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**DIMENSIONS OF STRUCTURE IN
HEBREW VERB SYSTEM**

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1. The set of Hb words here called verbs (V) can be classified in various ways. Any ϵV may be described as a stem (ϵSt) with or without affixes of various kinds. Subsets of V may be distinguished by contrastive-distinctive patterns of affixation. The most important kind of affixation is the affixation of pronouns.
2. The patterns of Pr affixation distinguish three major categories of V.
 - I. An infinitive absolute (IA) is a word which obligatorily has no affixation of any kind. Example: māšöl, 'rule'.
 - II. Verbal nouns consist of an obligatory predicator realized by a stem with one optional pronoun suffix, PrSf₅. The set of PrSf's is the same as the PrSf's used with nouns and prepositions.

There are three kinds of verbal noun. The infinitive construct (IC) has one optional PrSf which can manifest S or O of the VSt. IC are the least noun-like of verbal nouns. IC may be m. or f., that is, IC have obligatory gender; but they have no number, nor are they modified by the article or by attributive adjectives in apposition. Example: gezār, '[to] cut'. gozrō, 'his killing' or 'to kill him'.

The participles (Pt) have all the grammatical properties of regular nouns, or, rather, adjectives, since they have St-level obligatory Sf's of gender and number and receive optional modification by means of the article, etc. Example: mōšēl, 'ruling' i.e. ruler, mōšēlā, 'female ruler'.

A residual class of verbal noun (VN) resembles IC but may, in addition receive optional modification by means of A. Example: memselet, 'to rule' which may have a direct object like a verb. IC and Pt have direct paradigmatic connections with other V's, and so are easily described as part of the verb system from the morphological point of view. By contrast, VN's do not have direct morphological connections with the V system, and their V functions are often disclosed only in deep structure. For these reasons they will not be included in the following discussion.

- III. Finite verbs = $+P:VSt_{1,2,3} +S:PrSf_{1,2,3} \uparrow O:PrSf_4$ consist of an obligatory predicator realized by a member of three sets of verb stems, **plus an obligatory subject**, realized by a member of three corresponding sets of pronoun affixes, plus an optional object, realized by a distinctive set of pronoun suffixes. The word, "corresponding" refers to the fact that each set of St's has as its obligatory S only one set of PrSf's, and vice versa. In other words, only three sets of V with S:PrSf are involved. The word "affix" is used because one of these sets consists of discontinuous amphifixes.

In short, there are three sets of finite verbs.

Suffixed verbs (VS) = $+P:VSt_1 +S:PrSf_1$ (the so-called "Perfect[-ive]")
 Example: māšal-tī, 'I ruled'

Imperative verbs (VI) = $+P:VSt_2 +S:PrSf_2$
 Example: mošlū, 'rule! [m.pl.]'

Prefixed verbs (VP) = $+P:VSt_3 +S:PrSf_3$ (the so-called "Imperfect[-ive]")
 Example: timšöl-nā, 'you/they will rule [f.pl.]'. Strictly speaking, each affix in PrSf₃ consists of both prefix and suffix, i.e., discontinuous amphifix.

Two additional categories of finite verb need to be distinguished. Their distinctiveness is often evident only on the level of syntax, of Cl structure.

Consecutive suffixed verb (WS) has the same form as VS (same St, same Sf), but differs in as many as three features: (i) there is a contrast in stress pattern, at least for some members of the respective paradigms; (ii) WS has an obligatory conjunction wə- ~ 'and' and is always Cl initial, whereas VS can come anywhere in the Cl and the Cj is optional; (iii) VS refers to a past activity, WS future. Example: wəgāzārtī, 'and I cut'; wəgāzartī, 'and I shall cut'.

Consecutive prefixed verbs (WP) have the same general shape as VP (same Sf, but not necessarily same St); but they differ in as many as three features: (i) there is contrast in stress pattern, at least for some corresponding pairs of the respective paradigms; (ii) WP has an obligatory conjunction way- ~ 'and' always bound immediately to the verb (hence the symbol WP), and is always Cl initial, whereas VP can come anywhere in the Cl and the Cj is optional; (iii) VP refers to future activity, whereas WP refers to past. Example: yigzōr, 'he will cut'; wayyigzōr, 'and he cut'.

The fact that VS and WP both refer to past, while VP and WS both refer to future, calls for a more detailed examination of the relationship between tense and aspect in classical Hb than we have room for here. The contrasts in stress patterns in these related forms do not work the same way for VS and VP. In WS stress moves, where possible, to the end of the word, and there are no changes in St vowels; in WP stress moves, where possible, nearer to the beginning of the word, and may be accompanied by changes in the phonetic shape of the St. For example: yaqūm, 'he will stand up'; wayyāqom, 'and he stood up'.

In examples like the last one the contrast between the two tenses is at its greatest. The distinctive-contrastive form of Cj used with WP always places the category beyond doubt, and is sometimes the only signal of the difference between VP and WP; example: wəʔegzōr, 'and I shall cut'; wāʔegzōr, 'and I cut'. However, the forms of Cj used with VS and WS do not contrast, so members of these sets are often homophonous; example: wəgāzar can mean either 'and he cut' or 'and he will cut'. It is hard to draw the line between morphology and syntax in the Hb verb system. VP also occurs in a long (VC) and a short (VJ) form.

To sum up. The repertoire of Hb verbs may be represented by the matrix

$$V = \{ IA, IC, Pt, VS, VI, VP, VC, VJ, WS, WP \} \quad M-1$$

V is thus a set of sets of grammatical words, including a pronoun subject suffix only when this is obligatory. All except IA realize Cl syntagmemes or Cl-level tagmemes (IC and Pt optionally) on word level.

3. These ten subsets of V are distinguished, not only by the distribution of their stems with respect to the five sets of distinctive pronoun affixes, and by further contrastive variations within the stems themselves, but also in some cases by contrastive distribution with respect to clause type and discourse function. The stems of Hb verbs are not morphemes. Analysis by the usual methods leads to the recognition of three different kinds of constituent morpheme manifesting stem-level tagmemes. Indeed, it is best to recognize three levels of structure between Wd and Mp.

3.1 A root (εR) is an element in a set R of morphemes.

$$R = \{ r_1, r_2, r_3, r_4, r_5, \dots, r_n \} \quad M-2$$

All Hb roots consist of consonants only, roots or their allomorphs being 1, 2, 3, or at the most 4 consonants. When there is more than one C in the root allomorph, it is often discontinuous, for

example b...?, 'come', g...z...r, 'cut', the latter having allomorphs gz...r and g...zr. Every ϵR has at least one allomorph with at least two consonants. We shall make no attempt here to classify roots along these lines. The following remarks apply to the set R as a whole. nR is very large, but not infinite. Apart from limitations of size (roots with four consonants are very rare), certain combinations of consonants are never found. For example, there are no roots in which the first and second consonant are the same. There is no recursion, that is, no compound stems containing a combination of two or more roots. Each ϵVSt has one and only one ϵR .

3.2 Any ϵR may be modified by a member of a set of root-extendors (E). These are consonantal morphemes, or at least are most characteristically realized by consonantal allomorphs. If the unmarked form of the ϵR is considered to be modified by a zero ϵE , the set E is represented by the matrix

$$E = \{\emptyset, D, \underline{h-}\} \quad M-3$$

The combination of roots with extendors gives rise to a set of consonantal lattices (L). There are lattice syntagmemes on the level next above that of morpheme. Viewed as the multiplication of M-2 and M-3, this operation gives rise to a matrix of lattices (M-4), that is, the set L is a two-dimensional array.

$$\begin{array}{l}
 L = +r_1 +\emptyset, +r_1 +D, +r_1 +\underline{h-} \\
 \quad +r_2 +\emptyset, +r_2 +D, +r_2 +\underline{h-} \\
 \quad +r_3 +\emptyset, +r_3 +D, +r_3 +\underline{h-} \\
 \quad \dots\dots\dots \\
 \quad +r_n +\emptyset, +r_n +D, +r_n +\underline{h-}
 \end{array} \quad M-4$$

The first column constitutes the subset of unmodified roots, conveniently called ground-forms or G. D symbolizes the doubling of some feature of the root, and this subset can be referred to as D. The doubling of the middle consonant of a root $X...Y...Z$ gives rise to the lattice $X...YY...Z$. Other kinds of roots are doubled in other ways; for example, biconsonantal $X...Y +D \rightarrow X...Y...Y$ or $X...YX...Y$. Since some Hb consonants do not double, an ϵR containing one of them in mid position may have the G lattice and the D lattice indistinguishable in form -- still distinguished, however, in distribution. The D operation characteristically transitivizes or intensifies the meaning of the corresponding ϵR ; for example, g...d...l, 'to be big', g...dd...l, 'to make big'. The right-hand column of M-4 is a subset of lattices made by extending R by means of the prefix h-, $h...XY...Z$. Verbs with such lattices may be called H forms. The h- operation also typically transitivizes a root, frequently in the causative sense. An intransitive ϵR becomes transitive; for example, b...?, 'come', h...b...?, 'bring'. A transitive ϵR becomes a doubly transitive ϵL ; for example, l...b...š, 'put on [clothes]', h...lb...š, 'make [someone] put on [clothes]'. But some H verbs are used intransitively (absolutely), in which case they often have an elative meaning -- an action is performed to its fullest extent or a state is attained to its highest degree. In general G, D and H verbs do not have

such a simple pattern of grammatical functions or lexical meanings, uniform for the entire language. The meanings of many individual lattices conform to no pattern; their quite arbitrary meanings simply have to be learnt. Nor is every known root attested in all three forms. The occurrence L-matrix has many vacant cells. M-4 may be represented briefly

$$L = \{G, D, H\} \qquad M-5$$

3.3 There is another kind of consonantal root-extender which operates in a different semantic dimension from E. The modifiers n- (prefix) and -t- (infix) secure a middle or reflexive meaning/function for the root. The lattices in which they appear constitute the subsets Gn (or N), Dt, Ht.

3.4 Any one of these six kinds of lattice serves as a discontinuous consonantal framework for the verb stem (St). And St is formed by the interdigitation of vowels with these consonants. Such a putative discontinuous vowel morpheme may be called a stem-former (F)

$$St = L \times F \qquad M-6$$

Example: $\epsilon L = \underline{h..b..?}$
 $\epsilon F = \underline{..ē...ī}$
 $\epsilon St = \underline{hēbī?}$

nF is small. Any ϵF secures more than the mere physical formation of a continuous stem; it signals also distinctions of meaning and function, and for this reason is recognized as morphemic in status. But this does not mean that any ϵF is simply a stem-level morpheme.

Members of the set (F) of contrastive (morphemic) stem-formers secure distinctions in four independent structural dimensions.

3.4.1 The form of ϵF changes for each of the six kinds of lattice noted above, and so is part of the signal that places any given verb in one or other of these six subsets. For example, the vowels ..ā..a.. are found in many G stems (VS); the vowels ..i..ē.. in many D stems (VS), and so on. Sometimes the contrast in the stem vowels is the sole signal of the category of otherwise similar verbs: for example, yābō?, 'he will come' (G[VP]), yābī?, 'he will bring' (H[VP]).

3.4.2 Within the set of verbs with a common ϵL , variations in the concomitant ϵF yield stems with contrasting meanings and differing grammatical functions which may be subsumed under the category of voice. The H lattice of the root b..?, 'come', is h..b..?, 'bring'. It combines with ϵF ..ē...ī.. to yield the stem and verb hēbī?, 'he brought', used in clauses in which the grammatical subject performs the action described by the verb stem. Such a clause (and such a verb) may be called "active" (Act). When the same lattice combines with ϵF ..ū..ā.., it yields the stem and verb hūbā?, 'he was brought', used in clauses in which the grammatical subject receives the action described by the verb stem. Such a clause (and such a verb) may be called "passive" (Pas).

Similar voice contrasts that correlate with contrasts in the stem-forming vowels are met in verbs with G, D, and H lattices, but not in those with N, Dt and Ht lattices, since the latter constitute a third voice category -- middle-reflexive (Mid).

Here we confront a remarkable typological feature of the Hebrew verb system -- nonisomorphism between the phonetic shape and the grammatical function of the verb stems. The three voice categories constitute a matrix

$$\text{Voice} = \{ \text{Act, Pas, Mid} \} \quad \text{M-7}$$

The formal realization of the elements of this matrix in surface structure takes place on different hierarchical levels of phonemic structure, out of keeping with the general patterns of semitic, in which consonants and vowels constitute virtually two autonomous systems. The contrast between Act and Pas is realized entirely by the contrast between F_{Act} and F_{Pas} , which are vowels combining with the same lattice; But middle forms have their own distinctive lattice, characterized by n- or -t- (on the same formal level as E), combined with F_{Mid} . This is why we did not include the voice affixes (n- and -t-) in the same matrix (M-3) as the transitivizing affixes D and h-.

Historically, of course, and even descriptively in some Semitic languages, these affixes may have had to do with grades of transitivity, or with aspect. But the emergence of the passive voice has reorganized the system.

Multiplication of M-5 and M-7 yields a matrix of stems:

GAct	DAct	HAct	M-8
GPas	DPas	HPas	
GMid	DMid	HMid	

Since only one ϵF combines with any ϵL which is ϵN to produce ϵSt which is $\epsilon GMid$, the symbol N can be used to refer to either the lattice or the stem without ambiguity. But G, D, and H properly refer to lattices; and the category of the corresponding stems needs to be established by the further specification of the stem-former as either Act or Pas or Mid.

M-8 is schematic of a synchronic system that was never stabilized in the language as it developed historically. It contains certain unresolved tensions between form and function that contributed to the dynamics of further historical change. Traditional grammar recognized only seven binyānīm or "divisions", for HMid was never more than a fossil in the classical period, represented by only one verb of any frequency -- hištahāwā, 'he bowed himself down', which uses -s- as an allomorph of h-, the causative root-extender -- and the very existence of GPas was entirely forgotten by the time the mediaeval grammarians did their work. The internal passives were an innovation in West-Semitic (Ugaritic, Hebrew, Arabic), but Aramaic developed the original middle-reflexives into passives. This happened in part in Hebrew also, where the original N (which could even become active and transitive with some roots) usurped the role of GPas, eliminating the latter as a living form, and losing its own middle function in the process. Hence not many N forms in classical Hebrew fit into M-8. This development was doubtless fostered by some parallel phonological developments. Originally GPas guzara was distinct from DPas guzzara. But the development of secondary doubling in the former, in conformity with regular patterns of syllabilification and stress, produced homophony. Both became guzzar. Struggling with such ambiguity, GPas could not preserve its identity. Forms which survived were identified as DPas, and N (GMid) took the place of GPas as the passive of GAct.

3.4.3 Any one of the nine cells in M-8 represents a stem type or set of stems whose members include all the paradigmatic varieties represented by M-1. Multiplication of M-1 and M-8 yields M-9, a three-dimensional matrix of ninety verb types classified by lattice (transitivity), stem-former (voice) and paradigm (tense, aspect, mood). Every one of the ninety cells in M-9 has its own distinctive eF. Typical forms are shown in the following chart.

	GAct	GPas	N
IA	qāṭṭōl	quṭṭōl	hiqqāṭṭōl, niqṭōl
IC	qəṭṭōl	--	hiqqāṭṭēl
Pt	qōṭṭēl	qāṭṭūl, quṭ [ṭ]āl	niqṭāl
VS	qāṭal	quṭṭal	niqṭal
VI	qəṭṭōl	--	hiqqāṭṭēl
VP	yiqṭōl	yuqṭal(?)	yiqqāṭṭēl
VC	niqṭēlā	--	niqqāṭṭēlā
VJ	yiqṭōl-	--	yiqqāṭṭel
WS	wəqāṭal	wəquṭṭal	wəniqṭal
WP	wayyiqṭōl	wayyuqṭal	wayyiqqāṭṭēl

	DAct	DPas	DMid
IA	qaṭṭōl	quṭṭōl	hitqaṭṭēl
IC	qaṭṭēl	--	hitqaṭṭēl
Pt	məqaṭṭēl	məquṭṭāl	mitqaṭṭēl
VS	qiṭṭēl	quṭṭal	hitqaṭṭēl
VI	qaṭṭēl	--	hitqaṭṭēl
VP	yəqaṭṭēl	yəquṭṭal	yitqaṭṭēl
VC	nəqaṭṭēlā	--	nitqaṭṭēlā
VJ	yəqaṭṭel-	--	yitqaṭṭel-
WS	wəqaṭṭēl	wəquṭṭal	wəhitqaṭṭēl
WP	wayəqaṭṭēl	wayəquṭṭal	wayyitqaṭṭēl

	HAct	HPas	HMid
IA	haqṭēl	hoqṭēl	--
IC	haqṭīl	--	*hiṣṭaqṭēl
Pt	maqṭīl	moqṭāl	*miṣṭaqṭēl
VS	hiqṭīl	hoqṭal	*hiṣṭaqṭēl
VI	haqṭēl	--	*hiṣṭaqṭēl
VP	yaqṭīl	yoqṭal	*yiṣṭaqṭēl
VC	naqṭīlā	--	*niṣṭaqṭēlā
VJ	yaqṭēl	--	*yiṣṭaqṭel-
WS	wəhiqṭīl	wəhoqṭal	*wəhiṣṭaqṭēl
WP	wayyaqṭēl	wayyoqṭal	*wayyiṣṭaqṭēl

- Notes: (i) Participles are cited in unsuffixed sg. m. forms.
(ii) Infinitive constructs are cited in unsuffixed forms.
(iii) Finite verbs (except VC) are cited in 3rd sg. m. forms.
(iv) Cohortative verbs are cited in 1st pl. forms.
(v) Fillers for some of the cells in M-9 are not attested, and may never have existed. Notably absent are passives in the precativemoods.
(vi) D and H participles are characterized by the combination of the noun preformative m- with distinctive stem-forming vowels. This prefix m- could have been analysed as another root-extender, forming some of the participle lattices, and so included in M-3. But it does not involve the same semantic dimension as M-3; rather, as a participle-former it partakes of the paradigmatic distinctions of M-1. Furthermore, m- functions as a

nominalizer apart from the verb system. and is best recognized as a general noun-forming derivational morpheme.

3.4.4 Each of the cells in M-9 represents a set of verbs classified by lattice type, voice, and paradigm. Empirically each cell includes all the attested verbs, of whatever root, with that combination. For any given root, the cell includes all the suffixed forms, and these vary from paradigm to paradigm. IA, being unsuffixed, is the only word in its cell for any one root. There are four participles (for gender and number) and any of these may be further suffixed by possessive pronouns. The finite verbs have obligatory pronoun subjects with categories of person, number and gender. Only one representative of any such paradigm is shown in the chart.

But all of the stems in each cell do not necessarily have the phonetic form shown. In the first place, the vowel stem-formers vary with the shape of the root: qāṭal, 'he killed', bānā, 'he built', qām, 'he arose' are all GActVS. The several stem-formers are in complementary distribution, conditioned by the kind of root, and so do not secure any morphemic contrast. We shall not attempt to give here a full statement of the numerous alloforms that might be involved in some instances.

In the second place, each paradigm has its own pattern of affixation (i) in the form of the affixes, (ii) in phonetic changes in the stem (stress position and vowel length), so that the form of the stem former varies down the paradigm. Thus qāṭal, 'he killed', but qāṭelā, 'she killed'. Thus there may be several allostems, differing only (or mainly) in the vowels; but these variations are not morphemic either. Hence M-9 indicates that the verb system involves no more than ninety distinctive stem-formers, even though many of these may have several alloforms.

3.4.5 There is one area in M-9 (GAct verbs) whose stems manifest variations which are not phonologically conditioned, but which are said to secure real semantic and grammatical contrasts. A classification of verbs with respect to grade of transitivity would cut across M-8. Any of the three active sets (GAct, DAct, HAct) includes individual verbs with zero, one, or two degrees of transitivity. These distinctions are not secured in any way in the morphology of the verb; that is, there are no distinctive stem-formers that signal the contrasts in grade of transitivity. In GAct verbs, however, there is a distinction between active (Tr⁰ or Tr¹, rarely Tr²) and stative or qualitative (always Tr⁰). This distinction is signalled by the stem-forming vowels. Some examples will illustrate the point.

	GActVS	GActVI	GActVP
transitive	qāṭal, 'he killed'	qəṭōl	yiqṭōl
stative	kābēd, 'he is heavy'	kəbad	yikbad
qualitative	qāṭōn, 'he is small'	qəṭan	yiqṭan

Traditional grammar makes a great deal of these distinctions. But there is no reason to regard them as morphemic. The three kinds of F in GActVS (two in GActVI and GActVP) never realize a minimal pair with the same root; that is, their distribution is morphemically conditioned, and the differences in meaning associated with the vowels could more appropriately be assigned to the roots. This is a matter for lexicon, not grammar.

3.4.6 We do not need to discuss here other variations in stem forms which are phonologically conditioned (for example, yišlah, 'he will send' resembles GStavP by assimilation of the thematic vowel to the laryngeal), nor alternate forms which occur in free fluctuation, or which may represent geographical or historical dialectal variants. These are not relevant to the main point of this paper, which is the morphemic status of the constituents of the verb stems.

4. To sum up. Each verb stem is a construction of obligatory constituents which realize four distinct semantic dimensions.

4.1 The classical methods of structural linguistics establish the morphemic status of roots without equivocation.

4.2 M-9 represents a three-dimensional semantic-grammatical grid imposed upon the total field of meaning of any given root. Its three dimensions, represented by M-1, M-5 and M-7 depend in part for the specific distinctions they make on the specific meaning of any given root. Some cells in M-9 are never filled for any root. Some are filled for one root, but not for another. And verbs assigned to any one cell in M-9 on formal grounds do not necessarily differ only in the meaning of the root. In this respect the arbitrariness of the language system involves many different interconnections between semantic structure and formal structure. At this point we are not concerned with this problem, but begin by assuming that each cell in M-9 represents a unique point of intersection of the matrices M-1, M-5 and M-7, that is, a unique combination of one of the categories of voice (M-7), transitivity (M-5) and tense-aspect-mood (M-1). [We do not endeavour to distinguish tense, aspect and mood as three distinct dimensions, although this could profitably be done.]

4.3 If all the distinctions required by M-1 (ten distinctions of tense-aspect-mood), M-7 (three distinctions of voice), and M-5 (three grades of transitivity) were secured by unique contrastive-distinctive segmental morphemes, only sixteen would be needed. They would occur obligatorily in sets of three in each stem, ninety combinations in all (theoretically). But the non-root parts of the stems do not admit of analysis segmentally in this simple way. Nor, on the other hand, can these non-root portions of the stems be called portmanteaux in which three putative morphemes are unanalysably fused. In some parts of the system we can analyse three distinct morphemes as recurring partials, and in other parts of the system we have complete fusion. In between these extremes we have all possible gradations. We can identify h- as the 'causative' morpheme in the H subsystem; but it is not present in all members of that system. Similarly, there is no 'passive' morpheme identifiable as a recurrent partial feature of all stems with passive meaning, except in the very general sense that all passive verbs contain at least one back vowel (o, ō, u, ū), while no active verb contains u or ū and no passive verb contains i or ī.

4.4 M-9 includes a plane of thirty cells for stems of active verbs. Since we have associated voice with F "morphemes" the thirty stem formers in these cells (some of which themselves have several allomorphs) could be described as allomorphs of the "active" stem-forming morpheme. But three of them also lie in a plane of nine

cells containing all the VS stems (or any other element in M-1). By the same reasoning, in so far as tense-aspect-mood also is signalled by the stem-forming vowels, these could be described as allomorphs of the "past-tense" morpheme. But again, ten of these thirty "active" cells lie also in a different plane of thirty "factative" [D] verbs, and so could be described as some of the allomorphs of the factative stem-forming morpheme. This feature of the system has to be kept in mind, in order to be able to describe verbs whose D classification is shown, not by any doubling of consonants, but solely by the stem-forming vowels, or verbs whose H classification is shown, not by the morpheme h-, which is not present at all, but solely by the stem-forming vowels.

To sum up. The morphemic status of the stem-forming vowels is different in different parts of the system. In some regions the consonantal patterns realize distinctions in the transitivity dimension, while the stem-forming vowels are a portmanteau of voice and tense-aspect-mood. In other parts of the system, or for some kinds of root, the stem-forming vowels are portmanteaux of transitivity, voice and tense-aspect-mood.

Another way of putting it is to say that the total pattern of any verb signals what it is, not so much by what that pattern is as by what it is not. Just as a phoneme is not so much a discrete entity as a point of contrast in a total and systematic network of contrasts, so any given verb is not so much a bundle of morphemes as a point of formal contrast in a total and systematic network of contrasts. It would seem that the best way to describe the system is to exhibit all these contrasts fully in a matrix, and to review them in detail in all the dimensions involved. Analysis into discrete segmental morphemes is not possible without the intolerable complexity and artificiality of numerous zeros, arbitrary decisions about morpheme boundaries, and almost as many allomorphs as there are forms. Description in terms of total fusion into portmanteaux does not do justice to the data either, because it does not recognize the fact that some measure of description in terms of segmental morphemes is possible.