CHAPTER ONE: MEET & GREET BIBLICAL HEBREW—A SEMITIC LANGUAGE

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1. Preliminary Remarks

Before we delve into the specifics of the structure of Hebrew, let’s find out what kind of language Hebrew is and what makes it tick.

1.1 Linguistics in General; Semitic Languages in Particular

1.1.1(a) Those who study languages—‘linguists’—group the world’s languages into ‘families’ based upon their multiple common features. English, for example, is called an ‘Indo-European’ language, due to certain features in common with some 450 other languages including Latin, Italian, French, Spanish, German, and Hindi. (More specifically, English is a member of the sub-category ‘Germanic’ languages, evidencing stronger similarities to languages such as German, Dutch, and Danish.)

1.1.1(b) Hebrew, on the contrary, belongs to the ‘Semitic’ languages, a sub-category of the ‘Afro-Asiatic’ language family (the non-Semitic representatives of which are Ancient Egyptian [and its successor Coptic], Cushitic, Berber, Chadic, and possibly Omotic).

1.1.1(c) Although there were and are many Semitic languages, our chief concern is the six ‘literary’ Semitic languages; that is, the languages owning a sizeable literary corpus: Akkadian (perhaps a million tablets), Ugaritic (thousands of tablets, including the Baal Cycle), Hebrew (nearly all of the Old Testament; Mishnah; many Medieval rabbinic writings), Aramaic (Targums, Peshitta; Talmud), Arabic (Qur’an; poems, scientific and philosophical writings), and Ethiopic or Ge’ez (New Testament translation; pseudopigraphal books). The other languages are attested only in inscriptions (e.g. Moabite) or names (e.g. Amorite).

1.2 What’s in a Name?

Genesis 10, known as the Table of Nations, lists the families of Japheth, Ham, and Shem, and refers to their languages (5, 20, 31); the term ‘Semitic’ comes from Shem mentioned therein. In 1710 the polymath Gottfried Leibnitz noticed broad linguistic similarities among the languages of most of the descendents of Shem and Ham found in the Table. But he didn’t refer to them as ‘Semitic’ but rather as ‘Aramaic’ (the language now called Aramaic was known as ‘Chaldee’ at the time). The distinction of calling them ‘Semitic’ goes to A. L. Schlözer of the Göttingen School of History, who minted the term in 1781. In the nineteenth century J. G. Eichhorn (of the same school) popularized it, eventually supplanting older names (especially ‘Oriental languages’).

1.3 The Old Ones

1.3.1(a) Besides featuring the fifth most widely spoken language in the world, Arabic (after English, Chinese, Hindi, and Spanish), the Semitic languages are among the oldest languages. We have Old Akkadian and Eblaite texts going back to the third millennium B.C. (only Egyptian and Sumerian are known to be older), and the poetry of Job may be of a similar vintage. Although the languages are so ancient, several of these were only recently deciphered: Akkadian in 1859, Ugaritic in 1931, and Eblaite in the 1970s.

1.3.1(b) At various time periods Semitic languages have been the language of trade and culture—the so-called lingua franca—of the known world. Old Babylonian Akkadian served in that capacity during the second millennium B.C. and was superseded by Aramaic during the first millennium B.C. until it was in turn replaced by Indo-European languages: Greek, then Latin, then French (hence the term lingua franca), and English today.

1.4 Today’s Scene

Presently, Semitic languages claim in excess of 456 million speakers, or about 5.9 percent of earth’s population. Most are Arabic speakers—about 420 million in the Middle East and north Africa (up to 1.8 billion can read classical Arabic). The next most prevalent are the more than 26 million speakers of the Ethiopic languages of Amharic, Tigre, and Mehri. This is followed by approximately 9 million Modern
Hebrew speakers in Israel, and rounded out by roughly 1 million speakers of neo-Aramaic dialects in enclaves in Syria, Iraq, Turkey, and Iran.

1.5 Closing

1.5.1 Later on we’ll survey the literary Semitic languages, but for now we want to look at what makes the Semitic languages so different and so special.

1.5.2 As we begin to consider the structure of the Semitic languages, it is well to keep in mind that the classical grammatical designations—developed for Indo-European languages—often do not apply at all, or apply only approximately. Consequently we need to think in new categories. And in keeping with that we need to define the following symbols for letters not found in English you will see at times in the discussions below.

<table>
<thead>
<tr>
<th>symbol</th>
<th>name</th>
<th>pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʾ</td>
<td>‘aleph</td>
<td>as between o’s in cooperate, or Cockney l’il (little)</td>
</tr>
<tr>
<td>d</td>
<td>the</td>
<td>as in the</td>
</tr>
<tr>
<td>ð</td>
<td>ḍe</td>
<td>a combination of a d and release of a throat tightening</td>
</tr>
<tr>
<td>ḡ</td>
<td>ġayin</td>
<td>as in Gaelic gh</td>
</tr>
<tr>
<td>ḫ</td>
<td>ḫet</td>
<td>a gutteral sound deep in the throat, like a cat hacking a hairball</td>
</tr>
<tr>
<td>ḱ</td>
<td>rocking-horse h</td>
<td>as in Scottish loch</td>
</tr>
<tr>
<td>ʿ</td>
<td>‘ayin</td>
<td>a gutteral sound made deep in the throat and voiced</td>
</tr>
<tr>
<td>š</td>
<td>tsadhe</td>
<td>as in cats, or German Zug</td>
</tr>
<tr>
<td>š</td>
<td>sin</td>
<td>as an s but with the tongue positioned to say an l</td>
</tr>
<tr>
<td>ŝ</td>
<td>shin</td>
<td>as in ship</td>
</tr>
<tr>
<td>ð</td>
<td>th</td>
<td>as in thin</td>
</tr>
<tr>
<td>ṭ</td>
<td>tet</td>
<td>a combination of a t and release of a throat tightening</td>
</tr>
<tr>
<td>يعرف / ṣ</td>
<td>ẓe / ṭe</td>
<td>a combination of a ṭ and release of a throat tightening</td>
</tr>
</tbody>
</table>

A macron over a vowel (ā ē ī ō ū) or a circumflex (ē ĩ ŏ ū) indicates the vowel is long, a schwa (˘) is a reduced vowel as in about. A superscripted h indicates that the last letter is a vowel letter marking a final vowel, not a consonant.

1.5.3 We also need to define a few linguistic terms before proceeding further:

‘Phonology’—the study of meaningful sound in a language

‘Morphology’—how the structure of individual nouns, verbs, and particles conveys grammatical function in a language

‘Syntax’—how nouns, verbs, and particles relate to one another to convey thought in a language

‘Semantics’—the study of meaning in a language

‘Lexicography’—codifying the interconnections between words and groups of related words and their referents (people, objects, ideas) in a language

2. What Makes the Semitic Languages Tick?

2.1 The "Big One"

2.1.1 Verbs and Nouns Derived from them

2.1.1.1 The Semitic languages (and to a lesser extent the greater Afro-Asiatic language family to which they belong) systemically adhere to a sharp separation between the roles played by consonants and by vowels in verbs and nouns derived from them (the vast majority of words in these languages), a separation little observed, if ever, in other languages, but is that which distinguishes the Semitic languages from all others.
Furthermore, we may say with reason that it is the genius of the Semitic languages. Only the consonants carry the lexical meaning; vowels contribute nothing to it. They have another role to play.

2.1.1(b) The importance of firmly grasping this essence of the Semitic languages cannot be overstated. It is the master key which unlocks these languages, for in one way or another it pervades each and every aspect of all of them. A failure to understand this bifurcation can spell disaster for the learner: vocabulary mastery and grammar aptitude both are dependent on it, including and especially, parsing verbs rapidly and accurately and thus being able to analyze them correctly.

2.1.1(c) We can demonstrate this quintessential property and its power by comparing and contrasting it to English.

2.1.1(d) In English we sometimes find a curiosity such as *A singer sang a song* or *A drunkard drank another drink*. In these sentences, morpho-semantic syntactic items—here the subject (more technically the privileged syntactic argument, PSA), verb, and direct object (also called the secondary argument, SA)—are all lexically related: in this instance by sharing *sing* or *drink*. Rarely in English does this occur. Quite often the PSA, verb, and direct object are wholly unconnected “lexemes” (from *lexis*, Latin for “word”), as in *The runner sprinted during the last three seconds of the race*.

2.1.1(e) But in the Semitic languages *all* verbs and nouns derived from them exist in such groups and are so related. There are no exceptions. Consequently a relatively small inventory of basic words is sufficient for the vocabulary of a Semitic language. Modified one way, it is a verb; modified another it is a noun (if derived from a verb); and both noun and verb modifications are specific enough to pick out the difference between a person who steals only a few times, and a person characterized by stealing (which we designate in English by the unrelated word *thief*), between stealing, something entering the condition of becoming stolen, stealing many things, causing someone to steal, and many other shades of meaning and function—in a way which economizes space and words and which instantly conveys the basic idea under discussion in addition to the specifics.

2.1.1(f) Having briefly introduced this central feature, emphasized its significance, and hinted at its potential, we now turn to explain what it is and how it works, because it seems extremely odd to speakers of other languages and its structure is so peculiar that the linguistic viability of it was not settled with finality until 2010 (!). It sounds unassuming enough: *root and pattern*. But oh what power is in those words.

2.1.1(g) The *root* consists of a sequence of usually three (sometimes two, very seldom four) consonants. This sequence carries the basic meaning—the general lexical value—and is therefore a ‘morpheme’ (a unit of meaning or grammatical function which cannot be segmented into smaller units of function or meaning; varieties are ‘free morphemes’, which can stand alone as a word, and ‘bound morphemes’, which cannot).

2.1.1(h) The *pattern* consists of a sequence of vowels or marked syllable closures (traditionally called ‘silent *sh’r’wa*’) inserted between the consonants of the root (and in certain instances, augmentations affixed to the beginning and end of the root, and/or doubling of the middle consonant): this sequence of internal vowels, etc. encodes the specific modification—morpho-semantic syntactic particulars—and is therefore a morpheme as well.

2.1.1(i) Any pattern, in theory, can be applied to any root. In fact though, some root and pattern combinations are not attested in our texts.

2.1.1(j) The consonants of the root are *discontiguous*—a vowel of some value or marked syllable closure follows each consonant, so that the consonants are separated.

2.1.1(k) Necessarily, the elements of the pattern are likewise discontiguous—because only one true vowel ever appears in any given syllable and only one marked syllable closure occurs at the interface between consonants (where the first of these consonants is not followed by a vowel). Thus, there are consonants separating vowels or separating vowels from marked syllable closures.
2.1.1(f) The concept of discontiguity is vital (although some linguists still object to it), because a Semitic verb or derived noun comprises a discontiguous morphemic pattern or coupling of patterns interlaced with a discontiguous morphemic root. It is not unlike folding hands, in which the fingers of the right hand naturally interdigitate with those of the left. Furthermore, it must be understood that unlike Indo-European languages, in which a change of vowel(s) can change the basic meaning of the verb (e.g. to pān, to pen, to pān, and to pān in English or ḫabīn ‘feast’ [the eyes]), ḫebīn ‘live’, ḫeben ‘love’, and ḫoben ‘praise’ in German) or of a noun (e.g. ḫag, ḫag, ḫog, and ḫug), Semitic vowels in verbal roots and derived nouns do not and indeed cannot alter the basic meaning of the root. Their only role is to fine-tune the meaning dictated by the root and/or indicate grammatical function.

2.1.1(m) Nor can the root affect the function of the pattern. (However in some cases, the presence of a particular consonant will alter the pattern in a predictable way, without affecting the signification of the pattern.)

2.1.1(n) Now we will illustrate, from Hebrew, how root and pattern interact. If we assume that a certain root has linguistic reality, then that sequence is connected to a particular meaning, and all words containing that sequence share that meaning. For example, for the root K T B, because it is connected with writing, every word possessing K T B is connected with writing: Kūṭēb ‘writer’, Kāṭūb ‘written’, Kāṭāb ‘he wrote’, Yīkṭūb ‘he writes’ / ‘he is writing’ / ‘he will write’, Mīkṭūb ‘[writing] tablet’, etc.

2.1.1(o) Alternatively, a root is that discontiguous sequence shared by all words having a common basic meaning. So, we observe that the words Kūṭēb ‘writer’, Kāṭūb ‘written’, Kāṭāb ‘he wrote’, Yīkṭūb ‘he will write’, and Mīkṭūb ‘tablet [for writing]’, etc., which all concern writing, share the sequence K T B.

2.1.1(p)(1) Now we will look at the patterns in the above example, recalling that to each pattern is attached a specific grammatical function or modification of meaning. We will use the symbol □ to represent any root consonant. The first pattern is □ō□ē□, which indicates an active participle. So, with the root Q N B Gōnīb is ‘one who steals’. The second pattern, □ā□ū□, is a passive participle. So, Gōnīb is ‘stolen’. The third pattern □ā□a□ indicates past tense. So, Gōnīb is ‘he stole’. And so on.

2.1.1(p)(2) Incidentally, the noun (‘nominal’) pattern □a□ā□ indicates a profession or a defining characteristic (where □2 indicates consonant doubling). So, Gōnīb is ‘one who steals professionally’, that is, ‘a thief’. Thus, Hebrew can use the same root for one who steals and for thief by changing the pattern; whereas, English must change the lexeme. Also □ā□ē□ is a productive pattern, which refers to physical impairments: blindness (‘W R), deafness (H R $), muteness (‘L M), withered [appendages] (‘T R), hunch-backed (G B N), etc.

2.1.1(q) To reiterate: root and pattern are discontiguous morphemic sequences, semantically disassociated from one another, but perform always morphologically connected. And they each have their separate part to play in word formation and meaning.

2.1.2 Nouns and Particles not Derived from Verbs

2.1.2(a) Having dealt with verbal roots in the Semitic languages, we must now briefly touch on those nouns and particles not derived from verbs: the so-called primitive nouns (e.g., kinship terms, animals, body parts, tools and weapons, natural features and objects, etc., which are all designations of things), pronouns, prepositions, conjunctions, and other particles. This relatively small minority of words are very different from verbs and those nouns derived from them, in that vowels do contribute to their essential meaning and thus in that respect function as they do in the Indo-European languages.

2.1.2(b) A vowel is essential, if changing it changes the basic meaning. Note the following monosyllabic examples from biblical Hebrew in which this is so: ḫīm ‘if’ vs. ḫēm ‘mother’; ḫāl [negation] vs. ḫēl ‘towards’; ḫē ‘fire’ vs. ḫē ‘man’; ḫam ‘sea’ vs. ḫām ‘day’; ḫez ‘strong’ vs. ḫeṣ ‘she-goat’; ḫal ‘upon’, ‘over’, ‘beside’ vs. ḫal ‘yoke’ vs. ḫal ‘sucking’; ḫīm ‘with’ vs. ḫām ‘people’; ḫēr ‘city’ vs. ḫēr ‘skin’; etc. Some bi-syllabic examples are
hālāh ‘milk’ vs. ḥelēf ‘fat’; łyāken ‘to you [fpl]’ vs. łyākēn ‘therefore’; and ḥelēl ‘harp’ vs. nāḥal ‘fool’. Thus, in the above nouns and particles and any others like them, the vowels inform the lexical meaning.

2.2 Tri-radicalism

2.2.1 The Rule
2.2.1(a) Closely connected with root and pattern is the fact that verbal roots by and large are composed of three root letters or ‘radicals’, R₁, R₂, and R₃, where R₁ is the radical in the first position of the root, R₂ is in the second position, and R₃ is in the third. This is known as tri-radicalism.

2.2.1(b) But, not all root possibilities are attested in the Semitic languages. For instance in Hebrew, which has at least 23 different possibilities (because it has 23 different phonemes in its consonantal alphabet [an ‘abjad’]) for each position of the root, theoretically there would be at least 23 × 23 × 23 = 12,167 different roots. Some sequences however appear to be extremely limited or virtually non-existent. For example R₁ = R₃ is a very rare Semitic sequence, although it occurs in N T N ‘give’ (as might be expected a very common root), N G N ‘play [a musical instrument]’, and in the root meaning ‘root’, Š R Š. And R₁ = R₂ occurs in only one root in Hebrew (more in Akkadian). On the other hand, R₂ = R₃ is well represented.

2.2.1(c) Not only are identical consonants largely restricted to certain positions, but also the languages do not tolerate two non-identical, homorganic consonants (consonants pronounced in the same place in the mouth or throat) in the same root; for example, /b/ and /p/ can’t be in the same root nor can /g/ and /k/, etc. In fact, Akkadian dissimilates a second emphatic in a root (i.e., it causes it to lose its emphatic characteristics). The presence of s causes q to weaken to k, and t to weaken to ṭ; the presence of q causes ṭ to weaken to t, also. This behavior is known as Geer’s law.

2.2.2 The Exception?
2.2.2(a) Although tri-radicalism is pervasive in the Semitic languages, evidence can be adduced from the ‘weak’ or ‘irregular’ verbs that originally certain verbal roots may have been bi-radical. These verbs, which have only two consonants in some forms, fall into three camps—depending on which root position is weak, first, second, or third. ‘First weak’ manifests the presence of R₁ in certain forms, but in others has an initial vowel instead. ‘Middle weak’, ‘hollow’, or ‘biconsonantal’ roots, never betray the presence of R₂ in any of its forms and instead have a medial vowel. Consequently, they never look like a tri-radical verb. Analogous to middle weak verbs are ‘geminates’ (from Gemini), where R₂ = R₃. In geminates, in certain forms doubling is seen or the twin consonants are separated by a vowel (thus 3 root consonants); whereas, in others only one twin appears (thus 2 root consonants). ‘Third weak’ verbs, when properly understood, also do not manifest the presence of R₁ in any form, and instead have a final vowel. They also are biconsonantal, but not the same way as R₂ weak: third weak verbs look like tri-radical verbs but are not.

2.2.2(b) Notwithstanding, are weak verbs really an exception to tri-radicality? Were the root strictly consonantal, it would appear so. But if instead we consider it to comprise a sequence of three submorphemes which can be either consonants or radical vowels, then the weak verbs may be incorporated into the tri-radical system. In such a framework, even irregular verbs would be considered tri-radical, although not tri-consonantal, with two consonants and one vowel (what we could call a ‘mixed root’).

2.2.2(c) Nevertheless, most roots are tri-consonantal, that is, ‘strong’. Why is this? In languages in general, irregular verbs occur with a very high frequency. Think of the irregularities in the paradigm of to be: am, is, was, were, been, etc. and how commonly the verb occurs. We see the same situation obtain with the weak verbs in the Semitic languages. Texts are replete with them. Yet, considering languages at large, relatively few irregular verbs are attested in any given language. And so it is with the weak roots in the Semitic languages. Hence, tri-consonantalism dominates Semitic lexicography.

2.3 Sounds

2.3.1 An Important Clarification
Phonetics is the study of the sounds of a language apart from their meaning; phonology is the study of meaningful sounds. (In fact, in general the suffix -etic denotes ‘without meaning’ and -emic or -eme ‘with meaning’.)

2.3.2 Consonants
2.3.2(a) The sounds of consonants may be described in terms of where they are pronounced in the mouth or throat (point of articulation), whether their pronunciation involves shutting off and on the air flow (‘stops’/’plosives’) or merely narrowing the channel through which air flows (‘fricatives’/’continuants’), their ‘voicing’ (e.g. in English, /t/ is unvoiced; /d/ is voiced), and their resonance chambers (mouth or nose).

2.3.2(b) The Semitic languages have two groups of consonants rarely found in other language families—gutturals (save heh, which has the very common h-sound) and emphatics—besides a third group warranting our attention, sibilants.

2.3.2(b)(1) Gutterals. The first group may be classified by their point of articulation: ‘laryngeals’ at the back of the throat in ‘pharyngeals’ at the back of the throat at the pharynx, and ‘velars’ at the velum, the soft palate. Uvulars are pronounced at the uvula, at the rear of the soft palate. The laryngeals ’aleph and heh, and the pharyngeals het and ayin, are attested in all the Semitic languages except Akkadian. Velars/uvulars b and ġ are both absent in Hebrew and Aramaic; only b is found in Akkadian and Ethiopic; and both ġ and b are attested in Ugaritic and Arabic.

2.3.2(b)(2) Emphatics. Now let’s look at the second group—focusing on just Hebrew and Aramaic for the moment—of t, s, and q, which had an ‘ejective’ pronunciation; that is, it is at the same time pronounced at the primary point of articulation and at the glottis. Arabic had/has two additional emphatics, ð and ħ. Ugaritic had one of these, ħ. Ethiopic, the other, ð.

2.3.2(b)(3) Sibilants. The third group includes s, š, and š, but our interest is particularly with š, called a lateral sibilant, possibly pronounced like a Welsh ll. š is attested in Hebrew and Epigraphic South Arabic (ESA) but merges with s in Akkadian and Ugaritic, merges with s in Aramaic and even in Late Biblical Hebrew (LBH), and appears as the Arabic and Ethiopic š (whereas, Hebrew š appears in Arabic and Ethiopic as s).

2.3.3 Vowels
Semitic languages are built on a system of three vowel classes, a, i, and u, short and long; although some argue that earlier only a binary opposition existed, namely a against i/u. Indeed, there is evidence for this, but the vowels in the literary languages form a trinary structure. We refer to these three classes pedagogically as red, green, and orange, respectively; and similarly, to round things out, to all reduced vowels and syllable closure markers as purple.

2.4 Forms

2.4.1 Number
Besides distinguishing singular (sing. /s) from plural (pl./p), which is common in Indo-European languages, the Semitic languages have a dual! For the most part however it is not systemically productive in most of the languages: it is usually confined to references to parts of the body naturally occurring in pairs (eyes, ears, nostrils, hands, feet, etc.).

2.4.2 Gender
Pronouns, which are marked for person (p), gender (g), and number (n), have distinct forms for 2nd person masculine (masc./m) and feminine (fem./f) in singular and plural as well as 3rd person. Verbs, because their forms incorporate parts of independent personal pronouns (prefixed and/or suffixed pronoun stubs called ‘pronominal clitics’), similarly distinguish gender in 2nd person besides 3rd.

2.4.3 Verbs
2.4.3(a) Structure. Every Semitic verb is a combination of three discontiguous morphemes, a root and a two-part pattern, which determine the three components of a verb: a root (the lexical component); an inner core
pattern, which determines the stem (the semantic and syntactic component); and an outer perimeter pattern, which determines the form (the functional component; e.g., person, gender, number, tense). Thus, a verb is a tri-morphemic complex—a root, an inner pattern, and an outer pattern.

2.4.3(b) The Patterns.

2.4.3(b)(1) The core pattern consists of any prefix or preformative vowels, any vowels among the root letters, and any augmentations. The verb core is its root interlaced with its core pattern. See Figure 1.

2.4.3(b)(2) The perimeter pattern consists of either 1) a suffix bound to the back of the core or 2) a 'circumfix'—the first letter of a prefix, and a whole suffix—flanking the core. See Figure 1.

1) □ □ ● □ ● □ ★

2) ★ □ □ ● □ ● □ ★

Figure 1. Schematic of a Semitic Verb. □ = root consonant. For the rest of the symbols, solids will be there; outlined may be there. The core pattern comprises the sequence of □ or ● and possible doubling (★). The perimeter patterns are of two types either 1) a form with a suffix only—schematically, ★ at the end; or 2) a form with both prefixes and suffixes—★'s flanking the core.

2.4.3(b)(3) Although the three morphemes are interlaced in the verb, there is partial interdependence of root, form (perimeter pattern), and stem (core pattern). In three ways they evince independence, and in three ways, interdependence.

2.4.3(b)(3)(a) Evincing independence—forms and stems vis à vis roots; roots vis a vis. stems; stems and roots vis à vis forms:

1) In all forms and stems, a given root has the same basic meaning.

2) For all roots, the generalized core pattern for a particular stem and form is the same. This generalized core pattern is not affected by the root. The visible core pattern can be affected by the root—in a predictable way. Consequently, the visible core pattern can be adjusted to fit the generalized core pattern.

3) For all stems and roots, the perimeter pattern for a given form is the same. Perimeter patterns are what they are: they do not change.

2.4.3(b)(3)(b) Evincing interdependence—perimeter patterns for forms and core patterns for stems:

1) Each form maps to a set of core patterns for stems.

2) Each core pattern maps to a set of related forms.

3) Although core patterns do not determine person, gender, and number, they do indicate how they are marked: whether by a suffix alone or by alliance between a prefix and a suffix.

2.4.3(b)(4) In short, roots are disassociated from patterns; but patterns affect each other.

2.4.3(c) Stems All Semitic languages have a system of verbal semantic transformations which preserve the basic meaning, called a stem system (which braids morphology, semantics, and syntax together). For
example, ‘he walked’, he walked all around’, and ‘he caused someone to walk’ are from different stems; but all involve walking.

2.4.3(d) Each stem in a particular Semitic language has a set of different form-dependent core patterns. In addition, the stems group into families consisting of the main stems and their passive counterparts (formulated in various ways). All of the languages have a ‘ground stem’ (Grundstamm, C, e.g., “walk”), and most have a passive counterpart. All have a ‘doubling stem’ (Doppelstamm, D, e.g., “walk all around”), marked, if possible, by the doubling of the middle radical of the root (hence the name), and its passive counterpart. And all have a ‘causative stem’ (Causativstamm, C, e.g., “cause to walk”), marked by a preformative, and again its passive counterpart. In addition, most of the languages have an ‘N stem’ (e.g., “[eyes] opened”), marked with a preformative n-. Other stems occur in the different languages to convey other transformations.

2.4.3(e) A given perimeter pattern determines a form. For that form, a particular core pattern determines a stem. The root is wholly independent from these.

2.4.4 Location of person, gender, and number marking
All the languages with which we are familiar mark person (1st, 2nd, 3rd), gender (masculine, feminine, and in some languages, neuter), and number (singular, plural, and in some languages, dual) with endings if they mark them by affixes at all (English marks for number, and rarely for gender, by suffixes—ship, ships; heir, heiress). The Semitic languages also mark the pgn of certain verb conjugations with suffixes only, but in addition they mark that of others with a prefix-suffix combination. Indeed, the conjugations are designated by the location of the pronominal clitics which are the pg markers.

2.4.5 Noun patterns
There are over twenty noun root patterns having a common significance in all the languages. For instance □a□ô□ô indicates occupation or dominant trait; mi or ma preformatives indicate place, time, means, or abstract; and -î or -ay indicate national affiliation (called a ‘gentilic’). Other patterns are language specific.

2.4.6 Numerals
Cardinal numbers (that is, counting numbers) 3–10 used with masculine nouns have feminine looking forms. Cardinal numbers 3–10 used with feminine nouns have masculine looking forms.

2.4.7 Plurals
2.4.7(a) To form noun plurals most Semitic languages add suffixes. An example for Hebrew would be sūs ‘horse/stallion’ and sūsīm ‘horses/stallions’ for masculine and sūsāh ‘mare’ and sūsāt ‘mares’ for feminine. In these instances the singular and plural share the same ‘base’—a sequence of consonants and vowels to which various suffixes are attached and which serves as the foundation for the attested nouns and adjectives (analogous to an Indo-European stem). Certain common nouns however form their plurals on another base; e.g. in Hebrew, bēn ‘son’, but bānīm ‘sons’; and originally tri-radical monosyllabic nouns form their plurals on a bi-syllabic base; e.g., *malak > melek ‘king’, but *malak + plural suffix -im > mallahim ‘kings’; and furthermore, some nouns form their plurals very irregularly, such as issaḥ ‘woman’, whose plural is nāšīm ‘women’.

2.4.7(b) But Arabic and Ethiopic form noun plurals in an entirely different way, known as broken plurals, in which various patterns are applied to the root of the singular base and suffixes are not employed. The pattern applied to a particular noun is not predictable and thus the plural of each noun must be learned along with the noun itself. And, incidentally, such plurals govern verbs as feminine singulars!

2.4.7(c) Near demonstratives use a different base for the plural. For example in Hebrew: zeh ‘this [masculine singular]’, zo‘ı ‘this [feminine singular]’; but ‘elleh ‘these [common plural]’

2.4.8 Adjectives
Adjectives are not common.
2.5 Relations

2.5.1 General
Predication, attribution, and completion can be effected both syntactically and morphologically.

2.5.2 Adjectives
Attributive adjectives follow their head nouns. *habbayit haggādōl* ‘the big house.’

2.5.3 Chaining
2.5.3(a) The scarcity of adjectives is compensated for by a chaining of nouns (traditionally called a ‘construct chain’), so that the lead noun “leans” on the noun which follows it—hence its Hebrew name *smīkūt* from *š m k* ‘rest or lean upon’. For example, Hebrew does not have an adjective “royal.” So, ‘the royal house’ is expressed through the chaining of two nouns, *bayit* ‘house’ and *meleḵ* ‘king’ as follows: *bēt hammeleḵ* ‘the house of the king’. All but the last noun in a chain is marked by vowel changes and/or loss of stress.

2.5.3(b) Chaining is often preferred even when an adjective is available.

2.5.4 Relative clauses
2.5.4(a) Relative clauses (whether they follow a relative pronoun or not) are independent clauses.

2.5.4(b) The antecedent/head is often referenced by a suffix pronoun (called a ‘resumptive pronoun’) in a relative clause.

2.5.5 Duplication
The same root often appears twice in a sentence, and when it does so the two often immediately follow one another. In Hebrew this occurs usually with the main verb and another verb called the ‘infinitive absolute’, in which the second one functions adverbially.

2.5.6 Sentence structure
The dominant order of sentence constituents in narrative in most of the languages is *Verb PSA Object*.

2.5.7 Discourse structure
Parataxis (clauses are strung together by “and” even when clauses are conceptually subordinate) is the rule. In comparison, there is little explicit hypotaxis (subordination via a subordinating particle). Verb-less clauses are common.

2.6 Meaning
Nouns involving relationships (e.g., master, son, daughter, etc.) can grammaticalize, losing their literal sense. For example, *ben me’aṯ šānā* which word by word is *son of 100 year* means “100 years old.”

2.7 Lexicography
2.7.1(a) The Semitic languages have a substantial shared vocabulary in an array of semantic fields (see § 4.1.1), but exhibit extensive lexical divergences as well (see § 4.1.2). Words for father, mother, head, mouth, tongue, name, house, dog, blood, water, the sun, lightning, give birth, clothe, be full, sin, ride or mount, all, etc. are the same across the literary Semitic languages; on the contrary, ‘do’ is different in every language, ‘strike’ is as well, ‘enter’ differs in five of the languages, as do ‘leave’ and ‘say’, ‘fall’ differs in three, ‘word’ in all six, ‘neck’ in all, ‘mountain’ also, ‘wall’ in five.

2.7.1(b) Furthermore, the shared word is sometimes rare or poetic in one or more of the languages. For example, *TY*, ‘come’ in Aramaic does occur in Hebrew, but only in poetry. In addition, often the exact meaning shifts from language to language: Hebrew *šūr* ‘large rock’ or ‘cliff’ appears in Aramaic as *tūr*, but means ‘mountain’; *MLK* ‘king’ in Hebrew is ‘advisor’ in Akkadian; *BD* ‘serve’ in Hebrew is ‘do’ or ‘make’ in Aramaic. Identical roots with disparate meanings: *SKH* ‘forget’ in Hebrew, but ‘find’ in Aramaic; *MR* is ‘say’
in Hebrew and Aramaic, but ‘see’ in Akkadian (without the aleph) and Ugaritic; מַעַן is ‘find’ in Hebrew, but ‘come’ in Ge’ez.

2.7.2 We will now look briefly at the Semitic language family and see where Hebrew is located in the mix.

3. The Panorama of the Semitic Languages

The following short descriptions of these languages cannot do them justice but hopefully will serve to familiarize the reader somewhat with them and perhaps give him just enough taste for them to pique his interest to pursue further study.

3.1 Akkadian

3.1.1 We will begin our inventory with the oldest well-attested Semitic languages, Babylonian and Assyrian Akkadian, the languages of the Semitic peoples who lived in Mesopotamia (Greek for “between the rivers”), the area defined by the Euphrates and Tigris. (Old Akkadian and Eblaite may be older, but they are not nearly as well attested as standard Akkadian.)

3.1.2 The name ‘Akkadian’ stems from that of the capital of Sargon the Great’s Mesopotamian Semitic empire, Agade (whose exact location remains unknown to archaeologists). Although Sargon supplanted the non-Semitic Sumerian rulers, initializing a sequence of Babylonian and Assyrian hegemonies which lasted well into the first millennium B.C., Akkadian owes its writing system, cuneiform, to the Sumerians. Perhaps lacking a writing system of their own (but we really don’t know why), these Semites adopted that of those they had conquered. Sumerian scribes had developed the method of repurposing cut reeds as styli to make hundreds of signs made up of wedge-shaped impressions on wet clay.

3.1.3 Cuneiform means wedge shaped. It received this designation because at the time it was named—1700—it was erroneously thought an artistic decoration comprising variously positioned and grouped wedges. Thus it was called ‘cuneiform’ not ‘cunei-form’ writing or script; even though it was believed to be writing when first noticed at Persepolis in 1611, and the rest of the 1600s saw brilliant guesses being made that the signs represented words and syllables written left to right.

3.1.4 The story of the decipherment of Akkadian (and later of Sumerian) is quite a tale, but we must hasten to the defining moment in 1857 when Henry Rawlinson, Edward Hincks, Jules Oppert, and W. F. Talbot independently translated a previously unpublished inscription and sent their efforts sealed to the Royal Asiatic Society, where the four translations were compared. Unsurprisingly, they differed somewhat; but it was clear to most that the language which would become known as Akkadian had been conquered. Oppert’s subsequent detailed description of the decipherment process (published in 1859) silenced all naysayers.

3.1.5(a) Sumerian, being a non-Semitic language, could not represent all the sounds a system growing out of a Semitic language could (e.g., Sumerian neither had pharyngeals nor distinguished syllable-final voiced, unvoiced, and emphatic dental and velar plosives). Constrained by this Sumerian substratum, Akkadian texts contain a mixture of cuneiform signs, which can represent an entire word (a ‘logogram’), a syllable (vowel only, consonant plus vowel, vowel plus consonant, or even more complicated combinations), or a ‘determinative’ (category designation of what follows [or sometimes of what preceded], such as a god name, man’s name, woman’s name, city name, country name, river name, type of animal, type of object [house, ship, etc.], indication of physical composition [wood, metal, wool, etc.], part of the body, profession, month name, etc.).

3.1.5(b) Sumerian has another effect on Akkadian. Since Sumerian is an ‘aglutinative’ language (grammatical function is designated by unchanging morphemic segments joined to each other) with the verb being the last part of the segment string, Akkadian—uncharacteristically for a Semitic language—is verb final. Moreover, in stark contrast to the defining characteristic of Semitic languages, vowels are an integral part of the meaning of the signs. And finally, the Akkadian names for the schematized pictures of things (which is what signs are) do not give rise to the syllabic values of the signs—which they should if the signs were indigenous
to Akkadian. For example, a sign depicting a mouth, should generate the sound / p /, from Akkadian *pum*, but it does not. Instead, it is a / k /, which is from KA, the Sumerian word for mouth. In fact, this was one of the clues pointing to the non-Semitic origin of cuneiform and ultimately led to the discovery of Sumerian.

3.1.6 Another complication in the system, which by the way was a significant hurdle in its decipherment, is the polyvalence of the signs in both directions; that is, one sign can signify a number of different sounds or words and a given sound can be conveyed by a number of different signs.

3.1.7 Having said the above about Akkadian’s wholly non-Semitic writing system, the language itself—in spite of its many peculiarities which isolate it from the rest of the languages—is quintessentially a Semitic language.

3.1.8 The number of texts unearthed in the excavations in this region is vast (in fact, many have only been catalogued but not translated) and comprise numerous genre. Besides the rather prosaic but nevertheless informative economic texts, there are letters, omen texts, lists of spells, mathematical texts, astronomical texts, and great literary texts, among which are their wisdom texts and creation and flood epic poems.

3.1.9 Akkadian is most helpful in Hebrew studies not only because of the fairly large vocabulary they share, but also because the mention of kings of Israel and Judah in the royal inscriptions and chronographic texts of a sequence of neo-Assyrian kings. Although invaluable in themselves as background for the biblical text, when coupled with the happy circumstance of a total solar eclipse near Nineveh noted in one text (definitively dated to be June 15, 763 B.C.), they furnish such synchronisms as to establish an absolute biblical chronology.

3.1.10 Beyond biblical studies, by adopting a sexagesimal system (i.e. base 60 vs. our now familiar base 10 [decimal system] or base 2 [binary system]), the Sumero-Akkadian nexus gave the world 60 seconds in a minute and 60 minutes in an hour.

3.1.11 Akkadian gave its last bow with an astronomical almanac dated to A.D. 75, its chronologically latest datable text, and then left the stage.

3.2 Ugaritic

3.2.1 The city of Ugarit was discovered in 1929 at Ras Shamra, far north on the Syrian coast. At first excavations yielded only Akkadian texts. Then they turned up numerous texts written with cuneiform signs never before seen. When upon examination it became evident that there were only a relatively small number of different signs, it was soon realized that this was a previously unknown alphabetic language, which we call today Ugaritic. The alphabetical nature of the language and also Akkadian copies of some of the same texts allowed the task of decipherment to go swiftly and to be completed by 1931. Among the cache of texts were historical texts, which revealed that the ancient city was conquered and sacked by the Sea Peoples circa 1200 B.C. after they had done the same to the Hittite empire. And so all Ugaritic texts predate the dawn of the 12th C. B.C.

3.2.2 Although Ugaritic has many affinities with Hebrew, there are also many differences (a larger consonant repertoire, no Canaanite Shift, no definite article, divergent vocabulary, etc.) upon which we will further expand in § 5.4. The main complication with Ugaritic—as is the case with Hebrew, Aramaic, and Arabic—is that its alphabet virtually contains no vowels (the exception being different signs for aleph followed by different vowels) and unlike those three languages has not been pointed (vowels added later). Notwithstanding, Akkadian cuneiform texts, which were the first texts found at Ugaritic and were instrumental in the decipherment of the language, helped scholars to reconstruct the vowels.

3.2.3 The Ugaritic text most relevant to biblical studies is the lengthy Baal Cycle, because it gives us insight into the Canaanite religions against which the prophets contended. Other notable literary texts are The Legend of Keret and The Legend of Aqhat. Also significant are the lexical lists in as many as four languages: Ugaritic, Akkadian, Sumerian, and Hurrian.
3.3 Hebrew

3.3.1 Although not limited to biblical Hebrew, in that quite a few Hebrew inscriptions from the first millennium BC, the Dead Sea Scrolls, a large body of Rabbinic literature commenting in various ways on the Scripture as a whole but primarily on the Law, and a corpus of poetry (the piyyutim) exist, and not to mention the recrudescence of the language in Modern Hebrew, the limitations of the first and the notable developments from the biblical idiom in the last four make biblical Hebrew the necessary starting point for any study of the language.

3.3.2 Arguably, Hebrew in its various guises has been spoken or studied longer than any language. The language has been around for over 4000 years! Dating from well back in the Patriarchal period, perhaps a contemporary of third millennium Akkadian texts, is the archaic poetry of Job. And today a form of it—Modern Hebrew—is the primary language of the official languages of Israel, the others being English and Arabic.

3.3.3 Although the language boasts of such hoary antiquity and longevity, it has always only been spoken in a small area when compared with the other main Semitic languages. It is spoken today in Israel by about 9 million people. Biblical Hebrew is considered to be a Canaanite language, closely related to Phoenician and Moabite, neither of which possesses a literary text, and related as well to Ugaritic, but not as closely.

3.4 Aramaic (adapted from the Comprehensive Aramaic Lexicon; additional comments are within double square brackets)

3.4.1 Introduction
3.4.1(a) [[Though closely related to Hebrew, Aramaic has enough striking differences that the languages are not mutually intelligible. Moreover, it was much more widely spoken.]] Like Hebrew, it was written in a variety of alphabetic scripts. Aramaic inscriptions were written in a Paleo-Aramaic script, which closely resembles Paleo-Hebrew script. But Aramaic later developed a square script. In fact, Hebrew Bibles and Torah Scrolls are actually not written in a Hebrew script; they are written in an Aramaic square script.

3.4.1(b) [[There is also evidence that Greek received its alphabet via the Arameans. It is well known that the names of the letters are not Greek but Semitic (probably Phoenician), because they don’t mean anything in Greek but are perfectly intelligible in Phoenician and are appropriate designations for the early shapes of the letters. For example: alpha “ox”; beta “house”; delta “door”; etc. What is Aramaic’s contribution to all of these? It is the final “-a,” because Aramaic has a suffixed article -a; whereas, Hebrew’s is a prefixed ha, plus doubling of the first consonant of the word; and Akkadian, Phoenician, Ugaritic, and Ge’ez have none.]]

3.4.2 The earliest Aramaic
3.4.2(a) Our first clear glimpse of Aramaic comes from a small number of ancient royal inscriptions from almost three thousand years ago (900–700 B.C.E.). [[Hints of Aramaic influence can be seen here and there in the Pentateuch, e.g., in k’tōnet passūm ’long-sleeved tunic’, Aramaic pas occurs for ‘palm [of the hand]’, rather than Hebrew kap.]] Dedications to the gods, international treaties, and memorial stelae reveal to us the history of the first small Aramean kingdoms, in the territories of modern Syria and Southeast Turkey, living under the shadow of the rising Assyrian empire.

3.4.2(b) [[Particularly important to biblical studies is the Victory Stele of Hazael, better known as the Tel Dan Stele, which contains the oldest extra-biblical mention of David in the collocation byt dwd ‘House of David’, which in the context of the inscription is the name of the country we know as Judah. For David’s name to be the name by which the Arameans knew Judah is very significant. Remember that the inscription is written in Aramaic not Hebrew. How many people have their name as part of a country name? And even more astounding—that that name is known internationally?]]

3.4.3 Aramaic as an Imperial Language
Aramaic was used by the conquering Assyrians as a language of administration and communication, and following them by the Babylonian and Persian empires, which ruled from India to Ethiopia, and employed
Aramaic as the official language. For this period, then (about 700–320 B.C.E.), Aramaic held a position similar to that occupied by English today. The most important documents of this period are numerous papyri from Egypt and Palestine.

3.4.4 Biblical Aramaic
Aramaic displaced Hebrew for many purposes among the Jews, a fact reflected in the Bible, where portions of Ezra and Daniel are in Aramaic. [Those in Ezra are letters to and from the Persian court. Whereas, those in Daniel are some of the best known stories in biblical literature, including that of the three youths in the fiery furnace, Belshazzar's feast with the famous "handwriting on the wall," and Daniel in the lion's den. In fact, the entire middle of Daniel (2:4–7:28) is in Aramaic. Lesser known are Jeremiah 10:11 and the first half of Genesis 31:47.]

3.4.5 Jewish Aramaic Literature
3.4.5(a) Aramaic remained a dominant language for Jewish worship, scholarship, and everyday life for centuries in both the land of Israel and in the diaspora, especially in Babylon.

3.4.5(b) Among the Dead Sea Scrolls, the remains of the library of a Jewish sect from around the turn of the Era, are many compositions in Aramaic. These new texts also provide the best evidence for Palestinian Aramaic of the sort used by Jesus and his disciples.

3.4.5(c) Since the Jews spoke Aramaic, and knowledge of Hebrew was no longer widespread, the practice arose in the synagogue of providing the reading of the sacred Hebrew scriptures with an Aramaic translation or paraphrase, a "Targum." [We are likely seeing the beginning of this practice recorded for us in Nehemiah 8.]

3.4.5(d) In their academies the rabbis and their disciples transmitted, commented, and debated Jewish law; the records of their deliberations constitute the two talmuds: that of the land of Israel and the much larger Babylonian Talmud. Although the talmuds contain much material in Hebrew, the basic language of these vast compilations is Aramaic (in Western and Eastern dialects).

3.4.6 Christian Aramaic Literature
3.4.6(a) Although Jesus [[presumably]] spoke Aramaic, the Gospels are in Greek, and only rarely quote actual Aramaic words. Reconstruction of the Aramaic background of the Gospels remains a fascinating, but inordinately difficult area of modern scholarly research.

3.4.6(b) Christians in Palestine eventually rendered portions of Christian Scripture into their dialect of Aramaic; these translations and related writings constitute "Christian Palestinian Aramaic".

3.4.6(c) A much larger body of Christian Aramaic is known as Syriac. Indeed, Syriac writings surpass in quantity all other Aramaic combined. Syriac is originally the literary language of the city of Edessa (now Urfa in SE Turkey). The language became the tongue of the entire eastern wing of the church, from about the third century C.E. down until well past the Muslim conquest.

3.4.6(d) Syriac writings include numerous Bible translations, the most important being the so-called Peshitta (simple) translation of both Old and New Testaments, and countless devotional, dogmatic, exegetical, liturgical, and historical works. [Of the last The Life of St. Ephraim is quite fascinating.] Almost all of the Greek philosophical and scientific tradition was eventually translated into Syriac, and it was through this channel that most found their way into the Islamic World and thence, into post-Dark Ages Europe.

3.4.7 Other Aramaic
There are many other branches of Aramaic literature, including the substantial literature of the Mandaeans, a Gnostic religious group, and the Bible translation, liturgy, and doctrinal works of the Samaritans.

3.4.8 Modern Aramaic
Aramaic survives as a spoken language in small communities in Syria, Iraq, Turkey, and Iran. There are about 1 million speakers of Neo-Aramaic.

3.5 Arabic

3.5.1 Although spoken by about 420,000,000 people today and as many as 1.8 billion people can read it, Arabic started out relatively late when compared to its far older uncles and cousins, Akkadian, Ugaritic, Hebrew, and Aramaic. A form of Arabic is attested as early as the 2nd C., but an intertribal poetic language based on a certain Bedouin dialect gained prominence in the 6th C. and began to be written down in order to codify formerly only-oral poetry. It appears that this dialect is the basis of Classical Arabic, in which the Qur’an and its related teachings were written in the 7th C. This written idiom with its flowing cursive and long tails drawn from the Nabatean script was confined to a small area of the Arabian peninsula at first. And there no doubt it would have remained were it not for the mandate of Islam to conquer and convert and its singular belief that the language itself was given with the Qur’an. As the Muslim armies poured out of Arabia into the greater Middle East, North Africa, Malta, Spain, and Sicily, carrying the Qur’an with them, they transported its language to the world; and so, Arabic began its unprecedented rapid spread.

3.5.2(a) Following this period of expansion, beginning in the 8th C., they developed a thirst for, vigorously sought out, and absorbed the accumulated knowledge of India and Greece. They also began to study their own written language. Classical Arabic was standardized by the end of the 8th C. and has served as a vehicle for a remarkably variegated and influential literature, of both native origin and translations of and commentaries on the knowledge base they were assimilating—including, religious, legal, grammatical, lexicographical, historical, philosophical, scientific, creative prose, poetry, drama, political, current affairs, etc.

3.5.2(b) But in particular, the language became a conduit to bring the mathematical insight of India to the West—including the numerals and tables of sines. The Arabs coupled that insight with that of Mesopotamia and Greece to produce algebra. And thus Arabic joined Greek, Chinese, Sanskrit, and Latin in the Middle Ages as a language of scholarship. In addition, Arabic translations and commentaries on Classical works had a role in rekindling the West’s interest in Classical learning during the high Middle Ages (11th and 12th C.), which had been neglected earlier in the Middle Ages and at times its texts repurposed.

3.6 Ethiopic

3.6.1(a) The last literary Semitic language we want to introduce is Ancient Ethiopic or Ge’ez, which was a descendant of Sabaic, a South Arabian language, which spread across from the southern part of the Arabian peninsula to northern Ethiopia sometime during the first millennium B.C.

3.6.1(b) To be sure it was spoken widely in the area of its provenance and was made the official language of the areally-dominant Kingdom of Aksum, but would it have ascended to its current status were it not for an encounter between a highly-placed Ethiopian official and Philip the Evangelist, which may have been the seed eventually leading to the Christianization of that kingdom in the fourth century?

3.6.1(c) So the New Testament became part and parcel of the literature of that African country. Other important texts are the pseudepigraphal Baruch and The Book of Enoch. Also noteworthy is the fact that Ethiopic was the only Semitic language spoken in North Africa before the Muslim conquests brought Arabic into that region.

3.6.2 But perhaps most significant is the transformational innovation they introduced to their Semitic alphabet: they added vowels to it, but in a very ingenious way. In other Semitic alphabets there are no vowels. Ethiopic didn’t add vowels as separate members of the alphabet; rather, the vowels are indicated by modifications to the basic shape of each consonant (the basic shape being that consonant followed by a particularly type of “a” vowel). The result is that the combination of consonant plus vowel occurs in seven variants, and since there are 26 consonants, this yields 162 different graphemes for the language. Thus, unlike the other Semitic languages (both ancient and modern), Ancient Ethiopic and its modern scions explicitly
indicate their vowels. One of the latter, Amharic, is the defacto national language of Ethiopia (although it no longer enjoys that official status) and is spoken by about 25 million people.

### 3.7 Transition

Having overviewed the languages, in order for us to understand Hebrew better, we want to briefly consider its relationship to the other Semitic languages and how the family as a whole was/is organized (called its ‘genetic classification’). The discussion is necessarily technical; readers may wish to go to chapter 2 at this point, and return at a later time when better able to understand the material.

### 4. Family Groupings

#### 4.1 Lexical Groupings

##### 4.1.1 Similarities

The Semitic languages have a substantial shared vocabulary in the significant semantic fields listed below (after Bergsträsser). Sometimes the shared word is rare or poetic in one or more of the languages.

Words for man(kind), male, and woman; kinship terms (except ‘son’ is different in Akk.); animal names and behaviors (leopard, wolf, dog, bear, deer, ox, ass, eagle [or hawk]; scorpion [except it is not the usual word in Akk.], bark); crops and vegetables; foods and drink and food preparation; body parts and fluids (except ‘palm’, ‘neck’, and ‘foot’); terms dealing with death, execution, and burial; astronomical terms; natural features (not words for mountain) and phenomena; house; column, pillar, stanchion; bed (in Akk. and Aramaic; the term in BH and Arabic refers to a coffin or bier); bow and arrow; ship; rope; to be established; to set or place; to lift or carry; to rest; verbs of motion and location have 2 or 3 languages with the same root for a given motion; to weep; to shout; to blow; to seize; to remember; name; to ask; to herald; to favor or love; to count or allot; to clothe; to wash the body; to mix (usually, ingredients); to twist or wind; to bore; to dig; to winnow; to give drink; to shepherd; to harness; to ride or mount; to guard; to do one’s duty; to hold back; to separate; peace; good and bad smells; to destroy; to become lost (though Arabic and Ge’ez are a stretch!); to break; to become pulverized and fine; pinch; to hallow; to fail, sin, commit a crime; to offer/offering; to bless; all; full; to be the same or similar; to be light, small, or quick; precious or rare; to be strong; to be low; to open; the particles and prepositions for ‘in’, ‘by means of’ (if in Akk., it is incorporated in the verb for ‘to be’); ‘like’; ‘on’, ‘upon’, ‘over’; the interrogative ‘when’; the conjunction ‘and’; and the numerals 1-10, and 100 (Akk. uses a different root for 1; the common Semitic term means ‘single’, ‘solitary’, or ‘alone”).

##### 4.1.2 Differences

Nevertheless, we would be remiss if we didn’t show the lexical divergences as well. In the table below the same shading indicates the same root for a given semantic concept; different shading signifies a different root.

<table>
<thead>
<tr>
<th>Verbs of motion</th>
<th>Akkadian</th>
<th>Ugaritic</th>
<th>Hebrew</th>
<th>Aramaic</th>
<th>Arabic</th>
<th>Ge’ez</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go</td>
<td>alâk(u)</td>
<td>ḫlk</td>
<td>ḫlk</td>
<td>yhk</td>
<td>dâhaba</td>
<td>ḥora</td>
</tr>
<tr>
<td>Enter, go in</td>
<td>erebu</td>
<td>ḫṭql</td>
<td>twª</td>
<td>ḫb</td>
<td>ḫl</td>
<td>dâḥala</td>
</tr>
<tr>
<td>Come</td>
<td>alâk(u), ḫâgu</td>
<td>ḫtwª</td>
<td>ḫbª</td>
<td>ḫh</td>
<td>jâ(‘)a; ʿatay</td>
<td>mas’a</td>
</tr>
<tr>
<td>Exit, go out</td>
<td>ʿsû</td>
<td>ṣâª</td>
<td>ṣy’</td>
<td>npq</td>
<td>ḥaraja</td>
<td>wâd’a¹</td>
</tr>
<tr>
<td>Ascend, go up</td>
<td>ēlû</td>
<td>ṣlq</td>
<td>ṣlq</td>
<td>ḫlala</td>
<td>ṣlq</td>
<td>ṣlq</td>
</tr>
<tr>
<td>Leave</td>
<td>ezēbu</td>
<td>ṭb</td>
<td>ṣbq</td>
<td>ṭaraka</td>
<td>ḫâdaga</td>
<td></td>
</tr>
<tr>
<td>Return</td>
<td>sâhâru</td>
<td>ṭwbª ³</td>
<td>ṭwb</td>
<td>ḥd</td>
<td>ḥraj’a</td>
<td>gab’a</td>
</tr>
<tr>
<td>Go down</td>
<td>warâdu</td>
<td>ṣrd</td>
<td>ṣrd</td>
<td>nḥt</td>
<td>nazala</td>
<td>warâda</td>
</tr>
</tbody>
</table>

¹ Common Semitic 𐤍 is preserved in Arabic and Ge’ez. In Akk., Ugar, and Hebrew it has either merged with or is represented by 𐤇; whereas, in Aramaic it has either merged with or is represented by (by way of q[see Je 10:11]).

² The root is III-weak, meaning it lacks a third radical. The h in the lexical form 𐤇 is a vowel letter, marking a final long a-class vowel. In all III-yod verbs, the final vowel in the lexical form is so marked.

³ Ugaritic preserves the 𐤇 in Hebrew it is represented by ṣ and in Aramaic by ṣt.
### Parts of a house

<table>
<thead>
<tr>
<th>Stand</th>
<th>uzzazzu</th>
<th>qwm</th>
<th>‘md / qwm</th>
<th>qwm</th>
<th>waqafa</th>
<th>qama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross</td>
<td>ēbērū</td>
<td>‘br</td>
<td>‘br</td>
<td>‘br</td>
<td>‘ābara</td>
<td>‘ādawa</td>
</tr>
<tr>
<td>Sit, dwell</td>
<td>wašāb(u)</td>
<td>ʿyṯb</td>
<td>ʿyṯb</td>
<td>jalasa</td>
<td>nabara</td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>maqātu</td>
<td>npl</td>
<td>npl</td>
<td>npl</td>
<td>waqā’ā</td>
<td>bātala</td>
</tr>
</tbody>
</table>

### Other

<table>
<thead>
<tr>
<th>Say; speak/voice</th>
<th>qabū; dabābu / rigmu</th>
<th>ṛgm / g</th>
<th>‘mr; dbr / qōl</th>
<th>‘mr/ qāl</th>
<th>qāla / qawlu</th>
<th>yebel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word</td>
<td>awātū</td>
<td>hwt; ṛgm</td>
<td>dbr</td>
<td>pitgām; ‘mīrāb</td>
<td>kalīma</td>
<td>bāhl; nagar</td>
</tr>
<tr>
<td>Send</td>
<td>tārādū</td>
<td>šḥl; l’k</td>
<td>šḥl</td>
<td>šdr</td>
<td>rasala</td>
<td>la’āka</td>
</tr>
<tr>
<td>See</td>
<td>amārū</td>
<td>‘mr</td>
<td>r’y</td>
<td>hzy; ḫmy</td>
<td>ra’āya</td>
<td>rā’ya</td>
</tr>
<tr>
<td>Learn / know</td>
<td>lamādū / sālū</td>
<td>lmd; blyn / x̌</td>
<td>lmd / yd’</td>
<td>‘lp / yd’</td>
<td>‘alima / ‘arafa</td>
<td>(ta)mahāra; lamada / (‘a)mara</td>
</tr>
</tbody>
</table>

### Parts of the body

<table>
<thead>
<tr>
<th>Akkadian</th>
<th>Ugaritic</th>
<th>Hebrew</th>
<th>Aramaic</th>
<th>Arabic</th>
<th>Ge’ez</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be</td>
<td>baštû</td>
<td>k(w)nt</td>
<td>hyy</td>
<td>hwy</td>
<td>kāʾna</td>
</tr>
<tr>
<td>Give</td>
<td>nadānu</td>
<td>ytn</td>
<td>ntn</td>
<td>yhb; ntn</td>
<td>‘ātay</td>
</tr>
<tr>
<td>Lift up</td>
<td>našû</td>
<td>nš’</td>
<td>nš’</td>
<td>ntl</td>
<td>ḫamala</td>
</tr>
<tr>
<td>Take, receive</td>
<td>lēqû</td>
<td>lqḥ</td>
<td>lqḥ</td>
<td>qbl; nsb</td>
<td>‘āḥada</td>
</tr>
<tr>
<td>Do, make</td>
<td>epeš(u)</td>
<td>‘dh6</td>
<td>‘šy</td>
<td>‘bd</td>
<td>fā’ala</td>
</tr>
<tr>
<td>Wash</td>
<td>ramākū</td>
<td>řhs / kbs</td>
<td>řāḥas / kibbes</td>
<td>šgz; ḫpp / r’s</td>
<td>ḡasila</td>
</tr>
<tr>
<td>Drive out</td>
<td>tārādū</td>
<td>grš</td>
<td>grš</td>
<td>ʿrd</td>
<td>tārada</td>
</tr>
<tr>
<td>Strike; hit</td>
<td>šabātu</td>
<td>ḥlm; mḥš</td>
<td>nkh</td>
<td>mḥy</td>
<td>ḏaraba</td>
</tr>
<tr>
<td>Gather [tr.] / (intr.) (assemble)</td>
<td>šamāmu / pāhārū</td>
<td>‘sp</td>
<td>‘sp</td>
<td>knš</td>
<td>jum’a / danaḥa</td>
</tr>
</tbody>
</table>

### Parts of a house

<p>| Roof | tārānū | gg | gag | ḡr | satḥ | tafār; nāḥš; satḥ; tadbāb |
| Door  | babū | dlt | delet | gẖ; drš | bāb | anqas; dede; |</p>
<table>
<thead>
<tr>
<th>Window</th>
<th>aptu</th>
<th>hln</th>
<th>h'lôn</th>
<th>hrk; kwh</th>
<th>šubbâk</th>
<th>šuḫat; maʾ ašo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall</td>
<td>īgaru; amaḫu</td>
<td>qr ḫmt</td>
<td>qīr / hōmâh</td>
<td>ktl ḫrur</td>
<td>hāʾat / ṣūr</td>
<td>ʾaraft; gadgad; ṣurū; qasr; taqsim</td>
</tr>
<tr>
<td>Room</td>
<td>kummu</td>
<td>ḥdr; ap</td>
<td>ḥêder</td>
<td>ḡrû</td>
<td>ḡurfat</td>
<td>(mā) ḫ(a)dar</td>
</tr>
<tr>
<td>Table</td>
<td>paššûru</td>
<td>ʾlhn</td>
<td>šulhān</td>
<td>ṣṭûr</td>
<td>ūtawalat</td>
<td>māʾadd; lawh</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>awil(u); mutu</td>
<td>ūn; gm, [plural] nšm</td>
<td>ʾiš / ʾādām</td>
<td>nš</td>
<td>rajulu</td>
<td>beʾši</td>
</tr>
<tr>
<td>Woman</td>
<td>niš(u/)</td>
<td>ḡmṭ ; ʾt,</td>
<td>ʾiššaḥ</td>
<td>ʾnt</td>
<td>maraʾ</td>
<td>beʾšit</td>
</tr>
<tr>
<td>Akkadian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ugaritic</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hebrew</td>
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</tr>
<tr>
<td>Aramaic</td>
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<td></td>
</tr>
<tr>
<td>Arabic</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Geʾez</td>
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</tr>
<tr>
<td>Lion</td>
<td>nēšu⁸</td>
<td>lbʾi</td>
<td>ʾṭr</td>
<td>ʾaryāb; ʾṭr</td>
<td>ʾasad</td>
<td>ʾanbasā</td>
</tr>
<tr>
<td>Mountain</td>
<td>šēḏû</td>
<td>ghr</td>
<td>ḥar</td>
<td>ṭūr</td>
<td>ṣablu</td>
<td>ḏabr</td>
</tr>
<tr>
<td>Gold</td>
<td>hurāsu; pašallu</td>
<td>ḫ ṣmr</td>
<td>yṛq</td>
<td>ṣāhāb</td>
<td>ḏlhb</td>
<td>ḏḥāhab</td>
</tr>
<tr>
<td>Silver</td>
<td>kāspu</td>
<td>kṣp; ḫṭ</td>
<td>kešep</td>
<td>kṣ</td>
<td>ḡfḍlit</td>
<td>barur</td>
</tr>
<tr>
<td>Copper</td>
<td>urūdû</td>
<td>ʿț⁸</td>
<td>nḥošêt</td>
<td>nš</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Tin</td>
<td>annuku</td>
<td>ṣhr</td>
<td>ʾbʾr</td>
<td>ṾGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Iron</td>
<td>parzīlu</td>
<td>ṣhr</td>
<td>ṼGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Wine</td>
<td>karānu</td>
<td>ṭn; ṭmr; ṭṛ</td>
<td>ṭayin</td>
<td>ṭmr</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Grape</td>
<td>karānu</td>
<td>ṣhr</td>
<td>ʾenāb</td>
<td>ʾnḥh</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Olive</td>
<td>sīrdu</td>
<td>zṭ</td>
<td>zāyit</td>
<td>zṭ</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Milk</td>
<td>šību</td>
<td>ḥlb</td>
<td>ḥalāb</td>
<td>ḥlb</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Bread</td>
<td>aklu; kusāpu</td>
<td>ʾlhm</td>
<td>lehem</td>
<td>ṼGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>City</td>
<td>ālu</td>
<td>ṣṛḥy</td>
<td>ʾīr</td>
<td>ṼGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
<tr>
<td>Letter</td>
<td>egertu</td>
<td>ṣṛḥy</td>
<td>šēper</td>
<td>ṼGH</td>
<td>ṼGH</td>
<td>ṼGH</td>
</tr>
</tbody>
</table>

4.2. Odd Man out: Akkadian

The jury is still out for the most part on the interrelationships among the languages, but not when it comes to Akkadian. Akkadian differs so much from the other Semitic languages that it is given its own classification, namely, East Semitic, which is in keeping with its geographical location. Some signal differences: there is only one guttural in the writing system although vowel coloration indicates the presence of other gutturals; three prefixed verb conjugations (a past tense narrative with a monosyllabic core; a present/future with a bi-syllabic core in the G stem [elsewhere, peculiarly, only in Geʾez] and a t-form [only in Akk.]); the suffix conjugation has only a stative meaning; the causative preformative is ʾš case endings on nouns; independent personal pronouns are declined for case (dative and accusative forms as well as nominative); passive stems are marked only by various augmentations, never by changes in the core vowels (referred to by the German term ‘Ablaut’), which is unlike the Western Semitic languages; Akk. alone has a Gtn stem (which indicates habitual or iterative action); 3rd person pronouns begin with ʾinstead of h; no monosyllabic prepositions; prepositions cannot take a suffix pronoun; no article (a property it shares with Ugaritic, Phoenician, and Geʾez); relative pronoun is ʾš, adverb forming suffixes -ʾīš and -un, verb final; and its vocabulary is heavily influenced by Sumerian.

4.2. Whither Arabic?

⁸ Landsberger’s suggestion that Akk. nēšu and Aram. lēr are cognates is in keeping with the nice, rice, ice exchanges among the languages.

⁹ Semitic word for yellowish-green, so ‘yellowish green (metal)’.

¹⁰ Semitic word for three. Possibilities for this unusual name: 1) third most valuable metal; 2) three-part alloy; 3) three-part smelting process. I prefer 1).
The rest of the Semitic languages are *West Semitic*, which again is a geographical designation vis-à-vis where Akkadian is spoken. West Semitic in turn is divided into *Northwest Semitic* and *South Semitic*. Arabic’s place in *West Semitic* is debated: is it 1) grouped with Ugaritic, Hebrew, and Aramaic and thus is a NW Semitic language; is it 2) grouped with Ge'ez and its congener and thus is a South Semitic language; or, in that it has characteristics of both groups, is it 3) between the two? The ‘isoglosses’ (that which is in common with other languages, differentiating them from yet others) which suggest that Arabic belongs to the NW Semitic languages are a G stem prefix conjugation with monosyllabic core and 1st and 2nd person suffixes in suffix conjugation beginning with -t in contrast with South Semitic where they begin with -k. On the other hand, there are six isoglosses between Arabic and the South Semitic languages: 1) p is pronounced /f/ not /p/; 2) initial w- in a root is retained in verbal forms vs. it changes to initial y- in NW Semitic languages; 3) nouns use a broken plural formation; 4) an -a precedes R, throughout the suffix conjugation for all stems; 5) -a is the suffix for the 3ms suffix conjugation for all stems vs. NW Semitic and Akkadian have null; and 6) stem formation by vowel lengthening vs. not in NW Semitic or Akkadian. In addition to these, Arabic’s alphabet has six additional consonants Hebrew, Aramaic, Phoenician, and Moabite don’t have: interdentals 1 and 2, velar/uvular equivalents of unvoiced pharyngeal h and voiced pharyngeal ꠜ, h and ꠝ, respectively; and two additional emphatics, an unvoiced interdental emphatic ꠝ and a voiced dental emphatic ꠝ. In spite of these differences, this is not a sharp break with NW Semitic, because Ugaritic has all of the extra consonants too except for the voiced dental emphatic. The order of the letters in the Arabic alphabet is very different from that of the NW Semitic languages as well. Also, Arabic infinitives (called *masdar*) of the derived stems have unpredictable forms (like broken plurals) and the core vocabulary Arabic shares with NW Semitic is rather small (the words for man, woman, fall, mountain, word, table, lion, to do, to sit/dwell, to send, to know; to learn, to lift/carry, and all verbs of motion differ from those in NW Semitic).

### 4.3 NW Semitic

So, now we look at the NW Semitic literary languages, Ugaritic, Hebrew, and Aramaic. We will add Phoenician, Moabite, and Amorite to the mix, but it must be kept in mind that the texts of the first two are too few and/or too short to allow a “linguistically meaningful study of [their] structural and typological characteristics.” And the third is extracted from names in Akkadian texts from the middle of the third millennium, which don’t look like Akkadian ones. In any case, their contribution to the discussion, because literary texts have not been found in any of these languages, will be limited.

### 5. Hebrew’s Place

#### 5.1 Vs. the Rest

What confronts us is how Ugaritic is related to Hebrew and furthermore to Aramaic, since the differences between Hebrew and Aramaic are well known (discussed in § 5.2). And more specifically, is Ugaritic closer to Aramaic or to Hebrew or is it off on its own? But first we must establish that Ugaritic is a NW Semitic language, because, after all, its consonant inventory lacks only one phoneme of Arabic’s. Nevertheless, its core vocabulary, except for the verb ‘to be’ (U. uses *KWN*, as does Arabic; Hebrew and Aramaic use *HWY* and *HWY*, respectively), is close to that of Hebrew, not to that of Arabic. Even that exception isn’t a problem, because Phoenician employs the same root for ‘to be’. Moreover, none of the six isoglosses between Arabic and Ethiopic are attested in Ugaritic. In addition, the prefix form in Ugaritic (both with and without a preceding ‘and’) is frequently found in narrative texts expressing past tense, just as in Hebrew and some small isolated corners of inscriptive Aramaic, but only as a ‘frozen’ form after *lam* in Arabic. But, the fact that Ugaritic also doesn’t have a definite article, separates it not only from Arabic, but from Hebrew and Aramaic as well, and links it to the anarthrous languages Akkadian and Phoenician. Finally, although Ugaritic has a larger consonant inventory than Phoenician, Hebrew, or Aramaic, Ugaritic abecedaries (inscriptions listing consonants in alphabetical order) reveal that the extra consonants were inserted between the consonants which occur in those languages arranged in the usual NW Semitic order.

#### 5.2 Vs. Aramaic
5.2.1 It is common knowledge that Hebrew and Aramaic are very different, but let me count the ways—at least the main ones. Let us begin with phonology. Although Hebrew and Aramaic have the same consonant inventory, their “handling” of the additional Semitic consonants (seen in Arabic and most of them in Ugaritic and Ethiopic) diverges in every way possible: ṭ goes to ṣ in Hebrew, but to ṭ in Aramaic; ḏ goes to ẓ in Hebrew, but to ḏ in Aramaic; the three emphatics ʕ, ḏ, and ẓ all go to ṣ in Hebrew, but to ʿ, (by way of ʃ), and ʪ in Aramaic; and finally ʿ eventually goes to ṣ in Aramaic. Moreover, Aramaic is a “vowel killer”: in nouns, “near open” syllables (conventional term is ‘pretonic’; i.e., one syllable before the accent) are usually reduced to a very short neutral vowel called śūwa; whereas, in this location Hebrew has a long vowel. Furthermore, Aramaic doesn’t reduce some vowels Hebrew does. In addition, Aramaic does not lengthen stressed vowels, but Hebrew tends to. And finally Aramaic has no Canaanite shift (in which stressed ʾa becomes stressed ʾō).

5.2.2 Another signal difference between the languages is the placement of the article: Hebrew has a prefixed ʾh- with gemination of the following consonant; Aramaic has a suffixed -ā'. Also, instead of having the relative pronoun ʾālā as in Hebrew, Aramaic has a prefixed dā', which is compounded with -t to produce the word dil. What is more, while Hebrew forms the masculine plural of nouns with a final -ām (a ‘mimating’ language), Aramaic uses final -ām (a ‘nunating’ language) and feminine plural suffixes differ as well -ān in Aramaic vs. -ātn in Hebrew. And as for pronouns, 3ms pronominal suffixes differ on singular nouns and certain prepositions (ēḥ in Aramaic, ʾā in Hebrew) and on plural nouns (āḥī in Aramaic and ʾā/y)w in Hebrew). And all other pronouns differ as well.

5.2.3 The stem systems of the two languages are very different. Aramaic does not have an N stem, but rather makes use of various t augments. This gives Aramaic’s stem system a three-part structure; whereas, Hebrew’s has a four-part structure. Nevertheless, both Hebrew and biblical Aramaic use Ablaut to indicate the passive of the different stems.

5.2.4 The verb forms of the two are different as well. Aramaic doesn’t have a prefixed narrative tense. In Hebrew it forms the backbone of narratives. Aramaic instead uses the suffix conjugation or suffix conjugation of the “to be” verb plus a participle. The suffixes of the suffix conjugation differ between the two, the most striking being -ēt for 1cs in Aramaic, -ṭi in Hebrew; -at for 3fs in Aramaic (indicating that final -t supported by a short a vowel is not dropped in Aramaic), ʾā in Hebrew (final -t supported by a short a vowel is dropped and the vowel is compensatorily lengthened to a long a, which is marked by the vowel letter ĕ̄); Aramaic has a separate 3fp form (ā'), Hebrew does not; in Aramaic, the 2mp suffix differs from the 2fp in its vowel (-tūn vs. -tēn); in Hebrew the difference is in the final consonants (-tem vs. -ten). In the prefix conjugations there are differences: stress lengthening in Hebrew, none in Aramaic; 3fp prefix is y-, Hebrew has a ṭ; nunation after long vowel of suffix in 2fs, 3mp and 2mp, none in Hebrew; in Aramaic 3fp and 2fp both have the suffix -ān (same as the feminine plural suffix in nouns), Hebrew has -nā. Aramaic has very different looking infinitives from Hebrew: the G stem has a m- preformative, e.g., miknaš ‘to gather’; the D stem has a suffixed ʾāh, e.g., baqqāšā ‘to seek’; and so does the C stem, e.g., ḥabḏālā ‘to divide’.

5.2.5 Lastly, the core vocabulary is very different. The result of all these differences is evident in the two different names—both meaning “pale of testimony”—given to the pile of stones meant to be a witness between Laban and Jacob: Laban gives it its Aramaic name ʿašr, y’gar šāb’dātā; whereas, Jacob gives it its Hebrew name ʿāḥé gal ‘ed (Gn 31:47). Suffice it to say that knowing Hebrew will not guarantee that you can read Aramaic.

5.3 Ganging up on Aramaic

Now let us consider how Ugaritic aligns with Hebrew against Aramaic. Their common core vocabulary with few exceptions is totally different from that of Aramaic. This includes most of the verbs of motion, parts of a house, and some parts of the body. Also, the 1cs suffix for the suffix conjugation is t followed by a vowel; Aramaic’s is long e followed by -t. And 3fp prefix of the prefix conjugation is t- in Ugaritic and Hebrew but y- in Aramaic. And last but not least there is no N stem in Aramaic (the one attestation of an N stem in the Deir Alla inscription is hardly a deal breaker!); whereas, it is alive and well in both Hebrew and Ugaritic. In fact, the stem inventory in Aramaic is totally different.
5.4 Vs. Ugaritic

5.4.1 But Ugaritic also strongly breaks with Hebrew—in other ways besides its obviously fuller consonant inventory, which causes it to part company with Aramaic to boot. First it has no Canaanite shift, which is a sound change characteristic of Hebrew and Phoenician, but not of the rest of the Semitic languages (which of course includes Aramaic).

5.4.2 Second, although Ugaritic has preserved the voiced interdental sound, /d/, having a separate letter <d> to represent it, sometimes that sound is spelled with a <d>, which follows the Aramaic merger pattern of /d/ to /l/, rather than the Hebrew of /d/ to /z/. [endnote]

5.4.3 Third, the pronunciation of ś has merged with that of š and is spelled <š>; whereas, they are separate phonemes in Hebrew. In Aramaic ś merges into s.

5.4.4 Fourth, the prefix of the 3mp prefix conjugation is t. This is attested elsewhere only in Amarna Canaanite (dubbed Old Canaanite [OC], which comprises grammatical aberrations and Canaanite glosses found in the diplomatic letters written in Akkadian from Canaanite city states to pharaohs Amenhotep III and Amenhotep IV [Ankhenaton]).

5.4.5 Fifth, the preformative for the causative stems is ʾ, not h (Hebrew and early Aramaic) or š (later Aramaic).

5.4.6 Sixth, it has no article.

5.4.7 Seventh, the relative pronoun is d, like Aramaic (but in addition it is declined).

5.4.8 Eighth, -am is a common adverbial ending. This is not so in Hebrew or Aramaic.

5.4.9 Ninth, the enclitic particle of entreaty/emphatic particle is m, not naʾ as it is in Hebrew.

5.4.10 Tenth, core vocabulary divergences: ‘to be’ is KW[N instead of HYY (Hebrew and Aramaic); the root for ‘to say, speak, or talk’ is RGM; Hebrew’s is ʾMR (and so is Aramaic’s); on the other hand, ‘to see’ is ʾMR as in Akkadian, not RY as in Hebrew; ‘voice’ is g, common Semitic (except Akkadian rigmu) is QVL; to enter is štql, which differs from that of all the other languages; ‘to leave’, for which each of the rest of the languages has a different root, has yet again another root TB in Ugaritic; the root for ‘to do’ or ‘to make’, which again differs from language to language also does in Ugaritic with ʾDB (although it may be a metathesis of ʾBD, which is ‘serve’ in Hebrew, but ‘do’ or ‘make’ in Aramaic); the common word in Ugaritic for ‘boy’ or ‘young man’ is glm, not yeled or naʿar as in Hebrew; ‘mountain’ is GR, not HR (Hebrew) or TWR (Aramaic); the root, LʾK ʾsend’ occurs as a verb (as it also does in Geʾez), not just in cognate nouns as in Hebrew; Ugaritic’s (and Phoenician’s) common words for ‘foot’, ‘gold’, ‘city’ and ‘ox’ are rare (usually only in poetry) in Hebrew.

5.5 The conclusion of the matter

5.5.1(a)(1) So what’s the bottom line? Hebrew is a NW Semitic language belonging to a main branch many call Canaanite, which in every way is in clear opposition to Aramaic, which makes the latter the other main branch of NW Semitic. Is Ugaritic a Canaanite language as well or is it another main branch? What of Phoenician?

5.5.1(a)(2) Some would posit within Canaanite a Phoenic group consisting of Phoenician and Ugaritic and a Hebraic group comprising Hebrew and Moabite. Several isoglosses (same “to be” root, other shared lexicography, and no article) seem to support the first of these, but evidence can also be adduced suggesting Phoenician is closer to Hebrew than to Ugaritic (e.g., same consonant inventory and same causative root).
preformatives, similar relative pronoun [at least it has an s instead of a d]), which would break up the proposed structure.

5.5.1(a)(3) The puzzler seems to be Ugaritic: in some ways it’s like Aramaic, in others it’s different; in some ways it’s like Hebrew, in others it’s different; and in some ways it’s like Phoenician, and in others it’s different. So, in my opinion, it is best to give it its own place and maybe(?) lump Phoenician with it and call the combination ‘Littoral NW Semitic’.

5.5.1(b) The result is something like this: NW Semitic comprises four branches: Amorite, Littoral, and Canaanite, and a farther removed Aramaic. Canaanite in turn includes Hebrew, Amarna Canaanite, and Moabite. To use a different analogy, this would make Ugaritic a “close uncle” of Hebrew. And Aramaic? An estranged uncle?

5.5.1(c) Finally, it must be said that just as—as has been rightly stated—“no man is an island,” neither are languages. Those in physical, communicative, economic, cultural, or religious proximity affect one another. This is known as the ‘wave theory’ of language relationships. It is not surprising therefore that Moabite shares features of both Hebrew and Aramaic: it was geographically between the areas where those languages were spoken. Moreover, languages can be more closely related earlier and thus share certain features and then diverge later, at which point sharing is due to borrowing or to lending depending on how you look at it. Such was the case with Aramaic and Hebrew. Early texts evince the former scenario; later texts, the latter.

5.5.2 Now that we have an idea of where Hebrew was located linguistically, it’s time to examine the linguistic when, because as other real languages, Hebrew was not static. So, here we go for a trip down a not so short (up to 2000 years) memory lane.

6. A "Little" History Lesson

6.1 Introduction

6.1.1 Hebrew went through the following major periods in its development: pre-biblical, biblical, Mishnaic (MH; or rabbinic), medieval, and modern. But our concern is with the first three, focusing, in particular, on the second—biblical Hebrew. Thus, we will look at pre-biblical only to inform us about biblical and at Mishnaic only to inform us how biblical Hebrew relates to it.

6.1.2 Biblical Hebrew itself can be divided into three strata: Archaic BH, Standard BH, and Late BH. Before launching into the description of Standard BH (chapter two and following), we need to see where it came from, Archaic BH, and where it was going, Late BH anticipating MH.

6.2 Archaic BH

6.2.1 General
There is general consensus that Archaic biblical Hebrew comprises the old Hebrew poetry of the Old Testament and has features of Amarna Canaanite. A particularly interesting aberration in the Amarna letters is anāki'ī for standard Akkadian anāku, in that the former has the u-class (orange) vowel followed by the i-class (green) of Hebrew ānōkī instead of the a-class u-class (red-orange) sequence of standard Akkadian. In any case, almost all consider the Song of Deborah to be an example of Archaic BH. Jacob’s prophetic blessings of his sons, the Song of the Sea, the Song of Moses, and Moses’ blessing of the tribes also fit the bill. I would add the Song of Hannah and the poetic snippets sandwiched between large blocks of narrative in the Pentateuch. I would also include the dialogues of Job, Elihu’s monologue, and God’s theologue. Other poetry evinces some of the features as well (e.g., Ps 8; Pr 30). There are even some archaic features in the narrative sections of the Pentateuch (e.g., ḫayrō ’ereṣ ‘the wild animals of the earth’ in Gn 1:24).

6.2.2 Sounds
6.2.2(a) Likely, all 29 phonemes of common Semitic (usually referred to as ‘proto-Semitic’) were represented initially in the 22 graphemes of the Hebrew alphabet (most likely borrowed from the Phoenicians). [In the
following the additional distinctive pronunciations are in boldface]. Three letters did double duty: <z> was used for /d/ as well as /z/; <h> for /h/ and /ød/, and <ẓ> for /ʕ/ and /g/. And two letters filled a triple role: <s> represented /š/, /š/, and /t/; and <s>, /d/ and /g/, besides /š/.

6.2.2(b) In the course of time—sometimes, it was in antiquity, but other times, not until our own era—these letters lost their additional distinctive pronunciations, thus merging with the pronunciation of other letters, and finally being spelled with the latter. The parade example of a letter representing multiple pronunciations and remaining static in some places and undergoing phonetic change in others—with, I might add, lethal consequences—is the famous Shibboleth incident recorded in Judges 12:4–6, in which Gileadites demanded anyone crossing into Cis-Jordan to repeat a password they knew that Ephraimites could not properly pronounce. By this means, they intercepted any who claimed not to be Ephraimites.

6.2.2(c)(1) The text spells the password שִׁבֹּלֶת šibboleth, which has š as its first letter. But this š should not be thought of as representing the sound /š/, because that sound exists in all the Semitic languages, can be pronounced by all Semitic speakers, and consequently could have been pronounced by the Ephraimites. That would have made it a poor password. But the pronunciation test caught them. So that could not have been the pronunciation test.

6.2.2(c)(2) It should not be thought of as representing the pronunciation /š/ either, because then it would have been spelled that way in the Masoretic Text, with the dot on the upper left of the grapheme that represents both letters (an upper right dot indicates a š), but it isn’t.

6.2.2(c)(3) Only one possibility remains and that is the Masoretes simply followed the ancient spelling of the password with an initial š, which at the time of the writing of Judges still represented the sound of the voiceless interdental /t/, which had disappeared in the Ephraimite dialect of Hebrew in Cis-Jordan (possibly due to Phoenician or Aramaic influence) but was still alive in Trans-Jordan (more linguistically isolated perhaps?). The Ephraimites could not say that sound—as the expression goes, but was literally true in this case—“to save their lives.” The best they could do was שִׁבֹּלֶת šibboleth and that wasn’t adequate. Although it is true that the word *thibbolet was not a real word, this does not invalidate the idea that š represented /t/. These Gileadites were not philologists. Passwords in war can be nonsense words. Their purpose is to catch the enemy, not to pursue linguistic rigor!

6.2.3 Spelling

6.2.3(a) Hebrew uses several consonants to indicate the presence of a vowel (called plene spelling). A-class (red), i-class (green), and u-class (orange) vowels are marked by heh, yod, and waw, respectively. In this phase of the language, heh is used to mark final u-class (orange) long as well as a-class (red) long. Aleph also was used to indicate final a-class (red) vowels, but not as often. The Masoretes note that on seventeen occasions חֹרְךָ to him (with final waw) is spelled נַּחַל lō’ (with final aleph), which looks like the negative particle. Perhaps most famously this changes the admittedly odd “not we” of Psalm 100:3 to the quite sensible “we belong to Him.”

6.2.3(b) Four factors determine whether or not such vowel letters will appear: location of the vowel, its length, its class (color), and the language stratum in which it occurred. In Archaic BH short vowels are not so marked. Medial long i-class (green) and u-class (orange) vowels (whether original or due to monophthongization (sometimes called ‘contraction’) of diphthongs [aw > ō and ay > ē]) usually are. Medial a-class (red) are not. And medial stressed long are not. Final long vowels are marked. Marking two vowels internally is rarely (if it all) attested.

6.2.4 Forms

The following are characteristics of Archaic BH which are rarely or not found at all in Standard BH: possible remnants of the common Semitic case system (e.g., ḥaytōʾ eřəq; -mō as a 3mp pronominal suffix on nouns and an objective pronoun on verbs; different prepositional forms (ʾlē alongside ʾal and ʾlē as well as ʾēd; different noun forms (e.g., the following lexical changes from Psalm 8:8: sōneh for sōʾ h’ flock (both sheep and goats); and ʾlāgim for ʾwārīm oxen; sādāy for sādeh field; qatal configurations closer to common Semitic (e.g., -at as 3fs suffix [also in OC], -tī as 2fs suffix, and a separate form for 3fp [3mp does double duty in
Standard BH with -āh as the suffix); more frequent occurrences of the Old Qal Passive stem (also in OC); zū as relative pronoun; and article use is rare. Negation by bal (as in Phoenician) is found in the Archaic BH corpus only in Job. It is fairly well attested in the poetry of the Psalms, Proverbs, and Isaiah.

6.2.5 Relations
wayyiqtols without the initial waw plus gemination function as preterites; relative clauses without preceding relative pronoun

6.2.6 Lexicon
Contains rare poetic roots and primitive nouns.

6.3 Late BH

6.3.1 General
6.3.1(a) Many features of Late biblical Hebrew anticipate Mishnaic Hebrew, which was a spoken language in the environs of Jerusalem until the codification of the oral law in the Mishnah in about A.D. 200. The idea that MH was an artificial language of the rabbinic sages who produced the oral law was decisively refuted when letters dealing with non-religious matters (circa. A.D. 135) written in a language very much like MH were found in caves near Jerusalem. The strongest influence on Hebrew at this time was Aramaic, which was the lingua franca of the Assyrian, then the Babylonian, and finally the Persian empires. Whether it was due to this interloper or a natural development in the language does not alter the fact that Late BH is quite different from Standard BH.

6.3.1(b) The biblical books most strongly evincing Late BH—which we will call the primary corpus—are those which are clearly from the exilic and post-exilic period (Ezra, Nehemiah, Esther, Chronicles, Daniel, Haggai, Zechariah, and Malachi). The prophetic books intoning imminent exile (Kings, Jeremiah, Ezekiel, Habakkuk, and Zephaniah) exhibit one or two features of the idiom; consequently, we will call that collection the secondary corpus, although the language of these books is not normally considered to be Late BH.

6.3.2 Sounds
6.3.2(a) Little by little from Archaic BH through Standard BH into Late BH and into the Medieval period Hebrew lost the full consonant inventory of common Semitic, shedding the additional pronunciations of all but one grapheme, š. Only this one retained two pronunciations (of its original three), which are distinguished in the MT by the placement of a diacritical point. Transcriptions in the Septuagint (LXX) of place names evidence that both the pharyngeals and their velar counterparts were alive and well in the 3rd C. B.C., but the Hexapla shows that by the 3rd C. A.D. the two types were no longer different or had both weakened to near zero. In addition, since the Masoretes (mid 1st millennium A.D.) had a way of distinguishing disparate pronunciations of graphemes but didn’t do so with any of these letters except š strongly suggests that all the other common Semitic multiple-pronunciation letters had become mono-pronunciation letters. Nevertheless, it is difficult to say how far along in this process Hebrew had come in Late BH. Since spoken language tends to presage what a written language will look like in two or three generations, it is very possible that spoken Late BH was starting to lose the multiple pronunciations in its spoken idiom.

6.3.2(b) As it lost the multiple pronunciations of the letters mentioned above, Hebrew gained the allophonic variations (regular sound change having no phonemic implications) of six other letters b, g, d, k, p, and t (possibly due to Aramaic influence), the pronunciations of which after vowels were first aspirated (as they are pronounced in English at the beginning of a word) and then later softened (called ‘spirantized’) to /v/, /gh/, /dh/, /kh/, /fl/, and /th/, respectively. The hard pronunciation is marked by a dot (called daghesh lene) in the bosom of the letter. The soft pronunciation lacks the dot, but in Israel today only b, k, and p are pronounced differently after a vowel.

6.3.3 Spelling
Internal vowels are marked much more often in Late BH than in Standard BH. Best known are the change in the spelling of Jerusalem and that of David. In Standard BH Jerusalem is spelled y-rūšālaim hundreds of
times, but in Chronicles and Esther it is spelled yārūšālayim (with a yod between the a and i). Outside of Chronicles “David” is spelled dāwīd, but there it is spelled dāwīd (with a yod between the waw and the dalet).

6.3.4 Forms and Relations

6.3.4(a) A very peculiar feature of biblical Hebrew is that there are two versions of the first person common singular independent personal pronoun; that is, of ‘I’: ānōkî and ʾānî. The former occurs 359 times, the latter 874. Even though the former is reflected in OC, Ugaritic, and Phoenician, actually the latter form occurs more frequently in the Archaic BH corpus (17x for ānōkî vs. 30x for ʾānî). Starting with Kings (which tradition attributes to Jeremiah) the attestations of the longer form was starting to seriously wane at the same time the shorter was waxing (9 vs. 46). The disparity is even more drastic in Jeremiah plus Ezekiel (38 vs. 223). But in the primary corpus, ānōkî has almost vanished (3 vs. 76), which is consistent with the fact that it is totally absent from MH. In addition, in later parallel passages the later author replaces ānōkî with ʾānî (1C 17:16 || 2S 7:8; 1C 21:10 || 2S 24:12, 17; 2C 34:27, 28 || 2K 22:19) or replaces it with another construction (Jr 21:8 || Dt 11:26).

6.3.4(b)(1) zōʾ is not attested in Mishnaic Hebrew; zōh is found instead. We might expect then that these fs near demonstratives should show a decline in zōʾ in the primary LBH corpus and an increase in zōh. But does their distribution support this expectation? In fact, zōh occurs only 11x in the MT: twice in Standard BH (Jos 18:4; 2S 11:25), which might be explained as a Bethlehemite isogloss; twice in Kings (1K 14:5; 2K 6:19); once in Ezekiel (40:45); and 6x in Ecclesiastes.

6.3.4(b)(2) The collocations in which zōh appears and the distribution of zōh and zōʾ in general is very enlightening. In Judges 18:4, 2 Samuel 11:25, and 1 Kings 14:5, zōh occurs in the idiom הוֹצֵא zōh wʾkāze ʾ ‘according to this and according to this [= such and such]’ Furthermore, this idiom which pairs the fs and ms versions of ‘this’ occurs only with zōh not with zōʾ. However, a variant חוֹצֵא zōʾ wʾkāzo ʾ, with duplicate forms of fs, occurs five times: thrice in Standard BH (Jos 7:20 and 2S 17:15 [twice]) and two times in the secondary corpus (2K 5:4; 9:12). Although this variant does not occur in the primary corpus, neither does the other collocation. Hence, the data for these particular distributions are inconclusive.

6.3.4(b)(3) Prescinding from the above considerations and turning to examine the general distribution of feminine singular near demonstratives in Late BH, we find a surprising result. In Chronicles, zōʾ occurs 32x out of 32 instances of the near demonstrative fs. In Ezra-Nehemiah, fifteen out of fifteen are zōʾ. In Zechariah, 9 out of 9 are zōʾ. In Malachi, five out of five; in Daniel, 2 out of 2; Esther, four out of four. We can add to this the distribution in the secondary corpus: in Kings—38 of 40 are zōʾ; in Jeremiah—96x out of 96; and in Ezekiel—24 of 25.

6.3.4(b)(4) This distribution clearly shows that zōh is not displacing zōʾ in Late BH. Curiously, zōh is the near fs demonstrative which does not appear in the Late BH primary corpus. One wonders then where did zōh come from in MH? Perhaps there is a clue in Ecclesiastes, where zōh occurs six out of six times: yet another feature of this enigmatic book supporting the thesis that it was written in a colloquial Hebrew dialect which may have led to MH.

6.3.4(c) Imperatival IA is going out.

6.3.4(d) Waning of Old Qal Passive. The Old Qal passive stem has a u-class a-class (orange red) vowel sequence. Since two other stems (Pual and Hophal) had this sequence, the Old Qal passive eventually became otiose in the language. It does not occur in MH. As it went out it pulled into the place it had occupied another stem, which was middle passive, the Niphal. The statistics speak for themselves: 31 occurrences in the Pentateuch; 11 in the secondary Late BH corpus; and 3 in the primary corpus. And then there are the clear examples of a Niphal replacing an earlier Old Qal passive in parallel texts: 1C 3:4 || 2S 3:5; and 1C 20:6 || 2S 21:20.

6.3.5(a) Finite Verbs. Mishnaic Hebrew has only two finite verb forms: qatal and yiqtol. We might expect then to see evidence in Late BH of the following breakdown of the four-form system of Standard BH: wayyiqtol replaced by qatal and habitual yiqtol in narrative is replaced by qatal.
6.3.5(b)(1) To test this expectation, note the following relative frequencies of the number of wayyiqtol to total number of finite verbs in several biblical books: Gn .541; Sm .510; Kgs .503; Chr .490, Ecc .007; Dn .227; Est .403; Neh .417.

6.3.5(b)(2) The fraction of wayyiqtol replaced by qatal is given by the following expression:

\[ P_w = 1 - \frac{\text{wayyiqtol}}{.541 \, \text{FV}} \] (1)

where wayyiqtol is the number of wayyiqtol in a book, \( P_w \) is the fraction (between 0 and 1) of wayyiqtol which became qatal; FV is the total number of finite verbs in a book, and .541 is the relative frequency of wayyiqtol in Genesis.

6.3.5(b)(3) The fraction of habitual yiqtol replaced by qatal is given by the following expression:

\[ P_y = 1 - \frac{\text{yiqtol}}{.176 \, \text{FV}} \] (2)

where yiqtol is the number of yiqtols in a book, \( P_y \) is the fraction (between 0 and 1) of yiqtols which became qatal, FV is the total number of finite verbs in a book, and .176 is the relative frequency of yiqtols in Samuel.

6.3.5(b)(4) Applying equations (1) and (2) to the biblical books in question resulted in the following:

For Nehemiah \( P_w = .229 \) \( P_y < 0 \) [means that the relative number of yiqtol went up]
For Daniel \( P_w = .58 \) \( P_y < 0 \)
For Chronicles \( P_w = .09 \) \( P_y = .341 \)
For Ecclesiastes \( P_w = .987 \) \( P_y < 0 \)
For Esther \( P_w = .255 \) \( P_y < 0 \)

What does this mean? The results for wayyiqtol bear out our assumption that the number of wayyiqtol declined in Late BH as its function was taken over by qatal. But the results for yiqtol—with the exception of Chronicles—surprisingly, do not support the assumption that in Late BH habitual yiqtol was replaced by qatal; in fact they show an increase in the number of yiqtols from the number there would be if none had been replaced!

the wayyiqtol – qatal = FV [(1 - 2Pw)(.541) – P \( y \) (.176 [RFy in Gn]) – (.23 [RFq in Gn])], where qatal is the number of qatals in a book

If \( P_w \) and \( P_y \) are 0, then wayyiqtol – qatal = FV [(1 - 2Pw)(.541) – (.23 [RFq in Gn])]

6.3.5(c) Niphal (passive) in Standard BH replaced by Qal + D.O. (active) in Late BH. Note the following:


6.3.5(d) āz ‘then [in the past]’ is followed by qatal instead of yiqtol.

6.3.6 Lexicon

The Standard BH word for ‘kingdom’ is mamlākā (m- indicating place with the root M L K ‘to reign’). Besides this word for ‘kingdom’ there is another, malkāt, the word for ‘kingdom’ in MH, which is only rarely attested in Standard BH (4x) but is the word Daniel uses, not the formerly dominant one.

Additionally, roots common in MH but previously absent in Standard BH are seen; new roots needed to replace old roots which have changed their meaning appear; and roots and words common in MH replace older rare roots and words.

ENDNOTES
1.2 During the Medieval period, a number of celebrated writers (e.g., Saadia Gaon, some of the Qaraïtes, Hayyuj, Ibn Jannah, Ibn Geketilla, Ibn Ezra, the Qimhis), studied Sem lang, Sem lang, Sem lang comparatively with variable methodological soundness. So and so (born-died), for example suggested this and that but did not mention such and such; so and so else (born-died) did call attention to such and such but failed to see a connection with here and there. Early Modern scholarship was scarcely more unified. In Gottfried Leibnitz’s scheme, all the languages of the world belonged to either the European or Aramaic language family. He announced his observations in 1710 in a monograph entitled

2.1.1(q) What then is root and pattern? Is it disembodied consonants carrying the basic meaning interleaved with a pattern carrying the modifications so as to obtain all the forms by way of roots and patterns?

Is it a sequence of letters in common for words sharing a basic meaning, and connected to patterns generated by analogy to other words (technically and arcane, ‘melodic overwriting’ to achieve ‘nonconcatenative templatic morphology, NTM)?

With either understanding, still the root is the residual of the word after all the vowels and other elements of the pattern have been removed. And conversely, the pattern is that part of the word which isn’t the root.]

Endnote: Sign and referent. The root (sign) and the meaning attached to it (referent) are integrally connected, but are two distinct things; the core pattern (sign) and the stem (referent) are integrally connected but are two distinct things; the perimeter pattern (sign) and the form (referent) are integrally connected but are two distinct things.

Endnote. The diagram below illustrates these relationships (Independent or Dependent).

<table>
<thead>
<tr>
<th></th>
<th>root</th>
<th>gen. core pattern</th>
<th>perimeter pattern</th>
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<tbody>
<tr>
<td>root</td>
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<td>gen. core pattern</td>
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<tr>
<td>perimeter pattern</td>
<td>I</td>
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Endnote. A mathematical analogy? Every root \( r \) is connected to a set \( M \) with a particular meaning (e.g., “walking”). \( M \) has two elements a set \( R = \{r\} \) and a set \( V \), the set of the attested verb instantiations. “Stems” are a set of operators \( S = \{s_1, s_2, s_3, \ldots, s_x\} \) which act on \( r \) to produce the elements of \( V \). Since \( V \) is a subset of \( M \), its elements are within \( M \), in this case, “walking.” Symbolically, \( M = \{\{r\}, \{v_1, v_2, v_3, \ldots, v_x\}\} \), where \( V \) is the Cartesian product of \( S \) and \( R \), i.e., \( V = S \times R \).

2.4.3(d) Stem functions and definitions. The ‘ground stem’ is the simple lexical meaning (e.g., “walk”). ‘Pluralitive’ means multiplication of action, extension in space or time of the action, or repetition of the action (e.g. “walk all around”). ‘Factitive’ is putting something or someone into a state (e.g. “make big [= magnify]”). ‘Denominative’ turns a noun into a verb (e.g. “produce words [= speak]”). Causative causes someone to do something (e.g. “cause to walk”). Elative means to raise the verb to its extremity (e.g. “most severe”).

Stem augments in the literary Semitic languages (shaded means rare)

<table>
<thead>
<tr>
<th></th>
<th>Akkadian</th>
<th>Ugaritic</th>
<th>Hebrew</th>
<th>Aramaic</th>
<th>Arabic</th>
<th>Ge’ez</th>
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<tr>
<td>G</td>
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2.4.7 Formation of plurals in the Semitic languages: usually \( -im \) (Hebrew), \( -in \) (Aramaic), \( -uma \) (Ugaritic), \( -u \) (Akkadian) for a masculine plural; and \( -ot \) (Hebrew), \( -an \) (Aramaic), \( -atu \) (Ugaritic), \( -atum \) (Akkadian) for feminine plural.]

3.1.5(a) Akkadian cuneiform logograms. Logograms in Akkadian texts may be transliterated either as the Sumerian name for the sign or the Akkadian equivalent. For example, the logogram for house might appear either as \( \dot{b} \) or \( bitu \).]
3.5 Arabic was standardized by the end of the 8th C. [Endnote: In Sibawayhi’s monumental and seminal five volume grammar *Al-Kitab*.]

5.4 Vs. Ugaritic  Second, although Ugaritic … rather than the Hebrew of /d/ to /z/. [Endnote: In the case of Aramaic and Hebrew the sound could either have changed to /d/ and /z/, respectively, and was then spelled with <d> or <z>, or was merely represented by the respective letters because of the limitations of the Phoenician alphabet. The consistency with which it is spelled, however, in each language suggests that the change had already happened or was in process. But Ugaritic, since it had a separate grapheme for the sound, must have been undergoing the change, otherwise it would have spelled the sound with that grapheme.]

6.2.2(b) claimed not to be Ephraimites. [Endnote: Why not some other way? Since, being descendants of Jacob, did they all resemble one another?]