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## The History of the Ancient Hebrew Modal System and Labov's Rule of Compensatory Structural Change\*

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### 1. Consonant Cluster Simplification and the Tense System of VBE

William Labov delivered his inaugural lecture at the University of Pennsylvania in the late 1960's, when I was a graduate student in the Department of Oriental Studies. Naturally, what I remember best about that lecture is the excitement that it generated among the students, but I also recall that part of it dealt with consonant cluster simplification and the past tense suffix in Vernacular Black English (VBE).

This was among the earliest demonstrations of the variable operation of the English phonological rule which deletes word-final -t,d preceded by another consonant. Labov showed us that the rule is grammatically constrained, so that the final clusters in past tense verbs like *missed* and *bowled* are simplified (to *miss'* and *bowl'*) less often than the corresponding clusters in monomorphemic words like *mist* and *bold*. He also pointed out to us that the failure to understand that VBE forms like *miss'* and *bowl'* were the product of a phonological rule had led to misguided attempts to teach black pupils the concept of past tense. It was clear, he said, that these students had no need for such instruction, for they never confused *kep'* with *keep* or *tol'* with *tell*.

## 2. Labov's Rule of Compensatory Structural Change

The aforementioned material had been reported informally in Labov et al. (1968: 123-57); it was formally published shortly afterwards in Labov (1970:53-60). In the latter publication, the discussion of the connection between synchronic variable rules and diachronic sound change concludes with an audacious claim (p. 58):

It is important to note that in the course of language evolution, change does go to completion, and variable rules become invariant. When this happens, there is inevitably some other structural change to compensate for the loss of information involved.

In support of this claim, which I will refer to as "Labov's rule of compensatory structural change," three dramatic examples are adduced. I quote only the first of them:

In a number of English-based Creoles, phonological and grammatical simplification has effectively reduced clusters so that final inflections are typically eliminated altogether. Whereas VBE preserves the past tense accurately with irregular verbs such as *give-gave*, *keep-kep'*, *tell-tol'*, and the *-ed* ending in *rolled* remains embedded in a variable rule, Trinidad English and Jamaican Creole use the invariant simple forms *roll*, *give*, *keep*, *tell* for the simple past. How is the past then distinguished from the present? In Trinidad, the auxiliary *do* is used, so that now the present tense becomes the marked form, *He does give* as opposed to the past *He give* ....

## 3. Apocope and the Modal System of Ancient Hebrew

The purpose of this brief note is to call attention to an ancient Hebrew parallel to VBE consonant cluster simplification which obeys Labov's rule of compensatory structural change. I am not referring to consonant cluster simplification in Hebrew, which is accomplished by a wide variety of processes, including epenthesis ('segolation'), degemination ('loss of *dagesh forte*'), deletion ('quiescence' of *aleph*) and monophthongization ('contraction' of diphthongs). Rather, I am referring to the loss of final short high vowels which wreaked havoc on the modal system (not to mention the case system) in an undocumented ancestor of Biblical Hebrew (BH).<sup>1</sup> Given the absence of written evidence, it is clear that we can say nothing about the variable rule which may have been in effect before the change in question went to completion.

Let us begin with the proto-language. The Proto-West-Semitic mood opposition was apparently like that of Classical Arabic, trinary in part of the Imperfect paradigm, but binary in another part:

Person, Gender, Number	Indicative	Jussive	Subjunctive
1s, 2ms, 3ms, 3fs, 1pl	-u	-∅	-a
2fs, 2mpl, 3mpl <sup>2</sup>	-nV	-∅	-∅

In this system, the Jussive was used to express requests and commands (e.g., "do not go", "may he go", "let us go"<sup>3</sup>), and the Subjunctive, to express purpose (e.g., "so that I may go").

The cuneiform letters from Byblos found in el-Amarna, Egypt (early fourteenth century BCE) exhibit the triumph of the binary opposition over the trinary one. In these texts, the Jussive and Subjunctive moods are merged into a single Volitive mood combining the functions of both, and the formerly contrasting mood endings -a and -∅ are "free" variants<sup>4</sup> (Moran 1960):

Person, Gender, Number	Indicative	Volitive
1s, 2ms, 3ms, 3fs, 1pl	-u	-∅/-a
2fs, 2mpl, 3mpl	-nV	-∅

In Pre-BH, this free variation gradually gave way to complementary distribution:

Person, Gender, Number	Indicative	Volitive
1s, 1pl	-u	-a
2ms, 3ms, 3fs	-u	-∅(/-a)
2fs, 2mpl, 3mpl	-nV	-∅

The change to complementary distribution was not complete: even in BH, vestiges of the earlier free variation survive, especially in the imperative. Thus, both *hāšeb* and *hāšibāh* are attested in the Bible with the meaning "bring back!"<sup>5</sup>

Subsequently, a sound change deleted all word-final short high<sup>6</sup> vowels in the language, neutralizing the Indicative ≠ Volitive opposition in part of the paradigm (2ms, 3ms, 3fs) and triggering an analogy which largely neutralized the opposition in another part (2fs, 2mpl, 3mpl). The result was the system attested in BH:

Person, Gender, Number	Indicative	Volitive
1s, 1pl	-∅	-ā
2ms, 3ms, 3fs	-∅	-∅(/-ā)
2fs, 2mpl, 3mpl	-∅/n	-∅

#### 4. Secondary Differences Become Opposition Markers in Hebrew and VBE

The above chart gives the impression that the Indicative ≠ Volitive opposition survived mainly in the first person of the Imperfect (e.g., *nāšū<sup>w</sup>b* ≠ *nāšū<sup>w</sup>bā<sup>h</sup>* “we shall return ≠ let us return”), but that is not the full story. The 2ms, 3ms, and 3fs Volitive forms remained distinct from their Indicative counterparts in morphological categories characterized by long medial vowels: hollow verbs<sup>7</sup> like *tāmu<sup>w</sup>t* ≠ *tāmot* “she will die ≠ may she die” and *Hif’il* verbs<sup>8</sup> like *yagdī<sup>l</sup>* ≠ *yagdel* “he will make great ≠ let him make great.”<sup>9</sup> The survival of the opposition in these categories is due to a secondary difference created by a Proto-West-Semitic phonological rule (or syllable structure constraint) which shortened long vowels in closed syllables, producing Jussives like *tamut* rather than \**tamu:t* (Brockelmann 1982 [1908]:63) in opposition to Indicatives like *tamu:tu*.<sup>10</sup> The rule (or constraint) was no longer productive at the time when Indicative *-u* was lost, and, as a result, the Indicative form retained its long vowel (*tamu:t* > BH *tāmu<sup>w</sup>t*), remaining distinct from the Jussive (*tamut* > BH *tāmot*).

The survival of the Indicative ≠ Volitive opposition in BH *tāmu<sup>w</sup>t* ≠ *tāmot* exactly parallels the survival of the Present ≠ Past opposition in the *keep* ≠ *kep’* pair of VBE and other vernacular varieties of English. The stage for the latter was set in late Old English when long vowels were shortened before double consonants (Wright & Wright 1928:44-45). This sound change created a secondary difference between *kepe-* in the Present and *kepte*, *ykept* in the Preterite, Past Participle (Wright & Wright 1928:195). This difference, which survives to this day in *keep* ~ *kept*, took on new importance with the introduction of the deletion rule by which *kept* → *kep’*.

#### 5. The Collapse of the Old Modal System

Despite the abovementioned survivals, the Indicative ≠ Volitive opposition was doomed. Already in the Biblical period, the surviving Volitive forms are sometimes replaced by their Indicative counterparts. Thus, in I Sam 25:25, we find *’al ... yāšī<sup>v</sup>m* in the meaning “let him not put”<sup>11</sup> instead of the expected *’al yāšē<sup>m</sup>* (used in I Sam 22:15 and II Sam 13:33) or *lo(’)* *yāšī<sup>v</sup>m* “he will not put.”<sup>12</sup>

In the Hebrew of the Dead Sea Scrolls (mainly first century BCE), the breakdown of the modal system is virtually complete. In the non-biblical scrolls, we can lump the Indicative and Volitive forms together under the name ‘Imperfect’:

Person, Gender, Number	Imperfect
1s, 1pl	-Ø/-ā
2ms, 3ms, 3fs	-Ø
2fs, 2mpl, 3mpl	-Ø

The most important change here is the loss of the opposition between Volitive *-ā* and Indicative *-Ø* in the first person. The two endings are now partly “free” variants, partly in complementary distribution: the conjunction *w-* can be followed only by Imperfect forms ending in *-ā*; the negation *lo(’)* and the interrogative pronoun *ma<sup>h</sup>*, only by forms in *-Ø* (Qimron 1976:134-36, 1986:44). The old 2ms, 3ms, and 3fs Volitive forms of *Hif’il* and hollow verbs are also still in use, but they, too, no longer have their old meaning. And the old *-n* < *-nV* ending of the 2fs, 2mpl, and 3mpl is completely gone (Qimron 1976:139, 1986:45).

By the Mishnaic period, the forms of the old Volitive had become uncommon (virtually non-existent in the case of *-ā*)<sup>13</sup> and largely restricted to certain literary genres (Sharvit 1980:122-25; Mishor 1983:85-95). Since these relics of the Volitive do not contrast with the Indicative in Mishnaic Hebrew (MH), we shall continue to consider the two of them variants of a single Imperfect.

#### 6. The Rise of a New Modal System

In conformity with Labov’s rule of compensatory structural change, MH regained the ability to distinguish between indicative future (“X will go”) and volitive future (“let/may X go”) through a restructuring of the tense system. In the new system, volitive future is expressed by the Imperfect, while for indicative future in main clauses there are several options: (1) the Participle,<sup>14</sup> (2) a new periphrastic construction (*’āti<sup>v</sup>d* “ready” + Infinitive), and, according to some, (3) the Imperfect.<sup>15</sup> The following chart shows part of this restructuring of the temporal and modal systems (non-past verbs in main clauses only), as well as part of the earlier restructuring discussed above:

	he is going	he goes	he' will go	he may go	he must go	may he go	let us go	do not go
PWS	P?/li	li	li	li	li	J	J	J
BH	P	P/li	li	li	li	V	V	V
MH	P	P	P/A/I?	P/I	P/I	I	I	I

P = Participle, I = Imperfect, li = (Imperfect) Indicative, J = (Imperfect) Jussive, V = (Imperfect) Volitive, A = 'atî'd + Infinitive

Figure 1. Restructuring of Proto-West-Semitic temporal and modal systems in Biblical and Mishnaic Hebrew

Despite the possibility that the Imperfect may have been used in MH to express indicative future as well as volitive future, Labov's rule of compensatory structural change is valid for these data. When the need arose, the indicative-volitive distinction could be made clear through the use of the Participle or the new periphrastic construction.

## 7. The Use of the Present to Explain the Past

The ideas which I have presented here are related to Labov's research in a number of obvious ways, but there is an additional, less obvious, relationship which ought to be noted. They are inspired by the grand program set forth in Labov et al. (1972). At the end of that work (p. 272), Labov writes eloquently of "the uses of the present to explain the past." Here are the concluding lines (p. 275):

The basic direction of this report is towards establishing a symmetrical relationship between the studies of the present and the studies of the past.... There is of course a natural relationship between historical linguists and investigators of language in its social context.... It is hoped that the close association of these two interests will open up new avenues for linguistic investigation and the understanding of linguistic change.

## Notes

- \* I am indebted to Gregory R. Guy and Malcah Yaeger-Dror for their comments on an earlier draft of this article.
- 1 The loss of final segments is quite common in Hebrew and its relatives. The "general tendency ... to lose information at the ends of words" to which Labov et al. (1968:123) refers is well attested in the history of the Semitic languages.
- 2 The 2fpl and 3fpl forms had an invariant *-na* ending and, thus, did not distinguish any moods at all. For the sake of simplicity, they have been omitted from the tables.
- 3 Surprisingly, the ambiguity of English *let us go* (= (1) "let's go" and (2) "permit us to go") is a feature of its Hebrew counterpart as well, at least in the Biblical period.
- 4 If only the evidence were available which would allow historical linguists to speak of "social variants"!
- 5 This process is a fine example of what Hoenigswald (1960:36-37) has called "morphemic merger through developing complementation" or "syncretism." As noted, however, the immediate result of the merger was not complementary distribution but "free" variation. It seems likely that this two-stage process was not atypical.
- 6 For the resistance of short final *a* to deletion, see Steiner (1979:168-69 fn27).
- 7 Also known as "middle weak" or "Iw/y" verbs.
- 8 The *Hif'il* stem is a modification of the basic stem generally, but not always, used to create causative verbs.
- 9 They remained distinct in the final weak category as well. For the sake of simplicity, I shall forgo discussion of this category.
- 10 The doubt expressed by Moscati et al. (1964:65) about the application of this rule outside of Arabic is certainly misplaced. Alternations which go back to this rule survive in Ethiopic (e.g., *šalās* ~ *šalas* "three," *kebūr* ~ *kebert* "mighty", *lehiḳ* ~ *leheḳ* "old", Lambdin 1978:11) and Hebrew (*təšū<sup>w</sup>bā<sup>nā</sup>* ~ *tāšobnā* "they (fem.) shall return", *bu<sup>w</sup>šāh* ~ *bāš* "shame," *šallīṭ* ~ *šallīṭāt* < *šallīṭ* "ruler, domineering").
- 11 Note that BH negates the Volitive with *'al* and the Indicative with *lo(ʿ)*.
- 12 Clearly, we are dealing here with a simple analogy based on the usage of the overwhelming majority of verbs in which the same form is used to express "let him ..." and "he will...." Anttila (1972:98) seems to have overlooked cases like this when he wrote, "Linguists have usually assumed that a sound change takes place in peace, and when it has sufficiently eroded morphological machinery, analogy comes to the rescue". In our case, the machinery was too far gone to be saved. Analogy could do nothing more than deliver the coup de grace.
- 13 Thus, Deut 13:7 *neləkā<sup>h</sup> wəna'abdā<sup>h</sup>* "let us go and worship" is paraphrased as *nelek wəna'ābo<sup>w</sup>d* in Sanhedrin 7:10.
- 14 For a fuller discussion of the Participle's gradual encroachment on the domain of the Imperfect, see Steiner 1992:115-116. Gordon (1982) and Cohen (1984:298-334) also deal with this evolution, but they fail to take into account the use of the Participle in MH as a future tense.

- 15 The indicative use of the MH Imperfect, accepted by all early scholars (e.g., Segal 1927:153) and Qimron (1990-91), is denied by Kutscher (1972:1600) and his disciples (e.g., Sharvit 1980:110). Mishor (1983:99-103) tries valiantly to explain away the attested examples of this usage, through reinterpretation and/or assignment to a literary register, but he is unable to come to a definitive conclusion. To my mind, the indicative Imperfect from Ketubbot 11:4 cited by Segal is difficult to explain away: "Even if she says, 'I will give back a dinar to the heirs', her sale is void." Mishor (1983:99) dismisses this example as a "cohortative," but that term, as used by Hebraists, normally implies that the subject of the verb and the addressee are identical (i.e., the woman is talking to herself) and I fail to see how that is possible in this context. Nor can the usage be dismissed as "literary" or "Biblical" in this case, since an ordinary (albeit hypothetical) woman is being quoted. If this example proves to be beyond cavil, then the rationale for explaining away many of the equivocal examples is weakened. As for Qimron's arguments against Kutscher's position, they are not directly relevant to the specific question considered here. They establish that the MH Imperfect alternates with the Participle in the meaning "he may ..." but provide no evidence for a similar alternation in the meaning "he will ...."

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