

# THE OPHEL PITHOS INSCRIPTION: ITS DATING, LANGUAGE, TRANSLATION, AND SCRIPT

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*The summer of 2013 offered the exciting announcement from the Israel Ministry of Foreign Affairs that Eilat Mazar's excavational team had found potsherds of an inscribed pithos in the Ophel of Jerusalem that the excavators dated to the 10th century BC, which many have called the oldest Hebrew inscription ever uncovered at Jerusalem. The pithos in question was one of seven discovered in a foundational deposit as part of a fill, under a building that was constructed on bedrock. Numerous scholars have chronicled their opinions of the Ophel inscription's transcription and language, mostly utilising online blogs. This work seeks to delve deeper into the identification of each letter on the inscription, the language and translation of its text, and the dating of the potsherds of the inscribed pithos based on its findspot, with the intent of resolving each of these matters as confidently as possible.*

*Keywords: Ophel inscription, 10th century BC, paleo-Hebrew alphabet, Jerusalem, pseudo-wine*

## I. INTRODUCTION

During the 2012 excavations at the Ophel, which is located in Jerusalem between the Temple Mount and the City of David, Eilat Mazar's archaeological team discovered the remains of a large building that dates to the early Iron Age IIA, an archaeological period variously dated to *c.* 1000–900 BC (Stern 2008, 2126), *c.* 980–840/830 BC (Mazar 2005, 14), and *c.* 920–760 BC (Finkelstein and Piasezky 2010, 381). The building was constructed on bedrock, but since part of the bedrock featured a slight depression in elevation, seven *pithoi* (large storage jars) were placed within it as part of a fill, in order to stabilise the earth under this section of the building (Mazar, Ben-Shlomo, and Ahituv 2013, 39).

The seven *pithoi* are of the Type-A and Type-B varieties, with no *pithos* of the Type-C variety having been found in the depression (designated L.223C by Mazar). The neckless, folded-out-rim *pithos* of the Iron Age II most likely is the successor to the collared-rim jar of the Iron Age I. The earliest form of the neckless *pithos* (late Iron Age I?) evolved into the Type-A variety of the early Iron Age IIA, a variant that rapidly developed into the Type-B version with a horizontal, elongated rim, which was followed immediately by the Type-C version (Mazar, Ben-Shlomo, and Ahituv 2013, 43).

One of the *pithoi* (*Pithos* 1; Fig. 1) of the Type-B variety was inscribed with writing along the rim while the clay was still moist, thus before the jar entered the potter's kiln. The text was written in a script that has parallels from Tel Batash/Timnah, Izbet Şarṭah, Khirbet Qeiyafa, Tell Fekheriyeh, and several other sites (Fig. 2). The purpose of this work is to examine more carefully and resolve several crucial matters related to the Ophel *Pithos* Inscription, including the identification of each letter, the language and translation of the text, and the dating and significance of the inscribed rim-sherd.

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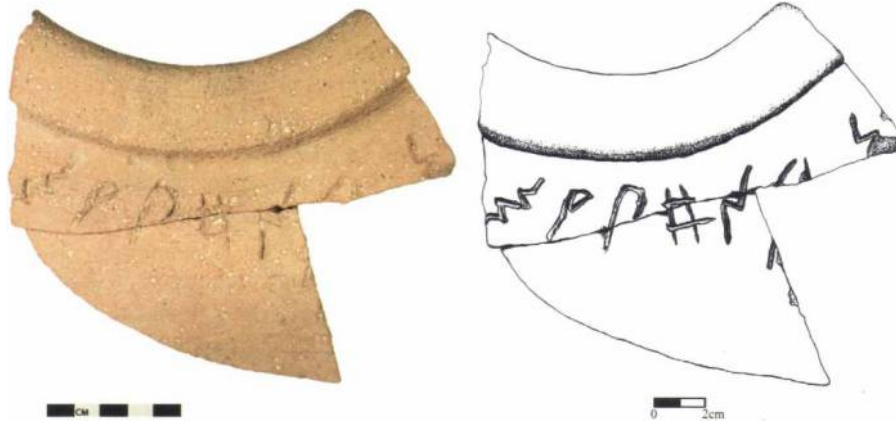


Fig. 1. Inscribed potsherd (Courtesy of *IEJ* and Eilat Mazar).

2. TRANSCRIPTION AND TRANSLATION OF THE OPHEL INSCRIPTION

The vital part of Pithos 1 consists of two separate potsherds that were reconnected by Mazar’s team. The text of the inscription reads either sinistrograde (right-to-left) or dextrograde (left-to-right), an area of dispute among scholars and a matter that will be discussed at greater length below. Ahituv was the first to suggest that the inscription reads dextrograde, ‘as evident from the stance of the letters’ (Mazar, Ben-Shlomo, and Ahituv 2013, 45). The

	Ophel	Qeiyafa	Sarta	Arrows	Walaydah	Tekke	Veradim	Gezer	Batash	Eshemoa <sup>c</sup>	Beth Shemesh	Rehov	Fekheriyeh
h	⊞		⊞				⊞	⊞ ⊞ ⊞	⊞	⊞	⊞		⊞
l		⊞ ⊞	⊞ ⊞		⊞	⊞						⊞	⊞
m	⊞	⊞ ⊞	⊞	⊞ ⊞	⊞	⊞		⊞ ⊞		⊞		⊞	⊞
n	⊞	⊞	⊞			⊞	⊞		⊞		⊞	⊞	⊞
p	⊞	⊞	⊞		⊞		⊞	⊞					⊞
q	⊞	⊞ ⊞	⊞					⊞					⊞

Fig. 2. Comparative chart of letters (Courtesy of *IEJ* and Shmuel Ahituv).

stance of the letters, however, does not necessarily indicate the direction of reading, as evidenced by the bronze bowl from Tekke, with several letters of atypical stance for an inscription that clearly reads sinistrograde (Naveh 1987, 41, fig. 36; see esp. initial *kaf*, *mem*, and later *kaf*).

Sinistrograde is the normal direction for reading a Hebrew text of the Iron Age IIA and thereafter, because the direction of writing seemingly became fixed as sinistrograde during the terminal phase of the 2nd millennium BC (Rollston 2013). Table 1 features preliminary readings of the letters on the inscription that various scholars have offered.

As for the translation of the inscription, the press release of the excavators states that “[b]ecause the inscription is not in Hebrew, it is likely to have been written by one of the non-Israeli residents of Jerusalem, perhaps Jebusites, who were part of the city[’s] population in the time of Kings David and Solomon” (Mazar 2013). The beginning of the press release even states that the inscription was written in ‘the Canaanite language’. While a Jebusite or Canaanite attribution certainly is possible if based solely on the script, the orthographic evidence reveals that the inscription most likely was written in Hebrew, which will be demonstrated below.

A comparison of the letters on the inscription to those of other Hebrew inscriptions in Fig. 2, such as the Qeiyafa Ostrakon inscription, strongly points to Hebrew as the language of the inscription. Beyond this, Gershon Galil was the first to translate and plausibly identify the meaning of the inscription (Galil 2013a), based on his reconstruction of two partially written letters (Galil 2013b; Fig. 3, from Galil 2013d, 15, fig. 1), so credit for numerous parts of the subsequent discussion of its translation goes to him.

The one presumably Hebrew word that can be read in its entirety is *ḥlq*, which consists of letters 5–7 (Fig. 4). There are two verbal roots for *ḥlq*: one root means, ‘divide, obtain one’s share, allot, apportion, assign, distribute’, in the *qal* stem; the other root means, ‘be smooth, be slippery, be deceptive’ in the *qal*. In the nominal form, the former root means, ‘a portion, share, tract, territory, piece of land, division’, with no adjectival form of the word attested (Luc 1997, 160–62).

In the nominal form, the latter root means, ‘smoothness, flattery’, while the adjectival form is rendered, ‘smooth’ (Luc 1997, 160). The sense of ‘smooth’ possesses a negative connotation, such as the lips of the immoral woman that are smoother than oil (Prov 5:3). The verbal use does not seem to be in view in the Ophel Pithos inscription, given the syntactical position of *ḥlq* in the context, as a verb typically begins Hebrew clauses. The standard sequence is verb + subject + direct object. On the potsherd, a noun immediately precedes *ḥlq*, as will be seen shortly. Therefore, an adjectival use would be expected for this word.

The derivative forms of the latter root of *ḥlq* occur twenty-eight times in the Hebrew Bible, and the principal employment is of smooth speech or flattery (Wiseman and Harris 1980, 294).

TABLE 1: Readings of the letters on the Ophel pithos inscription (right-to-left)

Letter #	1	2	3	4	5	6	7	8
Ahituv	<i>nun</i>	–	<i>lamed?</i>	<i>nun</i>	<i>ḥet</i>	<i>peh</i>	<i>qof</i>	<i>mem</i>
Rollston	<i>shin</i>	–	<i>Reš</i>	<i>nun</i>	<i>ḥet</i>	<i>lamed</i>	<i>qof</i>	<i>mem</i>
Colless	<i>nun</i>	<i>lamed?</i>	<i>Nun</i>	<i>nun</i>	<i>ḥet</i>	<i>peh</i>	<i>reš</i>	<i>mem</i>
Lehmann	<i>nun</i>	<i>šade</i>	<i>Mem</i>	<i>nun</i>	<i>ḥet</i>	<i>peh</i>	<i>qof</i>	<i>mem</i>
Demsky	<i>nun</i>	–	(space)	<i>nun</i>	<i>ḥet</i>	<i>lamed</i>	<i>reš</i>	<i>mem</i>
Galil	<i>mem</i>	<i>yod</i>	<i>Yod</i>	<i>nun</i>	<i>ḥet</i>	<i>lamed</i>	<i>qof</i>	<i>mem</i>
Petrovich	<i>nun</i>	<i>yod</i>	<i>Yod</i>	<i>nun</i>	<i>ḥet</i>	<i>lamed</i>	<i>qof</i>	<i>mem</i>



Fig. 3. Reconstructed reading of the Ophel pithos inscription (suggested by Gershon Galil).

The word was used descriptively of the flattering words of a seductress (Prov 7:5), the smoothing of metal by a metalworker (Isa 41:7), and David’s stones that were shaped into rounded form by the water of a stream and used against Goliath (1 Sam 17:40). Since the word before *hlq* seems to be a noun, an adjectival use is most probable for *hlq* here in the Ophel Pithos inscription, provisionally rendering the word, ‘smooth (?)’.

Next, this fully legible adjective meaning ‘smooth’ needs a noun to modify. In Hebrew, nouns typically precede adjectives, which is always the case with attribute adjectives, so the word before ‘smooth’ would be that modified noun. Here is where Galil’s brilliant

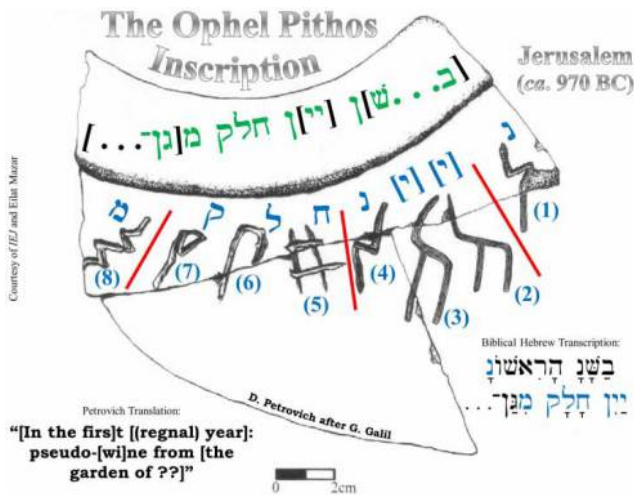


Fig. 4. Reconstructed reading of the Ophel pithos inscription (suggested by Douglas Petrovich).

reconstruction comes into play. The letter to the right of the *het* clearly is a *nun* (*n*), making it the last letter of the noun modified by ‘smooth’ (Figs. 1, 3, and 4).

To the right of the *nun* (letter 4) are two pincer-like strokes, which seem to join with the remnant of a straight stroke to their lower left, written on the lower potsherd. Unfortunately, the central part of the letter(s) that was between these strokes is obscured, since a partial lacuna is formed by a missing piece of the pithos. After many hours of efforts at reconstruction, the present writer concluded that there is no single letter that can be formed with the pincer-like strokes and the single stroke to their lower left. Lehmann and Zerneck (2013, 447) reconstructed *šade* and *mem*, reading from right-to-left, but a *mem* seems quite forced here (Galil 2013d, 14), with the reason being that the left pincer-stroke does not align sufficiently with the lower left remnant-stroke to warrant this reading (Fig. 1).

While the writings of Colless and Demsky display uncertainty about assigning a letter to these strokes (Colless 2013; Demsky 2013), Rollston (2013) opts for a *reš*, while Aḥituv (Mazar, Ben-Shlomo, and Aḥituv 2013, 45) considers it as possibly being a *lamed*. Contrastingly, Galil has suggested that the pincer-like strokes do not derive from the same letter, but from two separate letters (Galil 2013d, 16), each being a *yod*. Galil’s reconstruction of two *yods* follows Ada Yardeni’s reconstruction of a similarly shaped *yod* on the Qeiyafa Ostrakon inscription (Galil 2009, 203; Yardeni 2009, 259–60).

Galil is correct that there is no space between the letters here, as Demsky’s reading would imply, because the potsherd clearly betrays the presence of a tail of a letter (Galil 2013d, 14). Galil’s reconstruction is logical, because the thickness and direction of the two pincer-like strokes on the inscription actually do not match one another (Fig. 1). Thus these are not symmetrical strokes of the same letter, but asymmetrical and unconnected strokes of letters that were angled in a slightly different direction from one another, with two distinct thicknesses.

If two Hebrew *yods* were written here (Figs. 2 and 3), all of the difficulties can be resolved; moreover, the noun *yyn* (‘wine’) fits perfectly with the fully legible adjective that follows the noun. Here are the positives with Galil’s reconstruction: (1) it provides a solid—and even expected—noun that works harmoniously with the adjective that follows; (2) it accounts for the otherwise unsightly and inexplicable gap between letter 1 and the non-symmetrical, pincer-like strokes; and (3) it makes perfectly plausible use of the pincer-like strokes that simply cannot work together with the fragmented stroke to their lower left to form *any* known individual letter.

With this reading of the letters on the inscription, what were thought to be seven letters become eight. At this point, Galil appealed to a formulaic pattern for the labelling of wine jars that was common in Egypt from the 15th to 12th centuries BC: (1) regnal date; (2) classification of commodity; (3) provenience, or place of production; and (4) producer/vintner. Aḥituv previously noted that the letters on the Ophel inscription might refer to the name of the owner of the pithos, to its addressee, or to its contents (Mazar, Ben-Shlomo, and Aḥituv 2013, 47). If Galil’s perceptive reconstruction is correct, Aḥituv’s assertion would be justified.

As an example, Galil cited an Egyptian wine-jar label that reads, ‘Year 5: Sweet wine – from the Estate of Aton’ (Černý 1965, 22, no. 12). This formula would work well with the Ophel Pithos inscription, since the latter inscription’s final visible letter on the left is *mem*, which probably begins the Hebrew preposition *min* (‘from’), thus introducing the provenience of the wine and its pithos, and leading to the non-extant name of the vintner.

Wineries, labelling of commodities, and year–date/month–day formulas all were common during Judah’s later monarchy. A thriving winery was found at Gibeon of the 8th–7th centuries BC, including sixty-three rock-hewn cellars, large storage jars that in some cases bore inscribed handles, clay stoppers that sealed the mouths of the jars, and a clay funnel that fits the mouths of the storage jars perfectly (Pritchard 1962, 45–51; 1964, 1–27).

The handles on the wine-jars at Gibeon were much smaller than the rims of the Ophel pithoi, and thus possessed insufficient space for a full, year–date formula, but there was

enough room to inscribe *gh n gdr* + a vintner's name, thus rendering, 'Gibeon: the walled vineyard of (vintner's name)' (Pritchard 1962, 49). As a result of all of these parallels, the Ophel pithos inscription could represent an intermediary form between the standardised formula of the earlier Egyptian New Kingdom (NK) and the labelling on wine-jars of the later Judahite monarchy.

As Galil has noted (2013c), precedents for year–date formulas in Judah and Israel include, 'the sixth year, in the seventh (month)' on an ostrakon from Judah (Ahituv 2005, 170), as well as, 'in the third (year), in month Tzah', which also was inscribed on a ceramic jar that was classified as Arad 20 (Aharoni 1981, 40–41), among other examples.

Asserting that the Ophel wine-jar's provenience and vintner's name would have followed to the left of the *mem* (letter 8) presents no trouble contextually, because as Ahituv mentioned in the inscription's press release, the text probably wound around the shoulder of the pithos (Mazar 2013). The leftmost and rightmost letters (Fig. 4, letters 1 and 8) are so close to the edge of the rimmed potsherd that the original presence of more letters in both directions can be theorised without any strain whatsoever.

The only visible letter remaining to identify is letter 1, which is positioned to the right of the two reconstructed *yods*. This letter is partially illegible by the break in the potsherd (Fig. 1). Rollston favoured a *šin* here, asserting that the letter was turned on its side (Rollston 2013). The proto-consonantal script, the point of departure from which all alphabetic scripts derived, indeed is known to have featured letters turned on their side (Hamilton 2006, 45, 88, 128, 183), but letter 1 does not resemble a sideways *šin* by any stretch.

According to lines 1 and 2 of the Qeiyafa Ostrakon inscription, the *šin* better resembles an Arabic '3' than anything else (see Yardeni 2009, 259 [first letter of line 2, in fig. 14A.1]; Millard 2011, 11). This form of letter actually is the result of the *w*-shaped *šin* from the earlier inscriptions at Serabit el-Khadim (Fig. 5, updated from Colless 1990, 7), which were dated to 1550–1450 BC based on their archaeological findspot (Albright 1969, 8; Colless 1990, 8, 12 [column 3]), but turned on its side (Hamilton 2006, 231–44, esp. figs. 2.71–2.73). The difference with the Qeiyafa *šin* is that the shape of its '3' was inverted 90° to the left from the earlier form (see Millard 2011, 8, 9). Yet nothing in letter 1 of the Ophel pithos inscription matches these representations of a *šin*. With *šin* eliminated as a possibility, the letter's identity is restricted to two legitimate options.

Ahituv, Colless, Lehmann, and Demsky all favour the reading of *nun* here, despite a differently shaped *nun* written as the fourth letter on the inscription. In reality, both forms of *nun* are attested among contemporary inscriptions, with that of the first letter appearing at Qeiyafa (Garfinkel and Ganor 2009, 250, fig. 14.4), Batash (Mazar and Panitz-Cohen 2001, 190; photo 110, p. 6:3), and Fekheriyeh (an Aramaic inscription; Abou-Assaf, Bordreuil and Millard 1982, unnumbered table). Near-parallels can be found at Şartah (Kochavi 1977, 5, fig. 3) and Tekke (Cross 2003, 227 fig. 32:8). When speaking of contemporary inscriptions here, any time in the Iron Age IB or Iron IIA–B is meant (A. Mazar 2005, 2126).

The other possible reading for the first letter is a *mem*, which view Galil alone seems to favour (Galil 2013d, 16). One strength of this view is the stronger similarity that letter 1 shares with the *mem* of letter 8 than the *nun* of letter 4. However, since two completely different forms of *nun* are attested on other inscriptions, the strength of Galil's view dissipates somewhat. In fact, the supposed *mem* of letter 1 would be written symmetrically opposite from the unequivocal *mem* of letter 8. While this factor is not a fatal flaw for a *mem*-reading, the fact is that the initial vertical stroke of the known *mem* is quite short (Fig. 1), as with other contemporary inscriptions (Fig. 2). Yet letter 1's initial vertical stroke is long, similar to contemporary *nuns* that are not shaped as the *nun* of letter 4 on the Ophel pithos inscription.

Additionally, the short, second stroke of the *mem* of letter 8 was made at a 45° angle from where the first stroke stopped, whereas the second stroke of letter 1 is long and horizontal.

	EGYPT	SINAI EGYPT	CANAAN	PHOENICIA	GREECE	ROMAN	ARABIA
o	F1 ox	ox alp ox	A A U X	𐤀 𐤁 𐤂 𐤃 Hebrew/Aleph	Α Α Α Alpha	Α Α	𐤀 𐤁
B	01 house	bayt house	𐤁 𐤂 𐤃 𐤄	𐤅 𐤆 𐤇 Bet	Β Β Β Beta	Β Β	𐤂 𐤃
G	T14 boomerang	gaml boomerang	𐤈 𐤉 𐤊 𐤋	𐤌 𐤍 𐤎 Gimel	Γ Γ Δ Γ Gamma	Γ Γ	𐤄 𐤅
D	031 door	dalt door	𐤏 𐤐 𐤑 𐤒	𐤓 𐤔 𐤕 Dalet	Δ Δ Δ Delta	Δ Δ	𐤆 𐤇
H	A28 jubilate	fill jubilate	𐤖 𐤗 𐤘 𐤙	𐤚 𐤛 𐤜 He	Ε Ε Ε Epsilon	Ε Ε	𐤙 𐤚
W		waw hook	𐤞 𐤟 𐤠	𐤡 𐤢 𐤣 Waw	Υ Υ Υ Upsilon	Υ Υ	𐤛 𐤜
Z	D13 eyebrow	dayp eyebrow	𐤥 𐤦 𐤧	𐤨 𐤩 𐤪 Zayin	Ζ Ζ Ζ Zeta	Ζ Ζ	𐤧 𐤨
H	06 mansion	basir mansion	𐤫 𐤬 𐤭 𐤮	𐤯 𐤰 𐤱 Het	Η Η Η Eta	Η Η	𐤩 𐤪
U	V28 hank wick	bayt thread	𐤲 𐤳 𐤴				𐤫 𐤬
T	F35 good	tab good	𐤵 𐤶 𐤷	𐤸 𐤹 𐤺 Tet	Θ Θ Θ Theta	Θ	𐤭 𐤮
Y	D36 forearm	yad hand	𐤻 𐤼 𐤽	𐤾 𐤿 𐥀 Yod	Ι Ι Ι Iota	Ι Ι	𐤯 𐤰
K	D46 hand	kap palm	𐥁 𐥂 𐥃	𐥄 𐥅 𐥆 Kap	Κ Κ Κ Kappa	Κ Κ	𐤱 𐤲
L	S39 crook	lamd goad	𐥇 𐥈 𐥉	𐥊 𐥋 𐥌 Lamed	Λ Λ Λ Lambda	Λ Λ	𐤳 𐤴
M	N35 water	maym water	𐥍 𐥎 𐥏	𐥐 𐥑 𐥒 Mem	Μ Μ Μ Mu	Μ Μ	𐤵 𐤶
N	I10 cobra	nahš snake	𐥓 𐥔 𐥕	𐥖 𐥗 𐥘 Nun	Ν Ν Ν Nu	Ν Ν	𐤷 𐤸
S	K1 fish	samk fish	𐥙 𐥚 𐥛				𐤹 𐥀
R	R11 column	samk support	𐥜 𐥝 𐥞	𐥟 𐥠 𐥡 Samekh	Ξ Ξ Ξ Xi	Ξ	𐤻 𐤼
G	M43 eye vine	ayn eye	𐥣 𐥤 𐥥	𐥦 𐥧 𐥨 Ayin	Ο Ο Ο Omicron	Ο Ο	𐤽 𐤾
P	D21 mouth	pu mouth	𐥩 𐥪 𐥫	𐥬 𐥭 𐥮 Pe	Π Π Π Pi	Π Π	𐤿 𐥀
S	V33 bag	sirar bag	𐥯 𐥰 𐥱	𐥲 𐥳 𐥴 Sade	Μ Μ Μ San	Μ	𐥁 𐥂
Q	V24 cord	qaw cord, line	𐥶 𐥷 𐥸	𐥹 𐥺 𐥻 Qop	Φ Φ Φ Qoppa	Φ	𐥃 𐥄
R	D1 head	raš head	𐥼 𐥽 𐥾	𐥿 𐦀 𐦁 Resh	Ρ Ρ Ρ Rho	Ρ Ρ	𐥅 𐥆
S	N6 sun (raš)	šamš tad	𐦂 𐦃 𐦄	𐦅 𐦆 𐦇 Sin	Σ Σ Σ Sigma	Σ Σ	𐥇 𐥈
T		taw mark	𐦉 𐦊 𐦋	𐦌 𐦍 𐦎 Taw	Τ Τ Τ Tau	Τ Τ	𐥉 𐥊

Fig. 5. Chart of proto-consonantal letters (Courtesy of Brian E. Colless).

The angle and length of the initial two strokes of letter 𐤎 are far more in keeping with contemporary *nuns* than *mems*, so the reconstruction of a *nun* seems more plausible. Plus, the presence of two differently shaped *nuns* in the same inscription is not burdensome to accept, as Galil himself

admits that the two (proposed) *yods* on this inscription must have been written in different forms (Galil 2013d, 16). Therefore, the first visible letter should be considered a *nun*, and thus preferable to the reading of a *mem*, though the latter option must be viewed as plausible.

Attention now turns to the proposed reading of the text before letter 1 of the inscription. Given that the second and third elements of the formula for a commercial product are present in the inscription, namely the classification of a commodity ('smooth wine') and its provenience (the place 'from' where the wine came), the likelihood of an initial regnal date appears strong.

A regnal date may have consisted of a year-date and a month-date, or merely a year-date. If a labelling formula was used, and if the reading of letter 1 is a *nun* or *mem*, one or both of those letters would have to serve as the final letter in a numerical adjective for a month or year. The order would have been listed this way: 'year' + number of the year + 'month' (optional) + number of the month (optional). Often the word 'month' was omitted if its number was present.

As for a *mem*-reading for letter 1, the only numerical adjectives that end in a *mem* are twenty to ninety, in increments of ten (Jouion and Muraoka 1991, 525–30).<sup>1</sup> Since there are no months numbering beyond 12, the regnal date would be restricted to a year. In this case, since no Hebrew monarch of the tenth century BC was attributed with having ruled over 49 years, if it is accepted that an Israelite monarch sat on the throne during this century, the only plausible options for the date would be Year 20, 30, or 40.<sup>2</sup>

According to the biblical narrative, David and Solomon are the only kings said to rule 20 years or more (40 years each) until Asa, who reigned 41 years. Since Asa's Year 20 would have been in the 9th century BC, this would make David or Solomon the two best options for the king who sat on the throne when Pithos 1 was manufactured, if one considers them historical figures and prefers the high chronology. Given that David's Years 20–40 were from 989–969 BC, and Solomon's Years 20–40 were from 951–931 BC, according to the chronology that Thiele (1994, 51–53) outlined, both options are plausible if his chronology is correct.

The other option if the *mem*-reading for letter 1 is correct is that the *mem* may have been the final letter in the month-name 'ēṯānīm (Ethanīm), the seventh month in the Hebrew calendar (1 Kgs 8:2). The practice of recording month-names is seen in later biblical texts of Iron Age II (1 Kgs 6:1, 37–38; 8:2), the last verse of which features 'ēṯānīm. This practice also is found on three Phoenician inscriptions from Cyprus that date to Hellenistic times (Galil 2013d, 17).

Yet if the *nun*-reading is correct, only one numerical adjective is possible: 'first'. In this case, either 'the first month' or 'the first year' is to be read. If 'the first year' were in view, the only viable option for the reading would be Year 1 of the king, as numbers such as 11, 21, and 31 were not written with the ordinal form of one ('first') if added to values such as ten, twenty, and thirty. Instead, the cardinal form of 'one' was used exclusively with such numbers.

If 'the first month' were in view, there is no indication whatsoever as to the regnal year, and thus the inscription would possess no independent value for dating the potsherd. Examples where the designation of a month appears with inscriptional evidence mentioning a regnal year include 'the sixth year, in the seventh (month)' and 'in the third (year), in month Tzah', as cited above. Galil (2013c) remarked that 'first (month)' is a better option contextually for the *nun*-view, given that there is no feminine ending on the inscription's numerical adjective, that the noun 'month' is masculine, and that the noun 'year' is feminine.

If *nun* is the correct reading for letter 1, but originally no month was inscribed, the reading would be 'first (year)'. This reading, which would require the absence of a feminine ending (*qāmēš hē*) on the word 'first', is fully plausible because Galil's caution about potential grammatical incongruity is tempered by two vital facts. First, the absence of a vocalic ending is possible for this time period, because vocalic *hē*-endings from this era have not been attested. Second, the Hebrew word *šānāh* ('year') on an inscription (Sinai 351) of the Late Bronze Age was written



without a *hē*-ending (Petrovich 2015), thus providing an orthographic precedent for the later writing of the word without a *hē* on the Ophel pithos inscription.

If there was only a year-date on the pithos, it could not have referred to the reign of David, since David was said to have conquered Jerusalem in his Year 8 (2 Sam 5:5). Hebrew pottery would have no place at the Jebusite city of Jerusalem in David's Year 1—at least if one considers the authenticity of a Davidic reign and the textual claim to the timing of Jerusalem's conquest under the rule of David—as the findspot of the inscribed potsherd was located just outside the confines of the Jebusite city.

Therefore, if no month was inscribed on the pithos, Year 1 of Solomon (971 BC, high chronology) would be a better option for the date of the inscription if compared to the biblical text. Under the low chronology of Finkelstein, who does not take the narratives about David and Solomon to be largely historical (Finkelstein and Silberman 2006, 31–32, 173–74), neither David nor Solomon would be an option for the king behind the inferred regnal dating on the Ophel inscription, and one would be left to speculate as to which king ruled at the time.

Year 1 of Rehoboam does remain a plausible option for the higher chronologies, but by 931 BC there would have been less likelihood of Type-A and Type-B pithoi mingled together under a house that was built during the 10th century BC. Therefore, every reign beginning with that of Rehoboam is less likely than the preceding reign. It should be no surprise, then, that Galil attributed the inscribed pithos from the Ophel to Solomon's reign (Galil 2013d, 21–22).

Attention must be turned back to the language of the inscription, now that discussion of each letter has concluded. According to Ahituv, the inscription was incised in a proto-Canaanite script (Mazar, Ben-Shlomo, and Ahituv 2013, 39). Rollston concurred with this analysis, having stated that the inscription was described accurately by Ahituv as proto-Canaanite (Rollston 2013). While contemporary (late-)Canaanite writing may have used the same basic script as paleo-Hebrew, the question to solve here is whether Canaanite was the source language.

Therefore, the place to begin is the elimination of other options for the source language of the inscription. Some have suggested that perhaps the Qeiyafa Ostrakon inscription was inscribed in the Philistine language, and since the Ophel pithos inscription features exactly the same script, it also could be Philistine, by extension. Could this inscription be a Philistine potsherd?

The Qeiyafa Ostrakon inscription clearly is written in Hebrew, because it possesses distinctly Hebrew words: *'bd* (line 1, 'to serve, servant'), *šp̄t̄* (line 2, 'to judge, judge'), and *mlk* (line 4, 'king'). If the Philistines did produce the ostrakon, one first would have to suppose that the Philistines knew and effortlessly wrote in Hebrew, a Semitic tongue, despite their Aegean origin. In the case of the Ophel inscription, this assumption also would imply Philistine recognition and use of Israelite regnal dating, the latter of which is highly implausible.

Finally, one would have to assume that Philistines found their way to Jerusalem, seized control, then produced their own pottery. This, of course, would fly in the face of archaeological and biblical history, neither of which reveals any signs of Philistine occupation of the city. Of course, one always could assert that they invaded, bringing with them their enormous amphorae with inscribed Hebrew writing on them, failed in their attempt to storm the city, then smashed their amphorae in disgust as they fled. This is hypothetically possible, but quite unlikely, as the very presence of wine amphorae implies long-term and peaceful occupation, making Philistine a terrible candidate for the language on the Ophel pithos inscription.

Some scholars have suggested that the inscription was inscribed in Phoenician. Rollston has pointed out a fatal flaw in this hypothesis: unlike with Phoenician, the stance of the letters of these inscriptions from Israel was not fixed, meaning that the author was free to write letters with dramatically different degrees of rotation, even within the same inscription. For example, the *nun* (letter 4) is precisely in reverse of its normal stance in the Phoenician

alphabet (Rollston 2013), as this letter can be contrasted with Phoenician *N* in Fig. 5. For this reason alone, Phoenician and its fixed letter-stance cannot be the language of the inscription.

The next language and script to evaluate is late-Canaanite, which was mentioned above as the choice of Aḥituv and Rollston. Certainly late-Canaanite could be the script on the inscription if Galil's reconstruction of the two *yods* is wrong. Yet if Galil is correct, the fatal flaw of Canaanite as the source script is the orthography related to the words that have been preserved on the potsherd. With the restoration of the two *yods* that almost certainly yield the word *yyn* ('wine'), the spelling of this word strongly points to Judahite Hebrew as its origin.

As Galil has proven, the orthographic form *yyn* is restricted to a southern Hebrew dialect, given that Ugaritic, Old Canaanite, Ammonite, Phoenician, and even northern-Israelite Hebrew spelled 'wine' with only one *yod* (Galil 2013d, 17–18). The form *yn* appears in Ugaritic texts dozens of times, always without a reduplicated *yod* (del Olmo Lete and Sanmartín 2003, 968–71). The Old Canaanite form *ye-nu* is attested in the tri-lingual cuneiform fragment from Tel Aphek (Rainey 1983, 137).

In Ammonite, the form *yn* appears in an administrative ostrakon from Heshbon, dated to the late 7th or early 6th century BC (Aufrecht 1989, 807–808; Aḥituv 2008, 370–74). In Phoenician, once again only the bi-consonantal *yn* has been found, one from Shiqmona (near Haifa) and the other having originated in Gaza (Cross 1968, 226–33; 2003, 286–89; Naveh 1987, 27; 2009, 324). In northern-Israelite Hebrew, the spelling *yn* is attested dozens of times in the Samaria Ostraca, which date to the 8th century BC (Aḥituv 2008, 258–310).

In contrast to all of this evidence for 'wine' having been spelled *yn*, the geminated form *yyn* uniquely is attested throughout the area under Judahite control, such as on the Arad Ostraca nos. 1–4, 8, and 10–11 (Aharoni 1981, 12–19, 24–25; Aḥituv 2008, 84, 88–89, 92–103, 109–12). The tri-consonantal form also appears on an unprovenanced jar from Idna ('belonging to Yahzeyahu, blue *yyn*'), in the area of Hebron (Avigad 1972, 1–5; Demsky 1972, 233–34; Paul 1975, 42; 2005, 71), as well as on the inscription *lmtnyhw. yyn.nsk. rb't*, 'Belonging to Mattanyahu, libation wine—(one) quarter' (Deutsch and Heltzer 1994, 23–26). Thus Galil's deduction that the *yyn* spelling is restricted to the Judahite Hebrew language is extremely strong.

Therefore, if the *yy* restoration is correct for letters 2 and 3 on the Ophel pithos inscription—and no other viable option appears to exist, given the number, varying size, and position of the remnant-strokes on the potsherd—late-Canaanite is quite implausible, and Judahite Hebrew would remain the only legitimate option for the language of the inscription. Before concluding this section on the inscription's transcription and translation, some amplification of the favoured reading is in order.

As stated previously, the adjective visible on the potsherd derives from the word for 'smooth', and yet the connotation for this word in biblical contexts is always one of negativity. Therefore, it may be erroneous to consider that the vintner merely was claiming that this pithos-full of wine was the type that rolls down one's throat smoothly and enjoyably. Such advertising in antiquity simply did not occur. Galil's recent argumentation provides a solution to this dilemma that remains faithful to word-usage and avoids all notions of ancient advertisement (Galil 2013d, 18–20), though perhaps his translation can be taken a step further.

Galil noted that the expression *yn hlyq* appears in a Ugaritic administrative text (RS 16.127 = UT 1084 = KTU 4.213; Delavault and Lemaire 1975, 31–36), where the text enumerates quantities of various qualities of 'wine' and records where they were stored (ll. 1–23). The term *yn hlyq* is found only in the first paragraph of the text (ll. 1–3): '15 (jars) of good wine (*yn tb*), and 90 heavy jars of secondary-quality wine (*kdm.kbd.yn.d.l.tb*), and 40 (jars) of *yn hlyq*—all jars being stored at Gath-SKNM'. The quality of the 'wine' obviously was presented in descending order: good wine, secondary-quality wine, and lastly what Galil has termed 'inferior quality wine' (Galil 2013d, 18).

Galil documented the reference to secondary-quality wine in the Mari tablets (ARM 9 17:12, 186:1) and noted that *yn hlq* usually has been referred to as bad wine of poor or inferior quality, given that in Ugaritic *hlq* has been translated, ‘lost, missing, destroyed, spoiled’ (del Olmo Lete and Sanmartín 1996, 192). The Akkadian adjective *halqu* has the same meaning (CAD, H: 192), and scholarly opinion has confirmed this understanding (Galil 2013d, 19).

The dictionary of del Olmo Lete and Sanmartín renders ‘*hlq* as ‘ruined, spoilt, said of wine turned sour with time: *yn hlq* spoilt wine (sour with time)’ (del Olmo Lete and Sanmartín 2003, 394, 969). Galil pointed out that related terms are attested in the biblical text, the Arad inscriptions, and in Greek, Roman, and Rabbinic sources, including the expression *hms yyn*, which appears in the regulations for a Nazirite (Galil 2013d, 20). The man under a Nazirite vow was to abstain from wine and any other intoxicant, and additionally he was not to drink *hms yyn* or anything in which grapes had been steeped (Num 6:3).

While ‘vinegar’ often is the word translated for *hms*, clearly these regulations cannot refer to raw vinegar, but to a type of drink with a vinegar base yet heavily diluted with water, or a mixture of water and wine that had turned sour with time (Galil 2013d, 20). Aharoni identified *hms* of the Arad inscriptions (*N*<sub>0</sub> 2, ll. 7–8) with biblical *hms yyn*: ‘wine vinegar, apparently (sent) in time of an emergency’ (Aharoni 1981, 16). Lemaire added that *hms* was a cheap wine that was made by mixing water and grape residue and allowing it to ferment, which he called the usual drink of rural workers and soldiers (Lemaire 1977, 163).

Ahituv identified both *hms* and *hms yyn* with the well-known Roman drink *posca*, noting that the mixture of vinegar and water, sometimes sweetened with honey, was a popular beverage of the Roman legionaries; he also stated that perhaps the prohibition on drinking vinegar in the Nazirite regulations refers not to raw vinegar but to a similar beverage (Ahituv 2008, 98).

All of this evidence has caused Galil to translate *yyn hlq* on the Ophel pithos inscription as ‘inferior wine’, and to suggest that since the pithos dates to the second half of the 10th century BC, it probably is associated with the third decade of Solomon’s reign or later. Galil then tied the use of this inferior wine in the area of Jerusalem’s Ophel to the building of monumental building projects under Solomon, such as his palace and the First Temple (Galil 2013d, 21).

While no extra-biblical evidence has verified Solomon’s existence historically, Galil’s assertion can be applied to the contemporary, monumental architecture that Eilat Mazar has excavated just to the north of where the Ophel pithoi were discovered. This grand set of structures consists of a gatehouse complex (including a four-chambered gatehouse, a large tower, and an outer gatehouse), a ‘royal structure’, a straight wall, a smaller (adjoining) tower, and part of a connecting casemate (city) wall (Mazar 2009, 146–147).

Mazar dated the construction of the complex’s royal structure to the late 10th century BC based on ceramic analysis, notably the presence of a precisely datable black juglet. Also diagnostic was a frog scaraboid found in the fill beneath the lower floor of the royal structure, which can be dated stylistically to *c.* 1050–900 BC (Mazar 2009, 113, 147).

The labour required for these structures alone, including the casemate wall that undoubtedly surrounded the perimeter of the new parts of Jerusalem that were added to the Jebusite city, would have required an enormous labour force, thus making Galil’s theory plausible that an inferior grade of wine would have been issued to them in great volume. If the biblical text is to be trusted, these workers were ‘men subjected to forced labour’ (1 Kgs 4:6).

Mazar’s excavation of the gatehouse complex and the pithos inscription seemingly present a difficulty for the low chronology. Given that the complex’s pottery dates to the Iron Age IIA and features casemate walls, the latter of which Finkelstein considers to be diagnostic for the time of Omride architecture (Finkelstein and Lipschits 2010, 33), a synchronisation of northern Israel with Judah at this time would require that a Judahite king ruling at the time of Omri or Ahab was on the throne in Judah during this constructional phase. This would leave only one known Israelite occupational phase at Jerusalem before the Iron-IIA phase, meaning that the

reigns of David, Solomon, Rehoboam, Abijah, and Asa would have to be squeezed into a brief period of time. Perhaps the only solution to this dilemma would be to propose that they all are non-historical figures, despite the Tel Dan Stele's apparent reference to the 'house of David'.

A final word must be said about the translation of *hlq*. As noted above, the verbal root of the word implies the element of deception. Applied to this inferior type of wine, literally this was 'deceiving wine'. The drinker would know the difference in the type of wine he or she possessed only after tasting, so the implication is that this beverage was a false, spurious, phony wine.

Perhaps the best analogy is gold vs. pyrite: pyrite is useful for some purposes, but the value of genuine gold is never inherent within pyrite. In light of this, the best rendering of *yn hlq* seems to be 'pseudo-wine'. Moreover, the possibility exists that there was a double meaning intended by the speaker, since 'wine' with a high concentration of water would pass from the mouth to the stomach far 'smoother' than if the drink contained a high percentage of alcohol.

In summary, while several readings are possible for the Ophel pithos inscription's text, the best option for translation appears to be this: '[In the fir]t [(regnal) year]: pseudo-[win]e from [the garden of ??]'. While there is no certainty about the king under whose reign the pithos was produced, Year 1 of Solomon fits the historical and biblical contexts best. This is about as much as one can say about the translational and chronological possibilities related to the inscription on the pithos, but more can be said about Pithos 1's dating, based on archaeology.

### 3. DATING OF THE OPHEL PITHOS INSCRIPTION'S ARCHAEOLOGICAL CONTEXT

One of the areas of greatest dispute regarding the Ophel pithos inscription is its dating, though this matter cannot be separated from the dating of the pithos on which it was written, or from the other pithoi that were found together with it in Locus L.223C. According to Mazar, Type-A pithoi date as early as the 11th century BC, while the later Type-B pithoi (of which the Ophel inscription is one) usually are found together with an even later sub-group of pithos where they can be dated as late as the 9th century BC.

Ahituv suggested that the script of the inciser is connected orthographically to the 11th–10th centuries BC, while Mazar dated the ceramic assemblage to the 10th century BC (Mazar, Ben-Shlomo, and Ahituv 2013, 39, 42–43), probably because of the presence of Type-A potsherds found together with those of Type B (including Pithos 1), which ceramic form rapidly followed that of Type A.

In Rollston's preliminary study of the inscription, he stated that he is most comfortable with dating the inscription to the 11th century BC. The reason for Rollston's dating is the varied stance of the inscription's letters and his conclusion that it was written in dextrograde form, which was still in practice at this time, before the direction of the writing of this language was fixed during the terminal phase of the 2nd millennium BC (Rollston 2013).

As important as Rollston's comments are, he neither provided a clear or convincing reason why a 10th-century BC date is implausible, nor explained how a (most-likely) Hebrew inscription could have been placed in a constructional deposit in Jerusalem during the century before Israelites could have controlled the city. Plus, based on Galil's correct decipherment of the text, the inscription has been proven to read in sinistrograde form, not dextrograde. Moreover, Rollston has not dealt with Mazar's argumentation for relative dating based on the archaeological context of the inscription's potsherds.

It seems that Locus L.223C would have to be the only known context for an 11th-century-BC date for a pithos of the Type-B variety for Rollston's dating to be correct. Conversely, the large building that was built directly over the pit with these seven pithoi dates to the early Iron Age IIA, so a date earlier than the 10th century BC is extremely

problematic, as well. Galil is in agreement with the present writer that the archaeological data rule out a date of the 11th century BC for the inscribed pithos (Galil 2013d, 13).

Therefore, unless evidence should arise to validate the dating of Type-B pithoi to the 11th century BC, Mazar's choice of the 10th century BC ought to be followed as the best possible option. Mazar's 10th-century-BC dating for the archaeological context of the pithoi harmonises well with the dating of the inscription, which together (likely) imply Regnal Year 1 of an unnamed Israelite king soon after Jerusalem had fallen into Israelite hands, in turn implying that at least Judah already was governed by a strong, central authority under monarchical rule. While the evidence says nothing of the extent or might of this monarchy, it clearly speaks to the peace and prosperity that existed in Jerusalem both at the time that the pithoi were manufactured and when the house was built over the fill that stabilised its foundation.

#### 4. CONCLUSION

The Ophel pithos inscription represents an exciting new chapter in Jerusalem's history, being that its findspot is a stratified deposit that can be dated within a precise range of time, namely the early Iron Age IIA. Mazar dated Pithos 1 and its inscription to the 10th century BC, and her dating seems fully justified, unless one favours a late chronology such as that of Finkelstein. How does this archaeological dating fit with biblical chronology?

The meticulous work of Edwin Thiele, who established synchronisms between Assyrian and biblical records, combined with the recent refinements of Rodger Young, identifies the first year of the Israelite construction on the First Temple as May of 967 BC (Thiele 1994, 80; Young 2003, 601–602), meaning that David would not have captured Jerusalem (2 Sam 5:6–9) until *c.* 1002 BC (Steinmann 2011, 122).<sup>3</sup>

The evidence has demonstrated that the Ophel pithos inscription almost certainly was written in paleo-Hebrew, especially if the reconstruction of two *yods* is correct, as opposed to Philistine, Phoenician, or late-Canaanite. The letters on the inscription match those of contemporary inscriptions and form known words in the Judahite Hebrew language (*yyn hlq*), leading to this translation: '[In the first] [(regnal) year]: pseudo-[win]e from [the garden of??]'. For all who object that this conclusion is based on two reconstructed letters, it cannot be stated strongly enough that what is awry in the inscription's visible text is not a complete lacuna.

Instead, there are three remnant strokes of varying shapes, angles, and thicknesses, which in unison—including their proximity to one another—tell a detailed and complex story to the observant reader. In short, these three remnant-strokes are as much a part of the inscription as any of the complete letters. The possibilities for how to understand the missing parts of the strokes are exceedingly limited, since the entire paleo-Hebrew alphabet is known and the gap between the visible letters bracketing this area is defined and quite small. Thus the ascription of two *yods* as the answer to the missing parts of the strokes is far from arbitrary or uncalculated, and the burden of proof rests on anyone desiring to unseat this well-conceived reconstruction.

In Yosef Garfinkel's *BAR* article of 2012, he stated that his epigrapher, Haggai Misgav, called the language of the Qeiyafa Ostrakon inscription, 'Hebrew'. Garfinkel also suggested that the Gezer Calendar, the Tel Zayit Abecedary, and the Izbet Şarṭah Abecedary represent an earlier phase of the Hebrew language. Finally, he asked the penetrating question of who built the Iron Age cities of Israel and Judah if these inscriptions are Canaanite, Phoenician, or Moabite (Garfinkel 2012, 58–59).

This study confirms that Garfinkel's identification of many of these inscriptions as Hebrew writings is not only sensible historically and archaeologically, but also verifiable epigraphically and linguistically. The depositional context reveals that the inscription can be dated with relative confidence to the 10th century BC, and—if the formulaic pattern for the labelling of wine

jars was used—even to an inconclusive regnal year of an unnamed Israelite king, though Year 1 of the reign of Solomon, if not Rehoboam, is the most likely reconstruction.

Thus of vital significance is that the inscription probably—but not definitively—implies the existence of an Israelite monarchy during the 10th century BC, though it would say nothing about how expansive that monarchy was or whether David, Solomon, or Rehoboam actually existed. This conclusion harmonises well with Mazar's discovery of monumental architecture that she attributed as the palace of David, the dating of which is confirmed by Iron-IIA pottery found in Locus L47 between two walls (W22 and W24) of the building (Mazar 2009, 50), and with her discovery of a gatehouse complex with casemate fortifications that she considers part of a Solomonic wall (1 Kgs 9:15) and defensive system that was built to the northeast of the Large Stone Structure that she called the Davidic palace (Mazar 2011, 142–146).

The Ophel pithos inscription appears to be the oldest Hebrew inscription ever uncovered in Jerusalem, outdating the discovery in February 2008 of a fragment of a monumental inscription from the 8th century BC that was found in the City of David (Reich and Shukron 2008, 48), as well as that of a fragment of a Hebrew inscription dating to the 7th century BC that was found in October 1982 at the Ophel (Naveh 1982, 195). Since large storage jars with wine imply long and peaceful inhabitation, Hebrew-speakers almost certainly maintained control of Jerusalem for a long period of time throughout the 10th century BC. This is especially true since Type-A and Type-B pithoi were situated together, and since an Iron-IIA house was built over the constructional deposit that included these wine-jar potsherds.

If biblical chronology is tested against the archaeological evidence, the result is that the inscription dates to a time after *c.* 1002 BC, given that the presence of a Hebrew inscription from Jerusalem is contingent on the Israelite conquest of Jerusalem under David, who reportedly was the first Israelite leader to secure the future capital for the ancient Israelite state. How long after *c.* 1002 BC the inscription dates depends on one's view of ancient Israelite chronology.

## NOTES

<sup>1</sup> With the numbers 1–10, ordinal numbers were used with year/month-dates through ten; for numbers greater than ten, cardinal numbers were used.

<sup>2</sup> Much less frequently, Hebrew numbers were written with *ones* before *tens*, such as 'one-and-twenty' (as with German). An example of this is the writing of '32' in Num 31:40, which features '20' written second (*šēnayim iššēlōšim*). In light of this, technically Years 21–39 are also possible for the regnal year.

<sup>3</sup> With the help of Rodger Young, the present writer can offer the following reconstruction. A reasonable deduction is that David would have died in *c.* 969 BC, and that his reign in Jerusalem began 33 years earlier (1 Sam 5:4–5),

thus in *c.* 1002 BC. Solomon would have died in the Judean regnal year beginning in Tishri (September–October) of 932 BC after a reign of 40 years (non-accession reckoning), and certainly there was a coregency with David (1 Kings 1). While there is indefiniteness in determining when David would have died, by about two years, it probably would have been before construction on the Temple began in Year 4 of Solomon (1 Kgs 6:1). Since David actively gathered material for the Temple's construction (1 Chronicles 29), a reasonable conjecture is that he died about one-and-a-half years before construction of the Solomonic Temple began in spring of 967 BC, thus equating to 969 BC.

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