

FROM PROTO-HEBREW TO MISHNAIC HEBREW: THE HISTORY OF הָ AND הֶ¹

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אנשי בית שני אשר היו לפנינו אנשי סכרא
ובעלי משנה לא נסדרה משנתם ולא נאמר תלמודם
כי אם על הסדר הזה אִמְרָ בְנֵי פְעֻלָּה עוֹנֵךְ

“ . . . The men of the Second Temple who came before us, men of learning and masters of *mishnah* — their *mishnah* and *talmud* was always formulated in this way: אִמְרָ בְנֵי פְעֻלָּה עוֹנֵךְ” (Ibn Kapron, Ibn Daud, and Ibn Chiquitilla, 1870, p. 44).

ONE OF THE IMPORTANT breakthroughs in the rediscovery of Mishnaic Hebrew was the demonstration by Ben-Hayyim (1954, p. 50) that the three major reading-traditions of Hebrew — the Tiberian, the Babylonian, and the Palestinian — agree in restricting the general (i.e. non-pausal) use of the 2ms pronominal suffix הָ to post-Biblical texts. This aspect of Ben-Hayyim’s theory was further strengthened ten years later, when Yalon (1964, pp. 13–15) called attention to the tenth-century passage quoted above and many other interesting pieces of evidence.

1. It is a great pleasure to acknowledge the debt I owe to Professors Haim Blanc, Joshua Blau, Daniel Boyarin, Dietz Edzard, Edward Greenstein, Moshe Held, Robert Hetzron, Joseph Malone, Erica Reiner, and Malcah Yaeger for their valuable comments on an earlier, and very different, version of this article (originally prepared for the Fourth North American Conference on Afroasiatic Linguistics, March 14–15, 1976, Philadelphia) and/or their answers to questions about the issues raised here. It goes without saying that all errors in this article are my own.

Ben-Hayyim went beyond the simple observation that the use of אָ- is characteristic of post-Biblical texts. He noted that אָ- also appears in such texts, and that its distribution is by no means random. In Babylonian manuscripts of post-Biblical texts, for example, the following rule, based on forms like אָבִי ('your father'), מַעֲשֵׂיךָ ('your deeds'), and יָקִירְךָ בֹרֵךְ ('they will bring you near'), was shown to obtain (Ben-Hayyim 1954, p. 37):

In words ending in a vowel before the suffix, the form of the suffix is *-kâ* in all places.

Conversely, bases ending in a consonant generally take אָ-, even though אָ- is also found (Ben-Hayyim 1954, p. 36).

In a subsequent study, Kutscher (1963, pp. 264f) showed that אָ- and אָ- in the Kaufmann ms. of the Mishnah obey the same rules, and, moreover, obey them more consistently than in the Babylonian mss. examined by Ben-Hayyim, the only exceptions in this ms. being אָבִינְךָ ('your understanding,' 'Abot, 4:14) and הִיאֵינְךָ ('it has reached you, it's yours,' 'Arakin, 8:1,3).

These findings raise several questions: What is the origin of אָ- in Hebrew? Why does its frequency increase so dramatically in post-Biblical texts? Why doesn't אָ- replace אָ- after bases ending in a vowel? Why doesn't אָ- replace אָ- in the words אָבִינְךָ and הִיאֵינְךָ?

This article is an attempt to answer these questions plus a number of others which will arise in the course of the discussion. The questions will be dealt with in the order of their occurrence above.

1. What Is the Origin of אָ- in Hebrew?

In answer to this question, Ben-Hayyim (1954, pp. 63f) laid down a general rule that "the absence of a final vowel [in this form] . . . is not a feature of original Hebrew" but rather an Aramaism. This rule, in the opinion of Ben-Hayyim (1954, p. 63, note), applies to all texts, including the Tiberian text of the Bible:

It would appear that in this detail and in others similar to it, the Tiberian tradition also followed the usual (Aramaic) pronunciation.

The main problem with this theory is that it is unable to account for the pausal distribution of אָ- in Masoretic Hebrew. This pausal distribution is not peculiar to the Tiberian tradition. In Geniza fragments with Palestinian vocalization (Kahle, 1930, pp. 87, 79), we find:

לְךָ (Ps 71:23, major disj.) vs. לְךָ (Ps 71:22, conj.)

לְךָ (Jer 1:19, major disj.) vs. לְךָ (*ibid.*, conj.).

In Babylonian fragments (Kahle, 1913, pp. 4, 24, 58f), the picture is the same:

לָךְ (Exod 13:11, major disj.) vs. לְךָ (*ibid.*, minor disj.)

עֲמָךְ (1 Sam 10:7, major disj.) vs. לְךָ (*ibid.*, minor disj.)

לָךְ (Job 40:9, major disj.) and

עֲמָךְ (Job 40:15, major disj.) vs. לְךָ (Job 40:14, minor disj.)

It is difficult to understand why an Aramaism would be almost entirely restricted to pausal position in all three traditions.

Finally, it should be noted that הַיְ is, from a diachronic point of view at least, an apocopated form,² and that apocope is attested as a pausal phenomenon in both Semitic and non-Semitic languages. The clearest example in Semitic is, of course, the pausal apocope rule of Arabic, which affects nouns (e.g. *al-waladu* ['the boy'] → pausal *al-walad*) and verbs (e.g. *kataba* ['he wrote'] → pausal *katab*) as well as pronouns (e.g. *laka* ['to you'] → pausal *lak*).³

Pausal apocope is also found, as an optional rule affecting voiceless vowels, in Cushitic — specifically in Oromo (formerly called Galla). Andrzejewski (1957, p. 364 note) reports that it is accompanied there by another phenomenon:

When a vowel-coloured breath⁴ is omitted, in an optional variant before a pause, the lips assume the same position at the end of the word as during the articulation of the 'omitted' vowel-coloured breath.

This description is strikingly similar to Sibawaihi's description (1889, p. 309) of the Arabic pausal phenomenon⁵ known as 'ismām:

['ismām] occurs only in the nominative case and the indicative mood, because *u* comes from *w*⁶ and you are able to put your tongue in any place of

2. Bauer and Leander (1922, p. 255) derive הַיְ from **lā-ka* and הַיְוּ from **hōn-a-ka* (cf. also Harris, 1941, p. 145). These reconstructed forms are quite similar to the actually attested הַיְוּ (Exod 29:35). That Ben-Hayyim also takes הַיְ as an apocopated form is clear from his use of the phrase 'illum hattānu' a hassopit ('deletion of the final vowel') to describe this form in Ben-Hayyim (1972, p. 82), the Hebrew version of Ben-Hayyim (1954). In the latter, a more noncommittal expression ('the absence of a final vowel') is used.

3. For a full discussion and further references, cf. Birkeland (1940).

4. I. e., a voiceless vowel.

5. Another pausal phenomenon reported by Sibawaihi (1889, pp. 302–306) is the so-called *hā' u s-sakt* ('*h* of silence') or *hā' u l-waqf* ('pausal *h*') which Schaade (1911, pp. 61f) interprets (in my opinion correctly) as a kind of aspirated voiceless trailoff ('gehauchte Vokal-Absatz'). An exact parallel is found in Chontal-Mayan, an American Indian language, which, according to Greenberg (1969, p. 158) has vowels with a lightly aspirated final segment in utterance-final position.

6. I. e., both *u* (the nominative case marker in nouns and adjectives and the indicative mood marker in verbs) and *w* (the consonant which would be produced if 'ismām were accompanied by voicing) are produced by rounding the lips.

articulation which you desire and then round your lips, since rounding your lips is like moving part of your body.⁷ And ' *išmām* in the nominative case and the indicative mood is for the sight, not for the ear. Do you not see that when you say *hādā ma'n* ('this is a figurative expression') with ' *išmām*, it is the same for the blind man as when you do not add ' *išmām*?

Much less clear is the relationship between apocope and pause in Akkadian. Von Soden (1969, §42h) identifies the Old Babylonian apocopated plural pronominal suffixes *-kun*, *-kin*, *-šun*, and *-šin* as verse-final forms of the hymnal-epic dialect, but *-kun* and *-kin* are not even attested in that dialect (Gregoire-Groneberg 1971, p. 144), and *-šun* is by no means restricted to verse-final position there, as Von Soden himself makes clear in an earlier article (1931, p. 189). In fact, in the Old Babylonian hymn to Ishtar published by Thureau-Dangin (1925) — a text which contains over $\frac{3}{4}$ of the known occurrences of hymnal-epic *-šun* — the latter form occurs only twice in verse-final position vs. five times elsewhere (Von Soden 1931, p. 189). This distribution lends no support to the theory that *-šun* has an affinity for verse-final position, particularly since it is virtually identical to the distribution that one would expect if *-šun* totally lacked such an affinity, namely 1.5 occurrences verse-finally vs. 5.5 elsewhere.⁸ Hecker's claim (1968, §45a) that the apocopated forms of Old Assyrian are found mainly in sentence-final position appears to be equally devoid of solid statistical support.

So far, I have presented only isolated examples of pausal apocope, and one could hardly conclude from these that apocope is more common in pause than in context; but there are other grounds, both empirical and theoretical, for supposing that this is in fact the case.

On the theoretical plane, we might recall that apocope is, in essence, an anticipation of (i.e., a total assimilation to) a following silence (Anttila 1972, p. 72), and that silence is more common in pause than in context. On the empirical plane, we can point to one of Greenberg's conclusions (1969, p. 165) concerning voiceless vowels:

7. I.e., rounding the lips is just as independent of tongue position as any other bodily movement.

8. In verse-final position, there are two occurrences of *-šun* and one of *-šunu* (*aš-ba-as-su-nu* at the end of line 34, a form which Prof. M. Held assures me is a counterexample to Von Soden's claim [1931, pp. 188, 189] that only the apocopated form occurs in this position), making a total of three; elsewhere, there are six occurrences of *-šunu* and five of *-šun*, making a total of eleven. The expected number of occurrences of *-šun* in any given position (assuming a total lack of affinity for verse-final position) is simply half of the total number of occurrences of *-šun/-šunu* for that position, namely 1.5 verse-finally and 5.5 elsewhere. If we keep in mind that the actual occurrences must be integers, we see that the fit between the observed and the expected distributions of *-šun* is as perfect as it can be. The same is true of *-šunu*.

If a language does not regularly have high stress on the word-final syllabics, then, if it has voiceless vowels . . . in word final, then [it has them] in the final of some longer unit or units such as intonational contour, sentence, or utterance.

The importance of this conclusion for my study derives from the fact that the conditions for voicelessness in vowels are quite similar to the conditions for vowel deletion, a similarity which led Greenberg (1969, p. 172) to hypothesize that “in many historical instances of loss of vowels, there was, in fact, a period of voicelessness which could not find expression in the orthography.” This is quite similar to a somewhat earlier suggestion of Garbell’s (1958, p. 309) that “the elision of final vowels in [Arabic] pausal forms was possibly due to the tendency to unvoice them in this position.”

2. Why Does the Frequency of $\text{ִ}ְ$ - Increase So Dramatically in Post-Biblical Texts?

Ben-Hayyim (1954, pp. 51–61) argued convincingly that the increased use of $\text{ִ}ְ$ in post-Biblical texts is due to Aramaic. Kutscher (1963, pp. 261f) accepted this explanation and even strengthened it by pointing to feminine $\text{ִ}ְ$ in post-Biblical texts, a form which is not found in the Bible at all, and whose use after the prepositions -כּ and -ל is more reminiscent of Aramaic $\text{ִ}ְ$ than of Biblical Hebrew $\text{ִ}ְ$. But Kutscher modified Ben-Hayyim’s explanation in a subtle way. For Ben-Hayyim (1954, pp. 59–61), Aramaic influence is a *synchronic* factor distinguishing *reading styles* of a *dead* language, the Biblical reading style being less contaminated by Aramaic than the post-Biblical reading style. For Kutscher (1972a, p. 282), on the other hand, Aramaic influence was a *diachronic* factor distinguishing different *periods* of a *living* language, Biblical Hebrew (BH) being less influenced by Aramaic than Mishnaic Hebrew (MH) is.

There is probably an element of truth in both of these approaches. Ben-Hayyim’s approach is almost certainly valid for Greek and Latin transcriptions (1954, pp. 25, 52f) like $\eta\nu\alpha\chi$ (“your eyes”), $\omicron\iota\beta\alpha\chi$ (“your enemies”), $\alpha\lambda\alpha\chi$ (“on you”), *dabarach* (“your words”), *alichotach* (“your goings”), and probably also for Palestinian forms (1954, pp. 30, 56f) like מִפִּיךָ (“from your [masc.] mouth”), וְעֵינֶיךָ (“and your [masc.] eyes”), יַעֲרִיצוּךָ (“they will regard you [masc.] with awe”), and Samaritan forms (1954, pp. 38, 56f) like *banek* (“your [masc.] sons”), and *yabbadok* (“they will serve you [masc.]”). On the other hand, there is no reason to doubt that the more restricted distribution of $\text{ִ}ְ$ in the Kaufmann ms. (and other good vocalized mss. of the Mishnah) reflects colloquial Hebrew usage of the tannaitic period, particularly since this distribution differs significantly from the distribution of $\text{ִ}ְ$ in Aramaic, as shown in the following chart:

KAUFMANN MS. (Kutscher 1963, pp. 264f)	ARAMAIC
אָבִיךָ	(‘‘your father’’) אָבִיךָ Dan 5:11
יִקְרִיבוּךָ	(‘‘may they alarm you’’) יִבְהִילוּךָ Dan 5:10
יָדֶיךָ	(‘‘your servants’’) עֲבָדֶיךָ Dan 2:4
הִיא גִיעֵתְךָ	(‘‘she bore you’’) יִלְדֶתְךָ Targum Jer 22:26

The explanation offered for these differences below (Questions 3 and 4) will hopefully strengthen the view that the increase in the use of הֿ must be dated to a time when Hebrew was still a living language — a mixed language to be sure, but nevertheless a living one.⁹

It should also be pointed out that Aramaic influence may not have been the only cause of the increase in the frequency of הֿ in MH. Since הֿ was a pausal form in BH, a second factor may have been the tendency of BH pausal forms (e.g. אָמְרוּ, הוֹקְדְשׁוּ, יָפִי, בְּלִי) to spread into non-pausal positions in MH.¹⁰

3. Why Doesn't הֿ Replace ה- after Bases Ending in a Vowel?

This is a question which was raised, but not answered, by Kutscher (1963, p. 265):

9. On the other hand, the evidence for Aramaic influence adduced by Ben-Hayyim and Kutscher makes it difficult to accept the suggestion of Bauer and Leander (1922, p. 30) that the development in question had already taken place during the Biblical period, in a dialect different from the one which formed the basis of the Masoretic vocalization. It is true that, as Kutscher (1972b, pp. 1597, 1599) has pointed out, MH has several features (i.e., וּ [‘‘this’’], שְׁ [‘‘which, that’’], הִיָּת [‘‘she was’’]) which are more archaic than the corresponding features of standard BH (i.e., הִיָּתָה, אָשֶׁר, זֹאת) and which therefore must stem from a dialect different from the latter. It is also true that two of these features (i.e., וּ and -שְׁ) and two others (i.e., אֵיכָן < אֵיכָה < אֵיכָה [‘‘where’’] and הִשְׁתַּחֲוֶיָה [‘‘prostration’’]) are among the dozen or so non-standard Biblical features identified as northern by Burney (1903, pp. 208f) and Driver (1956, p. 188). And, finally, it is true that northern Hebrew may have been more heavily influenced by Aramaic than standard BH was (cf. אֵיכָה and הִשְׁתַּחֲוֶיָה discussed immediately above, and the name מְרַנֵּי [‘‘our lord is Yo’’] found in Samaria ostracoon xlii; cf. also Driver 1956, p. 449). Nevertheless, Aramaic influence on the Hebrew pronominal system presupposes a degree of intimacy between the two languages which is difficult to imagine in pre-exilic Israel, and which is certainly not attested in our Biblical or extra-Biblical sources of northern Hebrew. Nor do these sources offer any direct support to the notion that MH הֿ and יֿ go back to northern Hebrew. The Elisha cycle, our most important Biblical source, has כֹּה- (2 Kgs 7:2) and כִּי- (2 Kgs 4:2,7) in environments where MH requires הֿ and יֿ.

10. Strangely enough, I have not been able to find one discussion of MH which treats nominal forms like בְּלִי (‘‘implement, vessel’’) and יָפִי (‘‘beauty’’) together with verbal forms like הוֹקְדְשׁוּ (‘‘we were sanctified’’) and אָמְרוּ (‘‘they said’’), although Bendauid (1971, pp. 438f) comes close to doing so.

Why did the Biblical form survive in the above mentioned instances . . . ? At present, no plausible solution is to be found.

I submit that the answer to this question is simple, once it is recognized that the distribution of הַ- vs. ה־ in MH follows the same rule as the distribution of הַ- vs. ה־ in BH and MH. (Note the rhyme!) I submit, in other words, that analogical forces limited the borrowing of Aramaic הַ- (or the spread of pausal הַ-) to positions where ה־ was already present. Thus, הַמֶּלֶךְ changed to הַמֶּלֶךְ on the analogy of הַמֶּלֶךְ, but הַכִּיֹּרֶם remained on the analogy of הַכִּיֹּרֶם; הַדָּבָר changed to הַדָּבָר on the analogy of הַדָּבָר, but הַדָּבָר remained on the analogy of הַדָּבָר, and so on. Note that the analogy which I am positing was a two-edged sword, which blocked the spread of הַ- in some environments, but encouraged it in others. We thus have a third factor responsible for the rise in frequency of הַ- in MH, and the answer to Question 2 given above should be modified accordingly.

4. Why Doesn't הַ- Replace ה־ in the Words הַבִּינְתָּהּ and הַבְּנִינְתָּהּ?

The form הַבִּינְתָּהּ ('it has reached you, it's yours') occurs twice in the Kaufmann ms., once in *Araḳin*, 8:1 and a second time in 8:3. Both times, the scribe of the originally unvocalized text, or one of his predecessors, made a special effort to ensure that the pronominal suffix would be read correctly, by writing it with a ה at the end. Judging from the data collected by Kutscher and the dozens of examples which I have checked, it is quite possible that these are the only two instances of this spelling of the 2ms pronominal suffix in the entire ms. By employing this spelling here and, to my knowledge, only here, the scribe showed both his awareness of the anomalousness of a MH form with הַ- after a consonant, and his confidence in its correctness. One might also note that Codex Parma A (= De Rossi 138) has the same spelling for the two occurrences of this word, that an ancestor¹¹ of Codex Paris had the same spelling for the first of the two occurrences, and that the vocalizer of Codex Kaufmann, who often disagrees with the original scribe, agrees with him in this case.

I propose to solve this problem by pointing once again to the distribution of הַ- and ה־ in BH. Strangely enough, it is the former variant which is used with 3fs verbs in the perfect in BH,¹² e.g., הַבְּנִינְתָּהּ ('it seized her'), הַשְּׂכַלְתָּהּ ('it

11. Codex Paris itself has the nonsensical reading הַבְּנִינְתָּהּ.

12. According to Codex Parma A (=De Rossi 138), the same phenomenon is found in MH: הַפְּדִינְתָּהּ ('she redeemed it'; *Halla* 3:3), הַקְּדִישְׁתָּהּ ('she dedicated it'; *Halla* 3:3). In Codex Kaufmann, however, these forms are vocalized with a מַפִּיק in the ה but also with a שַׁגַּל in the ה. (Mixed forms of this type are also found in Babylonian Hebrew; cf. Yeivin, 1973b, p. 90, for examples.) If such forms were really used in the Mishnaic period, the analogy between הַ-/ה־ and הַ-/ה־ which I am positing would have to be dated earlier than the time they came into use.

bereaved it’), פְּעַסְתָּהּ (“she angered her”). In all of these forms, the ending הֶתְ- is synchronically equivalent to the anomalous form הֶתְ-*. Later in this article (Question 5), I will attempt to explain the origin of this anomalous form, but for now the important point is that it exhibits *the same anomaly* as הֶתְ- (י)גִיעַתְּכָה. Once again we see that analogical forces limited the borrowing of Aramaic הֶתְ- (or the spread of pausal הֶתְ-) to positions in which הֶתְ- was already present.

What about בִּינְתָהּ (“your understanding”)? It is well known, thanks to Kutscher, that Codex Kaufmann reverts to Biblical grammar in the vocalization of Biblical verses cited by the Mishnah. A good example is found in *Abot* 4:19: שְׁמוּאֵל הַקָּטָן אָמַר בְּנִפּוּל אוֹיְבֶךָ אַל תִּשְׂמַח וּבְהִכָּשְׁלוֹ אַל יִגַּל לְבָבְךָ (“Samuel the Little says, ‘When your enemy falls, do not be happy, and when he stumbles, let your heart not rejoice’”). Here we find הֶתְ- and הֶתְ- after bases ending in a consonant in a verse from Proverbs (24:18), even though the verse is “attributed” here to a *tanna*. The הֶתְ- of בִּינְתָהּ, which occurs only a few *mishnayot* before אוֹיְבֶיךָ and לְבָבְךָ, has the same explanation: despite the “attribution” to R. Nehoray, we are dealing here with a quotation from Proverbs (3:5)¹³: וְאַל בִּינְתָהּ אַל תִּשְׁעֶן.

In the preceding discussion, I attempted to explain the distributions of הֶתְ- and הֶתְ- in MH by equating them with the distributions of הֶתְ- and הֶתְ- in BH and (at least in part) MH. It is obvious, however, that in so doing, I merely postponed the inevitable confrontation with the real problems. These problems remain essentially the same, even though they must now be formulated in terms of הֶתְ- and הֶתְ- rather than הֶתְ- and הֶתְ-. I will now take up one of these problems.

5. Why Should the 3fs Verb in the Perfect Be an Exception to the Rule that Bases Ending in a Consonant Take הֶתְ- Rather than הֶתְ-?

This is a problem which was already noted by the medieval grammarians. Ibn Janāḥ (1886, p. 375) writes that the הֶתְ- of אָחַזְתָּהּ, שָׁכַלְתָּהּ, כְּעַסְתָּהּ, etc. is אֲדָה (“silent in defiance of custom”). In another place (1886, p. 196) he says, אֲלוּגָה פִּי הִדָּא אֱלֵהָא אֲלִטְהוּר פִּאסְתִּתְקַל דְּלָךְ (“the norm for this הֶתְ- was to be pronounced, but then it became burdensome for them”). David Qimhi (1842, p. 29a) states the problem somewhat more explicitly in discussing the hypothetical form פְּקֻדְתָּהּ*:

כִּלּוּ קִמּוּץ וְהָיָא בְּמִפְיָךְ כֵּן הוּא עַל הַמִּשְׁפָּט אֲלֵא שְׂמַצְאָנּוּהוּ בְּמִשְׁקַל פְּקֻדְתָּהּ
הַלְמִי' ד' פְּתוּחָהּ וְהִי' ד' גּוֹשֶׁה וְהִי' א' רִפְּהּ.

It is vocalized entirely with קִמּוּץ and a מִפְיָךְ in the הֶתְ-. This is how, by rights, it should have been, but [in fact] we find it on the pattern of פְּקֻדְתָּהּ with a פְּתַח under the 3rd radical, a דָּגֵשׁ in the תְּ-, and a silent הֶתְ-.

13. It is strange, therefore, that Kutscher considered בִּינְתָהּ to be an exception. Perhaps this judgement is based on the fact that the rest of R. Nehoray's maxim is in Mishnaic Hebrew.

Adding to our bewilderment is the fact that the 3fs perfect does not exhibit any exceptional behavior in the other Semitic languages in which bases ending in a consonant select a different pronominal allomorph than bases ending in a vowel. Many modern Arabic dialects, for example, have two allomorphs for the 2fs pronominal suffix: *-ki* after vowels (e.g., Damascene¹⁴ and Jewish Baghdadi¹⁵ *abūki* [‘your father’]; D. *‘alēki* = J. B. *‘lēki* [‘on you’]; D. *axadūki* = J. B. *axḏōki* [‘they took you’]) and *-ek/-ək*¹⁶ after consonants (e.g., D. *bēteḵ* = J. B. *bētək* [‘your house’]; D. *axadeḵ* = J. B. *axaḏək* [‘he took you’]). In these dialects, the 3fs perfect selects *-ek/-ək* just like any other base ending in a consonant (e.g., D. *axadteḵ* = J. B. *axḏətək* [‘she took you’]; D. *šāfteḵ* = J. B. *šafətək* [‘she saw you’]; D. *la’iteḵ* = J. B. *laqətək* [‘she found you’]).

Similarly, in the Aramaic of Targum Onqelos,¹⁷ we find two allomorphs of the 2fs and 3fs pronominal suffixes: *ִי-* and *ִה-* after consonants (e.g., Gen 16: *רַבּוֹנַתִּיךְ* [‘your mistress’]; *אִמַּתִּיךְ* [‘your maidservant’]; *רַיבּוֹנַתָּהּ* [‘her mistress’]; *אִמַּתָּהּ* [‘her maidservant’]; *אִשְׁכַּחָהּ* [‘he found her’]) but *ִי-* and *ִה-* after vowels (e.g., Gen 16: *עֵינַיִךְ* [‘your eyes’]; *בְּנֵיךְ* [‘your sons’]; *עֵינֶיהָ* [‘her eyes’]; *יָדֶיהָ* [‘her hands’]; Gen 19:33 *אָבוֹהָא* [‘her father’]). To the extent that the relevant forms are attested,¹⁸ we may state that, here too, the 3fs perfect does not behave differently from any other base ending in a consonant: *עֲנִיתָהּ* (‘she afflicted her’; Gen 16:6), *חִפְתָּהּ* (‘she covered it’; Exod 2:3), *שִׁוִּיתָהּ* (‘she put it’; Exod 2:3) *נָסִיבְתָהּ* (‘she took it’; Exod 2:5). Why then does the Hebrew 3fs perfect base *קטלת-* (unlike the Hebrew nominal base *קטלת-*)¹⁹ behave as though it ended in a vowel?

I contend that this anomaly, like many other synchronic anomalies, has a simple diachronic explanation. I contend, in other words, that there was an earlier stage of Hebrew in which forms like *אָחַזְתָּהּ* were not anomalous at all.

To prove this, we need only take the Masoretic forms which end in a consonant and compare them with their Arabic cognates. The overwhelming

14. The examples from this dialect are taken from Cantineau (1937, pp. 154f).

15. The examples from this dialect are taken from Mansour (1974, pp. 103f, 158f), except for the 3fs perfect verbs which were provided by Mrs. Munira Daniel and Prof. Haim Blanc.

16. The latter is the Jewish Baghdadi form given by Mansour (1974, p. 107). Blanc (1964, p. 65) gives it as *-k*, adding *ə* by means of a phonological rule of anaptyxis.

17. In Targum Yonatan, on the other hand, the allomorph *ִי-* is rare (and possibly limited to the Former Prophets), having been largely replaced by *ִי-*. Thus, Dalman’s assertion (1905, p. 15) that ‘‘der Wortvorrat beide Targume ist zwar verschieden, ihre Grammatik aber ist die gleiche’’ is not strictly accurate.

18. I have been unable to find a 3fs perfect with a 2fs suffix in Onkelos.

19. Note that this nominal base, like the 3fs perfect base, alternates with *קטלה*. This fact alone should forestall any attempt to answer Question 5 by pointing out that the 3fs perfect base has an allomorph which ends in a vowel.

majority of these cognates end not in a consonant but in a short vowel—generally a mood ending or case ending.²⁰ Of the handful of cognates which do end in a consonant, one stands out: the 3fs perfect (*qatalat*). We conclude, therefore, that the difference in pronoun allomorph selection between the 3fs perfect base and most other Masoretic bases ending in a consonant is the reflex of an older difference between them in type of final segment (consonant vs. vowel). More specifically: only bases which ended in a short vowel in Proto-Hebrew select the allomorph הַ- in Masoretic Hebrew.

Another synchronically anomalous form which may have a similar explanation is the suffix הַגָּ-*. Although this form is not actually attested (any more than הַתָּ-* is), the existence of הַגָּ- coupled with the existence of rare forms like הַגָּהַ-

20. I follow Brockelmann (1908, pp. 108, 475ff) and Harris (1939, pp. 41f) in positing case endings for singular nouns in the construct state (including nouns with pronominal suffixes) in Proto-Semitic and early Proto-Hebrew. The theory of Ungnad (1906, pp. 174ff) and Bauer and Leander (1922, p. 523) that singular nouns in the construct state had no case marking at all in either of these two periods is untenable in light of the full case-marking attested for the construct in Arabic, Ugaritic, and (Hetzron, 1969, p. 117) Proto-Ethiopic, and the partial case-marking attested in Akkadian and (Krahmalkov, 1970 and 1972) Phoenician. Moreover, the alternation between absolute *CVCVC and construct *CVCC in a few Hebrew nouns (עֲלֵעַ/עֲלֵעַ [‘rib’], כַּתֵּף/כַּתֵּף [‘shoulder’], יָרֵךְ/יָרֵךְ [‘thigh’], שֵׁעַר/שֵׁעַר [‘hair’], גֹּדֵר/גֹּדֵר [‘wall’], אֲשֵׁד/אֲשֵׁד [‘slope’], עָשָׁן/עָשָׁן [‘smoke’], שֶׁכֶר/שֶׁכֶר [‘wages’]) and adjectives (קָבֵד/קָבֵד [‘heavy’], עָרֵל/עָרֵל [‘uncircumscised’], אָרֶךְ/אָרֶךְ [‘long’]) and the existence of feminine construct forms ending in *-CVCr (e.g. מַמְלַכַת [‘kingdom of’], מַרְכָּבַת [‘chariot of’], מִשְׁפַּחַת [‘family of’], עֲטֻרַת [‘crown of’]) are surely products of a very early syncope rule affecting construct forms. Since syncope typically affects only vowels in an open syllable, it follows that the syncope-affected construct forms given above must have ended in a vowel. Even Bauer and Leander (1922, p. 552) admit that this latter conclusion is correct, and they are, therefore, forced to assume that the syncope-affected construct forms originally occurred only with the 1s pronominal suffix *-i and then spread by analogy to all of the other suffixed and non-suffixed construct forms.

A glance at the examples given above shows that this solution is totally inadequate. Some of the examples (כַּבֵּד, עָרֵל, אָרֶךְ) are adjectives and, therefore, could not have occurred with pronominal suffixes. Others (עָשָׁן, אֲשֵׁד) have semantic features which normally prevent them from occurring with pronominal suffixes referring to humans (including -i). And still others (כַּתֵּף, יָרֵךְ, גֹּדֵר), while occurring freely with pronominal suffixes in the Bible, do so only in their *CVCVC form, the *CVCC form being restricted to non-suffixed construct forms (and vice versa).

Much more difficult to refute is the theory proposed by Diakonoff (1965, pp. 60f) and accepted by Hetzron (1969, p. 116) according to which the partial case-marking (genitive -i, nominative \emptyset , accusative - \emptyset) of Akkadian and Phoenician represents the original (Proto-Semitic) state of affairs. It should, nevertheless, be noted that even Akkadian, in its earliest stages, shows vestiges of full case-marking. In Old Assyrian, for example, the word *kalum* (‘entirety’) is declined tripototally (Hecker, 1968, §62b). This is an exception, to be sure, but it is a very significant exception from a historical point of view, since the word in question is a very common one and one which is used almost exclusively in the construct state. Since frequently used words are less susceptible to change and, thus, often preserve archaic features, it stands to reason that the tripototic declension of *kalum* in the construct was once the rule rather than an exception.

Equally significant is the regular (if not always correct) use of nominative and accusative case endings before apocopated pronominal suffixes in the hymnal-epic dialect of Old Babylonian (Gregoire-Groneberg, 1971, pp. 145f, corrected in Annex 2 of her article in *Archiv für*

(alongside נָּגַז)²¹ and נָּגַזְּ (alongside נָּגַזְ)²² suggests that נָּגַזְּ^* did exist, if not phonemically at least morphophonemically (i.e., as an underlying form).

This form, as stated above, is synchronically anomalous, since bases ending in a consonant are supposed to take נָּגַזְ . Diachronically, however, the

Orientalforschung 26 [to appear]; cf. also Old Akkadian *mūraš* ('her foal [accus.]') in Gelb [1970, p. 10] and Westenholz [1977, p. 201] — references which I owe to Professors Edward Greenstein and Dietz Edzard). The significance of this usage rests on the well-known tendency of poetry to make use of archaic forms.

The tendency of proper nouns to preserve archaic forms is no less well-known, and it is, therefore, noteworthy that even the nominative ending is used before pronominal suffixes (apocopated or unapocopated) in Old Akkadian and early Old Babylonian names, e.g., *Nidnuša* ('her gift'), *Iqpuša* ('her embrace [?]',), *Kaspuša* ('her silver'), *Šilluš-Dagān* ('his shadow is Dagān'), *Rigmuš-dan* ('his roar is mighty'), and *Rīmuš* ('his gift') (Edzard, 1974, pp. 291f). Edzard (1974, p. 292) shares my belief that these forms are the remnant of an original triptotic declension.

21. The widespread belief that נָּגַזְ and נָּגַז are merely variants of each other is challenged by Hetzron (1969, p. 107) on the following grounds:

- (a) The former, just like the energetic in general, is rare, while the latter is very common.
- (b) The former shows a definite preference for pausal positions, while the latter does not.
- (c) The former has an energetic connotation, while the latter does not.
- (d) The former may occur after a verb in any person, while the latter is used only after 1s, 2ms, 3ms, 3fs, and 1p.

If these arguments prove to be correct, I shall obviously have to delete my discussion of נָּגַזְּ , since the grounds for positing this form will have disappeared. In the meantime, however, the following counter-arguments may be offered to justify the position taken in this article:

- (a) The assertion that the energetic is rare is based on the assumption, not shared by the majority of scholars, that נָּגַזְ is not an energetic form.
- (b) The preference of נָּגַזְ for pausal position is only part of a larger picture. It is paralleled by the preference, pointed out by Blau (1974, p. 23) of נָּתַתְ for pausal position. Of the eight cases of נָּתַתְ collected by Ibn Janāh (1886, p. 196), five stand at the end of a verse or at an $\text{אֶתְנַחַּ$; by contrast, none of Ibn Janāh's three examples of נָּתַתְ stands in one of these positions. Despite this difference in distribution, נָּתַתְ and נָּתַתְ are clearly related. A very similar phenomenon is pointed out and explained by Joüon (1923, p. 81):

Le ralentissement qui précède la pause explique que dans certains cas on préfère, en pause, des formes plus longues. Ainsi, dans les verbes נָּתַתְ souvent, en pause, on omet l'assimilation du נָּ , par ex. נָּתַתְּ .

- (c) The impression that נָּתַתְ possesses an energetic connotation may be due to the rarity of the form and, above all, to its preference for pausal position, which is by nature emphatic. In any case, this connotation of נָּתַתְ is too nebulous to distinguish it from נָּתַתְ .
- (d) The assertion that נָּתַתְ may occur after a verb in any person is based on the assumption, not shared by the majority of scholars (as Hetzron himself mentions) and not easy to square with the prohibition of long vowels in closed syllables in Proto-Hebrew (see below), that the נָּתַתְ is the *nun energeticum* rather than the *nun paragodicum*. It is true that, as Hetzron points out (personal communication), in a synchronic grammar of BH there may be no grounds for distinguishing these two *nun*'s; however, the issue which concerns us here is a diachronic one, and it is, therefore, valid to eliminate from our discussion cases of נָּתַתְ which are reflexes of the *nun paragodicum*.

22. Here too, Hetzron (1969, p. 125) rejects the commonly-held belief that both variants are

energetic suffix $\text{נ-}/\text{ן-}$ is one of the handful of Hebrew forms which ended in a consonant in Proto-Hebrew as well as Masoretic Hebrew. This is shown not only by the Arabic cognate *-an*²³ and the highly unusual *dageš lene* in the ך of אֶתְּנֶנְךָ (“I would tear you off”; Jer 22:24), but also by the assimilation **-anha*²⁴ > $\text{נָה-}/\text{הָנָה-}$, whose unusual progressive direction (paralleled only by **-atha*²⁴ > תָה- and **-athu* > תו-) seems to mark it as an early sound change.²⁵ If so, we have a good diachronic reason for the failure of the energetic suffix to take ה- : Only forms which ended in a short vowel in Proto-Hebrew select the allomorph ה- in Masoretic Hebrew.

My theory is less successful in accounting for the form יִמְצְאוּנָה (“they will find her”; Jer 2:24), attested with ה- rather than ה' in a fragment with Palestinian vocalization as well (Yeivin 1973a, p. 66). It is unlikely that the נ in this form was vowelless in Proto-Hebrew, as my theory would predict, since that language, before the loss of case-endings and mood-endings, was just as strict as Arabic in prohibiting long vowels in closed syllables (cf. תָמוּת [“she will die”] < **tamūtu*, but תָמַת [“may she die”] < **tamut*; יָקִים [“he will establish”] < **yaqīmu*, but יָקַם [“may he establish”] < **yaqim*; תָשׁוּבֵינָה [“they will return”], but תָשׁוּבָן < **tašubna*; אֲשֶׁמוּרָה [“watch”], but אֲשֶׁמֶרֶת [“watch of”] < **ašmurt* or **ašmurt*; גְּבִירָה [“queen, queen-mother”], but גְּבִירָת [“queen, mistress”] < **gibirt* or **gubirt*). There seems to be no escape from the conclusion that the נ of יִמְצְאוּנָה *did* have a vowel originally. In other words, I am forced to conclude that this נ is, at least historically, the *nun paragogicum* (as in Arabic *yaqtulūnahā* [“they kill us”] and Amarna Canaanite *timitumanu*²⁶ [“you make us die”]) rather than the *nun energeticum*, and that it was followed by a short *a* in Proto-Hebrew. Still, it is strange that Masoretic Hebrew, which

energetic. He argues that the gemination in ך- is not to be derived from the old *nun energeticum*, because the latter was used only with the imperfect of the verb, while the former occurs also with perfects as well as an occasional infinitive, participle, and adverb (unless יָי [“enough”] is also a participle). Instead, he argues, the gemination in ך- should be viewed as a product of its pausal paroxytone accent. Unfortunately, he does not adduce any parallels to support this latter claim. And in light of his belief that the BH energetic shows a decided preference for pausal position, it is a bit strange that he should stress the pausal distribution of ך- as much as he does and yet, at the same time, reject any connection between it and the energetic.

23. It is true that Arabic *-an* has a longer variant *-anna* which *does* end in a vowel, but the gemination in the latter shows that it is not the latter which is cognate with BH ך- .

24. For the short *a* of the 3fs pronominal suffix, see note 27 below.

25. Blau (1974, p. 23) is also of the opinion that this change is early.

26. Letter 238, line 33.

27. The vowel is given here as short, because I do not share the widespread belief that final vowels had to be long or aneeps in order to escape deletion. I believe that short **a*, unlike short **i* and **u*, was frequently preserved in word-final position because of its greater sonority.

preserves final *a*²⁷ in *תִּקְטְלוּנָה*²⁸ ('they/you [fpl] will kill'), *הִנָּה* ('they [f]'), *אֲתָנָה* ('you [fpl]'), *אֲתָה* ('you [ms]') *קִטְלָתְךָ* ('you [ms] killed'), *אֲקַטְלָה* ('let me kill'), and other forms, should not have preserved even a trace of this *a*. One would expect to find at least a few cases of *תִּקְטְלוּנָה** ('you [mpl] will kill') in the Bible. It is also strange that ה- does not have a pausal form הַ after this *nun paragodicum* (cf. Ps 63:4 *יִשְׁבְּחוּנֶךָ* ['they will praise you'] and Ps 91:12 *יִשְׂאוּנֶךָ* ['they will carry you']).

The above exception, however intractable it may seem, should not be

This hypothesis concerning **a* in word-final position is supported by the exceptional stability of **a* in other positions. Joüon (1923, pp. 75f) gives the following rule:

Dans les mots *disyllabes milera'* . . . si la seconde voyelle est longue, la première voyelle primitivement *a* demeure, les primitives *i*, *u* tombent.

This rule, in spite of numerous exceptions, is a sound one. It enables us to account for such pairs as *נוֹשְׁבוֹת* ('inhabited') - *נוֹשְׁבוֹת** ('they blow'), *חֲתָמוֹ* ('his seal') - *חֲתָמוֹ** ('he who seals it'), *הָבוּ* ('give') - *תָּנוּ* ('id.'), and (Joüon's example) *לְבוּשׁ* ('dressed') - *לְבוּשׁ** ('clothing').

Evidence that *a* is more resistant to reduction and deletion than the high vowels are is by no means limited to Hebrew, as Malone (1971, p. 62, note) has pointed out independently. In the Arabic dialects, final **a* was generally preserved longer than final **i* and **u* (Blau 1977, pp. 15f). And to this day, there are many dialects (called 'parlers différentiels' by Cantineau) which retain **a* (or some reflex of it) in environments where **i* and **u* have totally disappeared (Blau 1977, p. 16, note). According to Rabin (1951, p. 97), a similar situation existed already in Ancient East Arabian dialects, and according to Schaade (1911, p. 57), even classical Arabic phonology reflects the resistance of *a* to deletion.

In Ethiopian Semitic, **u* and **i* are reduced to ə or ø, while **a* is preserved, even in word-final position. And in Syriac, the plosive realization of *בגדכפת* is restored more regularly after ø < **i* than after ø < **a* (e.g. *בְּרֵבָא* < **garab* ['leprosy'] but *בְּרֵבָא* < **garib* ['leprous']); Nöldeke 1904a, p. 17), a difference which would seem to indicate that **a* was deleted later.

As noted in part already by Nöldeke (1904b, p. 3, note), the history of French provides a very striking parallel to these Semitic phenomena. According to Fox and Wood (1968, p. 29):

Final atonic vowels were slurred . . . in Gallo-Romance, apart from *a*, the most sonorous vowel sound, though it was weakened in that period to the neutral ə and disappeared from pronunciation in the 17th century (except in poetry), hence the difference between masculine and feminine adjectives, e.g. *las* < *lassum* but *lasse* < *lassam*, etc.

In conclusion, I may add Greenberg's discovery (1969, pp. 162f) that *a* is more resistant to devoicing than *i* and *u*. As mentioned above, the conditions for voicelessness in vowels are quite similar to the conditions for vowel deletion.

28. This form has the very same **-na* suffix that allegedly existed in the *masculine* plural. Even if **-na* had an anceps vowel (and I fail to see the necessity for such vowels in Proto-Hebrew, as explained in the preceding footnote), there is no reason why it should have been subject to apocope in the masculine plural but not in the feminine plural. On the contrary, analogical pressure should have ensured parallel treatment.

allowed to distract us from the overall picture, which is summarized in the following chart (:=length):

PROTO-HEBREW	>	MASORETIC HEBREW
CV: + _____ ha ²⁹	>	CV + _____ hâ
CVC + _____ ha ²⁹	>	CVC + _____ : â
CV + _____ h	>	C + _____ âh

The phonemic shape of the Proto-Hebrew pronominal suffix in the last line requires a word of explanation. Ordinarily, one would reconstruct the etymon of הֵ- as **-ah*, but this is impossible here, since Proto-Hebrew did not allow hiatus. Instead, I reconstruct the etymon of הֵ- as **-h*, and derive its חֵמֶק from the short base-final vowel to which **-h* was attached in Proto-Hebrew. This short vowel was protected from apocope by the suffixed pronoun, but since it was deleted elsewhere, it was a prime candidate for metanalysis. Thus, in the course of time, this short vowel took on the fixed value *a* before the 3fs pronominal suffix — that being the vowel of **-ha*²⁹ as well as the statistically most frequent vowel before pronominal suffixes (thanks to the high frequency of prepositions ending in *a*, especially the etyma of -ָ, -ֵ, and -אֵוֹ)³⁰ — and was incorporated into the suffix, yielding **-ah* > הֵ-.

Getting back to the older form **-h*, there can be little doubt that it is merely an apocopated variant of **-ha*. This brings us to the last question.

6. Why Is the Apocopated Allomorph of the Proto-Hebrew 3fs Pronominal Suffix Found Only after Bases Ending in a Short Vowel?

Cantineau (1937, pp. 148ff) answered this question (and similar questions about Aramaic and colloquial Arabic suffixes, some of which have been discussed above) by positing a rule of *quantitative* vowel harmony in Proto-Semitic, according to which the length of the vowel in a monosyllabic pronominal suffix is determined by the length of the base-final vowel. After a short base-final vowel, then, the *a* of the 3fs pronominal suffix was short and, hence,

29. See note 27 above.

30. That the etyma of these prepositions ended in *a* is shown by forms like מֵהֶם ('in them'), לָהֶם ('to them'), וְמַי ('and water'; Gen 1:6), אַתָּה ('you'; Exod 29:35), לָךְ ('to you [fs]'), בָּךְ ('in you [fs]'), אַתָּךְ ('you [fs]'), instead of the expected הֵלָּךְ, הֵבָךְ, הֵאֵתָךְ.

subject to apocope; after a base-final long vowel or diphthong, the *a* of the 3fs pronominal suffix was long and, hence, not deletable.

This is an attractive theory, but it deals with only two out of three possible environments. In its present form, therefore, it fails to explain why the apocopated allomorph is not found after bases ending in a consonant in Proto-Hebrew. Whether the theory can be modified to deal with this problem is an open question.

As an alternative to Cantineau's theory, I suggest that apocope was blocked in cases where it would have created an impermissible cluster, i.e., two consonants at the end of a syllable (CVCh) or vowel length plus consonant at the end of a syllable (CV:h). We have already seen that Proto-Hebrew has a phonological rule of vowel shortening or length deletion which eliminated the latter type of cluster when it arose through morphological processes, e.g., suffixation.³¹ Now I am positing a constraint which prevented some of those clusters from arising in the first place.

More generally, I am positing for Proto-Hebrew the kind of teleological cooperation between seemingly distinct processes and limitations on processes which modern linguists call a "conspiracy."³² Conspiracies whose "negative targets" are syllable-final CC and :C clusters are, of course, exceedingly common in the Semitic languages, and they have been known for a very long time.³³ Some of these conspiracies (e.g. that of Akkadian³⁴) feature limitations

31. Another synchronic device for eliminating clusters created by suffixation in hollow and geminate verbs is the insertion of a linking vowel: *סגור* in the imperfect (e.g. *הָשׁוּבִינָהּ* ["they will return"], *הִסְבִּיבִינָהּ* ["they surround"]) and *סגורם* in the perfect (e.g. *הִסְבִּיבִינִי* ["I turned"], *הִסְבִּיבִינִי* ["you caused to turn"], *הִקְיַמֹּתִי* ["I established"]). It is quite possible that this device goes all the way back to Proto-Semitic, since the linking vowel of the perfect has an Akkadian cognate — the *û* of *maršaku* ("I am sick"), *maršata* ("you are sick"), etc. However, since the Akkadian linking vowel appears even when there is no cluster to be eliminated (e.g. *zakarāta* ["you are a man"]), the distribution and function of its Proto-Semitic etymon are uncertain.

32. Cf. Kisseberth (1969 and 1970), Lakoff (1972), Kiparsky (1973), Pyle (1974), and articles by Aitchison, Lass, and Taylor in Anderson and Jones (1974, pp. 1–15, 311–352, 403–426).

33. In the eighth century, Sibawaihi explained at least a dozen Arabic phenomena with the help of the slogan *lā yaltaqī sākināni* ("two vowelless consonants may not meet"). Some of these phenomena involve deletion of a consonant (e.g. 1881, p. 72, l. 10; p. 272, l. 16; 1889, p. 105, l. 9), of gemination (e.g. 1889, p. 446, l. 15) or of vowel length (e.g. 1889, p. 92, l. 10). Others involve insertion of a vowel (e.g. 1889, p. 103, l. 20; p. 105, l. 12; p. 298, l. 20) or failure to delete or move a vowel (e.g. 1889, p. 162, l. 9).

34. Some of the devices which Akkadian uses to eliminate clusters are discussed by Reiner (1966, pp. 52f). The restrictions on the deletion of short vowels in Akkadian (only in a non-final open syllable immediately preceded by a short vowel; cf. Goetze, 1946) are precisely those which are needed to prevent an impermissible cluster from arising.

on vowel-deletion rules which are quite similar to the one I am positing for Proto-Hebrew.

My theory, in summary, is that the two Proto-Hebrew environments in which **-ha* is found are simply those in which apocope was blocked to avoid creation of impermissible clusters. These environments were originally lumped together as an "elsewhere" environment. Later, the loss of short final vowels and the resultant metanalysis caused the environment CVC+_____ to split off from CV: +_____ and merge with CV+_____, giving אָ and אַ anomalous distributions in Masoretic Hebrew. In Mishnaic Hebrew, these anomalous distributions were extended by analogy to אָ and אַ-, respectively. This analogy was reinforced by two other trends favoring the spread of אָ.

BIBLIOGRAPHY

- Anderson, J. and C. Jones (eds.). 1974. *Historical Linguistics II*. Amsterdam.
- Andrzejewski, B. 1957. "Some Preliminary Observations on the Borana Dialect of Galla." *Bulletin of the School of Oriental and African Studies* 19:354-374.
- Anttila, R. 1972. *An Introduction to Historical and Comparative Linguistics*. New York.
- Bauer, H. and P. Leander. 1922. *Historische Grammatik der hebräischen Sprache*. Halle.
- Bendavid, A. 1971. *Ləšon miqra uləšon haqamin*. Tel Aviv.
- Ben-Hayyim, Z. 1954. *Studies in the Traditions of the Hebrew Language*. Madrid-Barcelona.
- _____. 1972. "Šurat hakkinnuyim haḥaḇurim -ka, -ta, -ha bimsoroteha šel hallašon ha'ivrit." *Qoḇeš ma'amarim biləšon ḥazal*, pp. 59-92. Ed. M. Bar-Asher. Jerusalem.
- Birkeland, H. 1940. *Altarabische Pausalformen*. Oslo.
- Blanc, H. 1964. *Communal Dialects in Baghdad*. Cambridge, Mass.
- Blau, J. 1974. "'Iyyunim bətorat hakkinnuyim (kolel 'et hayyiddua') biləšonot šemiyyot." *Henoch Yalon Memorial Volume*, pp. 17-45. Eds. E. Y. Kutscher et al. Ramat Gan.
- _____. 1977. "The Beginnings of the Arabic Diglossia. A Study of the Origins of Neorabic." *Afroasiatic Linguistics* 4: 175-202.
- Brockelmann, C. 1908. *Grundriss der vergleichenden Grammatik der semitischen Sprachen I*. Berlin.
- Burney, C. F. 1903. *Notes on the Hebrew Text of the Books of Kings*. Oxford.

- Cantineau, J. 1937. "Une alternance quantitative dans des pronoms suffixes sémitiques." *Bulletin de la Société Linguistique de Paris* 38:148–164.
- Dalman, G. 1905. *Grammatik des jüdisch-palästinischen Aramäisch*. Leipzig.
- Diakonoff, I. M. 1965. *Semito-Hamitic Languages*. Moscow.
- Driver, S. R. 1956. *An Introduction to the Literature of the Old Testament*. Cleveland - New York.
- Edzard, D. O. 1974. "Puzriš-Dagān—Šilluš-Dagān." *Zeitschrift für Assyriologie* 63:288–294.
- Fox, J. and R. Wood. 1968. *A Concise History of the French Language*. Oxford.
- Garbell, I. 1958. "Remarks on the Historical Phonology of an East Mediterranean Arabic Dialect." *Word* 14:303–337.
- Gelb, I. J. 1970. *Sargonic Texts in the Ashmolean Museum (Materials for the Assyrian Dictionary 5)*. Chicago.
- Goetze, A. 1946. "Sequence of Two Short Syllables in Akkadian." *Orientalia* 15 (N.S.): 233–238.
- Greenberg, J. 1969. "Some Methods of Dynamic Comparison in Linguistics." *Substance and Structure of Language*, pp. 147–203. Ed. J. Puhvel. Berkeley—Los Angeles.
- Gregoire-Groneberg, B. 1971. "Untersuchungen zum hymnisch-epischen Dialekt der altbabylonischen literarischen Texte." Ph.D. dissertation, Westfälische Wilhelms-Universität zu Münster.
- Harris, Z. 1939. *Development of the Canaanite Dialects*. New Haven.
- . 1941. "Linguistic Structure of Hebrew." *Journal of the American Oriental Society* 61:143–167.
- Hecker, K. 1968. *Grammatik der Kültepe-Texte*. Rome.
- Hetzron, R. 1969. "Third Person Singular Pronoun Suffixes in Proto-Semitic." *Orientalia Suecana* 18:101–127.
- Ibn Janāh, Y. 1886. *Le livre des parterres fleuris*. Ed. J. Derenbourg. Paris.
- Ibn Kapron, Y., Y. Ibn Daud, and Y. Ibn Chiquitilla. 1870. *Təšūḇot talmidey Mənahem ben Ya'aqov Ibn Saruq*. Vienna.
- Jouön, P. 1923. *Grammaire de l'hébreu biblique*. Rome.
- Kahle, P. 1913. *Masoreten des Ostens*. Leipzig.
- . 1930. *Masoreten des Westens II*. Stuttgart.
- Kiparsky, P. 1973. "Phonological Representations." *Three Dimensions of Linguistic Theory*, pp. 75–82. Ed. O. Fujimura. Tokyo.
- Kisseberth, C. 1969. "On the Role of Derivational Constraints in Phonology." Mimeographed. Bloomington.
- . 1970. "On the Functional Unity of Phonological Rules." *Linguistic Inquiry* 1: 291–306.
- Krahmalkov, C. R. 1970. "Studies in Phoenician and Punic Grammar." *Journal of Semitic Studies* 15:181–188.

- _____. 1972. "Comments on the Vocalization of the Suffix Pronoun of the Third Feminine Singular in Phoenician and Punic." *Journal of Semitic Studies* 17:68–75.
- Kutscher, E. Y. 1963. "Ləšon hazal." *Henoch Yalon Jubilee Volume*, pp. 246–280. Eds. S. Lieberman et al. Jerusalem.
- _____. 1972a. "Aramaic." *Encyclopedia Judaica* 3:259–287.
- _____. 1972b. "Hebrew Language: Mishnaic." *Encyclopedia Judaica* 16:1590–1607.
- Lakoff, R. 1972. "Another Look at Drift." *Linguistic Change and Generative Theory*, pp. 172–198. Eds. R. Stockwell and R. Macauley. Bloomington.
- Malone, J. 1971. "Wave Theory, Rule Ordering, and Hebrew-Aramaic Segmentation." *Journal of the American Oriental Society* 91:44–66.
- Mansour, J. 1974. *Ha'arabit hayyehudit šel Bagdad*. Haifa.
- Mishna Codex Kaufmann*. 1968. Jerusalem.
- Mishna Codex Paris*. 1973. Jerusalem.
- Mishna Codex Parma (De Rossi 138)*. 1970. Jerusalem.
- Nöldeke, T. 1904a. *Compendious Syriac Grammar*. London.
- _____. 1904b. *Beiträge zur semitischen Sprachwissenschaft*. Strassburg.
- Pyle, C. 1974. "Why a Conspiracy?" *Proceedings of the Parasession on Natural Phonology*, pp. 275–284. Chicago.
- Qimḥi, D. 1842. *Miklol*. Lyck.
- Rabin, C. 1951. *Ancient West-Arabian*. London.
- Reiner, E. 1966. *A Linguistic Analysis of Akkadian*. The Hague.
- Schaade, A. 1911. *Sibawaihi's Lautlehre*. Leiden.
- Sibawaihi, 1881. *Le livre de Sibawaihi* I. Ed. H. Derenbourg. Paris.
- _____. 1889. *Le livre de Sibawaihi* II. Ed. H. Derenbourg. Paris.
- Sperber, A., ed. 1959–62. *The Bible in Aramaic* I-III. Leiden.
- Thureau-Dangin, F. 1925. "Un hymne a Ištar de la haute époque babylonienne." *Revue d'Assyriologie* 22:169–177.
- Ungnad, A. 1906. "Das Nomen mit Suffixen im Semitischen." *Wiener Zeitschrift für die Kunde des Morgenlandes* 20:167–183.
- Von Soden, W. 1931. "Der hymnisch-epische Dialekt des Akkadischen." *Zeitschrift für Assyriologie* 40:163–227.
- _____. 1969. *Grundriss der akkadischen Grammatik*. Rome.
- Westenholz, J. and A. 1977. "Help for Rejected Suitors: The Old Akkadian Love Incantation MAD V 8." *Orientalia* 46:198–219.
- Yalon, H. 1964. *Mabo ləniqqud hammišna*. Jerusalem.
- Yeivin, I. 1973a. *Mibḥar kitbey yad bəšitot niqqud taḥrani wə'eres-yiśrə'eli*. Jerusalem.
- _____. 1973b. *Masoret hallašon ha'ibrit hammištaqqepet banniqqud habbaḅli*. Jerusalem.