

**Predicate Formation
in the Verbal System
of Modern Hebrew**

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drága szüleimnek

to Cor

ERRATA

1. On page 10 end of paragraph one should read "The MH phonological system has 20 distinct consonant sounds..."
2. On page 10 " /k/ - velar plosive" it should be added (has two orthographic symbols).
3. On page 10 the last sentence of point 1. should read: "Thus no difference is made between the two orthographic signs for /t/, /v/, /s/ and /k/".
4. On page 172 the second name, "Kimhi, R.D." should read "Kimhi, D."
5. On page 175 "Kimhi, R.D." should read: Kimhi, D.
6. On page 178 on the top HISTAFEL should read HIŠTAFEL, and in the middle "M FOAL" should read: MəFOAL.
7. On page 180 "SAFEL (SIFEL)" should read: ŠAFEL (ŠIFEL), and "SUFAL" should read: ŠUFAL.

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Gouda
July 1987

Judith Junger

List of abbreviations and symbols

Semantic functions:

Ag = Agent
Go = Goal
Comp = Complement
Rec = Recipient
Ben = Beneficiary
Exp = Experiencer
Phen = Phenomenon
Instr = Instrument
Loc = Locative
Temp = Temporal
Po = Positioner
Proc = Processed
Fo = Force
Dir = Direction
0 = Zero function

Syntactic functions:

Subj = Subject
Obj = Object

Pragmatic functions

Top = Topic
Foc = Focus

Morpho-syntactic categories:

+tr = transitive
-tr = intransitive
pp = pseudo-passive
i = inchoative
ref = reflexive
rec = reciprocal
c = causative

General:

x1...xn = arbitrary arguments
y1...yn = arbitrary satellites
= arbitrary predicate
 Π = arbitrary predicate operator
v/val = valency
+v /val = valency increase
-v /val = valency reduction

Gender markers:

m = masculine
f = feminine

Number markers:

s = singular
pl = plural

Person markers

1p = first person
2p = second person
3p = third person

the binyanim:

B1 = PAAL
B2 = NIFAL
B3 = PIEL
B4 = PUAL
B5 = HIFIL
B6 = HUFAL
B7 = HITPAEL

Categories:

V = verbal
N = nominal
A = adjectival

Markers:

GM = Goal Marker

Aktionsart

hab = habitual
iter = iterative
mom = momentaneous
sud = sudden

Introduction

Treatises on Hebrew grammar are almost as numerous as on Latin. Ever since the early Middle Ages Hebrew has been studied by Jewish and Gentile scholars alike. For many generations Hebrew only served ritualistic purposes. Nevertheless, it was never as dead and static as commonly believed, though it is true that classic grammars are based on Biblical Hebrew. Hebrew was revived as a spoken language at the turn of this century. Contemporary Israeli Hebrew (which like its ancestor has been widely studied) differs from Biblical Hebrew in several significant ways. This study does not set out to add yet another description of Modern Hebrew to the already well-stocked shelves. Rather it aims at providing a point of contact between the language and the theoretical framework of this study: Functional Grammar.

Functional Grammar, as developed in Dik (1978, 1980, 1987) and various later studies, is a linguistic theory in the so-called functional paradigm. The theories in this paradigm see language as a means of communication, and are interested in the structure and system of language in relation to its communicative function. This distinguishes them from theories within the formal paradigm, which are interested in the abstract system of language for its own sake. (This distinction comes from Dik 1983b.)

In addition to this general aim, Functional Grammar strives for three standards of adequacy: pragmatic adequacy, psychological adequacy and typological adequacy. The demand for pragmatic adequacy results directly from its place within the functional paradigm, and requires that the rules governing verbal interaction should be incorporated in the theory. The demand for psychological adequacy implies that psychological models of linguistic competence and of linguistic behaviour must be taken into account. Finally, the demand for typological adequacy means that the theory should be able to give a good description of as many typologically varied languages as possible. (For more details on these standards of adequacy see Dik, 1978, 1983b, 1987.)

This study has a double aim. On the one hand it sets out to test the typological adequacy of Functional Grammar (FG), and on the other to try and come up with new insights into the Hebrew language on the basis of the FG perspective.

The first aim is clear enough since this is one of the few in depth studies of a Semitic language using FG as its theoretical framework. The study does not involve the whole FG model but only the lexicon and the predicate formation mechanism. More details on the theory of FG and the parts involved in this study will be given in chapter 2.

The second aim, acquiring new insights into Hebrew grammar, is also limited to part of the language only, namely the verbal system. The verbal system was selected for two reasons: first, because it is a clearly defined topic occupying a central place in Hebrew grammar. Second, because it provides several topics which are interesting to consider from the FG point of view: the verbal patterns, in combining syntax, semantics and morphology, thus overlap conveniently with the predicate formation mechanism; as the representation of the roots is an inseparable part of this topic, FG will be faced with a type of problem that it has never been required to discuss before.

Throughout the study these two aspects of the study, the verbal system of Modern Hebrew (MH) and FG are, intertwined. The innovative parts in chapter 3, which discusses the roots and the lexicon, centre on FG. Here some new theoretical suggestions are made on the basis of the problem of the representation of the roots and the organization of the lexicon. Chapter 3 is the contribution of MH to FG. Chapter 4 is a fairly straightforward application of the predicate formation mechanism of FG to MH. At the same time, it tests the theoretical notion of 'productivity' on the basis of the processes in the verbal system. Chapter 5 is innovative with regard to the Hebrew verbal system, offering a different level of analysis from the usual one. Instead of regarding all the verbs as one whole system, they are divided into configurational sub-systems, to which the predicate formation mechanism is applied. In chapters 4 and 5 the term 'predicate scheme' is introduced for the first time in relation to Hebrew grammar. Chapter 5 is the contribution of FG to MH. The results, discussed in chapter 6, show that the combination has been fruitful. New insights into the verbal system of MH have been gained, and the application of the FG predicate-frames and predicate formation mechanism does help to form a fairly well ordered picture where many studies before saw only chaos. At the same time, FG also benefitted. Not only because the typological adequacy has been met, but also because some problem areas have been brought into focus.

Notes on the transcription

The Modern Hebrew alphabet has 27 consonants and 10 vowels, some of which are orthographic doublings; in earlier stages various consonants had a different pronunciation, but these are now lost. In spoken Israeli Hebrew there are differences in the pronunciation (of the consonants) according to ethnic origin. There is a dividing line between the pronunciation of the Ashkenazi (European and North-American) vs. Sephardi (North Africa and Middle East) groups in that the latter remains closer to the original Hebrew pronunciation. The transcription system used in the examples in this study follows the standard pronunciation (i.e. heard on radio, taught in schools). The MH phonological system has 22 distinct consonant sounds, and 5 vowel sounds:

Vowels:

MH has only short vowels, and no diphthongs; these are /a/, /e/, /i/, /o/ and /u/, and a 'shwa' sound /ə/.

Consonants with the transcription used throughout the present study:

/b/ - bilabial plosive
/g/ - velar plosive
/d/ - dental and alveolar plosive (voiced)
/h/ - glottal fricative
/v/ - labiodental fricative (voiced) (orthographically two different symbols)
/z/ - alveolo-palatal fricative
/ħ/ - pharyngeal fricative
/t/ - dental and alveolar plosive (voiceless) (two different orthographic symbols)
/x/ - velar fricative
/l/ - lateral glide
/m/ - bilabial nasal
/n/ - dental nasal
/s/ - dental and alveolar fricative (two orthographic symbols)
/ʔ/ - glottal stop
/p/ - bilabial plosive
/f/ - labiodental fricative
/c/ - palatal plosive
/k/ - velar plosive
/r/ - uvular (or dental) rolled
/ʃ/ - palato-alveolar fricative

The following principles were adhered to throughout the study:

1. The transcription of words follows the standard pronunciation instead of the Hebrew orthographic signs. Thus no difference is made between the two orthographic signs for /t/, /v/ and /s/.
2. The transcription of roots follows the Hebrew spelling found in the sources (Barkali, 1980; Even-Shoshan, 1967). Thus a root may contain a vowel which is not distinctly pronounced in the actual words derived from it. In such cases the vowel is transcribed only when the root is mentioned. For example the /h/ in the root r.a.h. 'see' is omitted in *raiti* 'saw 1p.s.'

The transcription of a root consists of all its radicals, including those which are systematically omitted in the words derived from it. For

example the /u/ in the root š.u.t. 'sail', which is omitted in all the words derived from it, such as *šat* 'sailed 3p.m.s.', *mašot* 'oar' or *šayit* 'sailing'.

3. The transcription of the names of the *binyanim* also follows the pronunciation and not the Hebrew spelling. Thus PAAL in fact consists of the three consonants /p/ /' /l/, which correspond to the radicals. An orthographic transcription would have been PA'AL, NIF'AL, PI'EL, PU'AL, HIF'IL, HUF'AL and HITPA'EL; the /' / corresponds to the second radical.

4. Hebrew features a so called 'dageš', which changes or emphasizes a sound. Thus one of the /v/ symbols with *dageš* is pronounced /b/, or the orthographic sign for /x/ with *dageš* is pronounced /k/; the transcription here follows the pronunciation instead of the Hebrew spelling, as this seems to be more consistent. (Otherwise the Hebrew orthography would have to be followed throughout the transcription of each individual letter. The transcription of the pronunciation follows the tradition in other studies of MH, such as Berman (1978a) and Bolozky (1978)).

5. All roots in Hebrew consist of consonants only. Nevertheless, in some cases I transcribed one radical by a vowel. In this I mostly followed Barkali (1980), who added a vowel to the root in his list in order to avoid confusion with another root, which otherwise would seem homophonous but actually differs in one vowel. For example š.u.t. 'sail' and š.v.t. 'strike'. Actually š.u.t. also consists of /š/, /v/, /t/, but this transcription would make it look identical to š.v.t. 'strike'. The transcription with an /u/ solves the problem and therefore seems to me worth some inconsistency.

6. The Hebrew alphabet does not distinguish between capital and small letters. Therefore, names in the Hebrew examples too are transcribed with small letters, and written with capitals only in the translations of the examples, or in quotations in the English text.

Literature survey

1.0 Introduction

As already stated in the introduction, one of the chief aims of this research is to test the typological adequacy of Functional Grammar on a Semitic language, in this case Modern Hebrew. By Modern Hebrew I mean the standard and colloquial contemporary Hebrew as used in Israel. (Note that much of what is said in this study about Hebrew applies with slight modifications to Arabic as well- hence the typological interest of this study. Such resemblances can be seen for example in Mitchell (1983) on Arabic.)

Semitic languages differ in several points from the Indo-European ones to which FG has been applied so far. The one point relevant to this discussion is the morphological system. Semitic languages have a system whereby morphology, syntax and semantics are very strongly intertwined. The greater part of the vocabulary is formed by combining a consonantal root with a morpho-phonemic pattern. The root indicates a certain semantic field, and the patterns, the concrete form. The patterns are combined with the root and yield the concrete form (i.e. words). While nominal and adjectival patterns have only a morphological value, verbal patterns also carry syntactic values, expressing transitivity, causativity, reflexivity, etc. This is illustrated below, in (1) verbal and nominal forms derived from a root in Hebrew, in (2) a similar example for Arabic.

(1)a verbal forms from the root k.t.b.¹ 'write' (Hebrew):

katav 'wrote' 3p.s.m. past tense
ktov! 'write' imp.
kotevet 'write' 3p.s.f. *benoni* (in MH present tense)
yixtevu 'will write' 3p.pl.m. future tense
nixtav 'was written' 3p.s.m.
hixtiv 'made write, dictated' 3p.s.m.

b nominal forms from the root k.t.b. 'write':

katav 'correspondent, journalist' (m.)
katava 'newspaper report' (f.)
mixtav 'letter' (m.)
ktovet 'address' (f.)
maxteva 'desk' (f.)
ktiv 'spelling' (m.)

(2)a verbal forms derived from the root k.t.b. 'write' (Arabic):

katab 'wrote' 3p.s.m.
yiktib 'will write' 3p.s.m.
'ktib! 'write' imp.
kaatib 'had written' 3p.s.m.

b nominal forms from the root k.t.b. 'write' (Arabic):

kaatib 'clerk'
kitaab 'book'
maktab 'office, desk'
maktaba 'library'
maktuub 'written'

In Hebrew grammars the verbal forms are called *binyanim*, and the nominal forms are called *mišqalim*; the terminology was introduced by medieval grammarians, like Ibn Ginah, Ibn Ezra and others. The verbal forms further conjugate for tense, number, gender and person. These will be presented later in this chapter. Thus a very large part of the vocabulary of Hebrew consists of such combinations of roots and affixes. This study deals with the verbal morphological patterns only, which in terms of FG covers the predicate formation mechanism and some expression rules. The expression rules realize the tense, number, gender and person inflections. They will not be dealt with in detail, only indicated.

The verbal system, i.e. the patterns, their semantic-syntactic values and the relations between them are presented in the rest of this chapter in a literature survey on the *binyanim*. This allows the reader to become acquainted with various views on the Hebrew verbal system, and puts the approach adopted in this study into a clearer perspective. At the same time, the repetition of many descriptions and examples will hopefully provide a strong enough informative background to the material discussed, so that the reader will not have to keep referring back. Much of the study will rely on the background information presented in this chapter. FG will be introduced throughout the remaining chapters, step by step as the subject requires, but almost all the information on Hebrew is concentrated in this chapter. I will first present the traditional view, then some contemporary views, and conclude with a presentation and justification of the view underlying this study.

1.1 The traditional view

The traditional view on the *binyanim* system is represented by Gesenius (1910) and Kimhi (13th cent.), and is still held by several contemporary grammarians. Gesenius (1910), Driver (1879) and Kimhi in fact did not describe Modern Hebrew, but Biblical and post-Biblical Hebrew. Nevertheless, this view is presented here not only for the sake of comprehensiveness. Some contemporary grammarians like Sasson (1976) still adhere to it, and moreover, it still provides the basis for many Modern Hebrew school books. The traditional view, in other words, remains widely accepted.

For the sake of clarity, the FG terminology is used throughout, even when presenting descriptions based on other grammars. Their widely varying terminology will be quoted in brackets.

1.1.1 Gesenius

Gesenius (1910) distinguishes between the following three groups of verbal forms:

1. the verb in the PAAL pattern (called 'verbal stem', 'primitive verbs'), where we find only the root consonants without any addition. For example

(3) raca 'wanted' from the root r.c.h. + the vowels /a/

2. the other verbal forms which are derived from the PAAL ('verbal derivatives') either by change of vowel(s) and/or addition of consonants. For example

- (4) *raca* ---> *nirca* (NIFAL -B2)
 ---> *rica* (PIEL -B3)
 ---> *hitraca* (HITPAEL -B7)

It may be of interest to note that PAAL comes from the root p.'l. 'action'. The names of all the *binyanim* are in fact derived from this root.

3. denominatives: verbs² ('primitive' or 'derived') which are derived from nouns or even from particles. For example

- (5) *šoreš* 'root' ---> *šereš* (PIEL -B3) 'make rooted'
 ---> *hišriš* (HIFIL -B6) 'make rooted'

One of the forms, the PAAL (also called Qal) is regarded as the ground form, and the other forms are derived from it. The derivation can consist of

- a. change of vowel: PAAL---> PIEL (CaCaC ---> CiCeC)
 - b. addition of prefix: PAAL---> NIFAL (CaCaC ---> NICCaC)
 PAAL --> HIFIL (CaCaC --> HICCaC)
 PAAL --> HITPAEL (CaCaC --> HITCaCeC)
 - c. strengthening the middle consonant: PAAL ---> PIEL; the verbs in the PIEL pattern have a marker which emphasises the second root consonant (radical), called *dageš* 'emphasis marker'.
 - d. repetition of one or two of the stem consonants: CaCCaC, CiCCaC (we do not count these as separate *binyanim*, see section 1.5.2).
- The whole *binyanim* system is represented as follows: (illustrated by the root q.t.l. 'slay')

(6)	Active	Passive
1. Qal/PAAL	<i>qatal</i> 'to kill'	--
2. NIFAL	<i>niqtal</i> 'to kill oneself'	(rarely passive)
3. PIEL	<i>qitel</i> 'to kill many, to massacre'	4. PUAL <i>qutal</i>
5. HIFIL	<i>hiqtil</i> 'to cause to kill'	6. HOFAL /HUFAL ³ <i>huqtal</i>
7. HITPAEL	<i>hitqatel</i> 'to kill oneself'	(very rare HOTPA'AL)

Gesenius notes that very few roots occur in all these seven *binyanim*. He also gives an -in his words - more satisfactory division,

1. PAAL: the basic pattern
2. The intensive: PIEL, PUAL and HITPAEL
3. The causative: HIFIL, HOFAL (and ŠAFEL/ŠIFEL which will be discussed in section 1.5.2)
4. The reflexive or passive: NIFAL.

Gesenius (ibid: 101) says of the combination root + pattern that "the roots are mere abstractions of stems in actual use and are themselves not used. They represent rather the hidden germs (*semina*) of the stems which appear in the language."

As for the *binyanim*, he gives the following characterizations:

PAAL (QAL) (B1): basic
 NIFAL (B2):

- a. resembles Greek middle voice: *nistar* 'is hidden', *nišmar* 'is guarded'; expresses emotions which react upon one's mind or which one passively accepts: *niham* 'is reconciled', *neenah* 'sighs'

- b. expresses reciprocal or mutual action: *nidberu* 'agreed with each other', *nilhemu* 'fought each other', *no'ac* 'consulted someone'
 c. active: *neenah* 'sighed', *nilham* 'fought'
 d. passive of QAL: *nixtav* 'was written', *nišal* 'was asked'
 e. passive of PIEL or HIFIL (if there is no PAAL): *nixbad* 'was offered'

PIEL (B3) and PUAL (B4):

- a. intensification, strengthening and repetition of the action: *hilex* 'walked-iterative', *šiber* 'smashed' ('broke -intensive');
 b. causative: *gidel* 'made grow', *cidek* 'caused to be right', *kicec* 'made shorter';
 c. PUAL: passive and participle of PIEL. *kucac* 'was made shorter', *gudal* 'was made to grow';

HIFIL (B5) and HUFAL (B6):

- a. causative of PAAL: *hirši'a* 'made guilty', *hoci* 'caused to get out';
 b. transitive of intransitive PAAL:
 c. HIFIL occurs in stems expressing inchoative: *higbiha* 'made tall/ made long', *hifriah* 'caused to blossom';
 d. express incipience of a certain condition and its continuation: *heemin* 'believed', *hiškit* 'caused to be quiet', *hirgi'a* 'caused to be calm';
 e. action in some particular mental direction: *hehti* 'caused to sin', *heytiv* 'caused to be good, improved', *hiskil* 'made clever';
 f. denominatives expressing the drawing out, the production of a thing *hišriš* 'caused to be rooted', *hišmin* 'caused to be fat'.⁴ The HUFAL expresses primarily the passive of HIFIL: *hušraš* 'was made to become rooted'; sometimes it is also the passive equivalent of the PAAL: *nakam* 'avenged' - *hukam* 'was avenged'

HITPAEL (B7):⁵

- a. primarily reflexive of PIEL: *hitnakem* 'revenged himself', *hit'ašer* 'enriched himself'
 b. equivalent of PAAL: *avel* - *hitabel* 'mourned'
 c. reciprocal: *hitrau* 'saw each other', *hityadedu* 'got befriended with each other'
 d. middle ('action less directly affecting the subject and describes it as performed with regard to or for oneself'). According to Gesenius in such cases the HITPAEL takes the accusative: *hitnacel* 'apologized', *hitparek* 'got dismantled', *hitpalel* 'prayed', *hictayed* 'supplied himself'; in Modern Hebrew, however, only *hitpalel* 'prayed' can occur with a Goal.
 e. passive (but quite rare): *hištakeah* 'is forgotten'
 f. inchoative ('denominative with reflexive meaning'): *hityahed* 'became Jewish'

In addition to the derivation/conjugation of the *binyanim*, Gesenius presents the following paradigm of inflection for gender, number and tense. (Gesenius, who described Biblical Hebrew, mentions aspect: perfect and imperfect instead of tense.)

(7)		Perfect	
		singular	plural
3m.	c.c.c.		3m/f. c.c.c.-u
3f.	c.c.c.-ah		
2m.	c.c.c.-ta		2m. c.c.c.-tem
2f.	c.c.c.-t		2f. c.c.c.-ten
1m/f.	c.c.c.-ti		1m/f. c.c.c.-nu