

the right-hand member is the head. In Samoan, the head comes first, so that a noun-verb compound, such as *potumoe* 'bedroom', from *potu* 'room' + *moe* 'to sleep', has the category of noun.

In DERIVATIONAL MORPHOLOGY [q.v.], the category of a complex word is often determined by its outermost affix. Thus English *-ness* marks a word as a noun, while *-ize* marks it as a verb. Some prefixes, however, do not determine the category of the words they derive; e.g., with *pseudo-*, note the noun *pseudo-doctor* and the adjective *pseudo-scientific*.

In the case of coordinate structures, each conjunct must have the same category as the entire conjunction; hence it is best to consider each conjunct as a head of the conjunction. So-called appositive compounds (e.g., *painter-poet*, *bartender-bouncer*, or *Lutheran-Jewish*) have the same characteristics.

Finally, HEADLESS or EXOCENTRIC constructions have no member which determines their category. These include morphological conversions (such as *to machine-gun*, from a compound noun), as well as antonymic compounds like Mandarin Chinese *dà-xiǎo* 'size', lit. 'big-little'. It is often theoretically attractive to reanalyze exocentric formations by postulating zero heads—hence the frequent appeal to zero affixes and empty operators.

In generative grammar, X-BAR THEORY was developed specifically to express the 'head-of' relationship. Other important notions, such as 'government' and 'argument', are also defined in terms of X-bar theory, and hence headedness. In Generalized Phrase-Structure Grammar [q.v.], the notion plays a central role in the HEAD FEATURE CONVENTION.

Traditionally, two kinds of relationships between heads and non-heads are distinguished: that of FUNCTOR (or subcategorizer) and ARGUMENT, and that of HEAD and MODIFIER. The expressions *dwell in a cave* and *stupidity* illustrate the former; the categories of the non-heads are selected by the heads *dwell* and *-ity* . *Waterbed* and *life on Mars* illustrate the latter relationship. Modifiers, unlike arguments, can be iterated indefinitely (e.g. *meta-meta-meta-language* or *deep, dark, dull, dogmatic prose*). The head normally has the same distribution as the entire phrase in a head + modifier combination. Exceptions exist, however: thus, in many languages, clitics attach to verbs but not to verb + adverb groups. In German verb clusters, a verb cannot be replaced by verb + adverb. In a functor-argument combination, this is not usually so. The two relationships can be marked by

inflectional morphology: the markers on arguments of the head are usually called (direct) case markers, and the ones on modifiers, agreement markers.

Many issues involving heads remain controversial (Zwicky 1985): e.g., whether the head of S is a V[erb], an INFL[ection], or nothing; whether noun phrases are headed by the noun or the determiner (Hoeksema 1984, 1988); and what role heads play in cross-linguistic generalizations about word order.

JACOB HOEKSEMA

BIBLIOGRAPHY

- HOEKSEMA, JACOB. 1984. *Categorial morphology*. University of Groningen dissertation. Published, New York: Garland, 1985.
- HOEKSEMA, JACOB. 1988. Head types in morpho-syntax. In *Yearbook of Morphology*, vol. 1, edited by Geert Booij & Jaap van Marle, pp. 123–137. Dordrecht: Foris.
- ZWICKY, ARNOLD M. 1985. Heads. *Journal of Linguistics* 21.1–29.

HEBREW. [*This entry is concerned with the Semitic language which has been used distinctively by Jews since ancient times, in Israel and elsewhere. It comprises two articles:*

Ancient Hebrew

Modern Hebrew

For related topics, see Semitic Languages.]

Ancient Hebrew

Our knowledge of ancient Hebrew comes from the Bible, the Dead Sea (Qumran) Scrolls, the Mishnah and other Rabbinic works, as well as inscriptions (including hundreds of ostraca and seal impressions) produced by native speakers, ranging in time from the 12th century BCE (the 'Izbet Šarṭah abecedary, assuming it is Israelite) to 132–35 CE (the Bar-Kokhba letters). (For reference, see Davidson 1901, Gesenius & Kautzsch 1910, Bergsträsser 1918–29, Bauer & Leander 1922, Joüon 1923, Segal 1927, Blau 1972, Bar-Asher 1972–80, Ben-Ḥayyim 1977, Haneman 1980, Kutscher 1982, Garr 1985, Yeivin 1985, Waldman 1989, and Malone 1991.)

1. Variation. The language of the Hebrew Bible is by no means monolithic. There is enough diachronic variation to justify distinguishing S[tandard] B[iblical] H[ebrew] from L[ate] BH (after 500 BCE), and both of these from the archaic poetic dialect. The amount of

such variation is far less than one would expect in a collection of works spanning a millennium; this may be ascribed to a number of factors, including diglossia and the mainly consonantal character of the alphabet.

Diachronic variation in the Mishnah is much more difficult to detect. Early passages occasionally exhibit forms which differ from those of standard M[iddle] or M[ishnaic] H[ebrew]. However, these are BH forms; they may simply reflect the lingering influence of the literary standard on early written, rather than spoken, MH.

MH used to be viewed as an artificial scholastic jargon; however, the prevalent view today is that MH was a colloquial idiom still spoken in the 2nd century CE, and that it was descended from an older colloquial idiom ('Pre-MH') spoken in the Biblical period. According to this view, LBH is a purely literary language whose non-SBH features come from Pre-MH. The precise relationship of Pre-MH and MH to SBH, and to each other, remains to be determined. Nevertheless, it is generally agreed that, although MH frequently exhibits the culmination of developments begun in SBH, it cannot be a direct lineal descendant of the latter, since some of its distinctive features are at least as archaic as their SBH counterparts.

The sociolinguistic interplay of lects and languages in Palestine is the subject of a number of oft-cited Biblical and Talmudic passages: Judges 12:5–6, II Kings 18:26–28, Nehemiah 13:23–24, Bava Kamma 82b–83a, 'Avoda Zara 58b, Hullin 137b, and Pal. Talm. Megilla 71b.

Information about regional dialects can also be gleaned from inscriptions and Biblical compositions whose geographic origin is known. It has been shown that the Hebrew of the northern (Israelite) kingdom, unlike that of the southern (Judahite) kingdom, differed from SBH in important respects, largely as a result of Phoenician influence.

The most important non-Canaanite neighbor of Hebrew was Aramaic [q.v.]. Its influence is felt already in the oldest parts of the Bible, and becomes more and more pronounced after its rise to the status of an international language during the 8th century BCE. By the first two centuries of the Common Era, the dwindling Hebrew-speaking population of Judea was, in all likelihood, largely bilingual. The effect of this contact was profound in all areas except morphology.

Other non-Canaanite languages left their mark on Hebrew too, mainly in the area of the lexicon: Akkadian,

Egyptian, Iranian, Greek, Latin, etc. Much of this influence was mediated by Aramaic.

2. Orthography and phonology. The writing and pronunciation of ancient Hebrew can be discussed in terms of the consonants, the vowels, and the rules for their alternation.

2.1. Consonants. The Israelites adopted unchanged a twenty-two-sign version of the alphabet current in their area, even though they had preserved more than twenty-two of the twenty-nine Proto-Semitic consonants (see Table 1). Consequently, they were forced to use some signs with more than one value. Only one instance of such polyphony (/š/-/ś/ > /š/-/s/) survived long enough to be recorded in the Masoretic pointing (see below); but an old theory positing two additional instances (/ħ/-/h/, /ʕ/-/ġ/) has recently been confirmed, and there may well have been others. The polyphony of /t/-/t̄/, /p/-/p̄/, etc. has a different origin (see Table 1).

2.2. Vowels. Another type of polyphony shown in Table 1 is that of *h*, *w*, and *y*. These three letters represented vowels as well as consonants, but only in a rudimentary, ambiguous fashion: their use as vowel letters (*matres lectionis*) was not consistent in all positions, and the number of vowel phonemes was, in most periods, no less than six. Thus Ancient Hebrew had a highly homographic spelling which left much to the reader's judgment.

Such a situation was intolerable in the case of the Bible. It is no wonder, then, that the Talmud contains many references to an official Biblical R[eading] T[radition] (*miḳra'*), mastery of which was essential for one who aspired to be a reader in the synagogue (*ḳar-yana*). There were, in fact, a number of RTs in use at the time in Palestine and Babylonia. They were reduced to writing in the post-Talmudic period by various schools of traditionists, called MASORETES, through the insertion of 'points' into the received consonantal text. The same signs were used to record Palestinian and Babylonian RTs of MH. Reliable manuscripts show that these differed from the Biblical RTs in many details.

The differences among the Masoretic RTs are, for the most part, differences of dialect rather than of substance. The Tiberian and Babylonian systems (each with several sub-systems) distinguish seven and six contrasting vowel qualities, respectively, while the various Palestinian systems and sub-systems distinguish five, six, or seven; for the Tiberian system, see Table 2.

The systems differ in incidence as well as inventory.

TABLE 1. *The Hebrew Alphabet*. Letters are given with Tiberian pointing; final forms are marked by (f).

Letter	Transliteration	Notes	Letter	Transliteration	Notes
1 א	'	Glottal stop; realized as [θ] in final position, and sporadically as after [ā].	11a א, א	k	See note to 2a, above.
2a ב	b	Plosive realization marked by point (<i>dageš kal</i>).	11b א, א (f)	k, x	See note to 2b, above.
2b א	b, v	Fricative realization marked by line (<i>rafeh</i>); originally a post-vocalic allophone, subsequently phonologized.	12 ב	l	
3a ג	g	See note to 2a, above.	13 ג, ג (f)	m	Possibly realized as [̃] (i.e. as nasalization of preceding vowel) in final position by 2nd century BCE.
3b א	g, γ	See note to 2b, above.	14 ג, ג (f)	n	See note to 13, above.
4a ד	d	See note to 2a, above.	15 ד	s	
4b א	d, δ	See note to 2b, above.	16a ז	' ₁	Voiced pharyngeal approximant with glottal stop and/or creaky voice; realized as ['] (= 1) or [θ] at Qumran, as ['] by the Hellenized inhabitants of Haifa, Beisan, etc. in 2nd century CE, and as ['], ['], or [θ] in Samaritan RT.
5a א, א	h	Consonantal realization in final position marked by point (<i>mappik</i>); realized as ['] (= 1) or [θ] in Samaritan RT.	16b ז	g, '₂	Voiced uvular fricative; merged with 16a after 3rd century BCE.
5b א	h	<i>Mater lectionis</i> for mid/low vowel in final position.	17a ט	p	See note to 2a, above.
6a ו	w	Babylonian RT had BH realization: [w]. Tiberian and Samaritan RTs had MH realization: [w] after [u], [v] (= 2b) elsewhere.	17b ט, ט (f)	p, f	See note to 2b, above.
6b ו	w	<i>Mater lectionis</i> for long (later also short) high/mid back vowels, esp. in final position.	17c ט (= 17a)	p	See note to 9, above. Iranian loanword in Dan. 11:45 (as realized in RT of Jerome's teachers and Tiberian RT) and Greek loanwords in MH.
7 ז	z		18 ז, ז (f)	s, c	See note to 9, above. Two variant realizations: fricative and affricate.
8a ח	h, h₁	Voiceless pharyngeal fricative; realized as [h] (= 5a) or [θ] at Qumran, as [h] by the Hellenized inhabitants of Haifa, Beisan, etc. in 2nd century CE, and as ['] (= 16a), ['] (= 1), or [θ] in Samaritan RT.	19 ט	k, q	See note to 9, above. Transliteration with q is the norm today; it is accurate for Arabic, but misleading for Hebrew.
8b ח	h, h₂	Voiceless uvular fricative; merged with 8a after 2nd century BCE.	20 י	r	
9 ט	t	"Emphatic": glottalic realization, later (by 10th century CE) replaced by velarized (= Arabic) realization.	21a י	š	
10a י	y		21b י	š	Voiceless lateral fricative, [ɬ]. Jewish RTs have the LBH-MH realization [s] (= 15); Samaritan RT has the Israelite realization [š] (= 21a).
10b י	y	<i>Mater lectionis</i> for long (later, sporadically also short) high/mid front vowels, esp. in final position.	22 י	t	See note to 2a, above.
			22b י	t, θ	See note to 2b, above.

TABLE 2. *The Tiberian Vowel Signs (with matres lectionis)*

Sign	Name	Transliteration	
		Biblicists	Linguists
1a	ֶ <i>šerek</i> > <i>kibbuš</i> > <i>ḳubbuš</i>	u	u
1b	ִ <i>šerek</i> > <i>šuruḳ</i>	û	u ^w
2a	ֹ <i>helem</i> > <i>ḥolam</i> (<i>ḥaser</i>)	ō	o
2b	ִ <i>helem</i> > <i>ḥolam</i> (<i>male'</i>)	ô	ow
3a	ָ <i>ḳameš</i> > <i>ḳamaš</i> (<i>gadol</i>)	ā	ā, ɔ
3b	ֿ <i>ḳameš</i> > <i>ḳamaš ḳaṭan</i> (in closed unstressed syllables)	o	ā, ɔ
3c	ֹ <i>ḥaṭaf ḳameš</i> > <i>ḥaṭaf ḳamaš</i>	ø, o	ǎ, ɔ̃
4a	ֹ <i>pattaḥ</i>	a	a
4b	ֿ <i>ḥaṭaf pattaḥ</i>	ā, a	ā
5a	ֿ <i>segol</i>	e	ε, ə
5b	ֹ <i>ḥaṭaf segol</i>	ē, e	ě, ä
6a	ֹ <i>šeri</i> > <i>šere</i> (<i>ḥaser</i>)	ē	e
6b	ִ <i>šeri</i> > <i>šere</i> (<i>male'</i>)	ê	eʏ
7a	ִ <i>hereḳ</i> > <i>ḥirik</i> (<i>ḥaser</i>)	i	i
7b	ִ <i>hereḳ</i> = <i>ḥirik</i> (<i>male'</i>)	î	iʏ
8a	ֿ <i>šewa na'</i> (<i>mobile</i>)	ē, e	ǎ, ə
8b	ֿ <i>šewa naḥ</i> (<i>quiescens</i>)	none	none

For example, in unstressed syllables closed by an ungeminated consonant, the normal Tiberian reflex of Pre-Hebrew short /u/ is /ǎ/, corresponding to Babylonian /u/ and Palestinian /o/, /ǎ/, and /a/; see Table 3. The data in that table can be used to classify all RTs, including non-Masoretic ones; see Table 4.

TABLE 3. *Reflexes of Pre-Hebrew Vowels in the Hebrew Reading Traditions.* Stressed vowels are marked by ˈ. Reconstructed forms are marked by *. The attested form of Palestinian *ḳarbān* has only the first vowel marked.

	Vowel Number			
	1	2	1	3
Pre-Hebrew		* <i>ḳudḳúd-</i>		* <i>ḳurbá:n-</i>
Babylonian		<i>ḳudḳód</i>		<i>ḳurbān</i>
Palestinian		* <i>ḳodḳód</i>		<i>ḳorbān</i>
(cf. Josephus-NT)				<i>κορβαν</i>
Tiberian		<i>ḳādḳód</i>		<i>ḳārbān</i>
Palestinian		* <i>ḳādḳód</i>		<i>ḳārbān</i>
		<i>ḳadḳód</i>		* <i>ḳarbān</i>
Samaritan		<i>ḳādḳād</i>		<i>ḳārābān</i>

TABLE 4. *Structural Classification of Hebrew Reading Traditions.* The vowel numbers used in this table correspond to the vowel numbers used in Table 3.

		vowel 1 = vowel 3?	
		yes	no
vowel 1 = vowel 2?	yes	Samaritan	Palestinian
	no	Tiberian Palestinian	Babylonian

As for vowel QUANTITY, both the Tiberian and the Babylonian systems have a number of composite vowel-signs (*ḥaṭefim*) representing short vowels, which contrast with the regular vowel-signs in open unstressed syllables. A length contrast may be posited for closed unstressed syllables only if ǎ (*šewa mobile*) and/or the secondary accent (*gaṣya*) are non-phonemic. Pre-Masoretic Hebrew had a length contrast in stressed syllables as well, until it was erased by stress-lengthening after the 1st century CE.

2.3. Morphophonemics. The Tiberian RT has an unusually large number of alternations, most involving vowels (usually the historically short ones) or semi-vowels. The great majority are—or were originally—conditioned by differences in stress (stressed/unstressed, pretonic/antepretonic, [pre-]pausal/contextual, construct/absolute), by syllable structure, and/or by the proximity of a laryngeal (/ʔ h ḥ ʕ/). Table 5 gives a sample of some of the most common alternations.

3. Grammar. Ancient Hebrew morphology and syntax can be discussed under the following headings.

3.1. Gender and number. The categories of gender and number are common to nouns, adjectives, and verbs. Dual number, however, is generally restricted to a small set of nouns, mainly those denoting units of measurement and counting. When used with nouns denoting paired body-parts, the dual ending is structurally a plural ending, since it does not contrast with the regular plural endings, and it co-occurs with numerals. Moreover, this 'pseudo-dual' ending has a reduced allomorph in the construct state (see below), unlike the true dual, which is invariant (as in modern Arabic dialects). There is also a diachronic distinction. The pseudo-dual remained unchanged in MH, while the true dual was partially replaced by the word for 'two'. The plural of nouns is

TABLE 5. *Tiberian Morphophonemic Alternations*. The main stress is marked by ' in context and by ˘ in (pre-)pause. Forms with neither sign are proclitic. Suffixed pronouns are preceded by a hyphen.

/i/	/e/	/ɛ/	/a/	/ā/	/o/	/u/
lib:-i˘ *tāšibē˘nāˁh	léb tāšébnāˁh teléd yāšal:éaḥ	leb way:élek yitneḥām ʔéreṣ	teládnāˁh yāšal:áḥ way:elāk yitnaḥām ʔāmár dōbar-kém	ʔāreṣ ʔāmár dōbár-ām kál	kól tāšóbnāˁh mātoˁk	kull-ám tāšubē˘nāˁh mātuˁkáˁh

usually expressed by endings, but suppletive *šo(?)n* and *bāḳār* (the plurals of *šéˁ* 'sheep/goat' and *šor* 'ox,' respectively) are unsuffixed. Semitists use the term 'collective' to describe these nouns and mass nouns, as well as true collectives.

3.2. Definiteness. The definite article is prefixed to nouns and adjectives, mainly attributive ones; contrary to the usage of the other Semitic languages, these include demonstrative adjectives. It is used in many contexts where English uses the indefinite article. Indefiniteness is usually expressed by the absence of the definite article, but occasionally the word for 'one' serves as an indefinite article.

3.3. Case and state. The Proto-Semitic case system has broken down in BH, largely as a result of sound change. The old accusative ending is gone; its functional heir, the preposition *ʔet*, normally governs only definite nouns, and even with them it is not obligatory. Also gone is the old genitive ending, used in Pre-Hebrew to mark the second (attributive) constituent of compound noun phrases like *šemen zayit* 'olive oil' and *zeˁt šemen* 'oil olive'. In Hebrew, it is the first constituent (the head) of these compounds which sets them apart. That constituent, said to be in the 'construct state,' undergoes a number of distinctive modifications in the course of the compounding process, including (i) vowel reduction and monophthongization, and (ii) deletion of the definite article.

The compounding process is iterative, and a number of long chains are attested (e.g. Leviticus 13:59 and I Chronicles 9:13). Chains of any length may be broken

up—usually into their immediate constituents—by the insertion of the preposition *l-* 'to, of,' optionally preceded by relative *ʔāšer* or *še-*. The orthography of *še-l* in the Bar-Kokhba letters and the Qumran Copper Scroll, as well as its syntactic distribution in those letters and the Mishnah, show that it had been reanalyzed as one morpheme by the 2nd century CE.

The first constituent of these genitive constructions sometimes takes a suffixed pronoun referring to the second constituent. This genitive anticipatory pronoun is common in MH—but only preceding *še-l*; in BH, only one of its rare occurrences precedes *še-l*: Song 3:7 *miṭ:ātoˁ šel:išlomoˁ* 'the bed of him, of Solomon.'

3.4. The root. Lexical morphemes composed solely of consonants can be isolated in members of virtually all syntactic categories, but only in the verb are these 'roots' free to 'interdigitate' with a large number of contrasting 'patterns'. [See Semitic Languages.]

The verbal root is usually trilateral, occasionally quadrilateral, or rarely quinqueliteral. Synchronically biliteral roots occur chiefly as allomorphs of trilateral ones. From a diachronic point of view, these biliteral allomorphs are probably relics of a more archaic stage in which biliteral verbs were fairly common. Viewed in this light, most weak verbs (see Table 6) are seen to be originally biliteral verbs which were 'trilateralized' through the addition of a semivowel or consonant length. It is not uncommon to find alternation between two trilateralizations of a single biliteral original, e.g. *y-g-r* ~ *g-w-r* 'be afraid' and *ṭ-w-b* ~ *y-ṭ-b* 'be good' (both Perfect ~ Imperfect). Examples of trilateralization can be cited

TABLE 6. *Roots with 'Weak' Radical.* Verbs are in the 3sg. masc. imperfect. The three positions within the trilateral root are numbered I, II, and III; thus a *ln* root is a root with *n* in the first position.

Root	Class	Verb	Meaning
<i>n-š-b</i>	<i>ln</i>	<i>yiš:ób</i> <i>yaš:l'ḇ</i>	blow (wind) cause to blow
<i>y-š-b</i>	<i>Iy</i>	<i>yešéb</i> <i>yo"šf'ḇ</i>	sit, dwell cause to sit/dwell
<i>š-w-b</i>	<i>IIw</i>	<i>yāšú"ḇ</i> <i>yāšf'ḇ</i>	return cause to return
<i>š-b-y</i>	<i>IIIy</i>	<i>yišbé^h</i>	capture
<i>s-b-b</i>	<i>II = III</i>	<i>yāsób/yis:ób</i> <i>yāséb</i>	go around cause to go around

from the historical period as well, e.g. BH *bān-ām* > MH *bānāy-ām* 'he built them' and BH *yim:ad* > MH *yim:āded* 'it may be measured'.

Trilateralization seems to have affected quadrilaterals as well as bilaterals. Thus, comparative evidence indicates that both *š-k-b*, the root of *šākeb* 'heel,' and *š-k-r* (*pišel*) 'hamstring' come from a quadrilateral root *š-r-k-b*, preserved in MH *šarko"ḇ* 'ham, hock.'

Other noteworthy diachronic trends involving root-classes (see Table 6) include the tendency to shift *Iy* verbs to the *IIw* class (sometimes with a change of *binyan* as well), and *III?* verbs to the *IIIy* class.

3.5. Tense and aspect. BH has six paradigms with temporal and/or aspectual value, listed below together with conventional 1sg. examples from the root *k-t-l* 'kill':

- (A) Perfect: *kāṭalti?* (paroxytone)
- (B) Imperfect: *ʔekṭól*
- (C) Perfect + *waw* consecutive/conversive: *wāḵāṭalti?* (oxytone)
- (D) Imperfect + *waw* consecutive/conversive: *wāʔekṭól*
- (E) Participle: *koṭél*
- (F) Participle + auxiliary: *(wā)hāyiʔti?/(wā)ʔehēyē^h koṭél*

All these exhibit a morphological distinction between dynamic and stative verbs (only in the *kal* stem; see below). Table 7 displays the ideal pattern, but there are many exceptions. Most of the exceptions involve Stative I verbs with 'thematic' *a* rather than *e* in some forms of the Perfect (more in the Babylonian RT than in the Tiberian); this results from a conditioned merger ('Phi-

TABLE 7. *The Dynamic/Stative Opposition*

	Dynamic	Stative I	Stative II
	'write'	'be hungry'	'be small'
Perfect (3sg. masc.)	<i>kāṭáb</i>	<i>rāšéb</i>	<i>kaṭón</i>
Thematic vowel	<i>a</i>	<i>e</i>	<i>o</i>
Imperfect (3sg. masc.)	<i>yikṭób</i>	<i>yiršáb</i>	<i>yikṭán</i>
Thematic vowel	<i>o</i>	<i>a</i>	<i>a</i>
Participle (masc.sg.)	<i>koṭéb</i>	<i>rāšéb</i>	<i>kaṭón</i>

lippi's Law') which led ultimately to the near-total disappearance of stative marking for the Perfect in MH. One exception exhibits morphological rather than phonological conditioning. The verb *h-l-k* 'go' has a trilateral Imperfect with dynamic marking in the masculine (*yahālok*) but stative marking in the feminine (*tihālak*)—a unique phenomenon which appears to be very archaic.

According to some scholars, paradigms A–D have temporal meaning in SBH; according to others, aspectual meaning. The question has been debated furiously and inconclusively for more than a century. Much of the discussion has focused on paradigms C and D—even though, synchronically, they are simply variants (partly positional, partly stylistic) of B and A, respectively.

Table 8 shows that collocations of A and B may be used to express contrast of tense (past vs. future), irrespective of aspect, while contrast of aspect (perfective vs. imperfective) is expressed by collocating A and B not with each other, but with E. Although A, B, and E have a bewildering variety of uses, these particular functions seem to be at the core of the system.

When one considers the full range of uses of these paradigms in SBH, it becomes clear that A–B need to be described in terms of both tense and aspect. Only for E is it possible to give a simple description, i.e. imperfective aspect.

The complexity of the tense/aspect system results, in part, from the fact that it was constantly in flux. Paradigm E—etymologically and morphologically nominal—and Paradigm F gradually took on the functions of B, in the following order:

- (a) Progressive: complete replacement already in SBH, except in present tense questions; without exception in LBH
- (b) Habitual: partial replacement in BH completed in MH

TABLE 8. Use of Tense/Aspect Forms in Biblical Hebrew

Perfective:	Past	Future	
	A	B	
	<i>kaʔāšer ʕāšpʔiʔ ləšomroʔn . . . ken ʔeʕēšeʔ lʔruʔšālayim . . .</i>		
	as I did to Samaria . . . so shall I do to Jerusalem . . .		
	(Isaiah 10:11; cf. Exodus 10:14 and II Kings 10:18)		
Habitual:	A	B	
	<i>ʔābʔiʔ yis:ar ʔetkem baš:oʔiʔm waʔāniʔ ʔāyas:er ʔetkem bāʕakrab:iʔm</i>		
	my father flogged you with whips, but I will flog you with scorpions		
	(I Kings 12:11; cf. Joshua 1:17 and Jeremiah 44:17)		
Stative:	A	B	
	<i>kaʔāšer hāyʔiʔ ʕim mošeʔ ʔehēyeʔ ʕim:āk</i>		
	as I was with Moses I shall be with you		
	(Joshua 1:5)		
Future:	Imperfective	Perfective	
	E	B	
	<i>hin:eʔ ʕoʔdāk mādab:eret šām ʕim ham:elek waʔāniʔ ʔāboʔ(?)</i>		
	while you are still speaking there with the king, I will come		
	(I Kings 1:14; cf. I Samuel 10:5 and Isaiah 65:24)		
Past:	E	A	
	<i>wāhin:eʔ ʕoʔden:āʔ mādab:eret ʕim ham:elek wānātān . . . bā(?)</i>		
	and while she was still speaking with the king, Nathan came		
	(I Kings 1:22; cf. Judges 13:9 and Job 1:13–19)		

- (c) Future: large-scale replacement in MH outside of subordinate clauses
- (d) Modal: partial replacement in MH

At the same time, E took on two of the functions of A: perfective present, including the performative; and present of transitive statives. One result of this expansion was that E lost its aspectual value and became a tense—present in Pre-MH (?), non-past in MH. Moreover, thanks to the spread of F, Hebrew developed the ability to distinguish habitual aspect in the future (rare in SBH, common in Q[umran]H and MH), in the infinitive (rare in LBH, common in MH), and in the imperative (MH).

3.6. Mood. The BH Imperfect distinguishes, in part of its paradigm, a Volitive mood (representing diachronically the conflation of the Proto-West-Semitic Jussive and Subjunctive) from the Indicative mood, in three categories of verbs: *hifʕil*, IIIy, and IIw,y *kal*. Even these Volitive forms are sometimes replaced by their Indicative counterparts in SBH; in MH, they are uncommon and largely restricted to certain literary genres.

3.7. Valence. Hebrew, like the other Semitic languages, has an elaborate system of morphological patterns ('stems'; Med./Mod. Heb. *binyanim*) used, for the most part, to derive verbs from other more basic verbs. The relationships in Table 9 are fairly typical for BH: II

TABLE 9. Biblical Hebrew Binyanim

			A Perfect	B Imperfect	E Participle
I	<i>kal</i>	'be(come) holy/taboo'	<i>kāḏāš</i> (~ <i>kāḏēšuʔ</i>)	<i>yikḏāš</i>	(<i>kāḏōʔš</i> adj.)
II	<i>nifʕal</i>	'reveal oneself as holy'	<i>nikḏāš</i>	<i>yik:adēš</i>	<i>nikḏāš</i>
III	<i>piʕel</i>	'sanctify/purify'	<i>kid:āš</i>	<i>yāḏkad:éš</i>	<i>māḏkad:éš</i>
IV	<i>puʕal</i>	'be sanctified/purified'	<i>kud:āš</i>	<i>yāḏkud:āš</i>	<i>māḏkud:āš</i>
V	<i>hifʕil</i>	'consecrate/devote'	<i>hikḏiʔš</i>	<i>yakḏiʔš</i>	<i>makḏiʔš</i>
VI	<i>hufʕal</i>	'be consecrated/devoted'	<i>huḏdāš</i>	<i>yukḏāš</i>	<i>mukḏāš</i>
VII	<i>hitpaʕel</i>	'sanctify/purify oneself'	<i>hitḏad:éš</i>	<i>yitḏad:éš</i>	<i>mitḏad:éš</i>

is, apparently, the reflexive of I; VII and IV are, respectively, the reflexive and medio-passive of III, which is in turn a causative of I; and VI is the medio-passive of V, which is itself a second causative of I.

The MH chart for *k-d-š* would be much the same, except in II, IV, and VII. II is no longer attested with this verb, no doubt because the usage of II has narrowed. In SBH, II served both as a reflexive and as a medio-passive of I; but in MH, only the latter function survives. IVA–B have ceased to exist for virtually all verbs in MH; their function as medio-passive of IIIA–B has been taken over by VIIA–B (with VIIA altered in form to *niḱkad:aš*). Concomitantly, the rare ingressive use of IVE has been transferred to VIIE (which with *k-d-š* has retained its initial *m-*, but with other verbs has *n-*). As a result, IIIE has two medio-passive counterparts in MH: stative IVE and ingressive VIIE. VII continues to function as a reflexive, as well.

Most of the above relationships correspond to oppositions of valence. Causatives like III and V add an argument to the verb, while medio-passives and reflexive/reciprocals like II, IV, VI, and VII subtract an argument, as shown in Table 10.

In BH, valence decrease can take place with rearrangement of the remaining arguments (Type 1), or without it (Type 2). The process which derives medio-passive verbs normally deletes the subject of their active counterparts, rather than allowing it to remain in a prepositional phrase—hence the medieval Hebrew description of medio-passive verbs as ‘those whose agent is not mentioned’. Type 1 medio-passives advance the original direct object to subject by making the derived verb agree with it, and deleting the accusative marker *ʔet*; Type 2 medio-passive verbs are ‘impersonal’ (i.e. invariably 3sg. masc. and subjectless), and are used with *ʔet* (see Numbers 26:53–55 in Table 10). Intermediate types with

TABLE 10. *Hebrew Valence: Increase, Decrease, and Rearrangement*

Binyanim	Root	Valences	Example
I, II	<i>r-p-ʔ</i>	2, 1	<i>rāpāʔeniʔ Y. wāʔerāpē(ʔ)</i> ‘heal me, O Lord, that I may be healed’ (Jeremiah 17:14)
VII, II	<i>k-d-š</i>	1, 2	<i>hiḱkad:ššūʔ wāḱkad:ššūʔ ʔet-beʔt Y.</i> ‘sanctify yourselves and sanctify the House of the Lord’ (II Chronicles 29:5)
III, IV	<i>b-r-k</i>	2, 1	<i>uʔbārek ʔet-beʔt ʔabdākā . . . yāborak beʔt-ʔabdākā</i> ‘and bless your servant’s house . . . may your servant’s house be blessed’ (II Samuel 7:29)
V, VI	<i>b-w-ʔ</i>	3, 2	<i>way:ābe(ʔ) hāʔiʔš ʔet-hāʔānāšim beʔtāʔ yoʔseḫ . . . huʔbāʔuʔ beʔt yoʔseḫ</i> ‘and the man brought the men to Joseph’s house . . . they were brought to Joseph’s house’ (Genesis 43:17–18)
III, I	<i>t-h-r</i>	2, 1	<i>tihartiʔk wālo(ʔ) tāhart</i> ‘I purified you, but you would not be purified’ (Ezekiel 24:13)
V, I	<i>š-w-b</i>	2, 1	<i>hāšivʔbeniʔ wāʔāšūʔbāʔ</i> ‘bring me back that I may come back’ (Jeremiah 31:17)
III, I	<i>ḥ-y-y</i>	2, 2	<i>ʔim-yāḥay:unuʔ niḥyeʔ wāʔim-yāmiʔtunuʔ wāmātnuʔ</i> ‘if they let us live, we shall live; and if they put us to death, we shall die’ (II Kings 7:4)
V, I	<i>m-w-t</i>	2, 1	
I, I	<i>r-ʔ-y</i>	2, 1	<i>bāmirʔeʔ-t:ōʔ ʔerʔeʔ ʔotām . . . uʔmirʔeʔ šāmen tirʔeʔnāʔ</i> ‘in good pasturage I shall pasture them . . . and (in) rich pasturage they shall pasture’ (Ezekiel 34:14)
II, II	<i>ḥ-l-ḱ</i>	1, 1	<i>teḥālek hāʔāreḫ . . . yeḥālek ʔet-hāʔāreḫ</i> ‘the land shall be divided . . . the land shall be divided’ (Numbers 26:53–55)
I, I	<i>ʔ-l-y</i>	2, 2	<i>wāʔālāʔtāʔ ʔarmānoteʔhā siʔriʔm kim:ōs wāḥoʔaḥ bāmibšāreʔhā</i> ‘its palaces shall spring up (with) thorns; nettles and briars, in its strongholds’ (Isaiah 34:13)

partial advancement exist as well. With oblique objects, Type 2 is the norm (as in Arabic), e.g. Ezekiel 10:13 *lāhem ko^wrā(?)* 'they were referred to'; Ezekiel 16:34 *ʔahārayik lo(?) zu^wn:ā^h* 'you were not sought (lit. whored) after'; Song 8:8 *yā^dub:ar bā^h* 'she shall be spoken for'. In MH, Type 2 has virtually disappeared, although there is at least one example of it in reliable manuscripts: Pesahim 7:7 *šē-n:izraḳ ʔēt-dāmo^w* 'whose blood was sprinkled.' Type 2 may have originated in the *nifʕal* stem, which in Pre-Proto-Semitic was an active form containing an indefinite 3rd person pronoun, like French *on*.

Change of *binyan* consistently produces change of valence only in the case of III → IV and V → VI; each of these pairs comprised a single *binyan* in Proto-West-Semitic. Other *binyan* pairs shown in Table 10 sometimes fail to exhibit distinct valences. Thus there is a whole class of verbs (intransitive statives) which either have the same valence in V that they have in I, or else have two meanings in V—one with valence increase and one without it, e.g. *hib^ʔʔš* 'stink (= *bā^ʔaš*); cause to stink'.

However, valence increase/decrease normally presupposes change of *binyan*. One of the rare exceptions is the *kal* verb *rāšā^h* 'pasture (trans. and intrans.)' (see Table 10). Since the valence-ambiguity of this verb is attested in a wide variety of Semitic languages, it may go back to a Pre-Proto-Semitic stage preceding the creation of the *binyan* system.

Valence increase may be effected through a suppletive change of root without change of *binyan*; e.g. BH *nātan* 'give' and *šām* 'put' function as causatives of *hāyā^h* 'be' (all *kal*). At times, however, the pressure of the *binyan* system prevails. Thus, while Proto-Semitic conjugated in the *kal* stem both *š-t-y* 'drink' and its suppletive causative *š-k-y*, Hebrew conjugated the latter in *hifʕil*.

Mere rearrangement of valence does not necessitate any change of *binyan* in BH. Thus, in Isaiah 34:13 (see Table 10), the two parallel hemistichs are identical in deep structure—but not on the surface, for the first exhibits rearrangement, while the second does not. Nevertheless, the verb of the first hemistich serves the second hemistich as well.

RICHARD C. STEINER

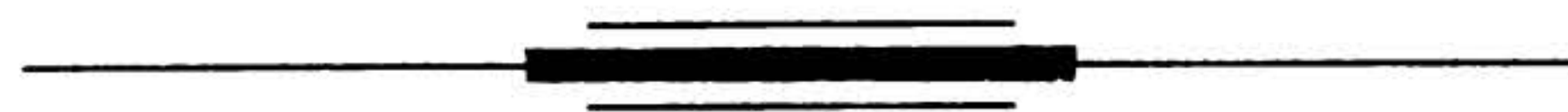
BIBLIOGRAPHY

- BAR-ASHER, MOSHE, ed. 1972–80. *Ḳoveš ma'amarim bilšon ḥazal*. [A collection of articles on Rabbinic Hebrew.] 2 vols. Jerusalem: Hebrew University.
- BAUER, HANS, & PONTUS LEANDER. 1922. *Historische Grammatik der hebräischen Sprache des Alten Testaments*. Halle: Niemeyer. Reprinted, Hildesheim: Olms, 1965.
- BEN-ḤAYYIM, ZEEV. 1977. *The literary and oral tradition of Hebrew and Aramaic amongst the Samaritans*, vol. 5, *Grammar of the Pentateuch*. Jerusalem: Academy of the Hebrew Language. [In Hebrew.]
- BERGSTRÄSSER, GOTTHELF. 1918–29. *Hebräische Grammatik*. 2 vols. Leipzig: Vogel. Reprinted, Hildesheim: Olms, 1962.
- BLAU, JOSHUA. 1972. *Phonology and morphology*. Tel-Aviv: Hakibbutz Hameuchad. [In Hebrew.]
- DAVIDSON, A. B. 1901. *Hebrew syntax*. Edinburgh: Clark.
- GARR, W. RANDALL. 1985. *Dialect geography of Syria-Palestine, 1000–586 B.C.E.* Philadelphia: University of Pennsylvania Press.
- GESENIUS, WILHELM, & E. KAUTZSCH. 1910. *Gesenius' Hebrew grammar*. Oxford: Clarendon Press.
- HANEMAN, GIDEON. 1980. *A morphology of Mishnaic Hebrew according to the tradition of the Parma manuscript*. Tel-Aviv: Tel-Aviv University. [In Hebrew.]
- JOÜON, PAUL. 1923. *Grammaire de l'hébreu biblique*. Rome: Institut Biblique Pontifical.
- KUTSCHER, EDUARD YECHESKEL. 1982. *A history of the Hebrew language*. Jerusalem: Magnes.
- MALONE, JOSEPH L. 1991. *Tiberian Hebrew phonology*. Winoona Lake, Ind.: Eisenbrauns.
- SEGAL, MOSES H. 1927. *A grammar of Mishnaic Hebrew*. Oxford: Clarendon Press.
- WALDMAN, NAHUM M. 1989. *The recent study of Hebrew: A survey of the literature with selected bibliography*. Cincinnati: Hebrew Union College Press.
- YEIVIN, ISRAEL. 1985. *The Hebrew language tradition as reflected in the Babylonian vocalization*. 2 vols. Jerusalem: Academy of the Hebrew Language. [In Hebrew.]

Modern Hebrew

Modern Hebrew evolved out of the Northwestern branch of Semitic [*q.v.*] over several periods in the history of the Jewish people: Biblical Hebrew (ca. 1300 to 200 BCE), from the Pentateuch and the early prophets to the period following the unsuccessful revolt against Roman domination of Palestine; Mishnaic or Rabbinical Hebrew, the language of the sages, until about 800 CE; and Medieval Hebrew, lasting to modern times (Eytan 1971, Kutscher 1982). The term 'Modern Hebrew' applies to a twofold linguistic 'revival' (Blau 1981). First, Modern Hebrew emerged as a literary language in the late 18th century, under the impetus of the Enlightenment (Haskala) among Jewish writers and intellectuals, who propagated the use of ancient Hebrew as a classical medium less parochial than the Yiddish vernacular in Central Europe—and later in Eastern Europe. However, Hebrew did not serve for everyday spoken intercourse,

INTERNATIONAL ENCYCLOPEDIA
OF
LINGUISTICS



WILLIAM BRIGHT

Editor in Chief

Volume 2

New York Oxford
OXFORD UNIVERSITY PRESS
1992