

Monosyllabic Roots in Hebrew

By Sasson Margalit

It was suggested (Marantz 2001) that the same syntactic engine that works at the level of a word and above (Chomsky 2005, 2006), may actually also be responsible for handling the hierarchic structures within words. The resulting framework enables a new approach to the problem of the structure of nouns and verbs in Hebrew.

The idea that in the Hebrew verbs that belong to the lexical-semantic class of “canonical transitive verbs”, the real Root is made up of the first two consonants, which in turn merge with the third consonant, playing a role of derivational suffix, to form a stem which corresponds to the traditional tri-consonantal root, was originally proposed by Harbour in an unpublished paper which was, in turn, discussed by Marantz in “Words” (Marantz 2001).

Previously two-letter roots were looked for mostly by examining similarities in the perceived intuitive meaning of Hebrew words, an approach which didn’t lead to significant success. In the present paper I address this long-standing challenge of identifying bi-consonantal roots in Hebrew, in the context of this new theoretical approach to the internal structure of words.

Rule 1: Lexical Gemination

Gemination of a consonant indicates that it is the second letter of the monosyllabic Root. This rule does not apply when there is a clear non-lexical reason for gemination (such as *Binyan pi’el*).

Examples:

אלומים	א למ	<i>alummim</i>
ארמי	א רמ	<i>arammi</i>
חנוכה	ח נכ	<i>chanukka</i>
כהונה	כ הנ	<i>kehunna</i>
קדושה	ק דש	<i>kedushsha</i>

Rule 2: Lexical Vowels

The Roots are associated with a lexical vowel and have the form CVC. Any of the three short vowels (a, i, u) can appear as a lexical vowel in a monosyllabic Root.

In most words the lexical vowels are not visible being that they are either replaced by inflectional vowels or deleted by phonological rules, but sometimes they are visible and allow us to identify the Root.

The presence of a lexical vowel in the first syllable of some nouns identifies the first two consonants as the Root. For example, 'e' in the noun *sefer*, and 'o' in the word *omer*. Notice that 'o' in nouns derived from adjectives is not a lexical vowel.

The phonology of Hebrew is known for its many processes that delete vowels in various contexts, so that lexical vowels usually remain hidden. Nevertheless, in some Hebrew words, the lexical vowels survive all the steps of phonological deletion.

Examples:

אָפֵן	אָפֵן	<i>ofen</i>
אָרַח	אָרַח	<i>orach</i>
חֹרֵב	חֹרֵב	<i>chorev</i>
חֹשֶׁךְ	חֹשֶׁךְ	<i>choshech</i>
זֵיכֶר	זֵיכֶר	<i>zeicher</i>
חֵיפֶזֶץ	חֵיפֶזֶץ	<i>cheifetz</i>
חֵישֶׁק	חֵישֶׁק	<i>cheishek</i>
חֵלֶק	חֵלֶק	<i>chelek</i>

Rule 3: Long 'a'

In some nouns, a long 'a' surfaces when the word is found at the end of a phonological phrase. This long 'a' separates the derivational prefix from the Root.

Examples:

אֶרֶץ	אֶרֶץ	<i>'aretz</i>
זָמֵר	זָמֵר	<i>zamer</i>
זָפֵת	זָפֵת	<i>zaphet</i>
זָרֵם	זָרֵם	<i>zarem</i>
חָרֵב	חָרֵב	<i>charev</i>
טָעַם	טָעַם	<i>ta'am</i>

Rule 4: Pa'al-Nif'al Alternations

This rule applies to Hebrew verbs which alternate between the transitive form in Pa'al, and the intransitive form in Nif'al.

- a) If the alternating verb **belongs** to the class of “caused change of state” verbs, then the **first** two consonants are the Root. The *nif'al* form of such verbs does not imply the presence of an Agent.

Examples:

הרג	הר ג	<i>harag</i>
אגד	אג ד	<i>'agad</i>
פתח	פת ח	<i>patach</i>
אטם	אט מ	<i>'aTam</i>
חסם	חס מ	<i>chasam</i>
סתם	סת מ	<i>satam</i>
בלע	בל ע	<i>bala'</i>
גדע	גד ע	<i>gada'</i>
גזע	גז ע	<i>gaza'</i>
אגר	אג ר	<i>'agar</i>
אטר	אט ר	<i>'aTar</i>
גזר	גז ר	<i>gazar</i>
גמר	גמ ר	<i>gamar</i>
סגר	סג ר	<i>sagar</i>
שבר	שב ר	<i>shavar</i>

- b) Alternatively, if the alternating verb **does not belong** to the class of “caused change of state” verbs, then the **last** two consonants are the Root.

Examples:

אחז	א חז	<i>'achaz</i>
ארג	א רג	<i>'arag</i>
ארוז	א רוז	<i>'araz</i>
ארס	א רס	<i>'aras</i>
ברא	ב רא	<i>bara'</i>
בדק	ב דק	<i>badaq</i>
בחן	ב חן	<i>bachan</i>
בחר	ב חר	<i>bachar</i>
דחק	ד חק	<i>dachaq</i>
דרס	ד רס	<i>daras</i>
הדף	ה דף	<i>hadaf</i>
זבח	ז בח	<i>zavach</i>
זבל	ז בל	<i>zaval</i>
זמר	ז מר	<i>zamar</i>
זנח	ז נח	<i>zanach</i>
חבט	ח בט	<i>chavat</i>
חטף	ח טף	<i>chaTaf</i>
חלץ	ח לץ	<i>chalatx</i>
חנת	ח נת	<i>chanat</i>
חסך	ח סך	<i>chasakh</i>
חצב	ח צב	<i>chatzav</i>

חרש	ח רש	<i>charash</i>
חתף	ח תף	<i>chataf</i>
חתך	ח תך	<i>chatakh</i>
טרף	ט רף	<i>Taraf</i>
טבח	ט בח	<i>Tavach</i>
צבת	צ בת	<i>tzavat</i>
רקד	ר קד	<i>raqad</i>

Interestingly, some prefixes and suffixes that are left after we identify the monosyllabic roots appear to have a coherent meaning. For example, all the verbs with the suffix ‘m’ in the set of examples (a) in Rule 4, have the shared meaning of “an action which leads to closing something”.

What are the meanings that one would expect verb forming prefixes and suffixes to have? It’s quite possible that they’ll turn out to be similar to the spectrum of meanings of prepositional prefixes in the Slavic languages.

So it seems that we need to pay attention not only to the meaning of the monosyllabic roots, but also to the meaning of the derivational prefixes and suffixes.

References:

Chomsky, N. (2005). On Phases. Ms. MIT.

Chomsky, N. (2006). Approaching UG from below. Ms. MIT.

Marantz, A. (2001). Words. WCCFL XX Handout, USC, February 2001.