Within Distributed Morphology, the 3-to-5-Consonantal Bases Cannot Possibly be Considered Roots

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Abstract:
In this article I argue that the Hebrew 3-to-5-consonantal Bases cannot possibly be considered roots in the framework of Distributed Morphology, despite the fact that they are traditionally called in Hebrew *shorashim* ("roots").

These Bases are formed by merging the underlying category-less roots with the category-defining functional heads.

The resulting 3-to-5 consonantal Bases are each fully specified as verbal, nominal or adjectival. They are certainly not category-less. It is to these Bases that inflectional morphology is attached which generates various word forms.

In the manuscript "Words" (Marantz 2000), the novel idea that a third consonant in the Base of the Hebrew verb is actually a 'little v', is introduced. This 'little v' head then merges with a bi-consonantal root to form a Base for the verb. Marantz (2000) credits this idea to an unpublished paper by Daniel Harbour.

In later years, this idea that the role of "categorizer" can be given to the "third consonant" was not widely adopted in Distributed Morphology (DM) literature. In particular, both Doron (2003) and Arad (2005) did not accept this new approach.

I will argue in this article that the approach introduced in Marantz (2000) for a particular class of verbs is not only correct for that specific class of verbs, but for Hebrew words in general. In other words, the goal of this paper is to show that roots in Hebrew are predominantly bi-consonantal.

All of the argumentation in the article is specific to the framework of Distributed Morphology and will not necessarily be valid in other platforms.

Hebrew grammar divides the verb Bases to many *gizrot* (classes of verb conjugation). For the needs of this article I only consider four primary Conjugations, which subsume multiple *gizrot* each. These Conjugations are considered in the next four sections.

1. The First Conjugation

The First Conjugation includes verb Bases that have a suppletive verbalizing prefix, which means that its phonological exponent has several variants. When the traditional system of the description of the Hebrew word was first established some eight hundred to a thousand years ago, the apparatus of Distributed Morphology was not available. The verbs in the first Conjugation were insightfully described as having a Base (designated in Hebrew as *shoresh*) starting with a "weak" letter. In other words, what we call today a suppletive prefix, medieval scholars call a "weak" letter. This is not a disagreement but rather the evolution of terminology.

Examples of the verbs in the first Conjugation:

(1) *yada', yalad, yarad, yashav, yatza?,…*
(2) *nasa?, natan,…*
(3) *halach, lakach,…*

The initial consonant, being the phonological expression of a suppletive prefix, disappears in the infinitive and in the future tense, as in (4-6).

(4) *la-da'at, la-ledet, la-redet, la-shevet, la-tzet,…*
(5) *la-set, la-tet,…*
(6) *la-lechet, la-kachat,…*

In addition, in some contexts, the prefix is spelled out as 'W' instead of 'Y', and due to regular phonology is pronounced as 'o', as in (7).

(7) *no-da', no-lad,…*

2. The Second Conjugation

The Second Conjugation includes verbal Bases that have a suppletive prefix that has an empty exponent in *binyan Pa'al*. Its characteristic feature is the reduplication of the final consonant of the root in the *binyanim Pi'el, Pu'al, and Hitpa'el,* as in (8-10). This reduplication is a manifestation a-la prosodic morphology of the same suppletive prefix.

(8) *me-o'fef, me-romem, me-soche'ach, me-sovev,…*
(9) *me-rumam, me-rutzatz, me-suvav,…*
(10) *mit-bonen, mit-lonen, mit-lotzetz, mit-romem,…*

In *binyan Pa'al,* the verbs of the Second Conjugation have transparently bi-consonantal roots, as in (11).

(11) ba?, *kam, lan, ratz, sam, shar,…*

3. The Third Conjugation

The Third Conjugation has a suppletive suffix. Traditional grammars say that the third consonant of the Base is *'H',* and some scholars insist it is a *'Y'.* In terms of DM, this is a clear case of suppletion. Sometimes the phonological exponent is indeed *'Y'* as in (12), and sometimes it is *'W'* as in (13). There are also other forms.

(12) *'asi-ti ,bani-ti, ratzi-ti,…*
(13) la-'aso-t, li-vno-t, li-rtzo-t,…

In the Third Conjugation verbs, the bi-consonantal root is, likewise, clearly visible.

4. The Fourth Conjugation

The Fourth Conjugation consists of verbs that do not have a suppletive verbalizing prefix or suffix. Consequently the Base consists of three or more stable consonants, and, unlike the first 3 conjugations, the identity of the bi-consonantal is not always instantly apparent. Which leads us to the question: is it possible that, at least in such a case, the root does indeed have three consonants. In this section I present arguments that it is not possible.

I'm not saying that such 3-to-5-consonantal Bases are epiphenomenal. What I say is that they are composite syntactic objects (as opposite to indivisible elements), and are a result of the syntactic Merge of a bi-consonantal root with a derivational prefix or suffix.

These syntactic objects, whose phonological expression is 3-to-5 consonants long, are simply way too large to be considered roots. When a Hebrew verb has a Base that is spelled out with 4 or 5 consonants, it is, more often than not, the result of reduplication. In DM roots cannot contain reduplicated elements.

When a verb consists of two instances of the same pair of consonants, we have a very clear case of a composite verbal Base. The reduplication of its bi-consonantal root is caused by the exponent of the verbalizing affix. There are many verbs of this type.

An additional argument, which is likewise theory-internal to DM, is based on the observation that when the Base has only three consonants, it still cannot be a root because it is fully specified for a category. In (14-15), the base of the verb is already verbal before adding any inflectional morphology.

(14) *ho-shia'*
(15) *no-sha'*

Since the roots are bi-consonantal, we expect to find Bases derived in more than one way. For example, the Base of the verb *safar* may be derived from the root (*P,R)* by the verbalizing suffix *'S'*, while the Base of the noun *sapir* - from the root (*S,P)* by the 'little n' prefix *'R'.*

5. Conclusion

The traditional description of Hebrew verbs that was completed some 800 years ago uses the word *shoresh* to describe what in today's linguistic literature is designated by the term "Base" – something that inflectional morphology is added to. In current usage, the term "root" is used in a completely different sense that focuses on its being category-less and not being a composite entity.