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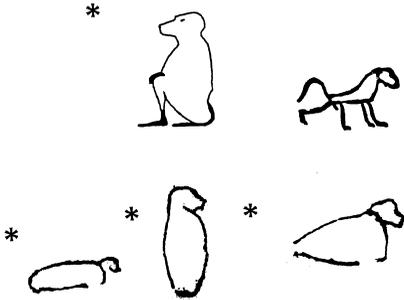
M16



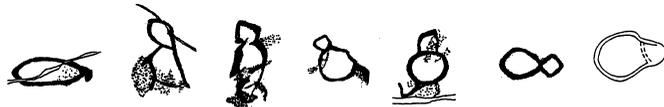
> s/z



28.
E32?



> q



E32?



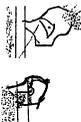
> q



Alphabet: ʾ b g h d h w z ḥ ṭ y k š l m ḏ n s ʿ p š/z q r θ ḡ t

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29.
D1      

> r       

D1      

> r         

30.
J32A,
J32      

> θ        

31.
T10     

> θ     

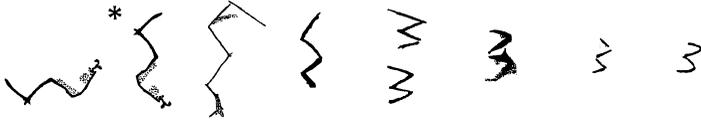
Alphabet: > b g h d h w z h t y k š l m ð n s c p š/z q r θ g t

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T10



> θ



32.

unknown

> ġ

33.

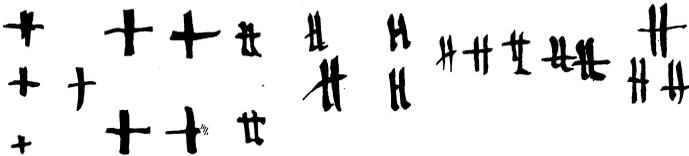
Z11



> t



Z11



> t



Alphabet: ʔ b ġ d h w z ḥ ṭ y k š l m ḏ n s ʿ p š z q r θ ġ t

CHAPTER 3

Conclusions

I. The Egyptian Antecedents of the
Proto-Canaanite Letter Forms

The writers of the early alphabet adopted and adapted thirty-three Egyptian signs in view of the evidence gathered in the preceding chapter.¹ Of these, derivatives of twenty-six prototypes are certainly attested in Proto-Canaanite scripts: ʔ , b (2 signs), ḫ , d (2 signs), h , w , z , ḥ , y (2 signs), k , l , m , ḏ , n (2 signs), ʕ , p , s/z (arguably 2 signs), r , θ (2 signs), and t . Derivatives of three more also occur in the earliest stages of West Semitic alphabetic writing but are less certain because they are seen only once and in damaged contexts (ṭ , š , s). The origins of ṭ and s may be safely postulated on the basis of the graphic proximity of some of their subsequent, non-developed forms in Old Canaanite scripts with Egyptian signs. *Gîmel* is only attested in that later stage of this script tradition, but its Egyptian prototype—variant stances of the same sign—is clear. The Egyptian antecedent of $qôp$, a letter well attested in Proto-Canaanite inscriptions, is only probable due to a lack of actual hieroglyphic writings with which to compare its earliest letter forms; the similar but not identical reduction pattern seen in a single hieratic and two appearances of this letter in later linear forms suggests that its

¹ The thirty-third prototype may either be enumerated as that for *gâin* (so below) or that for a new grapheme, twice attested, with the possible values of k , θ , or g (see Wadi el-Hol Text 2, Appendix 1). Another prototype could also be sought for b and l , but the evidence is not yet compelling. References in this chapter will be kept to a minimum; see the preceding chapter for my indebtedness to others.

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original prototype has been correctly isolated. A second prototype for *h* is mandated, but its identity is uncertain due to the schematic nature of some early alphabetic forms of that type of human stick figure. A few forms of five letters remain unclassified as to their exact antecedents.² And next to nothing is known about proto-*ḡain*. These complexities should not obscure the fact that most of the twenty-six or twenty-seven letters of the earliest West Semitic consonantal alphabet—depending on whether *ṣ/z* is viewed to have merged—have either close or exact graphic correspondents with a formal range of specific Egyptian signs.³ The overlapping forms of six letters (*ʔ, b, l, n, ʕ, r*) and pre-existent varieties of Egyptian signs are so extensive and well documented that they anchor the early alphabetic graphic repertoire in the writing traditions of the Nile. The Proto-Canaanite alphabet is a graphically derived script system.

A. The Range of Egyptian Forms Borrowed

	<i>Hieratic</i>	<i>Either Hieratic or Hieroglyphic</i>	<i>Semi-Cursive Hieroglyphic</i>	<i>Incised Hieroglyphic</i>	<i>Sunk Relief Hieroglyphic</i>
1. ʔ/F1				x	x
2. <i>b/O1/O1B</i>	x	x		x	x
3. <i>b/O4/O4B</i>	x	x		x	
4. <i>g/T14/T15</i>		(x)			
5. <i>ḥ/V28/V28C</i>				x	
6. <i>d/O31</i>			x	x	
7. <i>d/K1</i>	x			x	
8. <i>h/A28</i>	x?		x	x	
9. <i>h/unknown</i>					
10. <i>w/T3</i>		x	x	x	

² These are: *bêt* (3 letters), **dag-* (3 letters), *hê* (3 letters), *lāmed* (2 letters), and *nûn* (5 letters).

³ Letters I would deem to have exact correspondents with Egyptian signs: ʔ/F1; *b/O4/O4B*; *ḥ/V28/V28C*; *d/O31*; *h/A28*; *w/T3*; *z/T7/T7A*; *y/D36*; *m/N35/N35B*; *ḏ/Z4/Z4A/Z4B*; *n/I9/I9B*; *n/I10*; *ʕ/D4*; *r/D1*; and *θ/J32/J32A*. Letters I would evaluate as possessing close graphic correspondents with their Egyptian prototypes (with damaged early or later attestation in brackets): *b/O1/O1B*; (*g/T14/T15*); *d/K1*; *ḥ/O42*; (*t/O49*); *y/D47*; *k/D46/D46D*; (*š/M44*); *l/V1*; (*s/R11*); *p/O38/O38A/O38B*; *ṣ/z/M15/M16*; and *t/Z11*. I would consider *θ* from T10 to be a bit further from its graphic prototype and *q* from E32 to be fairly distant on the basis of the limited knowledge of actual forms of that sign.

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	<i>Hieratic</i>	<i>Either Hieratic or Hieroglyphic</i>	<i>Semi-Cursive Hieroglyphic</i>	<i>Incised Hieroglyphic</i>	<i>Sunk Relief Hieroglyphic</i>
11. z/T7/T7A	x			x	
12. h/O42		x			
13. t/O49?				x?	
14. y/D47				x	
15. y/D36	x			x	
16. k/D46/ D46D			x	x	x
17. š/M44?		x?			
18. l/V1	x		x		
19. m/N35/ N35B				x	
20. ð/Z4/Z4A/ Z4B		x		x	
21. n/I9/I9B	x			x	
22. n/I10	x	x		x	
23. s/R11		(x)			
24. ʿ/D4				x	x
25. p/O38/ O38A/O38B	x			x	
26. š/z/M15	x		x	x	
27. š/z/M16	x	x		x	
28. q/E32?				x?	
29. r/D1			x	x	
30. θ/J32/J32A	x?		x	x	
31. θ/T10		x	x	x	
32. ġ/unknown					
33. t/Z11	x	x	x	x	
Totals:	12	9	10	24	4
	+ 2?	+ 1?		+ 2?	
		+ 2 later			

The major conclusion of this study is that West Semites borrowed and reutilized a pre-existent range of both hieroglyphic and hieratic forms of Egyptian signs for use as letters in their monoconsonantal alphabetic system of writing.⁴ Putting aside uncertain derivations or

⁴ This conclusion was arrived at independently by the present writer (1985: 178-80; 2002: 39-41, n. 14) and the epigraphic team of Darnell et al. (2005: esp. 86), based on their very insightful work with the Wadi el-Hol alphabetic texts.

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those with only later attestations, some forms of over two thirds of the prototypes, $24/33$, derive from incised hieroglyphic antecedents. This is the graphic heart of the new system. But at least some derivatives of slightly over one-third of the prototypes, $12/33$, stem from distinctly hieratic prototypes (some commonly attested, e.g., the square form of *bêt* from hieratic O1; others attested only once or twice, e.g., a three-stroke form of *tāw* from hieratic Z11).⁵ The predominance of hieroglyphic forms becomes a bit clearer when one adds that some writings of $4/33$ prototypes are executed in a decidedly hieroglyphic style, sunk relief; yet one of those, a *bêt* derived from O1, has a distinctly hieratic form. In two instances (*ʿālep* and *dālet*), one sees distinctly cursive features transferred to essentially hieroglyphic models. In almost one-third of the prototypes, $10/33$, one also finds the best graphic parallels with specifically semi-cursive hieroglyphic forms. These “linear hieroglyphs” shift the look of the derived script system towards the more cursive end of the spectrum. This impression is heightened when one notes that specific forms of $9/33$ prototypes could be traced to either hieroglyphic or similarly shaped hieratic antecedents. Proto-Canaanite writing is a mixed script composed of derivatives of both hieroglyphic graphic forms (mostly incised, a few in sunk relief, and a considerable portion of semi-cursive) and fully cursive hieratic forms written on stone, metal, pottery, and wood.

There was, therefore, much merit in the positions of previous scholars who sought prototypes in the hieroglyphic sign-list *and* of those who postulated hieratic antecedents.⁶ They erred only in attempting to create a neat theory of deriving Proto-Canaanite graphic forms exclusively from one sequence of Egyptian writing or the other. One cannot account for the full range of early letter forms (and their later descendants) without reference to both major sequences of Egyptian scripts.

⁵ Compare Sass (1988: 132) who posited the transference of a single hieratic trait to a hieroglyphic form of one letter in the earliest alphabet.

⁶ Forms not included in the chart above, because there have no clear alphabetic derivatives, are detailed hieroglyphs, Fischer’s type 1 (1976: 41, fig. 4 [reproduced above in fig. 1.1]). The lack of derivatives of that stream of Egyptian hieroglyphs in Proto-Canaanite scripts is likely the principal reason why some previous scholars, whose specializations were often in language, literature, archeology, or religion, saw only little or vague connections between the parent and derivative script systems since they were often most familiar with such detailed hieroglyphs or modern fonts based on them.

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Such a mixture of hieroglyphic and hieratic forms is known within Egyptian writing itself. The reader may recall that many of the closest graphic parallels to Proto-Canaanite forms were selected from the sign-list of Middle Kingdom and specifically early Twelfth Dynasty rock inscriptions found in northern Nubia and southern Egypt.⁷ Žába (1974: 262-63) divided these texts paleographically into three groups: those in which only hieroglyphic signs are used (12 inscriptions); those with only hieratic forms of signs (48 texts); and those using a mixture of hieratic and hieroglyphic forms of signs (206 inscriptions by my count).⁸ Concerning this “mixed” script Žába (1974: 263) wrote: “[Even though] the percentage of New Kingdom rock inscriptions found by us in Lower Nubia is relatively low, we may nevertheless conclude that this kind of inscription becomes less frequent from the New Kingdom onward, when one kind of script was generally used in the whole inscription.” After emphasizing that the hieratic, semi-cursive hieroglyphic, and standard hieroglyphic sequences usually constituted separate and distinct traditions within Egyptian writing, Fischer (1976: 43) charted when they were mixed:

One must also take account the occasional intrusion of the more cursive forms, including hieratic, in undetailed hieroglyphic inscriptions. . . . Some hieratic intrusions of this kind may be cited from the Old Kingdom, when semi-cursive forms . . . were also occasionally used . . . in stone inscriptions—particularly in stone inscriptions that were small in scale and hastily executed. Intrusive hieratic forms became much more common in Eleventh Dynasty inscriptions at Thebes and in the neighboring regions. And such intrusions were apparently even more common after the reunion of Egypt, which marked the beginning of the Middle Kingdom. At this time, and again in the course of the Twelfth

⁷ While these inscriptions by Egyptians traveling the road south from Edfu are geographically far removed from the bulk of the Proto-Canaanite texts found in the western Sinai and Palestine, they are not distant from the two new Proto-Canaanite texts found at Wadi el-Hol, on the west bank of the Nile, north of Thebes (Darnell 2003; Darnell et al. 2005).

⁸ I would like to express my deep indebtedness to Dr. Edwin C. Brock, Director of the Canadian Institute in Egypt, who referred me to these finds after I communicated my preliminary findings to him while working on the Proto-Canaanite texts in Cairo.

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Dynasty and later [in the Second Intermediate Period], stelae were sometimes inscribed almost wholly in an incised form of hieratic.⁹

Darnell et al. (2005: 14) focused on that mixture of hieratic and hieroglyphic forms in reference to the script of the new alphabetic inscriptions from Wadi el-Hol, giving parallels to this mixed-script phenomenon on especially Egyptian rock inscriptions. Concerning the orthography, Darnell et al. (2005: 97, n. 104) concluded:

[t]he percentage of inscriptions alternating between hieratic and hieroglyphic orthographies appears to peak during the Middle Kingdom. Compare the observations of Ali 2002: 12-35; based on his analysis of several limited corpora of texts, approximately 40% of all Middle Kingdom rock inscriptions utilize a mixed hieratic-hieroglyphic orthography, compared to 12% of such texts from the New Kingdom.

Not only does a “mixed” script provide the best analogy for the use of both hieroglyphic and hieratic shapes on alphabetic texts, its vogue before the New Kingdom gives another clue regarding the time period when the West Semitic consonantal alphabet originated.¹⁰

Gardiner (1962: 45) best described the Proto-Canaanite texts found at Serabit el-Khadim as “semi-pictorial inscriptions.” Though on a form-by-form basis the letters of the early alphabet derive from hieroglyphic or hieratic antecedents, the resultant total script is neither as pictographic as hieroglyphic, nor as cursive as hieratic. Some letters are easily recognizable pictographs: *ʾālep*, (*gîmel*—late), **dag-*, *hê*, *zayin*, *yôd* (some forms), *kāp*, *nûn* (most forms), *ʿayin*, *š/z* (most forms), and *rêš*. But others can be recognized as pictographs only after

⁹ See Fischer (1976: 43, nn. 53-57) for references to specific instances of each phenomenon, to which one may add the rock inscriptions from the Theban Desert published by Darnell (2002), and the references gathered in Darnell et al. (2005: 97, n. 104).

¹⁰ One also notes that many of the Egyptian texts from northern Nubia and southern Egypt were written on sandstone, the same medium employed for many of the alphabetic texts from the Sinai. While Žába (1974: 262) posited that this medium was an important factor in the use of both types of signs, such would not account for the other Proto-Canaanite texts from Palestine and Egypt that have mixed antecedents but were written on other media (e.g., the Lachish Dagger, Gezer Sherd, Najila Sherd, Shechem Plaque, Lahun Heddle Jack).

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one knows their Egyptian antecedents and/or the meaning of their letter names: *ḥarm*, *dālet*, *wāw*, *ḥêt*, *lāmed*, (*sāmek*), *pê*, *qôp* (most forms, but not with certainty), and **ḥann*- (most forms). A handful of letters are too schematic or geometric in shape to be termed pictographs: *bêt* (mostly squares and rectangles), (*têt* [circle around a cross]), (**šawt*- [triangle?]), *mēm* (zigzags), **ḏay(n)*/**ḏê(n)* (two parallel lines), and *tāw* (usually two intersecting lines). And even among letters whose pictorial identities are usually recognizable, specific writings occur—usually derivatives of the hieratic stream—that are too cursive to be called pictographs (e.g., the perpendicular *yôd* of Sinai 367; the *nûn* and trident-shaped *š/z* of 364; the *nûn* of the Lachish Dagger). I would illustrate the fact that the Proto-Canaanite alphabet was not fully pictographic through reference to the many disagreements among perceptive scholars regarding the pictorial identities of several letter forms (e.g., see Albright [1935b and 1948] regarding *mēm* or **ḥann*-; Diringer [1943] for a catalogue of proposals for reading the early Palestinian texts; and above, under “*dālet*,” regarding the differentiation of “doors” from “fences”). Because West Semites borrowed Egyptian signs that had already had evolved for over a millennium from fully pictographic to completely cursive shapes (and anywhere in between), the early alphabet started out as a semi-pictographic script (cf. McCarter 1976: 17). Although most of its letter forms derive from incised hieroglyphic antecedents, the relatively high percentage of semi-cursive, fully cursive, and schematic or geometric non-pictographic forms in its graphic repertoire made it a functional script that could be written quickly on any writing surface (although only inscriptions on stone, metal, pottery, and wood are attested to date). By adopting that formal range of Egyptian signs, Proto-Canaanite writing may be characterized as a single stream, semi-cursive script from its earliest appearances.¹¹ This conclusion stands in contrast to the view that the earliest alphabet was fully pictographic (e.g., Ullman 1927: 313; Cross 1979: 99, n. 12; 2003: 332, n. 13; Sass 1988: 141; Lemaire 1994: 6).

¹¹ From my perspective, Zuckerman (2003: 106-7) overstated his case for the primacy of “pen and ink” cursive traditions in early alphabetic scripts by setting up too strong a contrast between cursive and lapidary sequences in both Egyptian and Proto-Canaanite scripts and ignoring the semi-cursive elements in both. Incised hieroglyphs, semi-cursive forms incised on hard surfaces *and* those inked on papyrus, as well as some fully cursive forms are all primary models for early West Semitic handwriting.

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B. The Stances of Proto-Canaanite Letters

The most significant graphic development away from the parent script occurred not in changes to the forms of the signs borrowed but in the stances of many letters and the ways those postures were used to indicate the direction in which an inscription was to be read. I shall summarize the discussion of stances under the following categories: those letters with a single stance; those with mirror image stances either received from Egyptian hieroglyphs or secondarily created in the new alphabetic script; those with both upright and horizontal postures either received from their prototypes or developed through quarter turn rotations; the tendency toward economical use of space on vertical columns or horizontal lines; and opposing orientations of letters.

Letters with a Single Stance

Proto-Canaanite *ḥarm* has only a single, upright stance inherited from its Egyptian antecedent, as do *hê* and *š/z* in all but one instance. Rarely and poorly seen *sāmek* may also be said to have only a vertical stance (although there may be one case of up-down mirroring attested in an Old Canaanite abecedary). The only certain writing of the letter **šawt*- is also upright in the manner of its probable Egyptian precursor.

Letters with Mirror Images

Sideways Mirroring

Many of the letters derive from hieroglyphs that have sideways mirror images: *ʿālep*, *bêt* (from certain forms of both O1 and O4), *gîmel* (only attested in Old Canaanite), *dālet*, **dag*-, *hê* (usually mirrors only the leg), *yôd* (both types), *kap*, **ḏay(n)*/**ḏê(n)* (diagonal forms), *nûn* (most forms), *pê*, *qôp* (probable prototype), *rêš* and **ḥann*- (composite bow type in vertical positions).

Some letters develop sideways mirror images. The earliest, albeit damaged occurrence of *ṭêt* appears with internal crossbars that mirror its closest formal antecedent. Horizontal mirroring also plays a part in the stance of some early writings of *bêt* derived from hieratic O1 and *lāmed* descending from distinctively hieratic forms of V1. Some forms of *nûn* face left, though they derive from hieratic writings of I9 and I10

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that face right.¹² Some forms of *pê* possibly mirror the hieroglyphic variant O38B, the lower right hand corner of wall to achieve a rendering of the lower left hand one (or are instances of up-down mirroring).

Up-Down Mirroring

Fig. 3.1

T10	O1	O4	D46D	V1	D1
<i>HT</i> 3: pl. 24	<i>HT</i> 5: pl. 1	Möller I, 342	Goyon 1957: 180	Möller I, 632	Sinai 421
					
					
Sinai 375 <i>θ</i>	Sinai 346a <i>b</i>	Sinai 375 <i>b</i>	Sinai 375a <i>k</i>	Wadi el-Hol 2.12, 1.3 <i>l, l</i>	Grossman Seal <i>r</i>

One sees only four clear instances of up-down mirroring. Two writings of **θann-* on Sinai 375, with their bow ends facing downward, are either continuing an extremely rare up-down mirror image of their Egyptian antecedent, T10, or represent a Semitic parallel development. The form of *bêt* on Sinai 346a clearly opens on the top, whereas its hieroglyphic prototype, O1, opens on the bottom. Similarly, the *bêt* of Sinai 375 shows an opening on the top right, where its closest hieratic antecedents in O4 have their openings on the bottom right. One of the *kāps* from Sinai 375a also mirrors its semi-cursive hieroglyphic antecedent, D46D, vertically.

There are other possible occurrences of this rare phenomenon. The stance of one of the Wadi el-Ḥol *lāmeds*, 2.12, with its curl on the bottom, either results from first sideways mirroring and then rotation of its hieratic predecessor, V1, or, from up-down mirroring of another *lāmed* from that site, 1.3. Most likely the *rēš* on the Grossman Seal also

¹² Sideways mirroring may also be at play in some forms of *bêt*, if they stem from hieratic O4, and **dag-* from hieratic K1, secondarily used as jar signs.

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mirrors its “block”-headed Egyptian precursor, D1, in both a sideways and an up-down fashion (but it could also be conceived of as an instance of letter rotation).¹³

Letters with Both Upright and Horizontal Stances

At least seven letters—*dālet*, *wāw*, *zayin*, *mēm*, **ḏay(n)*/**ḏê(n)*, *nûn* (horned viper type), and **ḥann-* (composite bow type)—inherited both upright and horizontal postures from their Egyptian antecedents.¹⁴ Both received positions are known in early alphabetic derivatives of the door-, mace-, water-, parallels-, and snake-graphemes. Only the stance of the axe pictograph with its blade situated like an hourglass has so far been attested in Proto- and Old Canaanite scripts. Both positions of the composite bow-grapheme are also attested among the Proto-Canaanite inscriptions, but the presence of its received upright stance, common on later texts, has only been charted in this study (see **ḥann-* above).

Many Proto-Canaanite letters rotated roughly a quarter turn from the positions of their antecedents to have both upright and horizontal postures: *ʾālep* (after it changed into a non-pictographic A-form), *bêt* (three-sided box form derived from hieratic O1), *bêt* (from O4), *gîmel* (attested only in Old Canaanite), **dag-*, *ḥêt*, *yôd* (both types, although the vertical position of the forearm type is seen only in Old Canaanite), *kāp*, *nûn* (some cobra types), *ʿayin*, *š/z* (horizontal posture only attested in Old Canaanite), *rêš*, and **ḥann-* (archaic bow type). One may surmise that these thirteen secondary postures were patterned after the primary group of at least seven letters that received both upright and horizontal postures from their Egyptian prototypes. This would be most apparent in the case of horizontal stances of **ḥann-* derived from J32/J32A, “archaic bow,” developing that posture from alphabetic derivatives of T10, “composite bow.” In other words, a limited pattern of double stances for some signs adopted from Egyptian writing

¹³ See *mēm*, *sāmek*, and *pê*, Chapter 2, and the Lahun Heddle Jack, Appendix 1, for other possible instances of this phenomenon.

¹⁴ *Lāmed* from V1 may be placed in this category as well, if one counts the usually upright forms of its hieroglyphic predecessors and the horizontal posture of some of its hieratic antecedents (but most are set on diagonal axes). If E32, “baboon,” is deemed the prototype for *qôp*, it too has received upright and horizontal postures.

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appears to have been generalized into a much more common pattern involving at least 20/33 prototypes, in the new script system.

The Tendency towards an Economical Use of Space

There is a tendency in the early alphabet texts towards using stances that economize space (following but making less absolute the insight of Ullman [1927: 320]). Horizontal forms tend to be employed on vertical columns (e.g., the horizontally-positioned *mēm* and *wāw* on Wadi el-Ḥol Text 2; the horizontal *wāws* on Sinai 351 and the Gezer Sherd; the horizontal *lāmeds*, *mēms*, and **ḏay(n)*/**ḏē(n)* on the columns of Sinai 346a), while upright forms tend to be used on horizontal lines (e.g., the vertical *mēms*, *nûns*, *lāmed*, and **ḏann-* on Wadi el-Ḥol Text 1; the upright *wāw* and *yôds* on the Najila Sherd; the vertical *lāmed* on the horizontal line of Sinai 346a; the vertically positioned *ʿayins* on Sinai 345 and the Lahun Heddle Jack; and the only slightly oblique **ḏay(n)*/**ḏē(n)* on Sinai 345). Counter-examples to this tendency, however, abound (e.g., the horizontal *mēms* on both the vertical column and horizontal line of Sinai 357 and one of the horizontal lines of 345; the long, vertical *nûn* on the column of 375c; the vertical **dag-* on one of the columns of 376; the *dālet* on the back of the Shechem Plaque).

Opposing Orientations of Letters

Vertical Columns

Another way of ascertaining the distance between an alphabetic script on a vertical column and the parent system of writing is by charting the orientation of the letters with fronts and backs. Hieroglyphs with fronts and backs habitually face one direction or the other *en masse* (e.g., Gardiner 1957: 25; Loprieno 1997: 24-25).¹⁵

Only three well-preserved Proto-Canaanite columnar texts are consistent in this regard: Sinai 346a (*nûn*, **dag-*, and *rêš* face right) and 346b (*nûns* and *rêš* face left); the Lachish Dagger (both *rêš* and *nûn* face left); and the column of Sinai 357 (*ʿāleps*, *nûn*, and **dag-* are oriented to the left).

¹⁵ When blocks of a hieroglyphic text, or phrases, or, much more rarely, individual signs were reversed, there were usually principles involved (e.g., symmetry or a concordance that was specific to Egyptian or conditioned by the position of an inscription in a temple complex; see especially the extensive study by Fischer [1977]).

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Many other Proto-Canaanite columns witness opposing orientations to their letters with fronts and backs, an arrangement that is anarchic by Egyptian standards: Wadi el-Ḥol Text 2 (*rēš* faces right, while *hê* and *ʾālep* face left); Sinai 351 (*nûns* to the left, *qôp* to the right); Sinai 352 (*ʾālep* and *nûns* to the left, *rēš* and **dag-* to the right); Sinai 358 (*ʾālep* to the left, **dag-* to the right); Sinai 363 (*ʾāleps* to the left, **dag-* to the right; *nûns* in both directions); Sinai 364 (*nûn* to the left, *rēš* to the right); Sinai 365b (*ʾālep* and *rēš* oppose); Sinai 375 and 375a (fish in both directions); Sinai 376 (*ʾālep*, *rēš* face right, **dag-* points upward); Sinai 380 (*nûns* to the left, *qôp* to the right); the Gezer Sherd (*kāp* and *wāw* to the right; *bêt* opens on the bottom left); the front of the Shechem Plaque, understood as a column (*ʾāleps* point to the left, *rēšs* point downward). Any early alphabetic columnar inscription that manifests such a mixture of orientations witnesses divergence from the consistent use of orientations in the parent script.¹⁶

Horizontal Lines

Although one has only a small sampling of early alphabetic texts written as horizontal lines, two inscriptions clearly exhibit a mixture of orientations, while another two arrange the letters with fronts and backs to face the end of the line on which they are written (the latter precisely the opposite of standard Egyptian usage).

Wadi el-Ḥol Text 1 shows letters with opposing stances. The first *rēš*, three *nûns*, second *hê*, and *ʾālep* all face left, on a line, if the initial letters *rb* are taken as **rabbu*, “chief,” that was meant to be read from right to left (Wilford 1999; Wimmer and Wimmer-Dweikat 2001: 107; Darnell 2003: 165; Darnell et al. 2005: 85). But the foot of the initial *hê* on that text clearly points to the right and, if my understanding of its final *rēš* is correct (see above under that letter), it too points towards the beginning of the line. As on columnar texts, that opposition

¹⁶ I highlight here the consistency of orientations in Egyptian columnar texts, rather than the typical characterization of signs with fronts and backs pointing to the beginning of a text, in order to take into account the rare, but well-documented phenomenon: signs with fronts and backs facing right while the text is read left-to-right on semi-cursive hieroglyphic papyri from the end of the Middle Kingdom, e.g., the Hymn to Sobek (Gardiner 1955: pls. 18-21; Parkinson 1999: 91 [with previous literature]) and the Veterinary Papyrus (Griffith 1898a: 12).

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between the stances of *hê* (and perhaps *rêš*) on one line contravenes standard Egyptian usage.¹⁷

Sinai 345 also witnesses opposed stances. Its right side, written from the base of the rear paw towards the front in a left to right direction, has the *ʔālep* and the leg of its *hê* pointing right, towards the end of that line. Its left side, incised from the front of the sphinx towards its rear paw, also in a left to right direction, has its *nûns* pointing left, towards the beginning of that line. The interpretation of this opposition of stances is a bit more ambiguous. While this may simply represent the equivalent on horizontal lines of the use of mixed stances charted above on many vertical columns of alphabetic texts, this arrangement on Sinai 345 may have been intentionally executed so the letters face the front of the sphinx, if that was considered the image of a deity (cf. Fischer 1977: 24-25 for possible parallels on Egyptian texts).¹⁸

Three Proto-Canaanite texts show letters that consistently face the ends of their horizontal lines. Sinai 349 witnesses *ʔāleps* and *rêšs* that face left on multiple lines written from right to left (Albright 1966: 18). The horizontal line of Sinai 357 has *ʔāleps* and *rêšs* facing right on a line reading from left to right (Albright 1966: 23). The point of the *ʔālep* on the Lahun Heddele Jack faces the end of the line on which it was written (see discussion in Appendix 1). These orientations unambiguously contravene Egyptian usage.¹⁹

¹⁷ Parallels to the “head in profile” sign facing the wrong direction do occur in Egyptian hieroglyphic texts, but they are exceedingly rare (e.g., *HT* 5: pl. 1; Sinai 421 [Reich 1933: pl. 16]; both graphically cited under *rêš*, Chapter 2). These may have occurred through influence from the hieratic sequence of D1, which habitually show the vestigial head on the left side (see Möller I, 79), itself unusual since hieratic signs with fronts and backs regularly face right.

¹⁸ The mirror image stances of *lāmed* on these two surfaces (the one on the right side a new but I think certain reconstruction) makes me think that this writer was intentional about the orientation of the letters on the base of this sphinx. Compare the up down mirroring of a *bêt* to open towards the face of the image of *bʿlt* on the front face of Sinai 346a.

¹⁹ Three other Proto-Canaanite inscriptions were written with horizontal lines that are incomplete or undeciphered. The rightward orientation of the *ʔālep* of Sinai 380 suggests that its horizontal line was written from left to right (Sass 1978: 185). The *hê* and *nûn* of Sinai 375a both face right on a very damaged horizontal line whose direction of writing is unknown. The complete *yôd*, as well as the bottoms of the incomplete *hê* and *nûn* of the fragmentary Nagila Sherd point to the left on lines possibly written from right to left (Leibovitch 1965; Cross 1984: 74; 2003: 295-96).

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Summary

Whereas most of the forms of Proto-Canaanite letters manifest no or moderate graphic developments from their Egyptian progenitors, the stances of those letters and how those orientations were combined on columns and horizontal lines provide the deepest departure from Egyptian norms. Several letters possess mirror images that have no such correspondents in the parent script. Many letters have rotated a quarter turn from their received postures. Letters with fronts and backs are arranged on numerous columnar inscriptions in a jumble anarchic by Egyptian standards. And letters with fronts and backs are sometimes arranged in the opposite direction to how one would normally read an Egyptian text composed in horizontal lines. When viewed together within a more limited repertoire of graphemes and the early predominance of single-file arrangements of the letters, perhaps these contrastive sets of stances and orientation patterns of graphemes provided a useful function for West Semites (and possibly Egyptians) to differentiate quickly an alphabetic text from a hieroglyphic one. In cultural contexts such as the western Sinai mining areas or the inscriptional wall at the end of the Wadi el-Ḥol in which the Egyptian script tradition prevailed, readers in antiquity would have been able to tell at a glance that they were looking at a West Semitic alphabetic text and not an Egyptian one primarily by the different stances of the letters and their contrastive usages. For example, while found in an Egyptian temple at Serabit, the vertically positioned *ayins* of Sinai 345, though formally the same as the Egyptian hieroglyph D4, would never have been executed by an Egyptian with that stance. And the opposing stances of letters employed on Wadi el-Ḥol Texts 1 and 2 would have quickly signaled that those inscriptions were not to be read as the dozens of Egyptian texts that surrounded them even though the forms of the alphabetic signs followed Egyptian models.

II. Letter Names

The acrophonic letter names provide an invaluable set of checks and balances to identifying the values of the Proto-Canaanite graphemes and isolating their Egyptian prototypes. When all three of those ways of knowing about a letter are in harmony, then one controls its origin. If one possesses only two solid points of reference, the third element of

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a Proto-Canaanite letter can sometimes be triangulated. One would have to multiply the uncertainties about the earliest alphabet many times if one did not have these acrophones. And as difficult as it is to ascertain the etymologies and meanings of some of them, the ones that are clear make sense when they are viewed together with the early-to-mid-second millennium B. C. forms of their letters and their Egyptian prototypes.

A. The Meaning of the Names

The names of seventeen letters (eighteen distinct acrophones, not counting vocalic variants) have exact cognates in Semitic languages: **ʿalp-*, “ox”; **bêt-*, “house”; **gaml-/giml-*, “throw-stick”; **dalt-/dilt-*, “door”; **hōy* and **hiʿ*, “ah,” “ha,” “here!”; **zayn-/zên-*, “weapon (axe)”; **yōd-*, “hand”; **kapp-*, “palm”; **mêm-*, “water”; **ḏay(n)/ḏê(n)*, “these two”; **naḥaš-*, “snake”; **samk-*, “pillar”; **ʿayn-/ʿên-*, “eye”; **pi-*, “edge (of a wall)”; **qōp-*, “monkey”; **raʿš-/ri(ʿ)š-*, “head”; **taw-/tô-*, “mark.” Of these, only the meaning of *tāw* bears no relationship to its Egyptian antecedent, although the exact relationship between **samk-* and its antecedent, R11, may be queried because of the obscure origins of that Egyptian sign. Only by combining the early shapes of *hê*, *zayin*, *dālet*, and *pê* with their Egyptian antecedents can one understand their acrophones. And only after synthesizing the exact cognates of *sāmek* and *qōp* with their earliest graphic forms can one isolate their almost certain (*s*) or probable (*q*) Egyptian prototypes.

One can triangulate the meanings of the names of four other letters by combining information from their earliest forms and their Egyptian prototypes with their closest—but not exact—cognates in Semitic languages: **ḥarm-*, “wick”; **ḥawṭ-/ḥôṭ-/ḥêṭ-*, “fence”; **lamd-*, “training instrument (coil of rope)”; and **ḥann-*, “bow.” From this writer’s perspective, these are secure reconstructions.

Eight acrophones are either difficult or impossible to reconstruct. Five names may have cognates in Semitic languages, but are very difficult: **ṭîṭ* or **ṭayt-/ṭêṭ-*, which may have designated either the intersection of a settlement, or, with considerably more difficulty, a wheel; **šawṭ-*, possibly meaning “thorn”; **nûn-*, which clearly was represented by pictographic and cursive snakes, but whose cognates all mean “fish”; plus **šappat-*, possibly meaning “reed,” and the diffi-

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cult *š/zaday-/š/zadê-, whose graphemes were clearly clumps of papyrus (or cursive derivatives of such). There are no certain cognates to two other acrophones: *waw-, which certainly designated a pictographic mace; and *sāt*, which is totally obscure. Two names were lost: the original acrophone of *gain* (but for *ǵa); and an alternate name for *d*, which may be restored as *dag-, “fish,” without abandoning the transmitted name *dalt-/dilt-, “door.”

Several letters have two different names (again excluding contrasts in vocalizations): *hōy and *hiʿ, *naḥaš- and *nūn-, and *samk- and *sat-. While the first pair may be authentic variants, it is unknown whether the second in each of the last two sets should be so considered. It is also uncertain whether one is dealing with one or two letters in the names reconstructed for š/z, *šappat- and *š/zaday-/š/zadê-.

After the merger of other consonants, languages transmit derivatives of two originally distinct acrophones: *zayn-/zên- plus *zay(n)* and likely *ǰê(n) as the names for *z* + *ǰ* > *z*; and *šawt- plus *šan* (from *θann-), later *šin*, following the merger of *š* + *θ* > *š*. Presumably *ḥ* and *ḫ* had also merged in South Canaanite before the borrowing of the Old Canaanite script into Epigraphic South Arabian. Distinct acrophones for these letters can be reconstructed largely through the Ethiopic names as *ḥarm- and *ḥawt-, after taking into account still later mergers in that language tradition.

B. Morphology

In terms of morphology, all but three of the acrophones stem from West Semitic nominal formations:

One is uniconsonantal: *pi-.

Several are biconsonantal: *waw-; *yōd-; *taw-; the loan word from Egyptian, *qōp-; plus *nūn- (if original).

Seven names derive from trilateral *qaṭl-/qiṭl- nominal formations. Languages transmit derivatives an original *qaṭl- in *ʿalp-, *ḥarm-, *lamd-, and *samk- and of both vocalizations in *gaml-/giml-, *dalt-/dilt-, and debatably *raʿš-/ri(?)š-. Others would see *samk-/simkat- as well as *θann- and *šin- as further instances of this vocalic variation (Cross and Huehnergard 2003: 227-28).²⁰

²⁰ Prof. Smith (personal communication) perceptively noted that *kapp-, *zayn-, *ṭayt-, *ʿayn-, and *ḥawt- also constitute *qaṭl- formations.

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Three names can be traced to geminate roots: **kapp-*; **šappat-*; and **θann-*.

Others are of middle weak formations, **qayl-/qêl-*: **bêt-*, **zayn-/zên-*, **hêt-*, **tayt-/têt-*, **mêm-*, **ayn-/ên-*; or less often **qawl-/qôl-* patterns: **hawt-/hôt-*, and possibly **šawt-*. While the **ay* diphthong is consistently contracted in tradents of three of these acrophones (**bêt-*, **hêt-*, **mêm-*), both contracted and uncontracted forms must be reconstructed for the names of *z*, *t*, and *ʿ* (so too most likely for *ð*). A mixture of treatments of the **aw* diphthong is also apparent in **hawt-/hôt-* and **šawt-*, although the evidence rests primarily on a single tradent, Ethiopic.

Only three names had originally dissyllabic bases: **naḥaš-*; **š/zaday-/š/zadê-*; and **šappat-*.

The latter, **dalt-/dilt-*, and possibly **tayt-/têt-* are the only feminine nominal formations (excluding **samkat-* as a secondary creation).

The exceptions are **hōy* and **hiʔ*, which are interjections, and **ḏay(n)/ḏê(n)*, which are demonstrative pronouns. The preponderance of the nominal formations among the letter names should not cause one to reject these two, which match their graphic images closely. When all is said and done, these acrophones were a simple, yet effective way to teach and remember the consonantal values of each letter (similarly, Lemaire 1994: 6).

C. Developments through Vocalic Shifts

Two letter names show the vocalic shift /ā/ > /ō/. The Ethiopic letter name *boy* derives from /hāy/. And although originating as a loan word from Egyptian, the name for *q* in most tradents also exhibits this shift: /qāp/ > /qōp/ (except where it has been secondarily rhymed with **kāpp-*).

Another two acrophones show the vocalic shift /á/ > /o/. Almost all traditions transmit a form of **yōd* from /yád/ (except the clipped form *ia*, which was possibly created secondarily through rhyming, and a transliteration of the Aramaic name *ya-a-dī*, which likely represents a back formation to the common noun). Greek also transmits *rō* < /roš/ < /ráš/ < **raʔš-*. Why similarly formed **waw-* and **taw-* (in almost all traditions) and *šan* (in Samaritan Hebrew) did not undergo this shift as well is not apparent.

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Parts of two traditions show the further vocalic shift of /ō/ > /u/. Samaritan Hebrew transmits /yud/ for *yôd*, as do most contemporary pronunciations of that name in the Jewish community and in parts of Syriac (Nöldeke 1966: 2; Brockelmann 1968: 5). Jewish tradition also transmits a pronunciation of /qup/ for *qôp*.

D. Developments and Obscuring through Rhyming

Rhyming of letter names is a common source for either the development of clearly secondary acrophones or an element that obscures the original vowels or final consonants of others (with alternate forms in brackets):

Ethiopic: *wāwi* (*wawe*), *lāwi* (*lawe*), *tāwi* (*tawe*); *ḥāwt* (< **ḥawt*-), *šāwt*; *ṭāyt* (*ṭait*), *pāyt* (*pait*); and *kāf*, *qāf*. The first chain likely originated in a substitution of the Arabic name **tawi*- for an original West Semitic **taw*-. The final *t* of *šāwt* likely replaced the final *ṭ* of **ḥawt*- through rhyming. *Pāyt* was secondarily created by rhyming with *ṭāyt* (so too *pait*, *ṭait*). The vowel of *qāf* more likely arose through rhyming with *kāf*, rather than as a vocalic backformation from **qôp*-.

Greek: *zēta*, *ēta*, *thēta*, *iōta*; *kappa*, *qoppa*; *mū*, *nū*; and *stau*, *tau*. The first rhyme chain likely obscured the original form of **zê* (< **ḏê*) as well as possibly the original final consonant of *thēta*. The doubled *p* of *qoppa* clearly arose from rhyming with *kappa*. *Mū* was certainly created by rhyming with *nū*, a clipped form of **nūn*-. *Tau* (and **vau*, now known only from Latin) engendered the end of *stau* (likely from West Semitic **šawt*-).

Syriac: *hēt*, *ḥēt*, *ṭēt*; *waw*, *taw*; and *ē*, *pē*. The original ending of the name of *ṭ* was possibly obscured through rhyming with *ḥēt*, which directly precedes it in that tradition's received order. More distant *hēt* appears to have joined those two to form a rhymed trio. *Waw* and *taw* form a rhymed pair. The name *ē* is most readily explained as a clipped form of **ēn*, which was then rhymed with *pē*.

Late Babylonian School Tablet: *ḥe*, *ṭè* (*tu*); *ṣu*, *qu*; and possibly *ia*, *ka*, *la*. The clipped forms of *ḥe*, *ṭè* form a rhymed pair, contrasting with *ḥe*, *tu* in the second column of that tablet (cf. *tu*). *Su* was most likely created by rhyming with *qu* that follows it. The sequence *ka*, *la* possibly engendered the preceding *ia* in a stage of transmission before this

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tablet was written (unless the latter represents a clipping of a backformation to /yad/ from *yōd-).

Hebrew Traditions: LXX and Eusebius: *ouau, tau*; and (*h*)*ēth, tēth*; Samaritan: *hîṭ, ṭîṭ*; Jewish tradition: *wāw, tāw*; *hêt, ṭêt*; and *šîn, šîn*. The names for *w* and *t* clearly formed a rhyming pair in the Hebrew acrophones recorded in LXX, Eusebius, the Mishnah, and subsequent Jewish tradition (contrast Samaritan *wāṣ, tāw*). The names for *h* and *ṭ* also traveled as a rhymed pair in each level of that language tradition. The Samaritan name *hîṭ* is consonantly originally but its vowel may stem from rhyming with *ṭîṭ*, which possibly transmits a consonantly authentic form. The equivalent names in Greek transcription and Jewish tradition appear to be more developed. In the latter, *šîn* was also created by rhyme from *šîn*.

Arabic: *bāṣ, hāṣ, ḥāṣ, ḥāṣ, ṭāṣ, yāṣ, fāṣ, zāṣ, rāṣ, tāṣ, tāṣ; dāl, ḏāl; kāf, qāf; sīn, šīn; ʿain, ḡain; and šād, ḏād*. The most likely source for the first rhyme chain is *hāṣ*, possibly originating as an Arabic substitute for the similar West Semitic interjection **hiṣ*. From clipped *dāl* the secondary name *ḏāl* was created by rhyming, from ʿ*ain, ḡain*, from clipped *šād, ḏād*. The vowel of *qāf* also likely came about from rhyming with *kāf* (rather than representing a vocalic backformation).

E. Development through Clipping

Five of the six traditions examined in this study transmit clipped letter names. These are usually composed of the first consonant and vowel, less often the first consonant, vowel, and second consonant of the original acrophone.

Three languages transmit one or two shortened names. Greek transmits the clipped names *nū* (< **nūn-*) and *rō* (< **rōš*). Syriac transmits the clipped form ʿ*ē* (< *ʿ*ēn*). Samaritan Hebrew transmits *wāṣ* (cf. the alternate spelling *wāṣw* in Jewish tradition [Jastrow 1903: 371] and Syriac [Nöldeke 1966: 2; Brockelmann 1968: 5]).²¹

²¹ See *mēm*, Chapter 2, regarding the several possible explanations for the etiology of Ethiopic *māy*. While that tradition's *zāy*, the transcription of *zai* in LXX and Eusebius, and Arabic *zāy*, could also represent a clipped name, in my view they more likely constitute authentic but developed forms of **ḏay*.

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The earliest textual evidence for the acrophones comes from an incomplete list of clipped names at Ugarit, transcriptions into Akkadian syllabic writing. It is unknown whether this was an *ad hoc* creation or reflected the full extent of what the letters were called at that site during the Late Bronze Age after the correspondence between the graphic forms and acrophones had been broken through the development of alphabetic cuneiform script. The continuation of that list with three supplementary letters used at Ugarit (*i* for ^ʔ*i*, *u* for ^ʔ*u*, *zu* for ^š [most recently, Bordreuil 2000: 147-48, n. 4; Cross and Huehnergard 2003: 224]) tilts towards the latter as the more likely interpretation.

The clipped names on a Late Babylonian school tablet suggest that there was a tradition, independent of the Ugaritic one, of abbreviating the letter names sometime well into the first millennium B.C.²² These abbreviations in syllabic cuneiform consist of the initial consonant plus vowel of each acrophone in all but one instance. They appear not to have been *ad hoc* shortenings since they were repeated consistently in a second column on that tablet (with only one difference in writing: *tu* versus *tè*). There are also two likely instances of clipped forms that developed through rhyming with apocopations that follow (*ia* with *ka*, *la*; and *su*, with *qu*); these rhymed forms could have occurred only if this were not the first time(s) this list of clipped names was transmitted. The exceptional writing of *a-a-nu* for ^{*c}*aynu* on the same tablet strongly suggests that the full letter names were also known in the same scribal environment.

Arabic transmits four (or five) clipped names: *jīm* (< ^{*}*giml-*), *dāl* (< ^{*}*dalt-*), *lām* (< ^{*}*lamd-*), *šād* (< ^{*}*šadê-* or ^{*}*šaday-*), and perhaps *rā* (< ^{*}*rā(ʔ)š-*). But the last is better explained as a secondary form created by rhyming with ten other letters ending in *-ā*^ʔ. The four certain clipped forms bring them into alignment with the other acrophones in that tradition, all but one of which (*alif*) are composed of a consonant, vowel, consonant, whether showing received consonantal formations (*hā*^ʔ, *wāw*, *kāf*, *mīm*, *nūn*, *sīn/šīn*, ^c*ain*, *qāf*, and likely *zāy*) or developed ones (e.g., *bā*^ʔ, *hā*^ʔ, *hā*^ʔ, etc.).

Clipped names are documented from the end of the Late Bronze Age (the partial list at Ugarit), the first millennium B.C. (two columns on

²² On the difficulties of dating this tablet, see Cross and Huehnergard (2003: 223, n. 3).

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the Late Babylonian School Tablet—all but *ayin*), in four (or five) occurrences in Classical Arabic, two in Greek, and one each in Syriac and Samaritan Hebrew. Abbreviating the received acrophones to their initial syllables is now a relatively well-attested phenomenon (cf. the term abecedary).

III. Chronological Concerns

I would reconstruct the most probable chronology for the invention of the West Semitic alphabet and the earliest inscriptions in that tradition as follows:

the invention of the alphabet, early in the Twelfth Dynasty,	ca. 1940-1850 B.C.;
the earliest alphabetic inscriptions from Egypt and the Sinai,	ca. 1850-1700 B.C.;
the earliest alphabetic inscription from Palestine,	ca. 1725 B.C. (\pm 25 years);
more typologically developed inscriptions from the Sinai,	ca. 1700-1500 B.C.;
more typologically developed inscriptions from Syria-Palestine,	ca. 1650-1350 B.C.;
and the latest early alphabetic inscription from the Sinai,	ca. 1250 B.C. (\pm 100 years).

A. The Invention of the Alphabet

Alphabetic writing likely commenced no earlier than Egypt's Middle Kingdom, most likely near the beginning of the Twelfth Dynasty (cf. Tropper 2003: 173). Three Egyptian forms borrowed as letters were only introduced into the parent script at that time: closed square forms of hieratic O1 adopted as well-attested forms of *bêt*; the hieroglyphic variant T7A, "axe of more recent type," seen rarely as *zayin*; and a three-stroke shape of hieratic Z11 attested once or twice as *tāw*. Since West Semites could not have borrowed these three forms before they were introduced into the parent script, they provide the best evidence

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for the *terminus ante quem* for the invention of the new writing system.

Three other aspects provide suggestive, but less definitive chronological indicators. First, one could point to the fairly rare vertical stance of the hieroglyphic water-sign, N35B, which is best attested in inscriptions from the early Middle Kingdom (Darnell 2003: 168; Darnell et al. 2005: 78, 86), that appears twice as *mēm* in an alphabetic text from Egypt and is secondarily witnessed as jar signs from Palestine. Secondly, while one may be tempted to take the regular +-form of *tāw* as a chronologically diagnostic form, it appears more prudent to say that it could have originated in either hieratic forms of the early Twelfth Dynasty if that was precisely when alphabetic writing began or in very similar hieroglyphic models if it commenced somewhat later. Thirdly, the predominance of single-file arrangements in early alphabetic texts also inclines one towards a time early in the Middle Kingdom for the origin of the Proto-Canaanite script, when similarly arranged hieroglyphic inscriptions, though always rare, are best attested (Darnell et al. 2005: 93, n. 21; see Appendix 2).

The best paleographic evidence for the *terminus post quem* of the West Semitic alphabet comes from its character as a “mixed” script composed of both hieroglyphic and hieratic forms. This mode of Egyptian writing was especially common in Egypt’s Middle Kingdom, particularly early in the Twelfth Dynasty to judge from inscriptions left by Egyptians traveling from Edfu to Nubia (Žába 1974) and elsewhere (Darnell et al. 2005: 97, n. 104). Since that kind of inscription appears to have been considerably less frequently attested in Egypt’s New Kingdom, this provides the strongest but slightly equivocal evidence for the latest possible date for the invention of the new writing system.²³

While literally dozens of graphic correspondences between the forms and stances of Egyptian signs incised or panned in the Twelfth and Thirteen Dynasties and early West Semitic consonants were solicited above, one also noted appeals to chronologically earlier and later Egyptian writings throughout this study.

On the one hand, a few Egyptian forms antedating the Middle Kingdom are extremely close to early alphabetic letters. One hieratic form

²³ This conclusion is supported by the developed forms of two letters (*y*, short *l*) used secondarily as jar signs uncovered in a controlled stratigraphic context at Gezer and dating to early in Egypt’s New Kingdom, ca. 1500 B.C. (± 25 years).

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of K1 from the Fifth Dynasty is very close to a single, much later alphabetic fish-pictograph. More derivations come from specifically cursive forms dating to the late First Intermediate Period: hieratic forms of K1, “fish,” used as **dag-*; exceptional hieratic forms of T7, “axe,” on coffin texts seen once as *zayin*; and especially hieratic writings of O38, “corner,” reflected several times as *pê*. Appeals were also made to four hieroglyphic shapes of D1, “head,” from the Eleventh Dynasty inscriptions used as *rêš*. While some of these correspondences may simply be the result of the happenstance of which Egyptian inscriptions have survived or which were examined by the present writer, they provide evidence to favor dating the origin of the alphabet earlier rather than later in Egypt’s Middle Kingdom when such mostly late First Intermediate Period and post-reunification Eleventh Dynasty forms would have been extant on presumably many more texts.

On the other hand, on occasion one also noted close graphic correspondences to forms or scribal practices that were prevalent later in Egypt’s Middle Kingdom and Second Intermediate Period, but only rarely to those from the beginning of its New Kingdom. The Old Kingdom practice of omitting the hands and feet on some hieroglyphs was revived late in the Middle Kingdom and continued in some texts assigned to the Second Intermediate Period. This practice is continued on some inscriptions with the human stick figure of *hê* (and possibly *qôp* as well), providing the *terminus ante quem* for those texts (but less likely the writing system as a whole). Hieratic forms from the Second Intermediate Period were also appealed to on occasion: O4 for one writing of *bêt*; I9 and I10 in several writings of *nûn*; M15 for one Proto-Canaanite and two derivative forms of *s/z*; as well as R11, D4, and T10 for a single attestation of *s*, *ç*, and *θ* respectively; and possibly O42 for a chronologically later but typologically early form of *h*. Solicitation of hieroglyphic forms from the Second Intermediate Period was rare (D47/*yôd*; D1/*rêš*). Only three appeals were made to forms, probably not chronologically diagnostic, from the Eighteenth Dynasty (T3/*wāw*; I9/*nûn*, single hieroglyphic and hieratic occurrences). In short, one is sometimes attracted by the shapes of specific signs of the Second Intermediate Period but rarely to those assigned to the beginning of the New Kingdom to understand a few forms of letters in early alphabetic texts.

When attempting to establish the chronological parameters of the

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paleography of an individual inscription, it is important first to determine a primary locus where most of the letter forms fit into a typological sequence and then to look for indicators of older and newer forms. One can employ the same method to establish the chronological parameters for the origin of the alphabetic writing system. The primary locus of early alphabetic writing is Egyptian hieroglyphic and hieratic scripts of the Twelfth Dynasty. Then one is attracted towards some older graphic forms from before the Middle Kingdom, largely dating to the late First Intermediate Period and the post-reunification Eleventh Dynasty, as well as some later ones, stemming from the late Middle Kingdom and Second Intermediate Period. This tension helps one to discern the likeliest date for the emergence of this script tradition.

The dates of 1940-1850 B.C. provide the best estimate for the beginning of alphabetic writing, as early as the beginning of the Twelfth Dynasty, ca. 1940 B.C., or as late as ca. 1850 B.C., the earliest possible date for the first alphabetic inscriptions. This conclusion would thus take into account: several archaisms from late in the First Intermediate Period or the relatively short lived post-reunification Eleventh Dynasty; the presence of three borrowings that only entered the Egyptian repertoire of signs in the Twelfth Dynasty; the practice revived late in the Middle Kingdom and Second Intermediate Period of truncating some signs that appears in forms of *hê* (plus perhaps *qôp*); and the similarity of a few Eighteenth Dynasty Egyptian forms of signs used as letters.

Given that range of dates as determined through paleographic means, the origin of West Semitic alphabetic writing may then be associated with the literally thousands of personal stelae and hundreds of inscriptions executed by or for individual Egyptians, especially on rock, that have been assigned to the Twelfth and Thirteenth Dynasties.²⁴ The scripts of those Egyptian inscriptions and small stelae provide benchmarks by which one can begin to evaluate the quality of the handwriting on Proto-Canaanite texts. The quality of handwriting in

²⁴ While Žába (1974: 261) saw the rock inscriptions of Lower Nubia and southern Egypt as resulting from a “literacy program” initiated by Ammenemes I (1938-1908 B.C. [Baines and Malek 2000: 40]), I have been unable to confirm the existence and extent of such a program from other sources. If such a pharaonic program were ever confirmed, one might wish to revisit some of the interrelationships between alphabetic literacy and the role of the state raised by Sanders (2004).

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most of the early alphabetic texts is poor to fair by Egyptian standards, at the lower end of what one finds on personal stelae (e.g., *HT* 1-6), but quite comparable to that found incised by ordinary Egyptians themselves, for example, on rock inscriptions found by the Czech team from Edfu to northern Nubia (Žába 1974) or by Darnell (2002) in the western Theban Desert.²⁵ A few of the early alphabetic writers may have had some, but not much scribal training (see, perhaps, Sinai 346, 347, 349, 351, or the Lachish Dagger). The rest appear to be of non-scribal quality, perhaps even amateurish at inscribing a text at least on stone (as evidenced by an instability in the stances of some specific letters). This is precisely what one finds *en masse* in southern Egypt and northern Nubia where ordinary Egyptians, “dog-keepers, hunters, townsmen, members of the household” (Žába 1974: 261), left epigraphic remains, especially during the early Middle Kingdom.²⁶ The same point applies to some of the less well executed mine inscriptions from Wadi Ḥammamat (Cuyat and Montet 1912; Goyon 1957) and

²⁵ The relatively low quality of handwriting should not be taken as indicative of a low social standing for the persons who wrote—or had someone else write—these epigraphs as Sanders (2004: 33) has done: “For the first half millennium or so of its history, the main attested use of the alphabet was for marginal people—foreign soldiers and laborers—to write graffiti in desolate, out-of-the-way places.” Regarding Bebi, general of an “Asiatic” military unit, and the so-far unnamed *rb* of the Wadi el-Ḥol texts, see Darnell et al. (2005: 87-90, 102-6). On the official character of many of the early West Semitic inscriptions from the Sinai, most recently see Lemaire (2000: 115, and the literature cited therein). For a recent contextualization of the heddle jack from Lahun as belonging to a worker in the textile industry, see Cartwright, Granger-Taylor, and Quirke (1998: 92-94) and the discussion below. From my perspective, a weaver was not “on the margins,” nor was Lahun an “out-of-the-way place” (see Baines and Malek [2000: 130] on its pyramid and walled town in the Twelfth Dynasty). Nor were Lachish, Shechem, or Gezer “out-of-the-way places” in Middle and Late Bronze Age Palestine—each of which has yielded early alphabetic inscriptions. While Sanders (2004: 34-38) rightly criticized the “Romantic-ethnic” and “Enlightenment-universalist” models evinced in the writings of many scholars, he himself may have romanticized the origin and early transmission of the alphabet among those on the margins (of either society in Canaan or a transplanted subgroup in Egypt). Such a simplification, in any case, does not match the evidence.

²⁶ While no Egyptian graffiti has been found at Serabit itself from the Twelfth Dynasty, Peden (2001: 30, n. 34) summarized an abundance of titles in hieratic and hieroglyphic scripts at Roḡ el-ʿAir inscribed by junior officers and artisans on their way from the coast to that site dating to that period: “scorpion-charmer (see...Sinai 502); cattle scribe (no. 502); foreman (no. 502); serving man (no. 507); scribe (no. 508); dragoman (nos. 510-511); stone mason (no. 513); and intendant (nos. 516 and 519).”

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some Twelfth Dynasty Egyptian inscriptions from the Sinai, e.g., Sinai 107 (Parkinson 1999: 163).

These parallels strongly suggest that some West Semitic early alphabetic writers were at least somewhat literate in Egyptian writing. The condition “at least somewhat literate” needs to be added because of the very limited repertoire of Egyptian signs (33) used as letters. Moreover, it would have taken a minimum of about six individual West Semites who knew those signs to have transmitted the variations in hieroglyphic and hieratic forms witnessed in the most completely attested letters (e.g., *ʔ, b, d, h, l, n, ʕ, ʃ/z, r, θ*).²⁷ The range of Egyptian forms that those alphabetic writers expected other West Semites to be able to read reflects the depth of their shared literacy in the parent scripts better than the relatively low quality of their handwriting. Their ability to recognize, read, and relate a number of sometimes disparate forms together as one letter demonstrates a fairly deep knowledge of pre-existent Egyptian usages for those signs (see, for example, the formally diverse variants of *l, n, ʃ/z*, charted above). That limited evidence of literacy by some West Semites is likely attributable to changes in Egyptian expectations in levels of literacy in their own culture as witnessed by rock inscriptions and personal stelae from throughout the Middle Kingdom.²⁸ One of the reasons why the new writing system likely succeeded was that the inventor(s) of the alphabet simply asked other West Semites to reutilize a subset of a script system that they already knew, a limited number of Egyptian signs, but to give them new values as consonants in their own language.

²⁷ Sass (1988: 108f.) noted many of these variations, but failed to see that the range of shapes of these letters could not derive from a single Egyptian inscription (e.g., Sinai 53, citing Ullman [1927: 313, nn. 291, 292], or two, adding Sinai 92 [1988: 143]).

²⁸ One also notes reflections of West Semites employing hieroglyphic writing outside of Egypt in the Middle Kingdom. “In [Sinai] 123B there is a ‘chief lector priest, priest and scribe, the Asiatic Werkerphemut,’ who is probably the leading religious figure connected with the temple of Hathor [at Serabit] in the time of Amenemhet IV” (Van Seters 1966: 88, n. 3); the lector priest was “the main ritual practitioner of a temple” (Parkinson 1999: 91). From Byblos starting in the last half of the nineteenth century and continuing to the mid-seventeenth century B.C. come a series of nine rock-cut tombs of the rulers of that city, almost all of which contain hieroglyphic inscriptions (Redford 1992: 97). These antedate the three Hyksos royal inscriptions in hieroglyphs at Tell ed-Dabʿa (Bietak 1996: 65-67, figs. 52-54), apart from scarabs, and the late Hyksos ruler Apophis’s claim to be able to read hieroglyphic script (Redford 1992: 122). See also the large number of scarabs found in Canaan, many produced there, starting in the Thirteenth Dynasty (Ben-Tor 1997).

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B. The Earliest Alphabetic Inscriptions from Egypt

The Wadi el-Hol Early Alphabetic Texts

I would concur with Darnell et al. (2005: 86-90) and Dobbs-Allsopp (2006: 497) that the two Proto-Canaanite inscriptions from Wadi el-Hol in the Theban Western Desert provide new benchmarks for establishing the chronology of the early alphabet. They signaled the importance of certain letter forms and stances as well as the mixture of hieroglyphic and hieratic antecedents to be distinct enough to recommend a Middle Kingdom dating for these inscriptions. They also made a nuanced case that two contextual considerations point more specifically to later in the Middle Kingdom, the late Twelfth to early Thirteenth Dynasties, ca. 1850-1700 B.C., as a reasonably wide estimate for their writing (cf. the much earlier estimates by Tropper [2003: 173]): the prominent locations of the alphabetic inscriptions on some of better surfaces of that wadi's inscriptional wall, most of whose Egyptian texts date to the late Middle Kingdom and Second Intermediate Period (Darnell 2002; Darnell et al. 2005: 74, 86); and the so-called Bebi inscription, which places the general of a West Semitic speaking military group and their families directly at Wadi el-Hol late in the Middle Kingdom (Darnell 2003: 170-71; Darnell et al. 2005: 87-90, 102-6).²⁹ I would echo Darnell et al. (2005: 90) that the relatively small paleographic developments witnessed in the scripts of these two Proto-Canaanite graffiti provide another way into estimating the date of the origin of the alphabet (although we differ on some specifics).

Wadi el-Hol Text 1 shows three developments in the forms of its letters, two minor and one major: the transference of a cursive opening to its otherwise hieroglyphic form of *'ālep*; developed angles to the legs of its first *hê* and probably its second as well (cf. Darnell 2003: 168; Darnell et al. 2005: 78-79); and the significant development of a "stringless" form of its angular, w-shaped **θann-šîn* positioned with a secondary vertical stance. Two of its letters also show development through letter rotation (*b, n*), another two by their anomalous tilts (*r*).

²⁹ For concise and cogent summaries of the presence of Egyptians in the Theban Western Desert as reflected by graffiti, see especially Peden (2001: 16-18 [Eleventh Dynasty], 28-29 [Twelfth Dynasty], 47-48 [Thirteenth Dynasty], 52-54 [Second Intermediate Period]). Peden's overview underscored the invaluable nature of the epigraphic and archeological work by the Darnells in that area.

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The letters with fronts and backs also exhibit opposing stances, a marked movement away from the usage of orientations in the parent script.

Wadi el-Ḥol Text 2 witnesses even fewer and only minor formal developments: an innovative point to the top of and a bust-like bottom added to its *rêš*; an innovative square eye and transferred cursive opening to its *ʾālep*; and probably a developed angle to the leg and foot of its *hê*. Letter rotation and mirroring of a hieratic form is apparent in its *lāmed*. The stances of the letters on this vertical column also oppose (*r* to the right; *h* and *ʾ* to the left). The latter development is matched by the archaism of having two sets of two letters share the same horizontal plane.

While the other letter forms and stances of these two relatively short inscriptions are typologically archaic, one would need to factor in a certain amount of time from the origin of alphabetic writing to allow for the development of those mostly minor graphic changes. I would estimate that Wadi el-Ḥol Texts 1 and 2, probably written by two or more different individuals given some contrastive forms and stances in letters that occur in both inscriptions, were incised approximately fifty to one hundred years, or perhaps a bit longer, after the origin of the alphabet. If these rock inscriptions were written between 1850-1700 B.C. (Darnell et al. 2005: 90; Dobbs-Allsopp 2006: 497), it is reasonable to place the beginning of alphabetic writing in the late twentieth or first half of the nineteenth centuries B.C., indicated above by the dates of ca. 1940-1850 B.C. (similarly and independently, Darnell [2003: 169-70] and Darnell et al. [2005: 90]).

The Lahun Heddle Jack

I would follow the re-assignment of the Lahun Heddle Jack by Quirke (Cartwright, Granger-Taylor, and Quirke 1998: 92) to the same period as the Wadi el-Ḥol early alphabetic texts, ca. 1850-1700 B.C. Scholars have been divided over when to date this heddle jack and its early alphabetic inscription. “Petrie neither specified the archaeological context—except for a 12th dynasty date—nor did he give an explanation for this tool’s use” (Dijkstra 1990: 51). (Sass [1988: 104] had already identified this object as a heddle jack.) Dijkstra (1990: 55-56) rehearsed the possibility of that early date but rejected it in favor of

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assigning this weaving instrument to a period when Lahun was settled much less extensively, the fourteenth century B.C., based solely on paleographic considerations. After this object was rediscovered and tested for wood type, Quirke (Cartwright, Granger-Taylor, and Quirke 1998: 92) challenged that dating:

It should be noted that, despite its scale, it can be identified securely as a heddle jack from parallels of the same kind and of a larger size, such as UC 7178 and 7282ii from Lahun (see Roth and Crowfoot 1921, with four examples from the Petrie Museum on p. 100, fig. 4). The inscription has been read inverse to the position required of the heddle jack when in use. These implements were used in conjunction with the horizontal loom, rather than the vertical loom attested from the Eighteenth Dynasty and later (Barber 1991, 113-16). Although C14 dating has not been used to corroborate the point, it seems probable that this jack and its inscription date to the *floruit* of Lahun during the late Middle Kingdom (c. 1850-1700 B.C.) rather than the period of partial resettlement in the Eighteenth Dynasty to which it has been ascribed by philologists.

The five Proto-Canaanite letters incised on this small cylinder of fir (Cartwright, Granger-Taylor, and Quirke 1998: 99) exhibit mostly minor developments from their Egyptian antecedents. Three minor changes can be charted with certainty: the transference of cursive openings to its essentially hieroglyphic form of *dālet* and the rotation of its *ʿayin* and *bêt*. Its *šādê* may show no development in either its form or stance (when, with Quirke, this text is read from right to left—see Appendix 1). The only surprise from a paleographic perspective is the presence of a linear A-form of *ʾālep* in an inscription that would be dated to ca. 1850-1700 B.C. on the grounds of its artifact type and the period of major settlement of the site in which it was discovered. Yet compare a similar but atypical form of the hieroglyphic antecedent of that letter, F1, on a rock inscription from Nubia dating to the *early* Middle Kingdom (Žába 1974: figs. 135, 136; drawn in fig. 2.3 above) which provides an analogy for the parallel development of this linear form in early alphabetic scripts (see the discussion under *ʾālep*, Chapter 2). See also the A-forms of *ʾālep*, with a different stance, that occur on the front of the Shechem Plaque, inscribed no later than 1400 B.C.

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(and quite likely considerably earlier—see the discussion of the dating of that object below). There is thus nothing in the paleography of the Lahun Heddle Jack that precludes its assignment to late in the Middle Kingdom.

A sample of the wood of EA 70881 has since been tested for ^{14}C content determined by accelerator mass spectrometry technique. The results are:

OxA-15501: 3661 ± 31 BP

68.2% probability

2130 B.C. (26.8%) 2080 B.C.

2050 B.C. (41.4%) 1970 B.C.

95.4% probability

2140 B.C. (95.4%) 1940 B.C.³⁰

These results are early by anyone's estimation. Nonetheless, the calibrated dates with a 95.4% probability, 2140-1940 B.C., reasonably support the earliest possible date for this small-scale heddle jack, ca. 1850-1700 B.C. based on the *floruit* of Lahun and the use of this type of artifact on a type of loom employed during that period when one factors in the well known "old-wood effect" (on the latter, see in particular Rech 2004: 218-19). Such is the likeliest interpretation since it has been shown that this piece of wood was imported into Egypt from elsewhere in the Mediterranean (Cartwright, Granger-Taylor, and Quirke 1998: 96-99). It may have sat around for a century (or more), either at its point of origin after the fir tree had been cut down and/or after it had arrived in Egypt.³¹

Cartwright, Granger-Taylor, and Quirke (1998: 93-94) also cited sev-

³⁰ Letter of D. Baker, Administrative Officer, Radiocarbon Accelerator Unit, Research Laboratory for Archaeology and the History of Art, Oxford University to Dr. R. Parkinson (14 Feb. 2006). I would like to express my gratitude to the British Museum, particularly J. Ambers and Dr. R. Parkinson, the Department of Ancient Egypt and the Sudan, for arranging this testing and granting permission to report these results. The testing was funded by a minor grant from the Social Science and Humanities Research Council of Canada, administered by Huron University College.

³¹ Alternately, one could appeal to the parallel of wood in Egypt from the Old Kingdom having been shown to give radiocarbon dates that are consistently early, on average 294 years older than could be established reliably by other means (Haas et al. 1987; Rech 2004: 215, 218). I would like to thank Prof. Rech, the Department of Geology of Miami University, for discussing these interpretations with me by email.

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eral late Middle Kingdom hieratic texts from Lahun and Thebes that provide evidence for the involvement of women in Egypt's textile industry both at the managerial and manual levels (reflecting a different picture than during the following New Kingdom when men dominated that industry). One hieratic text from Thebes dating to the Thirteenth Dynasty mentions a West Semitic woman involved in weaving.

The original owner of this heddle jack, whose name was $\text{ʾd}^{\text{c}}\text{šb}$, was likely a West Semitic speaking woman who lived and wove at Lahun some time between the mid-nineteenth and the late eighteenth centuries B.C.

C. The Typologically Earliest Alphabetic Texts from the Sinai

The dating of and the state of paleographic development seen on the Lahun Heddle Jack and in the two Wadi el-Ḥol inscriptions provide the best benchmarks by which to offer a fresh assessment of the handwriting of the early alphabetic texts from the western Sinai (similarly, Darnell et al. [2005: 100, n. 130] concerning the latter texts). In particular, they provide a way of adjudicating Gardiner's tentative (1916: 13) but persistent (1962: 45-48) dating of them *en bloc* to late in Egypt's Middle Kingdom. Gardiner's view, recently echoed by Cartwright, Granger-Taylor, and Quirke (1998: 92) and Sanders (2004: 31-32, n. 13), was largely due to the documented presence of West Semites as part of the Egyptian turquoise and copper mining operations in that area during the Twelfth Dynasty. The recently-published or -rediscovered West Semitic alphabetic texts from Egypt would seem to undermine Albright's equally tentative (1948: 9-10) but unyielding (1963: 203-5; 1966: 6) assignment of all of the Proto-Canaanite inscriptions from the western Sinai to early in the New Kingdom following some dubious dating of some of the artifacts on which they were written (well critiqued by Sass [1988: 135-41]).³² After reviewing the meager artifactual, contextual, and paleographic indicators known to him at that time, Sass (1988: 141, 144) could conceive of either a Twelfth or Eighteenth Dynasty date for these texts, while clearly favoring assigning them to the

³² Sass (1988: 137) also noted the discovery of an Egyptian Sinaitic text dating to the New Kingdom mentioning the presence of a Semite, thereby lessening the strength of one of Gardiner's key arguments.

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Middle Kingdom period (1991: 4-27). A third option has arisen since Sass wrote. Reviving a proposal by Sethe (1917; 1926: 137-38), Lemaire (1994: 6-7; 2000: 110-19) and Briquel-Chatonnet (1998: 59) recommended assigning them to the Hyksos Period, when, to our knowledge, no Egyptian expeditions to the western Sinai were recorded (Gardiner, Peet, Černý 1952: 59; Peden 2001: 49) and West Semites ruled northern Egypt. Significantly, Briquel-Chatonnet (1998) was writing after the publication of extensive new archeological work at Serabiṭ by Valbelle and Bonnet (1996) in an anthology edited by Valbelle (1998), who placed her entry on the “Proto-Sinaitic inscriptions” between chapters concerning the Middle and New Kingdoms. Each of these three proposals has merit, but each problematically assigns the Proto-Canaanite texts from in and around Serabiṭ el-Khadim and Roḡ el-ʿAir *en bloc* to one period. Albright (1966: 6) indicated the difficulty: “. . . the Proto-Sinaitic texts are not themselves homogenous palaeographically, but show marked evolution in their script. . . .” Assigning these inscriptions to a single period as a group is the option that is least likely to reflect when they were actually written.

Based primarily on the foregoing analysis of the development of their handwriting I would subdivide the Proto-Canaanite Sinaitic texts into three groups, starting with those that show approximately the same degree of paleographic development as the graffiti from Wadi el-Ḥol and the heddle jack from Lahun—four short inscriptions (Sinai 347, 359, 377, 362) and eight longer ones (Sinai 351, 352, 349, 346, 367, 375, 375a, 363). I would also posit a similar range of dates for them, ca. 1850-1700 B.C.³³ Using the handwriting of the typologically earliest Proto-Canaanite inscription from Palestine, the Lachish Dagger, as a further benchmark, I would isolate a second group of inscriptions from the Sinai (364, 345, 354, 357, 358, 376, 365, 527) as belonging to a more developed stage, probably stemming from ca. 1700-1500 B.C. Based on the analysis of one of its letters, a single text, Sinai 375c, must be assigned to Egypt’s New Kingdom, probably quite late in that period.

The earliest alphabetic inscriptions from the Sinai are (listed according to the typological development of their scripts):

³³ Six longer inscriptions (Sinai 350, 353, 356, 360, 361, 374) and two shorter ones (Sinai 378, 379) also probably belong with this early group, but they are either too damaged or too short to be certain.

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Sinai 347, whose two letter forms show only one very minor development: the equalization of the cross bars of its two *tāws*. Although normally an inscription with only two letter forms would not suffice, one still needs to note that this is the typologically least developed alphabetic writing to surface to date.³⁴

Sinai 359, whose three letters manifest only a single innovation, namely the addition of an entranceway to its hieroglyphic form of *bêt*.

Sinai 377, whose three clear letters witness only one minor development, namely a new diagonal stance to the shaft of its *lāmed*.

Sinai 362, whose three complete letters exhibit only two minor developments, a slight diminution in the lower extension of its *dālet*, and the rotation of its *bêt* from the position of its hieratic precursor.

Sinai 351, which shows paleographic development only in its “stringless” composite bow pictograph and opposing stances to its letters with fronts and backs (*nûns* to the left, *qôp* to the right).³⁵

Sinai 352, whose script manifests only two small developments, a developed wig line in its otherwise formally primitive *rêš*, and a shortened stem to one of its *lāmeds*. Its arrangement of letters shows development through opposed stances (*r* to the right, ² and *nûns* to the left). An archaic feature is apparent in two letters sharing the same horizontal space on a vertical column (*l*, *t*). The large fish pictograph and perhaps one or both *nûns* to its lower left (whose antecedents could not be traced) may represent secondary additions to this text.

Sinai 349, many of whose lines are poorly preserved, manifests only two developments: a lengthening of the necks of its *nûns*; and the loss of a distinct wrist on its *kāp*, whose four-finger form is otherwise received from Egyptian.

Sinai 346a (front) and 346b (side).³⁶ I would concur with Sass (1988:

³⁴ See n. 36 below on E. Russmann’s dismissal of Egyptian parallels to this artifact’s form of bust (already rendered chronologically insignificant by Sass [1988: 139]).

³⁵ It also may show a slightly atypical and rotated *b* (see Appendix 1). Sass (1988: 137) noted that while the shrine around the image of Ptah on the right side of this inscription has its best parallels in Middle Kingdom iconography at Serabit, similar representations from Egypt are also known from the New Kingdom.

³⁶ When asked for her reading of the art historical aspects of this block statue, the bust, Sinai 347, and the small sphinx, Sinai 345, Edna R. Russmann, Curator, Department of Egyptian, Classical, and Ancient Middle Eastern Art, The Brooklyn Museum of Art and an acknowledged expert in sculpture of the Middle Kingdom wrote (email, 19 May 2004), “When you ask me to give my ‘reading’ of the three Sinai objects, I pre-

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14) that the script on this Semitic imitation of a block statue is archaic. The handwriting on the front manifests four minor developments: the addition of an entranceway to its *bêt* and vertical mirroring of the antecedent hieroglyph of that letter; the rotation of one *‘ayin* to a vertical stance; a slightly innovative horizontal stance to one *lāmed*; and a developed x-stance of one *tāw*. The handwriting on the side, perhaps done by the same person, is more cursive and exhibits one (or two) very small development(s): a slightly innovative horizontal stance for *lāmed* and perhaps the diagonal positioning of the rightmost *bêt* (but the latter may originate in the hieratic sequence). The arrangement of letters on the lower portion of the text on the side, as a block that is read in a boustrophedon fashion, is archaic. While the stances on the front (facing right) and side (facing left) would seem to oppose, they are generally consistent in facing the image of the goddess (perhaps following an Egyptian practice).

Sinai 367, whose six poorly preserved letters transmit only one major and one minor change. The first is likely a typologically mixed form of *bêt*, and the second a slightly innovative horizontal stance to its *lāmed*.

Sinai 375, whose script shows little development to judge from its published photographs: “stringless” composite bow pictographs

sume you mean my opinion, based on stylistic features, of their date. Having looked at the illustrations in Sass’ study and read the relevant sections of his text, my opinion is (as it always has been) that the block statue, Sinai 346, is so clearly the work of a non-Egyptian carver that comparison with Egyptian examples is irrelevant, especially for purposes such as dating.

While the facial features of the bust, Sinai 347, and of the sphinx, Sinai 345, are somewhat more orthodox, in Egyptian terms, they too, are best explained as the work of sculptors who had little or no training in Egyptian sculpture and had seen few genuine examples. I think that it is nonsense to try to date the two busts by comparing Egyptian ‘ancestor busts,’ to which their resemblances should be considered merely accidental.

The body of the sphinx is undoubtedly based on an Egyptian model, including the tail curved around the right flank. The head, however, cannot be securely attributed to any Middle Kingdom or New Kingdom ruler. (The comparison to representations of Hatshepsut is ludicrous.)

Furthermore, the head exhibits numerous misunderstandings of Egyptian royal art, such as the badly proportioned, apparently misunderstood headdress; the absence (so far as I can see) of a uraeus; the stylization of the ears; the moon-like face with its low, horizontal cheekbones flanking what was a short nose; the lipless slash of a mouth. To my mind, the awkwardness of these features has much in common with the hieroglyphic inscriptions on the lion body, which also suggests the work of a person with some training, or at least familiarity—but not much, and not recent.”

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(which may mirror their antecedent hieroglyphs vertically); the addition of an extra gill-line on its clearest **dag*-; vertical mirroring of its *bêt* and probably its *pês* from hieratic antecedents; rotating *tāws*; and possibly a shortened stem on its *lāmed*. The origins of its other, more obscure **dag*- could not be traced. This text also shows development through the use of opposing stances (ʔ, *r*, *q*, *n* to the left; one **dag*- to the right, the other pointing upwards).

Sinai 375a, whose letters are shallowly incised and poorly preserved along most of the top line, shows only small changes from Egyptian forms: slimmer forms of **dag*- than their hieroglyphic predecessors; less extension beyond one long side of its *hêts* and one rotated occurrence of that letter; a lengthened tail on the *nûn* of its central column; one *kāp* showing an innovative form without a wrist that mirrors its antecedent vertically; and the other *kāp* rotated into an upright stance. The stances of the letters on this plaque oppose (ʔ to the left, *h* to the right, snake- and fish-pictographs in both directions), but are consistently applied in each column and horizontal line.

Sinai 363, whose handwriting manifests small developments (based on what can be ascertained on published photographs): a new “wavy” top to its *hê* and the truncation of the foot of that letter; the addition of a “whisker” to its **dag*-; and rotating of its *tāws*. The stances of letters with fronts and backs oppose (ʔ*āleps* to the left; *hê* and **dag*- to the right; *nûns* in both directions). The upper left hand corner of this text may evince something like group writing (see Appendix 2).

D. The Earliest Alphabetic Inscription from Palestine

The Lachish Dagger likely dates to ca.1725 B.C. (± 25 years), based on the contents of the tomb in which it was found³⁷ and its relatively

³⁷ When asked to review Sass’s dating of 1700 B.C. for this dagger (1988: 53) and the other contents of the tomb in which it was found, Jonathan Tubb, Assistant Keeper, Department of the Ancient Near East, the British Museum, a recognized authority in Syro-Palestinian archeology, especially that of Lachish, responded (email of 7 July, 2005): “I think that Benjamin Sass’ dating is all right, although I would be inclined to go just a bit earlier. Unfortunately, the assemblage accompanying the dagger in Tomb 1502 is not particularly distinctive. The scarab of Neferhotep II would seem to provide a *terminus post quem* of about 1700, but having checked with my Egyptological colleagues, it would seem that it was incorrectly read by Alan Rowe and has no connection whatsoever with Neferhotep II (nor indeed any other pharaoh!). In fact, all three scarabs in

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developed script. Three of its five letters show development: the considerable shortening to the stem of its *lāmed* (no matter where it ends, which cannot be established exactly due to damage), a typologically significant change (cf. two Gezer jar signs from ca. 1500 B.C. reflecting short *lāmeds* and that letter on the Grossman Seal) as well as a slightly innovative horizontal stance to that letter; mirroring of a hieratic form of *nûn*; and a form of *tāw* that has rotated from a hieratic precursor. This strikes me as proportionately more paleographic development than is seen in the Wadi el-Ḥol and Lahun inscriptions and typologically earliest alphabetic texts from the Sinai. While the *ḏāl* on this dagger may be an addition by a second hand, executed more lightly than the other letters since it does not show on an impression of this inscription made by Sass (1988: fig. 141), it is clear on the original. The writing of *ḏāl* and *lāmed* side by side, two letters sharing the same horizontal axis on a vertical column, represents an archaic feature. If the pottery assemblage with which this dagger was found pulls one towards 1750 B.C., its comparatively advanced script would incline one towards the latest possible date for the Lahun and Wadi el-Ḥol texts, ca. 1700 B.C. Assigning this dagger to ca. 1725 B.C. (± 25 years) would probably not be far off the mark.

E. Typologically More Developed Inscriptions from the Sinai

One short inscription (Sinai 364) and seven longer ones (Sinai 345, 354, 357, 358, 376, 365, 527) were probably written between near the end of the Middle Kingdom to early in the New Kingdom, ca. 1700-1500 B.C. to judge from their typologically more developed alphabetic scripts.³⁸ One should emphasize that this represents a relative dating, taking the estimated dates and the state of typological development seen in the scripts of the two Wadi el-Ḥol texts, inscribed heddle jack from Lahun, and Lachish Dagger as benchmarks. In particular, Sinai 345 and 354 could date to somewhat earlier than 1700 B.C., while Sinai

the deposit could fit anywhere into the Second Intermediate Period. This leaves the pottery. The bowl types are not especially developed, and this would incline me towards Kenyon's phase ii. On the other hand, the group includes a cylindrical juglet rather than a piriform juglet, which would be more typical of her phase iii. The dipper juglet and the store jars look early to me. On balance then, I would probably place the group closer to 1750 rather than 1700 B.C."

³⁸ Sinai 376 and 380 probably belong with this group as well but the published photographs (Sass 1988: figs. 91, 104) contain too many ambiguities to be certain.

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527 may have been incised somewhat later than 1500 B.C. The two hundred year “window” of 1700-1500 B.C. seems wide enough to allow for the emergence of certain key letter forms on some of these texts and the increasing number of composite changes on others.³⁹

These typologically more developed inscriptions are:

Sinai 364, three of whose four letters show development: its *bêt*, damaged at the bottom but almost certainly a derivative of O4, in the closure of its middle and new upright stance; the significantly lengthened diagonal to its *nûn*; and the developed bottom to its *š/z*. The neck of its *rêš* is narrow, but still falls within the parameters of its antecedent hieroglyph, D1. Its *nûn* appears to “incut” the lower portion of the *bêt*, thus showing an economical use of space.

Sinai 345,⁴⁰ five of whose eleven letter forms exhibit development: mirroring of a hieratic form of “corner” in its *pê*; the transference of a cursive opening to a hieroglyphic form in the bottom of its *ʾālep*; a developed, “seated” *hê*, whose abbreviated form without a foot was only reintroduced into Egyptian writing late in the Middle Kingdom and Second Intermediate Period; rotated *ʿayins*, one of which clearly shows a proportionately larger opening at its bottom and loss of any extensions indicating the corner of the eye; and rotating *tāws*. The stances of several letters face opposite directions, but likely in the pattern that *ʾālep* and *hê* on one side and the *nûns* on the other point toward the head of the small sphinx.

Sinai 354, whose clearest letters manifest two minor developments and one major one: a new diagonal tilt to its *lāmed*; most likely an innovative beginning or end to its *mēm*; and major changes in its very squat and “wristless” form of *kāp* (cf. that letter on the Gezer Sherd). While the forms of the other letters are archaic (especially its *hê*, which

³⁹ That West Semites continued to work the turquoise mines of the Sinai during the Second Intermediate Period is suggested indirectly by one item mentioned in Kamose’s description of the harbor at Avaris during the reign of the late Hyksos king Apophis: “hundreds of ships of fresh cedar which were filled with gold, lapis, silver, *turquoise*, bronze axes without number, not to mention the moringa-oil, fat, honey, willow, boxwood, sticks, and all their fine woods—all the fine products of Syria” (emphasis added; Kamose, II, 13-15; Redford 1992: 120). Kamose was writing some two hundred years after the last recorded pharaonic expedition to the Sinai in the Middle Kingdom, under Ammenemes IV. Serabiṭ el-Khadim is one of the two chief sources for turquoise in the ancient Near East, the other being eastern Iran (Beit Arieḥ 1985: 92).

⁴⁰ See n. 36 above regarding E. Russmann’s assessment of the chronological implications of the workmanship of this artifact and its hieroglyphic text (cf. Sass 1988: 136; Darnell et al. 2005: 100, n. 130).

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is proportionately larger than the other letters, in an Egyptian fashion), the *kāp* is indicative of a very developed script.

Sinai 357, at least six of whose fourteen letter forms show changes from the received script: a slight flattening of the center piece of the bow pictograph (from J32); mirroring of an Egyptian form of “corner” in its *pê*; loss of the dorsal fin on its **dag*- (except for a vestigial line); one innovative *kāp* with no wrist; small developments in the positions of the openings of the *bêts* on its vertical column; and a slightly innovative horizontal stance to its lowest *lāmed*; (and possibly a developed open head to its highest *nûn* and anomalous form of *tāw*, if those are true readings—see Appendix 1). The stances of letters with fronts and backs oppose, but in a consistent fashion whereby those on the vertical column face leftward, while those on the horizontal line face rightward.

Sinai 358, six of whose seven letter forms exhibit developments: the transference of a cursive opening to the hieroglyphic form of its *ʾālep*; the loss of most of the top fin of its **dag*-; the loss of a wrist from, and evening of the length of, the digits of its three-fingered *kāp*; and likely the rounding of one corner of its *ʿayin*, as well as the innovative miniature form of that letter as the pupil. The forms of its *lāmeds* and cursive *š/z* are primitive, but their stances are secondary (no matter how one conceives of the intended positioning of this text). The seventh letter form, a *mēm*, may show development as well, but that depends on how one understands its beginning and end strokes. The stances of *ʾālep* and **dag*- oppose. There appears to be a vestigial archaism in the cluster arrangement of the three letters on the bottom left.

Sinai 365a (front) and 365b (back) contain many archaic forms, but also witness a very developed *rês* with a diamond-shaped head and proportionately longer, narrow neck. (This represents the most developed form of that letter in the Semitic inscriptions from the Sinai, a change adumbrating writings with single-line necks from Palestine.) One can also see minor developments in its rectangular and square *bêts* in sunk relief, a hieroglyphic mode of sculpting applied to originally hieratic forms, most likely in the innovative ends of its *mēm*, and perhaps the pointed center of its bow-pictograph. Its *hê* continues the “footless” truncation well known in Egyptian writing of the late Middle Kingdom and Second Intermediate Period as well as showing the development of an open head; the tilt of that letter is anomalous. The stances of *ʾālep* and *nûn* oppose that of *hê* on the front, *ʾālep* and

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nûn oppose *rêš* on the back. An archaic cluster arrangement of letters occurs at the bottom of the inscription on the back (see Appendix 2).

Sinai 527 has only three legible letters in its rightmost column, two of which are developed. Its *ayin*, in an archaic horizontal stance, is similar to an apparently open form on the horizontal line of Sinai 357. Its x-shaped *tāw* has a developed form already seen on Sinai 346a, one that will reappear on subsequent Old Canaanite inscriptions (e.g., the Megiddo Ring). The typologically most significant letter is its *nûn*, whose zigzag head is archaic but whose body has been greatly truncated. This is the first appearance of a significantly altered form of that letter, of a length that will recur on the Megiddo Ring and in the ‘Izbet Šarṭah Abecedary. The best parallels to the separation mark of medium length on Sinai 527 are found on the Grossman Seal. Remnants of letters occurring on the left may include a *lāmed*, but that is far from certain (see Appendix 1).

*E. Typologically More Developed Inscriptions
from Syria-Palestine*

The very fragmentary inscription from Tell en-Nagila exhibits received forms and stances (*wāw*, an almost complete *nûn*) and a modestly developed one (its complete, “curved palm” type of *yôd* with a deeper bend at the knuckle, slightly longer wrist, and new vertical stance). What remains of its incomplete *hê* falls within the parameters of the most typologically developed forms of one possible Egyptian antecedent, but for the non-alignment of its lines for the head and torso plus a slight extension of the left arm beyond its shoulder. Although the bent leg of that *h* is incomplete, the remnants still show continuity of that feature between earlier “seated” forms from Wadi el-Hol and the Sinai as well as the later Lachish Boustrophedon text. These letters may be too few to give much of a hint as to its paleographic state of development and the sherd itself may too small to allow a ceramic typological analysis (Amiran in Sass [1988: 54]). However, closer to the end of the principal period of occupation at this site, MBIIB-C, 1750-1550 B.C. (Amiran and Eitan 1965: 115), ca. 1650-1550 B.C. may provide the best estimate for when this fragmentary text was written, a somewhat earlier date than that proposed by, among others, Cross (1984: 74; 2003: 295), Sass (1988: 54), or Puech (1986: 184), and considerably earlier than its reassignment to the fourteenth century B.C. recently advocated by

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Lemaire (2000: 114). Weinstein (1981: 2) noted that perhaps only “a ‘sparsely built settlement’ [Amiran and Eitan 1965: 115] was rebuilt in LBI on the ruins of the MBIB-C city” at Tell en-Nagila.

Each of the seven clear letters on the Shechem Plaque shows development. The three on its back manifest minor changes: transference of cursive features to an essentially hieroglyphic form of its *dālet*; a flattening of its incomplete bow-pictograph; and probably a slight loss of curvature on its incomplete *yôd*. Three of the forms on the front of this plaque are very developed: two writings of the new A-form of *ʾālep*, one of which retains a slight curvature to the line of its head; the loss of any depiction for a wrist in its otherwise archaic three-fingered *kāp*; and two writings of the innovative w-shape of *θš* (already seen in Wadi el-Ḥol Text 1). The form of its *rêšš* is received but for the enlarged eye in the highest writing and likely the rotated stance of both occurrences. Dating this plaque is difficult and depends on coordinating an analysis of its artwork, paleography, and the habitation of Shechem. The remnant of the iconographic figure in a robe with rolled edges would appear to fit more comfortably with parallel depictions from the late Middle Bronze Age than early in the Late Bronze Age (Schroer 1985: 68-69; Sass 1988: 57, figs. 150-152). The inscriptions on the front and back may have been added later as suggested by Sass (1988: 57). From a paleographic perspective, since the three letters on the back are significantly less developed than the four letter forms on the front, one could conceive of the text on that side having been written earlier than that on the front. But caution is mandated since one has only a very small sampling of handwriting here, with only one comparable letter certainly occurring on both sides (see Appendix 1 for another possible one). One also needs to factor in the absence of habitation at Shechem from approximately 1550-1450 B.C. (Toombs 1992: 1178, 1182; Seger 1997: 22). Perhaps listing two options for the dating of this plaque and its inscriptions, ca. 1650-1550 or 1450-1400 B.C., would represent the most prudent conclusion after taking into account these three factors.

Two of the three letters on the Gezer Sherd show development, one minor and the other major: the opening of its *bêt* has developed only slightly from semi-cursive hieroglyphic models; and its much more developed *kāp* has no depiction of a wrist and a very round, naturalistic form for its palm (cf. the *kāp* on Sinai 354). Its *wāw* is a received form (with its best parallel coming, perhaps by happenstance, from Eighteenth Dynasty Nubia). The striations on the small ceramic frag-

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ment on which these three letters were incised before firing assure that this was part of a text conceived as a vertical column. Ceramic specialists have debated whether the clay of this surface find should be traced to the Middle Bronze Age (so Albright 1966: 11) or this fragment is too small to be chronologically diagnostic (so Amiran in Sass [1988: 55]). A wide estimate of ca. 1500 B.C. (± 100 years) would reflect this debate and the minimal paleographic evidence on this fragment, probably of a cult stand.

Six of the seven letters on the Grossman Seal manifest development. Its *lāmed* is very short, almost a reverse C-form (cf. the short versions of that letter used secondarily as jar signs at Gezer, ca. 1500 B.C. [± 25 years]). Its *bêt* has clearly changed through rotation, as well as either developing a closure from a hieroglyphic antecedent or mirroring of a hieratic one. The angular, sideways w-form of its large, incomplete *θš* continues a very developed form already seen on Wadi el-Ḥol Text 1. The disconnected halves of its *θš* has also already appeared in one bow-pictograph on the Sinai 352 and will reappear in that letter on the Megiddo Ring. The proportionately smaller size of the *‘ayin* of this seal is the only development in that letter. Its *rêš* has developed a new stance, either through up-down mirroring of a “block head” hieroglyphic form or through letter rotation. While one rarely sees the letter *q*, one can say that the body of this *qôp* is rendered in a single lined fashion, a development away from outlined renderings in the Proto-Canaanite Sinaitic inscriptions, one that anticipates later forms. Its *yôd* clearly stems from a “curved palm” antecedent (contrast Cross 2003: 312), but shows the archaism of an outlined wrist and slight innovations in its shortened, straighter line for the palm and a diagonal stance (cf. that type of *yôd* used as a jar sign as Gezer). A date of ca. 1400 B.C. (± 100 years) would comport well with the iconography of this seal (Buchanan 1966: 213), which was bought on the open market in London in the early 1950s (Goetze 1953: 8). At that time its forms of *l*, *b*, *r*, *q*, and *y* had no published parallels. Albright (1966: 11) and Cross (1954: n. 24; 2003: 312, n. 24) may have been too confident of its provenance based on the *nisbeh* ending on *‘rqr*, “the Arkite,” in the second column (cf. Gen 10:1; Hess 1992: 393-94). While clearly the original owner came from that city, his choice of a gentilic, rather than the expected patronymic, might suggest that he lived and had his seal incised somewhere other than at Arka.

The two identifiable letters on the fragment of a carinated bowl

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from Tell el-Hesi, which was not occupied in the Middle Bronze Age (Fargo 1997: 22), are developed. The square headed *lāmed* with a long stem shows minor development in its horizontal stance (a position already attested on, for example, Sinai 346a, 352, 357). Its *ʿayin* represents the first occurrence of an innovative circular form that is proportionately smaller than the other letters (likely next seen in damaged form on the Lachish Boustrophedon Text). The identity of the highest letter of this fragment remains uncertain (see Appendix 1). The placement of this short text perpendicular to a fragment of a carinated rim assures that it was written as a vertical column of letters (cf. Sass 1988: 96, figs. 246, 247), an arrangement that excludes a proposed alternate dating in the first millennium B.C. (see Sass 1988: 96-97). An estimate of ca. 1350 B.C. (± 50 years) would provide a wide chronological margin for this carinated bowl fragment with its typologically developed *ʿayin*.⁴¹

G. The Latest Early Alphabetic Inscription from the Sinai

One letter on the short, damaged text of Sinai 375c provides the best non-Egyptian epigraphic evidence that West Semites were present at the turquoise mines of Serabiṭ el-Khadim late in New Kingdom (see Sass [1988: 137] for mention of a West Semite in an Egyptian Sinaitic text assigned to the New Kingdom). With a small restoration at the beginning, it reads [l]yʿn ḏ/z, “[For] Yʿn (is) this”; for parallels to this personal name in much earlier Amorite and subsequent Epigraphic South Arabian, see Huffmon (1965: 208). Its *yôd* and *ḏāl* are archaic forms, as is its *nûn*, except for the rotated stance of the latter. The *ḏāl*, while in a damaged section, is clear and provides the latest occurrence of that form (which may have had the value of *z by this late in the second millennium B.C.). Its *ʾālep*, however, manifests a very developed sideways A-form with significant extension of the middle bar beyond its narrowly converging upper and lower lines. The closest early parallel to an *ʾālep* with that degree of extension occurs on the Megiddo Ring (see Hamilton 2002: 38). Cross (oral communication) suggested assigning this plaque to the twelfth century B.C. based largely on the diagnostically significant form of that letter. The last pharaonic expe-

⁴¹ Cf. the assignment of this fragment to the first half of that period by Puech (1986: 185) based on its discovery near a jar handle stamped with hieroglyphs that Bliss (1894: 88, 133) attributed to Amenophis II, Puech (1986: 185) to Amenophis IV (no drawing; no photograph).

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dition to the western Sinai was sent by Ramesses VI (Beit Arieh 1985: 92). The largely undeveloped forms of its three other complete letters would recommend an earlier date. Perhaps ca. 1250 B.C. (\pm 100 years) for this plaque might indicate the likeliest range.

IV. A Preliminary Correlation of the Selection of Certain Signs with Aspects of the Material Culture of the Middle Bronze Age

Once the origin of the West Semitic consonantal alphabet has been dated securely to ca. 1940-1850 B.C., largely but not exclusively by paleographic means, one can begin to investigate how the selection of certain signs might correlate with aspects of the culture of those who made those choices. Clearly one has to postulate more than one person making these thirty-three selections, since at least six letters (*b*, *d*, *h*, *y*, *n*, *θ*) have two prototypes in the Egyptian sign list. While there are elements of speculation in relating some of these selections and some of especially the material remains of West Semites living in Palestine and Egypt early in the Middle Bronze Age/Twelfth Dynasty, it is incumbent to start the process of looking for possible correlations between those two groups of “knowns,” one paleographic and the other largely archeological, so as to begin to contextualize the birth and early childhood of the alphabet culturally. The choice of certain Egyptian signs for use as some of the West Semitic letters correlate with four aspects of the culture of the Middle Bronze Age known from archeological and other epigraphic sources: the importance of cattle; some of the architectural signs as possible reflections of a people undergoing resettlement into towns and cities; the prominence of weapons; and symbols of the Nile Delta as the primary region for the interchange of Egyptian and West Semitic cultures.

A. The Importance of Cattle

The selection of F1, “head of ox,” for use as the letter **alp-*, “ox” or “bull” likely reflects the importance of cattle in the culture of West Semites during the Middle Bronze Age.⁴² That importance can be illus-

⁴² While an often-repeated understanding of **lamd-* as “ox-goad” (e.g., Albright 1966: fig. 1; Sass 1988: 123, 125) might seem to serve as another reflection of the importance of cattle, a better reconstruction of that acrophone as a **“training instrument”*

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trated in diverse ways from both Palestinian and Egyptian sources: the relatively high percentage of bovine bones often found in archeological digs of that period in Palestine (see Firmage [1992: 1121] and especially Hesse and Wapnish [2002: 481-82]); the largely cattle culture among Canaanites portrayed in the Tale of Sinuhe (see, in particular, Redford 1992: 86); the depiction of a charging bull on a West Semitic seal of the storm god from Tell el-Dab^{ca} dating to the early Thirteenth Dynasty (Bietak 1996: 28, fig. 25, pl. 12D); a red-burnished vessel in the shape of a bull from one of the public buildings assigned to MBIIB-C at Tell en-Nagila (Amiran and Eitan 1965: 121, 118, fig. 9); bulls' heads applied to ceramics found in a Middle Bronze Age II-III cultic context at Tel Haror/Gerar (Oren 1992: 989); and a small bronze figurine of a calf or young bull, with remnants of silver leaf, discovered in a small temple dated to MBII outside the city gates of Ashkelon (most recently, see Caubet [2002: 215, fig. 6.2] and Borowski [2002: 408]). One could also point to an artistic and incomplete Egyptian epigraphic find at Meir: "From a tomb of the reign of Amenemhet III or Senwosret III (nineteenth century B.C.) comes a painting of cattle with the identifying caption 'cattle of the Asiatics brought as [. . .]'" (Redford 1992: 77). When the earliest alphabetic writers borrowed the Egyptian sign F1, "head of ox," they—and less likely a later generation—named it after E1, "bull," following the usage of F1 in the parent system of writing (see *ʿālep*, Chapter 2). The relative importance of cattle to West Semites in the Middle Bronze Age may also be signaled by the placement of **ʿalp*-, "bull" or "ox," first in a standard order of the letters, although that order is attested only later as reflected in fourteen of the fifteen abecedaries in the adapted alphabetic cuneiform script of Ugarit (Bordreuil and Pardee 1995: 855, n. 1) and the Old Canaanite abecedarium from ʿIzbet Ṣarṭah.

*B. The Correlation of Some Architectural Signs with
a Period of Resettlement*

Architectural signs form one of the largest groups of letters in the early alphabet (*b*, "house," *d*, "door," *ḥ*, "fence," *p*, "edge [of a

and its graphic images derived from V1, "coil of rope," would not necessarily limit that instrument to the training of cattle (see especially *qôp*, Chapter 2, for depictions of dogs and monkeys being lead by cords and Firmage [1992: 1136] on the later training of horses with nose rings and cords).

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wall],” perhaps *s*, “pillar,” and *t* representing the sign of a settled region). Three of those architectural signs chosen for use as letters likely correlate with the Middle Bronze Age as a period showing a marked increase in settled towns and walled cities in Palestine (on the latter, see Dever 1987: 152-59; Herzog 1992: 1035; Lemaire 2000: III; cf. Redford 1992: 87). The choice of O1, “house,” as one of the forms of **bêt-* likely signals the importance of fixed housing to those who made that selection (no matter whether it or O4, “enclosure,” was the primary source for that letter). The placement of **bêt-* second in the list of letters in a pre-fourteenth century B.C. ordering of the new “ox-house” system of writing may also signal that importance. Similarly, the selections of O31, “door,” as one form of *d*, **dalt-/dilt-*, “door,” and variants of O38, “corner of a wall,” as **pi-*, “edge (of a wall),” correlate with the Middle Bronze Age as a period of settling down in towns and walled cities in Palestine. The form of *dālet* depicts the door to a building, whether conceived of as an entrance to a house or another sort of permanent structure. It is unknown whether the earliest alphabetic writers understood **pi-* as the outlined edges of houses (in effect corners of **bêt-/O1*) or of city walls (cf. 2 Kgs 10:21; 21:16). If the latter, one might point to the large city walls for which the Middle Bronze Age in Palestine is well known (most conveniently, see Herzog [1992: 1035] and Dever [1987: 153-59; 1992: 999]), walls that in themselves reflect a highly militarized era (see the following section on the selection of signs depicting weapons).

A small adaptation to hieroglyphic forms of O1, the addition of lines to indicate entranceways, likely hints at the urban context of a subsequent generation of West Semites in Egypt. At least two early alphabetic writers in the Sinai added those marks, likely in imitation of pre-existent models of the houses of poor Egyptians, soul houses, or the actual homes themselves (see discussion under *bêt*, Chapter 2).⁴³ This correlates with Bietak’s findings (1996: 10, 14) that most of the West Semites living at Tel Dab^{ca} in the Nile Delta later in the Twelfth Dynasty likely came from urban backgrounds based on the placement of their cemeteries within that settlement.

The clearest evidence among the letters regarding the importance of

⁴³ Less certainly, birds’ eye views of parts of such poor Egyptians’ houses, real or modeled, are one possible source of West Semitic understandings of O4 as **bêt-*, “house.”

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signs for settled life to those who made the original selections remains only probable. The prototype for *t*, whose original acrophone is opaque, is probably O49, the Egyptian logogram for village, town, or city (Gardiner 1957: 498; Hannig 1995: 1072). Loprieno (1997: 23) recently described that common sign as “the stylized map of a settlement.”

C. The Prominence of Weapons

West Semites chose five Egyptian signs for weapons to represent four Proto-Canaanite letters: **giml-/gaml-*, “throw-stick”; **zayn-/zên-*, “weapon (axe)”; **θann-*, “bow”; and **waw*, “[mace].” These choices almost certainly reflect the prominent role of soldiers in Syro-Palestine during the Middle Bronze Age and among West Semites in Egypt during the Middle Kingdom. By way of illustration: fifty percent of the already plundered Twelfth Dynasty tombs at Tell el-Dab^a contained weapons of Syro-Palestinian Middle Bronze Age type (Bietak 1996: 10-14); two of the earliest Proto-Canaanite inscriptions from Egypt were found in what has been described as “a militarized setting” (Darnell et al. 2005: 75); and the earliest alphabetic inscription from Palestine, albeit from later in the Middle Bronze, was written on a weapon, the Lachish Dagger. In reviewing changing social dynamics in the Middle Bronze Age in Palestine, Herzog (1992: 1035) asserted: “clearly the power in this period was no longer in the hands of the theocratic elite but had been taken over by the ascendant political-military class.”

The selection of T14 and T15, “throw-stick” (variants stances of the same sign) as the prototype for *g* likely reflects a paradigmatic weapon for such West Semitic leaders and warriors.⁴⁴ The value attached to this weapon can be illustrated by a fragmentary colossal statue of a West Semitic dignitary holding a throw-stick to his shoulder, which was found in a tomb dated to the late Twelfth or Thirteenth Dynasty at Tell el-Dab^a and a throw-stick on the shoulder of a similar seated figure from the palace at Ebla that comes from approximately the same time period (Bietak 1996: 20, fig. 17; pl. 4C). One need presuppose only limited literacy in Egyptian to realize the paradigmatic value of the choice of T15/T14 to West Semites: in Egyptian the throw-stick

⁴⁴ See Cross (2003: 221, n. 37) regarding iconographic representations of this weapon.

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sign is employed both as a “club used as a foreign weapon of war” and as part of the word ʿ*3m.w*, “Asiatic” (Gardiner 1957: 513).⁴⁵ Although one does not see a clear attestation of the letter *gîmel* until seven to eight centuries after the invention of the alphabet, to my mind, this is a certain reconstruction.

The selection of T7A, “axe of more recent type,” the variant of an Egyptian sign that only entered the sign list in the Twelfth Dynasty (Gardiner 1957: 439, 511, n. 1; Fischer 1976: 34, n. 31), relates to an axe-type of the MBII-LBI Periods (Cross 1980: 10, fig. 11; 2003: 222-23, fig. 32.7). The importance of this weapon may be illustrated by the ten axes, of unspecified type, taken by Egyptians (along with 1,554 “Asiatics”) as booty in a raid on Syria-Palestine early in the Twelfth Dynasty (see Redford 1992: 79).

The prominence of weapons can also be seen in the choice of two types of bows, J32/J32A, “archaic bow,” and T10, “composite bow,” for use as the letter **θann-*. The composite bow is of particular interest culturally as it was a West Semitic invention (Gardiner 1957: 511, n. 1; Shaw 2001: 60). It is likely seen in the hand of a Semite in a famous early Middle Kingdom tomb at Beni Ḥasan (Newberry 1893: pl. 31; Bietak 1996: 15, fig. 12C). The secondary selection of “composite bow” (charted paleographically above) may have occurred because T10 was preferred in hieroglyphic writings of the Egyptian word *pdt*, “bow,” “foreign people,” and “troop” from the Twelfth Dynasty onward (Gardiner 1957: 511), and because it was used as the symbol of Egypt’s traditional enemies, the “Nine Bows” (Wilkinson 1992: 185), among whom the so-called “Asiatics” were numbered. Literarily, Sinuhe (B 121-22) epitomizes one who lived in mountainous Palestine as a “bowman” (Redford 1992: 86-87). West Semites chose another paradigmatic weapon for their people when they secondarily selected T10, “composite bow” to write **θann-*.

The selection of T3, “mace with pear-shaped head” as the prototype for **waw-* is intriguing because of the relative infrequency of finds of actual maces in the Middle Kingdom compared to earlier periods (Hayes 1953: 282). They survived as ceremonial weapons in reliefs and among model weapons buried with the dead in that period (Hayes

⁴⁵ For an example of the former, see the pectoral of Ammenemes III from Dahshur (Wilkinson 1992: 178, fig. 2), and of the latter, used as the name of a deputy treasurer on a scarab from Tell el-Dabʿa (Bietak 1996: fig. 35.1).

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1953: 282-83),⁴⁶ and, above all, in representations of pharaohs smiting their enemies. For example, one of the earliest texts from Serabit contains the depiction of a pharaoh of the Old Kingdom with this kind of mace in a position to strike (Valbelle and Bonnet 1996: frontispiece).⁴⁷ A pectoral of Ammenemes III from Dahshur also shows that pharaoh with his mace raised high in the act of smiting a cowered “Asiatic” countering with a throw-stick (Wilkinson 1992: 178, fig. 2). It may be that for **waw*- West Semites usurped what they saw as a typically pharaonic weapon. That is not entirely speculative since most of the male population in the early settlement of Tell el-Dab’a likely worked as soldiers for the Egyptian crown (Bietak 1996: 14).

Generals and scribes of specifically “Asiatic” troops, sometimes accompanied by their families, are known from Wadi el-Ḥol and elsewhere in Egypt during the Middle Kingdom (Darnell et al. 2005: 103, n. a). The selection of five Egyptian signs depicting weapons for use as letters in the Proto-Canaanite alphabet fits that specifically militarized cultural context. These people valued weapons.

D. Symbols of the Nile Delta

The role of the Nile Delta as the primary locus for the interchange between Egyptian and West Semitic cultures during especially the Middle Bronze Age is borne out by the selection of three signs: K1, for use as **dag*-; and M15 and M16 for use as *š/z*.

K1, “a fish (*Tilapia nilotica*; Arabic *bulṭi*)” (Gardiner 1957: 476) frequently serves as a symbol of the produce of specifically Lower Egypt, in distinction to the perch used as a symbol of the produce of the south (Wilkinson 1992: 110-11, figs. 3, 4 [examples from the Sixth and Eighteenth Dynasties]; Houlihan 2002: 114, 115, fig. 3.5 [Old Kingdom]). A fine alabaster container with the distinct shape of a *bulṭi* fish was imported from Egypt to Tell el-ʿAjjul in Palestine in the mid-second millennium B.C. (Dever 1987: 167). Earlier, when West Semites chose K1, the *bulṭi* fish, as one form for the Proto-Canaanite letter *d*, they selected the symbol of produce specifically from the Nile Delta.

⁴⁶ Compare the mace of a different type set in the hand of the storm god found on a West Semitic seal from Tell el-Dab’a dating to the early Thirteenth Dynasty (Bietak 1996: 28, fig. 25, pl. 12D).

⁴⁷ For the famous early dynastic representation of Narmer and Den wielding maces, most recently see Freu (2000: 100, figs. 2, 3, pl. 23).

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Wilkinson (1992: 123) documented how two signs also serve as the emblematic plant of the Delta region: “A growing clump (M15, 16) of three papyrus stems served as the determinative in the word *idhu*: ‘swamp,’ and also in the word *Mehu* or *Ta-Mehu*: ‘Land of Papyrus,’ which was used to denote the kingdom of Lower Egypt” in distinction to M26, which was the emblematic plant of southern Egypt (see too Loprieno 1997: 25). This association was so strong that one who lived in the Delta was epitomized as a papyrus stalk in a negative appraisal of potential West Semitic-Egyptian relations in Sinuhe (B 121-22): “There is no bowman that fraternizes with a Delta dweller. Who can plant a papyrus stalk on a mountain?” (Redford 1992: 87). Papyrus plants would have been relatively unknown to West Semites in or from Syria-Palestine since they grow only in the Lake Huleh region (Jacob and Jacob 1992: 814). When West Semites chose M15 and M16 as the source(s) for *š/z*, they selected the heraldic plants of the Nile Delta.

Since these three graphic sources for two or three letters function as the emblematic plants for, or as symbols of, the produce of Lower Egypt, they strongly suggest that the West Semites who chose the prototypes of the alphabet knew or were closely associated with that region. That should come as no surprise given the increasing presence of West Semites in the Delta documented in the Middle Kingdom (e.g., at Tell el-Dabʿa starting late in the Twelfth Dynasty [Bietak 1996: 10-21]). The borrowing of these highly symbolic signs may even give a clue—nothing more—regarding the most likely region to place the birth of consonantal alphabetic writing, tentatively narrowing the loci proposed by Sethe long ago. Černý (1971: 215) wrote: “Sethe was inclined to [attribute the origin of the alphabet] to a Semite living either in Egypt or in a country near to Egypt, the Sinai or Palestine.” A similarly wide range of locations occurs in more recent literature (e.g., Dever 1987: 171; Sass 1988: 144, n. 99, 158; Parkinson 1999: 182; Lemaire 2000: 117-18; Smith 2001: 195; Hamilton 2002: 40; Darnell et al. 2005: 18; Dobbs-Allsopp 2006: 495).

The range of forms adopted by West Semites from the variety of pre-existent Egyptian ways of writing the borrowed signs is most easily explained by placing the earliest generations of writers of the West Semitic alphabet in an Egyptian cultural context. That range is now well attested for many letters (e.g., *ʿ*, *b*, *ḥ*, *k*, *l*, *m*, *ḏ*, *n*, *ʿ*, *š/z*, *r*, *θ*).

One would also have to postulate such a place to account for at least six letters (*b*, *d*, *h*, *y*, *n*, *θ*) that have two sources in the Egyptian sign

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list.⁴⁸ Since both forms of each of these letters go back to Egyptian graphic prototypes (even if the second source of *h* is difficult to ascertain with certainty), it must have been a location whereby the first generations of writers of the Proto-Canaanite alphabet—not just its inventor(s)—were in contact with the parent script.⁴⁹ (In other words, there is not a primary form for each of those letters that comes from Egyptian scripts and a secondary one that represents a *sui generis* creation.) The most likely location for that on-going cultural contact is Egypt itself and the most likely place where West Semites and Egyptians came into regular, if not daily, contact is the Nile Delta region.⁵⁰

V. The Adoption and Adaptation of Signs Depicting the Human Form

Rivaled only by the number of signs relating to architecture, the inventor(s) and early transmitters of the alphabet chose seven signs

⁴⁸ The idea that two different signs could be used to represent a single phoneme may perhaps have originated in the list of Egyptian monoconsonantal signs, where three of the twenty-four phonemes in the so-called Egyptian alphabet, *y*, *w*, and *n*, possessed alternate signs during the Middle Kingdom (Gardiner 1957: 27, Obs., n. 4; see also Freu 2000: 101, fig. 4). Note that two of the six alphabetic alternates, one for *y* (descendants of D36 or D47) and one for *n* (descendants of I9 or I10), had to have come from that list of signs since both prototypes occur in it. But one traces the etiology of ideas with considerably less certainty than the origins of concrete objects such as letter forms.

⁴⁹ The addition of entranceways to two writings of *bêt* derived from hieroglyphic O1 in imitation of real or modeled Egyptian homes of the poor also suggests such a locus for the early transmission of the alphabet.

⁵⁰ Sanders (2004: 46) recently wrote: “Ugarit seems to have been the first society to have produced a written *vernacular* literature, and to have created a writing system especially for it,” contrasting that particularizing tendency, on the one hand, with the universalizing scribal systems of Mesopotamia and Egypt, and on the other, with the “non-standardized amateur writing” (2004: 46) of the first five hundred years of Proto-Canaanite writing. *If* the Proto-Canaanite alphabet was born and first raised in Egypt, there is a case to be made that it was the earliest movement towards a particularizing system, one designed to render into writing the speech of presumably various dialects of West Semitic immigrants, mercenaries, sailors, and traders into their vernacular (see Bietak [1996: 10, 14, 19-20, 40-41] for evidence of each of those categories). Based on the evidence accumulated in Chapter 2 above, I would submit that the forms found in Proto-Canaanite scripts were highly standardized following the range of usage in Egyptian scripts. The standards of the derived Proto-Canaanite script system were much more complex than those of later cuneiform alphabetic traditions—itsself possessing varieties, see Bordreuil (2000) regarding the three cuneiform alphabets of Ugarit—and those of linear alphabetic scripts after the adoption of an exclusively horizontal, right-to-left arrangement of letters near the end of the second millennium B.C.

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depicting all of the human body (*h* [two prototypes]) or parts of it (*y* [two signs], *k*, *ʕ*, *r*). Since these represent almost one-quarter of all the prototypes—7/33—and are some of the most easily identifiable as pictographs, they give the early alphabet a strongly human appearance. While five of these signs were selected by the initiator(s) of the alphabet, early in the transmission of the new semi-cursive script alternates for *h* and *y* were also chosen from among signs depicting human beings in whole or part (cf. the selection of a completely different alternate for *d*). The collective influence of these seven was so strong that very early in Proto-Canaanite scripts *some* forms of another letter, w-shapes of **θann-*, *‘‘bow,’’ also appear to have been re-interpreted as a member of this group of letters depicting body parts, as **šinn-*, ‘‘tooth,’’ or tooth-like projections.⁵¹ Only two or three individual letters descending from Egyptian body-signs exhibit modifications that can be identified as distinctly West Semitic features from other sources (see *rêš*, Chapter 2).

The original collection of letters depicting parts or all of the human body then underwent some significant changes from their Egyptian forebears, mostly through a consistent use of the simplest form of each antecedent (see especially *hê* and *rêš*). With these seven letter forms in particular, the movement was from complex to simpler (see, in particular, *ʕayin*). Only on occasion does one see small Semitic adaptations, i.e., a change in the formation of the leg and foot on one type of *hê*, a lengthening of the forearm on one type of *yôd*, a dropping of any depiction for the wrist on one form of *kâp*, or a modification in the length and width of the neck in some writings of *rêš*. A more subtle change was from distinctively Egyptian to more generic conceptions of how to represent human beings and their body parts as graphemes (see *hê*, *kâp*, and *rêš*). The cumulative effect of these secondary changes was to create a short inventory of letters that not only had a marked focus on human beings, but contained simple, generic depictions of human beings in whole or part, with very few distinctive markings for ethnicity or even gender (see especially *hê* and *rêš*).

⁵¹ And almost four millennia after the beginning of alphabetic writing, the influence of this group would reassert itself in attempts by some scholars to interpret *pê* simply as ‘‘mouth’’ and *šîn* originally as ‘‘tooth.’’

VI. Summary: The Relative Simplicity of the Proto-Canaanite Alphabet

The inventor(s) of the West Semitic consonantal alphabet valued cattle highly, gave prominent places to architectural signs, highlighted signs depicting weapons, and created a writing system with graphemes showing a strong human focus. They likely either lived in, or came into regular contact with the Nile Delta region of Egypt. They chose to adopt Egyptian signs for their new writing system, showing a profound attraction towards Egyptian forms, also known from the contemporary glyptic art of Syria-Palestine (Teissier 1995), scarabs found and often produced in Palestine beginning in the Thirteenth Dynasty (Ben-Tor 1997), as well as from other aspects of the material culture of West Semites living in Egypt during the Middle Bronze Age (e.g., Bietak 1996). It is no accident that some of the Proto-Canaanite inscriptions were written on objects that also imitate Egyptian forms, a small sphinx (Sinai 345) and a block statue (Sinai 346), while beside other early West Semitic alphabetic texts are found Egyptian symbols, an *ankh*-sign (Wadi el-Hol Text 2 [Darnell et al. 2005: 83]) and an image of Ptah (Sinai 351 [Sass 1988: 137-38]). Part of what was gained from this cultural interchange was the ability for West Semitic speakers to write their own language in a comparatively simple graphic system with memory aids for the consonantal values of the graphemes supplied by the acrophonic letter names. Part of what was lost early in the transmission of this derived semi-pictographic, semi-cursive type of handwriting was the beauty of many Egyptian hieroglyphic and hieratic scripts.⁵²

Despite the many complexities in the graphic origins and transmission of the early West Semitic alphabet charted above, perhaps the relative simplicity of the new system of writing would be better communicated by grouping the letters under more abstract categories, with simple descriptions of the graphemes (not necessarily translations of their letter names). Where Egyptologists (Gardiner 1957: 442-543; Hannig 1995: 1025-1103; *Hieroglyphica* 2000: sign list) have found it con-

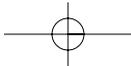
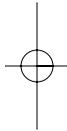
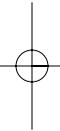
⁵² From my perspective, it would take over a millennium following the introduction of consonantal alphabetic writing for a beautiful script in that tradition to emerge, the elegant hand of the Deir 'Alla Plaster Texts (see, among others, Hoftijzer and van der Kooij 1976; Hackett 1984).

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venient to use twenty-six thematic categories to organize about 1,000 hieroglyphs used in the Old Kingdom to approximately 750 signs employed early in the second millennium B.C. (Loprieno 1997: 23),⁵³ this student of the early alphabet would need only seven to categorize twenty-six or twenty-seven known letter forms (with questionable identifications listed last in each column):

<i>Architecture</i>	<i>Human Body</i>	<i>Weapons</i>	<i>Animals</i>	<i>Fibre Implements</i>	<i>Plants</i>	<i>Simple Linear Figures</i>
<i>b</i> , house	<i>b</i> , stick-figure	<i>g</i> , throw-stick	<i>ʔ</i> , ox-head	<i>h</i> , wick	<i>s/z</i> , papyrus	<i>m</i> , zigzags
<i>d</i> , door	<i>y</i> , hand/arm	<i>w</i> , mace	<i>d</i> , fish	<i>l</i> , rope	<i>š</i> , thorn?	<i>d</i> , parallels
<i>h</i> , fence	<i>k</i> , palm	<i>z</i> , axe	<i>n</i> , snake			<i>t</i> , cross
<i>p</i> , corner	<i>ʿ</i> , eye	<i>θ</i> , bow	<i>q</i> , monkey?			
<i>s</i> , column?	<i>r</i> , head					
<i>t</i> , intersection?						

⁵³ *Hieroglyphica* (2000: sign list) numbered 4,717 signs and variants.



APPENDIX I

The Proto-Canaanite Inscriptions from Egypt, the Sinai, and Palestine

The best-preserved Proto-Canaanite inscriptions are collected together geographically, starting with those from Egypt (Wadi el-Hol and Lahun), then those from the western Sinai (in numerical order), and finally those from Palestine (in typological order). One clearly later West Semitic text from Serabit, Sinai 375, is included for ease of reference. An asterisk precedes the title if I have examined the original inscription. After a drawing of each text, the following format will be employed:

1. Select bibliography
2. Place of discovery
3. Artifact and size of the inscription
4. Direction of writing
5. A transliteration of the text. The following *sigla* will be used:
 - ⋆ a supralinear dot indicates a damaged but certain reading;
 - ⊙ a supralinear circle indicates a very damaged or uncertain reading;
 - ⋆/⋆/⋆ (a slash(es) indicate(s) a letter whose identification has been narrowed to one of two or three possibilities;
 - | a vertical line indicates a separation mark;
 - [] square brackets indicate a lacuna in the text;
 - < > angular brackets indicate a correction or a secondary hand.

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6. Date (see Chapter 3, “Chronological Concerns,” for a detailed discussion of the dating of most of these inscriptions)
7. Discussion of writings whose consonantal or numerical values remain uncertain (see Chapter 2 for most certain readings)

Fig. A.1
Wadi el-Hol Text 1



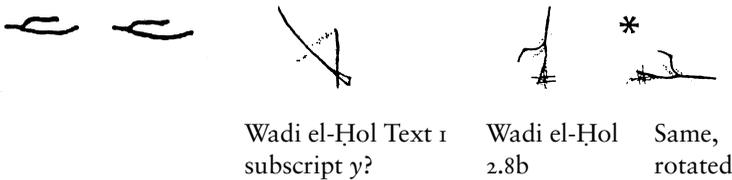
(traced from a WSR transparency = Darnell et al. 2005: pl. 4)

1. Darnell and Darnell 1995: 46-47; Wilford 1999; Wimmer and Wimmer-Dweikat 2001; Hamilton 2002: 39-40; Sacks 2003: 39, 115 (photos), 34-40 (a journalistic account of its discovery and initial interpretation); Darnell 2003: frontispiece, 164, Abb. 2 (color photographs), 165-71; Tropper 2003: 173-75; Zauzich 2003: 183-85; Zuckerman 2003: 106-8, fig. 1; Sanders 2004: 31-33, 42-45; Darnell et al. 2005; Dobbs-Allsopp 2006: 496-97
2. Discovered at Wadi el-Hol, north of Thebes, on the west bank of the Nile, on a wall of Egyptian inscriptions most of which date to the late Middle Kingdom and Second Intermediate Period (Darnell et al. 2005: 74; cf. Darnell 2003: 165)

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3. Approximately 20 cm. long (Darnell et al. 2005: 76), about 8 inches
4. Horizontal, right to left
5. *r b <y?> l n m n h n p θš h ʿš m ḥ r*
6. ca. 1850-1700 B.C. (Darnell et al. 2005: 90)
7. Lines below the *bêt* (Darnell 2003: frontispiece, 167, Abb. 2) appear to be a “curved palm” type of *yôd* (cf. hieroglyphic D47 [HT 2: pl. 2] and the certain *y*, Wadi el-Ḥol 2.8b); the outlined part on the lower right (Darnell 2003: 164, Abb. 2) is particularly suggestive of a letter (see *yôd*, Chapter 2). This could be a subscript correction of *rb*, “great one, chief” (Wimmer and Wimmer-Dweikat 2001: 107, nn. 1, 3; Darnell 2003: 165; Darnell et al. 2005: 85) to *rby*, “my great one, my chief.” But one would need to examine the original to be sure these were intentional and not just random marks (as taken in the *editio princeps*).

Fig. A.2
 Hieroglyph D47, “hand with curved palm”
 HT 2: pl. 2



Letter 1.13 has been identified both as a questioned *š* (Darnell et al. 2005: 81-82) and *ʿ* (Wimmer and Wimmer-Dweikat 2001: 108, 111, fig. 3). Reading *š* is possible, but very difficult. One would need to propose an *ad hoc* graphic derivation from an atypical form of the Egyptian sun sign, N5, “sun,” which would be almost elliptical, with an internal vertical, in contrast to its typical round shape, most often with an internal circle or dot (cf. the best graphic parallels to the form of this letter cited by Darnell et al. [2005: 82, fig. 15] from much later, Nineteenth Dynasty northern Nubia [Žába 1974: sign list]). Furthermore, if one accepts this form as *š*, then one would need to reconstruct a new acrophone, **šamš-*, “sun” (a value which may have already been taken in this inscription by 1.10, **θ(š)*). That identification seems viable primarily because it would not require positing that this letter has

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rotated or that different forms of *ʿ* were employed on the two texts from Wadi el-Ḥol (cf. 2.6 below). Reading *ʿayin* for 1.13 seems preferable given the basic shape of this letter, an elliptical outline, even if one would need to postulate it as a unique derivative of a hieratic form of D4, “eye,” with two small formal developments from such an antecedent (a lengthening of the internal vertical and closure of the outline) and a quarter turn rotation (cf. the graphically closest cursive forms of D4 with longer internal slashes and minimal eye creases on some late First Intermediate Period funerary texts [Goedicke 1988: 6b]).¹ From my perspective, the deciding factor is the similar formation of the eye within the *ʾālep* that was written immediately before the disputed letter: basically an ellipse bisected by a slash. I suspect that in both of these letters the slash was reinterpreted as the edge of an eyelid (one bovine, the other human). And although I would concur with Wimmer and Wimmer-Dweikat (2001: 108, n. 8) that the two texts from Wadi el-Ḥol were likely incised by different individuals, see *HT* II (pl. 1; BM EA 55278) for a slightly later Seventeenth Dynasty sarcophagus with both hieroglyphic and hieratic forms of D4—the latter with a long slash inside it—on the same text (not reproduced below).

Fig. A.3

N5, “sun”

Žába 1974: sign list

Dyn. 19



Wadi el-Ḥol
1.13, *ʿš*

Hieratic D4, “eye”

Goedicke 1988: 6b

Late I Int. Per.



*



Same,
rotated

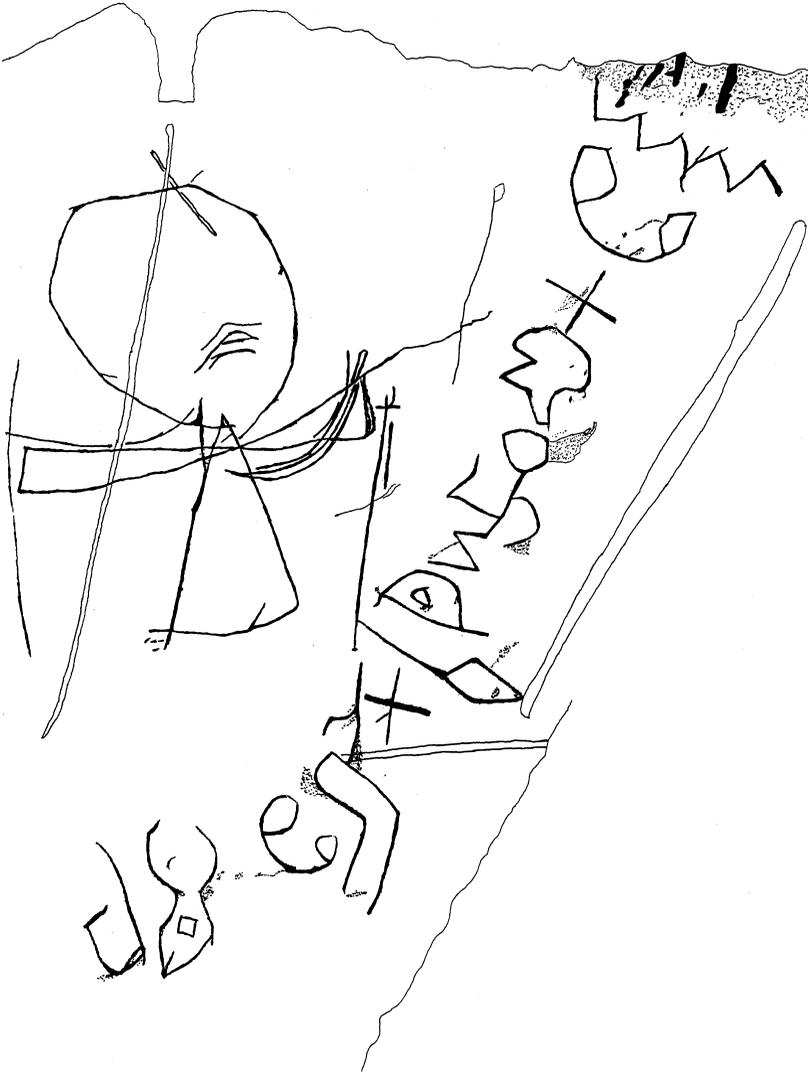
Wadi el-Ḥol
1.12, *ʾ*

Wadi el-Ḥol
2.6, *ʿ*

¹ See the elliptical *ʿayins* with vertical stances on Sinai 345 and 346a (Wimmer and Wimmer-Dweikat 2001: 111, fig. 3) and on the Lahun Heddle Jack (fig. A.6 below).

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Fig. A.4
Wadi el-Hol Text 2



(traced from a WSR transparency = Darnell et al. 2005: pl. 7)

1. Darnell and Darnell 1995: 46-47; Wilford 1999; Wimmer and Wimmer-Dweikat 2001; Fischer 2001: 84, fig. 2; Hamilton 2002: 39-40; Altschuler 2002: 201-4; Sacks 2003: 39, 364 (photos), 34-40 (a

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journalistic account of its discovery and early interpretation); Darnell 2003: 169, Abb. 3 (color photograph), 165-71; Tropper 2003: 173-75; Zauzich 2003: 183-84; Zuckerman 2003: 106-8, figs. 1, 2; Sanders 2004: 31-33, 42-45; Darnell et al. 2005; Dobbs-Allsopp 2006: 496-97

2. Discovered at Wadi el-Ḥol, north of Thebes, on the west bank of the Nile, on a wall of Egyptian inscriptions most of which date to the late Middle Kingdom and Second Intermediate Period (Darnell et al. 2005: 74; cf. Darnell 2003: 165)
3. 11 cm. in length (Darnell et al. 2005: 83), about 4.25 inches. See Darnell et al. regarding the crude *ankh*-sign, “the hieroglyphic representation of ‘life,’ apparently carved at the same time as the vertical inscription” (2005: 83). To my knowledge, the vertical figure between the *ankh* and text has not been identified.
4. Vertical
5. $m \overset{\circ}{k} / \overset{\circ}{\theta} / \overset{\circ}{g} \ t \ r \ h \ ^{c} \ w \ t \ y \ p \ \overset{\circ}{k} / \overset{\circ}{\theta} / \overset{\circ}{g} \ ^{v} \ l$
6. ca. 1850-1700 B.C. (Darnell et al. 2005: 90)
7. This inscription appears to be complete, with random marks above the first letter.

The consonantal value of the second and third-to-last letters is uncertain. They represent two writings of a previously unknown grapheme. Derivations from two Egyptian signs and assignment of three consonantal values are possible.

Altschuler (2002: 202), Darnell (2003: 169), and Darnell et al. (2005: 84, 85) tentatively identified these letters as alternate forms of θ . The latter derived them from the Egyptian sign V13, “rope for tethering animals” (Gardiner 1957: 523). But forms of that hieroglyph usually are long and narrow with small loops at the ends, as exemplified by three writings from a Twelfth Dynasty stele of unknown provenance (*HT* 3: pl. 23). Only rarely are the loops larger (e.g., a writing from Wadi Ḥammamat [Goyon 1957: 80]) or the figure shorter (e.g., a questionable form from Nubia [Žába 1974: sign list]). One would be forced to posit considerable graphic development of Wadi el-Ḥol 2.2 and 2.10 through shortening, widening, an increase in the size of the loops, and letter rotation to derive them from antecedent forms of V13, which depict hobbles. Darnell et al. (2005: 84) assigned these graphemes

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the value of θ , based on the usage of similar graphemes in much later South Semitic scripts (cf. the phonetic value of V13 as \underline{t} in Egyptian [Gardiner 1957: 523]).

A less radical developmental scenario can be envisioned for these new letter forms if one posits D28, “*Arme in Ka-Haltung*” (Hannig 1995: 1035; Gardiner 1957: 453), as their graphic antecedent. D28 shows squared shoulders with upraised arms and open palms in its more detailed hieroglyphic manifestations, the hands reduced to two parts open at the top in less detailed writings, and a very boxy figure with closed loops for the hands in one semi-cursive hieroglyphic form of this sign (Fischer 1976: 41, fig. 4). Two short lines in the lower center of the latter were sometimes omitted and the shoulders sometimes slightly rounded, as seen on two D28s on a Middle Kingdom stele of unknown provenance (*HT* 3: pl. 3). One would have to posit only slightly more rounding of the shoulders (Wadi el-Hol 2.2)² or considerably more (2.10) to derive these letter forms from such a hieroglyphic antecedent.³ Since important parts of this proposed antecedent are the open palms, I would suggest that these letters might be alternate forms of **kapp*-, “palm.” They may represent a sporadic intrusion from a subsystem of Egyptian writing, “syllabic orthography,” where D28, sometimes without a vertical placed below it, has the value of *k* in group writings (Gardiner 1957: 453; Parkinson 1999: 79; cf. Sass 1991: 14, 19).⁴

² Note that the detailed photograph of this letter (Darnell et al. 2005: pl. 9.1) shows more squared junctures at the bottom. See the Egyptian inscription on Sinai 345 for a writing of D28 with one or both shoulders rounded (photo: Lemaire 2000: 122, figs 3a, b). See also *hê*, Chapter 2, for semi- and fully cursive forms of the prototype of that letter, A28, with more rounded shoulders (and a continuation of that feature in the *h* of Sinai 363) that may have influenced these potential derivatives of D28.

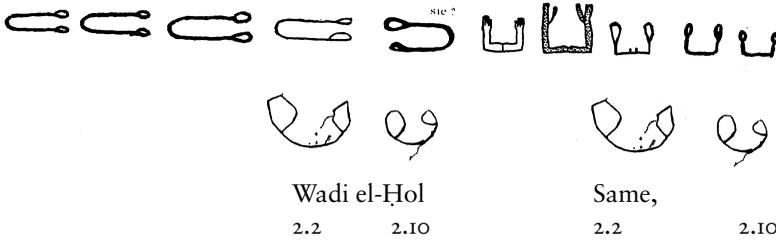
³ This picks up a suggestion by Mallon (1930: 142) that D28 was a prototype for *kāp*, unlikely on the basis of the evidence known at that time, but perhaps worthwhile reconsidering in view of these recent discoveries.

⁴ Most recently, see Higgenbotham (2002: 30-31) on syllabic orthography in general (with bibliography), and Darnell et al. (2005: 100-101, n. 143) on some of the issues concerning this subsystem in regard to alphabetic writing.

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Fig. A.5

Hieroglyph V13, "rope for tethering animals" <i>HT</i> 3: pl. 23	Same, Goyon 1957: 80 Wadi Hamamat	Same, Žába 1974 Nubia	Hieroglyph D28, "Arme in Ka-Haltung" <i>HT</i> 3: Fischer 1976: 41, fig. 4	Same, pl. 3
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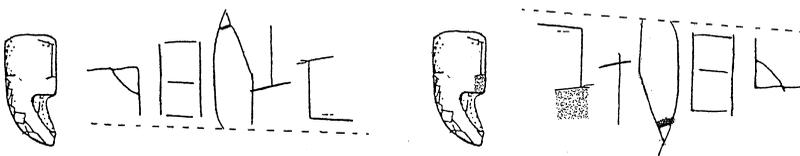


While a derivation from D28 is paleographically more conservative than one from V13 and the former yields a value relating to a documented acrophonic name, I see no firm basis by which to adjudicate between these two possibilities.

One needs also to recall that any new grapheme is a candidate for a consonant that has not yet been attested, namely, *ǵain*. Indeed, this consonant is the major outstanding "unknown" in the Proto-Canaanite alphabetic inventory. I would therefore give the transliteration options for the two occurrences of this new letter form as: *k/θ/ǵ*. Only a linguistic decipherment of this inscription might provide further reasons why one of those consonantal values is the most likely.

Fig. A.6

*Lahun Heddle Jack



As published
Petrie 1890: pl. 27.85
l-r

Viewed from the other end
modified from Petrie 1890: pl. 27.85
collated with the original, EA 70881
r-l

1. Petrie 1890: pl. 27.85; Eisler 1919: 172; Driver 1976: 103; Sass 1988: 104, fig. 282; Dijkstra 1990; Cartwright, Granger-Taylor, and Quirke 1998: 92-93, 99; Parkinson 1999: 196, n. 24; Fischer 2001: 84, fig. 52;

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- p. 62, n. 49 above (a new proposal for reading the first element of the name)
2. Found at Lahun/el-Lahun, in the town area sometimes referred to as “Kahun.”⁵ Lahun is located in Middle Egypt, between the west bank of the Nile and the Faiyum (Baines and Malek 2000: 129-30).
 3. A small-scale heddle jack made of wood belonging to the *Pinacaea* family, probably *Abies*, fir, a wood not native to Egypt (Cartwright, Granger-Taylor, and Quirke 1998: 92-93, 99). It measures 8.2 cm. in length, 3.5 cm. in diameter (about 3.25 by 1.5 inches), close to Dijkstra’s estimates (1990: 51), based on Petrie’s drawing (1890: pl. 27.85). The letters range between 2.5-5 cm. (1-2 inches) in height (cf. Sinai 527).
 4. Horizontal. This text has most often been read from left to right (e.g., Petrie 1890: pl. 27.85; Eisler 1919: 172f.; Driver 1976: 103; Dijkstra 1990: 51, fig. 1; Fischer 2001: 84). But Quirke (Cartwright, Granger-Taylor, and Quirke 1998: 92) pointed out: “This inscription has been read inverse to position required of the heddle jack when in use.” When in use, with its point down, the text incised around this heddle jack reads from right to left. This was likely intended as the primary direction of reading to judge from the archaic stances of *ʾālep* and *šādê* when viewed from that direction (see the sequences of those letters, Chapter 2). But the person who incised this inscription also made it possible to read the owner’s name from left to right, with the flat surface of the heddle jack on the bottom (similarly Sass 1988: fig. 282). Only the *šādê* would look odd when viewed from that position (and could be accounted for as up-down mirroring, a rare but documented phenomenon in early alphabetic writing). Since the incision of the owner’s name was likely intended to differentiate this heddle jack from others, presumably including those kept together as a group when not in use, I suspect that this inscription was incised so that it could be read in both directions.
 5. *ʾ d ʿ š b*
 6. ca. 1850-1700 B.C. (Cartwright, Granger-Taylor, and Quirke 1998: 92)

⁵ On the origin of the name “Kahun,” first used by Petrie in 1887, see especially David (1998: ix) and Luft (1998: 1-2).

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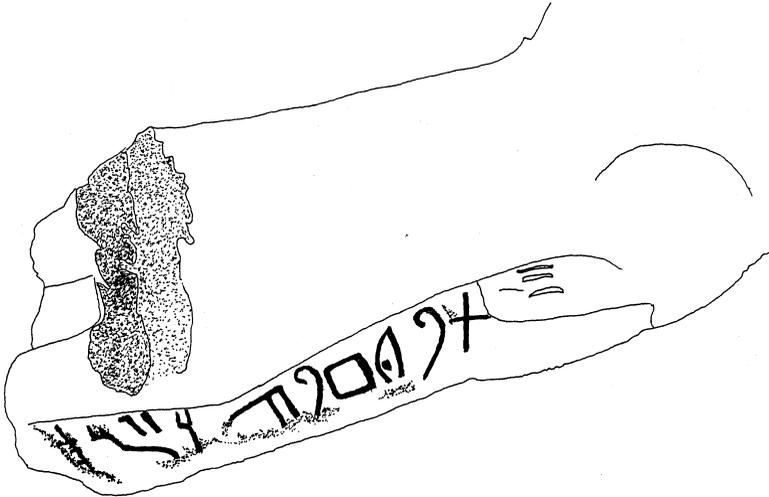
Fig. A.7

*Sinai 345

Right Base (before painting of the letters and reattachment of the head)



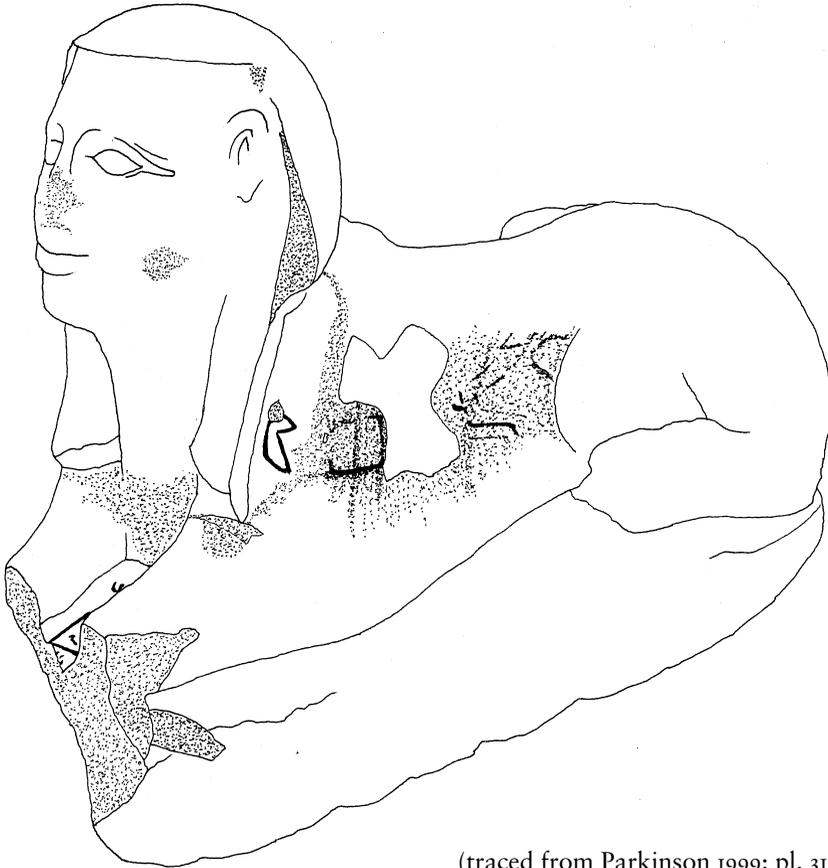
Left Base (before painting of the letters and reattachment of the head)



(both sides traced from Grimme 1923: pl. 5)

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Left Shoulder (after painting of the letters and reattachment of the head)



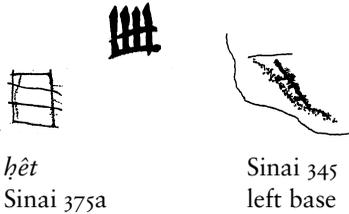
(traced from Parkinson 1999: pl. 31)

1. Gardiner 1916: 15, pls. 1, 3; Sethe 1917: 466; Eisler 1919: 32-33; Grimme 1923: pl. 5; Ullman 1927: 313-15, n. 2; Butin 1932: pl. 10; Gardiner, Peet, and Černý 1955: 202; Albright 1966: fig. 5; James 1982: 176-77; Puech 1986: 189; Sass 1988: 12-14, 133-39, 142, figs. 2-8; 1991: 4; Colless 1990: 13-15, fig. 2.03; Davies 1990: 129-30, figs. 42, 43; Healey 1990: 210-11, fig. 1; Briquel-Chatonnet 1998: 57-59, fig. 45; Parkinson 1999: 182, fig. 59, pl. 31; Lemaire 2000: 115-16, 121-22, figs. 2a, b, pls. 24a-c; Viers 2000: 264-65, 267, fig. 1, and cover photo; COMPASS object number OBJ6022; Darnell et al. 2005: 100, n. 130; Dobbs-Allsopp 2006: 496, fig. 4; Russmann (pp. 301-2, n. 36 above)

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2. Discovered in the Temple of Hathor, Serabiṭ el-Khadim (exact location unrecorded)
3. Probably a Semitic imitation of a small sphinx (James 1982: 177), approximately 24 by 14 by 15 cm. (Sass 1988: 169), or about 9.5 by 5.5 by 6 inches
4. Horizontal: bases, left to right; left shoulder, direction unknown
5. right base: *m ᶜ h b ᶜ l i* [1 or 2 letters]
left base: [no more than 1 letter] *ḥ ᶜ n ḏ ᶜ n z l b ᶜ l t*
left shoulder: *p* [1-2 letter(s)]
6. ca. 1700-1500 B.C.
7. Remnants of a letter on the left edge of the broken base on the left side have been overlooked. These are more clearly visible on an early photograph (Grimme 1923: pl. 5) than on the original in London. These remnants consist of a diagonal set high on the line with two or three “nubs” running into it. They are suggestive of a Proto-Canaanite *ḥêt*. Compare a rotated form of that letter from Sinai 375a, itself a new reading, and especially the right side of a hieratic form of O42, “fence” from a Thirteenth Dynasty manuscript (Möller I, 368).

Fig. A.8
Hieratic O42, “fence”
Möller I, 368



It is very unlikely that a single letter was written in isolation on the left shoulder of this small sphinx. The short break after the nearly complete *pê*, filled in with modern clay to reattach the head of this sphinx, allows for the possibility that a maximum of one or two letters completed a short line of writing (cf. the poorly executed but clear Egyptian inscription *mry ḥtḥr mfk3t*, “beloved of Hathor, [lady of] turquoise” [James 1982: 176] on its right shoulder). Following that break, the body on this side of the sphinx is as smooth as on the other. Possible remnants of letters

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in the drawing above (traced from Parkinson 1999: pl. 31) are photographic illusions.

Fig. A.9
*Sinai 346

346a (top face)



346a (front face)



346b (right side)



(traced from WSR digitized photographs of the negatives of Butin 1932: pls. 11, 12)

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1. Gardiner 1916: 15; Sethe 1926: Taf. 2; Grimme 1929: pls. 8, 9; Butin 1932: pls. 11, 12; Albright 1966: 16-17; Puech 1983: 577; Sass 1988: 14-15, 137-38, 142, figs. 12-17; Colless 1990: 15-16; fig. 2.04; Pardee 1997b: 354; Briquel-Chatonnet 1998: 57-59; Dobbs-Allsopp 2006: fig. 3; Russmann (pp. 301-2, n. 36 above); Appendix 2, below
2. Discovered in the entrance to the Hall of Sopdu, Temple of Hathor, Serabiṭ el-Khadim
3. Semitic imitation of a block statue, 30 cm. high, with a base of 22 by 17 cm. (Sass 1988: 169), approximately 11.75 by 8.5 by 6.75 inches. On block statues as an invention of the Twelfth Dynasty, see Malek (1999: 191-92).
4. 346a: vertical column on the left turning into a left to right-horizontal line; a second vertical column on the right
5. 346b: vertical column turning into a boustrophedon quadrant of letters
 346a: $^c l \dot{n} [^c m \text{ plus } 1 \text{ letter}] m t l b ^c l t; \delta l d \text{ } \dot{4} \text{ } ? m r ^c t |$
 346b: $^c l n ^c m \dot{r} b n q b n$
6. ca. 1850-1700 B.C.
7. The restoration the last two letters of the name $n^c m$ from 346b to the lacuna in the left hand column of 346a is certain (Albright 1966: 16-17; cf. Sass 1988: 14-15). Faint traces of the effaced letters are still visible on the most detailed photograph (Grimme 1929: pl. 9; Sass 1988: fig. 12). The vertical line just below the left corner of the neck of the statue—to the right of the poorly preserved $n\dot{u}n$ —is likely the beginning of a chisel mark that gouged most of that rb 's name. This is probably an instance of *damnatio memoriae*, the effacing of a name, in this instance a West Semitic leader's name by Egyptians (see Parkinson 1999: 140 on this practice in general).

The reading of only one (or two) grapheme(s) on this multifaceted statue is uncertain.

In the fourth position down on the right hand column, there may be remnants of the top of a +-shape of $t\dot{a}w$ only visible on the new WSR digitized photograph of the glass negative of this inscription (Butin 1932: pl. 11). But the original in Cairo now shows only a small pit in the stone surface in that area, as does another early photograph (Sethe 1926: Taf. 2).

The identification of the larger, only moderately damaged

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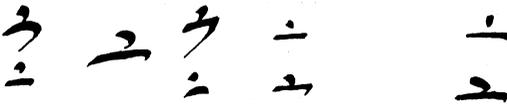
form to the left of that possible letter is difficult. Its form is a long horizontal line with a slightly oblique vertical attached to it. This has been taken as a *yôd* (e.g., Cowley 1929: 204; Albright 1966: 17, fig. 1; Cross 1980: fig. 9; 2003: 228, fig. 32.9; Sass 1988: 121). But the shape of this grapheme conforms to neither type of Proto-Canaanite *yôd*, both of which now can be charted in some detail. My tentative suggestion would be that this is a slightly developed form of the hieratic numeral for 40. Möller (I, 626) recorded multiple writings of that cursive numeral from the Twelfth to early Eighteenth Dynasties whose most common form has a horizontal that is variously topped by a hyphen-, hook-, or dot-shape. Sometimes the top connects with the horizontal; at other times a flourish continues below that line. The figure on Sinai 346a is not graphically distant from these hieratic numerals, especially one from the Twelfth Dynasty with a longer horizontal and another from the Twelfth-Thirteenth Dynasties with an almost vertical top. One would need to posit only minor development from such antecedents, a slight lengthening of the vertical by this Semitic writer. While such is a graphically plausible postulation, it must remain tentative because there is only one other possible use of Egyptian numerals by early alphabetic writers.⁶

Fig. A.10

Hieratic 40

Möller, I, 626

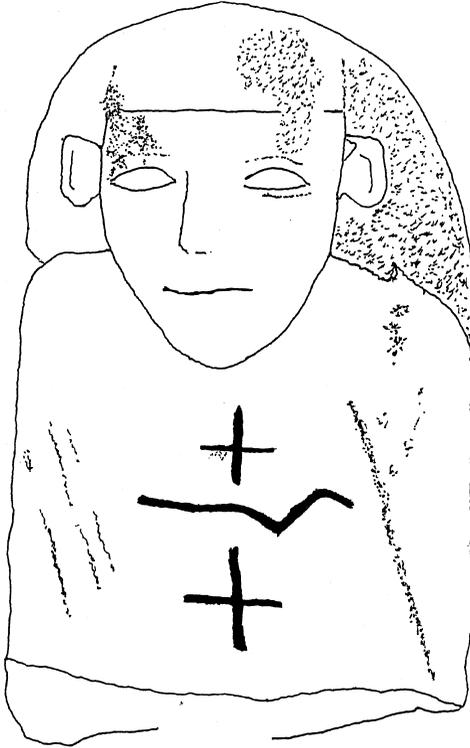
Dyn. 12; 12/13; 13; Hyksos Period; Dyn. 18



Sinai 346a
40?

⁶ See perhaps Sinai 527 below and the use of cursive forms of 100/V1 as *lāmeds* (Chapter 2). The later use of hieratic numerals in Old Hebrew (Aharoni 1966; Meshel 1978; Lemaire and Vernus 1980) and Ammonite (Aufrecht 1989: 355) provide parallels for this tentative proposal, but the extensive trade and scribal contact between the southern Levant and Egypt suggest that such borrowings could have occurred independently at several different times.

Fig. A.II
Sinai 347



(traced from Sass 1988: fig. 20)

1. Cowley 1916: 18; Butin 1932: pl. 13; Albright 1966: 17; Cross 1967: 14, n. 27; 1973: 32; 2003: 320-21, n. 29; Puech 1983: 577; Maier 1986: 142, n. 110; Sass 1988: 15-16, 139, 143, fig. 20; Colless 1990: 16-17, fig. 2.05; Briquel-Chatonnet 1998: 57-59; Russmann (pp. 301-2, n. 36 above)
2. Temple of Hathor, Serabiṭ el-Khadim (exact place of discovery unrecorded)
3. Probably a Semitic imitation of an Egyptian bust, 7 by 8.5 by 13.5 cm. (Sass 1988: 169), approximately 2.75 by 3.5 by 5.25 inches
4. Vertical
5. *t n t*
6. ca. 1850-1700 B.C.