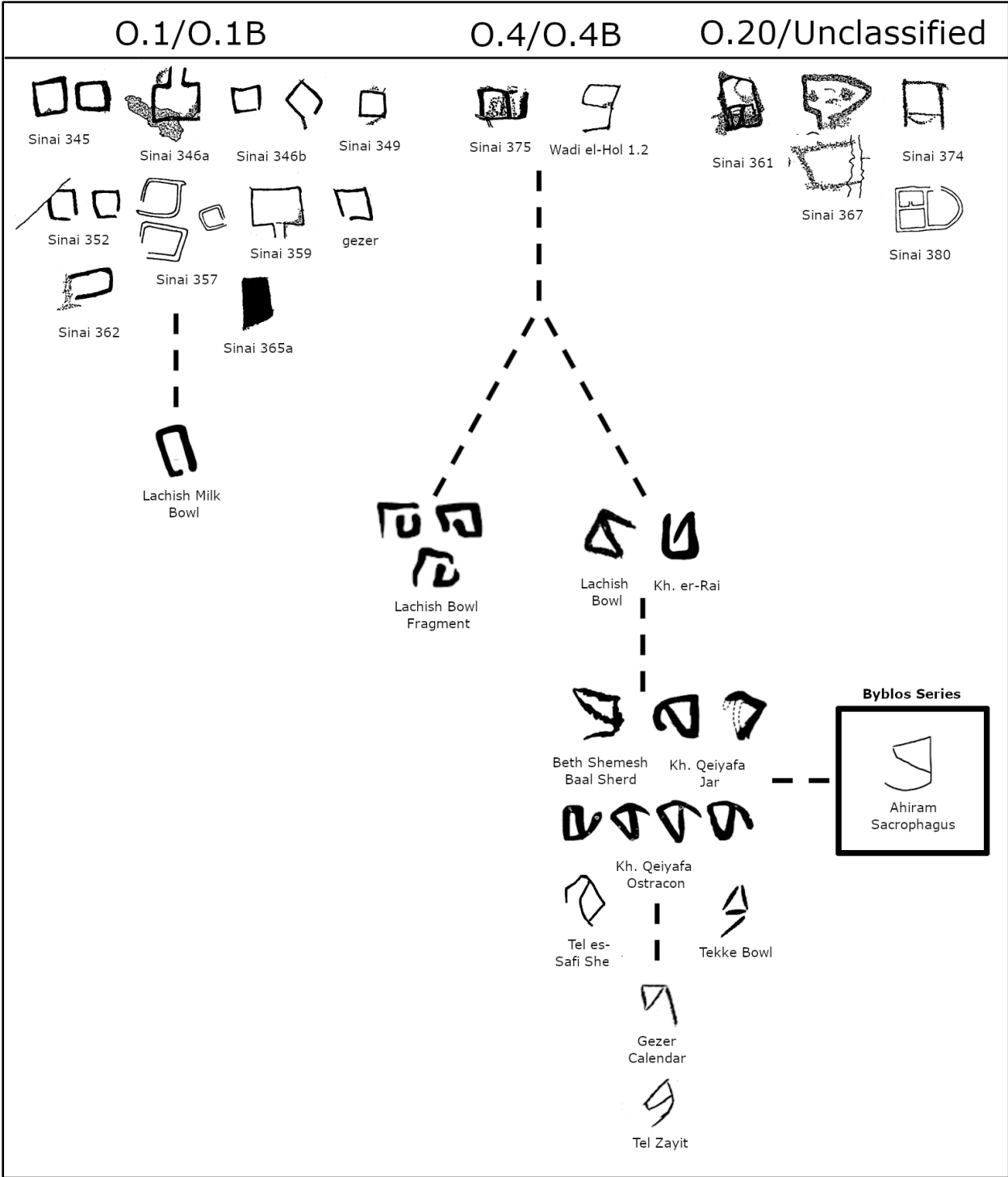


Fig. 4.5: Early history of *bet* with select 10th century inscriptions (Sinai and Wadi el-Hol according to Hamilton 2006: 40-41, 45, and 48; Ahiram after Lehmann 2008: 128; drawn by the author).

Hamilton, in his work on the early alphabet, recognizes the depth of the archaism of the form of *bet* in the Lachish Bowl Fragment. Citing Ussishkin and Cross, he states, “the *bêts* on the chronologically later Lachish Boustrophedon Text represent the typologically-oldest derivatives of the hieroglyphic O4.”⁶⁶⁹ The appeal to hieroglyphic is, however, ultimately unnecessary. While rectilinear, without internal closure, the form of *bet* in the Lachish Bowl Fragment draws closer comparison with hieratic O4 from the New Kingdom. Wimmer, in his seminal study of non-literary ostraca from the New Kingdom, provides several forms of O4, almost all of which are consonant with the form of *bet* in the Lachish Bowl Fragment. Consider especially Wimmer’s description of his “type a” ductus for New Kingdom hieratic writing of O4. He states, “Bei Typ a ist der kleine, mittlere Strich fluessig an die linke Ecke angesetzt.”⁶⁷⁰ While the status of the middle line (connected cursively, connected intermissively, or disconnected), what we have called the interior, is determinative for categorizing differing forms of hieratic ductus, Wimmer’s “a” forms bear other marks of resemblance in ductus. For example, a few examples of Ramesside O4 from the 20th Dynasty of the “a” type are rectilinear with three strokes: (1) body and tongue, (2) spine, and (3) tail.⁶⁷¹

⁶⁶⁹ Hamilton 2006: 46-47.

⁶⁷⁰ Wimmer 1995: 2000.

⁶⁷¹ See also the comprehensive digital list of forms of O4 (<https://aku-pal.uni-mainz.de/graphemes/452>)

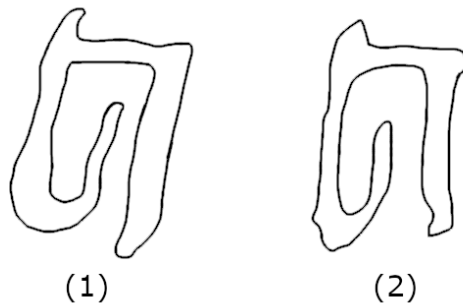


Fig. 4.6: Hieratic O4 of Wimmer's Type "A" from the ostraca of the New Kingdom: (1) O4 dated to Ramesses IV; (2) O4 dated to Ramesses V (drawn by the author after Wimmer 1995b: 248).

Notice details of the examples from Wimmer drawn above. The tail and spine of the form are straight connected at a right angle. New Kingdom hands are said to have emphasized vertical strokes which might account for the breadth of the tail stroke in (1) above.⁶⁷² The form and appearance, and from what is available in the images, the ductus, are otherwise reminiscent of the composition of *bet* in the Lachish Bowl Fragment. There are, however, differences. In the example of *bet* from the Lachish Bowl Fragment, the writer is careful to not allow the vertical stroke of the head extend beyond the horizontal of the spine. This is not the case in the examples of O4 provided by Wimmer (fig. 4.6), and yet, examining Wimmer's paleographic chart reveals that this extension is not a regular occurrence, being restricted to a few forms which just so happen to include the examples selected for the figure here. Nevertheless, the curvature of the head, bending from tongue around, is more pronounced in the hieratic examples given by Wimmer but again not uniformly so.⁶⁷³ An example of hieratic O4 from earlier in the New Kingdom appears more similar in form to Lachish *bet*, but in this hieratic example the form

⁶⁷² Tait 1988: 485; cf. Wimmer 1995a.

⁶⁷³ See examples in Wimmer 1995b: 248; discussion in Wimmer 1995a: 200.

appears to differ in ductus as concerns number of strokes (*bet* = 3 strokes; Wimmer ‘Tawosret’ O4 = 5(?) strokes).⁶⁷⁴ Why is this comparison important? Aside from a general curiosity, it shows that Hamilton’s suggestion of a hieroglyphic affinity, evincing perhaps a unique archaism in the *bet* of the Lachish Bowl Fragment, is unnecessary. So how else are we to explain the peculiar appearance of *bet* in the Lachish Bowl Fragment other than some archaic retention? Allow me to cautiously forward a different suggestion, one that has implications for the relationship between Egyptian and Levantine writing culture.

4.2.1.1. Archaism or Affinity? O4 as *Bet*, N1 as *Aleph* and the Scripts of Lachish

It has been suggested that the peculiar forms of the Lachish Bowl wax particularly archaic, showing or retaining forms that may long predate the period of the inscription itself. Alongside *bet*, the other easily recognizable archaism is *heh* in line two. The form of *heh* is not generally well attested after the Sinaitic inscriptions. Hamilton draws attention to a number of “seated forms” of Egyptian A28 that bear resemblance to forms found at both Wadi el-Hol and Sinai, which seem to be the ancestral forms of Lachish Bowl Fragment *heh* (see fig. 4.7 below).⁶⁷⁵ Yet, there is a significant gap between these forms and our form of *heh* here, with the only link being a *heh* from Tell en-Nagila of uncertain early date (probably LBII).⁶⁷⁶ After the 13th century and the Lachish Bowl Fragment the next example of *heh* does not appear until the Izbeth Sartah ostrakon (end of the 11th century) in which it takes a large “E” shaped form. The example of the stability of *heh* from early alphabetic in Egypt and the Sinai all the way down to the Lachish

⁶⁷⁴ Wimmer 1995b: 248.

⁶⁷⁵ Hamilton 2006: 76-86, especially 78 and 82. We might also now add to this the example from Theban Tomb 99 (Haring 2015).

⁶⁷⁶ Amiran and Eitan 1964: 198; cf. Sass 1988: 54-55.

Bowl Fragment might be evidence to argue that both *heh* and *bet* are indeed archaic survivals. Yet, as we have pointed out, contemporary inscriptions display a generally different form of *bet* than what we see in the Lachish Bowl Fragment. Whereas there is too little evidence at present to analyze the paleography of *heh* in the earliest periods, *bet* is better attested, with extant, contemporary examples from the Kh. er-Rai inscription and the Lachish Bowl. These data, albeit minimal, provides some context for arguing that the *bet* in the Lachish Bowl Fragment, rather than being a genuine archaic survival, is instead peculiarly anomalous.

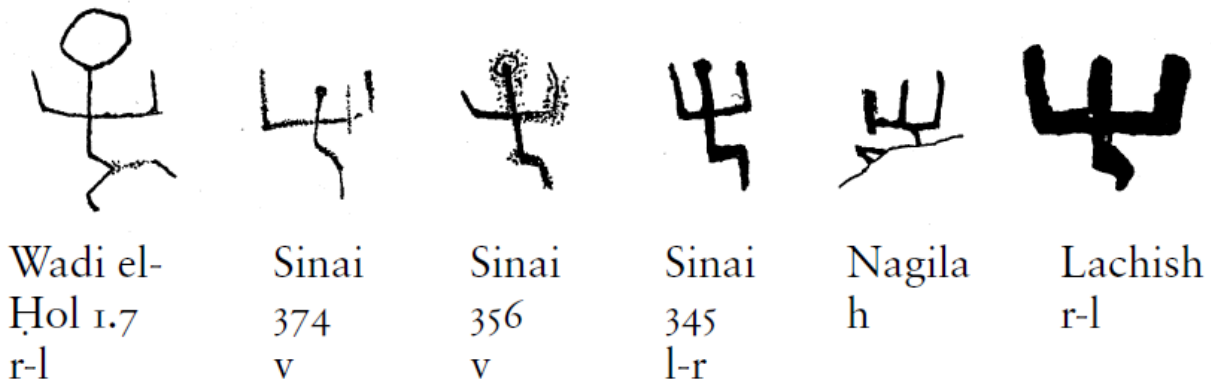


Fig. 4.7: Alphabetic forms of “seated man” (Eg. A28) (after Hamilton 2006: 78, fig. 2.21)

Were the peculiarity of the *bet* in the Lachish Bowl Fragment and its similarity to Egyptian O4 in hieratic the only data to work with, there would be no reason to suggest an alternative hypothesis to Hamilton’s reasonable opinion that the form is an archaic relic. Taking into account the evidence of *heh*, the question would seem to be answered; the Lachish Bowl Fragment retains highly archaic forms. Yet, considering the most peculiar form in the entire inscription, *aleph*, beckons us to consider an alternative hypothesis.

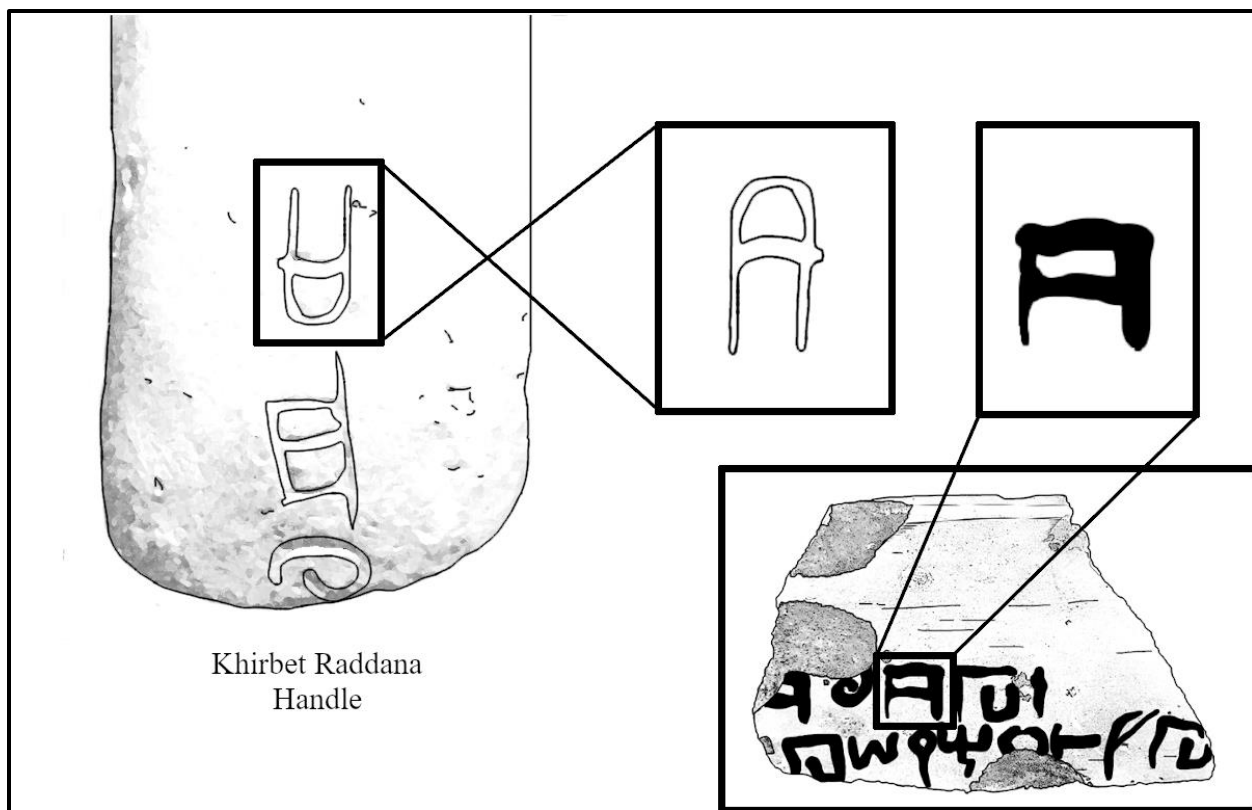


Fig. 4.8: Comparison of *aleph* in Kh. Raddana Handle and Lachish Bowl Fragment (drawn by the author).

The irregular form of *aleph* in the Lachish Bowl Fragment is, as of yet, inexplicable. Lemaire and Cross tentatively suggest a comparison with the “broad-nosed” *aleph* of the Kh. Raddana handle inscription.⁶⁷⁷ But, as can be observed in the comparison above (fig. 4.8), the Raddana handle *aleph* bears only vague resemblance to the form in the Lachish Bowl Fragment. Thus, Cross, having suggested some slight similarity to the ‘broad-nosed’ *aleph* of the Raddana inscription, nevertheless demurred, “the square-nosed *’alep* has no precise parallel.”⁶⁷⁸ As a result, Cross saw the *aleph* as somewhere in between proto-Sinaitic forms and the Raddana

⁶⁷⁷ Cross 1984: 71; Lemaire 2004: 1599; see drawings the earlier drawings of the Kh. Raddana handle in Cross 1971: fig. 2 and 1979: fig. 1.

⁶⁷⁸ Cross 1984: 71.

example, stating that it “fits perfectly into the sequence between [the two]”.⁶⁷⁹ The ‘flat-head’ of the *aleph* in Raddana, however, is not flat in the strictest sense but retains a slight, but still recognizable, curvature. From examination, the flattened head seems, at least in part, a product of incision working against the clay. As we have mentioned before, we should be cautious in comparing forms incised, punched, or otherwise inscribed in tough, rigid materials with those easily painted on with ink. The broadness of the head of *alephs* in the two inscriptions is, however, certainly worthy of comparison. Still, the strict, linear, flat head of the Lachish Bowl Fragment is clearly deliberate. The relatively flattened curve of the Raddana handle may not be. The only other example of *aleph* in this early period comes to a point; thus it may be possible that the Lachish Bowl Fragment *aleph* and the Raddana *aleph* stand in the same tradition, differing from the pointed *alephs* of later writers. In this respect, the comparison between the two *alephs* was summarized well by Lemaire, stating that the two are “close enough.”⁶⁸⁰ However, in comparing early alphabetic inscriptions to contemporary hieratic inscriptions, and by extension examples of hieratic writing in the New Kingdom, I would argue that there are forms that go beyond ‘close enough’ that may better explain the form of *aleph* in the Lachish Bowl Fragment—though in quite provocative fashion.

⁶⁷⁹ Cross 1984: 71; Cross and Freedman date the Kh. Raddana Handle unnecessarily high (Cross and Freedman 1971). This is due to both a reliance on paleography and Callaway’s flawed assessment of the material culture (13th century BCE = Callaway and Cooley 1971; 12th to early 11th century = Callaway 1993; for critique of the method see Finkelstein 2007). Lederman’s later assessment of the material establishes a more reliable date toward the end of the 11th century to the beginning of the 10th century (Lederman 1999: 74).

⁶⁸⁰ Lemaire 2004: 1599.



Fig. 4.9: Hieratic N1 and Lachish *Aleph* (drawn by the author; hieratic drawn after KVO 29)

For readers of hieratic texts, examining the *aleph* of the Lachish Bowl Fragment, one may draw an immediate comparison to N1, the *pt* sign (see fig. 4.9 above).⁶⁸¹ This sign, often in constructions meaning *hry* “Overseer of X” is frequent in administrative lists.⁶⁸² Wimmer notes a few forms of N1 in his compilation. Each example he shows are structured with a flat head and a central rung connecting the two verticals on either side.⁶⁸³ There is, of course, some variation in the form of N1 during the New Kingdom into the 20th dynasty, but overall the basic features are

⁶⁸¹ Gardiner 1957: 485; Möller 1927 (II): 27.

⁶⁸² *Wb* 3: 141.14-142.2.

⁶⁸³ Wimmer 1995a: 188; 1995b: 193.

retained. The N1 sign is frequent enough that it may be attested in one of the hieratic fragments from Tell el-Farah (S), fragment A.⁶⁸⁴ The text is effaced and partially broken, so its appearance there cannot be absolutely certain. Still, consider the graphic similarities between *aleph* (twice in the first line of the Lachish Bowl Fragment) at the N1 sign as it appears in an ostrakon from the Valley of the Kings, some examples which are only partially preserved.⁶⁸⁵

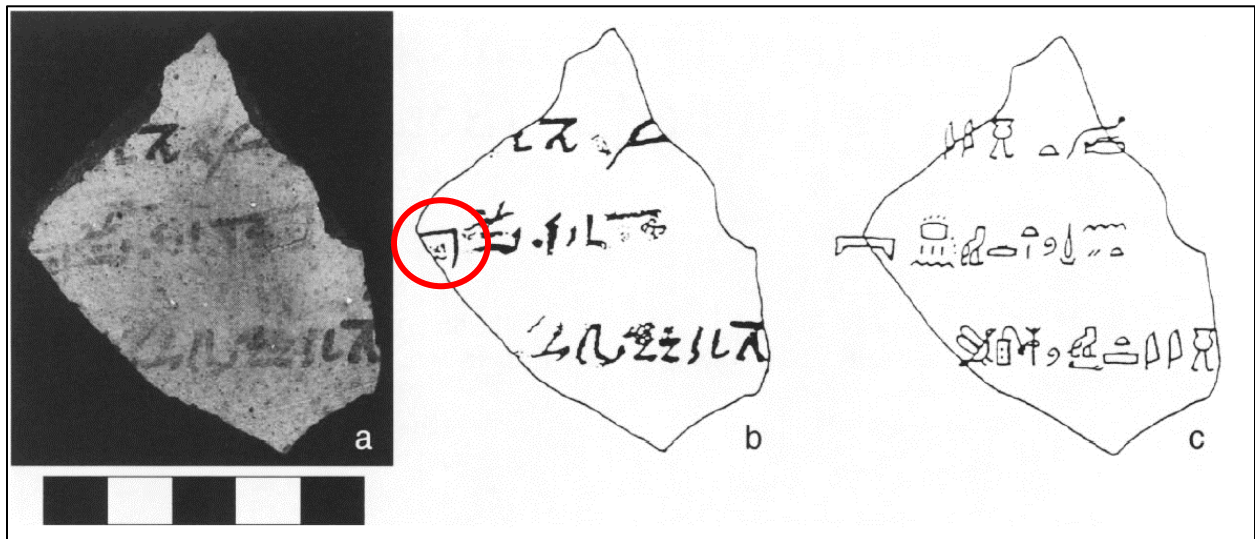


Fig. 4.10: Fragment A from Tell el-Farah (S) (from Goldwasser and Wimmer 1999: fig. 1).

Is it possible that the forms in the Lachish Bowl Fragment, *bet* and *aleph* reflect not archaism in the alphabetic tradition but affinity with the Egyptian tradition? There are arguments for and against. The case against would appeal to the archaism of *heh*, suggesting some alternative explanation for *aleph* in line one, typologically or otherwise; this has been the implicit argument of alphabetic paleographers, made not out of conscious rejection of comparison to hieratic but out of ignorance of its relative ubiquity during the Late Bronze Age.

⁶⁸⁴ Goldwasser and Wimmer 1999.

⁶⁸⁵ See Abdel Samie 2009: pl. 29-29a; transliteration and translation on pp. 98-99.

The case in favor would argue three things: (1) the forms of both *bet* and *aleph* in line one of the Lachish Bowl Fragment are irregular; (2) they both appear to fit extremely well hieratic forms (displaying some contrast with contemporary alphabetic forms); and (3) hieratic writing is known and available contemporary with alphabetic writing, and even further ubiquitous at the same site, Lachish.

Aside from paleographic concerns, and visual arguments that might be levied in favor of seeing overlap between hieratic N1 and the *aleph* of the Lachish Bowl Fragment, the circumstantial case offered in chapter 2 above may factor in. There I argued in favor of seeing the Lachish Bowl Fragment as an alphabetic example of the Egyptian practice of writing administrative docket bowls. The graphic argument about the use of the *kr* sign would stand as another circumstantial evidence in favor of seeing some overlap between the script traditions. Whatever the exact case, the Lachish Bowl Fragment displays the ductus and appearance of a writer with some facility in the pen, probably gained over an extended period of practice and training—in what script, we do not know.

The importance of ductus and letter form in writing practice cannot be understated. The peculiar form of *bet* in the Lachish Bowl Fragment is written in a similar way to hieratic examples from the New Kingdom, likewise the *aleph* betrays an irregular alphabetic form that is congruent, however, with hieratic N1. Given the plurality of hieratic inscriptions used for administration discovered at Lachish, this overlap in form seems significant. As we outlined at the beginning of this dissertation, learning is a social phenomenon that creates a nexus of connections within a group. The amount of skill required to efficiently use the Egyptian-style rush pen, assuming as it does the hours of training and practice, would have been attained through an intense period, or periods, of apprenticeship. Being that Egyptian writing culture

precedes and coincides with alphabetic writing culture at Lachish, such apparent overlaps might be evidence of the broad sharing of these two writing cultures, further suggestive of the role of the ‘Egyptian scribe’ at Lachish in the transformation of the alphabet.⁶⁸⁶

4.2.2. Iron I/Iron IIA: Kh. Qeiyafa Jar and Ostrakon: Ductus and Aesthetic

As we move down in time, it seems that the Egyptian-style rush pen continued to be used in the southern Levant into the early 10th century, though it is difficult to be categorical because the evidence is minimal. Still, two inscriptions from Kh. Qeiyafa seem to attest to the continuation of the aesthetic style borne out from the Kh. er-Rai and Lachish examples above. These examples tell us, too, something about the ductus of early alphabetic writers in this period. As we move to examine these pieces, it should be remembered that analyzing the ductus of early alphabetic inscriptions in ink is difficult. This is in part due to the poor preservation of many of the inscriptions, and the fact that the methods employed for the better preserved papyri from Egypt are difficult to apply.⁶⁸⁷ Thus, we will seek to gain some insight by looking at the ceramic inscription from Kh. Qeiyafa, which on the one hand is better executed than the inked ostrakon and, on the other hand, preserves well for us the order of strokes due to the nature of the medium. In this case, the strokes on the Kh. Qeiyafa Jar, an incised ceramic vessel from the late 11th–early 10th century, allow some insight into ductus but also into aesthetics.⁶⁸⁸ Let us consider the better

⁶⁸⁶ Goldwasser 1991; Consider also the recent Lachish Jar Sherd naming a ‘scribe’ (Sass et al. 2018; Schniedewind 2020).

⁶⁸⁷ See Allen’s tour de force analysis of everything from letter form to the number of dips of ink and the amount of each text written with a single dip (2002). Allen’s powerful analysis of the particulars is difficult for the inked inscriptions from the Levant because the minute levels of thickness of ink that Allen so deftly examines are less clear in ostraca, especially poorly preserved ostraca.

⁶⁸⁸ Garfinkel et al. 2015; cf. Garfinkel et al. 2018

executed example of the jar as an emblem of writing practice before considering the peculiar features of the training text on the ostrakon.

The clear letter forms on the Kh. Qeiyafa jar are exemplary. The text moves from right to left, carefully incised in broad, robust strokes. The first fully visible letter, *aleph*, is composed of three movements, two downward diagonal movements with a final horizontal bisecting.⁶⁸⁹ Similarly, *shin* is clearly composed in four strokes, top to bottom. The general preference of letter composition is vertical downstrokes first, left to right, followed by horizontals, moving left to right and ordered top to bottom. This is true universally in inked writing. Möller comments that, though hieratic writing moves right to left, scribes have a tendency to compose signs with left to right horizontals, coming back toward the previous letter.⁶⁹⁰ Thomas Wahl has likewise noted that this left to right horizontal ductus is attested in later Hebrew inscriptions.⁶⁹¹ This is due to the material and physiological constraints imposed on writers, and we should be wary of making too much of this fact.⁶⁹² Nevertheless, the practice of incision on the Kh. Qeiyafa jar is indicative of the same sort of progression of movements which attests to a familiarity with inked writing (see fig. 4.11 below). The shifting of clay with a hard implement is given to its own set

⁶⁸⁹ See Garfinkel et al. 2015: 227.

⁶⁹⁰ Moller 1927: 7.

⁶⁹¹ Wahl 1971: 10; cf. Sirat 2006.

⁶⁹² It is quite apparent that this is partly constrained by the material features of the rush pen, which cannot, as we have said, be used to perform 'push' strokes without either (1) losing control of stroke width or (2) damaging the nib (Tait 1988: 479-480; van der Kooij 1986: 17-22). In addition, issues of physiology are at play as I have found in my own experiments with a rush pen that horizontal pull strokes, moving left to right, are simple to perform. Movements in the opposite direction, however, would have required the scribe to twist his wrist in order to adjust the implement and move the whole forearm to produce the stroke. This inefficiency results in a near necessity to perform simple wrist-controlled horizontal pull strokes from left to right.

of constraints (preferring pull strokes much like the rush pen) but provides no impediment to differing stroke order.

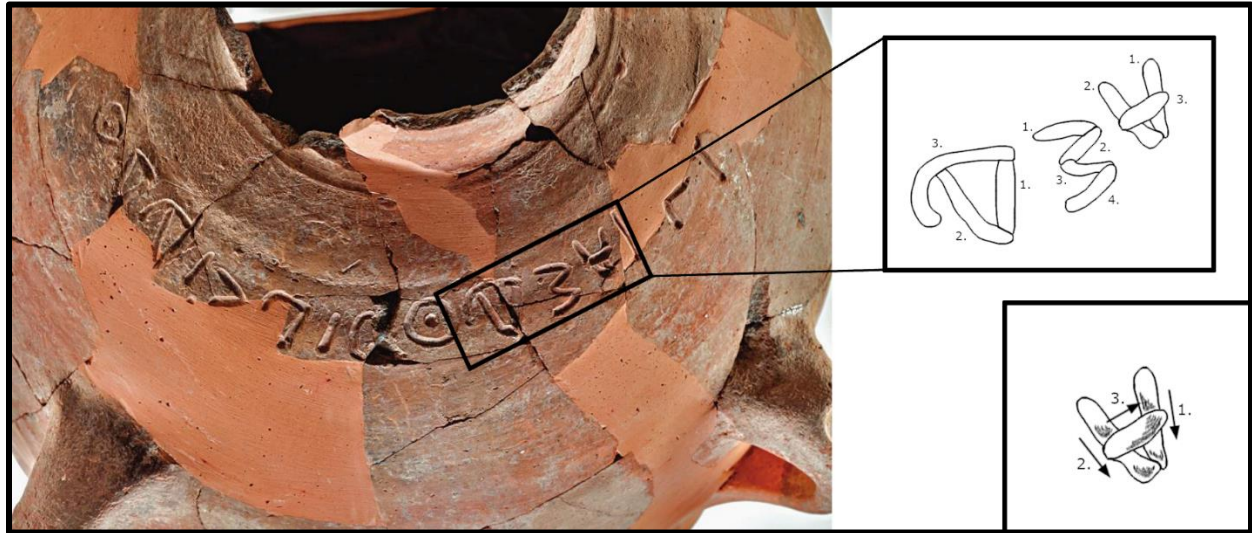


Fig. 4.11: Writing Practice at Kh. Qeiyafa as Exemplified by the Kh. Qeiyafa Jar (image from Garfinkel *et al.* 2015; ductus drawn by the author)

Another thing to note with incised inscriptions is the appearance of the letters. While we should be careful in comparing the appearance of inscriptions in different materials, there is an almost intentional quality to the lapidary form of the strokes, which is comparable to the inscriptions discussed above, as well as the Kh. Qeiyafa ostrakon (fig. 4.12 below). The writer's movements and possibly the imitation of an ideal appearance may attest to familiarity with inked writing on papyrus and the use of the rush pen. The writer then, when incising in soft clay, moves his new implement in ways familiar to the hand and appealing to the eye.



Fig. 4.12: The Kh. Qeiyafa Ostrakon at 90° (photo credit: G. Bearman and W. Christens-Barry)

The Kh. Qeiyafa jar is accompanied at the site by another, much more famous, inscription, the Kh. Qeiyafa ostrakon.⁶⁹³ While the jar provides details of the movement of the hand of the writer, the ostrakon provides, not only evidence of inked writing at the site, but a similarity in the aesthetic appearance and form of letters. This inscription, found during the recent excavations at Kh. Qeiyafa, under the supervision of Yosef Garfinkel, likewise dates to

⁶⁹³ See Donnelly-Lewis 2022: 181-210, especially 181 n. 1 with a complete list of previous studies.

the late 11th century, though the dating is debated.⁶⁹⁴ A few features of the inscription stand out. In general, the strokes of the letters are broad, with little deviation. The full end of the implement was placed on the surface of the ostracon to form the strokes, as indicated by the clear circular (oval) points form at the beginning and end of strokes (see fig. 4.13 below). The movement of the pen is difficult discern, as are the order of strokes, due in large part to its poor preservation. Consider just one letter, *ṭet* in line two, as emblematic of both the unpracticed hand of this inscription and the broad stroke style.

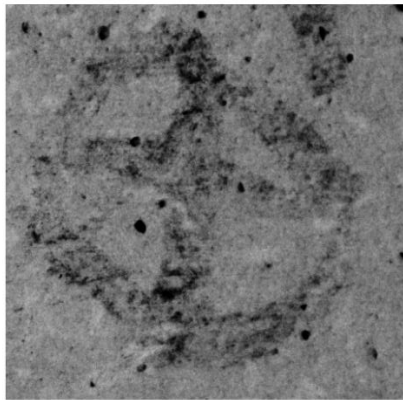


Fig. 4.13: The Letter *ṭet* in the Kh. Qeiyafa Ostracon (photo credit: G. Bearman and W. Christens-Barry, produced at Megavision laboratory).

The ductus of *ṭet* in the Kh. Qeiyafa ostracon is difficult to reconstruct. The exterior circle seems brutishly composed, with shifts and pivots as the pen pulls across the surface. It is difficult to tell how many strokes would have been needed to create this form. A well-executed *ṭet* of a later period would have been four strokes, two for the exterior and two for the interior. In contrast, the exterior here is incongruent in a number of places suggesting either a large number of strokes or awkward pivots as the left-side of the letter appears to show. Due to the poor state

⁶⁹⁴ Garfinkel, Ganor, and Hasel 2012.

of preservation it is difficult to tell whether an attempt is made to decompose the sign into two or three major strokes, though in any case with little skill. Notice that the left side of the *tet* in figure 4.13 is slightly raised in comparison to its counterpart on the right side. Likewise, the left side seems to consist of one stroke pulled down, with an artless hitch before turning to the right. The right side appears to be two quarter-circle strokes and the exterior is made up of one horizontal stroke made lower than the (two?) vertical stroke(s). The form, nevertheless, mimics a robust circular appearance similar to the appearance of the circle of *ayin* in the jar above. I would suggest that the writer, at pains in doing so, may have assumed that the letter forms should be as robust and broad as possible—as we have suggested, using the full end of the implement. Letter 2.3, *tet*, is merely an example of how this style of appearance, as we have called it aesthetic, could impact the writing style.

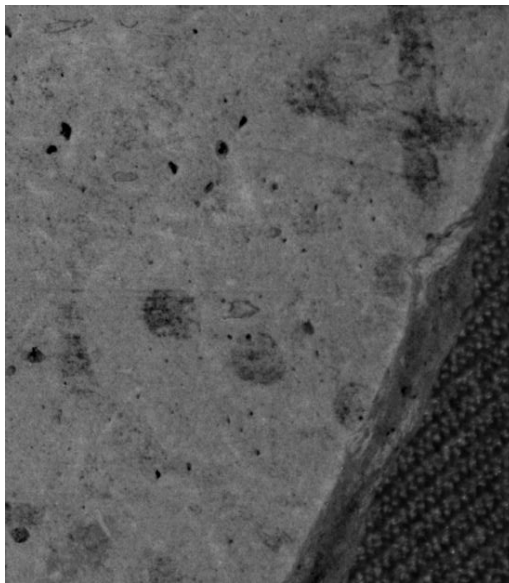


Fig. 4.14: Circular Ink Deposition on the Kh. Qeiyafa Ostracon (photo credit: G. Bearman and W. Christens-Barry, produced at Megavision laboratory)

These two inscriptions from Kh. Qeiyafa represent the only data dating to the 11th century, and coming from a modern, scientific excavation, from which we can make suggestions as to the

continued use of the Egyptian-style rush. In less than a century, the style and appearance of inscriptions from the southern Levant will change partly induced by a change in the preparation of the pen and perhaps interaction with Phoenician writing culture.⁶⁹⁵

Excursus—Undifferentiated Iron I- early Iron IIA: The Beth Shemesh Ostrakon

The last inked inscription worthy of examination for describing the use of the rush in the early Iron Age is the Beth Shemesh Ostrakon. The ostrakon was discovered in Grant's excavations at Beth Shemesh during the 1930s and of generally early date, though a secure date cannot be established.⁶⁹⁶ Paleographically, the ostrakon expresses several allographic forms of the same letter, adding to the difficulty in dating. However, in view of the epigraphic discussion above, a date as early as the Iron I (late 12th - 11th centuries) with a *terminus* in the early Iron IIA (10th century) is probable, and likely. The inscription is brushed on with, apparently, the Egyptian-style rush pen, though it is difficult to be certain. The strokes are robust and for the large part rectilinear. The ductus is part intermissive, however, the ostrakon does evidence some intriguingly cursive features. The most obvious of these is the almost spiral form of *mem* on the verso (see fig. 4.15). With this letter it does not appear that the writer lifted the implement but rather elegantly brush in the round, as it were, until its termination in a lengthened tail. The form of *ayin* is decomposed into two strokes, intermissive, with a center dot on the verso but no visible dot in the *ayin* of the recto. Overall, the ostrakon is a compilation of forms, some well executed and some seemingly incompetent.

⁶⁹⁵ Lehmann 2020.

⁶⁹⁶ Grant and Wright 1939: 46 [Area Y 31]; for discussion see Sass 1988: 64-65.



Fig. 4.15: The Beth Shemesh Ostrakon (drawn by the author)

Two letters stand out for their various forms. *het* and *aleph* appear in multiple forms drawn with seemingly multiple ductus. In the first case, *het* is drawn (right hand side, recto; fig. 4.15) with two verticals and three horizontals. The middle horizontal transgresses the rightmost vertical slightly and the bars are spaced apart. The length of the outside verticals is uneven. The leftmost vertical extends far below the right. This *het* is written with intermissive ductus, and rather poorly at that.

The second *het* (left hand side, verso of fig. 4.15, at bottom right) is drawn with a pronounced top horizontal turning immediately down in cursive ductus to form the right side (without lifting the implement). The *het* is then completed with a middle horizontal, a lower horizontal and a long vertical, extending below the bottom horizontal. In contrast to the first *het*, this letter is drawn fairly well and exhibits some facility with the tools.

The third *het* (left hand side, verso, of fig. 4.15, at the middle left) is barely visible from the photos, but appears to be written in yet another form. From what is visible, the verticals extend below the bottom horizontal but not above the top. This creates a short, stout, almost

armoire like shape with small ‘feet’ sticking out at the bottom, unlike either of the previous two examples. It is difficult to access the value of this form due to its poor preservation.

What can be said of these three forms of *het* and what, if anything, does it communicate about writing practice? In my estimation there are only three options to explain the variability expressed in this ostrakon: (1) *allographic* variation, (2) a practice text, or (3) multiple writers. Any of these options would have some novel impact on our understanding of writing in this early period, as such they are worth of a brief exploration.

The first explanation for the multiple forms is *allographic* variation. It has been suggested that *allography* was a feature inherent to early alphabetic practice. Lehmann, in discussing early Iron scripts identifies *allography* as, “*graphetic* differences that did not interfere with readability within a very small literate elite. [...] In the Late Bronze/Early Iron Ages we have a loose and spacious trans-regional, non-hegemonic and even supra-lingual standard. It is not a typological standard set by a local administration or school, rather by means of writing technique.”⁶⁹⁷ Lehmann sees *allography* as the coexistence of multiple forms, small “*graphetic* differences, these abide in different writing communities. It seems unlikely that the significant differences between individual signs in one inscription would qualify as *allographic* in the sense that Lehmann means it. Still, we may expand Lehmann’s argument to include variations in the order and form of strokes in an individual sign, seeing as he has argued that readership is the defining quality. Further, it should be noted that variations in form and ductus can be noted in hieratic writing, even within an individual hand. Consider the variation expressed for Gardiner

⁶⁹⁷ Lehmann 2020: 77.

A1, “seated man,” in the individual hands of the Heqanakht papyri.⁶⁹⁸ Through both paleography and statistical analyses scholars have identified at least three writers responsible for the various Heqanakht papyri, thus we can compare meaningfully the breadth of variation in the hand of a single writer (here as ‘scribe) over one or more papyri.

Scribe #1



Scribe #2

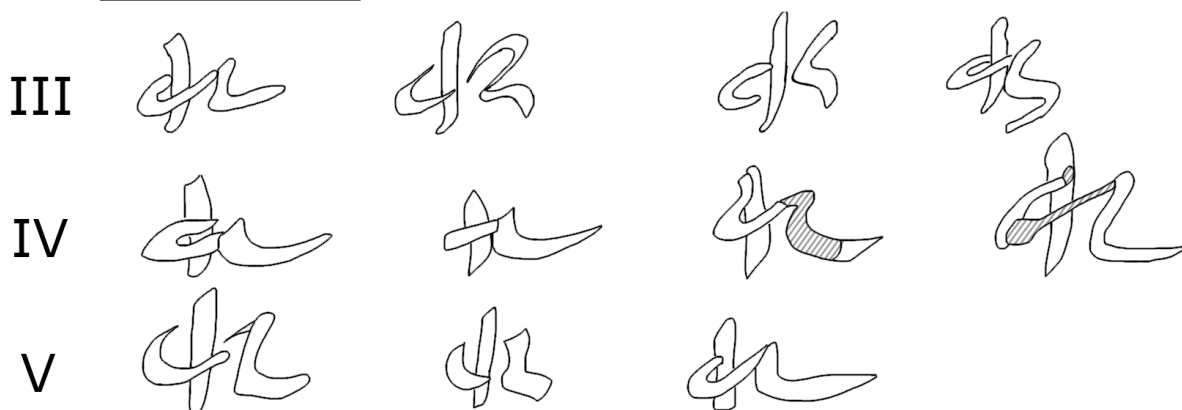


Fig. 4.16: Ductus of A1 in Heqanakht Papyri (adapted by the author from Allen 2002: 193).

⁶⁹⁸ Allen 2002: 193 (see fig. 4.16 below).

One major difficulty with the hypothesis of simple allographic variation is the degree and significance of the variation between the letters seen in the Beth Shemesh Ostrakon. hieratic examples of variation in form and ductus seem much more refined, even judging from the non-literary ostraca. The variation expressed allographically in hieratic, in many cases, come from a single trained hand over some time. While the order and even morphology of strokes change from one example to the next, they rarely if ever move from skilled execution to unskilled execution. Yet, with the Beth Shemesh ostrakon, forms are, at times, skillfully produced and at other times unartfully produced.

The infelicity with which certain forms are drawn in the inscription leads quite naturally to a second explanation, a pedagogical text. That is, one way to account for the variation expressed in the letter forms of the Beth Shemesh ostrakon is to assume an unskilled hand working at practice. This is a reasonable suggestion and not infrequently assumed when approaching particularly difficult inscriptions. Lists, and lists of names in particular, are common among practice texts and so we should not be surprised to see a list of names as a potential practice for a writer working to improve their control of the implement and spelling simultaneously.⁶⁹⁹ Two features of the ostrakon, however, seems to suggest that this list, however, is not for practice. First is the prefix *lamed* on the first name on the verso. This is a common feature of administration, especially administrative lists. The prefix *lamed*, in all probability, indicates that the first name is the commander of the following group of names.⁷⁰⁰ Second, the use of dots on the ostrakon have been suggested to have something to do with

⁶⁹⁹ See Schniedewind 2019, especially “From Lists to Literature.”

⁷⁰⁰ See Mendel-Geberovich 2014: 340-341.

administration, the marking of workdays or something of a similar manner.⁷⁰¹ Both of these features would suggest that the ostrakon had a practical use rather than a use for practice.

The only option left is an intriguing but perhaps controversial one, multiple writers. The variant forms in the ostrakon might be explained as the work of multiple hands, having to sign their names on the work form, as it were. This would be highly irregular. There is only one, unprovenanced, example of an inscription with multiple hands, signatures, dating probably to the seventh-sixth centuries, but aside from this, examples of many hands at work in a single inscription without clear demarcation are not forthcoming.⁷⁰² The conclusion of multiple writers would be controversial because it would be to suggest that basic literacy was perhaps broader than has been argued for the 11th-10th centuries. To counter this it should be recognized that the sort of basic literacy necessary to recognize letters and spell one's own name is different than high level literacy, what some might call 'literary literacy.' Still, no firm conclusion can be reached at this time.

The Beth Shemesh ostrakon is enigmatic. For the theme of the chapter, the ostrakon enters into the discussion because of its apparent use of the Egyptian-style rush pen. The style of the skillful hand of the commander is in keeping with the prior examples of the use of the rush pen in this period, though we cannot of yet account for the variation in the execution of forms. Further, while we cannot date the ostrakon with certainty, the use of the rush in this style suggests sometime in the Iron I–early Iron II prior to the novel preparation and form that characterizes inscriptions from the Gezer Calendar on down.

⁷⁰¹ See Yeivin 1939: 11 cited in Sass 1988: 65.

⁷⁰² Aḥituv 2008: 186-189; cf. Deutsch and Helzer 1995: 88-103.

4.3. Conclusions on Orthography

The corpus of early alphabetic inked inscription from the end of the Late Bronze Age to the beginning of the Iron Age is small but important. Important because it attests to the use of an implement prepared in a fashion unknown from later inscriptions. While the skill and experience of each writer with the implement varies from text to text, the broad-brush strokes are typical of the normative appearance of inked inscriptions in this period. In a later period, the slight, almost automatic, typographical form of inscriptions indicates the use of, as Lehmann has argued—and van der Kooij before him—the *chisel-shaped wide nibbed* pen. In light of this, the early period, even with its small corpus, provides some evidence that the traditions of pen preparation in the Egyptian-style, with oblique oval shape, continued in the early Iron Age before giving way to a uniquely Levantine style of preparation.⁷⁰³

⁷⁰³ Lehmann 2020.

Chapter Five How to Write (II): Writing Direction and Letter Direction

Introduction

When we sit down to write, we immediately know where to start. Our eyes move to the left of the page and trace the letters as we lay them down. We move vertically down the page, imprinting horizontal lines of text, left to right as we go. We feel an unconscious apprehension at transgressing the light red line at rightmost margin of our paper and move immediately to begin a new line just right of the dark red margin on the left side. When we have reached the end and have more to write, we flip the page over or move on to the next page without so much as a thought. Our pages are rectangular shapes with height larger than width, disconnected and stacked, when they are printed. Our off hand stands at rest, only useful for stabilizing or shifting the page and, on occasion, as support for a weary head. Such is the experience of writers using modern European scripts like English. Horizontal lines, reaching across the body to begin left to right, descending vertically down the page—writing effected only by the subtle movements of our dominant hand, or, more often, simply by our dexterous fingers on a keyboard. While taken for granted, we do not appreciate how deeply engrained in our psyche this sort of textual practice is, and how experience with our particular writing system inculcates us with writing practice that extends into culture.

This chapter will consider what writers in the ancient southern Levant assumed normative writing direction to be, as concerns both whole lines and individual letters. Writing direction, I will argue, is influenced by two major factors, culture at large and mechanical constraints. In considering the writing of whole lines, I will argue that the stabilization of right-to-left writing was primarily motivated by mechanical and physiological constraints induced by the tools and

postures of the writer. Writers composing a text did so with particular tools (discussed in part one) that induced particular postures (discussed in the last chapter) which, when coupled with physiological facts, determined a direction of writing that favored a beginning on the right side of the surface. In considering the writing of individual letters, however, it seems that the cultural context of writing in the southern Levant during the Late Bronze-Iron Ages may have been determinative of writing direction. In this early period letters rotate and mirror even in the most competent hands. I will argue that cultural conceptions (or rather socio-cultural context) of writing may explain this significant irregularity in the writing of early alphabetic.

5.0.1. Writing the “Right” Way: Culture and Writing Direction

Writing direction and how we conceive of it is primarily cultural. Thus, Herodotus in his *Histories* records a conceptual difference between Egyptian and Greek writing in a strange and somewhat confusing way. He states, “the Greeks write and calculate from left to right; the Egyptians do the opposite; yet they say that their way of writing is towards the right, and the Greek way towards the left.”⁷⁰⁴ While not immediately comprehensible, it would seem that Herodotus records a conflict in views of how writing moves that is based on perceptions of both the ideas of ‘writing’ and ‘movement’. While Herodotus assumes that the orientation of writing, the way writing moves, is in the production and reception of writing. The writer lays down text moving across the page left-to-right. In contrast, if Herodotus is to be trusted, his ‘Egyptians’ conceive of the movement of writing differently. For them, the direction of writing, the way it moves, is not in the production and reception of writing, how one lays text down, but in the relationship between the beginning and end of individual lines. That is, for Herodotus’s

⁷⁰⁴ Herodotus *Hist.* II.36.

Egyptians, and for Egyptians in the ancient record, the writing the hand moves left to right when beginning a new line, as opposed to Greek writing where the hand moves right to left in beginning a new line (see fig. 5.1 below). For Greeks, as for modern writers of Romance and Germanic languages, we define the direction of writing from the beginning of the line, how one's hand traces across the page while we write. For Herodotus' Egyptians, however, they apparently defined the direction from the end to the beginning, how one's hand moves from the end of one line to the beginning of the next, showing just how cultural our conceptions of writing and its direction are.



Fig. 5.1: Conceptualization of Writing Direction, “They say that their way of writing is toward the right” (Greek [left above]: L > R while writing; R > L when beginning new line; Egyptian [right above]: R > L while writing; L > R when beginning new line; drawn by the author).

Being a part of culture, writing direction, its effects and conceptualization, extends beyond books and pages to impact, in many ways, the whole of how we conceive the movement and

progression of the world, time and space itself.⁷⁰⁵ The psychological effect of assumptions about the directionality, where a thing begins, where it ends, and how it moves in-between, has been the subject of study in a variety of fields.⁷⁰⁶ Though the majority of the world's population is right-handed, literate cultures that begin texts at the left exhibit a sort of bias toward the left-hand side of things, resulting from the pervasive influence of our writing.⁷⁰⁷ This is why, for instance, in the literate western world optimal product placement for items in stores is left-to-right, the progress bar on videos moves left-to-right, and even icons on the virtual screen prioritize space left-to-right.⁷⁰⁸ The cognitive effect of our writing practice shapes perceptions of the world, and produces automatic biases about where to look and find something. The non-textual world, writ large, invariably becomes ordered by the individual textual experience of reading and writing direction. The dynamic interplay between literacy and culture produces assumptions that impact both.

5.0.2. Write Like an Egyptian: Directionality and the Mechanics of Writing

This curious intersection between writing and culture, relies too in large part on the intertwined motives of practicality and physiology. To understand the origin of writing direction and its fixation, we need to first understand posture, pen hold, and right-handedness. As discussed in the last chapter, the pen hold of the ancient Egyptian writer was often elevated, allowing the writer to freely move the tip of the rush across the papyrus. The common representation of the seated

⁷⁰⁵ Bergen and Chan 2005, Bergen and Chan Lau 2012; further its influence extends to cognition and even memory (see Kazandjian and Chokron 2008; Román et al. 2016; and Guida et al. 2018).

⁷⁰⁶ See Bergen and Chan Lau 2012 and Kazandjian and Chokron 2008 for examples.

⁷⁰⁷ Gilbert and Wysocki 1992, Corballis 1997; Kazandjian and Chokron 2008.

⁷⁰⁸ On time see Bergen and Chan Lau 2012; the effect of left-to-right processing and (what is called) visual saliency is well-known in literature on product marketing, with the left-hand orientation being “prime placement.”

scribe plays a roll in the direction of writing. While Egyptian writing exhibits practices, especially in the use of Hieroglyphs, of sinistrograde, dextrograde, and columnar (i.e., vertical) writing, cursive scripts in Egyptian are regularly sinistrograde after the Middle Kingdom.⁷⁰⁹ This is of practical import. Writing in horizontal lines facilitates speed and accuracy in the production of texts, and therefore has a very natural practical advantage over columnar writing.⁷¹⁰ But the prime motivation for writing sinistrograde seems to be related to the practice of papyrus inked writing where the natural starting point is nearer to the right hand. This seems to be also informed by posture, where the left hand and forearm are positioned so as to simultaneously hold the papyrus scroll open and be able to quickly shift the papyrus to continue with the next line.⁷¹¹ Stretching out the papyrus over the tight kilt, the elevated hand of the writer brushed groups and signs on right to left because this is the most natural movement of right-handed writers (see discussion of posture in previous chapter, section 4.1.1.). The writer extended his or her arm and, unincumbered by the danger of smudging the ink, as would have occurred with a hand resting on the surface, began where the arm extends, on the right.⁷¹² It would have been possible for the writer to reach across the body to begin on the left, but this is unnecessary. Figure 5.2 below shows an artistic representation of the writing hands, including the offhand on the rolled papyrus. The offhand was able to manipulate the papyrus as needed and to hold the roll in place on the lap while writing.

⁷⁰⁹ Eyre 2013: 37-38; Polis 2019: 555; and Parkinson and Quirke 1995: 26-27.

⁷¹⁰ Eyre 2013: 37-38.

⁷¹¹ Sirat 2006: 384-385

⁷¹² Sirat 2006: 384-385.

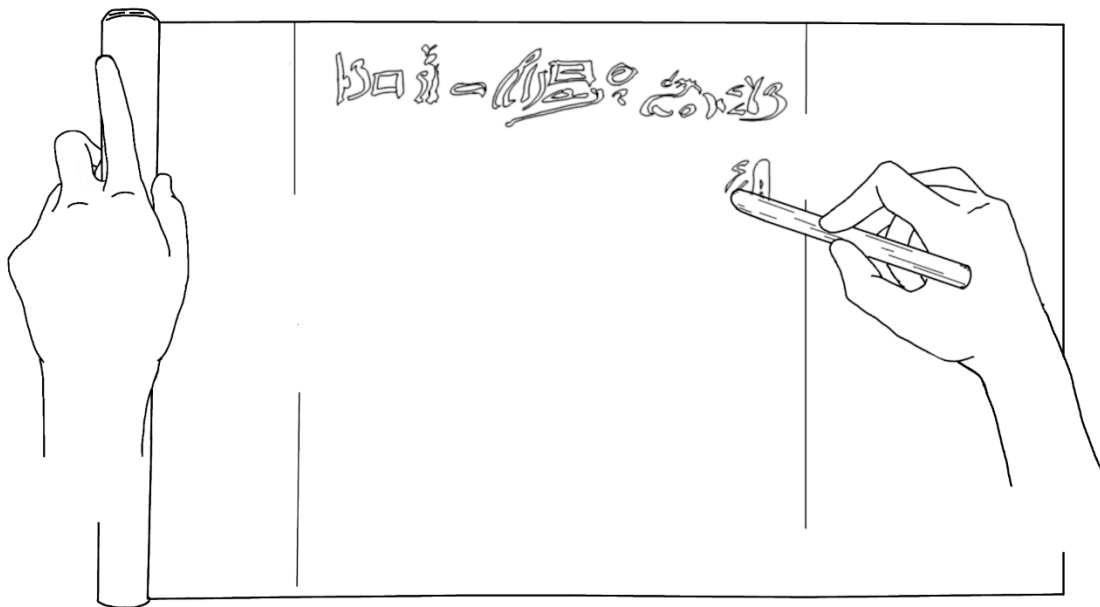


Fig. 5.2: Artistic Representation of Hand-Placement for Writing on Horizontal Papyrus (drawn by the author).

Writing on horizontal papyrus was, however, not the only way to write. Images of scribes depict different scenes of writing and textual evidence attests to different orientations of the papyrus.⁷¹³ One orientation, used for administrative reports in ancient Egypt, is known by the Latin name *traversa charta*, with reference to Suctonius (see fig. 5.3 below).⁷¹⁴ The orientation of the papyrus does not, however, change the basic mechanics of writing, as the extended right arm still begins on the right side. This has implications for the fixation of early alphabetic script traditions, Old Hebrew, Phoenician, and Old Aramaic and some implication for the direction of writing even as attested by early alphabetic inscriptions. This has an important impact too on the

⁷¹³ Parkinson and Quirke 1995: 35-37; Sirat 2006: 384-386; cf. Cerny 1952.

⁷¹⁴ Cerny 1952: 22.

experience of the writer and the learned assumptions about writing practice that influence writing culture on the most basic, most practical level.

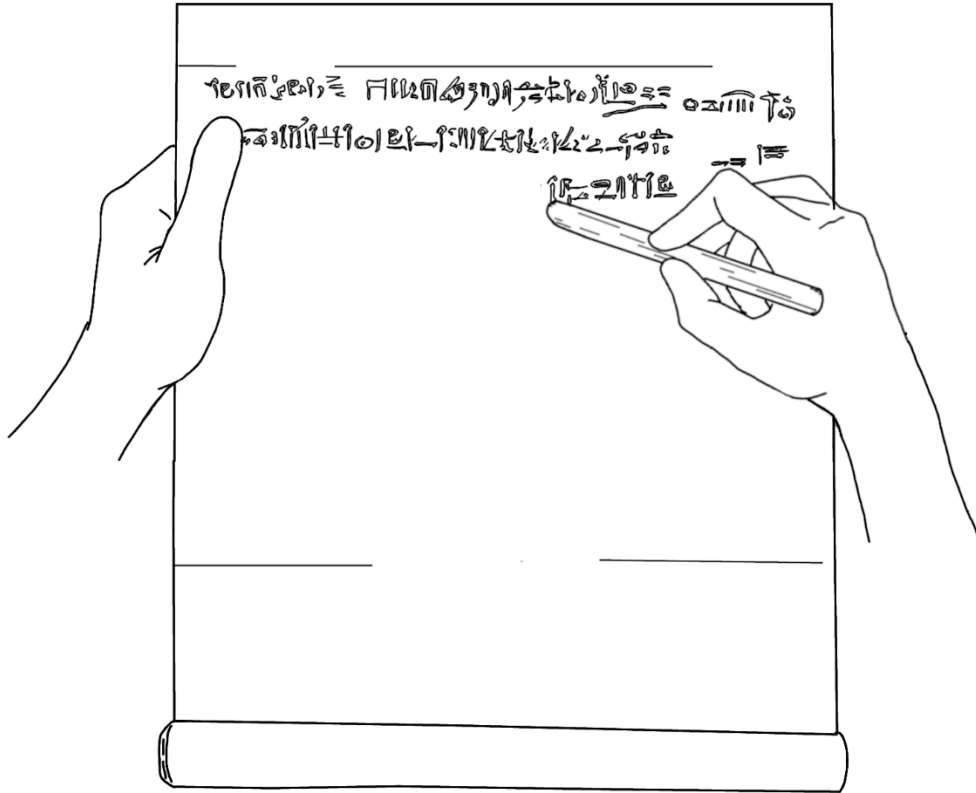


Fig. 5.3: Artistic Representation of Writing *transversa charta* as exemplified by p. Moscow 120 (drawn by the author).

The sinistral orientation of Egyptian writing, and subsequently alphabetic writing, represents another practical, materially induced distinction between the writing cultures of Egypt and the Levant in contrast to cuneiform writing culture dominant in Mesopotamia and points further north. As we have argued, the shared experience of writers with the materials drives assumptions and perspectives of writers on writing. Cuneiform moves in dextral horizontal lines of wedges across clay. And, much like writing in ink, writing with wedges in clay induces its own sort of traditions that arise from the experience with the material. The cuneiform tablet

requires an “imprinting” of signs, and therefore some force applied to the writing surface and its consequent support.⁷¹⁵ If, as we have suggested above, the majority of writers are right-handed, then the clay support for writing in cuneiform required a firm grip in the writer’s left hand. They imprinted with a stylus held at a narrow angle with the right hand to carefully, yet efficiently form each sign.⁷¹⁶ Here there is a quite natural preference to begin on the left where the interior of the palm provides the greatest support for the tablet against the force applied by the leveraged stylus. Starting from the right, while of course possible,⁷¹⁷ would provide the least support and place the writing hand in the most removed position.

These mechanical constraints are likely determinative of the direction of daughter scripts in cuneiform like Ugaritic, as Bordreuil comments,

Cet heritage formel, trop souvent passé sous silence, est un élément fondamental que les inventeurs de l’alphabet d’Ougarit ont hérité des pratiques sribales mésopotamiennes. L’orientation dextroverse, définitivement stabilisée dans la région depuis plus d’un demi millénaire, est donc restée une constante.⁷¹⁸

The intertwined motives of prior knowledge and the physiological constraints of cuneiform writing with stylus gripped at a narrow angle were determinative of the dextrograde orientation of Ugaritic alphabetic cuneiform. As such, while mechanical constraints are important, there is undoubtedly something cultural about the adoption of cuneiform for alphabetic at Ugarit. The basis for many of the signs was, apparently, linear, suggesting linear models already existed,

⁷¹⁵ Sirat 2006: 375-377.

⁷¹⁶ See detailed discussion of the paleography and writing practices of (alphabetic) cuneiform in Ellison 2002 and 2015; for more on direction Powell 1981.

⁷¹⁷ For more on the diversity of script directions in alphabetic cuneiform see Dietrich and Loretz 1988 and Bordreuil 2012. There were likely multiple traditions of direction and numbers of signs (Lemaire 2008).

⁷¹⁸ Bordreuil 2012: 2.

probably written with ink on papyrus.⁷¹⁹ Thus, while it is beyond the purpose of this dissertation to speculate, we might suggest that the experience of the writers at Ugarit with Akkadian and their identification with cuneiform culture was a motivating factor in the adaptation of linear alphabetic letters to the cuneiform medium. Traditions of writing, and writing direction, are traditions for a reason; they are deeply embedded within the system of writing culture that arises from the regular material and the shared experience of writers with that material. Thus, the materiality of writing, its implements and support, are inextricably connected to physiological constraints like hand position and posture which themselves might engender different associations and assumptions about writing.

5.1. Directionality in Writing in the Southern Levant

It is well-known that later Hebrew writing in the Iron II uniformly moves right-to-left. The consistent trajectory of writing, right to left, permeates the early scripts of Phoenician, Aramaic, Hebrew, and even the earliest Greek material. But when does this consistency in directionality form and what does it mean? In what follows, we will look at the earliest alphabetic material from the southern Levant to see if a pattern emerges and what reasonable inferences might be made about the direction of writing, when and why it stabilizes.

5.1.1. The Emergence of Sinistrograde Writing: Alphabetic into the 10th Century

The earliest alphabetic material from the Levant attests to an instability in writing direction. Inscriptions can move dextrograde or sinistrograde with no larger consistency to be seen. Examining the table below seems to indicate that this is indeed the case. However, with what we understand about directionality as physiologically and materially induced, we should make some

⁷¹⁹ See Cross and Lambdin 1960.

comments on the validity of our understanding of writing direction in the early periods in order to draw some conclusions about when and why it stabilizes.

Table 5.1 Sample of inscriptions from the Late Bronze to the Iron IIA⁷²⁰

	Period	Novice	Skilled ⁷²¹	Method	Direction
Lachish White Slip	LB II		X(?)	Ink	Unknown/Circular?
Tell en-Nagila	LB II(?)	X(?)		Incised	Left-to-Right
Lachish Ewer	LB III	X		Ink	Left-to-Right
Lachish Bowl	LB III		X(?)	Lime	Right-to-Left
Lachish Bowl Fragment	LB III		X	Ink	Left-to-Right
Qubur al-Walayda Bowl	LB III	X(?)		Incised	Left-to-Right
Lachish Jar Sherd	LB III		X	Incised	Right-to-Left
Kh. er-Rai	Iron I		X	Ink	Right-to-Left
Izbet Sartah	Iron I	X		Incised	Left-to-Right
Kh. Qeiyafa Ostrakon	Iron I/IIA	X		Ink	Vertical ⁷²²
Kh. Qeiyafa Jar	Iron I/IIA		X	Incised	Right-to-Left
Kfar Vradim Bowl	Iron I/IIA		X	Incised	Right-to-Left
Beth Shemesh Ostrakon	Iron I/IIA	X(?)		Ink	Vertical
Kh. Raddana Handle	Iron I/IIA	X(?)		Incised	Vertical
Beth Shemesh Baal Sherd	Iron IIA	X		Incised	Vertical
Şafi No. 821141	Iron IIA	X(?)		Incised	Right-to-Left
Şafi No. 20D96C053	Iron IIA		X(?)	Incised	Right-to-Left

⁷²⁰ Lachish White Slip (Hoflmayer *et al.* 2021), Tell en-Nagila (Amiran and Eitan 1964; Sass 1988); Lachish Ewer (Gaster 1940; Sass 1988), Lachish Bowl (Diringer 1958; Sass 1988), Lachish Ivory Comb (Vainstub *et al.* 2022), Lachish Bowl Fragment (Ussishkin 1984; Lemaire 2004), Qubur al-Walayda Bowl (Greene 2016); Lachish Jar Sherd (Sass *et al.* 2015; Schniedewind 2020); Kh. er-Rai Inscription (Rollston *et al.* 2021); Izbet Sartah (Kochavi 1977; Naveh 1978); Kh. Qeiyafa Ostrakon (Misgav, Garfinkel, and Ganor 2009; Donnelly-Lewis 2022a); Kh. Qeiyafa Jar (Garfinkel *et al.* 2015, 2018); Kfar Vradim Bowl (Alexandre 2006); Beth Shemesh Ostrakon (Grant 1930; Sass 1988); Kh. Raddana Handle (Cross and Freedman 1971); Beth Shemesh Baal Sherd (McCarter, Bunimotitz, and Lederman 2011); Şafi No. 821141 (Maier *et al.* 2008); Şafi No. 20D96C053 (Eshel *et al.* 2022); Rehov No. 2 (Ahituv and Mazar 2020); Manahat Sherd (Stager 1969); Ophel Pithos (Mazar, Ben-Shlomo, and Ahituv 2013); Gezer Calendar (Albright 1943; *HAE* 1:30-37).

I have left out the Lachish Ivory Comb from this list because the inscription quite new, several letters are not entirely clear, and the writing direction is somewhat confusing (Vainstub *et al.* 2022).

⁷²¹ These divisions between “Novice” and “Skilled” should be understood as heuristic. Some of the inscriptions are clearly written by competent writers, some are clearly written by writers in training, many, however, are difficult to tell. Especially as it regards incised inscriptions, it can be hard to tell a novice from a skilled writer. Generally, when the letter forms are well articulated, having consistency in size and appearance, I consider the writer skilled. In this regard, the better term would probably be “experienced.”

⁷²² Kh. Qeiyafa is written right to left in the progression of lines, whereas the progression of letters is vertical (columnar) writing (see ch. 7 below).

Rehov No. 2	Iron IIA		X	Incised	Right-to-Left
Manahat Sherd	~Iron IIA	X(?)		Incised	Right-to-Left
Ophel Pithos	~Iron IIA ⁷²³	X		Incised	Left-to-Right ⁷²⁴
Gezer Calendar	~Iron IIA ⁷²⁵	X		Incised	Right-to-Left

From the horizon of the LB II-III, it does in fact seem to be the case that writing direction is not stabilized. Examples like the Lachish Ewer attest to novice writers writing with different implements in different styles (and scripts) in different directions. Similarly, the Lachish Bowl and Lachish Bowl Fragment attest to writers probably more experienced in the letter forms and with the implements who nevertheless compose their texts in different directions. The last two of these inscriptions, the Qubur al-Walayda bowl and Lachish Jar Sherd, are likewise enigmatic. The Qubur al-Walayda bowl is well composed by a writer who chose to move from left-to-right. The reason, in this last case, may be materially induced. The writer incising the inscription does well to represent his letters but may have need to rest his hand on the surface of the bowl while writing, thus making a left-to-right orientation preferable, if not necessary. This is merely a suggestion. In contrast, the Lachish Jar Sherd evidences a writer skilled with the letter forms who

⁷²³ Kleinman argues on ceramic grounds for a date of the late 9th century for this inscription (2021: 167-179; cf. Finkelstein and Sass 2013; cf. Sass and Finkelstein 2023). Kleinman's ceramic argument is a more secure basis for establishing the date, though he rightly dismisses the idea that ceramic and radiocarbon concerns are the 'high court' in these cases (2021:175). Still, his assumption that a less developed script might have continued to be used longer than expected is, in my opinion, reasonable. If restricted literacy continued in non-elite communities, we might imagine that their letter forms and inscriptional style would mimic earlier periods. While I'm not sure I would date the inscription quite so late, there is no theoretical barrier to it.

⁷²⁴ Demsky's analysis is convincing, reading left-to-right as follows: ה[מר להנ] (see Hamilton 2015). Demsky, to my knowledge, has not published this opinion. Attempts to read this right-to-left have been less than satisfactory (see for instance Galil 2013 and more recently Vainstub 2023).

⁷²⁵ Since Albright (1943), the assumption has been that the Gezer Calendar is from the latter half of the 10th century (cf. HAE 1:31). It, however, was discovered out of context, written in a novice hand in limestone. Thus, while I would still argue in favor of a 10th century date, this cannot be certain (see low-chronology view in Finkelstein and Sass 2013).

incises delicately right-to-left. The alphabetic tradition during this period seems not to have established a regime of orthography, though, as we will see one quickly forms.

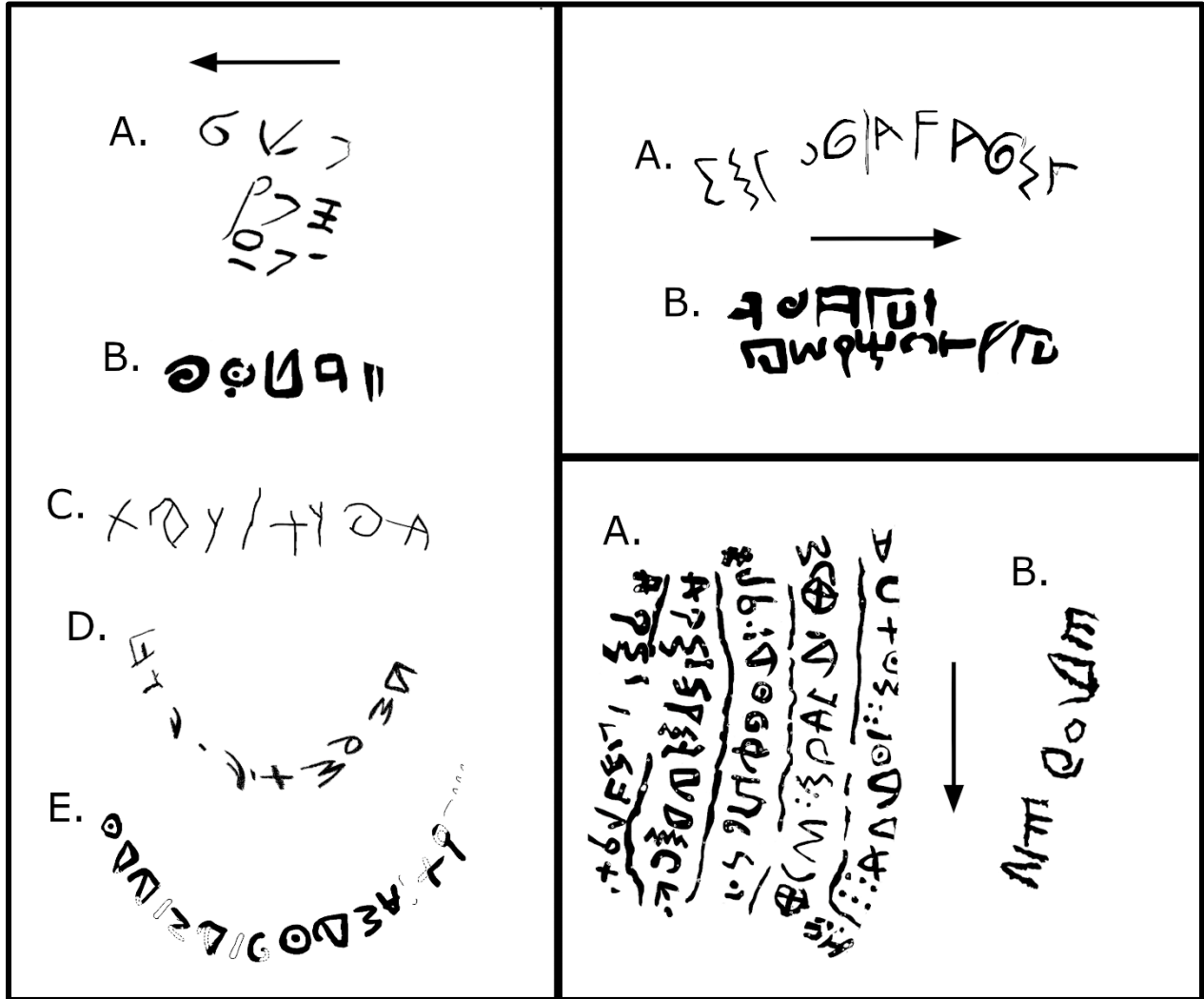


Fig. 5.4: Writing direction of select early alphabetic inscriptions (Left: (A.) Lachish Jar Sherd, (B.) Kh. er-Rai Ostrakon, (C.) Tell eš-Šafi Sherd; (D.) Lachish Bowl; (E.) Kh. Qeiyafa Jar; Top Right: (A.) Qubur al-Walayda Bowl, (B.) Lachish Bowl Fragment; Bottom Right: (A.) Kh. Qeiyafa Ostrakon, (B.) Beth Shemesh Baal sherd).

Moving down into the Iron I and early Iron IIA, we already see the stabilization of the orientation right-to-left. From the inscriptions of the Iron I to IIA, the only inscription written dextrograde is the practice text from Izbet Sartah. Almost every other text moves sinistrograde,

with the exception of the Kh. Raddana handle written vertically. But even this last text, from Raddana, attests to a tradition of columnar writing that descends vertically with the only one example lineating right-to-left (Kh. Qeiyafa Ostrakon). Still, the stabilization of the directionality of the script seems to have already been established in the early Iron Age. The sole example of Izbet Sartah is the exception that proves the rule, a novice writer practicing the alphabet and basic letter forms. In contrast, by the end of the Iron I, it is clear that both professional and practice texts are organized right-to-left. The writers' natural movements take on the posture known for Egyptian writers, even if the tradition of direction cannot be wholly a product of Egyptian influence. Nevertheless, the Egyptian materials (pen and ink [maybe papyrus?]) alongside Egyptian practices of writing may have induced a standard of directionality that takes hold almost immediately.

It seems that when the alphabet becomes the normative script in the southern Levant (hieratic and cuneiform are no longer written), the movement is immediately to shape these organizational aspects of the script to known conventions of writing. Down into the Iron IIA and even further, the tradition of right-to-left writing continues. But in this early period of shaping the traditions of the alphabetic script, directionality of the script stabilizes quickly. The variability of direction, or lack thereof, however, is not the most intriguing aspect of early alphabetic writing. What is more intriguing is the direction and transposition of letters that does not seem to stabilize immediately. This has been an underrecognized feature of early alphabetic writing, but one that recent finds can help illuminate. So, let us turn now to the question of *letter* direction and ask why variability might have existed and why it is important to understanding the emergence and development of the early alphabet tradition in this period.

5.2. Letter Direction: Literacy and Vectoriality

The question of orientation and directionality of lines relates also to the question of letter orientation. While not often considered, the way letters face is likewise a matter of tradition and practice. In every writing system, it has been recognized that there is a normative procession of characters and graphemes, standing at attention, as it were, ‘facing’ one way or another. Scholars of the psychology of reading have referred to this aspect of the graphic form of a letter within a writing system as its ‘vectoriality.’⁷²⁶ Studies of literacy development discuss the formation and orientation of letters as perceived by their writers. The basic components of a letter are the “hasta,” which refers to the basic vertical stroke, and “coda,” which refers to strokes branching from the hasta, sometimes also called appendages.⁷²⁷ The ‘vectoriality’ of the letters refers to the assumption of writers as to which way the letters “face.”⁷²⁸ In the later Iron II scripts of the southern Levant, most of the letters are leftward facing. That is, their coda branch toward the left and face away from the beginning of the line. Certain letters, however, express different structures, facing back toward the beginning of the line (for example *tsade*). This sort of phenomenon is expressed in every alphabetic script, but the predominant orientation of moving with the writing direction is still expressed in most letters. This peculiarity is the result of a long development of those letters and practices of writing established through a long-standing tradition.

⁷²⁶ Brekle 1994.

⁷²⁷ Treiman and Kessler 2011; cf. Brekle 1994.

⁷²⁸ Brekle 1994; Treiman and Kessler 2011; see also Watt 1983 for reference to some aspects of this in early alphabetic.

In reading and writing practice, the vectoriality of a letter is somehow inherent to its essential properties as a letter.⁷²⁹ Reading English letters backward, *liǝ ǝq* has an almost uncanny feel, resulting in the impression that the script being read is somehow foreign. Letters in a highly literate environment garner expectation not just in the ‘correct’ formation (ductus and appearance) but also in their orientation. Thus, when we examine the early alphabetic inscriptions for aspects of letter orientation, we should consider when expectation is subverted and when it is confirmed, and what either of these orientations might mean.

5.2.1. Variability in Letter Direction: Alphabetic into the 10th Century

More puzzling than the variability in the orientation of whole lines (right-to-left or left-to-right) which can, to some degree, be accounted for by the mixture of learned preference and materiality, is variability in the stance and orientation of letter forms. Which way letters face, their vectoriality, is inconsistent in inscriptions from the 13th-10th centuries. Let us examine the variety of directions letters face.

The most conspicuous aspect of letter direction, which has drawn some past comment, is in the rotation or transposition of letters. This is exemplified well by Kh .Qeiyafa (see fig. 5.5 below). Scholars have wrestled with the multi-positionality of the letters in Kh. Qeiyafa, but it is a feature that is not unique in early alphabetic inscriptions in the LB-Iron IIA. More problematic than writing direction, which seems to stabilize in the 11th century, letter direction is variable until at least the late 10th century.

There is little consistency in the vectoriality of letters in these inscriptions. The evidence divides into two categories, rotating and mirroring letters. The latter category, rotated letters, is

⁷²⁹ Treiman and Kessler 2011.

something of a curiosity. Best exemplified by examples of *aleph* from Kh. Qeiyafa, *bet* in the Kh. er-Rai inscription, *yod* in the Lachish Ewer, and several examples of *tav* from a variety of sites, rotating letters indicate a lack of familiarity with the script. In later periods, the variations of, for instance, *tav* may result from divergence in script traditions but in early periods, single authors rotate letters in a variety of directions (e.g., Kh. Qeiyafa). Letter rotation is attested at least until the end of the Iron I with possible examples extending into the early Iron IIA.

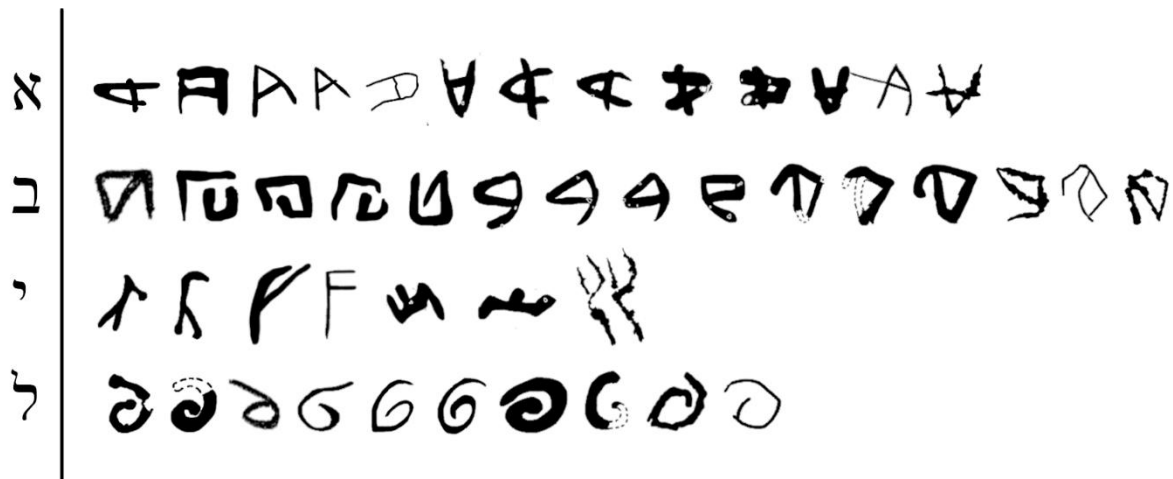


Fig. 5.5: Variable vectoriality in select early alphabetic letters (drawn and prepared by the author).

Mirror letters are a stranger phenomenon still. Consider the form of *bet* (fig. 5.5 above). In some forms the head moves away from the writing direction (Lachish Bowl, Lachish Bowl Fragment) or into it (Kh. er-Rai, Kh. Qeiyafa Ostrakon, Kh. Qeiyafa Jar, Beth Shemesh Baal Fragment). Similarly, *lamed* sometimes opens away from the writing direction (Kh. er-Rai, Qubur al-Walayda, Lachish Bowl, Kh. Raddana Handle, Tell eṣ-Ṣafi Sherd, Ophel Pithos) or into it (Lachish Jar Sherd, Lachish Ewer, Lachish Bowl Fragment, Beth Shemesh Ostrakon, Beth Shemesh Baal Sherd). Like letter rotation, the mirroring of letters can indicate an unfamiliarity with the script, or further still a lack of ‘standard.’ Further, it could be indicative of the local

varieties of alphabetic in the Iron I to early Iron IIA where according to Lehmann allography ruled.⁷³⁰ Still, the lack of any perceptible vectoriality in the letter forms of the early alphabet (13th-10th centuries) is striking. As we have already explained, writing is not simply composed of the individual choices of the writer but as writing as a material practice is a social practice and caught up in a nexus of connections between, within, and outside of writers that influence the understandings and perceptions of writing. For this reason, I will offer an interpretation of vectoriality that develops the phenomenon witnessed in these texts in their socio-cultural context, commenting on the role and place of writing in the early Iron Age.

5.2.2. A Chaotic Appeal: Heterography and the Early Alphabet in Social Context

The issue of writing direction is a curiosity but can be explained by embodied features of writing practice, perhaps a confluence of material practice and social convention. Letter direction, on the other hand, is not so easily explained. As such, the lack of perceptible vectoriality and stance in letters of the early alphabetic variety up to and into the 10th century should be understood in light of the social location of alphabetic writing in this period and its relationship to other, more dominant forms of writing such as hieratic.

The alphabetic script, though invented earlier in the 2nd millennium, fails to attract institutional support. As such, it continued to exist on the periphery for centuries before its ultimate adoption by the Levantine kingdoms. This produces unique social circumstances for the alphabet. Whereas the early emergence of Egyptian hieroglyphic and cuneiform in Mesopotamia are coupled with institutional concerns, to greater and lesser degrees, the alphabet remains a democratized script for nearly a millennium before its institutionalization. As such, particular

⁷³⁰ Lehmann 2020.

trends develop that are evident into the early Iron Age. To understand what these features are we need to revisit the idea of orthography as a social practice, that is, writing exists in a social context, an orthographic space.

The theorist Mark Sebba refers to three spaces that writing inhabits, a regulated space, a partially regulated space, and an unregulated space.⁷³¹ The latter two categories define the operation of writing in spaces ranging somewhere between graffiti and official inscription.⁷³² The orthographic space of writing, regulated to unregulated, is instructive of the kind and quality (of appearance) of inscription likely to be found. In the alphabet's maturation through the 2nd millennium, it, by necessity of its relationship to the more dominant scripts of the time, operated only in these partially regulated or unregulated spaces. Scripts limited to this sort of social situation evince particularities uncommon to institutional scripts, in regulated spaces.⁷³³ But how does this help us understand the aberrant features of early alphabetic and the variability in letter vectoriality displayed above? Here we must marry an understanding of orthography in time and space with an understanding of writing as literacy, and literacy as local.

Issues of letter direction and orientation do not seem to concern the writers of early alphabetic inscriptions. Two skilled writers could have similar forms of a letter but different understandings of its orientation (Lachish Bowl v. Kh. er-Rai). Similarly, an individual writer might choose various orientations without much thought as the "right" or "proper" way of writing (Lachish Ewer *yod*, Kh. Qeiyafa Ostrakon, many). While we might chalk this up to

⁷³¹ Sebba 2009: 43-44.

⁷³² Sebba 2009: 44.

⁷³³ See for instance Sebba 2009: 46-57; cf. Blommaert 2008, Lillis 2013.

‘poor’ literacy, there is a better, more nuanced answer that first begins by redefining literacy. In recent decades critical literacy studies have introduced complications in the classic definitions of literacy and the sorts of questions asked about literacy practice.⁷³⁴ This has resulted in a reinterpretation of literacy practices in light of broader socio-political and even cultural concerns. As such, the subversion of expectations in a script may be the result of its social location and may communicate something about the perceived standards of the writer. Interpreting the transposition of letters in early alphabetic in this light may be helpful in defining exactly how we should understand this phase of early alphabetic.

Without over complicating the discussion with peripheral theoretical concerns, I understand the early alphabetic inscriptions from the 13th to 10th centuries to reflect what Jan Blommaert calls, ‘grass-roots literacy.’⁷³⁵ Blommaert defines ‘grass-roots’ literacy as “a wide variety of ‘non-elite’ forms of writing [...] performed by people who are not fully inserted into elite economies of information, language, and literacy.”⁷³⁶ At a broader level grassroots literacy “[is] a particular, locally constructed and constrained literacy ‘culture’ with a degree of autonomy vis-à-vis related literacy cultures, including that of elite, normative literacy.”⁷³⁷ The import of this category is found in the evaluation of writing in developing countries, as Blommaert insists, what is often considered the absence of a consistency expected in a literacy culture gives way to a different kind of order.⁷³⁸ Where order and consistency of a different kind govern institutional

⁷³⁴ Street 1995, Barton and Hamilton 1998, Collins and Blot 2003, and Blommaert 2008.

⁷³⁵ See Blommaert 2008.

⁷³⁶ Blommaert 2008: 7.

⁷³⁷ Blommaert 2010: 85.

⁷³⁸ Blommaert 2010: 85.

scripts, writing in unregulated spaces develops its own, local, type of order. This is what we see in the early alphabetic scripts and the lack of a concern for vectoriality, and to some degree line direction.

Among the characteristics of grassroots literacy, two features are relevant for an understanding of the early alphabetic scripts. First is what Blommaert calls ‘heterography,’ in contrast to ‘orthography.’⁷³⁹ Heterography, as a key aspect of a grassroots literacy culture, is defined by Blommaert as follows:

[Grass-roots literacy] is a form of literacy which results in very restricted literacy repertoires and in which, consequently, the norms and codes of literacy are deployed differently, in a different system of visualization of meaning. It is not ortho-graphy, but *hetero-graphy*, the deployment of literacy techniques and instruments in ways that do not respond to institutional ortho-graphic norms but that nevertheless *are not completely chaotic, even if such chaos appears to be the most conspicuous feature.*⁷⁴⁰

Heterography leads to another feature that seems to characterize the early alphabet, locality.

What Lehmann calls allography leads him to conclude that so long as a text was readable, it was acceptable, regardless of the letter formation.⁷⁴¹ This conclusion dovetails nicely with an understanding of the locality of early alphabetic as a literacy practice, similar to what Blommaert referred to as “constrained mobility.”⁷⁴² While theorists of literacy conduct their own research in and on post-industrialized literacy economies, their contributions to the interpretation of

⁷³⁹ Blommaert 2008: 7.

⁷⁴⁰ Blommaert 2010: 86, italics in the last line added.

⁷⁴¹ Lehmann 2020: 76-77.

⁷⁴² Blommaert 2008: 7.

meaningful variation in alphabetic writing is profitable for understanding the early alphabetic texts, and may hint at how we should view alphabetic writing in social context.

Provided modern analogs for writing practices in unregulated spaces and environments of ‘grass-roots’ literacy, we can begin to understand the variation in letter orientation as products of a peripheral script and perhaps a differentiating feature of alphabetic script. Consider Rollston’s positive analysis of the script of the Kh. er-Rai inscription,

The script is nicely written on a horizontal plane[...] The writing is smooth, the strokes are nicely drawn on the pottery, the ductus is clear, almost elegant, and the size of the letters is consistent. This is the hand of a trained scribe.⁷⁴³

And yet, the form of *bet*, however appropriately drawn, is upside down, or, from Rollston’s later point of reference, 90° clockwise from the script evidence in later Phoenician inscriptions and the Old Hebrew script.⁷⁴⁴ As we have discussed, a writer trained in the Egyptian rush would have required, “lengthy practice.”⁷⁴⁵ How then does a letter become drawn with a variant orientation? It is a product of the twin aspects of alphabetic writing that we have outlined above, grass-roots literacy practice in an unregulated orthographic space. Given this, we might surmise that the language external symbolism of the alphabet (i.e., its physical appearance) was part of its communicative worth. The apparent chaotic disregard to vectoriality is irregular at a psycholinguistic level but perhaps differentiated alphabetic by subverting the expected norms of orthographic practice of more dominant scripts, such as hieratic and cuneiform, both of which have clear and expected vectorial features (e.g., one reads *into* the mouth of birds in Egyptian,

⁷⁴³ Rollston et al. 2021: 11.

⁷⁴⁴ Rollston et al. 2021: 11.

⁷⁴⁵ Tait 1988: 478.

cuneiform horizontal wedges “point” toward the direction of writing).⁷⁴⁶ It may communicate an unfamiliarity with the script at a broader level but in the individual community in which it operated it may have served as an understood point of reference for alphabetic.

The evidence for variability in vectoriality signals that the script, in these spaces, is unregulated and non-institutional. The orientation of letters is subject to local practices and concerns and derives a sort of disordered order (heterography). While these ideas require further development, the import for our project may lie in an understanding that the early alphabet operated locally among smaller communities of writing, and perhaps by deliberate contrast with the more dominant scripts of the Late Bronze Age. The rotation and mirroring of letters then indicates that writers trained with the rush were nevertheless working with an untrained script, as it were, with little to no broader institutional community of writing.⁷⁴⁷

5.3. Conclusion: How to Write, or Rather, Which Way?

Directionality in writing in the earliest years of the use of the alphabet in the southern Levant is variable, probably due to its secondary status among the scripts of the Late Bronze Age.

However, shortly after the withdrawal of Egyptian hegemony and the onset of the Iron I, the

⁷⁴⁶ See Blommaert 2008, 2010 and Lillis 2015.

⁷⁴⁷ This may be important for considering who these early writers were. Here we may have a conflicted understanding. While the writer of Kh. er-Rai is trained with the rush, he evinces heterographic orientation of the letter *bet* (and perhaps also *yod*) an aspect of local literacy practice. Blommaert describes that individual writers in this space are only partially inserted into the dominant knowledge economies (2008). This may accord with what Wimmer observes about the Lachish Jar Sherd, that the appearance of the *ḥq3.t* sign with the plural stroke is both drawn poorly and technically incorrect (Stefan J. Wimmer, personal communication). If we imagine the early alphabetic writers in the Late Bronze age and early Iron age to have been associated with the Egyptian imperial apparatus, then who might we imagine them to have been? Literate Egyptian soldiers garrisoned in the levant conducting day-to-day administration, or semi-literate clients of the Egyptian empire (cf. Burke 2020)? These are questions worth considering again briefly in the conclusions of this dissertation. For now, it behooves us to consider that the answer may be both-and rather than either-or.

direction (of lines at least) becomes stabilized. As we have reasoned, there are both material and social reasons for this. The early writers of the alphabet quickly adopted practices of writing orientation that accord most closely with the practices current in Egypt. We might suppose that one or the other reasons for this stabilization was more dominant. For instance, were the regular writing material ostraca and other peripheral materials, we might suppose that no 'proper' orientation would arise until the institutionalization of the script, which seems to happen sometime in the early-mid Iron IIA. From this, we might reason that a materially induced explanation for a right-to-left writing orientation would necessitate that writing on papyrus was an active part of the writing culture, as we have shown that the right-to-left orientation was physiologically preferred for papyrus laid out before a writer in Egypt. On the other hand, if we assume that materiality was not the dominant factor, then we must assume some sort of recognition or knowledge of the right-to-left system that operated in the writing culture of the Egyptians. In either case, the resultant interpretation would be intriguing, either papyrus writing in the Iron I or writers with 'know-how' pertaining to Egyptian writing practices. Undoubtedly the answer is probably something of both. In this way, writing direction can be seen as a legitimate heritage of Egyptian writing practice, whether primarily arising from the materiality of writing or from the learned practices of writers.

Letter orientation, on the other hand, like orthography (ductus and aesthetic) previously, seems to be a unique heritage of the early alphabetic script that precedes and supersedes conventions that may have been borrowed from Egyptian writing culture and practice. The alphabet as a script existed both under and outside of Egyptian hegemony. As such, it developed much in the way that peripheral scripts do, in local literacy economies taking heterographic form. While line direction stabilizes rather quickly, due to preexisting materials and customs for

writing, letter direction remains variable until at least the mid 10th century in the southern Levant. This is probably a result of the socio-political instability and the role of writers within it. Literacy economies in this period probably remained local and while future data will be needed to prove it so, local city-state ‘orthographic regimes’ probably ruled the day over larger supra-regional entities like states. As such, the need for broad administration in the form of written documents was probably minimal until the middle or end of the 10th century. The prevalence of Iron IIA writing at sites like Tell eṣ-Şafi and Tel Rehov probably signal the rising importance of documentation and the imposition of literacy standards outside of the local literacy economies of these city-states.⁷⁴⁸ Whether or where a supra-regional power like a state (the early Israel state for instance) factors into this is debatable. States can exist without literacy and local literacy can exist without states, the two need not be so intertwined. And yet, there is something peculiar about the lack of orthographic standardization until the end of the 10th century that is worth considering further, albeit in a different publication. For now, the evidence for writing direction (lines and letters) signals some continuity and some discontinuity with Egyptian practice.

⁷⁴⁸ Finkelstein and Sass 2021.

Chapter Six How to Write (III): Numerical and Metrological Notation as Knowledge

Introduction

Numbers are sometimes considered the universal language.⁷⁴⁹ In today's world, the ubiquity and universality of Arabic numerals across scripts and languages often caused it to be left out of consideration as a deliberate practice of orthography, or even part of writing culture. While in the past it has sometimes been recognized as a meaningful aspect of the history of writing, the majority of recent reviews fail to recruit numerals and numerical notation into broader reviews of script.⁷⁵⁰ In spite of this, it is important to recognize that numbers are not an autonomous system, they exist for and through a culture.⁷⁵¹ How these numerals appear, how they operate in a system of numerical notation, and how they relate to other associated sigla (metrological and mathematical) all provide crucial information about writing culture. Writing numerals and representing numerical concepts are key parts of performing competently in any given writing culture. Numerals communicate to us not only clues as to their origin as graphic symbols denoting mathematical realities but also, to some degree, information about how the culture conceives of these mathematical realities. When taken in conjunction with mathematically associated symbols, such as those denoting metrological units (meter, degree, etc), the symbolic

⁷⁴⁹ Guedj 1996.

⁷⁵⁰ Often numerical notation becomes a question of script when dealing with particularly early or opaque scripts. Relatively, however, most reviews of script do not acknowledge numerical notation on anything more than a cursory level. See helpful theoretical comments on the importance of numerical notation for writing and communication in Chrisomalis 2010: 19-23.

⁷⁵¹ Street, Baker, and Tomlin 2005: 15-24; cf. Street 1984 and Houston 2004.

system embedded in the writing system provides valuable data for understanding its origin and development within culture and society.

In this chapter, we will investigate one of the most important and best recognized Egyptian influences on the writing culture of the southern Levant, the incorporation of hieratic numerical notation. It has been long recognized that the writing culture of the southern Levant (Hebrew writing culture more specifically) somewhat uniquely adopted this system of numerical notation. Thus, this chapter will investigate not the evidence for hieratic numerals, which is already well-established in prior studies, but the significance for understanding the influence of Egyptian writing practice on writing culture in the southern Levant, detailing in specific evidence for the potential early date for the influence of this numerical notation system and aspects of the associated metrological system. By understanding the nature of numerical notation in the abstract as well as drawing a brief theoretical proposal for understanding its significance as an aspect of orthography, this chapter will offer that hieratic numerals are, in large part, an indication of deliberate and intense cultural contact that transmitted not merely graphic symbols but a broader network of working knowledge in, what we might say is, ‘mathematics.’ This recognition requires us to consider the import of the adaptation of a variety of metrological symbols in the alphabetic writing of the southern Levant as well as the linguistic and practical knowledge that comes with weights and measures. While not attempting to be exhaustive, this chapter will attempt to pioneer a new socially-oriented perspective on the hieratic numerical notation system, insofar as it exists in the southern Levant, to better advocate for the central role it plays in the Egyptian influence on alphabetic writing culture in the southern Levant.

6.0. Numbers as Orthography, Numbers as Knowledge: Theoretical Overview

Numerical notation systems are complex. While not often recognized, there are deeper principles that govern the writing of numbers that we must consider in order to resource the proper data for analyzing the adoption of a numerical notation system. Let us briefly offer a few theoretical considerations that will form the bedrock for understanding numerical notation and what type of information it communicates.

Before we can discuss numerical notation (numbers) as a distinct aspect of writing practice (orthography), we must first define what a numerical notation system is and what information it provides. As I will define it, a numerical notation system is a visual, non-phonetic graphic system for representing numbers.⁷⁵² While it may sound a bit tautological, that a numerical notation system is a system for representing numbers, the definition is formed as such to describe the relationship between a discrete grapheme (“1” for instance) and an abstract reality (of “oneness”). The graphic notation “1” is a sign signifying the singularity of a thing, anything. As such, numerals have been defined as an “open” orthographic system in that its representation is tied to a relatively easily transferred concept rather than to a particular phonetic articulation.⁷⁵³ But a numeral notation system as a visual, non-phonetic system for representing numbers goes beyond single digits. It is important to understand that numerical notation systems are structured entities. That is, they are governed by text external systems of thought and organized similarly by these text external systems. As Chrisomalis has identified, there are two elements that govern a numerical notation system at a foundational level: powers and bases.

⁷⁵² Chrisomalis 2010: 3; cf. Chrisomalis 2004: 38.

⁷⁵³ Houston 2004; Chrisomalis 2010: 20-21.

A *power* is a number X multiplied by itself some number of times (its power); $10^1 = 10$, $10^2 = 100$, $10^3 = 1000$, etc. [...] A *base* is a natural number B in which powers of B are specially designated. [...] Western numerals and many other systems use a base of 10, but this is not universal.⁷⁵⁴

The importance of the power and the base can be seen in the number of discrete graphemes employed in a numerical notation system. For instance, Roman Numerals deploy a notation system that recognizes a base of 10 (Roman Numeral “X”) and a sub-base of 5 (Roman Numeral “V”). The sub-base is recognized by the need for specific unique graphemes used to represent the products of the sub-base (5) and the power (10) (e.g., 50 = L, 500 = D).⁷⁵⁵ Some systems abide by base-10 others by base-60 and several have embedded in them these sub-bases. As an aspect of script, then, numerical notations are not free but bound by mathematical constraints external to the text or script that guide their organization and use.

Beyond bases and powers, how these numerical notation systems represent larger numbers is likewise important to consider. For this Chrisomalis has a convenient tablet showing the typology of numerical notation systems that is reproduced here for convenience (fig. 6.1 below).⁷⁵⁶ While we need not dwell on the considerable complexity that Chrisomalis has encapsulated here, the importance of understanding numeric notation not merely as a strategy of representation but a graphic system with functional properties and elements that drive and

⁷⁵⁴ Chrisomalis 2010: 4.

⁷⁵⁵ Chrisomalis 2010: 4, 109-118.

⁷⁵⁶ I follow Chrisomalis’ typology as opposed to typologies offered by other studies such as Zhang and Norman 1995 and Ifrah 1998. While these studies can be helpful and thus are cited here, Chrisomalis explain more technical deficiencies in these prior typologies in his introduction (2010: 10-11; cf. 2004: 39-40 which includes a visual demonstration of these typologies). Further, while Widom and Schlimm (2012) may have introduced refinements to the typology of Chrisomalis, however, I retain Chrisomalis’ typological schema for convenience and because the typology of Widom and Schlimm do not differ drastically from Chrisomalis but risk introducing additional complexity which might distract from the goals of the present chapter.

Numerical notation systems are embedded with an assumption of bases and powers as well as internal structures that govern how numeral signs are combined to represent larger numbers (Chrisomalis calls these intra- and interexponential structures).⁷⁵⁸ The exponential structure (represented by the x and y axes on the graph above) is important to consider as numerical systems are adopted and adapted because they indicate the sort of internal logic of the system that must be learned for its proper use. Structural affinities between systems are important to consider just as much as the visual affinities may be. Further, when numerical notation systems evince affinity, whether in the structure or in visual form, we must consider why this might be and where the systems diverge. As we will discuss below, certain systems bear structural similarities but graphic differences and even differences that relate to the representation of powers and bases. All of these things are relevant for understanding numerical notation as a cultural resource, and cultural knowledge embedded in writing. And here we turn to the question of the role of numerical notation systems in writing in specific, in orthographic practice.

6.0.1. Numerical Notations Systems and a Social View of Script

The underlying principles behind numeric notation systems is crucial for understanding the types of questions that can be asked at a higher level of knowledge, the know-how of the writer. This sort of numerical knowledge is anterior but nevertheless tied to the graphic representation. But the adoption, adaptation, or invention of a numerical notation system involves more than mathematical principles alone, it involves the deliberate activity of writers in their own time and culture. In this dissertation, we have emphasized the twin elements of agency and learning,

⁷⁵⁸ Chrisomalis 2010: 11-12.

choice and convention, asking what motivates writers to conduct their work in the way that they do, what are the sorts of underlying assumptions that guide their hand, and perhaps most importantly what do these assumptions signify to us about the origin of their technical knowledge. Extending this theoretical perspective into the present chapter means looking at the particular details of a numerical notation system for what lies beyond it.

Much like many of the things we have investigated, the adoption and adaptation of numerical notation systems in a writing culture exists somewhere between explicit, intentional identity work and the implicit motives of pragmatism—intentional choice on the one hand and convention on the other. This is true of the adoption of a system across cultures and even in the novel invention of numerical notation systems. Consider for instance, the invention of just one recent novel script in West Africa, Adlam, which included, quite intentionally, the invention of a novel numerical notation system.⁷⁵⁹ Yet, this numerical notation systems for Adlam, while graphically distinct from prior systems, still abides by the dominant place-value system common in the modern world.⁷⁶⁰ The inventor of the notation system, or the one principally adopting or adapting it, must draw upon existing cultural forms of representation and indexation, systems of thought, that inhere in their own culture.⁷⁶¹ Like script, numerical notation systems are part and parcel of culture. Zaslavsky offers a relevant quote from anthropologist Leslie A. White, who said,

⁷⁵⁹ Adlam/Pular script (<https://r12a.github.io/scripts/adlm/fuf.html>); see for context discussions of the development of scripts in West Africa such as Unseth 2011 and Kelly 2019.

⁷⁶⁰ Other West African languages have complex numerical systems embedded in the language but not represented in the script (e.g., Yoruba's vigesimal [base-20] system).

⁷⁶¹ The study of mathematics (numbers) in culture is known as ethnomathematics (Ascher 1991; D'Ambrósio and Knijnik 2020).

Each individual is born into a pre-existing organization of beliefs, tools, customs, and institutions. These cultural traits shape and mould each person's life, give it content and direction. Mathematics, is, of course, one of the streams in the total culture.⁷⁶²

While we are not interested in mathematics in the abstract sense, the concrete use of numerical signs as representations of numerical realities is a subset of what we might call mathematics, and as such, we should understand that the governing principles of the numerical notation system and its graphic form are involved in a dialogue with particular cultural values and ideologies.⁷⁶³ That a particular representation system for numbers should be accepted by writers in a culture is not a given. Neither perceived efficiency nor convenience is a sufficient factor on its own. Thus, Arabic numerals were introduced to Europe hundreds of years before their wide-scale adoption for accounting, in spite of the perceived efficiency of this system over Roman Numerals.⁷⁶⁴ This is in spite of the fact that it has been argued that the Hindu-Arabic numerals were more useful for arithmetic than Roman numerals.⁷⁶⁵ The continuation of Roman Numerals over Arabic numerals was the result of multifaceted cultural processes, in some parts ideology and others assumption. The choice of the representation of numerical notation is then within the purview of the culture of the writer, insofar as they learn a system and chose to perpetuate it. In some cases, however, they may be aware of multiple systems in which case the choice of one particular system should

⁷⁶² Zaslavsky 1999: 16.

⁷⁶³ Here I adopt a practical definition of mathematics as “the science that deals with the logic of quantity, shape, and arrangement” (Chrisomalis 2010: 4).

⁷⁶⁴ See Durham 1992.

⁷⁶⁵ Zhang and Norman for instance begin, “We all know that Arabic numerals are more efficient than Roman and many other types of numerals for calculation” (1995: 271). Chrisomalis critiques the assumptions of Zhang and Norman stating, “Even if Western numerals are the best system for doing arithmetic (which would best be resolved through the use of the systems rather than abstract theorization), most other systems were never designed or used for such a purpose. The situation is analogous to denigrating screwdrivers for being inefficient hammers” (2010: 32).

be taken as an extremely important data point and the potential reasons for this particular system winning out should be scrutinized.

Just as orthography is the deliberate choice of the writer to represent language via particular styles of graphemes, numerical notation is too a deliberate choice. It is the choice to represent numerals via particular visual, non-phonetic forms. As such, I propose that we understand numerical notation as it is written to be part of the orthographic practice of writers. While there may be some difference between numbers and letters at a cognitive level, I rather doubt that ancient writers made this particularly rationalistic distinction. Rather, resituating numerical notation as a part of the broader scheme of orthography more accurately accords with the understanding and training of ancient writers who saw questions of ‘how to write’ as a holistic endeavor, letters, numbers, and symbols.

6.0.2. Numbers, Numeracy, and Knowledge Systems: Counting and Accounting

There is one final aspect that we should consider in an investigation of numerical notation, that is the role of numerical notation as a system of knowledge. Numerical notation and various sorts of metrological symbols are integral to a writing system and a writing culture, but understanding them, or translating them, requires a particular frame of reference and training in how to use them. The ability to interpret and work with written numbers is called numeracy.⁷⁶⁶ Literacy and numeracy, as the similarity in name suggests, are two names for the decoding of written

⁷⁶⁶ For our investigation, numeracy should mean the ability to interpret and use written numerals and associated mathematical symbols. It is thus defined in order to understand it as a subset of orthographic practice, or ‘how to write.’ This restricted definition does not exclude more broad reaching or nuanced definitions of numeracy as involving events or practices (see Baker, Street, and Tomlin 2003; Baker and Street 2004; Street, Baker, and Tomlin 2005; for numeracy as not specifically mathematical see Barwell 2004). For our purposes, the relationship of numbers and associated metrological and mathematical symbols to actual mathematical reasoning (or calculation) is analogous to the relationship between script and language, intertwined but separable.

symbols.⁷⁶⁷ Nuanced discussions about literacy and numeracy, letters and numbers, aside, the ability to interpret and use written language is akin to the ability to interpret and use written math.⁷⁶⁸ For ancient writers, we should consider that, just like in the modern world, the training in a writing system was inclusive of that system's numerals. For ancient writers, there was likely no clear distinction between learning to compose text and learning to calculate (in the most basic sense). Each system was part of the whole.

Being able to work with numbers, for us, extends beyond the graphic recognition of a numerical sign to incorporate various associated symbols like weights, measures, and fractions. These sorts of symbols have no corresponding phonetic value but have logical or practical text-external meaning. This expected text-external knowledge necessary to interpret "1" let alone more complex quantities like *hq3.t*'s, for instance, often requires some experience with "things." Other symbols, such as fractions may index the same sort of experience with "things" on some basic level but tap into more abstract logo-mathematical principles. This is where, in some small way, we move might into a cultural discussion of mathematics, or at least mathematics as applied.

Numerical notation is an aspect of orthography insofar as writers must learn the proper rules of its use but it curiously intersects with an aspect of applied knowledge. Beyond knowing the simple concept of "oneness," there are associated symbols (weights, measures, and fractions) that are necessary for the proper operation of a numerical system as a mathematical system. That

⁷⁶⁷ See Baker and Street 1996 wherein the authors predicate definitions of numeracy "events" and "practices" on previous work on literacy (cf. Street, Baker, and Tomlin 2005).

⁷⁶⁸ As mentioned in note 767 above, numeracy is not math *per se* but a contingent activity. That is, one must have a concept of basic mathematical principles to interpret and use numbers.

is, how numbers are represented is a question of numerical notation systems, their form and logic, how numbers are applied and understood is a question of the associated symbols, both of which combine to form a complete whole. For our purposes, we want to define not just the numerical notation system as an isolated system but highlight it as a part of the greater cultural knowledge system of numbers, fractions, weights, and measures. In sum, we want to understand numeracy but also what sorts of assumptions may have conditioned the using of numbers.

Numeracy, as we should define it, extends beyond the digits to consider the particular mathematically associated sigla like those for particular weights and measures that provide value to the numbers themselves. Decoding what is meant by “5°” involves understanding the grapheme for the quantity (i.e., “fiveness”) but also the associated symbol “°” (i.e., degree). Even further still, however, the word “degree” only finds meaning as a unit of measurement of an angle in a plane, or more commonly as a measurement of temperature. Thus, critical to numeracy beyond a fundamental level is understanding associated mathematical concepts and even symbols that signify those concepts.⁷⁶⁹ For us the concern is not with the specifics of calculation (i.e., mathematical reasoning) but rather with the general sense that a symbol for a unit of measurement or a fraction is understood by the writer to stand for something, and something in specific. This implies knowledge and even assumption of knowledge in some measure. One must know what a degree is in order to interpret the symbol representing it, meaning that one must know how a degree functions (in some basic way) and under what circumstances the symbol becomes meaningful (i.e., angles). As mentioned, the specifics of mathematical reasoning are not truly of interest to us, the assumptions that make the sign interpretable, however, are. If, as we

⁷⁶⁹ Street, Baker, and Tomlin 2005.

have suggested above, learning to write was inextricably coupled with learning to write numbers, then just as spelling forms a higher level of processing than a simple abecedary, a level necessary to make one functional for representing language, then calculation (math) is a higher level of processing than simple numerical notation, similarly a level necessary to make one function for representing quantities. Thus, when we approach numerical notation, assaying its features and assumptions, we wish to be able to offer some comment on the complex web of knowledge that was a necessary precondition for its operation.

6.1. Hieratic Numerals in Egypt: Their Origin, Operation, and Use

Hieratic develops as a shorthand for Hieroglyphs, written with cursive ductus, already in the Old Kingdom.⁷⁷⁰ The hieratic script differs in significant ways from other varieties of Egyptian script and from the well-known monumental hieroglyphs in particular.⁷⁷¹ This is true of the development of hieratic numerals, which were developed from the antecedent hieroglyphic numeral signs but gradually become less and less associated with the form and structure of these earlier signs.⁷⁷² Instead of an additive system using groups of individual signs in repetition, groups of numbers (like six) became a single ciphered sign. This cipherization of numbers facilitated fast and efficient accounting writing in the cursive hand.⁷⁷³ The result over time, however, was the development of signs that bear little resemblance to their hieroglyphic antecedents. The hieratic numerals were still structured base-10 but due to the development of the numerals as discrete number-signs it must be classified as a ciphered-additive numerical

⁷⁷⁰ Polis 2020.

⁷⁷¹ Polis 2020.

⁷⁷² Chrisomalis 2010: 48.

⁷⁷³ Boyer 1959: 128-129; see also Chrisomalis 2010: 47.

notation, meaning that these distinctive signs stand for every numeral of the base times the power (see fig. 6.2 below). Such use of the system for administration developed further away from the hieroglyphic system of notation, using, for example, multiplicative-additive structuring for the representation of higher numbers.⁷⁷⁴ This represents a significant development in the history of hieratic numerals.

	1	2	3	4	5	6	7	8	9
1s	𐀀	𐀁	𐀂	𐀃	𐀄	𐀅	𐀆	𐀇	𐀈
10s	𐀉	𐀊	𐀋	𐀌	𐀍	𐀎	𐀏	𐀐	𐀑
100s	𐀒	𐀓	𐀔	𐀕	𐀖	𐀗	𐀘	𐀙	𐀚
1000s	𐀛	𐀜	𐀝	𐀞	𐀟	𐀠	𐀡	𐀢	𐀣
10,000s	𐀤	𐀥	𐀦	𐀧	𐀨	𐀩	𐀪	𐀫	𐀬
100,000s	𐀭								
56,207 = 𐀆𐀒𐀛𐀟𐀤									

Fig. 6.2: Hieratic numerals (from Chrisomalis 2010: Table 2.7)

Hieratic numerals were employed for administration, accounting, and mathematical practice. The majority of the evidence we have for the use of numerals pertains to applied mathematics, calculations in the real-world.⁷⁷⁵ Even fantastic texts like the Rhind Mathematical Papyrus, while containing mathematical problems with a more theoretical bent, is nevertheless

⁷⁷⁴ Christomalis 2010: 46-48.

⁷⁷⁵ Imhausen 2016: 102-125; Chrisomalis 2010: 48-49; Kiely 2022: 28-32; cf. Imhausen 2006, 2007.

focused on training in the practical application of numerical concepts.⁷⁷⁶ An in-depth understanding of weights and measures (numeral and metrological notation) is key to the complex questions presented in texts like the Rhind Mathematical Papyrus and even the Moscow Mathematical Papyrus. The numerals are tied to these metrological signs, asking questions of the number of *ḥq3.t*s, for instance, and fractions into the subunits thereof. One example of a practical question like this comes from the satirical letter of Papyrus Anastasi I, when the writer asks, “How much is missing in one *ḥq3.t*, if the loss is 5 *hnw* for every *jp.t*?”⁷⁷⁷ While embedded in a literary text satirizing the sort of knowledge that everyday administrators should know, the form and content of the question stresses the practical importance of numerical and metrological notation.

Learning applied mathematics in Egypt was part of the training of writers, be they soldiers, craftsmen, or simply administrators.⁷⁷⁸ Knowing numbers implied knowing calculations, at least at the basic level of arithmetic. Solving these calculations, as mentioned above, required knowledge of metrological symbols and their values. As we have suggested above, it is clear that numeracy was tied to literacy for ancient writers in Egypt, and the work of administration was inseparable from work in ‘mathematics.’⁷⁷⁹ Thus, Imhausen notes that the laudatory status that writers (scribes) give themselves in texts is due to “the fact that scribes are literate and numerate.”⁷⁸⁰ Another quote from Papyrus Anastasi I provides an example of the

⁷⁷⁶ Imhausen 2016: 63-83, esp. 65-67; cf. Chase, Bull, and Manning 1929; Peet 1923; Robins and Shure 1987; Claggert 1999.

⁷⁷⁷ From Imhausen 2016: 150.

⁷⁷⁸ Imhausen 2016: 102-125.

⁷⁷⁹ Imhausen 2003: 386; 2016: 125.

⁷⁸⁰ Imhausen 2016: 146.

kind of problem a soldier-scribe was expected to answer, being versed in arithmetic, determinations of the appropriate manpower, distributions of rations, and even geometrical knowledge for construction.⁷⁸¹ The text even includes several mock word problems. One reads,

A ramp is to be made of 730 cubits, 55 cubits wide, of 120 *rigata*,⁷⁸² full of reeds and beams, of 60 cubits height at its head, its middle of 30 cubits, with a batter of 15 cubits, whose base is of 5 cubits. The bricks needed have been asked of the overseer of the workforce. The scribes are all assembled, without one who knows [... They ask,] ‘Answer us the bricks needed.’⁷⁸³

This word problem is offered as the sort of knowledge that the recipient should be able to solve, even if modern scholars cannot.⁷⁸⁴ While it represents something of a higher level of calculation, its association with writing is important for us. For the Egyptians, literacy and numeracy were parts of a whole. Hieratic numerals were used in conjunction with the necessary metrological symbols to solve problems in the real world. Weights, measures, and fractions were necessary for day-to-day administration and writers were expected to know them and how to use them.⁷⁸⁵ Egyptian writers were trained in the whole system of mathematical and linguistic knowledge as part of their schooling, becoming proficient and effective communicators with the written script in all its facets. Having offered brief comment on hieratic numerals in Egypt, we should consider

⁷⁸¹ Imhausen 2003: 372; cf. Fischer-Elfert 1986: 118-157 and Imhausen 2016: 148-156.

⁷⁸² From Semitic, see Hoch 1994: 211-212.

⁷⁸³ Allen 2002: 11; cf. Imhausen 2016: 151.

⁷⁸⁴ Imhausen states, “Due to the fact that they don’t contain all the necessary data to solve the sketched mathematical exercises, a variety of interpretations is possible. See various solutions in Fischer-Elfert 1986: 132 and Schwela 2012.

⁷⁸⁵ See Imhausen 2016: 41-54 on metrology and fractions.

the nature of Egyptian derived numerals outside of Egypt, in the singular place in which they were preserved, the southern Levant.

6.2. Hieratic Numerals in the Southern Levant: Date and Use

It has long been recognized that the unique system of numerals devised for hieratic was only preserved outside of Egypt in the southern Levant.⁷⁸⁶ Hebrew epigraphs from the Iron II evidence this special preservation of the hieratic numeral system.⁷⁸⁷ As such, the exceptional adoption of hieratic numerals here, in the southern Levant, and not in other scripts, has been highlighted as an important point of contact between Egyptian and, specifically Hebrew, alphabetic writing culture.⁷⁸⁸ However, recent data suggests that this point of contact precedes the specific Hebrew script of the Iron II, and that the adoption of hieratic numerals and accounting symbols was already underway toward the end of the Late Bronze Age.⁷⁸⁹ In what follows, we will attempt to show that several epigraphs attest to the Late Bronze Age origin of hieratic numerals and accounting symbols in alphabetic writing culture, arguing that, like the practice of writing on bowls discussed in chapter two, the use of hieratic numerals in the Iron II, while perhaps spurred on by Egyptian activity in the late Iron II, ultimately represents the continuation of a writing tradition with Ramesside roots.⁷⁹⁰

⁷⁸⁶ See Aharoni 1966; Lemaire and Vernus 1980; Goldwasser 1991, Millard 1995, Wimmer 2006; 2008a; and Calabro 2012.

⁷⁸⁷ See as the definitive study of the topic in Wimmer 2008a (with a reedition forthcoming).

⁷⁸⁸ Goldwasser 1991; Wimmer 2006, 2008a.

⁷⁸⁹ Schniedewind 2020.

⁷⁹⁰ Goldwasser (1991), Wimmer (2006, 2008a), and Calabro (2012) have all argued for an early adoption of the hieratic material, but Schipper has shown that Saite Egyptian influence during the late Judean Monarchy should be seen as an impetus for the further development of Hebrew hieratic (2010: 211-212, 214-217; see also Schipper 2011). Wimmer notes that, while finding evidence of the early roots of the Hebrew hieratic tradition, certain features suggest contact with abnormal hieratic and even demotic. He cautiously advocates for a 'both/and' proposition

6.2.1. Palestinian Hieratic in Early Alphabetic Inscriptions: Late Bronze Age

Early examples of hieratic in alphabetic inscriptions have not been forthcoming until recently. The only published example to date comes from the Lachish Jar sherd discovered in 2014.⁷⁹¹ According to Schniedewind, the sherd contains what might be a personal name (*p-k-l*) followed by the word for “scribe” in Semitic (*spr*), and a hieratic numeral (“5”) followed by the *Heqat* sign with an irregular plural stroke underneath (Fig. 6.3 below).⁷⁹² As was recognized in the *editio princeps*, there is no good alphabetic grapheme that can account for what Schniedewind has plausibly interpreted as the *Heqat* sign altogether his interpretation is compelling.⁷⁹³ This first example of an Egyptian sign in an alphabetic inscription is, however, only the first *recognized* example. In this section, I will offer that three other inscriptions from the LB-Iron horizon in the southern Levant that can plausibly be interpreted as bearing hieratic numerals.⁷⁹⁴

rather than ‘either/or’ in regard to the origin and impact of the Hebrew hieratic tradition. He states, “An unbroken survival of the Late Bronze Age heritage may be one component in explaining the phenomenon of ‘Palestinian hieratic’; but strong contemporary affinities toward Egypt remain a very probable factor as well.” (2006: 27).

⁷⁹¹ Sass et al 2015.

⁷⁹² Schniedewind 2020.

⁷⁹³ Sass et al 2015; Schniedewind 2020.

⁷⁹⁴ As a personal aside, the Lachish Censer Lid (Diringer 1958: 128-129; cf. Puech 1986: 17; Sass 1988: 100 [figs. 260-261]) bears certain markings that are difficult to make out. The biggest visible line however, which Puech read as *zayin* (1986: 17), appears similar to the hieratic *epha* sign (Wimmer 2008a: 257-258) purely based on the images. This artifact should be subjected to advanced imaging efforts in the near future, as clearly there were deliberate markings on the lid. The hope is that the present author will be able to be involved in these efforts.

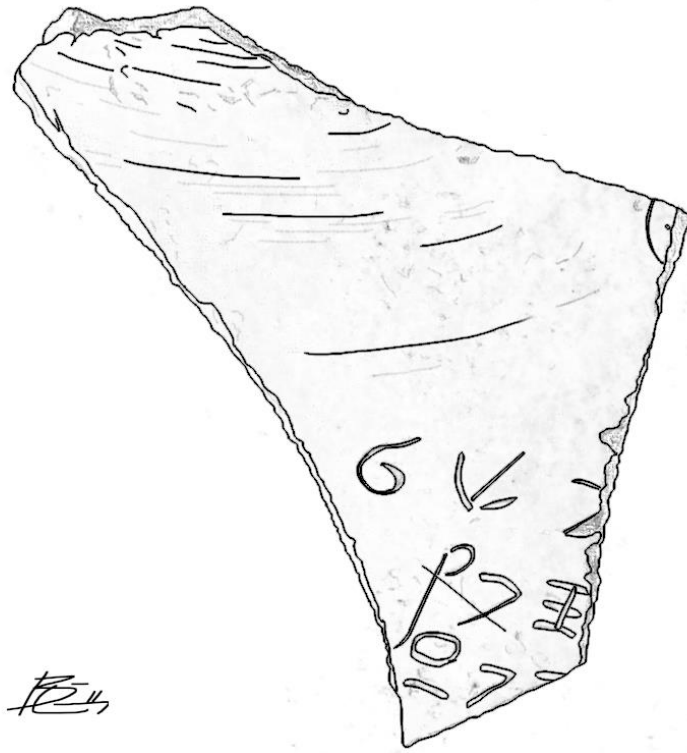


Fig. 6.3: The Lachish Jar Sherd (drawn by the author)

In chapter two, we discussed the possibility that line two letter seven on the Lachish Bowl Fragment represents a form of the *kr* sign (see ch. 2 above). While we will not revisit the specifics of the argument, we will restate the thesis, namely that the “T” shape of this character finds the best analogy in the examples of the *kr* sign from the later Iron II Hebrew epigraphs. Taken in conjunction with the Lachish Jar Sherd and the example for hieratic bowl writing at Lachish contemporary with these inscriptions, it seems reasonable that this graphic anomaly too is an early example of hieratic integrated into an alphabetic inscription.

Yet another early alphabetic inscription from Lachish may contain a hieratic numeral that has been hitherto unrecognized. The Lachish Bowl, like the Lachish Bowl Fragment, was discussed in chapter two above for its curious connection to the practice of writing on complete bowls (see chapter two, section 2.2.1.1.). But the author’s own recent reexamination of the

inscription reveals still greater connection to Egyptian practice. Let us examine the images (figs. 6.4-5 below) in order to posit a hieratic interpretation.

6.2.1.1. The Lachish Bowl: A New Hieratic Sign?



Fig. 6.4: (Top) Photo of last three letters of the Lachish (alphabetic) Bowl (Photo by the author, 75% contrast applied); (Bottom) traces of remnant lime used for inscription (drawn by the author)

Toward the end of the inscription traces are admittedly difficult to see. The white lime with which this inscription was drawn has chipped off and only poorly preserves proceeding toward the major crack in the bowl (the only major missing piece). In the image above, however, three letters are visible, if not poorly preserved: *yod*, *resh*, and *het*. This reading confirms what has been previously suggested.⁷⁹⁵ However, upon close examination, just below the writing line, lower and to the left of the remnants of *mem*, a strong white signature is visible. This, I believe, connects to clearly deliberate traces proceeding leftward and terminating somewhere underneath (or just to the right of) *resh*.

Below, is a focused image of the head of the character. The swooping form, with vertical head, bears most resemblance to hieratic “100.”⁷⁹⁶ Some traces of white lime precede this character, but they are difficult to make out and, to my eye, are likely the elongated tail of the poorly preserved *mem*.⁷⁹⁷ If the swooping character seen in the images and represented in my facsimiles is indeed a hieratic 100, and I think this is a good candidate, then what purpose does it serve on this bowl? Does it indicate the amount of offering? If so, what should we make of such a sizable offering, in a tomb context no less? Further, numerals often accompany commodities, but no commodity is listed here. Could the use of a numeral here be symbolic in some fashion? These are difficult questions to answer.

⁷⁹⁵ Diringer 1958: 129; Puech 1986: 18.

⁷⁹⁶ See Wimmer 2008a: 228.

⁷⁹⁷ Compare the *mem* of the Beth Shemesh Ostrakon (fig. 4.15 above).



Fig. 6.5: Close-up of *mem* and head of the potential hieratic numeral (photo by the author, 75% contrast applied).

The inscription on the bowl *bšlšt . ym̄ . yḥ* “in the third day of the month,” as we have already suggested in chapter two, seems to denote the delivery of an offering similar to the complete bowls inscribed in hieratic.⁷⁹⁸ In this context, however, the offering is funerary. The date might indicate the date when the bowl was deposited in the tomb. Here we might ask why a bowl bearing such a text might have been deposited. I suggest that the writing itself was symbolic and prepared in the tomb context for one-time use. The writing of the date, perhaps of deposition, evoked an association with written bowls in sacred contexts, like what has been posited for the hieratic inscribed bowls.⁷⁹⁹ One of the reasons for my supposition is that the writing does seem rather *ad hoc*, considering that the movement of the writing line is right-to-left descending as it moves across the curvature of the bowl. That is, the writing is not consistent on

⁷⁹⁸ See chapter 2, in particular section 2.1.2., above.

⁷⁹⁹ Wimmer 2022.

a line across the bowl but rather descends closer to the rim as it continues. It may be then that the writer found himself without ample space for indicating the amount and commodity and thus wrote it just below the end of the primary inscription. Thus, we might surmise that the commodity being offered was indicated in the now lost portion of the bowl.⁸⁰⁰ But this must remain conjecture.

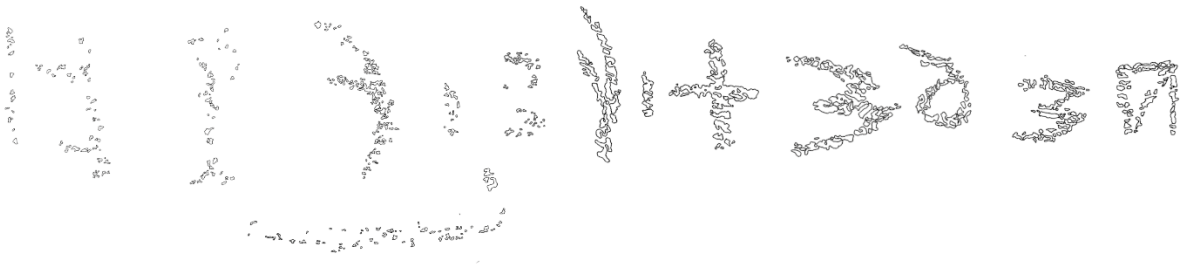


Fig. 6.6: Preliminary facsimile of the Lachish (alphabetic) Bowl with previously unrecognized character (drawn by the author)

Nevertheless, the newly recognized character resembles most closely a hieratic numeral. Few other options come to mind and none that would accord with normative writing practice in alphabetic. A hieratic option would be supported by (1) the Lachish Jar sherd mentioned above and (2) the number of hieratic inscriptions at Lachish during this period. Thus, we might offer the following reading of the bowl “In the third day of the month: 100 [X,” and interpret the bowl marking as a delivery of an offering to the deceased in the tomb.

6.2.2. Palestinian Hieratic in Early Alphabetic Inscriptions: Early Iron Age

The three examples from Lachish in the strata of the Late Bronze Age are not, however, the only examples of early hieratic numerals and accounting symbols embedded in an alphabetic text.

⁸⁰⁰ Suggested to me by Stefan J. Wimmer (personal communication).

There remains one additional inscription with a curious grapheme that is better read as a hieratic numeral, the Beth Shemesh Baal Sherd, and another with a possible connection to Egyptian accounting symbols employed in the Levant, the Tell Ḥalif Jar Handle.

6.2.2.1. The Jar Handle from Tel Ḥalif: Early Alphabetic or Š(QL)?

A fragment of a Jar Handle from Stratum VIIA at Tel Ḥalif bears strange markings that have been interpreted variously as early alphabetic or as hieratic.⁸⁰¹ An exemplary drawing of the handle from the Ḥalif excavation volume has been reproduced below for convenience (fig. 6.7 below). As Shea first noted, the middle character, a round form with two diagonals branching out, resembles the later Hebrew hieratic symbol for *šql* found on weights and a few ostraca.⁸⁰² The form of the character, it has been noted, resembles most closely Hieroglyphic V6.⁸⁰³ On the Tel Ḥalif jar handle the graphic association is attractive. However, one major problem for this hypothesis is the lack of meaningful context. The top character, which was tentatively identified as hieratic “10” by Shea,⁸⁰⁴ is clearly more akin to a *tav* in other images and thus represented as such in the line drawing below (fig. 6.7).⁸⁰⁵ The form of hieratic “10” as attested in both Egyptian texts and Hebrew never approaches such a deliberate *tav*-like form, with overlapping strokes.⁸⁰⁶ Much rather, the ‘body’ of hieratic “10” terminates in the ‘head’ stroke, whether in the middle or the end of the ‘head.’ For this reason, Shea’s suggestion cannot be maintained. This is

⁸⁰¹ Early Alphabetic = Seger 1995; Jacobs and Seger 2017; Hieratic = Shea 1978.

⁸⁰² Shea 1978.

⁸⁰³ Wimmer 2008a: 249.

⁸⁰⁴ Shea 1978: 79-80.

⁸⁰⁵ See Seger 1993: 556.

⁸⁰⁶ See Wimmer 2008a: 216-218.

further exacerbated by a third character (bottom in the figure below) that does not easily find comparison in either early alphabetic or hieratic, at least as it is drawn. Other images are supportive of a character here but ambiguous in the form that can be seen. Thus, Shea's contention is intriguing and the graphic similarity between the middle character on the Jar Handle and the Hebrew hieratic character for *šql* is attractive, but we must admit serious problems with the proposal.



Fig. 6.7: Inscribed jar handle from Tel H̄alif, stratum VIIA (Jacobs and Seger 2017: Fig. 4.A.32; rotated 180° by the author)

The fragment was, nevertheless, found in an intriguing spot when considering the potential of a hieratic reading. The handle was discovered in locus 11024 belonging to Stratum VIIA in what the excavators refer to as the “grain storage complex.”⁸⁰⁷ This complex was

⁸⁰⁷ Jacobs and Seger 2017: 547-549, 563-566.

continuously used from Stratum VIII (Late Bronze Age) into Stratum VII (Iron I). The excavators' comment on the potential use and importance of this complex in the socio-political landscape of the LB-Iron. They state, "this storage complex clearly functioned for the seasonal collection, storage, and eventual dispersal of grains, perhaps as an element of the taxation of the area by Egypt through its regional center at Gaza."⁸⁰⁸ This interpretation may be optimistic but is intriguing to consider in light of Shea's graphic argument. Nevertheless, insufficient evidence exists to interpret either the findspot or the find itself. While the graphic similarity is, as stated above, attractive, the lack of meaningful context prevents us from providing further analysis. However, we must admit the possibility of (1) potter's marks or (2) another script.⁸⁰⁹ Given this we can only label the Jar Handle inscription as a "possible" example with little supporting evidence.

6.2.2.2. The Beth Shemesh Baal Inscription: *Nun* or Hieratic Numeral?

The Beth Shemesh Baal inscription, discovered in 2001 during the renewed excavations at Tel Beth Shemesh, is another example of an inscription that may bear a hieratic numeral. The inscription is composed of two adjoining sherds discovered in Level 4 of Area E, though in different depositional layers.⁸¹⁰ Both sherds were discovered with what the excavators refer to as "mixed material."⁸¹¹ The bottom half of the inscription was discovered in the mixed deposit of a pit cut into Level 4.⁸¹² The top half of the inscription was likewise discovered in a secondary

⁸⁰⁸ Jacobs and Seger 2017: 547.

⁸⁰⁹ Wimmer notes that a similar sign occurs in the Cypriot script (2008a: 250). Additionally, a similar sign exists in Hieroglyphic Byblian (Dunand 1945 [E21]).

⁸¹⁰ McCarter, Bunimovitz, and Lederman 2011: 179.

⁸¹¹ McCarter, Bunimovitz, and Lederman 2011: 180.

⁸¹² McCarter, Bunimovitz, and Lederman 2011: 180.

deposit of materials in a “large round silo, presumably from Level 4.”⁸¹³ The remains of Level 4 in this area were sealed with a plaster floor leading the excavators to determine a *terminus ante quem* of the 9th century based on radiocarbon specimens from Level 3.⁸¹⁴ Based on an analysis of the pottery from these secondary deposits, they reason that the sherds date “before 1050 BCE,” but “even more precisely 1150-1100 BCE” essentially assigning the sherd to either Level 5 or Level 6.⁸¹⁵ The excavators admit that their statistical analysis of diagnostic sherds in secondary context “must be advanced with caution.”⁸¹⁶ For this reason, a basic date of “before 1050 BCE” is probably a more cautious dating for the sherd. Likewise, paleographically, there is little to suggest a date earlier than the 11th century. The form of *bet* attested is similar to the form in the Kh. Qeiyafa Ostrakon and the Kh. Qeiyafa Jar, which may suggest a date closer to the end of the 11th century.⁸¹⁷ However, we should not rely much on paleographic dating for this period due to the paucity of data and the irregularity of the regional hands prior to the end of the 10th century.

For good reason few have attempted a reanalysis of the inscription. The letter forms on the sherds are clear and identifiable and at first blush there is little to argue with in the initial interpretation of the inscription. The elucidation of content presented in the *editio princeps* is reasonable and clearly stated. Thus, the goal here is not to overturn the well-established letters but to suggest that the reading of one letter, letter six, may be (and should be) alternatively identified. In what follows, I will suggest that the reading of *nun* for letter six is graphically

⁸¹³ McCarter, Bunimovitz, and Lederman 2011: 180.

⁸¹⁴ McCarter, Bunimovitz, and Lederman 2011: 183-184.

⁸¹⁵ McCarter, Bunimovitz, and Lederman 2011: 184.

⁸¹⁶ McCarter, Bunimovitz, and Lederman 2011: 184.

⁸¹⁷ See Misgav, Garfinkel, and Ganor 2009; Donnelly-Lewis 2022 and Garfinkel et al. 2015.

untenable and instead offer that the form as it appears is best interpreted as a hieratic numeral, number “10.”



Fig. 6.8: The Beth Shemesh Baal inscription (drawn by the author)

In the initial publication, McCarter, Bunimovitz, and Lederman read the inscription as follows: [*lxx*] *hb' lhn* “[*śrt*], “Belonging to *xxh[u]ba'l*. T[en] *hin*”⁸¹⁸ The authors provide an overall reasonable interpretation, as a deictic inscription describing the vessel’s quantity. The collation is largely sound with comments on letter forms that are both well-informed and intriguing. However, as the authors note, this early inscription stands in a void of early alphabetic

⁸¹⁸ McCarter, Bunimovitz, and Lederman 2011: 185 (brackets in “T[en]” added by the author because it is a reconstruction; 2011: 184-185).

texts from the mid-Iron I, and as such, lacks good comparative data for a few of the letters.⁸¹⁹ The authors offer several important caveats about their readings, in particular as it relates to letters six and seven. In particular they state, “analysis of the *nun* [...] is hindered by a lack of early comparisons.” They highlight the equal lengths of the three strokes of the proposed *nun* arguing that such forms are known from ‘Izbet Sartah and the collection of 11th century arrowheads which “tend to be sharply angular with three strokes of equal length.”⁸²⁰ In spite of this, the authors recognize multiple problems with the proposal. Thus, when presenting their holistic interpretation they state that, “*in all probability*, the sixth sign represents *nun*[.]”⁸²¹ Further, in the same context, in note 3, they identify additionally that “the sign is imperfect in that the two upper strokes do not actually join at the angle” reasoning that, “the awkward result does not, however, offer a plausible alternative reading to *nun*.”⁸²² Such an implausible alternative reading is offered in the note, they state, “a short horizontal stroke serving as a word divider followed by a large acute *gimel* or *pe*?”⁸²³ All of these comments taken together show that the authors were both reasonable and cautious in their attempt to read the inscription. Further, it shows that they considered the difficulties in offering an alphabetic interpretation, difficulties that I believe make a non-alphabetic reading more likely.

⁸¹⁹ McCarter, Bunimovitz, and Lederman 2011: 185, 191.

⁸²⁰ McCarter, Bunimovitz, and Lederman 2011: 191.

⁸²¹ McCarter, Bunimovitz, and Lederman 2011: 185.

⁸²² McCarter, Bunimovitz, and Lederman 2011: 185 n. 3.

⁸²³ McCarter, Bunimovitz, and Lederman 2011: 185 n. 3.

One area where the authors might, and perhaps should, be critiqued, however, is in their attempt to explain the irregularities of the form in light of a typological scheme, a linear development of the script across the Levant. The authors state,

It seems most accurate, then, to describe the 2001 Beth-Shemesh *nun* as the forerunner of the *nun* of the 11th-century arrowheads, which tend to be sharply angular with three strokes of equal length. This is the form of *nun* that will give way at the beginning of the 1st millennium BCE to a vertically drawn form in which the lowest of the three strokes elongates.⁸²⁴

The comment seems to conflict with the cautious acknowledgement that there is insufficient comparative material for *nun* in this early period. Further, the author's suggestions about the history and development of *nun* are not wholly accurate. Let us consider them in turn.

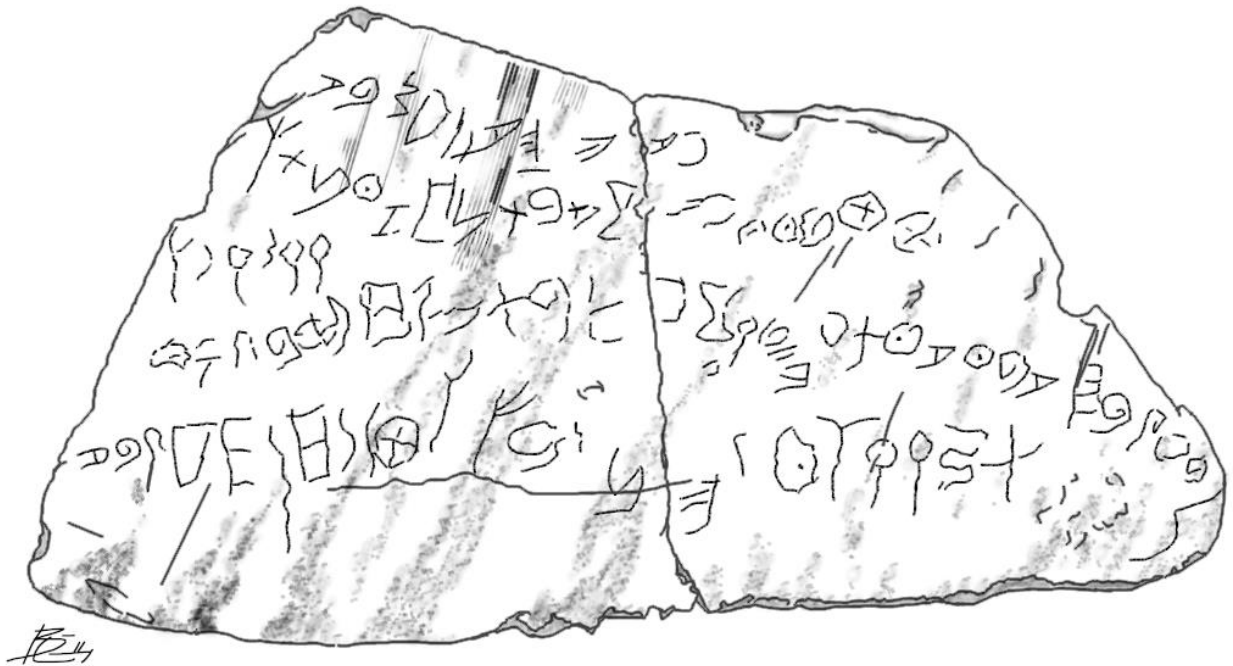


Fig. 6.9: Preliminary drawing of the Izbet Sartah Ostrakon (drawn by the author)

⁸²⁴ McCarter, Bunimovitz, and Lederman 2011: 191.

The authors first suggest that their irregular form of *nun* might be compared to Izbet Sartah. And yet, as we have already noted, Izbet Sartah makes for poor comparative material for a number of reasons (see fig. 6.9).⁸²⁵ Further, the form suggested for *nun* on the Izbet Sartah ostrakon does not accord with the suggestion of *nun* in the Beth Shemesh Baal sherd. The former is not composed of three strokes and the four strokes of its composition are not equal length.⁸²⁶ Thus, in addition to being poorly incised by a student, the formal similarities suggested are not evident in an inspection of the ostrakon.

The authors then suggest that the form of *nun* in the Beth Shemesh Baal Sherd is “the forerunner of the *nun* of the 11th-century arrowheads.”⁸²⁷ This is reasoned because the *nuns* found on these arrowheads are “sharply angular with three strokes of equal length.”⁸²⁸ These comments are difficult to understand. Recent work on the materiality of the inscription of these arrowheads has brought to light a number of relevant facts. First, the “strokes of equal length,” is due entirely to the implement used to inscribe the material.⁸²⁹ Likewise, their “sharply angular” form is due to the material, metal. That the Beth Shemesh Baal Sherd was incised before firing means that curvature was possible with some pressure from the hand making any “sharply angular” form only possibly purposeful. The difficulty of working with various media is

⁸²⁵ Naveh 1978; cf. Sass 1988.

⁸²⁶ This is drawn from my personal examination of the object in the Israel Museum. While advanced images will be needed in the future to conduct a proper assessment of the Izbet Sartah ostrakon, judging from my first-hand examination of the inscription the *nun* in the abecedary is (1) highly irregular (resembling the author’s *bet*), (2) composed of four strokes, and (3) composed of strokes of unequal length.

⁸²⁷ McCarter, Bunimovitz, and Lederman 2011: 191.

⁸²⁸ McCarter, Bunimovitz, and Lederman 2011: 191.

⁸²⁹ See Lehmann 2021 and Keimer 2015.

somewhat determinative of the shapes that letters take in their ductus. Thus, the comparison with early arrowheads is untenable.

Beyond this, we might consider the forms that *nun* takes in its history, none of which match the form suggested in the initial publication (see fig. 6.10).⁸³⁰ The authors initially seemed to recognize this. In addition, they seemed to recognize that the reading of *nun* amounted to a “best-possible reading, rather than anything of real epigraphic or paleographic certainty.

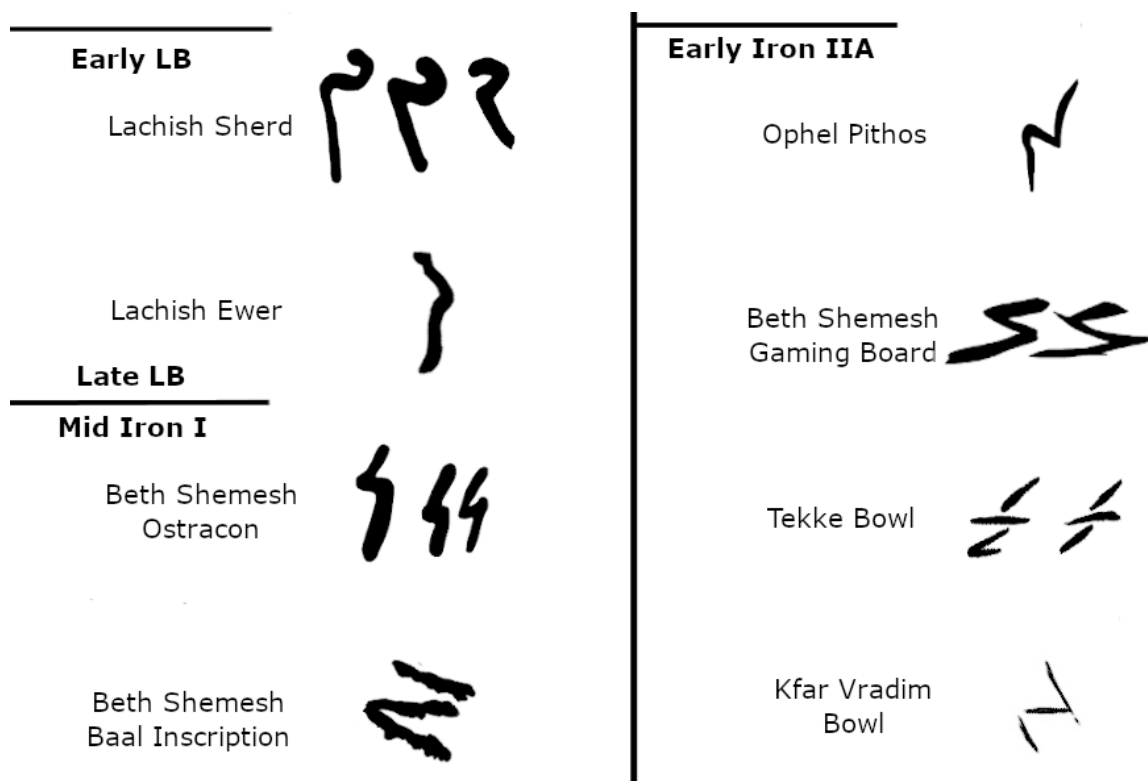


Fig. 6.10: Early examples of *Nun* (prepared by the author)

The proposed *nun* is composed of a line disconnected from an acute angled form, appearing somewhat like a triangle without a bottom. While the horizontal line and this angular form are close in relative spatial terms, there is a clear disconnection between the two that would

⁸³⁰ See also Sass 1988.

seem irregular, or as the authors put it “imperfect,” if we were to assume that the three strokes should be interpreted as one letter.⁸³¹ The remainder of the letters, while not all well-executed, do not attest to such a clear disjunction. Strokes that are intended to connect do indeed connect, and those that should overlap likewise do so. Why then would *nun* be the exception?

On these grounds we can reason that the reading of *nun* for letter six is uncertain. As we have mentioned, and as the authors even admit, the reading constitutes a “best-possible” understanding of the grapheme if it is taken as an alphabetic letter. With this in mind, I argue that a much more intriguing and graphically suitable interpretation as a hieratic numeral can, and should, be offered. Allow me to briefly make the case for a new interpretation of the sherd reading letter six as hieratic “10” (see fig. 6.11 below).

Consider the form of hieratic “10” in the Iron II inscriptions from the southern Levant (see fig. 6.10 below). The acute angular shape has two main forms, with an overlapping stroke or without. The form I propose to read in the Beth Shemesh Baal Sherd is the form without, written peculiarly on its side, with a line divider prior to it. If this acute angular form is read as hieratic “10” we must account for these two peculiarities, the sideways writing and the dividing line prior.

Concerning the first element, the sideways writing, in the previous chapter we have offered reflections on the “vectoriality” of letters, suggesting that in the period from the Late Bronze into the early Iron II, orthography reflects grassroots writing practice without stabilized vectoriality in letter forms. This is most aptly exemplified by the Kh. Qeiyafa ostrakon. I would suggest that the writer of this inscription, in a period slightly before but proximate to the Kh.

⁸³¹ McCarter, Bunimovitz, and Lederman 2011.

Qeiyafa ostrakon, displays the same capacity to write without discernable vectoriality for his letters. Consider that the writing of *heh* in this inscription would not accord with proper vectoriality in any direction, it is written mirrored. Such mirror letters were already discussed in the prior chapter. Thus, if as we have reasoned above, literacy practices are one part of a whole with numeracy, then they all constitute characters (or graphemes) that writers learn as meaningful written symbols. As such, there is no reason to assume that if non-standard directionality practices inhere in letter forms (see chapter five, section 5.2 above) this should not extend to number forms.

If the graphic similarity to hieratic “10” is recognized and the explanation provided for the lack of vectoriality from literacy-numeracy practice is accepted, there still remains the problem of the single line prior to the numeral and the contingent problem of interpretation of the lone *heh*. Here I would suggest an abbreviation followed by a peculiar (perhaps logographic?) stroke known to accompany the *bet* abbreviation of the *bt* measure in later Iron II inscriptions.⁸³² While *heh* is not known as an abbreviation, other letters such as *bet* and *šin* are well-known as metrological abbreviations for *bt* and *šql* respectively. I would offer to read *heh* here as a metrological abbreviation for *hn* (from Eg. *hnw*). The following stroke would then operate similar to the stroke that follows *bet*, as previously noted. This peculiar stroke with the alphabetic abbreviation is a Levantine invention with no Egyptian antecedent but in cases of *bet* is known to be followed by hieratic numerals.⁸³³ The mixed system represented by the Iron II inscriptions, then, I would argue is similar to the practice of this writer in the mid-late Iron I.

⁸³² Wimmer 2008a: 252-253.

⁸³³ Wimmer 2008a: 252-253.

6.2.3. Palestinian Hieratic in Early Alphabetic Inscriptions: Summary

The material attesting to potential hieratic or generally Egyptian numbers and symbols in early alphabetic is dominated by the corpus from Lachish in the Late Bronze Age. This is perhaps to be expected. The Lachish Jar Sherd may attest to an early alphabetic scribe who could write alphabetic proficiently and use hieratic numerals and accounting symbols, if only poorly. The Lachish Bowl Fragment and the Lachish Bowl likewise provide potential connections that rely, in the first case, on a circumstantial argument predicated on traditions of practice and, in the second case, a poorly preserved stroke with graphic resemblance to a hieratic numeral.

Aside from Lachish, one finds only two examples of early inscriptions that may have hieratic numerals or early metrological symbols. The Tell Ḥalif Jar Handle contains markings that resemble the Egyptian derived *šql* sign but cannot be definitively assigned such a value, due in part to its lacking interpretable context. The other, the Beth Shemesh Baal Sherd, offers a more intriguing case. As we have argued, a reading of *nun* is paleographically unlikely. As such, the graphic similarity of the form to hieratic “10” is tempting, and we might see early resonance of a system of accounting and the use of metrological abbreviations. Still, any attempt to read hieratic or Egyptian derived symbols in this early period will be stunted by the lack of available data. Hopefully, in future, more inscriptions like the Lachish Jar Sherd will come to light that display clear connections to Egyptian accounting practice that in turn support a connection to the later, better attested Hebrew hieratic tradition of the Iron II.

6.2.4 Palestinian Hieratic in Hebrew Inscriptions from the Iron II

The use of hieratic numerals in the later Hebrew scripts of the Iron II has been well documented.⁸³⁴ So well documented, in fact, that it merits its own designation, Palestinian hieratic or Hebrew hieratic. While we have preferred the former term for the early material, being that these cannot be identified linguistically, in the Iron II the term Hebrew hieratic becomes suitable. Of the attested characters in the Hebrew inscriptions from the Iron II “1” through “9” are attested on ostraca and weights. Even numbers extending into the tens, hundreds, and thousands are attested on a practice text from Kadesh Barnea (T. Qudierat 6).⁸³⁵ The widespread evidence attests to the extensive use of the system in the Levant in this later period. Whether this can be chalked up to Egyptian imperialism in the later period or whether this is simply due to an increase in the epigraphic evidence available cannot be said for certain.⁸³⁶ The extent of its use in earlier periods is unclear, but by the end of the Judean monarchy, hieratic numerals and metrological symbols were widespread and well-integrated into the writing culture of the southern Levant.

⁸³⁴ Wimmer 2008a.

⁸³⁵ Lemaire and Vermus 1980, 1983; see also Renz 1995: 341-343; Wimmer 2008a: 103-113 and Calabro 2012.

⁸³⁶ Schipper argues that the rise in Hieratic characters in Hebrew inscriptions “cannot be explained through the tradition of hieratic numerals in Hebrew inscriptions, but points instead to new connections with Egypt” (2010: 211). This might very well be the case, but we must consider that the evidence of ostraca (and writing in general) skews late, so it is difficult to tell how prevalent hieratic numerals and metrological symbols might have been early in the Iron II.

	1	2	3	4	5	6	7	8	9
10^0	𐤀	𐤁	𐤂	𐤃	𐤄	𐤅	𐤆	𐤇	𐤈
10^1	𐤉	𐤊	𐤋	𐤌	𐤍	𐤎	𐤏	𐤐	𐤑
10^2	𐤒	𐤓	𐤔	𐤕	𐤖	𐤗	𐤘	𐤙	𐤚
10^3	𐤛	𐤜	𐤝	𐤞	𐤟	𐤠	𐤡	𐤢	𐤣

Fig. 6.11: Hieratic numerals as attested in Hebrew inscriptions (adapted from Chrisomalis 2010: Table 2.9).

The earliest evidence for Hebrew hieratic appears in 10th-9th century.⁸³⁷ The system was apparently used in both the kingdoms of Israel and Judah, as attested by the Samaria and Arad ostraca. Various inscriptions from Arad attest to the use of hieratic numerals in the activities of accounting and distributing food rations.⁸³⁸ The *šql* weights of the Iron II attest to hieratic numerals and the peculiar Egyptian derived *šql* sign, providing additional evidence for Egyptian influence (see fig. 6.14 below).⁸³⁹ The hieratic numeral system was well integrated into the Hebrew writing culture by the end of the Iron II. While continually reinforced by Egyptian contact especially in the late period, the adoption of hieratic numerals was part of an inherited tradition, learned and perpetuated by writers in the southern Levant for generations.

⁸³⁷ Wimmer 2008a.

⁸³⁸ See Aharoni 1981.

⁸³⁹ See Scott 1959, Aharoni 1966, Kaufmann 1967, Ronen 1996, Kletter 1998, Wimmer 2008a, Calabro 2012, and Wimmer 2023.

6.3. Hieratic Numerals and Writing Culture in the Southern Levant

In light of the evidence for hieratic numerals and associated metrological symbols in the southern Levant, even potentially in early periods, we should consider the implications for our understanding of writing culture in the southern Levant. In particular, it is important to take note of the implications of the choice of the graphic form of numerals and, by implication, the rules that structure the particular graphic forms of the numerical notation. We should also consider the role of learning and the relationship between numeracy and literacy, which quite naturally leads to reflections on higher levels of thought and embedded networks of knowledge in the southern Levant.

6.3.1. The Choice of Hieratic Numerals in the Southern Levant

The importance of the adoption and adaptation of hieratic numerical notation into the alphabetic writing system of the southern Levant should not be understated. It likewise should not be considered in isolation. As we reasoned above, numerical notation systems are embedded in systems of cultural knowledge. They are organized around principles of calculation (power and bases; mathematics) that are in many ways cultural. General principles guide their regular use and these principles arise, at least in part, from the cultural expression of the peoples that use them. Thus, the adoption of hieratic numerals represents a culturally significant act. It represents both an activity of deliberate choice and learned practice.⁸⁴⁰

It might well be reasoned that the adoption of hieratic numerals was motivated simply by principles of practicality. Chrisomalis intimates as much in his study of numerical notation. He

⁸⁴⁰ Chrisomalis considers the cultural aspects and motivation for diachronic change in the use of numerical notation (2006; 2010: 401-429). In the southern Levant historical circumstances are rather peculiar in regard to numerical notation and script itself. As such, I will not attempt to integrate his framework of numerical notation as transformation, replacement, invention, or extinction.

states that “Prior to this point [the ninth century BC], there is no evidence that the Israelites used any numerical notation whatsoever,” continuing to suggest that hieratic numerals were available and therefore used.⁸⁴¹ Putting aside the reference to Israelites, there *were* other numerical notation systems resident in the southern Levant during the Late Bronze Age that some writers were trained in and, other than issues of script, might have been readily drafted into the orthographic system of alphabetic writing culture—the prime example being the cuneiform numerical notation.

Among the examples of cuneiform discovered in the Levant, cuneiform numbers are to be expected. Centers of diplomacy and trade have produced letters and administrative fragments from the Late Bronze Age bearing cuneiform numerals.⁸⁴² A Middle Bronze Age fragment from Hazor even attests to a multiplication table likely used for training in mathematics.⁸⁴³ The Amarna scholarly tablets point to higher levels of education in cuneiform being available, and this education would have undoubtedly involved numerical notation and methods of calculation.⁸⁴⁴

As was mentioned, script may have been a concern for the writers in the Late Bronze Age and thus cuneiform numerals were not adopted, but this concern was certainly not an insuperable one. As the invention of the cuneiform alphabet used at Ugarit exemplifies, when there is reasonable motivation, systems developed for a particular type of material can be adapted to suit

⁸⁴¹ Chrisomalis 2010: 50.

⁸⁴² See Aphek 2 in Oshima and Horowitz (2006: 31).

⁸⁴³ Oshima and Horowitz 2006: 78-80; cf. Horowitz 1997.

⁸⁴⁴ See Amarna Scholarly Tablets in Izre’el 1997.

the cultural and practical needs of writers.⁸⁴⁵ As concerns numerical notation, it would seem as if the writers of the ancient southern Levant simply did not have the desire to adapt cuneiform numerals.

When considering the meaning of the adoption of hieratic as the numerical notation system in the southern Levantine writing culture, we should not only consider that they did not adopt cuneiform numerical notation (nor cuneiform's structural system of bases and powers) but that they did not adopt any other system that might have been available.⁸⁴⁶ Were writers of alphabetic scripts in the southern Levant sufficiently moved, they could have easily adopted another system for numerical notation for use in their practical accounting, or simply invented one as it seems some others did. Such seems to be the case with Aramaic and even Phoenician systems of numerical notation (figs. 6.12-13).⁸⁴⁷ Both of these writing cultures opted for different systems of numerical notation, without clear antecedents.

1	10	20	100	1000
	↪	↪↪	↪↪↪	↪↪↪↪
2894 = ↪ ↪↪↪↪ ↪ ↪↪				

Fig. 6.12: Aramaic numerals (from Chrisomalis 2010: Table 3.2).

⁸⁴⁵ Consider that the alphabet used at Ugarit has been shown to be graphically predicated on an already extant linear alphabet (Cross and Lambdin 1960; cf. Rin 1961-1962).

⁸⁴⁶ For instance the economic tablets from Deir Alla from the Late Bronze Age, which have clear numerals and accounting symbols with Mediterranean (Linear or Cretan?) affinities (see Chrisomalis 2010: Tables 2.12-14). These tablets, still undeciphered, have been erroneously identified as religious tablets written in an alphabetic script in spite of their clear visual similarity to administrative tablets in Cretan Hieroglyphic (*pace de Vreeze 2019*; see Chrisomalis 2010: Fig. 2.3; cf. Ventris and Chadwick 1973). The segmentation of the tablets into registers and the appearance forms that greatly resemble Cretan or Linear numerals. If the graphic similarity is compelling, and I think it is, it probably indicates that these Mediterranean scripts were (1) known and (2) had influence in the Levant during the Late Bronze Age.

⁸⁴⁷ Chrisomalis 2010: 68-76.

All of this bears consequences for cultural identity and cultural affinity. As we mentioned above, the adoption of hieratic numerals is a culturally significant act, but not only in the act of representation of numerals but in the adoption of the principles that guide the use of those numerals. The hieratic system of numerical notation is what Chrisomalis refers to as a ciphered-additive system in that each sign represents a multiple of a power of the base (base-10). This contrasts with the hybrid cumulative-additive, multiplicative-additive system of cuneiform (Assyro-Babylonian) notation.⁸⁴⁸ The Mesopotamian system(s), as represented by cuneiform, also utilized a unique sexagesimal system (base-60) alongside a decimal (base-10) system.⁸⁴⁹ While it may seem a minor point, the typology of the system (cumulative, ciphered, multiplicative, etc.) is culturally and historically significant. Similarities in the intraexponential organization of Aramaic and Assyro-Babylonian systems of numerical notation leads to the conclusion that there is a historical and cultural connection.⁸⁵⁰ Thus, while there may be some superficial similarities between Egyptian numerals and Aramaic numerals, the core graphemes have no clear antecedent and the intraexponential structure (hybrid, cumulative-additive/multiplicative) brings it in closer association with the Mesopotamian systems.⁸⁵¹ The inventive Aramaic system is partially graphically and partially mathematically adapted from other systems. The Hebrew, in contrast, is not.

⁸⁴⁸ Chrisomalis 2010: 247.

⁸⁴⁹ Chrisomalis 2010: 247. The sexagesimal system is an example of cultural influence in mathematics (see Powell 1972).

⁸⁵⁰ Chrisomalis 2010: 71.

⁸⁵¹ Chrisomalis 2010: 71-73.

1	10	20				100				1000
	↵	≡	○	H	N	P	Λ	Γ	Ϸ	f
697 = ↵ H H H H H Λ										

Fig. 6.13: “Phoenician” numerals (from Chrisomalis 2010: Table 3.4)

The contrast between the graphic inventory of Hebrew hieratic, adopting wholesale the numerals of hieratic, and the graphic inventory of Aramaic and Phoenician numeral systems, insofar as we know them, is likewise an important datapoint for understanding the cultural value of numerals.⁸⁵² Both Aramaic and Phoenician systems invented a grapheme (or graphemes) to represent the number “20,” perhaps signaling something of cultural import.⁸⁵³ In contrast, Hebrew hieratic is just that, hieratic. The wholesale adoption of a numerical notation system is important and represents a choice in itself. The fact that the writers of the alphabet in the southern Levant did not choose to adopt another system is one thing, but the choice not to adapt the hieratic system is doubly curious. When it is considered that the system for numerical notation used in the southern Levant could have been either (1) invented without prior antecedent (as apparently the case with Aramaic and Phoenician) or (2) adopted from another number known competing system, the wholesale adoption of a singular system without numerical adaptation is an important part of the cultural history of Hebrew numbers.

⁸⁵² I recognize the numerous problems in describing a “Phoenician” numerical notation system: (1) the problematic notion of ‘Phoenician’ (see Quinn 2017); (2) the geographic and diachronic variability that is likely glossed over by the chart above (fig. 6.13); and (3) the sources that Chrisomalis, and by consequence myself, rely upon are extremely dated (see 2010: 74-76). More work is needed from epigraphers to investigate the nature and form of all numerical notation systems used in the Levant across periods (Ugaritic, Aramaic, Phoenician, etc.), even if only to confirm earlier evaluations of the data.

⁸⁵³ Perhaps the invention of this character accords with a sub-base of “20,” a vigesimal system? These types of numerical systems are known from the world’s cultures. With this system, however, we might expect more than just “20” (e.g., 200, 2000).

6.3.2 Numeracy in the Southern Levant

While the import of hieratic numerals as an inheritance of Egypt in the writing culture of the southern Levant has been recognized, it has not been sufficiently elucidated. It has not been explicitly recognized by prior scholars that the acquisition of literacy corresponds directly to the acquisition of numeracy in the writing culture of the southern Levant. Writers operate with an orthographic system inclusive of letters (phonetic graphemes) and numerals (numerical graphemes). They learn to use and interpret these signs in their daily practice. The inscriptions from Kadesh Barnea (especially no. 6) attest to the integration of hieratic numerals in the schooling of writers in the southern Levant.⁸⁵⁴ Further, an example of elementary exercises from Kuntillet 'Ajrud evidences a novice writer practicing letters and numbers. In particular drawing the number "70" repeatedly is attested on Pithos A, as well as practice in the orthography of other numerals.⁸⁵⁵ Simple practice such as numerical lists or practice of ductus is to be expected but speaks to the integration of this numerical notation system into the training of writers in the southern Levant.

Alphabetic scribes in the southern Levant during the Iron II, and perhaps earlier, practiced the use and form of hieratic numerals in conjunction with their practice of alphabetic letters, basic literacy was coupled with basic numeracy. Perhaps this is why Isaiah 10:19 states "and the remainder of the trees of his forest shall be a single number (מספר), such that *even* a

⁸⁵⁴ Lemarie and Vernus 1980: 345.

⁸⁵⁵ Schniedewind 2019: 34-35.

child could write it.”⁸⁵⁶ While it certainly served a different function and purpose, numeracy in hieratic numeral notation was part of literacy for ancient writers in the southern Levant.

Letters and numbers were not, however, the full extent of the graphic system that writers must learn to become competent in their craft. Other non-linguistic symbols, in particular metrological symbols and fractions, were necessary for writing. Both the orthographic form and the meaning of these symbols had to be learned. In some cases, these symbols were adapted or abbreviated from within the alphabetic system (*bet* with accompanying line, *š* for *šql*) but in other cases signs were adapted from hieratic (fig. 6.14). Thus, the acquisition of numeracy was inclusive of a larger category of mathematically associated signs that writers were trained to use.

<i>sql</i>	<i>ʿph</i>	<i>sʿh</i>	<i>hʒr</i>	$\frac{1}{2}$
⸏	𐤀	𐤁	𐤂	𐤃
<i>hqʒ.t</i>		$\frac{1}{2}$ <i>hqʒ.t</i>	$\frac{1}{4}$ <i>hqʒ.t</i>	$\frac{1}{4}$
•	𐤄	𐤅	𐤆	𐤇

Fig. 6.14: Hebrew hieratic symbols with plausible Egyptian antecedents (collected from Wimmer 2008a)

Integrating a numerical notation system and including symbols for weights and measures implies a great deal about the knowledge and assumptions of the writers. It necessitates enculturation in systems of knowledge and systems of thought that make these components of

⁸⁵⁶ Gandz argued that what was intended here is an ideographic number, a single digit that even a child could write (1932: 57-58). I find the argument compelling. Levine has attempted to examine the structure of lists to determine the possibility of ideographic numbers which were lexicalized to be incorporated into the Hebrew Bible (Levin 2012; cf. 1965). He finds the structure “item + quantity” to frequently be an indication that ideographic numbers were part of the ‘*vorlage*,’ for him real lists from which the composition draws (2012: 35). There is good evidence for this in that the syntax of lists and the totaling of those lists meets some syntactic expectations known in real epigraphic lists.

the orthography productive. Writers learned counting and accounting, the latter of which implies greater levels of complexity and therefore closer and more intense, deliberate contact. That is to say alphabetic scribes could not have simply gleaned in passing the sort of internal knowledge necessary to make systems of calculation work; they had to be taught. This teaching raises important questions about the nature of Egypto-Levantine contact and just how deep the connections go.

6.3.3 The Measure of All Things: Hieratic Numerals and Systems of Knowledge

While no mathematical treatises or even simple exercises in calculation have been discovered in the alphabetic epigraphs from the Levant, embedded in letters and logistical lists are the assumption of numerical knowledge, calculations, accounting. This numerical knowledge extends beyond numeracy as a literate practice to an understanding of the system itself and how it combines to represent greater numbers and greater quantities, and further into how weights and measures are conceived and broken down into greater and lesser units (i.e., fractions). In this way, the discussion of hieratic numerical notation and the accompanying symbols cannot be divorced from a discussion of inherited knowledge and broader conceptions of the (mathematical) order of things. The famous Rhind Mathematical Papyrus from Egypt begins with this title, “The correct method of reckoning, for grasping the meaning of things, and knowing everything—obscurities and all the secrets.”⁸⁵⁷ The all-encompassing nature of mathematical knowledge, as offered by this introductory line, is, in some way, symbolic of how interconnected mathematical knowledge, knowledge of numbers and calculations, is with the life of the writer or administrator.

⁸⁵⁷ MacGregor 2010: 107 as cited in Kealy 2022: 40.

The inclusion of metrological symbols in the writing culture of the southern Levant is significant of a larger movement of knowledge, even the knowledge of “all things.” To this point, external to the written symbol are a variety of metrological words from Egyptian that find their way into the lexicon of Hebrew: *ephah*, *hin*, *zeret*, and *qab*.⁸⁵⁸ Some of these are particularly archaic and therefore difficult to tie to any specific period of the transfer of knowledge, and certainly no period in which the writing culture of the southern Levant was developed.⁸⁵⁹ The term אִפָּה, however, has direct bearing in the period that we have suggested is crucial for the transfer of writing knowledge, the Late Bronze Age. As Kilani has persuasively shown, matching the Egyptian phonetic reconstruction with the Hebrew phonetic reconstruction displays a period of exchange in this precise period.⁸⁶⁰ Other tantalizing evidences could be adduced, one of which is the suggestion that the Hebrew hieratic *šql* sign (from Gardiner V6) was so adopted because of the Egyptian value of the sign *šsr*, indicating a time of deliberate linguistic contact.⁸⁶¹ While we cannot speak with any precision about mathematical systems in the southern Levant, nor should we for the present purpose of understanding the written code, we can say that the impartation of a numerical notation system, metrological symbols, and signs for various fractions of the whole strongly implies deliberate training in Egyptian mathematical principles that might have included not just arithmetic but geometry and various sectors of applied mathematics.⁸⁶² Whatever this might have looked like, it is clear that the Egyptian

⁸⁵⁸ See Wilson-Wright 2023; also Noonan 2019.

⁸⁵⁹ See Wilson-Wright 2023.

⁸⁶⁰ Kilani 2021: x+4; see also Wilson-Wright 2023: 171 (“before 1360 BCE”).

⁸⁶¹ Scott 1959, 1964; see further Kletter 1998. Whether this is truly the case is debatable (Wimmer 2008a: 247-250 and Calabro 2012: 82).

⁸⁶² See Imhausen 2003.

connection to alphabetic writing via the impartation of numerical and metrological notation must have been intense, deliberate, and sustained. It included specific training in numerical notation with its attendant assumptions and specific experience with weights and measures even down to the adoption of loan terms and loan symbols. What the Egyptians offered to the alphabetic writers of the southern Levant was not just numbers and symbols but the “proper method” for knowing “all things.”

6.4. Conclusions

Numbers matter. Their graphic form, organization, and relationship to other symbols in the orthographic system are all important data points and serve to fill out the proper definition of a writing culture. Understanding the meaning of the adoption of hieratic numerals in the orthographic system of alphabetic writing in the southern Levant, as it turns out, requires a complex knowledge of how writing relates to culture and how culture relates to calculation. A system of numerical notation does not exist in isolation but is “one stream in the total culture,” to reuse a quote from above.⁸⁶³ As such, the present chapter represents only an attempt to draw out socio-cultural meaning from the fact that hieratic numerals and accounting symbols are present in southern Levantine writing culture, even, it would seem, from the very beginning. Numerical notation is deeply nestled inside a wider web of cultural knowledge and social meaning. When the complexity of understanding the adoption of a numerical notation system by one culture from another is layered with the added complexity of the novel adoption of a script (like early alphabetic), the problem becomes far too intricate to be properly addressed in a short dissertation chapter. What I have hoped to offer here is not an exhaustive investigation of the topic but rather

⁸⁶³ Zaslavsky 1999: 16.

a sufficient one. An investigation sufficient to show that the adoption of hieratic numerals, rather than being a matter of convenience, is interconnected with social networks of knowledge, a matter of deliberate choice, and perhaps a matter of ideology. Future investigations will be needed to further explore just how meaningful the adoption of hieratic numerals and symbols in the alphabetic script is for understanding its Egyptian origin. For our purposes it is but one variable necessary to quantify the whole.

Chapter Seven What Writing Looks Like (I): Origins of Textual Division and Layout

Introduction

Writing inhabits space. As a practical matter, writing takes up space. When we see writing there is not only a procession of letters, words, and lines in a given direction but a relationship that exists between these elements, between the words, phrases, and lines, and even often a relationship between a composition's organization and its content. These organizational and spatial features of writing define how writing appears, and this appearance has consequences for our expectation about the writing. For example, when we open a book of poetry, we might be surprised were we met with continuous justified lines across the page in unrelenting procession page after page. To the contrary, we expect lineation according to some phono-semantic scheme, a division of rhythm or rhyme, sound and sentence. In just the same way, with an academic work such as the present one, we expect paragraphs by way of chunks of text constituting an individual thought or idea. Strict lines of words at the left side of the page leading across toward a jagged right edge. Conventions, as it seems, compel writing practice even in the visual appearance and organization of text on a page.

These visual features of writing as mentioned define how we perceive a written text, not just in the broad distinctions between poetry and prose, but in smaller ways too. Textual segmentation by means of non-linguistic symbols, in our case punctuation, provide visual cues for starts and stops and as such contributes to the organizational features of the text in ways that are related to but perhaps not wholly dependent upon the linguistic features of the text.⁸⁶⁴ Thus,

⁸⁶⁴ See theoretical discussion in Crellin 2022: 7-34. There is no way to wholly extract punctuation and other systems of graphic or textual segmentation from spoken language, but we must be mindful of their status as graphic signs in a textual system that abides by its own internal order (see Nunberg 1990; see also Coulmas for a more general

in discussing textual organization in aspects of layout and the visual features thereof, we must also consider the role of textual segmentation markers.

In this chapter, I will account for certain organizational features of written artifacts in the southern Levant by looking to Egyptian writing practice. We will begin by looking at textual segmentation markers, punctuation, in alphabet writing of the southern Levant, especially the early material, in order to cautiously investigate whether these small signs may have some link back to Egyptian practice. Beginning with punctuation signs serves as a nice bridge between the last chapter, which dealt with one type of non-linguistic sign system employed in the orthographic practice of the southern Levant—numerals—and the present chapter. From here we will move to consider larger aspects of organization and layout. At times, this becomes difficult as the cross-cultural comparison we have been conducting in this dissertation often relies on distinctive features that can be isolated to show some unique heritage and, as it turns out, with organization and layout, this is seldom the case. Certain features of textual organization and layout are supra-regional (*scriptio continua*, registers in administrative texts, lineation in accounting texts, etc.). Thus, displaying the visual comparisons between, for instance, accounting texts in Egyptian and accounting texts in alphabetic is of limited value because no distinctive heritage can be established. For this reason, in discussing organization and layout, we will focus on one early example of a possible connection in organizational practice and only briefly discuss the visual similarity of late Hebrew accounts from Arad and some Egyptian

introduction to writing and the ways in which it has “a certain autonomy” [2003: 16]). For our concerns, the visual features of word dividers will be primary. Very little discussion, if any at all, will be devoted to their use or relationship to language.

accounting texts, leaning a bit circumstantially on the evidence for late Egyptian influence on Hebrew writing practice.

7.1. Textual Segmentation: Possible Egyptian Origins for Alphabetic Word Dividers

Alphabetic scripts in the ancient Iron Age southern Levant did not have ‘punctuation’ in the same way we do today. Symbols identifying questions, pauses, or other sorts of linguistic phenomena did not exist. What did exist, however, were word dividers. In the Iron II Canaanite scripts these can appear as an individual dots in between words or on occasion as short vertical lines.⁸⁶⁵ In earlier alphabet texts they appear only infrequently as an individual dot (Kh. Qeiyafa Ostrakon?)⁸⁶⁶ or a series of dots (Lachish Ewer) and more frequently as a single vertical line (Lachish Bowl, Qubur al-Walayda, Kh. Qeiyafa Jar, Tell eṣ-Ṣafi 2008, Tell eṣ-Ṣafi 2022).⁸⁶⁷ Visual and linguistic division like this is apparent from the earliest inscriptions (Lachish Ewer, Tell en-Nagila, Lachish Bowl) but only inconsistently used. It is not until the late Iron II that small individual dots are used consistently for word division. Prior to this point, several examples, like for instance the famous Mesha Stela, display the use of both vertical lines and small dots, employed for apparently different purposes.⁸⁶⁸ The early attestation of textual segmentation in alphabetic is curious and warrants some investigation. In what follows, I will

⁸⁶⁵ See Millard 1970 and Naveh 1973.

⁸⁶⁶ The dot at the ends of lines four and five are open to interpretation (See Donnelly-Lewis 2022).

⁸⁶⁷ The Tell en-Nagila sherd could fall into either category of a single dot or a vertical line. The mark may, however, be too small for a line (see Sass 1988: fig. 143-144).

⁸⁶⁸ See Ahituv 2008: 391 for a facsimile of the Mesha Stele; see Crellin (2022: 236-241) for an argument for consistency with regard to the use of dividers in a variety of inscriptions, including the Moabite inscriptions. Whatever one thinks of Crellin’s argument, I will at times refer to ‘inconsistency’ by which I mean inconsistency in the graphic form of the dividers. Perhaps in future work, the variation between the two dividers in the Mesha Stele will be explained, and perhaps it already has been (see comments in Millard 1970: 8 to the effect that the issue with the use of vertical dividers may have been resolved, unfortunately, I was unable to consult the sources cited).

investigate whether these word dividers may have somehow originated in Egyptian writing practice through the reappropriation and adaptation of non-phonetic symbols in Egyptian writing, the logographic stroke, plural strokes, and verse points.

7.1.1. Vertical Dividers

The earliest examples of word dividers in alphabetic are, in large part, short vertical lines. The Lachish Bowl, Qubur al-Walayda Bowl, and perhaps the Lachish Bowl Fragment attest to the use of vertical lines to segment the textual content. In the case of the Qubur al-Walayda Bowl, it functions to divide a PN from a patronym, and the same could be true of the Lachish Bowl Fragment, though the name may now be lost.⁸⁶⁹ This tradition of division continues in the southern coastal plain into the late Iron I and early Iron II as attested at Tell eṣ-Şafi (2008 and 2022 sherds).⁸⁷⁰ The development of unique signs for word division is perhaps a natural intuition but not a necessary one. Ancient writers, as it seems, could be content to write without specific concern for morphosyntactic, lexical, or prosodic division markers.⁸⁷¹

Symbols demarcating division between content appear, however, already in early alphabetic inscriptions in two forms: a small vertical line or a series of three dots. The use of these dividers is, however, inconsistent, and it is difficult to tell how or why a division at a certain point may have been meaningful for the writer.⁸⁷² There are perhaps sociological reasons

⁸⁶⁹ See Puech 1986.

⁸⁷⁰ Maier et al 2008; Eshel et al 2022. The initial publication of Şafi 2022 preferred to read the vertical divider as a large *nun*. It seems, however, more likely that this is a word divider separating two names. If this is the preferable interpretation, however, the names are difficult to evaluate.

⁸⁷¹ Millard 1970, Naveh 1973, Steiner 2016; though see Lehmann 2016: 37*-39*.

⁸⁷² Crellin in his recent monography argues in favor of consistency for a variety of corpora and even includes appeals to a few early alphabetic texts, curiously listed with the Phoenician inscriptions (Tell en-Nagila, Lachish Ewer, Lachish Bowl, and Qubur al-Walayda; Crellin 2022: 63-64). Crellin's argument is intriguing and he makes several useful theoretical distinctions throughout his insightful work (see reference in note 864 above). With the

for the apparent irregularities in the early use of word dividers, reasons that may be related to the lack of clear vectoriality in early alphabetic inscriptions (see section 5.2.2. above). However, by far, the most prevalent marker in early texts is the short vertical. Several texts display division in this way: the Lachish Bowl, Qubur al-Walayda, Kh. Qeiyafa Jar, Tell eṣ-Şafi 2008, and Tell eṣ-Şafi 2022. The first three texts evidence division between all words. The sherds from Şafi only separate a name from what may likely be a patronym but are fragmentary.⁸⁷³ It seems as though, there may have been a regular tradition of vertical dividers separating words, as appears to be the case with the Byblian inscriptions.⁸⁷⁴ However, a few examples, like perhaps the Lachish Bowl Fragment and the Azarbaal Spatula, may display inconsistent uses of this vertical divider.

early alphabetic inscriptions, however, there may simply be insufficient evidence to justify a claim of consistency. While there undoubtedly was a linguistic reason for the use of word dividers at certain points in an inscription, the graphic forms are too varied in the earliest periods to make, in my opinion, any claim about their relationship to linguistic realities at present.

⁸⁷³ Eshel et al. 2022; see comments in note 870 above.

⁸⁷⁴ See for instance the Ahiaram Sarcophagus inscription (KAI 1); with the most up-to-date study by Lehmann 2005.



Fig. 7.1: T. eṣ-Şafi 2022(drawn by the author)

After the earliest period, the vertical dividers appear only infrequently. The most prominent case is their use in the first half of the Mesha stela. The inscription is inconsistent in the form of divider used. The vertical dividers are used alongside the single point divider more common in later Iron II inscriptions from the southern Levant but seemingly absent from early alphabetic inscriptions. While it has been suggested that the vertical divider “morphed” into the single point divider, this does not seem likely.⁸⁷⁵ First, the Mesha stela displays the two types of dividers used in alongside one another in the 8th century, with, as mentioned, an unclear distinction in use.⁸⁷⁶ Further, in the Kh. Qeiyafa ostracon, I have argued that a small vertical divider appears in line two of the inscription, whereas two small dot (dividers?) appear at the end

⁸⁷⁵ *pace* Naveh 1973: 206-207.

⁸⁷⁶ See note 868 above.

of lines four and five.⁸⁷⁷ If these later dots are dividers, then this too would evidence the overlapping existence of the two systems, though they perhaps have some as of yet not understood distinction in use.⁸⁷⁸ Vertical dividers are the best attested system in early alphabetic with points only infrequently appearing if at all (see perhaps T. en-Nagila and Kh. Qeiyafa Ostrakon). Given what we have suggested about the Egyptian inheritance of the materials, practices, and even symbols (e.g., numbers, metrological, fractions) might we find an Egyptian fore-runner for this symbol as well? I offer an admittedly speculative case for the adaptation of an aspect of Egyptian orthography using a late, likewise dubious, example of sign adaptation as an analog.

7.1.1.1. Vertical Dividers, Origin in the Logographic Stroke?

Surveying the orthographic practice of ancient Egypt, one symbol stands out as the potential source for the vertical divider, the logographic stroke. From a visual standpoint, consider the separative function of the logographic stroke in the hieratic text below (see O. Turin 57378 below). While the logographic stroke is far from a *divider*, its operative function, to signify that the preceding group is to be read logographically, works to linguistically segment the text. In the same way, from a visual standpoint unlike the flow of groups and signs, the logographic stroke presents the reader with a visual break. In the example below (fig. 7.2) the stroke is used somewhat irregularly that, in the eye of the present author, only exaggerates its utility as a potential linguistic-graphic divider.

⁸⁷⁷ See Donnelly-Lewis 2022.

⁸⁷⁸ See comments in Donnelly-Lewis 2022: 185, 194, 196, and 199.

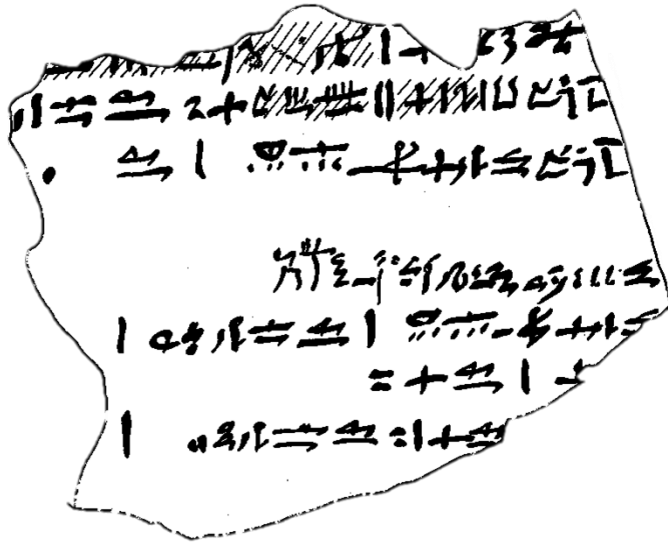


Fig. 7.2: O. Turin 57378 (reproduced facsimile)

The reuse of a symbol from one writing culture to another, disregarding the original function, is a well-known phenomenon in the interaction between scripts. Consider the reuse and adaptation of the *glossenkeil* in both Hittite and Old Persian. The *glossenkeil*, as its name suggests, was a cuneiform grapheme that signaled a linguistic “gloss,” such as an Akkadian gloss for a Sumerian word, Luwian gloss for a Hittite word, or Canaanite gloss for an Akkadian word. This sort of semi-punctuation mark was reused in Hittite to display indentation.⁸⁷⁹ This strategy is an adaptation of its use in lexical lists and overall a reuse of visual formatting strategies. In the Old Persian syllabary, a form of the *glossenkeil* is used as a general word divider, though the origin of this practice is likely mediated by Urartian.⁸⁸⁰ It is possible that through the influence of Egyptian writing practice, alphabetic writers took meaningful sigla and symbols that would

⁸⁷⁹ See Pisaniello 2020.

⁸⁸⁰ See Diakonoff 1970.

otherwise have little or no meaning in their own writing system and used them for other purposes.

This sort of reuse of a symbol across scripts, in particular the logographic stroke, may find analogy in a later Iron II Hebrew inscription from Arad (No. 31). This text attests to the use of a vertical line of unclear meaning in two places.⁸⁸¹ The line appears between two hieratic accounting symbols. The use is problematic, and few have attempted a detailed analysis. Wimmer in his seminal work on Palestinian hieratic notes the difficulty in understanding the use of the line before making a remarkable and fascinating connection with Egyptian writing practice. He analyzes the vertical line in Arad 31 as follows,

Der auf [°] folgende, senkrechte Strich kann dann kaum 1 gelesen werden, es sei denn, er würde als Zahl dem—vorangestellt, was ungewöhnlich wäre. Wir möchten die Möglichkeit ansprechen, das hier der so genannte Ideogrammstrich entlehnt wurde. Ein senkrechter Strich steht im Ägyptischen (Hieroglyphen und hieratisch) nach Einzelzeichen, die einen ganzen Begriff darstellen. In unserem Fall wäre das [°] so explizit als Abkürzung (für *'br*) kenntlich gemacht. Z[eichen].10 hat der Schreiber möglicherweise nochmals auf sonst im palästinischen Hieratisch nicht belegte Weise auf ägyptische Schreibpraxis zurückgegriffen.⁸⁸²

Wimmer's connection between the logographic stroke in Egyptian and this vertical line in Arad 31 is intriguing and could serve as an analog for the more general adaptation of the logographic stroke as a word divider in early alphabetic. Perhaps the symbol was adopted and adapted in one period for a particular use and then readopted and adapted in a different period. It would seem natural for the interaction which produced the whole-sale adoption of hieratic numerals to then permit some resourcing of other symbols and sigla in Egyptian orthography for use in early, and

⁸⁸¹ *AI* 31; cf. Ahituv 2008: 135.

⁸⁸² Wimmer 2008: 39-40

even later, alphabetic, though admittedly this is difficult to prove. One counterfactual point to be made is that vertical dividers are the norm at early Byblos, and it would be difficult to argue for a shared innovation, or multiple points of adaptation, thus, it must be admitted that we cannot suggest an origin of vertical dividers in Egyptian practice without admitting considerable difficulty.⁸⁸³ It is possible that these dividers originate from an early alphabetic adaptation of the logographic stroke but likewise possible that they represent an *ad hoc* invention as an easy means for textual division by the innovative writers of the early alphabet.

7.1.2. Tri-punct Divider

In discussing textual segmentation in early alphabetic, we should briefly comment on a divider that only occurs in the Lachish Ewer and only appears to separate a name from the label. This divider is the ‘tri-punct’ or three vertical dots.⁸⁸⁴ While it only appears in early alphabetic in the Lachish Ewer, it is more common in early Greek inscriptions.⁸⁸⁵ This contributed to Naveh’s supposition that the alphabet must have been transmitted to the Aegean already in the 2nd millennium.⁸⁸⁶ If the Greek ‘tri-punct’ divider is itself a heritage of the early transmission of the alphabet, which is by no means clear, then it may have been more prevalent as a textual divider in early alphabetic than the present extant evidence (Lachish Ewer). It is possible that the ‘bi-

⁸⁸³ See especially the Azarbaal Spatula, where division with vertical punches is curiously placed (see Donnelly-Lewis 2021 and Richey 2022 for two recent readings of the inscription as an economic text, though offering different readings for the crucial series *nun-šhin-bet-tav*).

⁸⁸⁴ Borrowing the term from Crellin 2022.

⁸⁸⁵ Crellin 2022: 5.

⁸⁸⁶ Naveh 1973: 206; Crellin 2022: 5.

punct’ seen in T. Fekheriye is a reduction of an earlier ‘tri-punct’ but again here we are on unstable grounds.⁸⁸⁷

Due to the lack of data, it is difficult to make any serious suggestion as to its origin. Its status as a textual divider is only attested, in early alphabetic in the Lachish Ewer. However, if we were to attempt to offer an Egyptian origin for this divider, an obvious candidate would be the plural strokes from Egyptian hieratic, most especially the vertical variety with three descending dots or diagonal slashes. This is, however, only a conjectural graphic association. It is entirely possible that the ‘tri-punct’ was an innovation in the alphabetic system or resourced from some other written tradition. Yet, given the frequency with which symbols of various sorts are adapted and reappropriated across script systems, we present it as a possibility despite that it is impossible to prove.

7.1.3. Single Dividers

One strange phenomenon in Egyptian writing that should be discussed here in light of potential Egyptian origins for alphabetic punctuation are the small single dividers referred to as “verse points” (*Verspunkte*) or “structuring points” (*gliederungspunkte*).⁸⁸⁸ While in Egyptian these single point dividers are typically found in poetic texts, they occur in a variety of genres, both literary and non-literary.⁸⁸⁹ In many texts what these single points intend to separate is unclear. In a recent study of their use, Landgráfová and Mynářová point out that these single points could serve not only to divide but also potentially for aid in reading and performance in liturgy or other

⁸⁸⁷ See Millard and Bordreuil 1982.

⁸⁸⁸ Brunner 1986; Foster 2001 = verse points; Burkard 1983; Landgráfová and Mynářová 2016 = structuring points.

⁸⁸⁹ Landgráfová and Mynářová 2016: 187-188 [with conclusions on 203]; cf. Parkinson 2002: 115-118.

oral genres, as well as for use by a copyist to track lines.⁸⁹⁰ The use of points in certain economic texts from Deir el-Medina seems to separate content but could just as likely be understood as *ad hoc* dots indicating that the content is accurate, again perhaps for copying. The irregularity of their use across genres and even within individual texts, however, leads to the conclusion that, “structuring points [verse points] can be used to divide meaningful units of text of (almost) any length, including word, phrase, clause, and even complex sentence. The broad range of genres and text types shows that they cannot be connected exclusively to the domain of school and education.”⁸⁹¹ This broad sort of definition is emblematic of some of the difficulties current in the understanding of verse, or structuring, points in the Egyptological literature. For our purposes, however, the mere existence of these divisions, whatever they might divide, makes for a potential point of contact between Egyptian and Levantine writing that merits investigation, however brief.

Verse or structuring points, used broadly in Egyptian writing in the New Kingdom, offer an attractive example of a non-linguistic sign in Egyptian with the potential for adaptation. If Levantine scribes had this ambiguous and seemingly adaptive grapheme in ‘their toolbox,’ so to speak, they might have put it to good use in a way that differs from the Egyptian practice. As Landgráfová and Mynářová point out, in several texts there is a clear connection between linguistic realities (e.g., phrases or clauses) and the use of a singular dot.⁸⁹² This is similar to the case for the single point word divider in the southern Levant, where Crellin has identified a specific linguistic relationship. However, much like our other suggestions, a clear line cannot be

⁸⁹⁰ Landgráfová and Mynářová 2016: 203.

⁸⁹¹ Landgráfová and Mynářová 2016: 203.

⁸⁹² Landgráfová and Mynářová 2016.

drawn between the two practices. Single dot word dividers are infrequent in the earliest alphabetic inscriptions, when we might posit the most intense contact between the two writing cultures, only occurring with frequency in the later scripts of the Iron II. As a result, a temporal chasm must be bridged between the period in which intense contact between the writing cultures might have produced an adaptation of such a small and ambiguous grapheme. As a result, it is perhaps better to see the single point word divider common in later Iron II scripts to be a genuine innovation on the part of alphabetic writing culture, likely unrelated to the enigmatic Egyptian verse points.⁸⁹³

7.1.4. Textual Segmentation Markers: Summary

Various markers of different kinds, with different rules governing their deployment, as well as different irregularities characterizing their usage, make it difficult to draw any clear lines between Egyptian graphemes that create textual or linguistic separation and later alphabetic word dividers, especially when we consider the wide distribution of markers in the Near East. The breadth of the practice of using small marks and dots to denote divisions of various kinds across the Near East likely makes it impossible to speak to the origins of many punctuation practices with any clarity. Even as regards the history of our own punctuation markers in English, their historical origins are murky and marked with varieties of adaptation from prior written materials

⁸⁹³ One case of an early example that might be pursued further are the two dots that end lines four and five of the Kh. Qeiyafa ostrakon. Below it will be argued that the Kh. Qeiyafa ostrakon bears striking similarity to the Egyptian ‘model letter’ *Kemît*. One potential point of intersection between the two which cannot be discussed at this time is the potential use of structuring points. Landgráfová and Mynářová as well as Parkinson refer to structuring points used in copies of *Kemît* from the New Kingdom (Landgráfová and Mynářová 2016: 187; Parkinson 2002: 117). In my own collation of the Kh. Qeiyafa ostrakon, I called attention to the two dots at the end of lines four and five arguing that they may denote clause boundaries. This is, in fact, the purpose of structuring dots in examples of *Kemît*. I have, however, not done enough research to provide a more specific comparison. For this reason, these notes, while interesting, do not merit inclusion in the body.

as well as innovation and invention of new marks, some of which did not survive the journey.⁸⁹⁴ Still, the question of textual segmentation and its origin deserves further, and more focused, study than can be offered here. All that can be said is that given the significant overlap between southern Levantine alphabetic practice and Egyptian scribal practice, and what we have previously argued about the embeddedness of learned traditions, it is a possibility that the interaction between these writing cultures produced adaptations in the written code, while always appreciating and allowing for novel innovation on the part of the curators of the alphabetic tradition.

7.2. Format and Layout in the Southern Levant: Possible Egyptian Connections

The organization and layout of texts, be it according to genre or style, is an important part of writing practice and thereby writing culture. As we mentioned at the beginning of this chapter, there are certain conventions and expectations about the organization and layout of various compositions. The visual production of writing assumes that there is a normative, and therefore ‘good’ in some sense, way to write. Aspects of the layout of writing might be the borders of a text (either written or assumed), the lineation of a text, and the arrangement of the lines and letters in relation to the borders and lines. Unfortunately, in the southern Levant we have little to discuss in regard to the layout and format of texts, especially early alphabetic texts. Most of the early alphabetic inscriptions from the Levant are too small and too fragmentary to provide sufficient evidence for understanding practices of writing layout in the earliest period. For this reason, we will have to look to later administrative inscriptions to draw out visual comparisons with Egyptian writing. But even here, as mentioned previously, there is difficulty in identifying a

⁸⁹⁴ Parkes 1993; see also Houston 2013.

specific heritage to the material. Yet, despite the lack of evidence for describing layout practices in early inscriptions, we will investigate one text, the Kh. Qeiyafa ostrakon, suggesting that there may be a relationship between the peculiar layout of this early alphabetic practice text and much better known examples of practice letters from Egypt.

7.2.1. An Early Model Letter?: The Kh. Qeiyafa Ostrakon in Light of Egyptian *Kemit*

The Kh. Qeiyafa ostrakon is one of the few early epigraphs that we might examine for peculiar details of textual organization and layout. To start off, the text is of debated orientation, either written dextrograde or vertically.⁸⁹⁵ Secondly, the text curiously bears dividing lines between each row or column of text, something otherwise unattested in early alphabetic writing. These peculiar features of textual organization have contributed to the difficulty in working with the inscription and, as of yet, no secure solution has been offered. The irregular orientation of the letters, with varying vectoriality (see chapter five, section 5.2 above) led Demsky to present a vertical orientation for reading, at least for the first line, but arguing that the writer of this text moved the inscription, “reading in the round,” down to the last line.⁸⁹⁶ Further, as concerns the dividing lines, some have suggested that they were written after the fact or to guide the eye of the reader along. While all theories hitherto put forward about the organization and layout, including the strange lines, are possible, I offer what I consider a compelling comparison that provides outside evidence for (1) a vertical (columnar) reading of the inscription, progressing then from right to left line-by-line and (2) an interpretation of the lines.

⁸⁹⁵ Rollston stated, “I suggest that one can also make a rather strong case that this inscription is written vertically.” (2011: 77). Others have noted the possibility as well (Misgav, Garfinkel, and Ganor 2009; Demsky 2012; and Donnelly-Lewis 2022).

⁸⁹⁶ Demsky 2012: 192.

Kh. Qeiyafa Ostrakon



Fig. 7.3: Kh. Qeiyafa Ostrakon with two orientations (photo credit, Greg Bearman; figure produced by the author).

Just as scholars remained open to questions of orientation, there has been little discussion of the lineation of the inscription. Galil opined that, “these lines were drawn only after the letters were written.”⁸⁹⁷ To this Demsky added that the lines could constitute ‘ceiling’ and ‘floor’ lines for the writing of individual letters, but believes that the orientation of the letters in distinction to these lines suggests “that the lines serve another purpose, perhaps for guiding the reader, rather than the writer.”⁸⁹⁸ While both interesting suggestions, scholars’ hesitancy to state anything for certain comes from the fact that there is no compelling comparative evidence for either lineation or vertical writing in the corpus of early Iron Age inscriptions, but looking beyond this corpus, to Egypt, may offer a solution.

⁸⁹⁷ Galil 2009: 208.

⁸⁹⁸ Demsky 2012: 190.

Before we address such Egyptian comparative, however, I would like to offer some observations on the inscription that set precedent for the plausibility of the proposed Egyptian connection. First, most scholars have recognized that the text is some sort of practice text with some favoring an interpretation that the inscription is, most plausibly, composed of a list of names.⁸⁹⁹ In spite of the clearly untrained hand of the writer,⁹⁰⁰ the content of the text made it difficult for me to situate in an educational context.⁹⁰¹ But recently, I have reconsidered by previous objections and now, in line with the majority opinion of scholars, do believe the ostrakon consists of a practice text. Second, upon physical inspection of the ostrakon, it should be noted that the writer could almost only have written the text vertically because of the curvature of the concave inscription. Writing the inscription dextrograde, horizontally would result in several problems. I will describe the problems in detail.

As has been noted repeatedly, the inscription is written on the interior of a sherd of significant size.⁹⁰² This results in a few necessary conclusions. First, from the perspective of the writing hand such a curvature would have greatly impeded the writer in the writing process. Moving across the curvature would not be wholly impossible, but it should be noted that it would be considerably easier to move down the sherd, avoiding the curvature altogether. Further, if we are to imagine that the writer composed the text horizontally then the off-hand would be unable to offer the necessary stability to carefully—if not unartfully—write such a lengthy inscription.

⁸⁹⁹ Thus Ahjtuv 2009; Demsky 2009, 2012; Becking and Sanders 2010; Millard 2011; Rollston 2011; Richelle 2015; and Schniedewind 2019.

⁹⁰⁰ Donnelly-Lewis 2022: 181.

⁹⁰¹ Donnelly-Lewis 2022: 203 n. 53.

⁹⁰² Misgav, Garfinkel, and Ganor 2009.

First off, the grasp would be cumbersome, having to provide support from the upper palm to the tips of the finger while the thumb lay hold of the interior of the sherd, where it would have undoubtedly impeded the writing line.

In contrast, when writing vertically on the interior of the sherd, the off-hand can easily grasp the inscription on the convex side and provide ample stability to compose each letter. From this position one handles the inscription quite comfortably. Thus, both writing hand and off-hand have a physiologically easier time executing the inscription if it is written vertically in columns. This is because, as stated, the writing hand does not have to move across the concave curvature of the sherd and thereby twist the hand, arm, and implement to write each letter, meanwhile the off-hand comfortably grips the convex back of the inscription providing ample support and stability for the author to pen each and every letter. Handling the inscription first-hand makes these observations evident (see fig. 7.4 below).

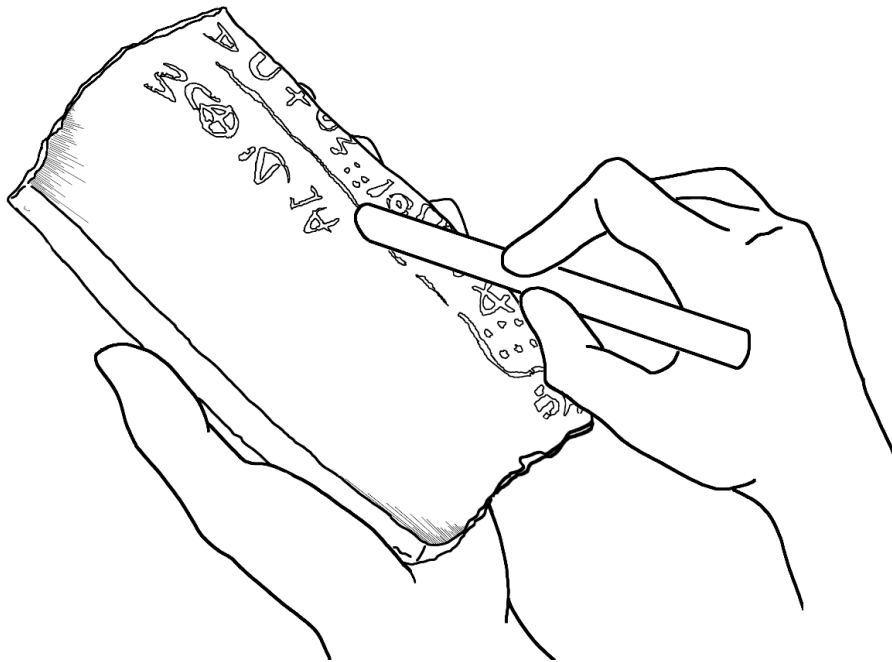


Fig. 7.4: The vertical orientation of the Kh. Qeiyafa Ostracon (drawn by the author)

From this, I would like to begin with the suggestion that (1) the text is likely a practice text due to the poor execution of the letters, and (2) the inscription is, in all likelihood, written vertically in columns down the sherd as opposed to horizontally in dextrograde fashion. These suggestions can be reasonably defended independent of an explicit connection with an Egyptian textual form but provide pretext for the comparison with the Egyptian textual form that we will discuss below, if not only because a practice text written vertically would be an outstanding case in the corpus of alphabetic inscriptions from the southern Levant.

Examining these features of the inscription, that it is a vertically written practice text with lines separating each column of text, in light of Egyptian practices concerning layout and format, we find what I believe to be a compelling comparison with a ‘much copied’ letter known as *Kemît*.⁹⁰³ Copied from the Middle Kingdom down to the end of the Ramesside period, *Kemît* is a ‘model letter’ of varying content used to train Egyptian writers.⁹⁰⁴ The composition is recognizable by a few key features of both content and, most particularly, layout.

As we have mentioned above (see chapter 5), the regular orientation of writing in hieratic was sinistrograde (right-to-left) and horizontal. However, vertical writing is attested, though it begins to fall out of use already at an early period, probably because the orientation is not conducive to fast, efficient writing in the daily chores of administration.⁹⁰⁵ Further, purposeful lineation of writings is an infrequent phenomenon in Egyptian.⁹⁰⁶ The combination of the two, vertical and lineated, is even more so. Hagen notes that “the practice of dividing columns by

⁹⁰³ Hayes 1948; see also Barta 1978, Hagen 2005, and Petersmarck 2012.

⁹⁰⁴ Barta 1978: 6-14; Hagen 2005: 43; and Petersmarck 2012.

⁹⁰⁵ Eyre 2013: 37-38; cf. Polis 2020: 555 and Parkinson 2009: 93-96.

⁹⁰⁶ Eyre 2013: 40-45.

inserting vertical lines between them is rare on ostraca.”⁹⁰⁷ There are, however, exceptions. As Hagen notes, there are three genres of inscriptions that can be, or are frequently, written vertically (that is, columnar) with vertical lineation dividing line from line: (1) hieratic imitations of inscriptional forms of writing (i.e., imitations of monumental Hieroglyphs), (2) religious and magical texts, and on occasion (3) copies or drafts of tomb decorations.⁹⁰⁸ Outside of these genres, the combination of columnar writing with dividing lines occurs most frequently in one text in particular, the ‘model letter’ known as *Kemît*.⁹⁰⁹

The didactic character of this composition has been long recognized based on the poor quality of the handwriting, and in at least one case evidence for multiple hands, one of the master and another of the student (see chapter eight, fig. 8.1 below).⁹¹⁰ The earliest attestations of *Kemît* are on Middle Kingdom papyri from Lahun, but the text is perhaps most abundantly attested from the New Kingdom ostraca found at Deir el-Medina.⁹¹¹ The content of these examples, of which there are currently 464 inventoried witnesses, is generally epistolary in nature but can include excerpts of literary texts, wisdom sayings, and number exercises.⁹¹² In a few examples the body of the ‘letter’ contains language, with common verbs, that frequently appear in both epistolary and economic texts. The flexible nature of this text makes it useful for training scribes and its peculiar layout marks it as a model letter, as Hagen notes of the three examples of *Kemît*

⁹⁰⁷ Hagen 2005: 43.

⁹⁰⁸ *ibid.*

⁹⁰⁹ *ibid.*

⁹¹⁰ *ibid.*; cf. Galan and el-Bialy 2004

⁹¹¹ Collier and Quirke 2004, 50-51; Hagen 2005

⁹¹² See Petersmarck 2012.

he analyzes, “the rarity of the format of vertical columns with dividing lines, which is unattested for ‘real, letters,’ the poor handwriting, and the existence of three copies of the same letter identifies the text [of these ostraca...] as a model letter and a student exercise.”⁹¹³ The peculiar characteristics of *Kemit* in its compositional layout and in its generally poor ductus make it recognizable to Egyptologists even from small fragments. Its wide chronological and geographical distribution in Egypt establishes that it was a popular and well-known form of writing practice.

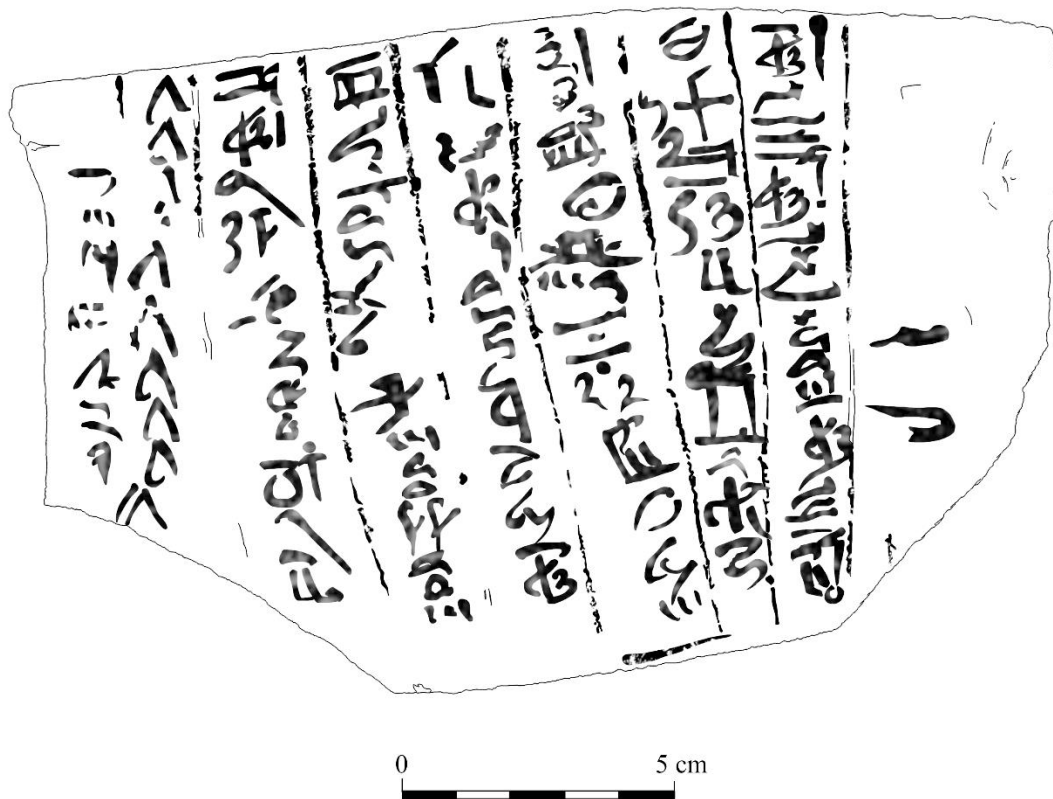


Fig. 7.5: O. British Museum EA 21284 (drawn by the author after Demareé 2002: plate 62)

⁹¹³ Hagen 2005: 44.

Comparing this frequently attested model letter to the format and layout of the Kh. Qeiyafa ostrakon is instructive. Simply observing the two, the similarities become immediately apparent. The vertical orientation, as we have suggested above, coupled with the curious and inexplicable lineation draw these two textual forms into parallel. The peculiarities of the Kh. Qeiyafa ostrakon and the general lack of comparative data for either the orientation or the lineation among the corpus of alphabetic inscriptions suggest that the similarity between *Kemît* and the Kh. Qeiyafa ostrakon go beyond simple coincidence. We might argue that the basic form of practice text represented by *Kemît* was known, at least in broad detail, by writers of alphabetic in the southern Levant, if only as a residual inheritance of the Late Bronze Age. In this respect, it has been persuasively argued that the Gezer Calendar reflects an adaptation of the cuneiform student exercise Ura 3, not only in content but also in layout.⁹¹⁴ In this case, the Kh. Qeiyafa ostrakon would represent a similar phenomenon.

A comparison with *Kemît* has broad implications beyond just the layout and format. It shows that both of the strange features, lineation and vertical orientation, signal its function as a writing exercise. Further, we might compare the two texts at another point, their respective content. While it is generally thought that the first line of Kh. Qeiyafa ostrakon has been lost, the text has often been interpreted as some type of correspondence by those who see it not as a list but as a complete text.⁹¹⁵ I have previously argued that this lost first line could have contained “a general epistolary introduction.”⁹¹⁶ This cannot be confirmed but would reflect the genre and style of *Kemît* as a ‘model letter.’ *Kemît* as a model letter is always a continuous text and while

⁹¹⁴ Schniedewind 2019c.

⁹¹⁵ Misgav, Garfinkel, and Ganor 2009, Puech 2010, and Donnelly-Lewis 2022.

⁹¹⁶ Donnelly-Lewis 2022: 203.

the genre and content of the text may differ between the various exemplars, it is practice in training writers to compose a coherent text. This accords well with the assumptions of Misgav and Yardeni about the content of the Kh. Qeiyafa inscription. Misgav stated, “we can determine, however, that the text has continuity of meaning, and is not merely a list of unconnected words. It is phrased as a message from one person to another. [... it] clearly contains more than a list of names.”⁹¹⁷ Yardeni agreed but concluded that “the interpretation as a list of names, though it seems less likely to me, cannot be ruled out.”⁹¹⁸ In the view of this comparison with *Kemît*, we might find outside support for taking the Kh. Qeiyafa ostrakon as a “continuous, coherent text,” whatever one might see the proper decipherment as.⁹¹⁹

The unique features present in the Kh. Qeiyafa ostrakon, like its vertical orientation and lineation, in addition to features previously argued for, composed by an unpracticed hand as a complete text (letter?), accord well with unique features known from the Egyptian model letter *Kemît*. In this regard, I am moved to suggest that the orientation and vertical lines of the Kh. Qeiyafa ostrakon reflect a memory of the standard ‘model-letter’ form of practice represented by *Kemît* in the Egyptian tradition. This form was mimicked in an early period of the formation of the alphabetic tradition and, as things often are, adapted to the particular culture of Canaan. Thus, in my understanding, the best interpretation of the peculiar form of the Kh. Qeiyafa ostrakon is as an archaic vestige of writing practice current in the overlap between Egyptian and alphabetic in the Late Bronze Age.

⁹¹⁷ Misgav, Garfinkel, and Ganor 2009: 255-256.

⁹¹⁸ Yardeni 2009: 259-260.

⁹¹⁹ Donnelly-Lewis 2022: 204.

7.2.2. Some (Late) Similarities in Administrative Writing

We have few early examples of administrative texts written in alphabetic. The economic texts we do have consist of a few lines at most, containing only a few words. Texts like the Lachish Jar Sherd, the Lachish Bowl Fragment, the Kh. Qeiyafa Jar, and the Beth Shemesh ostrakon are evidence for the use of alphabetic at some level in administration. We cannot make a clear connection to Egyptian practice as concerns form or layout from these short samples alone. Rather, we must appeal to the plurality of later Iron II examples of administrative texts to show that habits of layout and format that exist in Egyptian practice also exist in alphabetic texts, even if this similarity may be ultimately fleeting. On this note, we should offer an important caveat. Certain features of administrative layout are shared across the Near East. Administrative texts are frequently written in successive, short lines and numbers are listed at some distance. This occurs frequently in the well-known list traditions from Mesopotamia but also in Egypt. This, it would seem, is a product of practicality.⁹²⁰ Writers across the Near East needed administrative lists that were usable. Listing names in successive order allows for easy review. The writer can easily scan through the list rather than attempting to find a name or amount embedded in a text written *scriptio continua*, though administrative lists of this sort do exist as well. For this reason, format and layout of inscriptions are difficult to assess due to the similarity that this genre shares in the various writing cultures of the Near East. Nevertheless, it is worthwhile to examine these texts and their features to see how the organization of characters is similar in many ways to Egyptian practice, even if no specific inheritance can be discerned.

⁹²⁰ Though it should be noted, with Eyre, that such practicality need not be assumed as the only reason for format and layout in any text (see Eyre 2013: 52-54).

Administrative texts exhibit a particular form and, we might even say, syntax. In the plurality of lists (often name lists) that come to us from Iron II contexts in the southern Levant, there is some consistency in listing things in successive order, though certain inscriptions and short receipts could be written *scriptio continua* (Ophel 1; Qasile 1; Samaria 3, 5, 8, 9, 10, 12, 13, 14, 16, 17a, 18, 19, 21, 24, 45, 47, 50, 53, 54, 55, 59, 63; as well as an unprovenanced ration list and the unprovenanced ‘assessment’ [“*noqdim*”]ostracon). Many of these lists are merely lists of names, however several include numbers as well. When these numbers are listed, they are sometimes separated out from the names by space, perhaps for ease of interpretation (Arad 25, 31(?), 76; Samaria 1, 2; T. Gamma 2; an unprovenanced ration list; and a unprovenanced list of payments).⁹²¹ This sort of practice, of using space or columns to separate content, occurs in both cuneiform texts from points across the Near East, as well as administrative texts from Egypt.

⁹²¹ Ahituv 2008; Renz 1995.

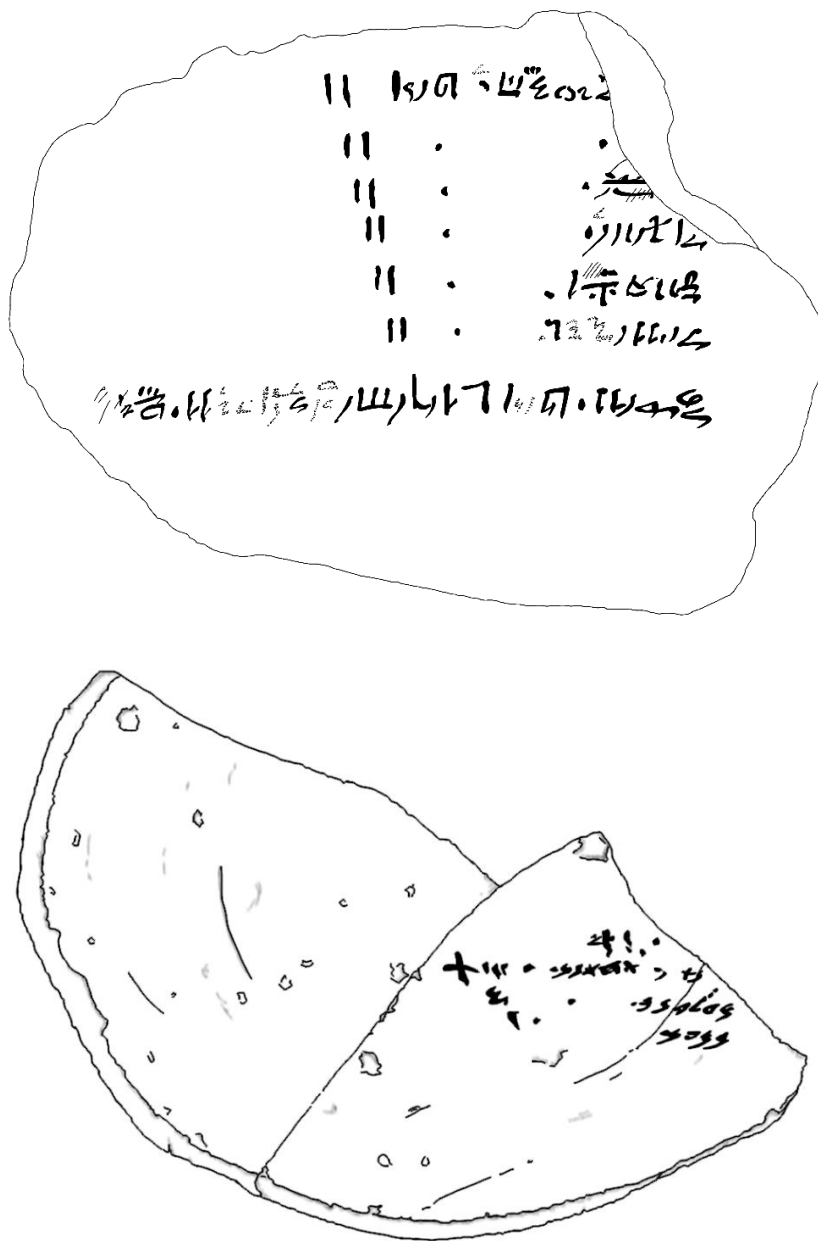


Fig. 7.6: (Top) *O. Turin 57369* (reproduced facsimile); (Bottom) *Arad 25* (drawn by the author)

Perhaps the most evocative example of alphabetic (Hebrew) administrative layout and potential Egyptian influence is the use and spacing of numbers and *hq3.t* dots in *Arad 25* (above). Compare the two ostraca here, one from Deir el-Medina (*Torino 57369*) and one from *Arad (25)*. In each of these texts, the organization is similar, names to the right, followed by an

intermediary *hqʔ.t* dot and the hieratic numeral. While the Arad example is less consistent, with the Egyptian example being more stable, the spatial relationship between the features (numerals, dots, and names) is curiously congruent. The writer of the Arad ostrakon lays out his text with some consideration of where the elements might be best placed and decides upon a strategy of layout that brings the text into dialogue with Egyptian practices. Still, we must be wary of making too close a parallel, as inconsistency on the part of the Arad writer obscures the picture. Thus, we call the similarities evocative but not necessarily consequential.

The use of hieratic numbers and sigla discussed in the last chapter has bearing on any attempt to see some connection in the layout of administrative inscriptions in alphabetic, as practices in the layout of administrative texts are likely to have been learned and passed down, just as we have argued for a variety of elements in the writing culture. The antiquity of certain administrative practices may be evidenced by the Beth Shemesh ostrakon, an early example of an administrative list (see Fig. 4.15 above). Two administrative strategies stand out in this text that are of relevance here. First is the potential use of *hqʔ.t* dots. This early list of names contains several peculiar dots of unknown use. Both Sass and Yeivin have commented on these dots, noting particularly a potential Egyptian connection.⁹²² Sass writes, “the dots are reminiscent of the recording of workdays beside the names and signs of labourers on Egyptian ostraca from western Thebes at roughly the same period.”⁹²³ Sass and Yeivin make an important connection, though I believe Sass misspeaks when he says, “recording of workdays,” as the dots from Egyptian ostraca are not numeric notation but consist, most likely, assignments of rations. In this way, the Beth Shemesh may evidence a similar phenomenon. Consider that the three clearest

⁹²² Sass 1988; Yeivin 1958.

⁹²³ Sass 1988: 65.

dots occur to the right and left of the names on the ostracon (see Fig. 4.15 above). The occurrence of multiple dots together, that are clearly not constituent of a letter lends credibility to the idea that these are dots denoting rations given (perhaps *ḥqʕ.t?*), being that only one name is assigned two dots, while others are accompanied by only one (see Fig. 4.15 above). What is more, a diagonal stroke next to the name *gm'h* could be an additional sign. While difficult to see, as I read it, it might be a rectilinear *bet*, perhaps an abbreviation of *bath*. If this were the case, and it is very uncertain, I tentatively suggest to read it as 2 (*ḥqʕ.t*) (and) (1) *b(ath)*, perhaps denoting both the grain and wine ration given to a particular worker or soldier. Better images using modern, advanced methods would be required to confirm any such supposition.

The Beth Shemesh attests to the continuity of administrative practices in the southern Levant in one more small way. The first name, which Cross correctly identified as *'z'h*, is marked with a *lamed* while the remainder of the names are unmarked.⁹²⁴ This phenomenon is attested from later Iron II administrative texts and has often been interpreted as a type of ellipting, whereby *lamed* “to” is assumed for every name after the first.⁹²⁵ Mendel-Geberovich in her study of epigraphic lists, however, disagreed with this perspective, stating, “The word [*lamed*] probably represents a situation in which men were ‘belonging *l*-PN,’ who is in the title, for instance, a group of workmen or soldiers under his command or responsibility.”⁹²⁶ The use of *lamed* to denote the leader of a group, as mentioned, is a strategy used well into the Iron II and might attest to the continuation of assumed practices of administration. If not specifically layout, this has bearing on the discussion of layout as a practice of writing culture in that it shows a

⁹²⁴ Cross 1984.

⁹²⁵ See discussion in Mendel-Geberovich 2014: 340.

⁹²⁶ Mendel-Geberovich 2014: 340 (translated from the Hebrew by the author).

depth to administrative traditions from which we might surmise a similar depth of layout practices. However, with the current evidence we cannot describe early practices of layout in alphabetic texts with much specificity.

7.3. Conclusions

Investigating textual organization strategies is difficult with the little data we have from the Levant. In trying to sort through the material, certain evocative similarities between Egyptian and Levantine practice can be noted. And yet, definitive connections are hard to come by. This is no surprise. The dataset available is extremely limited, and making a specific case for a direct inheritance would be difficult given the cross-cultural similarities that inhere in textual forms across the Near East. Still, it is worthwhile to open the discussion of textual organization and segmentation in hopes that future epigraphs might shed further light on both similarities and differences between alphabetic in the southern Levant and Egyptian writing practice. To this extent, the recognition of similarities between the Kh. Qeiyafa ostrakon and the Egyptian model letter *Kemît* argued for here might lead to other recognitions of similarities between organization and layout in still future inscriptions. In any case, it is hoped that the investigation in this brief chapter has opened a new avenue of exploration for the relationship between scripts, and especially between alphabetic and Egyptian, in the ancient southern Levant.

Chapter Eight What Writing Looks Like (II): Color Meaning and Writing Practice

Introduction

In the modern world of marketing and commerce, people are confronted with a barrage of text in different shapes, sizes, and colors. The constant textual stimulation can cause us to overlook the role that font and color play in attracting and maintaining our gaze. One benign example of the affective, visual use of color and font in text is the conscious color psychology of road signage. Conscious effort has gone into the design and color of road signs, either to purposefully draw our gaze or to cause us to ignore it entirely.⁹²⁷ The most potent example, stop signs, are specifically designed with bold, white block letters on bright red relief to both catch the eye (red) and facilitate reading from some distance (bold, white, and block).⁹²⁸ Much in the same way, caution signs are often orange or yellow to draw attention. However, even in the similarity of their design, the differences in color become emblematic of differences in the message or meaning of the sign. Repeated encounters with signs of various colors (red, orange, yellow, and green) enculturate us into a range of potential meanings. Signs are an apt example because they are specifically designed to communicate both in implicit (e.g., red means “pay attention”) and explicit ways (e.g., Highway 10 is that way) through the connection between color and text. The conscious use of color in this way is true across countries and cultures, even where the conventions that determine meaning may differ.⁹²⁹

⁹²⁷ See commentary in Andersen 2009.

⁹²⁸ See Andersen 2009, as well as Fiske’s discussion of the use of red in traffic lights (2011: 56-57).

⁹²⁹ See for example discussion in Adams and Osgood 1973.

The physical and visual form of text is important. It offers something about the desired meaning to be communicated, relying on both natural and conventionalized meanings in the culture of the one who produced it. As such, the use of coloration, size, and shape in writing is an important part of a shared writing culture, insofar as such uses create unique possible meanings for writers and readers. Unfortunately, with regard to the Iron Age southern Levant, we can really only truly describe one of these visual features, color. But even in this inquiry, there are unfortunate gaps in our knowledge. In what follows, I will offer an overview of bichrome writing in Egypt to set the stage for an analysis of the two main inscriptions from the southern Levant that attest to such writing in both red and black ink. These two inscriptions, Pithos B from Kuntillet 'Ajrud and the Deir Alla plaster texts (DAPT), offer our only interpretable insight into writing practice as it pertains to color, and our only avenue through which we can interrogate the meaning of red in writing from the southern Levant in the material culture. Before we begin, however, it is necessary to understand the Egyptian use of color in writing. This brief summary of Egyptian material will provide insights that carry over into the study of the Levantine material.

8.1. The Two Pens of the Scribe: Red and Black Ink Use in Egypt

The use of the color to enhance writing in ancient Egypt is almost as ancient as the art of writing itself. Reference to bichrome writing in ancient Egypt dates as early as the Old Kingdom with one pyramid text demanding, “Scribe, scribe! Destroy your palette, break your *two pens*, and rip up your scrolls.”⁹³⁰ The ‘scribe’ called upon here is commanded to destroy all of the elements of the standard kit; this includes the standard two pens of the scribe, red and black. The use of the

⁹³⁰ Allen 2015: 134 (emphasis added).

dual in Egyptian *r.t*, translated “two pens,” refers to the two rushes of the writer’s pincase that we have already discussed in chapter one (section 1.1 above).⁹³¹ The reference to two pens, situated alongside palette and papyrus, indicates that already in the Old Kingdom period bichrome writing was the standard practice of skilled writers in Egypt.

By the Middle Kingdom in Egypt, distinctive domains of usage for both red and black ink had already developed in the writing culture.⁹³² Black ink (Eg. *ry.t km.t*) was standard for writing and colored the texts and procedures of everyday practice. Everything from literary texts, administrative documents, and small notes were written in coarse, black ink. As such, black was the assumed, natural color of writing. In contrast, red ink (Eg. *ry.t dšr.t* or *ry.t wšd.t*), being evocative by nature, came to be used in much more restricted and sometimes ritualistic ways.⁹³³ According to Posener, red ink took on four basic functions in Egyptian texts regardless of content. Red ink was used (1) to highlight, (2) to divide, (3) to isolate and (4) to differentiate.⁹³⁴ These broad functions could take on more specific nuances when used in particular genres of literature or when exploited to idiosyncratic ends in individual texts. One of these specific functions was the frequent and fearful use of red to invoke the realm of the magical, malefic, and divine.

In use and practice, we can sketch out two main spheres for the functionality and interpretability of red ink; these two spheres are secular and religious. These spheres are by

⁹³¹ Allen 2015: 205 n. 41.

⁹³² Posener 1951: 76.

⁹³³ Parkinson and Quirke 1995: 45; see also discussion of red ink in Posener 1951 and Quack 1998.

⁹³⁴ Posener 1951: 77; cf. *LÄ* 5: 313-314.

necessity anachronistic but provide a simple framework from which to describe, in brief, the use of red ink in Egypt.

In the secular sphere, the practice of writing in red ink had both pedagogical and practical purposes. Much like the dreaded red marks of a primary school instructor today, ancient Egyptian teachers used the red pen for instruction and training in writing, marking up the exercises of their pupils to teach them correct grammar or proper sign form (see fig. 8.1 below).⁹³⁵ Examples of this type include verse points, assumed to check content, but also marks and corrections on writing boards and practice ostraca. This relatively well-known use of red ink is, however, not the only secular use of red ink. The most common secular use of red ink was used as headings, or rubrics, that served to separate out particularly important material in a composition.⁹³⁶ In dates, this sometimes meant the demarcation of the months and days to separate them from the regnal year, which would not be written with red ink.⁹³⁷ In administrative work, writers calculating totals would or could single them out by use of inscription in red.⁹³⁸ The use here is for differentiating or dividing out, drawing the eye of the reader to that datum most important for his or her work, with no apparent unease felt at the sight of the color that, as we will see, evoked more negative association in other types of literature.

⁹³⁵ See example in Galán 2007: 95-116.

⁹³⁶ Posener 1951: 75-80; Parkinson and Quirke 1995: 45; *LÄ* 5: 313-314.

⁹³⁷ Posener 1951: 78; Griffiths 1972: 88; Parkinson and Quirke 1995: 45.

⁹³⁸ Posener 1951: 77; *LÄ* 5: 313-314; cf. Gunn 1941.

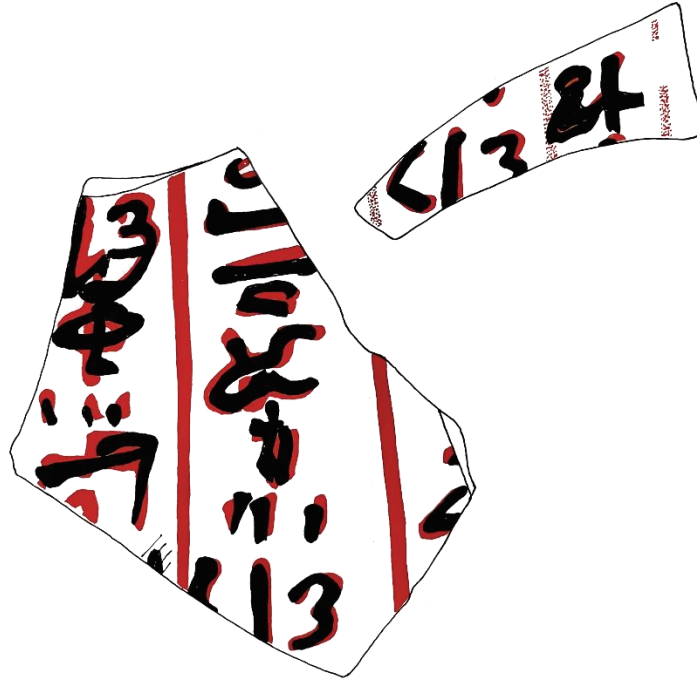


Fig. 8.1: Hieratic fragments of *Kemit* (after *O.Turin 57545 & 57546*).

Somewhere inbetween the secular and religious spheres, there exist the category of literary texts, texts that transgress the artificial, heuristic boundaries established here. In literary texts, while not involved in specific rituals or religious affairs, there were both secular and religious uses of red ink. In these sorts of texts secular, or non-religious, benign uses of red ink (for headings and performance) accompanied the sacred (and often dreaded) religious uses. In literary texts red could simply be used to call attention to headings or signal to the reader something of particular importance, sometimes as a signal for pronunciation or recitation.⁹³⁹ However, at times, red appears with a use that can only be described as religiously motivated.⁹⁴⁰

⁹³⁹ Meyer-Dietrich 2010.

⁹⁴⁰ Ritner 2008: 147; cf. Posener 1958: 257.

Thus, while of some general use, red ink carried with it a sense of the culturally and religiously embedded association, often with the malefic divine.

This leads us to what is perhaps the most fascinating aspect of the use of red ink, and that is its use in magic and ritual. These uses, which we have called the ‘religious sphere,’ call to mind the color red’s exciting affective value, like the stop sign in our culture. The use of red ink demands pause or caution on the part of the reader and writer. Culturally, red in ancient Egypt held significance as the color of the hated Apopis, and later Seth.⁹⁴¹ Red became the color of curse and execration, as those self-same texts exhibit. In written texts of the ritual or religious sort, red invoked a lingering sensation of the hex; the distinct sense that writing in red brought with it associations of the curse and-or the wrath of beings of the maleficent kind (i.e., demons).⁹⁴² While the ritualistic or religious use of red ink is one of the most fascinating uses of red ink, it is not one that clearly enters into the discussion of written texts in the southern Levant and as such does not require much focused attention. This being the case, it only serves us to say that a negative divine appeal accompanied writing in red in Egypt. Whether this be the invocation of a curse or the binding of an evil spirit by incantation, red ink retained the magical power to invoke and manipulate the divine realm. Still, it is important to consider that in Egypt this use of red ink was quite common and, as such, it is not likely that such negative associations between the color and supernatural was unknown to the inhabitants of the Levant.

⁹⁴¹ Griffith 1972: 89; Ritner 2008: 147 and 147 n. 663.

⁹⁴² See Ritner 147 n. 663; as well as Lucarelli 2010 and Posener 1949.

8.2. Writing in Color: Red and Black Ink in the Southern Levant

Moving now to color as a component of writing culture in the southern Levant, it is important to offer a sober assessment of the data. Truth be told, few inscriptions from the southern Levant show use of any ink other than the regular, common black. Black ink, as discussed in chapter one, is the standard writer's ink (Heb. יִיָּד; see ch. 1.) And, though it may vary in composition to one degree or another, its ubiquity assures us of no variance in meaning; black ink was nothing special. Writing and reading on the regular was ruled by letters and signs in that stout, cold, black—just as in Egypt—just as today. Red ink, on the other hand, much like in Egypt, appears to have been used in a much more restricted manner in the southern Levant. Because of this, it appears only scarcely in the inscriptional record. Few precious inscriptions provide evidence of its use in the southern Levant, and even fewer provide clues as to its meaning for writers and readers of the text. Among these few inscriptions only two provide sufficient context for scholars to hazard an interpretation of any value on the meaning of red ink. These two inscriptions are the practice texts on Pithos B from Kuntillet 'Ajrud and the elaborate plaster texts from T. Deir Alla. Beyond this, two additional inscriptions (from T. Malḥata and T. Reḥov) are, unfortunately, too small and fragmentary to warrant a full investigation. In these cases, some comment will be given about the possible interpretations of the red ink, though no conclusions can be reached.⁹⁴³

This chapter will begin with Pithos B from Kuntillet 'Ajrud, detailing well-recognized similarities between this inscription and the similarly well-recognized practice of red ink for pedagogy known from Egypt. After this, a much more complex topic will be broached, the interpretation of the rubrics of the Deir Alla plaster texts (DAPT). These two inscriptions provide

⁹⁴³ See section 8.2.3 below.

sufficient evidence for the use of red ink and further, as I will aver, the importation of semiotic meaning(s) of the color red as it was understood in Egypt into the writing culture of the southern Levant.

8.2.1 The Color of Correction: Red Ink in Writing Practice at Kuntillet ‘Ajrud

The site of Kuntillet ‘Ajrud in the central Sinai has produced one of the few inscriptions from the southern Levant bearing both red and black ink, Pithos B.⁹⁴⁴ With exercises ranging from simple abecedaries to model letters, much of the basic scribal curriculum for writers in the ancient Levant is on display on this curious object.⁹⁴⁵ The Pithos bears two abecedaries that demonstrate the pedagogical use of bichrome writing in the southern Levant. As Schniedewind points out, one abecedarium, in black ink, is written in a rudimentary, unpracticed hand, whereas the second abecedarium, in red ink, appears in long following letters, the signature of a more elegant, well-trained hand (Fig. 8.2 below).⁹⁴⁶ This use of red for the hand of the master and black for the pupil is similar to what we find in Egypt. Consider the example of *Kemît* shown previously (Fig. 8.1). As discussed in the last chapter, *Kemît* is a classic pedagogical model-letter, known from hundreds of exemplars in Egypt.⁹⁴⁷ While examples of *Kemît* often only display the hand of the novice writer, who writes in rudimentary style using black ink, certain examples show the hand of the master alongside, training the writer in the basic of letter (or in Egyptian, sign)

⁹⁴⁴ Aḥituv, Eshel, and Meshel 2012: 73-142.

⁹⁴⁵ Schniedewind 2019a: 25-37.

⁹⁴⁶ Schniedewind 2019a: 28-29.

⁹⁴⁷ See Petersmarck 2012.

execution.⁹⁴⁸ The dual abecedaries represent a striking example of the use of red for pedagogical practice in the ancient southern Levant just as it was in ancient Egypt.

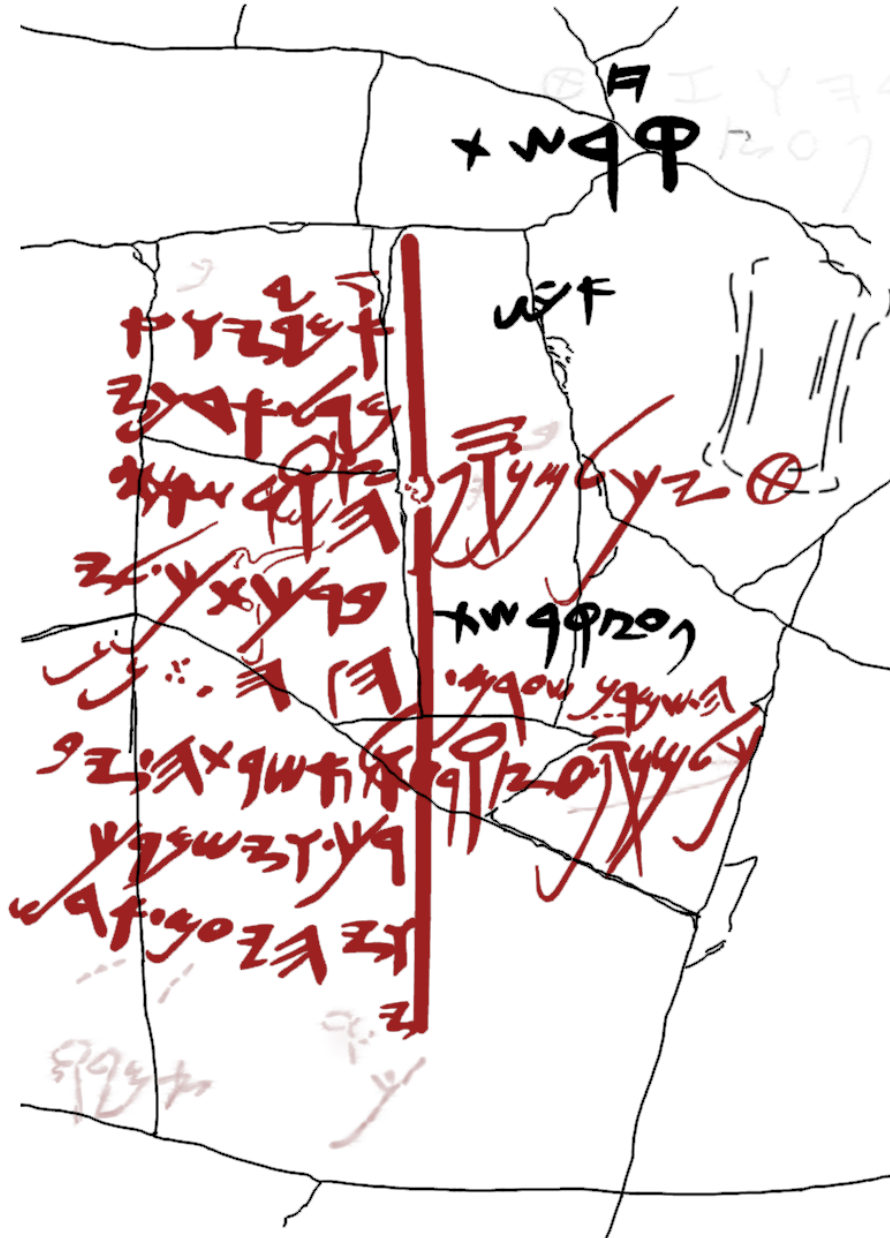


Fig. 8.2: Kuntillet 'Ajrud Pithos B in color (drawn by the author after images in Ahituv, Eshel, and Meshel 2012)

⁹⁴⁸ See Galán and el-Bialy 2004; cf. Hagen 2007 and fig. 8.1 above.

The pedagogical use of this Pithos, and of red and black ink, is not only evident in the abecedaries but on every side of the object. In some places on the Pithos, particularly toward the bottom, there are remains of practice letters (like *yod*)⁹⁴⁹ and practice numerals, repeated over and over time and again.⁹⁵⁰ Practicing letters, numbers, and signs were fundamental to education in writing for writers in the ancient southern Levant, as in Egypt. Practice in Egyptian often includes repetitions in number and sign forms, with some corrections by the instructor. All of this should not be too surprising; students need practice. But what is curious about this connection is the interconnection of the tools (two pens, two inks, and palette) with the use of red and black ink with its associated meanings. One could easily imagine a scenario in which red becomes the writing of the pupil, where the traditional color of writing, black, represents the master, but this did not happen. The use and meaning of red and black ink were replicated in the southern Levant exactly as it was in ancient Egypt. The exact nature of the transfer reinforces the basic thrust of this dissertation, that terms and tools imply practice. Writers in the southern Levant adopted the technology of red and black ink along with one of its culturally determined uses, for instruction and training in writing.

8.2.2 Colorful Language: Red Ink in the Deir ‘Alla Plaster Texts

While the meaning and use of red and black ink in the inscriptions of Pithos B from Kuntillet ‘Ajrud are relatively straightforward, the meaning and use of these two inks in the plaster texts from T. Deir Alla (DAPT) prove more difficult to interpret. The DAPT like the inscriptions from Kuntillet ‘Ajrud above, are quite well-known, in large part due to their fascinating content,

⁹⁴⁹ See Schniedewind 2019a: 39.

⁹⁵⁰ Refer back to chapter 6 on the Egyptian origin of numerals and numeracy.

containing the ‘account’ of Balaam son of Beor known also from the biblical texts (Num. 22-24). The elaborate account is broken in many places and consists of two combinations (I and II). As already identified in the *editio princeps*, the text contains strings of letters written in red, called rubrics. In the long history of study since its initial publication, scholars have come to recognize three rubrics, two in Combination I and another in Combination II. The meaning of the use of red ink in these three instances is highly debated. In what follows, I will offer some of the interpretations of the meaning and use of red ink in these three rubrics, as well as offering some Egyptian evidence for or against certain interpretations. The use of rubrics in this text, though less clear than the texts from Kuntillet ‘Ajrud, share in conspicuous ways elements of meaning known from the use of red ink in Egypt.


The first two instances of red ink appear in the first two lines of Combination I. A reasonable interpretation can be offered for both of these instances of red ink, whether understood as a continuous rubric or understood as two separate uses with two separate interpretations.

The first as an identifying rubric containing what amount to a title of the work, “[...] the account of [Balaam, son of Beo]r, a seer of the gods.”⁹⁵¹ Some have argued that the following pronoun (*h<aleph>*) should be understood as a copula (e.g., A man who was a seer of the gods) but, given that the red ink ends after “gods” (*<aleph>lhn*), I am tempted to see the phrase “man, seer of the gods” (*<aleph>š . ḥzḥ . <aleph>lhn*) as both part of the title of the work and a title for Balaam himself.⁹⁵² Many in the past have rightly appealed to Egyptian practice to explain the

⁹⁵¹ van der Kooij 1976; Hackett 1980; Blum 2016.

⁹⁵² See comment on page 87 n. 231 above that the biblical seer, who is called ‘a man of god’ may be related. Further, it should be noted that red and black ink were not used systematically and necessarily consistently in the formation of rubrics (see Posener 1949; 1951; Parkinson 2009). Though, as Wearne has rightly pointed out, black ink

use of red ink here. While we cannot say for certain that red rubrics operated as “titles” per se, the use of ‘title’ to describe the rubricated first line of a composition is useful if not an importation of modernist textual assumptions onto the past.⁹⁵³

In any case, the beginning rubric of Deir Alla reflects several Egyptian rubrics. The beginning, written in red ink, reads as follows: [...] *spr* [*bl*<*ayin*>*m . br . b*<*ayin*>]*r* <*aleph*>*š . ḥzh . <aleph>lhn*, which translates most literally to “[...] the book of Balaam son of Beor, a (man) seer of the gods.” I restate this to call to mind the specific language and notation of the composition as a “book” or “document” (*spr*). This leading text denotation is similar to technical document language used in Egypt, specifically in New Kingdom Egyptian magical texts. These texts lead with a rubric calling the text a “document” (Eg. *md̩.t* | ).⁹⁵⁴ Consider a few examples of these rubricated *md̩.t* texts: (1) *md̩.t* for dispelling a male or female *nsy* (demon);⁹⁵⁵ (2) *md̩.t* for driving away a terror;⁹⁵⁶ (3) *md̩.t* of a migraine incantation.⁹⁵⁷ While it is perhaps not surprising to see *spr* in the Levant and *md̩.t* in Egyptian in the first, titular, line of a composition, the underlying push of this dissertation has been that the adoption of a tool (in this

interrupting a red rubric is well known in Egyptian literature (Posener 1948; Parkinson and Quirke 1995; see also linguistic arguments in Wearne 2018: 137 citing Greenfield 1991).

⁹⁵³ Eyre 2013.

⁹⁵⁴ *Wb* 2, 187.5. (Additional details about *md̩.t* and book titles can be found in Schott 1952. Unfortunately, I have not been able to consult this source before the completion of this dissertation).

⁹⁵⁵ Borghouts 1978: 36 (No. 54).

⁹⁵⁶ Borghouts 1978: 3 (No. 6), here the rubric ends with *snd̩.w* “terrors, nightmare (*Wb* 4, 183.4)” excluding the subordinate clause “which comes to fall upon a man in the night” (Borghouts 1978: 3). This may provide some support to the idea that *h*<*aleph*>, written in black ink, should be included in the title in spite of its being written in black (see further Posener 1949; 1951).

⁹⁵⁷ Following the German translation of K. Stegbauer in *Thesaurus Linguae Aegyptiae, Magical Papyri New Kingdom, The Spells of pChester Beatty V = pBM EA 10685, Verso 4,1-9*, into English for convenience by the author.

case, red ink) necessitates the adoption of methods and practices associated with the tool (i.e., ‘know-how’) that then might extend further into networks of knowledge and assumptions of practice. Thus, perhaps the note that the Deir Alla text is a *spr* is more important than has been previously recognized (cf. Nah 1:1).⁹⁵⁸

We should, however, be careful when drawing analogies between *mdj.t* and *spr*. The term *mdj.t* in Egyptian is one of the oldest terms for written texts in Egypt.⁹⁵⁹ As such, throughout Egyptian history it takes on a number of culturally restricted meanings, one of which is to refer to lots (i.e., named documents) cast before the deity for oracular decisions.⁹⁶⁰ As we have seen, *mdj.t* also has a curious connection to amuletic documents and magical spells. Further yet, it has, at times, a very general meaning of ‘document,’ or even ‘administrative’ or ‘judicial’ document.⁹⁶¹ We must be careful to consider that terms like this take on culturally restrictive meanings. Still, the connection between the use of red ink and the titulary style and language is an important meeting point between Egyptian and Levantine writing practices.

⁹⁵⁸ It has been suggested that the Deir Alla text was copied from a papyrus. This may be supported by the overall style of the text, the use of red ink, and the use of the term *spr* in the title (see Millard 1989, Lemaire 1991, and Richelle 2016).

⁹⁵⁹ Haring 2003: 97.

⁹⁶⁰ Haring 2003: 97-99.

⁹⁶¹ Haring 2003: 97-98.



Fig. 8.3: Deir Alla Plaster Text, Combination I (from Hoftijzer and van der Kooij 1976: Plate 29)

The second section of red ink on the Deir Alla plaster texts begins in the middle of line two. What is written is difficult to interpret due to the poor state of preservation of the plaster. Still, the beginning of the red ink comes after an apparent introduction of direct speech by the god(s). Wearne interprets the use of red ink here to be the continuation of the heading, whereas Blum sees it as highlighting the direct speech of the god(s). More than just direct speech, however, I would offer that the use of red ink here has a specifically divine quality. In Egyptian

religion, writing in red notes often an association with a curse or inauspicious omen.⁹⁶² I would offer that the writing in red here operates in much the same way. The vision that Balaam has been given is one of dreadful consequence, a divine judgement. As such, the use of the inimical red defines the words of the god(s) as imprecatory. Even if the words themselves do not constitute the utterance of a curse, per se, the divine speech is wet with condemnation and therefore worthy to be feared. As Blum interprets, the words are the commission of Balaam who is to deliver the haunting message of divine judgement.

The third rubric in the plaster texts from Deir Alla comes in Combination II and has enjoyed a plethora of interpretations in the literature. This rubric, as it turns out, is the most difficult to explain, in part due to disagreements in the proper reading of the line. Scholars over the years have offered several different epigraphic evaluations of the text, beginning with van der Kooij's *editio princeps* and continuing to the recent work of Wearne.⁹⁶³ These differing readings have resulted in a variety of translations and consequently interpretations. For simplicity's sake, we will only offer the two most recent published readings of this line. Blum, in several studies, touches on matters of interpretation ultimately interpreting the text in a pedagogical context and translating the line as follows, "verstehst du dich nicht auf die Schreibkunst, (darauf,) anzuleiten den, der auswendig [repe]tiert? [Di]r obleigen Rechtsprechung und kunstvolle Rede!"⁹⁶⁴ Recently, Wearne has opted to see the line as instruction for the oral performance of the text, translating this line as, "Heed the account! Speak and retain (lit. to guard) it orally: A judgement and a

⁹⁶² See Posener 1949, 1951 and later Griffiths 1972.

⁹⁶³ van der Kooij 1976; Wearne 2018.

⁹⁶⁴ Blum 2016: 47.

punishment.”⁹⁶⁵ Each translation offers its benefits, and whatever the exact interpretation should prove to be, there is a general sense in the literature that this line specifically addresses the audience of the text in a unique way.⁹⁶⁶ This being the case, it is appropriate to interrogate the Egyptian parallels from this broad perspective rather than attempting to decide on one or the other interpretation.

Addressing the audience with some sort of oral recitation, whether for pedagogy or performance, is quite at home in Egyptian writing culture and practice. In Egyptian, terms that refer to oral recitation include the verb *šdy* “to recite” or the broader formation *dd md.w* “to say words.”⁹⁶⁷ In the *Myth of the Sun’s Eye*, the instruction for the reader to recite the words of the god Thoth are written in red with the remark *hrw.f m-mit* “his voice likewise.”⁹⁶⁸ The instruction in the third rubric of the Deir Alla plaster texts contains language that can be interpreted in a very similar fashion. For instance, the use of the basic term for speech in Egyptian *dd* corresponds to the verbal interpretation of Deir Alla *dbr*.⁹⁶⁹ The Egyptian infinitival construction *r-dd* “to say” might be read alongside Blum’s reading of *lšnh* “to recite” or more literally “to say a second time.”⁹⁷⁰ While there is little with regard to red ink from Egypt that speaks to pedagogical instructions for textual recitation, that this existed is not hard to imagine. Thus, the third rubric in

⁹⁶⁵ Wearn 2018: 135.

⁹⁶⁶ See Hackett 1984; Blum 2008, 2016; and Wearne 2018.

⁹⁶⁷ Meyer-Dietrich 2010: 2.

⁹⁶⁸ See Meyer-Dietrich 2010: 6, citing Spiegelberg 1917: 9.

⁹⁶⁹ Hackett 1984: 30; Wearne 2018: 131-133.

⁹⁷⁰ Blum 2008b: 38.

the Deir Alla plaster texts, whatever one's exact interpretation, should be understood as an example of writing practices that were borrowed and adapted from Egypt.

The use of rubrics at Deir Alla can be explained by an appeal to Egyptian writing practice. The first example being the use of red ink for a titular rubric in line one—a 'document' heading. The second rubric can either be read as the continuation of this heading or, as I have it here, the use of red for divine words in the form of curses. Even further, the third, and most difficult rubric can be read against the background for Egyptian literature and language that provokes the audience, or the writer himself, to pronounce the very words of the text. Like Kuntillet 'Ajrud above, the Egyptian origin of the tools themselves influences the practices and meanings in ways that continue into the Iron Age.

8.2.3. Ambiguous Examples of Writing in Red in the Southern Levant

These two inscriptions, Pithos B from Kuntillet 'Ajrud and the Deir Alla plaster texts, are the best evidence for writing in red ink from the Iron Age southern Levant. A few other examples of writing in red exist, but these intriguing examples are either too fragmentary or have too little interpretive context to warrant a full investigation. One of these fragments, a small sherd from T. Malḥata, is difficult to interpret, bearing only a single letter. Given the context of other sherds at the site, we might suggest some association with economic activity, but this is mere speculation.⁹⁷¹ Another larger, but no less mysterious, inscription with evidence of red ink writing has already been mentioned in chapter one. This inscription bears the name <aleph>lyš<ayin> in prominent red ink.⁹⁷² In its context, as we have already surmised, the

⁹⁷¹ Beit-Arieh 2013; Nir-El et al. 2013.

⁹⁷² Mazar and Aḥituv 2011; Aḥituv and Mazar 2020.

inscription might be interpreted as cultic (see 1.2.2.1 above). But even if cultic, the use of red ink is curious. As mentioned above, in Egyptian practice the writing of one's name in red is connected to imprecation or execration. Unfortunately, we cannot know much of anything about the use of red ink in this small inscription.

Outside of the inscriptional record, there may exist one more reference to writing in red ink that comes from the Hebrew Bible in Isaiah 8:1. Recently VanDyke has argued that the enigmatic phrase *חרט אנוש* should be translated 'red rush pen.' She argues that the second, and most difficult, lexeme *אנוש*, sometimes understood as the common Hebrew noun meaning "human," is actually a loanword from Egyptian *ins*, a rare term meaning 'red.'⁹⁷³ She presents an argument that this derivation fits both linguistically (by phonetic correspondence) and literarily in the context of Isaiah's prophecy. In this passage, a divine judgement is being pronounced by YHWH. As such, VanDyke argues that the divine, and specifically imprecatory meaning of red in writing, fits the context. Her proposal is convincing. One question that remains, however, is in regard to the color terminology. VanDyke has argued for an adoption of Egyptian *ins* instead of *dšr*, but we might reasonably ask, why?

In Egyptian, the ordinary term for red is *dšr*.⁹⁷⁴ And thus, quite naturally, one would assume that corresponding phrase *ry.t dšr.t* is regularly used for "red ink." Yet, this natural and sensible phrase is not quite so common in writing. Instead, the Egyptians adopted a euphemism to describe writing in red ink, *ry.t wšd.t*.⁹⁷⁵ The word *wšd* in the color terminology of Egypt,

⁹⁷³ VanDyke *forthcoming*.

⁹⁷⁴ *Wb* 5.488-490; Quack 1998: 7-8.

⁹⁷⁵ Quack 1998: 7-8.

however, does not generally mean ‘red.’ Instead, it is often identified as type of ‘green.’⁹⁷⁶ In a short note on the subject Quirk attempted to provide an answer for this strange, seemingly out of place, use of the word *wšd*. He reasoned that the abandonment of *dšr*, “red” in the description of “red ink” was in some way motivated by the force of the taboo, the association of ‘red’ as a symbol—and even the word *dšr* itself—with evil forces.⁹⁷⁷ The argument is intriguing. Given what we have argued about the overlap between red ink practice and red ink meaning in the southern Levant, is it possible that speakers and writers in the southern Levant may have been aware of the same taboo and the words associated with it? Or, was the Egyptian euphemism *ry.t wšd.t* simply too culturally dependent to translate into a meaningful loan in the southern Levant? There is perhaps no way to know; however, it is important to contextualize the loan formation proposed for Isaiah 8:1 with the background of the strange color terminology for red ink known from ancient Egypt.

8.3 Conclusions

Color has culturally conditioned uses and meanings. While some understandable overlap may exist between cultures with regard to certain colors, overlaps in what Eco called ‘natural’ meaning, when this overlap expands to culturally conditioned meanings, we have direct evidence of influence.⁹⁷⁸ But more than just influence, some of these meanings must be taught; they must be experienced in the deliberate context of practical training. No southern Levantine writer gleaned in passing the pedagogical use of red, nor did southern Levantine writers understand the

⁹⁷⁶ Wb 1.264-266; Griffith 1972; Quack 1998

⁹⁷⁷ Quack 1998: 8.

⁹⁷⁸ Here I am borrowing concepts from Eco’s understanding of natural and artificial signs, though without specific elaboration (Eco 1975 cf. Eco on color semiotics and semantics in Eco 1985).

meaning of compositional headings in red by mere sight. Sustained training in a tradition of writing that was subsequently handed down over generations is the source of this sort of specific culturally conditioned knowledge in practice.

Conclusion Writing, Culture

Orthography is *par excellence* a matter of language and culture.
– Mark Sebba⁹⁷⁹

All culture is originarily colonial.
– Jacques Derrida⁹⁸⁰

Writing is a cultural practice. Beyond script, language, and grammar, the material practice of creating a text involves the cooperation of individuals in and across time. Gathering the necessary materials is but the first step in textual production, an all-important precondition of writing. The writer of the text must have not only these materials but the know-how to put them to good use. A writer must know how to pen the individual letters—their sequence, order, and direction—as well as how to organize the textual information on the page—a text’s layout—and how all of this signifies to a distinct end.

A text communicates by more than merely its grammatical and linguistic content. It communicates essential details about the community of producers, writers. These writers, as all writers do, wrote because of and for other writers in a community bound by space and time. This share repertoire of meaning and representation, the shared actions and activities of this community is what we have called a culture. In manifold ways, the distinct writing culture that emerged in the southern Levant at the very end of the Late Bronze age and flourished in the Iron Age bears the hallmarks of a writing culture indebted to Egypt. The two parts of this dissertation

⁹⁷⁹ Sebba 2007: 7.

⁹⁸⁰ Derrida 1998: 39.

have sought, in concert, to display the tremendous weight of this debt. As such, it seems appropriate to summarize the findings of this investigation, stretching from the basic materials of writing to the aesthetic semiotics of the final product.

Summary Results

Part one of the dissertation investigated the question of the materiality of writing, with a focus toward what evidence might be recruited to display the depth of Egyptian influence on alphabetic writing culture in the southern Levant. The natural starting point in Chapter One was the long-recognized Egyptian loanwords that exist in Semitic (specifically Hebrew) for things like ink, scribal palette, and various types of papyrus plant. Past analyses have firmly established words like *דיו* “ink” and *קסט* “(scribal) palette,” both only known from the Hebrew Bible, as Egyptian loanwords in the Semitic lexicon of the southern Levant. These crucial analyses, however, have overlooked the opportunity to weave this linguistic knowledge into a social and archaeological framework, to better understand how these words are not just nonce loans but emblems of deep and long-lasting connections between Egyptian and Levantine writers. In other words, it was argued that the existence of these loanwords, largely localized to the specific ‘scribal’ semantic domain displays a close connection between Egyptian and alphabetic writing in material and practice.

Setting the stage in Chapter One, Chapter Two began to develop a specific line of tradition that connects Egyptian writing practice in hieratic to Levantine writing practice in alphabetic. Moving away from loanwords, this chapter asked questions of the textual artifacts found in the southern Levant, both Egyptian in hieratic and Semitic in alphabetic, with the primary focus on the pressing issue of agency – that is, how and why a specific material was chosen to be inscribed. One specific, and curious, overlap between Egyptian writing practice (as

known in the Levant) and later alphabetic practice is that of inscribing administrative content on complete bowls. This practice is well known from the corpus of hieratic inscribed bowls from the southern Levant, however, it has only infrequently been analyzed with view toward the evidence for bowl writing in the kingdoms of Israel and Judah during the Iron age. The connection between these two practices, however, forms a crucial line of evidence to show the enduring nature of the influence of Egyptian writing practice in the Late Bronze Age on later alphabetic writing practice in the southern Levant.

Remaining on the question of writing material, the third chapter broaches the difficult question of the nature and extent of papyrus writing in the southern Levant. Few, yet crucial, indicates exist to prove the use of papyrus as a regular medium for writing in the southern Levant. Using what is known about papyrus writing in ancient Egypt, this chapter attempts to construct an argument for the administrative use of papyrus in the southern Levant and establish the likelihood of its regular use in writing practice. Tackling a variety of side issues, the chapter presents arguments from both inscriptions and the Hebrew Bible to suggest that writers in the southern Levant not only used papyrus, but that papyrus constituted the basic medium for high-level scribal activity. The remnants of which must be inferred from a variety of textual sources.

Part Two of the dissertation turns from the Egyptian influence on the material and media of writing culture in the southern Levant to the minute ways in which embedded practice, induced by the material supplies and supports, displays enduring Egyptian influence. From Chapter Four to Chapter Six, the dissertation looks at the larger question of “How to Write” in three ways. The first of these chapters, Chapter Four, investigates how orthography as handiwork in the southern Levant is influenced by the Egyptian-style pen. Looking at the peculiarities of

ductus, it is argued that the earliest inscriptions display keen affinity with Egyptian scribal handiwork.

While Chapter Four introduces the idea that orthography, in the form of ductus, is constrained by both material and physiological factors, Chapter Five expands to include writing direction. The extant epigraphs show that there was a rather quick move toward line direction stabilization moving sinistrowrite, or right-to-left. It was reasoned that this stabilization was materially and physiologically induced. As writers in the Levant adopted the posture of writing that was current in Egypt, a posture that arises, in part, from working with the same materials (pen on papyrus), they likewise adopted the line direction known in Egypt for regular administrative writing on papyrus in hieratic. Though sinistrowrite writing direction is to be seen as an inheritance from Egypt writing practice, the strange variability of letter direction known from the earliest alphabetic inscriptions in the Levant, it was reasoned, seems to be a unique feature of the alphabetic writing community. As such, alphabetic writing practice in the southern Levant, in its basic features, inhabited a peculiar space, at once inheriting certain features from Egyptian writing while nevertheless subverting some of the expectations of the way writing moves.

The last chapter on “How to Write,” Chapter Six, moves away from the specifics of letter and line formation toward a larger question, that of numerical notation. As has been long recognized, ancient writers in the southern Levant adopted hieratic numerals. This is critical evidence for Egyptian influence on the writing communities of the southern Levant, however, the consequence for writing culture in the southern Levant has not been adequately explored. This chapter argued that numerical notation is integral to writing practice, as literacy and numeracy are inextricably connected. Thus, while numbers may form what theorists of writing

have called an ‘open’ system, meaning they are more easily transferred between groups, they bring along with them a host of necessitated assumptions about numbers, weights, measures, and calculation. Further, the wholesale adoption of the hieratic Egyptian system of numerical notation in the southern Levant speaks to the depth of Egyptian influence.

Beyond “How to Write,” the last two chapters discuss issues of the appearance and organization of writing. Chapter Seven opens up a discussion of textual segmentation and organization in the southern Levant. Suggestions are offered for an Egyptian origin for each of the three main dividers used in alphabetic writing from the southern Levant, the tri-punct (or three-point) divider, the single vertical divider, and the single point divider, with varying confidence. The difficulty of identifying a specific Egyptian origin for word dividers and textual segmentation markers, however, leads to the question of textual organization. While, like dividers before, an Egyptian origin for textual organization and layout is difficult to identify, at least one example of an Egyptian style organization is posited for the mysterious Kh. Qeiyafa ostrakon. In this chapter it was argued that the Kh. Qeiyafa ostrakon was written vertically and that this vertical orientation should be connected to the Egyptian practice text *Kemît*. Outside of this example, a few texts are discussed to show some similarities in the organization of text in administrative ostraca from both Egypt and the southern Levant.

The final chapter of the dissertation highlights a final piece of writing practice in the southern Levant that provides a link to Egyptian writing practice, the use of red and black ink. This chapter discusses bichrome writing known from inscriptions at Kuntillet ‘Ajrud and Deir

‘Alla in light of the enduring bichrome tradition in ancient Egypt. These remarkable inscriptions not only use red and black ink but, do so in a way that reflects an understanding of color meaning very akin to the use and meaning of the two colors in Egyptian writing. Close attention was paid to the possibilities for interpreting the rubrics, or lines of red ink, in the Deir Alla plaster text and the tradition of rubrics as both headings as well as a visual symbol for preformative reading. The use of red and black ink displays not only a material connection between Egyptian and Levantine writing but also a conceptual one, being that writers in the southern Levant retain traditions of the meaning of red ink in specific contexts (pedagogical, literary, and ritual) that ultimately originated in Egypt in time immemorial.

The deep contemplation of the variety of ways in which writing culture in the southern Levant was influenced by Egyptian writing practice offers unique ways to view long studied material, providing fresh perspectives on epigraphs from the southern Levant, seeing them not primarily for their grammatical or linguistic value but for their sociocultural value as emblems of communities of writers. While the perspectives offered in this dissertation have sought to provide answers to a number of issues in the study of alphabetic writing culture in the southern Levant, the results engender novel questions of the origin of the Egyptian influence and the nature of the relationship between Egyptian writing communities and the communities who cultivated and curated the early alphabet in the southern Levant.

Enduring Questions, Future Prospects

Behind the texts are the hands of the producers, the writers, by whom the knowledge of writing finds expression. In the case of this investigation, I have endeavored to show that the building blocks of the writing culture, the materials, induced postures, and learned practices that extend even to the composition of the final text originated in and with Egyptian practice. But

how and when did this culture form? The evidence of this study suggests some significant points of origin in the Late Bronze Age, of course not excluding later periods of contact when Egypt renewed its considerable influence in the Levant.⁹⁸¹

As the material culture of writing in the southern Levant points back to Egypt, it points there by way of the writers themselves, those who diligently penned the scraps and notes that we labor over. Who, then, were these earliest writers, and what was their exact connection to Egypt? How did these writers learn these particularly Egyptian practices of writing? How, further, did they conceive of their identity and the nature of their craft? Looking to this earliest period, the Late Bronze Age, the quite natural conclusion is that Egyptian writers, or writers under the auspices of the Egyptian imperial powers, cared for and cultivated a unique writing culture for early alphabetic. As the quotes above state, orthography (writing) is both parts culture and language, and specific aspects of culture are, in many places and many times, originally colonial. But, with such a considerable legacy, where might we find evidence of these early Egyptian colonial writers? Perhaps clues are to be found in archaic passages and historical memories of the Hebrew Bible, the passing reference to the “staff of the scribe,” (Judg. 5:14), the scribes of David as “the sons of Shisha” (possibly a corrupted Egyptian title),⁹⁸² and other sorts of small and subtle hints found hidden in the Hebrew Bible.

Even beyond the specific identity of these individuals, this writing community, there is the question of the impact of the Egyptian origin of the material technologies and writing practices on the construction and conception of larger, more significant literary texts. Namely,

⁹⁸¹ Schipper 2011.

⁹⁸² Schniedewind 2014: 59; cf. Mettinger 1971.

how could a writing culture cultivated on Egyptian grounds produce a Hebrew Bible that is only infrequently compared to the Egyptian literary tradition? Surely the Egyptian influence on writing culture at the material and practical levels filtered into the intellectual and literary spheres as well. Perhaps like the name *Amen-em-opet* in Proverbs 22:19, the Egyptian roots were forgotten, neglected, or obscured by later writers.⁹⁸³ Perhaps it still lie latent in the text, and we have as of yet been ill-equipped to recognize it.

There are many more avenues to be consider and questions to be pursued. Questions such as, who was responsible for transmitting the specific practices and traditions of Egyptian writing to writers in the Levant; how long did this process take; were the writers of early alphabetic at the end of the Late Bronze Age Egyptian or Levantine; and the ever-elusive, where did these bearers of tradition in the Late Bronze Age go during the interregnum of the early Iron Age? The hope is that with this dissertation, some of the groundwork has been laid to begin exploring these untrodden paths, to bring the relevance of Egyptian material to the forefront, and to understand more fully the craft and culture of the writers of the ancient southern Levant.

⁹⁸³ Schniedewind 2019: 129-130; Rendsburg 2016: 192-195.

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