

NON-PHONETIC CONDITIONING OF SOUND CHANGE AND BIBLICAL HEBREW

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1.

THE TIME-HONORED discussion of the problem of the non-phonetic conditioning of sound change has been intensified through the recent emergence of generative phonology. Whereas the orthodox neogrammarian position, as well as that of "autonomous" phonemics, only allow for strict phonetic conditioning of sound change, "systematic" generative phonology posits that phonetic changes may also take place in environments whose specification requires reference to non-phonetic morphophonemic and/or (superficial) grammatical structure.¹ In the following I shall attempt to view this problem from the vantage-point of some sound changes in Biblical Hebrew.

2.

Many scholars,² correctly in my opinion, allow for paradigmatic resistance to sound change. According to this view, functionally significant sounds may be preserved, although "blindly operating" sound change should have changed them. Sounds behave differently if they are the sole markers of a certain

1. See, e.g., Postal (1968, pp. 231-260).

2. See, e.g., Horn (1923, pp. 118-120), who (in pp. 131-133) deals with the history of research; Malkiel (Lehmann-Malkiel, 1968, p. 68); Szemerényi (1968, pp. 3-38); Anttila (1972, p. 80).

grammatical category, and sound changes are delayed if homonymy would result. In short, sound changes do not take place irrespective of the needs of communication. They do not operate blindly, endangering mutual understanding.

2.1

Indeed, Biblical Hebrew exhibits a rather clear case of paradigmatic resistance to sound change, preserving a functionally significant sound. As is well known, the second person singular personal pronouns, as a rule, are 'attā (masc.): 'att (fem.), the corresponding pronominal suffixes (used in genitive and accusative function) -kā : -ēk, etc., the corresponding suffixes marking the persons of the perfect -tā : -t. Whereas the final vowel of the feminine has disappeared, that of the masculine remained, no doubt owing to paradigmatic pressure, since the omission of the masculine final vowel would have entailed the disappearance of any difference between masculine and feminine.³ One would not attribute the preservation of the final vowel in the masculine forms to the greater stability of the *a*-vowel.⁴ In other Semitic languages (e.g., in Aramaic and Arabic dialects), it is the feminine final vowel *i* that, as a rule, exhibits greater stability,⁵ thus proving that the main factor for the preservation

3. As a matter of fact, the pronominal suffixes exhibiting the vowel *ē* preceding the *k* in the feminine would have preserved the functional difference between masculine and feminine even if the masculine had lost its final vowel (except for forms in which the pronominal suffixes are preceded by a long vowel, as ''your father''-*ābikā* : *ābik*). It stands to reason that the preservation of the final vowel in the masculine in pronominal suffixes as well is due to the analogy of the personal pronoun and the perfect (and pronominal suffixes preceded by long vowel).

4. Though it might have influenced the preservation of the final vowel in the masculine rather than in the feminine. The main reason for the preservation of one of the final vowels was paradigmatic pressure, and in Hebrew (contrary to other Semitic tongues, see below) it was the *a*-vowel that was preserved, perhaps because of its greater stability. At any rate, in Hebrew *a* is more stable than *i/u*, as demonstrated by its behavior in open pretonic syllables: whereas *u* (always) and *i* (often) are reduced, *a* is always lengthened. In many Arabic dialects too (called by J. Cantineau *différentiel*) *a* is more stable.

5. The particulars are rather complicated, including, e.g. in Syriac, the preservation of the final *-ī* in orthography only. For our purpose we shall cite the behavior of the pronominal suffixes in Baghdadi (according to Blanc, 1964, pp. 64–65): in the Jewish dialect, after bases ending in a consonant the final vowel is omitted in both masculine and feminine, since the difference in gender is sufficiently indicated by the vowel preceding *k*; after bases terminating in a vowel, however, in which no vowel difference preceding *k* obtains between masculine and feminine, only the masculine loses its final vowel, the feminine being *-ki*, a clear example of paradigmatic blocking of the omission of a functionally necessary vowel. In the Christian dialect, however, through the influence of the perfect suffixes *katabet:katabti*, as well as of the pronominal suffixes after bases ending in a vowel (cf. also note 3 above), the feminine pronominal suffix of the second person has always the form *-ki* (and in the Muslim dialect >-*č*).

of one of the final vowels was paradigmatic pressure, phonetic parameters being at most secondary.⁶

2.2

It goes without saying that the principle of paradigmatic resistance to sound change has to be applied judiciously. Even *prima facie* clear cases of blocking of changes of functionally important sounds may, on closer inspection, turn out rather to exhibit ordinary sound change. Thus it has been claimed⁷ that third person feminine singular perfect forms of *verba IIIy* like *hāyât* ('she was') with preservation of the final *t* (as against its regular omission, e.g., in *kātābā*, 'she wrote') is due to paradigmatic pressure. Had the *t* shifted to zero, the allegedly regular feminine form **hāyā* would have become identical with the corresponding masculine. It is, however, more likely⁸ that originally it was only the feminine ending *-at* that shifted to *-ā*, whereas *-āt* preserved its *t*. Therefore, in this case, the preservation of the *t* is regular, rather than due to paradigmatic pressure.

2.3

As is well known, case endings are especially apt to be omitted, in both Semitic and non-Semitic languages. This omission of the case endings is due to multiple causation. For example, in Neo-Arabic the dropping of the case endings was due to the intertwinement of many factors:⁹ the disappearance of the final short vowels, the analogical extension of pausal forms lacking case endings, and also the prevalence of more frequent forms over less common ones (e.g., the prevalence of the *-īnal/-ayna* endings in the sane masculine plural/dual over the *-ūnal/-āni* endings). Yet this process was conditioned by the low functional yield of the case endings, partly due to substitutes¹⁰ preceding the

6. Grotzfeld (1964, p. 54) posits for the perfect suffixes in the Arabic dialect of Damascus an originally short final vowel in the masculine as against a long vowel in the feminine (**ta : *tī*). His view is based on the fact that traces of a long final vowel are preserved in Classical Arabic in the feminine form but not in the masculine. Therefore, he regards the preservation of the final *-ī* as original rather than secondary, due to a tendency for differentiation and the influence of the imperfect/imperative ending *-ī*. This, however, is not very likely. Nöldeke (1904, p. 20) adduced decisive proof for *-ā* originally terminating in a long vowel. That Classical Arabic has not preserved traces of this long vowel is insignificant. Thus, in the perfect suffix of the second person plural traces of a long final vowel have been preserved in Classical Arabic in the masculine (*katābtumūhu*), but not in the feminine; though, as demonstrated by Nöldeke (1904, pp. 24–25), it terminated in a long vowel as well.

7. See, e.g., Bauer-Leander, 1922, p. 411.

8. See Blau (forthcoming a, p. 2).

9. For particulars see Blau (1965, pp. 168–169).

10. As were prepositional phrases in the case of Romance languages (see Havers, 1931, p. 198) and word order in the case of Arabic.

disappearance of the case ending and thus becoming one of the factors of its disappearance,¹¹ and partly due to the redundancy of the case endings.¹²

This conditioning of the omission of the case endings is reflected in their preservation in adverbial function, attested in both Semitic¹³ and non-Semitic¹⁴ languages. Whereas in general the case endings were redundant, in the special case of adverbial function they continued to be necessary markers of this grammatical category and were therefore preserved. This is the case in Biblical Hebrew in adverbs terminating in *-ām*:¹⁵ *ḥinnām* (“in vain”), *yômām* (“by day”), *rêqām* (“in vain”).

2.3.1

Another case of the preservation of an otherwise disappearing sound in adverbial function in Biblical Hebrew is the rather marginal preservation of *-at*, which otherwise (cf. Section 2.2) shifted to *-ā*: *mohōrāt* (“the morrow”), frequently used as a noun, presumably to be interpreted as an original adverb,¹⁶ further *rabbat* (“much”), which as an adverb is attested in Psalms only, yet its occurrence in late prose as a noun (“many,” 2Chr 30:17, 18) demonstrates that it was not limited to poetry. It stands to reason that this *-at* ending in adverbial function is due to multilinear development, to the preservation of the *-at* of the feminine ending, because it was reinterpreted as marking adverbial function and therefore preserved, and further to the existence of an original adverbial ending *-at* of different origin, which, in the light of Arabic *rubbata/rabbata* (“sometimes”) is, at least in the case of *rabbat*, quite likely,¹⁷ even if in Hebrew it reflects Aramaic influence.

3.

Yet the not strictly phonetic conditioning of sound change may be, it seems, demonstrated in more conspicuous cases as well. According to the view of the

11. See Havers (1931, p. 198).

12. For the problem of the redundancy of case endings cf. Blau (1977a, pp. 4–8).

13. Cf. for Arabic Blau (1965, pp. 170, 216, 217); for Aramaic Bauer-Leander (1927, pp. 205b, 254o, 244r).

14. See, e.g., Anttila (1972, p. 80).

15. It stands to reason that these words did not terminate in a simple accusative, but (also) in an adverbial ending. This is indicated by the El-Amarna transcription (137:21) *ri-ka-mi* exhibiting a final short vowel. The omission of such a final short vowel in Hebrew is also demonstrated by the oxytone stress of these words (see Blau, 1976, p. 30).

16. Cf. Brockelmann (1908–13, I, p. 409, where also instances for Aramaic are cited), and Bauer-Leander (1927, p. 254o and p. 225r, where a different and unconvincing explanation is provided).

17. See Barth (1913, p. 18 and 1913–14, p. 307).

strict conditioning of phonetic changes, a phonetic change affects the sound concerned in all the positions in which it is operating. Let us assume that in a certain language the allophones A_1 and A_2 exist. Later (stage II), another sound (B) shifts to A_1 : $B > A_1$. Now (stage III) another sound change affects A_1 , let us say: $A_1 > C$. According to the view that sound changes only require reference to phonetic information, A_1 has to shift to C in all its occurrences, both in environments in which it alternated with A_2 and in those in which it developed from B. Yet I would like to submit that this is not the only possibility. The other is that the sound shift $A_1 > C$ affects only the phoneme A_1 that arose from B, without changing A_1 that is the allophone of A_2 . In this case, the speaker differentiates between the phoneme A_1 , which is not restricted to a special environment, and the allophone A_1 , which he recognizes by its restriction to special environments and its alternation with A_2 in other environments. Synchronically, therefore, I am inclined to posit for stage II a phoneme A_1 (the historical continuation of B) and the allophones A_1 and A_2 .

3.1

It seems that (late) Biblical Hebrew reflects such a case of identical phonemes and allophones with only the phonemes being affected by a sound change. It can be proved¹⁸ that, at least at the time of the Septuagint translation of the Pentateuch, Biblical Hebrew still possessed \acute{g} and h (which later shifted to ' and h respectively). We do not, to be sure, know the exact date of the spirantization of (*b*), *g*, (*d*), *k*, (*p*, *t*).¹⁹ It stands to reason, however, that it had already taken place at the time of the translation of the Septuagint. Accordingly, one has to posit that besides the phonemes $/\acute{g}/$ and $/h/$, the allophones $[\acute{g}]$ and $[k]$ (of $/g/$ and $/k/$) also already existed, although the latter were practically identical to the former. Later, when the phonemes \acute{g} and h shifted to ' and h , the phonetically identical allophones were not affected.

3.2

This interpretation of the facts may be buttressed by Eastern Syriac and Modern Hebrew. In Eastern Syriac,²⁰ h has shifted to h , and, as is usual, post-vocalic *b*, *g*, *d*, *k*, *p*, *t* have been spirantized. Yet the coexistence of h and spirantized *k* has not led to any significant confusion between the two. Similarly, in literary and colloquial standards of Modern Hebrew as used by Ashkenazim *w* has shifted to *v* and h to *x*, alongside v/x which are the

18. See Blau (forthcoming b).

19. See Kutscher (1964-65, pp. 49-58).

20. See Blau (1970, p. 16).

allophones²¹ of *b/k*, respectively. Nevertheless, this has not led to any significant amount of confusion between the phonemes *v/x* and the phonetically identical allophones.

4.

On the other hand, I think that recent proposals as to the excessive abstractness of sound changes are exaggerated. *Inter alia*, it has been claimed that grammatical classes, as parts of speech, have as such direct influence on sound change.²² It is very difficult for me to accept such a claim. It is, in my opinion, hard to imagine that a sound shift should be blocked in a certain grammatical category without any historical, phonetic, or functional reasons, or analogical formation. In the following, I shall cite two cases exhibiting different phonetic treatment of grammatical categories in Biblical Hebrew, for which, on closer inspection, however, functional reasons or analogical formation may be made very likely. I am of course well aware that this does not refute the possibility of the influence of grammatical categories on sound change. It cautions one, however, against rushing into unwarranted conclusions.²³

4.1

In Biblical Hebrew, as is well known, absolute nouns in stressed closed syllables exhibit long vowels, in contrast to the verbs which exhibit short

21. In my opinion, in the literary and colloquial standards of Modern Hebrew occlusive and spirantized *b, g, d, k, p, t* have to be analyzed as allophones and the spirantized allophones *h k* (as against *v <w: h <h*) must not be analyzed as separate phonemes. Although oppositions such as *sapa* (<*sappa*, 'couch'): *sapa* (<*šāpā*, 'lip, language') do exist, in cases like *piša* ('your mouth')/ *bəpiša* ('in your mouth') or *tapar* ('he sewed')/ *yitpor* ('he will sew') *p-p* are felt by the educated speaker at least as allophones. In fact, I advocate a more 'abstract' phonemic analysis, or the mixing of levels between phonemics and morphophonemics; though this does by no means indicate that I plead for generative phonology. At any rate, I have the impression that too much attention has been paid to Modern Hebrew substandard, at the expense of Modern Hebrew standard (though, of course, the linguistic analysis of Modern Hebrew substandard is perfectly legitimate).

22. See, e. g., Postal (1968, pp. 231ff). In the domain of Semitics this view was mainly upheld by the Italian school of Semitics; see recently Aspesi (1977), who quotes Garbini several times; further Garbini (1978, p. 52).

23. Even Anttila (1972, p. 79), who states that "one frequently finds a different treatment of the same sound on the categorial verb-noun axis," prudently remarks that "perhaps in some such cases we have different chronology rather than real grammatical conditioning." And Aspesi, in the conclusion of his paper (1977, p. 401), propounds the view that the alleged sound shift *s(š) > h* did not operate outside certain morphological classes, because this would have involved too far reaching changes in the phonological system. Although this argument is hardly convincing, it shows that even Aspesi felt discomfort at the assumption that a sound shift be limited to a certain morphological class without any (in this case, functional) reason.

vowels in this position. It stands to reason²⁴ that the different behavior of verbs is due to the fact that final short vowels disappeared in verbs before they were dropped in absolute nouns, so that the vowel between the second and third radical consonants came comparatively early to stand in a closed syllable and was not lengthened. The reason²⁵ for the earlier dropping of the final short vowels in verbs was that they were functionally redundant. Whereas the final short vowels in nouns were the only markers of the case endings: the *-a* ending of the third person singular masculine perfect was altogether redundant, not standing in any opposition; and the *-u* ending of the indicative **yaqtulu* in contrast to the zero ending of the jussive **yaqtul* was redundant, since the opposition indicative: jussive was sufficiently indicated by the different stress, i.e. **yaqtúlu: *yáqtul*.²⁶ In other words: in the case of the dropping of the case endings in the absolute noun there was paradigmatic resistance to the omission of the final short vowels (see Section 2 above), but in verbs the final short vowels were either totally redundant or not the sole markers of the ‘‘moods,’’ and therefore they were affected by the regular sound change.

4.2

The sound structure of the imperative, as it is exhibited in *qal*, is exceptional. According to the general penultimate stress that once prevailed in Biblical Hebrew,²⁷ one would have expected **qútuł/*qítuł/*qátal*, which could not have regularly shifted to **qətuł/*qətuł/*qətál*. Again, one should not simply resort to the assumption of grammatical conditioning. Some scholars attributed the special behavior of the imperative to the loss of stress of this grammatical category.²⁸ This, however, is unlikely,²⁹ not only because one would then have expected similar behavior in the imperative with pronominal suffixes (as *kotbēhū*), which is not the case, but also because the imperative in *nip'al* (*hiššāmēr*) is normally stressed and exhibits pretonic lengthening. The

24. See for particulars Blau (1968, pp. 36–37), where (in note 44) it is refuted that the different vocalization was due to either different stress or to the rare occurrence of verbs in pausal position. Cf. also Blau (1977–78, p. 147).

25. The reasons adduced by Blau (1968, p. 37, note 45) are not convincing.

26. This difference in stress stems from a period in which penultimate stress generally prevailed. The assumption of such a stress period is, in my opinion, the most powerful explanation of the phonetics of Biblical Hebrew, and is the cardinal point upon which the understanding of Biblical vocalization pivots (cf. Blau, 1976, p. 30). For the reason of the preservation of the final *-a* of the cohortative **aqtula* cf. Blau (1977b, pp. 29–30).

27. See the preceding note.

28. So, e.g., Bergsträsser (1918–29, 1, p. 115). For the shortening of the imperative in general see Horn (1923, pp. 32–40).

29. Cf. also Blau (1977–78, p. 149).

simplest explanation of the special behavior of the imperative *qal* is that it was restructured according to the imperfect (*kəṯōb* according to *yiktōb*: cf. also *qûm*, rather than the expected **qom*, restructured according to *yāqûm*, and *qûmf*, etc.; cf. also Arabic ('*u*)*ktub*, restructured according to the imperfect *yaktub*-). At any rate, one need not assume grammatical conditioning of these vowel structures.

5.

I have tried to show that sound change is not always strictly phonetically conditioned. I have demonstrated on the strength of biblical material that functionally significant sounds may be preserved in positions in which they are, as a rule, omitted (Section 2), and that phonemes are apt to behave differently from phonetically identical allophones (Section 3). On the other hand, I do not consent to the often expressed opinion that sound changes may be limited to certain grammatical classes to the exclusion of others, without any historical, phonetic, or functional reasons, or analogical formation. I am convinced that accurate analysis of such alleged cases is apt to discover special reasons that led to the restriction of a certain sound change to a special grammatical class. In Section 4 two such alleged cases occurring in Biblical Hebrew were treated, and the reasons underlying them analyzed.

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