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Usage-Based Studies in Modern Hebrew

Background, Morpho-lexicon,
and Syntax

Edited by
Ruth A. Berman

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Usage-Based Studies in Modern Hebrew

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Volume 210

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Usage-Based Studies in Modern Hebrew

Background, Morpho-lexicon, and Syntax

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Ruth A. Berman
Tel Aviv, March 2019

Transcription and Coding

The conventions specified here apply across the chapters of the book, except where otherwise specified, with the aim of covering different levels of representing the following facets of Hebrew-language data and structure:

- A. Orthographic elements: Representation of roots and transliteration of written Hebrew
- B. Transcription of audio-recorded speech, sub-divided by: Vocalic elements = Vowels and diphthongs (B-1), Consonantal phonemes (B-2), Bound morphemes (B-3), Word-stress (B-4), and Verb Citation Forms (B-5)
- C. Hebrew-specific glossing and coding conventions

A. Orthographic elements

Orthographic elements representing the 22 letters of the Hebrew alphabet are listed in Table 1 (see, also, Chapter 6, Section on Orthography). These are used in three main cases across the volume:

- (1) Representation of root elements
- (2) Transliteration of examples from written Hebrew, both Modern and Classical
- (3) Transliteration of bibliographical references written in Hebrew, as specified in A-2 below

Table 1. 22 letters of Hebrew alphabet – Names, phonetic symbols, and sample root representations

Hebrew letter	Name	Symbol	Example roots
א	alef	ʔ	<i>ʔ-h-b</i> 'love', <i>r-ʔ-h</i> 'see', <i>b-w-ʔ</i> 'come'
ב	bet ~ vet	b, v	<i>b-n-y</i> 'build', <i>š-b-r</i> 'break', <i>k-t-b</i> 'write'
ג	gimmel	g	<i>g-n-b</i> 'steal', <i>p-g-š</i> 'meet', <i>h-r-g</i> 'kill'
ד	daled	d	<i>d-ʔ-g</i> 'worry', <i>s-d-r</i> 'order', <i>r-q-d</i> 'dance'
ה	heh	h	<i>h-r-g</i> 'kill', <i>n-h-g</i> 'drive', <i>g-b-h</i> 'grow'
ו	waw [vav]	w i	<i>w-d-ʔ</i> 'ascertain', <i>b-w-ʔ</i> 'come'
ז	zayin	z	<i>z-l-g</i> 'leak', <i>p-z-r</i> 'scatter', <i>z-w-z</i> 'move'
ח	xet	ħ	<i>ħ-t-p</i> 'catch', <i>b-ħ-n</i> 'test', <i>b-r-ħ</i> 'run away'
ט	tet	t	<i>t-w-s</i> 'fly', <i>q-t-p</i> 'pick', <i>š-p-t</i> 'judge'
י	yod	y ~ i	<i>y-k-l</i> 'be-able', <i>t-y-l</i> 'take a walk', <i>b-n-y</i> 'build'

(continued)

Table 1. (continued)

Hebrew letter	Name	Symbol	Example roots
כ	kaf ~ chaf	k	<i>k-t-b</i> 'write', <i>b-k-y</i> 'cry', <i>h-l-k</i> 'go'
ל	lamed	l	<i>l-q-h</i> 'take', <i>b-l-m</i> 'brake', <i>t-y-l</i> 'take a walk'
מ	mem	m	<i>m-c-?</i> 'find', <i>l-m-d</i> 'learn', <i>s-y-m</i> 'end'
נ	nun	n	<i>n-q-y</i> 'clean', <i>g-n-b</i> 'steal', <i>l-w-n</i> 'sleep over'
ס	samech	s	<i>s-p-r</i> 'count', <i>p-s-q</i> 'stop', <i>t-w-s</i> 'fly'
ע	ayin	ʕ	ʕ- <i>m-d</i> 'stand', <i>t-ʕ-m</i> 'taste', <i>š-m-ʕ</i> 'hear'
פ	pe ~ fe	p ~ f	<i>p-g-š</i> 'meet', <i>s-p-g</i> 'absorb', <i>i-w-p</i> 'fly'
צ	tsade	c	<i>c-r-h</i> 'yell', <i>m-c-?</i> 'find', <i>r-w-c</i> 'run'
ק	kof	q	<i>q-b-l</i> 'get', <i>r-q-d</i> 'dance', <i>y-r-q</i> 'spit'
ר	resh	r	<i>r-q-d</i> 'dance', <i>c-r-h</i> 'yell', <i>d-b-r</i> 'talk'
ש	shin	š	<i>š-m-ʕ</i> 'hear', <i>n-š-q</i> 'kiss', <i>p-g-š</i> 'meet'
ת	tav	t	<i>t-p-s</i> 'catch', <i>n-t-n</i> 'give', <i>b-y-t</i> 'tame'

A-1 Root elements

Consonantal roots are represented by the abstract, historical elements making up the alphabetical orthography of both classical and modern Hebrew, as in the last column of Table 1.

A-2 Transliteration of Hebrew-language references in bibliographical listings

In the bibliographical listing of Hebrew-language references at the end of each chapter (but not necessarily in the text, where Hebrew script may be retained), the following conventions were adopted, based largely on the established transliteration of ISO-259, but including minimal indication of vowels for optimal transparency of written Hebrew. For example, where possible no vowel is inserted between (initial) consonant clusters, orthographic schwa / oral *e*, and the same symbol is used for both the letters *tet-tav* and *samech-sin* (see Table 1), since these generally do not incur morpho-phonological variations. Only the *publication titles* are transliterated. Author names and other publication details are given in English script.

Table 2. Transliteration of Hebrew titles in bibliography

Transcription	Hebrew orthography
ʔ	אָ
b v	בּ
g	גּ
d	דּ
h	הּ
w o, u	וּ
z	זּ

Table 2. (continued)

Transcription	Hebrew orthography
ħ	ח
t	ט
y i	י
k x	כ
l	ל
m	מ
n	נ
s	ס
ʃ	ע
p f	פ
c	צ
q	ק
r	ר
š	ש
t	ת
	Vocalized Hebrew letters (illustrated with a preceding <i>ʋ = t</i> letter)
to	טו
ta	טא/טָא
te	טֵע
ti	טִי
tu	טוּ

For example, the following Hebrew titles would be transliterated as:

- (1) דרכי היצירה המילונית בעברית בת זמננו
darxey haycirah hamilonit beʕivrit bat zmanenu
'Means of lexical innovation in contemporary Hebrew'
- (2) המיליון ששינה את המזרח התיכון: העליה הסובייטית לישראל
hamilyon šešinah ʔet hamizrah hatixon: haʕaliyah hasovyetit leyisraʔel
'The million that changed the Middle East: Soviet Immigration to Israel'
- (3) צירופי שם עצם + שם תאר גזור-שם בעל סופית י בעברית בת ימינו
ceyrufey šem ʕecem + šem toʔar gzur- šem baʕal sofyt y beʕivrit bat yameynnu
'Noun + denominal adjective phrases with the suffix i- in Modern Hebrew'

B. Broad phonemic transcription of spoken Hebrew

Audio-recorded speech output is represented in broad phonemic transcription indicating current Hebrew pronunciation, by procedures developed in the Berman lab at Tel Aviv University. The conventions detailed below are motivated by ease of reading oral Hebrew materials in a way approximating the pronunciation of adult speakers of “standard” or General Israeli Hebrew (Ben-David & Berman 2007; Blanc 1964; see, too, Chapter 4 on Sociolinguistic Variation). As such, they do not directly reflect current adult or children’s speech output unless specified as such by authors using close phonetic transcription of recorded forms of speech. Nor do they necessarily reflect consistency in representing lexical and other items for computerized searches – in view of the numerous levelings of historical distinctions noted in Chapters 6, 7, and 8 of this volume. Authors who decided to deviate from these conventions for purposes of orthographic or morphological representations were free to do so, as long as each explicitly specified and motivated his or her own conventions. The following information is provided below: vocalic elements (B–1), consonantal phonemes (B–2), bound morphemes (B–3), and word-stress (B–4).

B-1 Vocalic elements

Table 3 lists vowels and diphthongs not represented in the generally non-vocalized, unpointed orthography (i.e. lacking in diacritics indicating vowels, the difference between stops and their fricative versions, etc.), with the five vowels pronounced close to the cardinal vowels, represented by *a, e, i, o, u*.

Table 3. Hebrew vowels and diphthongs represented by diacritics, with sample words

Alphabet	Broad phonemic transcription	
Vowel diacritics below consonants		Name of diacritics
ֶ ֵ ִ	a	<i>qamac, patax, xataf-patax</i>
ֶ ֵ	e	<i>segol, schwa</i>
ֶ	ey	<i>tsere</i> (tensed offglide at ends of words: singular <i>more</i> ‘teacher’ ~ plural <i>morey</i> ‘teachers-of’)
ִ	i	<i>xirik</i>
ֹ ֺ	o	<i>xolam, qamats qatan</i>
ֻ ֽ	u	<i>qubuts, shuruk</i>
Diphthongs		
ֵי	ay	e.g., <i>pnay</i> ‘leisure’, <i>alay</i> ‘on-me’
ֹי	oy	e.g., <i>noy</i> ‘beauty’, <i>goy</i> ‘non-Jew’
ֵי	uy	e.g., <i>panuy</i> ‘free’, <i>asuy</i> ‘likely’

B-2 Consonantal phonemes

These are represented in Table 4 as corresponding to their orthographic counterparts, which are listed in Tables 1 and 2. The fact that a single phoneme may be represented by two or more letters (e.g., *v* may be written by the letter *vet* or *vav*, *x* by the letters *chaf* or *chet*, *k* by *kaf* or *kof*, etc.) is due to numerous levelings of phonological distinctions assumed for earlier stages of the language, still maintained partly by some communities of speakers, as well as in the system of orthography used to this day in MH (see Chapters 4, 6, and 8).

Table 4. Hebrew letters and corresponding phonemes with sample words

Letter	phoneme	example
א, <i>alef</i>	zero ʔ intervocalic before stressed vowel if author prefers	<i>im</i> 'if', <i>egoz</i> 'nut', <i>kara</i> 'called' <i>raa</i> '(he) saw', <i>yire</i> '(he) will-see', <i>nasu</i> (they) carried'
ב, <i>bet</i>	b	<i>baxur</i> 'boy', <i>kibel</i> 'received', <i>kabab</i> 'kebab'
ו, <i>vet</i>	v	<i>ve-</i> 'and', <i>yaveš</i> 'dry', <i>ratuv</i> 'wet'
ג, <i>gimmel</i>	g	<i>gamar</i> 'finished', <i>nagar</i> 'carpenter', <i>bóreg</i> 'screw'
ד, <i>daled</i>	d	<i>délet</i> 'door', <i>yada</i> 'knew', <i>rikud</i> 'dance'
ה, <i>heh</i>	h word-final zero	<i>halax</i> 'went', <i>herim</i> 'lifted', <i>miher</i> 'hurried' <i>raca</i> 'wanted', <i>káma</i> (she) got up'
וּ, <i>waw [vav]</i>	v	<i>ve-</i> 'and', <i>viter</i> 'gave up', <i>givun</i> 'variety', <i>vav</i> 'hook'
ז, <i>zayin</i>	z	<i>zar</i> 'foreigner', <i>muzar</i> 'strange', <i>brógez</i> 'at outs'
ח, <i>xet</i>	x	<i>xalom</i> 'dream', <i>maxak</i> 'erased', <i>patúax</i> 'open'
ט, <i>tet</i>	t	<i>téva</i> 'nature', <i>matbéa</i> 'coin', <i>moret</i> 'pluck'
י, <i>yod</i>	y	<i>yošev</i> 'sits', <i>tayar</i> 'tourist', <i>siyer</i> 'scouted'
כ, <i>kaf</i>	k	<i>kélev</i> 'dog', <i>maka</i> 'hit', <i>kol</i> 'all' ~ <i>qol</i> 'voice'
ך, <i>xaf</i>	x	<i>maxar</i> 'sold', <i>maxbesa</i> 'laundry', <i>masax</i> 'screen'
ל, <i>lamed</i>	l	<i>lilmod</i> 'to-learn', <i>mélax</i> 'salt', <i>nafal</i> 'fell'
מ, <i>mem</i>	m	<i>maca</i> 'found', <i>limco</i> 'to-find', <i>taam</i> 'tasted'
נ, <i>nun</i>	n	<i>nudnik</i> 'nag', <i>anáxnu</i> 'we', <i>katan</i> 'small'
ס, <i>samex</i>	s	<i>soléax</i> 'forgive', <i>pasim</i> 'stripes', <i>namas</i> 'melted'
ע, <i>ayin</i>	zero ʕ intervocalic before stressed vowel where necessary	<i>omed</i> 'stand', <i>elbon</i> 'insult', <i>tava</i> 'drowned', <i>neemad</i> 'stood up', <i>tav'a</i> 'drowned-F ~ demanded-F'
פ, <i>pe</i>	p	<i>pe</i> 'mouth', <i>pipel</i> 'pepper', <i>kipec</i> 'hopped'
ף, <i>fe</i>	f	<i>fibrek</i> 'fantacize', <i>filosof</i> 'philospher', <i>mefic</i> 'spread'
צ, <i>tsade</i>	c	<i>codek</i> 'be right', <i>maca</i> 'found', <i>heci</i> 'peeped'
ק, <i>kof</i>	k	<i>kol</i> 'voice', <i>kafac</i> 'jumped', <i>makom</i> 'place'
ר, <i>resh</i>	r	<i>roš</i> 'head', <i>para</i> 'cow', <i>tofer</i> 'sew'
שׁ, <i>shin</i>	š	<i>šem</i> 'name', <i>xašuv</i> 'important', <i>lavaš</i> 'wore'
שׂ, <i>sin</i>	s	<i>sone</i> 'hate', <i>masua</i> 'torch'
ת, <i>taf</i>	t	<i>tafas</i> 'caught', <i>menateax</i> 'surgeon', <i>naxat</i> 'landed'
In loan words:	ǰ (dʒ) č (tʃ) ž (ʒ)	<i>juk</i> 'cockroach', <i>jins</i> 'jeans', <i>pijama</i> 'pajamas' <i>čizbat</i> 'tall tale', <i>ričrač</i> 'zipper' <i>žanre</i> 'genre', <i>bež</i> 'beige', <i>garaž</i> 'garage'

Notes

The so-called “gutturals”, that is, weak back consonants – orthographic א (*alef*), ע (*ayin*), ה (*heh*) – that are typically not pronounced in current Hebrew are disregarded in transcription, in word-initial position – except for *h*, which is pronounced by many speakers of General Israeli Hebrew in word-initial but not in word-final position (e.g., *harim* ‘mountains’ versus *arim* ‘cities’ with initial *ayin*, *arim* ‘I’ll lift’ with initial *alef*); in word-medial position, e.g., *nigal* ‘was-disgusted’ from the root *g-š-l* and also ‘was-redeemed’ from the root *g-ʔ-l*; *taam* ‘tasted.v’ with word-final stress and *táam* ‘taste.N’ with penultimate stress before a stressed vowel (see Section B-4 below).

The only exception is in specifying the names of the 7 verb *binyan* conjugations, where a straight quote is used to represent orthographic *ayin*, so as to maintain consistent labeling across the volume for this particular system in the grammar of Hebrew, thus: *pa'al*, *nif'al*, *pi'el*, *pu'al*, *hif'il*, *huf'al*, *hitpa'el*.

Stop consonants with spirant alternants – *b ~ v*, *p ~ f*, and *k ~ x* – are indicated in pointed Hebrew orthography by a letter-internal diacritic (dot) – but by consonantal alternations in transcription.

Capital (upper-case) letters are used only for proper nouns (names of people and places), which can also stand for words with a conventional spelling, as in:

- (4) *ma šlomó* ‘how is he?’ ~ Shlómo = the name Solomon,
- (5) *rexovót* ‘streets’ ~ Rehóvot = the name of the city.

B-3 Bound morphemes

Orthographic prefixes

Definite articles, prepositions, and conjunctions that are written as part of the next word (traditionally labeled by the acronym *Moshe veKalev* ‘Moses and Kalev’ standing for the consonantal elements *m* ‘from’, *š* ‘that’, *h* ‘the’, *v* ‘and’, *k* ‘as, like’, *b* ‘in, at’, *m* ‘from’) are separated from the next word by a hyphen, e.g.,

- (6) *ha-báyit* ‘the house’,
- (7) *ba-báyit* ‘in-the house = at home’,
- (8) *le-Paríz* ‘to-Paris’,
- (9) *me-ha-súper* ‘from-the-supermarket’,
- (10) *ve-axšav* ‘and now’,
- (11) *ha-baxur še-ba* ‘the boy that came’,
- (12) *ve-še-hikárti* ‘and that I knew’,
- (13) *kše-higánu* ‘as-that = when we arrived’

Bound affixes

Bound affixes (inflectional and derivational) are generally written as part of the word. These include:

- (1) Prefixal *l* + *V* marking infinitive, e.g., *ledaber* ‘to-talk’, *lilmod* ‘to-learn’, *laléxet* ‘to-go’
- (2) Person suffixes and prefixes on verbs, e.g., *dibárti* ‘I talked’, *nelex* ‘we-will-go’

- (3) Gender and number suffixes on verbs, nouns, adjectives, e.g., *lomdim* ‘we~they~you learn / are-learning’, *holéxet* ‘me~you~she-goes / is-going’, *talmida* ‘female student’, *talmidim* ‘students’, *xaxamot* ‘wise (women)’
- (4) Inflected (non-nominative) pronouns, e.g., *li* ‘to-me’, *alay* ‘on-me’, *itánu* ‘with- us’, *miménu* ‘from-him’

In cases where these affixes are the target form of a particular analysis or set of examples, they are separated from the stem according to the guidelines presented in the Leipzig glossing rules (Comrie et al., 2008).

B-4 Word-stress

Word stress in Hebrew is assumed to be word-final, in which case it is not indicated. Other instances are indicated by an *accent aigu* on the antepenultimate or penultimate syllable, as in (1):

- (1) *praxim* ‘flowers’ ~ *pérax* ‘flower’
hitnagdut ‘opposition’ ~ *hitnagádeti* ‘I was opposed’
tarnegolot ‘hens’ ~ *tarnególet* ‘hen’

B-5 Verb citation forms

Since verbs lack an unequivocal basic or unmarked form, the citation form used throughout is the morphologically simplex 3rd person masculine singular, past tense, thus: *halax* literally ‘(he) went’ stands for ‘go’, *siper* literally ‘(he) told’ stands for ‘tell’, *hitkarev* literally ‘(he) approached’ stands for ‘approach’.

C. Hebrew-specific glossing and coding conventions

Items required for translation into English but not part of the grammar of Hebrew are entered in **parentheses**, for example: *hu talmid* ‘he (is a) student’, *hu lo mevin* ‘he (does) not understand’.

Items separated by a **tilde or slash** indicate possible alternative versions in English, e.g., *ha-tinok boxe* ‘the-baby cries ~ is crying’, *hu rac* ‘he runs/ran’.

Items separated by a **hyphen** indicate bound morphemes written as part of the same word in Hebrew but as separate words in English and other European languages. A **period** is used to represent single words in Hebrew with more than one-word equivalents in English, e.g., *šeli* ‘of. me = my, mine’, *tinok boxe* ‘(a) baby.is.crying’.

C-1 Grammatical codes and symbols

Grammatical coding (the Leipzig Glossing Rules: Comrie et al., 2008) is separated from the gloss by a colon. Morpheme boundary is marked by a hyphen.

The following codes and symbols are adopted for representing Hebrew-specific categories:

BENPRS/BENPRTC: *benoni* ‘intermediate’. The *benoni* form is marked either as **BENPRS** when used as present tense, or as **BENPRTC** when functioning as a non-finite participle.

CS: construct state. **CS** is the label for bound *smixut* genitives, following the morphologically bound head noun (traditional *nismax* ‘dependent’). This is marked by a caret followed by a space (^) as bound, e.g., *sipur-ey^ Agnon* ‘story-PL.CS Agnon’ = ‘Agnon’s stories’ versus *ha-sipur-im šel Agnon* ‘DEF-story-PL of Agnon’ = ‘the stories of Agnon ~ Agnon’s stories’

BN: *binyan* verb patterns (prosodic templates). Some authors adopt the following numbering system for ease of reference, following the division into two subsets in Berman (2016) and see, too, Chapter 8 on Derivation, and the note on transcription of labels in Section B-2):

- (5) B1: *pa'al (qal)*
 B2: *nif'al*
 B3: *hif'il*
 B3_{ps}: *huf'al*
 B4: *pi'el*
 B4_{ps}: *pu'al*
 B5: *hitpa'el*

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Introduction

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This volume on *Usage-Based Studies in Modern Hebrew* consists of three parts: I – *Introduction* edited by Eitan Grossman and Yael Reshef (Hebrew University), provides historical, sociological, and typological background to Modern Hebrew [MH], with a brief survey of its main phonological and orthographic properties; II – *Morphology/Lexicon*, edited by Ruth Berman and Elitzur Dattner (Tel Aviv University), includes detailed characterizations of inflectional and derivational morphology and key facets of the lexicon of MH including parts of speech, voice alternations, and nominalizations; and III – *Syntax*, edited by Bracha Nir (University of Haifa), deals with selected syntactic constructions at the levels of phrase, clause, and clause-combining.

Numerous studies on Modern Hebrew have appeared since the 1950s, including many dozens of articles in English and in Hebrew (some also in French or German), entries in the *Encyclopedia of Hebrew Language and Linguistics* (Khan 2013) – several of which are referenced in this volume – as well as full-length books, e.g., Rosén (1956, 1962, 1977); Berman (1978); Glinert (1995); Amir-Coffin & Bolozky (2005); Shatil (2014). The motivations underlying the present volume differ from these and related works in several ways. First, the book opens with half a dozen background chapters characterizing key facets of the development of current Hebrew from interrelated perspectives: its history, contemporary evolution, genetic sources, sociolinguistic circumstances, and language planning. Second, rather than aiming at a “reference grammar” describing various aspects of Modern Hebrew structure, focus here is on *typologically interesting* facets of the language, particularly in domains where it differs markedly from Standard Average European [SAE], such as in phonology (Chapter 6), inflection (Chapter 7), derivation (Chapter 8), agreement (Chapter 12), and genitive constructions (Chapter 14). Third, studies focus deliberately on “Modern Hebrew” [MH], as defined and motivated in the sections on nomenclature in Chapter 1. As such, the book is oriented to “an internal typology” of MH, with most chapters noting explicitly how the system in question departs from earlier stages in the history of the Hebrew language and/or from SAE, rather than aiming at comparative cross-linguistic analyses. The book should thus

hopefully make a contribution to the general phenomenon of *language change and variation* – of particular interest in a language with the unique historical and sociological factors underlying its evolution, as characterized in Part I.

Perhaps the most innovative aspect of the current volume is that it is deliberately *usage-based*, relying on authentic corpus-based data rather than on constructed examples. Sources specified for each chapter separately include written corpora (mainly newspapers), mixed written/spoken from the web, and oral materials in the form of extended texts, recorded conversations, and structured elicitations.¹ The question arises as to what is implied by the notion of “usage-based” in the present context. Ideally, in the view of the editors of this volume, a usage-based perspective is intimately bound up with two prongs of current, functionally motivated linguistic research. One is Construction Grammar, which takes form-meaning correspondences to be the basic units of language, characterizing both the core and the periphery of grammar with the same tools and assuming no strict division between syntax and lexicon, while focusing on specific conditions of use (Fillmore, Kay & O’Connor 1988; Goldberg 1995; and as applied to Hebrew, for example, in Dattner 2008, 2015; Melnik 2006; Nir 2008). Another facet of usage-based approaches to language is the direct link between usage, diachrony, and synchrony in language change (e.g., Kemmer & Barlow 2000) along lines described by Nir in the introduction to her concluding chapter: “In the study of language change, usage-based theory is viewed as a natural evolution of the Greenbergian (1978, 1979) perspective on the relationship between function and grammar (see Bybee 2009 and references there), including the attempt to categorize languages into types (Cristofaro & Zúñiga 2018; Croft et al. 2011). Current investigations show that language diversity supersedes language similarity (e.g., Evans & Levinson 2009; Ibbotson 2013): Whatever can be viewed as similar between languages is explained from a functional, cognitive perspective. The latter explores the shared contextual, pragmatic, and processing constraints that impact the emergence, consolidation, and change of language structures, on the one hand, and in form-function relations, on the other.”

Despite the avowedly usage-based orientation of the studies in this volume, authors do not espouse a particular theoretical frame-of-reference in analyzing the phenomena they discuss, but rather provide model-neutral characterizations of the current state of Hebrew, along the lines of what Dixon (2010) terms “basic linguistic

1. Sources used by authors include conversational interactions (CoSIH 2001–2002; Dekel 2014), elicited expository and narrative texts both oral and written (Berman 2008: 738–739; Berman & Nir-Sagiv 2004), picture-book based oral narratives (Berman 1988), online blogs, including Tal Linsen’s corpus (Chapter 9), and *heTenTen* (Jakubiček et al. 2013), a billion-token web-crawled Hebrew corpus (Chapter 12).

theory”. The chapters in this volume, apart from those in the Introduction which survey largely extra-linguistic factors (except for Chapter 6 outlining features of phonology/orthography) interpret the notion of “usage-based” in different terms, ranging from reliance on documented rather than constructed examples via more or less vague generalizations about favored trends in current Hebrew usage, to statistical breakdowns of frequency of occurrence in a range of data-based sources recorded for Hebrew-speaking children and adults. One reason for these departures from what is generally conceived as “usage-based linguistics” as depicted above is the variety of backgrounds of the authors contributing to the volume, including traditional Hebraists at one extreme and more functionally oriented or construction-grammar linguists at the other. A second reason is the lack of a large-scale established corpus of written and/or spoken Modern Hebrew such as is available for most SAE languages (for a survey of methodological issues and available sources in Hebrew, see Seroussi 2011: 21, 35–40; Wintner 2004).

Not only were authors given a free hand as to how they interpreted the notion of “usage-based”, the book also involves a variety of approaches to the topics dealt with as well as the data deployed. Some chapters rely in part at least on frequency distributions in texts, structured elicitations, and dictionary counts (e.g., Chapters 8, 9, and 12), others use documented examples from a variety of sources, either written (Chapter 10), spoken (Chapter 15), or digital (Chapters 9, 12).

Despite their varied approaches to linguistic analysis, across the volume authors largely depart from the mainly diachronically oriented and structuralist-descriptivist approach characteristic of Hebrew Language studies to this day. Contributors do not include, however, protagonists of various paradigms of formal generative linguistics, covering numerous scholars and a considerable body of research on Hebrew morphology and syntax (e.g., Bat-El 2008; Borer 1988, 2009; Doron & Meir 2013; Horvath & Siloni 2008; Preminger 2009; Reinhart & Reuland 1993; and see, too, the collection in Armon-Lotem, Danon & Rothstein 2008). This is particularly marked in the chapters dealing with syntax in Section III, as summed up in Nir’s concluding chapter to the volume, the focus of generative grammars of Hebrew as of other languages.

Another implication of the usage-based orientation of the present volume is its largely non-modular approach to various domains of linguistic analysis. This finds expression in the deliberate combination of morphology, lexicon, and syntax in the survey chapters of Part I as well as the analyses provided in the rest of the book, and in how various features of MH structure and usage are dealt with in the volume. One such category is the question of *root-structure* (Chapter 3) and the status of the consonantal root in MH morphology and lexicon (Chapters 7, 8, 9). Root consonantal structure plays a major role in the phonology, morphology, and lexicon of Hebrew to this day, with a marked impact on morpho-phonological variation and

departures from normative dictates (Chapters 6 and 8). Different analyses of the topic consider such issues as the distinction between words constructed out of full or canonic roots compared with those based on weak or defective roots with glides and historical gutturals; the contrast between basic, derived, and loan words in the language; and the interplay between inflectional and derivational morphology in the deployment of root-structure.

Another typically Semitic feature of MH touched on across the volume is the system of verb *binyan* forms, labeled variously as conjugations, verb patterns, or prosodic templates, and numbered as containing either 5 or 7 subsystems (with two passive alternatives being regarded by some authors as inflectional, hence part of the grammar, by others as derivational, so associated with the lexicon). Discussion of the topic from different perspectives in the chapters on Inflection (7), Derivation (8), Parts of Speech (9), Voice (10), Nominalizations (11), and Transitivity and Valence (13), reflect how crucial and controversial this domain is for an appreciation of the morphology, lexicon, *and* syntax of the Hebrew language to this day. For example, some authors such as Halevy (Chapter 13 on Transitivity and Valence) underscore the role of lability or ambitransitivity in functioning of the *binyan* system, whereas others such as Ravid (Chapter 8) tend to highlight the unique status and function of each *binyan* separately. We feel that such variation is advantageous, since the volume deliberately avoids presenting a single, monolithic view of linguistic structure and language use as realized in MH.

Another area linking the domains of morphology, lexicon, and syntax, one which highlights change across time in the structure and use of MH, is the category traditionally termed *benoni* literally ‘intermediate’. These forms, the participles of classical Hebrew (both active and passive, corresponding in many ways to present and past participles respectively in SAE), have undergone considerable functional change while retaining features of their mixed nominal-verbal status (Chapters 7, 8, 9, and 11). Today, *benoni* form verbs serve primarily for expressing present tense on a par with their finite past and future tense counterparts; in formal registers they also occur as nonfinite verb forms in complement and adverbial clauses; while lexically, they serve restrictedly for zero-derivation of certain classes of nouns and adjectives. As a result, some authors refer to them as participles, others as present tense, yet others as a (largely undefined) mixture of both, yielding inconsistencies which are in principle rather inelegant but which in fact reflect different views on how this system should be analyzed today.

As noted, a shared focus of the chapters in both Parts II and III is on the impact of *morphology* on structure and usage in MH, which in this respect has remained close to its Semitic sources (as discussed from very different perspectives in Chapters 3 and 18). Deliberate attention is paid to the interrelation between both morphology and lexicon (Chapters 8 and 9) and morphology and syntax

(Chapters 10, 11, 12, 13, 14, and 15), rather than isolating each of these domains. The decision to focus on these facets of MH was motivated both in principle, in the interest of thematic coherence, and in practice, in the interests of economy. For usage-based elaboration of the role of phonology (Chapter 6), readers are referred to Bat-El, Cohen, & Faust on *Phonetics and Phonology of MH* in a special issue of *Brill's Journal of Afroasiatic Languages and Linguistics* [BJALL].

In overall approach, then, the bulk of the analyses present a functionally motivated, dynamic approach to actual usage, rather than providing purely structuralist or formal characterizations of a given linguistic system. This perspective seems critical in a language undergoing accelerated processes of change for historical and sociological reasons, on the one hand, (Chapters 1, 2, and 3), and in which the gap between prescriptive dictates of the Hebrew Language establishment and the actual usage of educated, literate but non-expert speaker-writers of current Hebrew seems to be constantly on the increase, on the other (see Chapters 4 and 5 on Sociolinguistic Dimensions and Prescriptive Activity).

As noted, the domains of *morphology/lexicon/syntax* serve to tie together various themes, which in Modern Hebrew are closely intertwined with one another across categories and systems. The interaction of Inflection (Chapter 7) and Agreement (Chapter 12) is an obvious example. More typologically specific is the interplay between Inflection, Case-Marking, and Lexicon in the system of Prepositions with suffixed pronominals in all except nominative contexts (Chapter 7). Other systems, such as *binyan* verb-pattern alternations, Voice and Valence, Nominalizations, and Genitive constructions, all of which are morphologically realized, play an important role in syntactic domains of transitivity, valence-changing operations, voice, and case (Chapters 8, 10, 13, and 14). Relatedly, the historically motivated alternations between earlier, yet still functioning bound inflectional forms compared with syntactically analytical phrases in areas like Possessives and Genitives (Chapters 8, 14) and the co-existence of paratactic and hypotactic means of Clause-Combining (Chapter 18), reflect the special nature of Modern Hebrew as a “fusion” language, not so much in the sense of the external impact of languages in contact situations (as discussed in Doron 2016; and see, too, Chapter 4 on Sociolinguistics), but rather in the sense that constructions from different historical layers co-exist and alternate in current usage (Berman 2016; Halevy 2013; Rabin 1963/2005).

An unavoidable, but not entirely unwelcome, upshot of the interrelations between morphology, lexicon, and syntax in MH is the reiteration of the same or similar concerns across different chapters in this volume. These were deliberately retained, in order to enable readers to regard the same topic from different perspectives, both in terms of a particular structural context and of different author approaches. Besides, they also enable readers to address particular chapters without studying the book as a whole. Examples of such recurrent topics as those noted

above refer primarily to typologically key facets of the language, including number and gender inflection and agreement, the *binyan* system of verb patterns in relation to inflection, derivation, the lexicon, syntactic transitivity and semantic valence, the special nature of the *benoni* ‘intermediate’ category functioning as both non-finite and adjectival participles and as present tense, and sub-categorization of nouns by inflection, derivation, and lexical classes.

In terms of bulk, morphology takes up a relatively large part of the volume, to this day representing uniquely Semitic properties such as the role of consonantal roots in the bulk of its open-class lexicon, and the constraints imposed by the narrow set of 7 *binyan* morphological patterns *cum* prosodic templates in which all verbs are constructed. As noted in Chapter 5 on the impact of prescriptivism, traditional Hebrew scholarship was concerned primarily with issues of morphology and lexicon, with questions of syntax still largely disregarded by the Hebrew Language Academy. This is reflected in the fact that the Hebrew word for ‘grammar’ *dikduk* – related to the roots *d-y-q* ‘be precise’, *d-q-d-q* ‘be meticulous, fastidious’ – typically covers what is known in schoolbooks as *torat ha-hége ve-ha-curot* ‘the law of sound and forms’ rather than including *taxbir* ‘syntax’ (from the root *h-b-r* ‘to combine, connect’). In fact, issues of syntax were relatively neglected until the middle of the last century, subsequently being taken over by Hebrew scholars concerned either purely with (often prescriptively motivated) description or by generative linguists. This presented us with a dilemma, since such works focus on traditional linguistic categories rather than actual usage, while generative grammars are concerned mainly with model-internal formally motivated representations. One upshot of this sociolinguistic situation is that the section on syntax is less general in coverage than the other parts of the book. On the other hand, as noted, where Hebrew differs most markedly and most interestingly from SAE is largely in the interfaces between morphology-lexicon-syntax rather than of syntax alone. Finally, in principle, in a usage-based, constructionist approach, no strict boundaries are taken to demarcate off phonology / morphology / lexicon or prosody / morphology / syntax as encapsulated modules (Beckner et al. 2009).

Chapter summaries

Part I. Background

Chapter 1: Setting Modern Hebrew in space, time, and culture, by Eitan Grossman and Yael Reshef, Hebrew University – opens the volume by providing an overview of key features of the structure and use of Modern Hebrew (MH), contextualizing it in space in terms of its community of speakers; in time, in relation to its diachronic background and its status as a Semitic language; and in culture, by specifying why the term *Modern Hebrew* was selected, and what it refers to in the present context. **Chapter 2: Historical overview**, by Yael Reshef – outlines the timeline of the language known as “Hebrew” from ancient times to this day, delineates the impact of classical strata on Modern Hebrew, and traces processes of modernization and standardization involved in its contemporary evolution. **Chapter 3: Genetic affiliation**, by Aaron Rubin, Penn State University – starts by describing what is meant by “the Semitic family of languages”, notes characteristically Semitic facets of Hebrew morphology (the consonantal root, its pronominal, nominal, and verbal systems, including verbal derivation and inflection) and lexicon, concluding with brief comments on the controversial status of MH. **Chapter 4: Sociolinguistic dimensions**, by Roni Henkin, Ben Gurion University – provides a detailed analysis of the multilingual contexts in which MH developed via waves of immigration prior to and since the establishment of the State of Israel in 1948, noting the asymmetric patterns of interaction between Hebrew and Palestinian Arabic, together yielding a complex sociolinguistic setting with numerous different varieties of usage (registers, genres, styles, and codes) with the current linguistic landscape of MH impacted further by more general issues of language planning, gender, and power. **Chapter 5: Prescriptive activity in MH**, by Uri Mor, Ben Gurion University – echoes several of these themes, highlighting the tension between the nationalist, puristic stance to the Hebrew language anchored in the Jewish past that dominated public discourse until the 1970s and currently active, unplanned processes of language development and use. Taking into account conflicting forces underlying language change and variation since the pre-Mandate period to current times (prescriptivism/normativism; institutional or planned/native or unplanned), the chapter underscores the complex attitudes obtaining to this day in relation to what constitutes “correct language”.

Chapter 6: Notes on MH phonology and orthography, by Stav Klein, Tel Aviv University – departs from the five other chapters in Section I, in the form of a brief survey of a particular domain in MH: phonology, supplemented by a short section

on orthography. This chapter aims to provide basic background information to morpho-phonological processes impacting numerous facets of the morphology and lexicon of MH discussed in the chapters in Part II.²

Part II. Morphology-lexicon

Chapter 7: Inflection, by Ora R. Schwarzwald, Bar-Ilan University – first details inflectional features of the Hebrew pronominal system, and then proceeds to description of the major lexical classes of Verbs, Nouns, and Adjectives, concluding with a note on conservative features as against variability and changes in MH. Inflectional morphology in MH is described as involving, variably: Tense, Mood (Imperative), Person, Number, and Gender – for verbs; Number, Gender, and Construct-State – for nouns; Number and Gender – for Adjectives and *benoni* ‘intermediate’ participles; and non-nominative pronominal Case-Marking – for prepositions. Inflection is typically suffixal, except for Person marking in Future tense, and varies by the features of Count for Number and Animacy for Gender, with Accusative case-marking on verbs and Genitive case-marking on nouns increasingly replaced by analytic alternatives in MH.

Chapter 8: Derivation, by Dorit Ravid, Tel Aviv University – provides novel analyses of derivational morphology, as a domain critical to the content and organization of the MH lexicon, based mainly on distributional findings from current, primarily spoken, empirical studies of derivational morphology. Interrelations between derivation and inflection are considered, with derivational processes characterized as representing one-to-many and many-to-one relations of form and meaning. Four major means of word-formation in MH are delineated in descending order of frequency: Non-linear root-pattern affixation, linear suffixation on stems, zero-derivation, and stem plus root reduplication. Verbs are analyzed as distinct from nominals (nouns and adjectives), and the *binyan* system of verb conjugations is reevaluated, drawing a two-way distinction between older and more recent subsystems of morphological, semantic, and syntactic interrelations. Discussion of the verb system of MH takes into account the role of *benoni* present-tense/participles, defective roots, frequency of use, transitivity and voice, and verb semantics. Nouns are analyzed in terms of ontological categories such as Agent, Instrument, Location, and Adjectives are described as basic, verb-derived, and noun-based, while Adverbs are presented as morphologically marginal in MH.

2. As noted earlier, interested readers are referred to the special issue of Brill's *Journal of Afro-Asiatic Linguistics* edited by Bat-El, Cohen & Faust.

Chapter 9: Parts of speech categories, by Shmuel Bolozky, University of Massachusetts at Amherst, and Ruth A. Berman, Tel Aviv University – divides word classes in MH into Open Class (Nouns, Verbs, Adjectives), Closed Class paradigmatically organized grammatical items (Pronouns, Determiners, Conjunctions, Case-Markers), and Intermediate elements lying between the two (Prepositions, Adverbs, Floating Operators) – in contrast to the traditional Hebraist division into Verbs, Nominals, and Particles. Analysis of the verb lexicon reviews different types of consonantal roots (full versus defective) and the *binyan* conjugations or prosodic templates, compared with nouns and adjectives as morphologically less restricted than verbs, and including loan words that are only partially integrated into the Hebrew phonological system. The chapter presents distributional frequencies of different parts of speech in established conventional and current online Hebrew dictionaries (types) in comparison to a large corpus of digital data (tokens). Focusing on current trends in lexical innovation, the chapter concludes with discussion of the notion of productivity in the lexicon.

Chapter 10: Voice distinctions in MH, by Dana Taube, Hebrew University – analyzes the category of voice – active, passive, and middle – in primarily morphological terms as displaying a set of oppositions between two or three *binyan* verb-templates for a single consonantal root. Described as instantiating different argument structures without affecting the inventory of semantic roles characterizing a given root as a lexical entry (e.g., causative, reciprocal, reflexive), these oppositions are analyzed in relation to their functional distributions in different kinds of *written* Hebrew. Although semantic relationships between the different *binyan* patterns are not fully predictable, systematic form-function oppositions are revealed that denote distinctions of voice and different degrees of argument participation in a given event.

Chapter 11: Nominalizations, by Ruth A. Berman, Tel Aviv University – details structural and usage-based properties of three cases of verb shifts to nouns in MH – Action Nominals, Gerunds, and Infinitives. The three constructions meet the following criteria: They are fully productive, hence grammatically inflection-like; they are directly associated with verbal *binyan* patterns; and they alternate syntactically with their verbal sources, hence can be paraphrased by tensed subordinate clauses. These properties do not apply to other classes of derivationally verb-related nouns in MH, such as adjective-based stative nouns, Agent and Instrument nouns derived by syntactic conversion from *benoni* ‘intermediate’ forms, and verb-derived nouns denoting diseases, collectives, locations, etc. The relatively recent Action Nominals (e.g., *harisa* ‘destruction, destroying’) are highly productive, although largely confined to more formal registers of usage; Gerunds common in Biblical Hebrew (*be-hors-o* ‘in-destroy-his = on his destroying’) are restricted to syntactically bound constructions relatively rare in current usage; and Infinitives (e.g.,

la-haros ‘to-destroy’) are pervasive at all levels of usage, displaying a broad range of functions in the absence of other, less widely used non-finite verbs. The chapter concludes by comparing the three constructions concerned in relation to more general features of MH structure and use.³

Part III. Syntax

Chapter 12: Agreement, by Nurit Melnik, Open University of Israel – provides a novel characterization of agreement in Hebrew, defined as an asymmetric relationship where one element, the controller (also source or trigger), determines the agreement features of another, the target, in a particular syntactic domain. In MH, Agreement is controlled by nouns and involves the features of person, number, gender, and definiteness, occurring at clause-level between the grammatical subject and its associated predicates and in noun phrases between a typically initial head N and its modifiers (e.g., demonstratives and adjectives). In contrast to prescriptive dictates, usage-based data – derived from *heTenTen* (Jakubiček et al. 2013), a billion-token web-crawled Hebrew corpus – reveal considerable variation, the focus of the chapter. Discussion deals, first, with the gender feature of the targets as varying between masculine and feminine; second, with contexts where agreement targets exhibit either full or impersonal (or default) agreement; third, with classes of nouns that trigger two types of agreement properties, formal and semantic; and, fourth, with instances where an agreement target is controlled by one of two possible controllers. Two factors are specified as accounting for the variation phenomena found in MH agreement: lack of morphological transparency in the system, on the one hand, and discrepancies between the prescriptive system of agreement and the functions speakers tend to associate with agreement in constructions like syntactically complex NPs, the referent of an agreement controller, and the role of grammatical subjects in copula and verb-initial constructions, on the other.

Chapter 13: Transitivity and valence, by Rivka Halevy, Hebrew University – complements the morphological focus of Chapter 10 by considering the syntax of transitive constructions in MH of “varying prototypicality” including complex predicates, semi-transitive, and lexicalized constructions. A growing tendency to use of labile (ambitransitive) alternations, particularly in the prototypical causative morphological pattern of the *hif'il* verb-template (e.g., *hilbin* ‘whiten’ serves both as causative ‘make white’ and inchoative ‘become white’) yields the claim that

3. The two last chapters in this section – on Voice and Nominalizations – underscore the close connection between morphology and syntax in MH. As such, they refer widely to topics touched on in the other chapters in Section II on morpho-lexicon as well as to several topics in Section III on syntax, as will be evident in the summaries that follow.

transitivity in MH depends not only on the semantic frame or morpho-phonology of verb *binyan* pattern, but rather on syntactic and discourse-based properties of the construction as a whole.

Chapter 14: Genitive (*smixut*) constructions, by Ruth A. Berman, Tel Aviv University – considers structural and usage-based properties of MH constructions involving two nominal constituents, an initial head and following modifier. Focus is on the three *smixut* ‘adjacency’ or ‘dependency’ constructions: (i) “construct-state” compounds in the form $N^{\wedge} N(P)$, where a caret indicates the relation between an initial bound head N and its free-form modifier; (ii) free, analytic $N(P) \text{ } \acute{s}el (N)P$ constructions with the genitive marker *šel* ‘of’, and (iii) doubly marked $N_1 \text{ } \acute{s}el N_2$ genitives. The bulk of the chapter deals with alternations between these three options for expressing possession and other genitive relations, also addressing two other binominal constructions: construct-state $\text{Adj}^{\wedge} \text{Noun}$ and $\text{Noun} + \text{Denominal Adjective}$ phrases. The concluding section compares current use of these constructions in MH.

Chapter 15: Impersonal and pseudo-impersonal constructions, by Rivka Halevy, Hebrew University – presents a novel classification of the main impersonal or generalized constructions, relating primarily to spoken Hebrew, including: “*uncontrolled*” meteorological and environmental events, existential and possessive constructions, modal and evaluative impersonals, experiential impersonals, impersonal passives, 3rd person plural subjectless constructions, and impersonals with overt 3rd person plural or 2nd person singular subjects. Coding properties of such constructions are analyzed, based on the typological characterization of MH as a non-subject-oriented and non-configurational language with inflectional marking of person in finite verbs, hence not requiring an expletive or ‘dummy’ subject. Functional properties of impersonal and generalized constructions are noted in relation to pragmatic underpinnings of their patterning in discursive contexts.

Chapter 16: Negation in spoken Hebrew, by Leon Shor, The Hebrew University of Jerusalem – examines the expression of syntactic negation in spontaneous Modern Hebrew speech on the basis of a quantitative analysis of negative constructions occurring in the conversations recorded during 2001 and 2002 in the *Corpus of Spoken Israeli Hebrew* (CoSIH). Analysis includes attention to phenomena that generally remain unaddressed in considerations of negation, such as negative sentences with extra-sentential scope, negation-based discourse markers, and non-linguistic negation. In addition to their prototypical functions of rejection and denial, negative utterances are shown to serve for mitigating evaluations, implying the desirability of a state/event, and strengthening the speaker’s claim by rejecting potential counter-arguments. Analysis also reveals that prosodic prominence of markers of negation may be affected by hitherto unconsidered cognitive and communicative factors.

Chapter 17: List constructions in spoken Hebrew, by Anna Inbar, Tel Aviv University – examines list constructions in spoken Hebrew (corresponding, for example, to English “I don’t think that she’ll buy *a living-room, a bedroom suite, and a gas-stove*”). Analysis is conducted from both an intentional perspective defining the properties of linguistic expressions that can be considered a list construction (the concept) and an extensional perspective specifying the objects that fall under this construction (typology). Analysis takes into account the frameworks of construction grammar and interactional linguistics, based on examples occurring in the *Corpus of Spoken Israeli Hebrew* (CoSIH 2001–2002) database of conversational interactions. The study reveals that lists in MH as in other languages constitute complex constructions serving various purposes in interactive communication, as affected by the cognitive and social constraints arising from such interactions.

Chapter 18: A usage-based typology of MH syntax: How Semitic? by Bracha Nir, University of Haifa – serves as a concluding chapter to the volume as a whole. As such, it examines how findings from the preceding chapters, most particularly those on syntax, shed light on the usage-based domain of contemporary linguistic typology, defined as concerned with the interrelations between function and grammar, in the attempt to categorize languages into types, taking into account the cognitive and processing effects of language variation and change. To this end, the “Semiticness” of MH syntax is (re-)examined in relation to a range of features discussed in the preceding chapters, with special emphasis on the nature of complex *clause-combining* constructions. The conclusion is that Hebrew syntax to this day reflects constructions that are attested at earlier periods in the history of the language, including early as well as late Biblical Hebrew, while manifesting changes both in function and in frequency in current Hebrew usage.

Finally, readers are urged to consult the *Transcription and Coding* section on Transcription, Transliteration, and Coding Conventions at the beginning of the book. This delineates methods used for representing Hebrew data and categories, including: *orthographic* elements (the 22-character consonantal alphabet), consonantal *roots*, *transliteration* of written Hebrew, broad phonemic *representations of spoken Hebrew* consonantal and vocalic (vowels and diphthongs) elements, as well as means of representing *bound morphemes* and *word-stress*. The *Transcription and Coding* section also describes ways of *glossing* Hebrew items in English, and two kinds of *coding* of Hebrew data: general grammatical codes specified by the Leipzig coding system (Comrie, Haspelmath & Bickel 2015) supplemented by a few Hebrew-specific symbols and codes adopted for present purposes.

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PART I

General background

Setting Modern Hebrew in space, time, and culture

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This introductory chapter presents general information about Modern Hebrew (MH), as the topic of the present volume. It delineates major features of MH in order to contextualize the language in space – in terms of its community of speakers; in time – in relation to its diachronic background and its status as a Semitic language; and in culture – as reflected in various strands of research and the different labels assigned to the language at issue here. To this end, the chapter starts with a short survey of the evolution and current use of MH as reviewed in the other chapters of this introductory part of the book, followed by a brief survey of prescriptive and descriptive research on Modern Hebrew.

1. Introduction

This introductory chapter outlines major points of information concerning Modern Hebrew (henceforth, and throughout the volume, MH), as the focus of description in the present volume. As such, it provides background to the overviews of the topics that constitute the volume as a whole, as follows: the history of Modern Hebrew (Chapter 2), genetic affiliation (Chapter 3), its sociolinguistic dimensions (Chapter 4), the impact of normativism and prescriptivism (Chapter 5), and major phonological and orthographic properties (Chapter 6). The goal of the present chapter, then, combined with the five which follow in this section, is to provide readers with an overall orientation to the more detailed, usage-based characterizations of major morphological, lexical, and syntactic properties of MH in Parts II and III of the present volume.

1.1 The speech community

Modern Hebrew is a relatively new linguistic variety, which emerged as a consequence of the key role accorded by the Jewish national movement to the issue of a common national language (Harshav 1993; Rabin 1999). Following the successful implementation of efforts to reinstate the spoken dimension of Hebrew from the 1880s onwards, a process discussed in detail in Chapter 2, the language is currently spoken and written by most inhabitants of the state of Israel from diverse ethnicities (around 8.5 million people in 2016, according to the Israeli Central Bureau of Statistics). The great majority of current speakers were born in Israel, with a higher proportion of native speakers among younger than older segments of the population. Legally, Hebrew was granted the status of an official language (alongside English and Arabic) by the British Mandate authorities in the 1922 Palestine Order in Council. In 1948, with the end of British rule and the establishment of the State of Israel, Hebrew became the *de facto* primary language of administration, the labor market, education, mass communications, etc., making it the sociolinguistically and politically dominant, unmarked language in Israel (Morag 1993). Hebrew is a mother tongue (exclusively, or alongside heritage languages) for most native-born Israeli Jews and serves as a second language for most other Jews in the country as well as for the Muslims, Druze, Christians and other ethnic groups of citizens, who make up about 20% of the population. It is also used to some extent by an unknown number of non-citizen residents. Outside of Israel, Modern Hebrew is spoken by large numbers of Israeli-born first-generation immigrants in other countries of the diaspora and is also familiar to heritage speakers and to L2 learners in Jewish schools.

The sociolinguistic situation of Modern Hebrew, as detailed in Chapter 4, is extremely complex (Ben-Rafael 1994). First, it is marked by considerable differences – at every level of analysis – between more formal language and everyday colloquial spoken usage. The more carefully monitored formal registers are largely subject to the prescriptive dictates of the *Hebrew language establishment*, that is, language planning and educational institutions such as the Academy of the Hebrew Language, the school system, and language editors, which aspire to preserve a close affinity to the classical strata of Hebrew (as reviewed in Chapter 5). In order to do so, they work in two complementary directions: attempting, first, to moderate the pace of processes of linguistic change that tend to widen the gap between the classical models and contemporary usage (Bar-Asher 2012), and, second, by aiming to restrict lexical coinages and innovations in ways compatible with usages attested to in historical Hebrew corpora (Eldar 2010). Both formal and colloquial language varieties manifest considerable variation, reflecting the multiple distinctions in Israeli society, such as ethnic origin, religious affiliation and beliefs, geographical center versus periphery, and so forth.

Part, at least, of the sociolinguistic complexity of Modern Hebrew stems from its rich contact situation, both past and present. As the dominant language of an immigrant society, Hebrew is currently spoken not only by monolingual native speakers, but also by L1, L2 and L3 or bilingual speakers of Semitic, Indo-European, and other languages. Many Hebrew speakers – and virtually all educated, more literate sectors of the population – have at least some competence in English, a required subject of study in the school system from 3rd grade (and often earlier) and an obligatory component of the school-leaving *bagrut* (matriculation or *baccalaureat*) examinations. Proficiency in English is a requirement for academic studies, and a good knowledge of English is considered an important asset in the job market. Leisure activity (such as the norm of screening films and TV series in the original language, accompanied by subtitles) further contributes to the exposure to, and need for, proficiency in English (Spolsky & Shohamy 1999).

2. Genetic affiliation and nomenclature

Modern Hebrew is usually considered to be one of the *Semitic* languages, which include numerous varieties of Arabic and Neo-Aramaic, Amharic (and other languages spoken in present-day Ethiopia and Eritrea), and the modern South Arabian languages, such as Mehri and Soqotri (see the overviews in Goldenberg 2013; Hetzron 1997; and Weninger 2011). However, some linguists challenge the straightforward assignment of Modern Hebrew to the Semitic language family, arguing that the complicated history of the language points towards an Indo-European or hybrid nature (as detailed in Chapter 3 and see, especially, Chapter 18). This line of argumentation is not widely accepted, and the scholarly consensus still holds to the traditional point of view.

The somewhat unusual history of Modern Hebrew has been the source of considerable controversy and mythologizing. Whereas much has been written about the miraculous ‘revival’ of Hebrew from its status as a ‘dead’ language, this simplistic view is no longer accepted in contemporary research. Alternative definitions for the process have been suggested by various scholars, stressing the transition of Hebrew from a language in partial use in traditional Jewish communities to a modern national language used for all the communication needs of a modern speech community – as, for example, in Morag’s (1993) “full return to Hebrew” or Ornan’s (1984) “transformation to an all-encompassing language”. On the other hand, scholars who question the genetic affiliation of Modern Hebrew to the Semitic languages tend to reject the claim of continuity of Modern Hebrew with earlier phases of the language and suggest instead that it should not be treated as a new phase in the history of Hebrew, but as a separate linguistic entity.

This controversy is reflected in the various *labels* assigned to Modern Hebrew in the course of its history, including ‘Israeli Hebrew’, ‘contemporary Hebrew’, ‘native Hebrew’, ‘spoken Hebrew’, and others (Rosén 1977: 15–19). The autonym is usually Romanized as *Ivrit* (Modern Hebrew pronunciation [ivʁit], in Hebrew orthography עִבְרִית), or sometimes in a scholarly context, *Ivrit Xadasha* (עִבְרִית הַדְּשָׁה, ivʁit χadafa ‘New Hebrew’). These names often reflect commitment to particular ideological and/or scholarly persuasions, motivations that are not always easy to tease apart – with a major dividing line demarcating the degree to which a given scholar views the language described in this book as a continuation of earlier stages of Hebrew or the result of some kind of historical rupture. Scholars holding to the former view usually prefer the term ‘Modern Hebrew,’ while those who emphasize historical ruptures tend to prefer ‘Israeli Hebrew’ or simply ‘Israeli.’

The position taken in the present volume is that the term ‘Israeli’ is inadequate for the language under description here, for several reasons. First, it fails to take into account the important formative phases in the history of the language that preceded the establishment of the state of Israel in 1948, and which involved modernization processes via both literary revival and speech revival (Harshav 1993; Reshef 2015; and see Chapter 2). Further, it also obscures the fact that the language described here has many speakers who are not citizens or even residents of Israel. Besides, the “continuity” view is better supported by the linguistic facts. In the past, the claim of continuity was mainly supported by the persistence of morpho-syntactic constructions in today’s Hebrew that already occurred in earlier, more classical strata of the language (for example, Bolozky 1995; Goldenberg 1996). However, contemporary research has shown that even the syntactic structures usually imputed to European substrate languages have clear antecedents in previous stages of the language (Doron 2016: 5; Givón 1986; and see, too, Chapter 18). Moreover, Modern Hebrew lacks certain of the typological hallmarks of a Standard Average European language (Haspelmath 1998; Zeldes 2013).

3. Linguistic research: From prescriptivism to descriptivism

Modern Hebrew is generally studied from two different perspectives, descriptive and prescriptive. In the first decades of its existence, the focus of attention was exclusively prescriptive, reflecting the fact that the mere existence of the language as a daily means of communication was the result of premeditated language planning activities aimed at speech revival (Reshef 2013). The Hebrew establishment was preoccupied, on the one hand, with planning activities regarding *status*, namely the consolidation of the place of Hebrew in the emergent speech community and vis-à-vis the foreign rulers (first the Ottomans, later on the British) and, on the other,

with *corpus* planning activities, namely the specification of grammatical norms and elaboration of the Hebrew lexicon in order to adapt the language to the new functions it needed to fulfill (Efrati 2004; Eldar 2010).

One of the first actions taken by language planners as early as the beginning of the 20th century, a few years after Hebrew was first introduced as a medium of instruction in schools, was the standardization of the vocalized spelling system. Like many other Semitic languages, Modern Hebrew has its own writing system, which is basically consonantal (with a partial use of *mater lectionis* in certain circumstances to indicate vocalization, see Chapter 6). Following the creation of a system of diacritics in the Middle Ages, called *niqqud* (*nikud* ‘pointing’ in spoken Modern Hebrew), Hebrew could be written in two different ways: an unvocalized variety without pointing diacritics, used in most text types, and a vocalized variety, restricted in contemporary language to specific contexts such as religious texts, poetry, or texts intended for children or new immigrants. Whereas the modern norms of vocalized spelling were decided on as early as the first decade of the 20th century, the efforts to standardize the unvocalized or non-pointed spelling of Hebrew is an ongoing process, with the first set of rules published in 1948, and amended several times since.

Throughout the existence of Modern Hebrew, the Hebrew language establishment has been extremely active in specifying norms of usage in various domains outside of orthography, primarily pronunciation, transliteration, and morphology, with minor attention to syntax. As a rule, these prescriptive dictates are based on canonical religious texts, rather than the linguistic practices of contemporary writers, and they often contradict the acceptability judgments of educated speakers. These specifications, as elaborated in Chapter 5, are often not familiar to speakers, and have had only partial success in shaping actual usage.

As distinct from the extensive activity in specification of norms of usage, dating back to the early days of the emergence of MH, linguistic research on the topic began only in the 1950s with the influential work of Haiim B. Rosén and Haim Blanc (e.g., Rosén 1956, 1957; Blanc 1954, 1964, 1968). Initially, their claims that Modern Hebrew should not be treated as a deviation from the classical models but should be studied as a linguistic system in its own right encountered strong objections from Hebraists (Kuzar 2001: 137–196), but in subsequent years the descriptive (rather than prescriptive) study of Modern Hebrew gradually took root among scholars, in linguistics and Hebrew language academic departments alike (Reshef 2013). By now, Modern Hebrew is the object of considerable linguistic research, and various grammatical domains have been studied in a wide range of approaches. As specified in detail in recent surveys of the state of research, extensive work has been done by linguists in the frameworks of traditional grammar (Reshef 2013), structuralist linguistics (Kuzar 2013), generative linguistics (Berman 1978; Borer 2013) as well

as in functionalist and typological approaches (Kirtchuk 2013). There is a rich body of psycholinguistic as well as computational research on Modern Hebrew, while applied linguistics, with a focus on teaching Modern Hebrew to L2 learners, is also well-established, with the *ulpan* method of Hebrew instruction one of its more significant achievements (see, for example, Coffin & Bolozky 2005).

The extent of research on Modern Hebrew structure and usage differs from one subfield of linguistics to another (as specified further in the next section). Phonology and morphology have been particularly intensively studied, far more than syntax, with studies on pragmatics and discourse having emerged only relatively recently. As in other languages, usage-based approaches to Modern Hebrew are also relatively recent, boosted by the advent of modern corpora, spearheaded by psycholinguists and computational linguists, as well as scholars interested in spoken language. The current volume draws on these recent developments to provide readers with as wide a coverage as possible of patterns of grammar and usage based on authentic examples from naturally-occurring corpora, spoken as well as written (see Introduction). In addition, many of the chapters on Morphology and Syntax note specific processes of change compared with earlier stages in the history of the language, while at the same time highlighting features of MH that differ typologically from Standard Average European.

As a result, the present volume elaborates on earlier studies of the synchronic structure of Modern Hebrew (e.g., Berman 1978, 1997; Glinert 1989; Rosén 1977, Schwarzwald 1994, 2011) that provide overviews of its major grammatical subsystems; it also elaborates on the brief state-of-the-art articles on many aspects of Modern Hebrew provided in Khan (2013). Specifically, focus in this book is on the rich morphological systems of current Hebrew, with inflection in a wide range of grammatical categories (Chapter 7) interacting with facets of its highly structured derivational systems (Chapter 8), lexical categories (Chapter 9), as well as with numerous of its syntactic processes such as Nominalizations (Chapter 11), Agreement (Chapter 12), Transitivity and Voice (Chapters 13, 10, respectively), and Genitive constructions (Chapter 14). Other noteworthy facets of the typology of MH that emerge from other chapters in the volume are its reduced phonemic inventory and its typically word-final stress patterns (Chapter 6), its mixed character with regard to Word Order (Chapter 12), and the interaction of syntax with verb inflection in determining whether an overt subject (pro)noun is required or not (Chapter 15).

These chapters highlight the complex structure of MH, marked by a combination of old and new: While numerous classical forms and constructions are prevalent in various registers of Modern Hebrew in both morphology and syntax, there are many structural differences between Modern and Classical Hebrew, and many processes of change are continuously underway. In addition, forms and constructions that are similar in surface form to the inventory found in previous linguistic

strata do not necessarily fill the same functions. The particular combination described in this book, of inherited material, on the one hand, and of both internal and contact-induced innovations, on the other, clearly distinguish MH from previous historical strata.

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Historical overview of Modern Hebrew

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The chapter starts by outlining the timeline of the language known as “Hebrew” from ancient times since the 2nd millennium BCE and Biblical times via the period of exile when the language existed in a state of diglossia for nearly two millennia, serving mainly for ritual and religious purposes, and up to its transformation into a modern means of literary and journalistic expression in late 18th century Europe, and its revival as a means of everyday communication, both spoken and written, in late 19th century and early 20th century ‘Eretz Yisrael’ (the land of Israel) or Palestine. The chapter delineates the impact of classical strata on Modern Hebrew and traces processes of modernization and standardization involved in its contemporary evolution.

1. Timeline

The history of Hebrew is marked by discontinuity in its use as a spoken language, as a significant gap separates its spread as a spoken vernacular in ancient times from its current use. While the origins of the language and of its ancient speakers are somewhat obscure, the accepted view is that Hebrew diverged from the Canaanite dialects to form a distinct linguistic variety in the second millennium BCE, in Biblical times, coming to serve as the main language of the ancient Israelites (Khan 2013: 304; Sáenz-Badillos 1993: 1, 35, 50–75). Following several centuries of repeated political turmoil, wars, occupations and exiles, and under the growing pressure of other languages (primarily Aramaic), the speech community gradually declined, so that by the end of the second century CE Hebrew ceased to be employed as a daily means of communication (Bar-Asher 2009: 1: 3; Breuer 2013: 102; Kutscher 1982: 116, 148; Sáenz-Badillos 1993: 171). Since then, for almost two millennia, Jews lived in a state of diglossia, featuring in each of its components one or more languages: *Leshon ha-kódesh* (‘the holy tongue’, consisting of Hebrew and Aramaic) was predominant in the written sphere (including religious and cultural texts alongside written correspondence and other kinds of utilitarian texts), whereas everyday communication was conducted in a wide range of local vernaculars, both

Jewish varieties and the language(s) of their country of residence (Bunis 2013; Kutscher 1982: 149–150; Sáenz-Badillos 1993: 202–203; Sáenz-Badillos 2013). The oral dimension of Hebrew was not, however, totally lost, since the various Jewish communities retained their oral reading traditions in prayer and study. In addition, Hebrew may have filled other, more marginal functions as well, for example, occasionally being employed as a lingua franca in case of need for inter-community communication (Morag, 1992, 1993: 208–210, 1999: 3).

The modernization processes that resulted in the emergence of the linguistic variety known as ‘Modern Hebrew’ occurred in two distinct phases, differing in timespan, geographic location and the linguistic processes involved (Harshav 1993: 125–152; Rabin 1999; Reshef 2012; Reshef 2013). A literary revival, which occurred among Ashkenazi Jews in Central and Eastern Europe from the mid-18th century on, generated a comprehensive change in the nature of written Hebrew, expanding its bounds beyond the genres of traditional Hebrew writing and introducing far-reaching changes in its linguistic style. The initiative for speech revival, by contrast, was a later development, connected to the rise of the Jewish national movement towards the end of the 19th century. While inspired by European national ideology, the implementation of this initiative was conducted primarily by Jewish settlers in a province of the Ottoman Empire known as ‘Eretz Yisrael’ or ‘Palestine’ (see §3 below).

The idea of reinstating the use of Hebrew as a spoken language originated in nationalistically inclined Jewish circles in Europe towards the end of the 19th century. The need for a common spoken language for all Jews was viewed as a crucial component of the nation-building project, resulting in great efforts towards implementing this goal from the 1880s on, both in Jewish circles in Eastern Europe and among Jewish settlers who started immigrating to Palestine (Harshav 1993: 173–176; Rabin 1999: 365–368). By the end of World War I and the British occupation of Palestine, the success of these efforts was significant enough to be officially recognized. In a 1916 survey, about 34,000 people (roughly 40 percent of the Jewish population of Palestine) identified themselves as Hebrew speakers, and in 1922 Hebrew was declared an official language, alongside English and Arabic, by the British Mandate authorities (Bachi 1956: 185–187).

Although the Jewish society in what was then Palestine continued to be largely multilingual, the years of British rule were clearly marked by the consistent consolidation of Hebrew. The speech community continued to expand due to the arrival of repeated waves of immigration and the steady rise in the number of Hebrew school graduates (Bachi 1956: 187–189). The growing practical need for Hebrew within the semi-autonomous Jewish society was coupled with an explicit ideological struggle for Hebrew, vis-à-vis both the British authorities from without, and users of other languages from within (Efrati 2004: 201–214; Helman 2002; Reshef

2015: 18–39). The language repeatedly assumed new functions, and its usage domains constantly expanded, for example, in the administrative and legal spheres, the film industry, or radio broadcasting. As a result, the linguistic system itself underwent rapid processes of standardization and developed a growing measure of stability. On the one hand, these developments reflected the impact of actual practice in the form of common linguistic usages that arose spontaneously through the daily deployment of Hebrew for practical purposes (Blanc 1968; Reshef 2015). On the other hand, it was affected, at least partially, by extensive language planning activities of institutions and individuals who aspired to instill prescriptive norms (see Chapter 5).

By the end of the British rule and the foundation of the State of Israel in 1948, the number of Hebrew speakers amounted to slightly over 510,000 people (Bachi 1956: 191 [Figure 6]). After the establishment of the state, Hebrew naturally assumed the role of an official language, and became the dominant language of economy, administration, culture and education for all citizens of Israel, Jews and non-Jews, native and L2 speakers alike.

The foundation of the State had significant implications not only in the political sphere, but in various other domains as well. One of the most significant outcomes of independence was a drastic change in the demographic character of the Jewish population of the country within a very short time span. By 1951, it more than doubled (from around 650,000 people in 1948 to more than 1,300,000) due to mass waves of immigration, comprising primarily refugees from post-Holocaust Europe and from the Middle East and North Africa (Bachi 1956: 189–191). The effect on the size and composition of the speech community was dramatic. Since many of the newcomers were unfamiliar with Hebrew, and many other were familiar only with the traditional written sources, the percentage of Hebrew-speakers within the population initially decreased (Bachi 1956: 192). However, since many other newcomers had previous knowledge of Hebrew, the actual number of speakers increased significantly, so that by 1954 the speech community amounted to more than 860,000 people (Bachi 1956: 191 [Figure 6]).

No less significant was the impact of the mass immigration on the internal composition of the Jewish population. Up till 1948, about 80% of the population consisted of Ashkenazi Jews, originating in Europe and affected by Indo-European substrates (e.g., Yiddish, Russian, Polish), and only 20% were Sephardi Jews, originating in the Mediterranean and Middle Eastern countries and native speakers of mainly Judeo-Spanish or Arabic. The mass immigrations of the early 1950s shifted the balance between the various ethnic groups, so that by 1958 more than 40% of the Jewish population came from Arabic-speaking countries (Lissak 2003; Schmelz 1989). Since their families tended to be larger than those of Ashkenazi Jews, their share in the population continued to rise due to natural growth. There were other

significant differences as well between the various ethnic groups within the Jewish population in the early years of statehood that are highly relevant to language use, such as type and level of religiousness, cultural background, attitudes towards the language of the Hebrew traditional sources, education, professional training, gender differences, or geographical distribution after immigration to Israel. Very little research, however, has been done on the effect of the mass immigrations of the 1950s on the language accommodation of the various ethnic groups, or on their long-lasting impact on the further development of Modern Hebrew (see discussion in Chapter 4).

Further waves of immigration, coupled by natural growth, continued to increase the number of speakers and to affect the demographic composition of the population in the following decades. Most notable was the arrival of more than 1,000,000 immigrants from the former Soviet Union during the 1990s (Galili & Bronfman 2013; Leshem & Sicron 1994). Other ethnic groups immigrated in much smaller numbers: For example, the organized immigration of the majority of Ethiopian Jews to Israel consisted of a group of 8,000 people in 1984 and another 14,000 in 1991 (Kaplan & Salamon 2004). However, as opposed to the formative years of the first half of the 20th century, when each wave of immigration seemed to threaten the achievements of Hebrew, contemporary Israel is linguistically no different from any other country of immigration. For adult first-generation immigrants, Hebrew remains an L2, with accommodation patterns depending on factors such as length of time since arrival, level of education, motivation, professional occupation, etc., whereas the younger generation (of native-born Israelis or children who came to Israel at a young age) typically achieve native or near-native proficiency of Hebrew.

To this day, the speech community is characterized by a great measure of multilingualism due to the high proportion of Jewish immigrants, non-Jewish minorities and non-citizen immigrants (see Chapter 4). However, Hebrew is undoubtedly the dominant, unmarked language both in face-to-face interaction and in formal and written communication. The strength of Modern Hebrew in the speech community despite its relatively recent formation is remarkable. A key factor to understanding this non-conventional process of language revitalization (as well as some of the complexities of contemporary practice) involves taking into account prior use of Hebrew and its place in Jewish life before and during the period of speech revival.

2. The impact of the historical strata of Hebrew

Although Hebrew was no longer used as a spoken vernacular from around the year 200 CE, it retained its centrality as an essential component of Jewish life and Jewish identity. The canonical texts created in the classical periods assumed a sacred

status and formed the basis for liturgy, learning and religious practice over the centuries. In addition, since Jews across the diaspora typically lived in various states of di- or even multi-glossia, an exceedingly large body of religious and secular works was composed in *Leshon ha-kodesh* (i.e. Hebrew and Aramaic), irrespective of the local vernacular employed in daily life. The nature of Jewish education and the requirements of religious life resulted in a relatively high level of literacy (confined largely to males) in traditional Jewish society as compared to the surrounding societies (Stampfer 1993). The cultural patrimony was always transmitted in Hebrew, or alternatively translated into Hebrew when originally written in another language. The most notable example is the large body of literature composed in Judeo-Arabic by Jewish writers in Medieval Spain, and translated to Hebrew by the sages of Provence in the 12th and 13th centuries (Maman 2013; Sáenz-Badillos 1993: 246–264; Zonta 2013). Practical functions also relied heavily on knowledge of Hebrew, which was employed, inter alia, in letters, documentation of essential information in the community archives, inscriptions on tombstones, and so forth. Later, processes of modernization and secularization among Jews in Central and Eastern Europe from the mid-18th century on were accompanied by a flourishing of written works in Hebrew (Harshav 1993: 120–132; Rabin 1985b). Consequently when the idea of reinstating its use as a vernacular was first raised towards the end of the 19th century, Hebrew was readily available to prospective speakers as a language already in partial use (Morag 1993; Reshef 2012).

The canonical texts created in the classical period consist of two distinct corpora differing significantly both in grammar and in style, Biblical Hebrew and rabbinic Hebrew. The Hebrew Bible exists in a single, authoritative version that includes a system of diacritic vocalization created by the sages of Tiberias in the 10th century CE and accepted by all Jewish communities around the world. The text itself, in spite of certain differences between genres (such as poetry, prophecy, historical narrative) and the long timespan during which it was composed, is characterized by a shared set of morphological and syntactic features that clearly distinguish it from later Hebrew corpora (Hornkohl 2013; Khan 2013). The Biblical lexicon consists of approximately 8,000 items, with Hebrew grammatical tradition based on the study of the canonical, vocalized version of the Bible.

The biblical text and style of writing are by and large highly familiar to members of the speech community. Unlike other cultures, in which coping with historical texts is often challenging for the uninitiated reader (such as Chaucer or Shakespeare for English speakers), the biblical text is readily accessible to speakers of Modern Hebrew, at least in its narrative parts, and a certain measure of exposure to it is an integral component of their linguistic experience. In the religious sphere, certain parts of the Bible form part of the liturgical practice and are read aloud in public in the synagogue on a regular basis. In Israeli society as a whole,

the Bible is considered to be a formative component of modern, secular Jewish identity (Shapira 2005), and is thus studied by all as a core school subject from an early age up until school-leaving, regardless of religious belief. It is also obligatory for students in Arabic-medium schools as well.

The other classical stratum of the language, namely rabbinic Hebrew, is much less familiar to most contemporary speakers. Unlike the Bible, rabbinic Hebrew consists of a vast corpus of works, its most basic representative being the Mishna, a codex of Jewish laws given its final form during the latest phase in use of Hebrew as a medium of spoken communication around the year 200 CE. The Babylonian Talmud, which is based on the Mishna and serves as the basis for Jewish religious rulings, was created when Hebrew was no longer a spoken language, and as such is in fact written in two languages, Hebrew and Aramaic, reflecting the typically diglossic situation of Jews in post-Biblical times (Breuer 2013).

There are significant differences between rabbinic and Biblical Hebrew in morphology, syntax, lexicon, and style (Bar-Asher 2009: 6–11; Rubinstein 1985: 10; Sáenz-Badillos 1993: 51). In addition, as distinct from Biblical Hebrew, there is no single accepted or authorized version of the rabbinic texts. Besides, rabbinic literature occupies a totally different place in Israeli culture than the Bible. Whereas rabbinic texts (and later works based on them) were the basic component of traditional Jewish education, so that they were familiar to most educated males in the formative phase of Modern Hebrew, processes of secularization meant that rabbinic texts were largely marginalized in secular Israeli culture. As a result, although in religious circles they have retained their central place in schooling, they typically no longer form part of the linguistic experience of non-religious speakers of Hebrew today.

The same is true of most Hebrew texts created during medieval and pre-modern times. Such texts are often hard to understand for the uninitiated contemporary reader. However, in contrast to the situation in other languages, the difficulty stems primarily from factors related to style and content rather than from purely linguistic differences. The basic linguistic material in most historical texts is rooted in the classical layers of Hebrew, with processes of change affecting mainly the meaning of words and the syntactic organization of the texts (what Hebraists term the “internal content” of the language), while leaving the “external appearance” in the sense of morphological forms of written Hebrew relatively intact (Ben-Hayyim 1985: 18–21). As a result, most forms encountered in historical texts are familiar to the contemporary reader, but not necessarily how they are used or what they mean in the context of these writings.

Generally speaking, the formation of Modern Hebrew was based primarily on a combination of biblical and rabbinic features, whereas usages patently associated with medieval types of Hebrew were largely rejected (Rabin 1985a; Rubinstein

1985). The choice of linguistic patterns and structures out of the various options available in the earlier styles of writing were greatly affected by changes in the nature of written Hebrew in modern times, prior to its revival as a medium of everyday speech. As written and spoken Modern Hebrew emerged in two separate processes, one centered in Europe, the other in Eretz Yisrael, the choices made in these two modalities between the available linguistic features were not necessarily identical, resulting in a relatively wide gap between more formal and everyday colloquial usage in contemporary language (Berman 1997: 331–332).

3. The modernization of Hebrew

As noted, the modernization of Hebrew occurred in two stages, since efforts at transforming Hebrew into a spoken medium in Eretz Yisrael from the late 19th century on followed on a hundred years or more of significant expansion and change in the nature of written Hebrew among Ashkenazi communities in Central and Eastern Europe (Harshav 1993: 120–132; Rabin 1985a). The changes in the written language are customarily attributed to processes of emancipation that gave rise, from the mid-18th century on, to the Haskala movement (the Jewish ‘Enlightenment’), which aimed at promoting the modernization of Jews and their integration into the surrounding societies. In order to do so, highly educated and literate Jews created a vast body of literature in Hebrew, both original and translated, aimed at expanding the boundaries of written Hebrew to match the repertoire of other cultures in various domains, including belles-lettres, science, philosophy, and journalism (Kahn 2013a). In linguistic terms, the Haskala advocated replacing the two components of the linguistic diglossia of diaspora Jews – of Yiddish as the local Jewish vernacular used in daily speech alongside the traditional *Leshon ha-kodesh* (i.e. Hebrew and Aramaic) used in writing – by purer, less adulterated linguistic varieties. In everyday communication, Yiddish was to be replaced by the language of the surrounding gentile society, while the mixture of rabbinic Hebrew and Aramaic that dominated traditional religious texts was to be replaced in literary writings by the original, classical version of Hebrew, namely Biblical Hebrew (Bartal 1993). This focus of leaders of the Haskala on adherence to biblical style, grammar, and lexicon and their objection to post-biblical varieties of Hebrew was influenced by the classicist ideas of the Enlightenment movement from without, and by the internal legacy of linguistic purism inherited from the golden age of medieval Hebrew poetry produced in Spain under Muslim rule several centuries previously. These ideas took root among modernized Jews, functioning as basic components of language ideology throughout the early period of the revival of Hebrew speech, as well as at later stages in the evolution of Modern Hebrew.

Another influential movement that arose in Jewish circles in Eastern Europe around the same time as the Haskala was the Hasidic movement, which introduced a new, popular form of Jewish religious life. Hasidism also created a large body of texts in a unique idiom, known on the one hand for its great popularity and on the other for its extreme deviation from the rules of traditional Hebrew grammar (Glinert 2006; Kahn 2013b, 2015). Despite the aversion to Hasidic style in modernized Jewish circles (and later in the Jewish national movement), certain common non-canonical linguistic usages found in Hasidic texts appear to have been unintentionally adopted by the first generations of speakers, helping to shape the form and content of colloquial registers once a speech community of users of Modern Hebrew started to emerge (Reshef 2019).

The late 19th century witnessed two parallel developments in the use of Hebrew (Harshav 1993: 120–152; Rabin 1999; Reshef 2013). One was a literary revival centered in intellectual circles in Europe. Alongside a marked change in the topics of belletristic production and in literary forms, this revival involved the substitution of the somewhat archaic literary models of the Haskala along with its Biblically oriented stylistic aspirations by a modern, more flexible variety of written Hebrew. This new linguistic style was based, on the one hand, on the acceptance of the linguistic legacy of all various historical periods of the language as a legitimate means of literary expression, and on the other hand, on openness towards modes of expression stemming from the close contact with Yiddish, Russian, and other languages and cultures familiar to Eastern European Jewish writers (Even-Zohar 1993; Rabin 1985a, 1985b). The other development was the revival of Hebrew speech in Eretz Yisrael. At first, the attempt to use Hebrew for everyday spoken communication was restricted mainly to schools but, subsequently, in the decade preceding World War I, it expanded to wider social circles as well (Harshav 1993: 104–112, 133–152; Morag 1999: 215–217; Reshef 2012: 548–549; Reshef 2013: 410–412).

Initially, these two parallel processes not only developed separately, but were in certain respects in opposition to each other. Most leaders of the literary revival in Europe bitterly objected to the initiatives undertaken in Palestine to promote Hebrew speech, most particularly to the directions of linguistic change that these involved (Eldar 2010: 96–100; Reshef 2014). Later on, however, following the ban on Hebrew cultural activity as a result of the Bolshevik revolution in Russia and its surroundings, the center of Jewish literary activity in Europe was destroyed, and the Jewish community in Palestine turned into the indisputable center of Hebrew usage in all domains of life (Shaked 1985; Shavit 1985).

Following on the initial split between spoken and written usage in the evolution of Modern Hebrew, two different standards came to co-exist side by side in the language: a literary standard characterized by elevated language and a high degree of affinity with the classical models; and an emergent standard in speech and everyday

written texts, which was more modern in nature, and characterized by numerous deviations from the classical models. Evidence points to the 1920s as a crucial watershed in the formation of this standard (Reshef 2015, 2016; Reshef & Helman 2009). During that decade, Hebrew shifted from an optional linguistic variety in the Jewish society in Palestine prior to World War I to what Harshav (1993) has called the “frame language” of society whose linguistic predominance is universally recognized, regardless of the actual linguistic practices of its participants. At the time, however, this emergent standard was largely confined to spoken usage and to utilitarian types of written activity, whereas more formal usage continued to rely on the literary tradition created on European soil (Even-Zohar 1981; Reshef 2015: 35–38).

An example of the differences between the various registers that co-existed in the speech community is provided by Blanc (1968: 242–243), who presents a scale of four varieties of style: ‘untutored’, ‘average informal’, ‘average formal’ and ‘elevated’. His translation to Hebrew of the sentence “We don’t think they have any in this store” according to this scale is as follows (presented in Blanc’s transliteration):

- (1) Untutored:

anáxnu lo xošvim še-yeš et ze baxanút (h)azóti
 we not think:PRS.1PL that-there.is ACC this in.DEF.store DEF.this

- (2) Average informal:

anáxnu lo xošvim še-zé yešno baxanút (h)azót
 we not think:PRS.1PL that-this is in.DEF.store DEF.THIS

- (3) Average formal:

eyn anáxnu (ánu) svurim (xošvim) ki davár ze nimcá
 not we think:PRS.1PL that thing this found:PRS.3SG.M
bexanút zu (zo)
 in.store this:F

- (4) Elevated:

eyn ánu (eynénu) svurim ki yimacé hadavar
 not we (we.not) think:PRS.1PL that found:FUT.1SG DEF.thing
baxanút zo
 in.store this

As Blanc’s example clearly demonstrates, differences between the registers touch on all linguistic domains, from phonology and morphology to syntax and the lexicon.

This split between the different standards – written and spoken, formal and informal – continued to affect the use of Modern Hebrew for many years, with traces that are to some extent still felt in contemporary language usage. Up to the 1950s, formal and elevated usage dominated all cultural and ideologically motivated

linguistic activities. Prose, poetry, children's literature, songs, films, theater, radio broadcasting, political speeches, and even certain journalistic styles – all featured an elevated linguistic style, while the emerging informal standard was considered an illegitimate or reprehensible means of expression to be avoided. School instruction of Hebrew was oriented to directing language use to “correct usage”, while at the same time extensive language planning activity aimed at eradicating spontaneous linguistic innovations and usages that were perceived as corrupt, with the goal of replacing them by usages more compatible with the linguistic legacy of the classical layers of Hebrew (Gonen 2013; R. Nir 1981), as elaborated in Chapter 5.

From the 1950s on, an ongoing process of acceptance of the emerging standard as a legitimate medium of cultural activity gradually came to affect language use in Israel. The rate of change was not uniform across all aspects of the culture, being variously manifested in different domains. For example, standard language was adopted as the basic means of expression first in poetry, and only later in both prose and song-writing, original literary works preceded its adoption over translations, and cultural activities aimed at adults changed earlier than those aimed at children (including not only established genres such as drama and prose, but more contemporary genres as well, such as use of high register in dubbing of foreign films and television series). As a result, the linguistic experience of members of the contemporary speech community is extremely varied, since they are exposed from an early age to a variety of linguistic styles alongside colloquial and contemporary standard written usage: deliberately archaic language in many children's songs, elevated literary language in books, highly normative speech in certain television shows, Biblical Hebrew through school instruction, and so forth.

The effect of this variegated exposure on educated speakers has an impact not only on their linguistic competence, but in the area of linguistic ideology as well. The very creation of Modern Hebrew was based on a perception of historical continuity of the language despite the centuries-long hiatus in its use as a vernacular (Ben-Hayyim 1985; Rabin 1985b: 274). Nowadays, the principles dominating linguistic education and the vast exposure to linguistic styles anchored in the historical legacy of previous linguistic strata tend to foster this sense of continuity among contemporary speakers. Structural factors also contribute to the sense of continuity, as changes seem to have had a stronger effect on the functions than on the surface forms of linguistic elements (see, for example, Chapters 11, 18). This phenomenon is particularly evident in the field of morphology, which is marked by extreme conservatism due to the almost exclusive reliance on inflection on the grammar taken over from earlier stages of the language (Goldenberg 1996; and see, too, Chapters 7, 8, and 9). The considerable number of inherited lexical items and syntactic constructions in the modern linguistic system also contributes to a sense of continuity with previous linguistic strata (Rabin 1985b). Consequently, despite

the distinct nature of Modern Hebrew, the large majority of Hebraists and many linguists (as well as non-expert educated contemporary speakers) tend to view classical and Modern Hebrew as two phases of a single unified language, Hebrew (Ben-Hayyim 1985: 16–18; Rubinsten 1985: 9).

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Genetic affiliation

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The chapter opens with a description of “the Semitic family of languages”, then describes characteristically Semitic facets of Hebrew morphology with reference to the consonantal root, the pronominal, nominal, and verbal systems of the lexicon. It concludes with comments on the controversial status of MH, viewed by some as an independent “Israeli” as against a language still closely affiliated with its Semitic roots.

1. The Semitic family

Hebrew is traditionally considered to be a member of the Semitic family of languages (Rubin 2010, 2017; Weninger et al. 2011). As such, Hebrew is descended from a common ancestor (an unattested Proto-Semitic language) as are the other Semitic languages, with which it shares inherited features of grammar and lexicon. The overwhelming scholarly consensus is that although Hebrew has evolved over the last three millennia, its genetic affiliation remains the same. This classification has, however, been challenged with respect to Modern Hebrew by a small number of scholars (see §4 below).

With a written history of nearly five thousand years, the Semitic languages comprise one of the world’s earliest and longest attested language families. Most of the Semitic languages were or are spoken in the areas of the Levant, Mesopotamia, Arabia, and across the Red Sea in Ethiopia and Eritrea, with the major exception of Arabic, which has spread across North Africa and, to a lesser extent, into Central Asia. Many of the living Semitic languages are also spoken by immigrant communities worldwide.

The Semitic family is part of a larger macro-family called Afroasiatic (Hayward 2000; Huehnergard 2004). All the other language families within Afroasiatic – Egyptian, Cushitic, Omotic, Berber, and Chadic – are (or were, in the case of the extinct Egyptian branch) found in Africa.

The internal classification of the Semitic languages has long been the subject of debate (Rubin 2008; Kogan 2015). Most scholars agree that from an unattested ancestor called Proto-Semitic, there was a primary split between East and West Semitic, with Akkadian (including the Babylonian and Assyrian dialects) as the most important member of East Semitic. West Semitic can be divided into three main subgroups, (i) Ethiopian Semitic languages (including Ge'ez, Amharic, and about a dozen other modern tongues), (ii) the Modern South Arabian languages of Yemen and Oman (including Mehri, Jibbali, Soqoṭri, and several others), and (iii) Central Semitic. The Central Semitic group consists of Arabic (by far the most widely spoken Semitic language today), the Ṣayhadic group (including Sabaic, the language of the ancient kingdom of Sheba), and the Northwest Semitic group, which includes ancient Ugaritic, Aramaic, and the Canaanite group. Hebrew originated as just one of several dialects of Canaanite. In fact, in the Bible (Old Testament), the Hebrew language is never actually called Hebrew, but rather is referred to either as *שְׂפַת כְּנָעַן* *šəp̄at kənaʿan* ‘the language of Canaan’ or *יְהוּדִית* *yəhūdīt* ‘Judean’. The family tree in Figure 1 illustrates this classification scheme. (Languages in italics are no longer extant.)

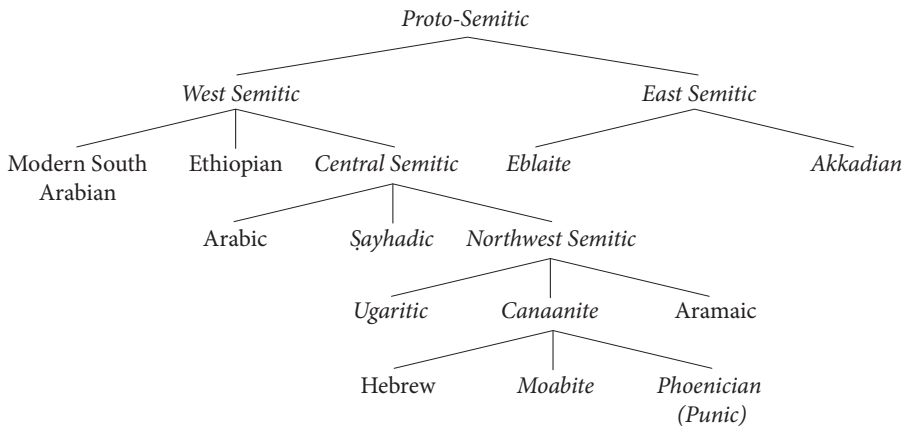


Figure 1. Classification of Semitic languages

2. Hebrew morphology as Semitic

The genetic affiliation of a language is traditionally considered to be most effectively established by comparison of its morphology with that of other languages (Hetzron 1976). Some scholars also consider the lexicon a useful source of information in this respect (Kogan 2015), while phonology and syntax are more easily

affected by external influences. Those who uphold the traditional classification of Modern Hebrew as Semitic (e.g., Goldenberg 1996) tend to regard the morphology of Modern Hebrew as especially conservative compared with other aspects of its grammar and lexicon. The following sections provide a brief overview of some basic morphological phenomena and their cognate constructions in other Semitic and non-Semitic Afroasiatic languages.

2.1 The consonantal root system

Perhaps the most characteristic feature of the Semitic family is the consonantal root, which is fundamental to the morphology and lexicon of all Semitic languages (see further in Chapters 7, 8, and 9). All verbs and most nouns are based on a set of root consonants, usually three, which are used in conjunction with vocalic templates to form words. These templates, which result in the interweaving of the consonants with vowels, and often include the addition of prefixes or suffixes, serve to form the bulk of the content words (all verbs and most nouns and adjectives) in the language. The consonantal root typically conveys the core lexical meaning, while semantic variations and grammatical alternations are carried by morpho-phonological templates traditionally termed *miškal-im* literally ‘weight-s’ for nominals (nouns and adjectives) and *binyan-im* ‘building-s, construction-s’ for verbs. For example, the Arabic root *MLK* has a meaning associated with ownership or rule, as seen in the words *malaka* ‘he ruled’, *yamliku* ‘he rules’, *malikun* ‘a king’, *mulkun* ‘reign, dominion’, *milkiyyatun* ‘property, ownership’, and *malakūtun* or *mamlakatun* ‘kingdom’. In each of these words, the root appears with a particular set of vowels, and sometimes also with a prefix or suffix. This typical Semitic trait is seen in all periods of Hebrew, and remains a vital part of Modern Hebrew. For example, from the cognate root מִלֵּךְ *m-l-k*, Modern Hebrew uses the words מֶלֶךְ *mélex* ‘king’, מַלְכָּה *malka* ‘queen’, מָלַךְ *malax* ‘he reigned’, מָלוּךְ *məlox* ‘reign!’, הִמְלִיךְ *himlix* ‘he crowned (as king)’, מַלְכוּת *malxut* ‘royalty’, and מַמְלָכָה *mamlaxa* ‘kingdom’.

Across all periods of Hebrew, as in Semitic languages in general, the vocalic patterns are typically associated with derivational morphology, such as for formation of different types of nouns (e.g., agentives and instrumentals) and verbs (e.g., causatives, reciprocals, and passives), but they can also sometimes be used for inflectional morphology (person, gender, and number marking). As noted, these properties trends are elaborated with respect to MH in Chapters 7 and 8, respectively.

2.2 Pronominal system

The Hebrew pronouns, both independent and suffixed forms, are very close to those of the ancient Semitic languages, and even have clear parallels in various Afroasiatic languages. For example, the longer (today more elevated) Hebrew 1st person singular pronoun אֲנִי *anoxi*, can be compared not only to Akkadian *anāku*, but also to Tamazight (Berber) *nek* and Coptic (Egyptian) *anok*; while the everyday Hebrew form אֲנִי, and *ani*, is clearly related to Arabic *ʔana* and Amharic *ʔane*, but also Sidamo (Cushitic) *áni* and Hausa (Chadic) *nī*. The distinction of gender in both 2nd and 3rd person pronouns is typical of Semitic. Moreover, distinction of gender in the 2nd person, while common in other Afroasiatic languages, is relatively rare cross-linguistically, and is unknown in European languages (Siewierska 2004: 105); and, in fact, this distinction is largely blurred in current MH usage in the plural (Chapter 7).

Moreover, the person-marking affixes in the verbal system have parallels going back to Afroasiatic. For example, the markers of 3rd person singular in the Hebrew future tense are -י *y-* for masculine and -ת *t-* for feminine (e.g., יִכְתוּב *yixtov* ‘he will write’, תִּכְתוּב *tixtov* ‘she will write’). These are comparable to Tamazight (Berber) *i-* and *t-*, Somali (Cushitic) *yi-* and *ti-*, and Hausa (Chadic) *ya* and *ta*, although the verb paradigms associated with these various Afroasiatic pronominal forms do not necessarily correspond exactly to the Hebrew future.

The indication of the pronominal objects of verbs and prepositions by means of suffixes is a Proto-Semitic feature, as is the indication of pronominal possession by means of suffixes. Already in Classical Hebrew, pronominal objects of verbs and pronominal possession could also be indicated by independent lexical items (, the preposition אֶת *et* for objects, and, later on, the particle שֶׁל *šel* for possession, which are themselves used with pronominal suffixes, as noted from different perspectives for MH in Chapter 7 and Chapter 9). The marked preference in MH is for analytic rather than bound, inflected marking of direct objects and possessors (compare *rei-ti-v* ‘see:PST-1ST.SG-OBJ.3SG’ versus *rai-ti ot-o* ‘see:PST-1ST.SG ACC-3SG.M’, both meaning ‘I saw him’, and *yald-o* ‘child-POSS.3SG.M’ versus *ha-yéled šel-o* ‘DEF-child GEN-POSS.3SG.M’, both meaning ‘his child’), developments which are found in many other Semitic languages as well (see, for MH, Chapters 7 and 14).

2.3 Nominal system

Proto-Semitic marked nouns for two genders (masculine and feminine), three numbers (singular, dual, and plural), and three cases (nominative, accusative, and genitive). As far back as the earliest attestation of Hebrew, the system of case-marking was lost, and the dual had become only marginally productive. But the general morphology of gender and number marking has remained clearly Semitic.

The Hebrew feminine markers ה- *-t* and ה־ *-a* reflect the most common Semitic feminine markers **-t* and **-at*, respectively, and these can also be traced back to Proto-Afroasiatic. A feminine suffix *-t* is also found in ancient Egyptian, while in Berber languages, most feminine nouns have a prefixed *t-*, often paired with a suffixed *-t*, as in Tamazight *izem* ‘lion’ ~ *tizemt* ‘lioness’.

The various patterns and derivational morphemes associated with Hebrew nouns usually have clear parallels in other Semitic languages, and sometimes also in Afroasiatic. For example, the pattern *CaCCaC* used for many agentive nouns is found in a number of other Semitic languages (cf. Hebrew סבּל *sabbal*, Arabic *ḥammāl*, and Ge‘ez *ṣawwār*, all meaning ‘porter’). Many Hebrew nouns with related verbal roots have a prefixed מ- *m-*, which can indicate location (e.g., מקום *maqom* ‘place’, from the root קוּם *QWM* ‘stand’), agent (e.g., משרת *māšaret* ‘servant’, from the root שרַת *šRT* ‘serve’), and instrument (e.g., מפתח *mafteaḥ* ‘key’, from the root פתַח *PTX* ‘open’). Parallels can be found not only in Semitic languages (cf. Ge‘ez *manbar* ‘seat’, from the root *NBR* ‘sit’, and *marxo* ‘key’, from the root *RXW* ‘open’), but also in Egyptian, Chadic, and elsewhere. Cf. Hausa (Chadic) *sàuka* ‘lodge, stay’ ~ *masaukī* ‘lodging place’; *hàifā* ‘give birth to; beget’ ~ *mahàifi* ‘parent’; *gìrbā* ‘reap’ ~ *magìrbī* ‘harvesting tool’.

2.4 Verbal derivation (verbal stems)

The seven major verbal stems (*qal*, *nif’al*, *pi’el*, *pu’al*, *hif’il*, *hof’al*, and *hitpa’el*) – traditionally called *binyanim* and in the present volume also ‘verb patterns’ or ‘prosodic templates’ – have parallels throughout the Semitic family, although the functions of some stems vary between the languages. This relationship is seen most clearly in the *hif’il*, which has a causative function throughout Semitic. The Hebrew initial *h-* of the Hebrew causative stem (*hif’il*) derives from a Proto-Semitic **s-*, which became *ʔ-* in Arabic, Aramaic, and Ethiopian Semitic, and *š-* in Akkadian. Thus, parallel to Hebrew pairs like לבש לְבַש *lavaš* ‘wear, put on’ ~ הלביש *hilbiš* ‘dress (someone), clothe’, we find Arabic *labisa* ~ *ʔalbasa*, Syriac *laveš* ~ *ʔalbeš*, Ge‘ez *labsa* ~ *ʔalbasa*, and Akkadian *labāšu* ~ *šulbušu*. A causative with *s-* also existed in Egyptian, and is still found in Berber (e.g., Tamazight *ired* ‘be washed’ ~ *ssired* ‘wash’). Cushitic and Omotic causatives are usually marked by a suffixed *-s* (e.g., Oromo [Cushitic] *hiyyom* ‘be poor’ ~ *hiyyoms* ‘make poor’), although a causative with a prefixed *s-* is not unknown (e.g., with certain verb types in Beja [Cushitic]). The Hebrew *n-*stem pattern (*nif’al*), typically a detransitivizing construction, also has clear parallels in Afroasiatic (Lieberman 1986), as does the *t*-Stem (*hitpa’el*) pattern (see details for MH in Chapter 8).

2.5 Verbal inflection

Of the three main verbal tenses of Modern Hebrew – past, present, and future – only the past and future are historically verbal forms. The Modern Hebrew present tense (e.g., לומד *lomed* ‘learns’), which conjugates only for number and gender, but not for person, is historically a nominal form (called the *benoni* ‘intermediate’ in the Hebrew tradition) that had the function of a present participle. The past and future tenses are inflected for person, as well as for number and gender. The past tense, characterized by the use of suffixes to indicate the subject (e.g., למדתי *lamád-ti* ‘I learned’), can be reconstructed as such back to Proto-West Semitic. In Proto-Semitic it was a stative construction, as in Akkadian. The future tense, characterized by the use of prefixes to indicate the subject (e.g., אלמד *e-lmad* ‘I will learn’), had a much broader range of functions in Biblical Hebrew, generally serving as a present/future or an imperfective. Its origins lie in the West Semitic imperfective **yaqtulu*, which itself comes from the Proto-Semitic preterite **yaqtul* plus an indicative morpheme *-u*. The use of the form **yaqtulu* as an indicative imperfective is an innovation of Central Semitic that replaced the inherited imperfective form (Huehnergard 2005).

The morphemes used to mark person, number, and gender in MH past and future tense are the same as those of Biblical Hebrew, which in turn are very close to those of Proto-Semitic. The only real innovation of Modern Hebrew is the loss of the 2nd and 3rd person plural feminine forms of the future, now usually found only in a very high register, although they can also be found in some female-only sociolinguistic settings (such as sports classes), in the speech of religious speakers, or among speakers with a feminist objective. Other changes are restricted to colloquial usage, such as the tendency to merge the 1st and 3rd person singular prefixes of the future tense (e.g., *yixtov* [*yi-xtov* 1SG/3SG.M-write:FUT] ‘I/he will write’).

3. Lexicon

While Modern Hebrew has a large number of loanwords from a variety of languages, the core vocabulary of Hebrew, its pronouns, numbers, prepositions and other function words are all Semitic, with the exception of a handful of discourse particles, like *nu* from Yiddish or Russian (see Chapter 9). Categories of basic nouns, including kinship terms, body parts, primary colors, and words related to time, are nearly all Semitic words that are attested in the Bible or Rabbinic literature.

Of the newly-created words in Modern Hebrew, most are based on Semitic roots. Some of the coinages of the last two centuries are calques of words or phrases from European languages, but their roots are still Hebrew (Yadin 2013). For example פרת משה רבינו *parat moše rabénu* ‘ladybug’ (literally ‘our rabbi Moses’ cow’)

is a calque of Yiddish *moyše rabenes kiele* (itself a partial calque; cf. Russian *bož'ja korovka* 'God's little cow'), and חַמְשָׁן *xamšan* 'oxygen' from the root חמץ *x-m-š* 'sour') is a calque of German *Sauerstoff*.

Many semantic extensions come from other languages. For example, the fact that Hebrew גרעין *garšīn* means both 'stone (of a fruit)' and 'nucleus' may well be due to the fact that both meanings are encoded by German *Kern* (cf. also French *noyau* and other European languages). This is also the case of the recent extension of *réšet* 'net' to refer to the internet, based on English usage.

As noted above and like any language, there are also many loanwords in Hebrew. Loanwords from neighboring languages like Akkadian, Egyptian, and Aramaic, appear already in the Bible. In modern times, loans are mainly from European languages, especially from English, and from Arabic, and these are often incorporated into the Hebrew system of morphology, as in words like *bos* 'boss', plural *bósim*, feminine singular *bósit*.

4. The controversial status of Modern Hebrew

Some scholars have claimed that Modern Hebrew is not a Semitic language, but rather a relexified European language (Wexler 1990) or a hybrid Semitic – Indo-European language (Zuckermann 2006, 2008), a point of view that is expounded, and countered in some detail, by Zeldes (2013), and see, too, Chapter 18.

Modern Hebrew has clearly been influenced by European languages (Yiddish, English, and others), particularly in the domain of vocabulary, where the influence of English is currently the most pervasive (Rosenhouse 2013a, 2013b; Shlesinger 2013). However, this in no way negates the many inherent Semitic traits of Modern Hebrew, or negates the facts of its history.

For example, the inflectional and derivational morphology of the verbal system, the pronominal system (including the indication of pronominal objects and possession by means of suffixes), the idiosyncrasies of gender (reverse concord) with regard to the numeral system (see Chapter 7 on inflectional morphology), the so-called "construct state" used for indicating a genitive relationship between two nouns (see Chapter 15), and the entire system of root consonants and patterns (templatic morphology) are all Semitic.

A substantial part of English vocabulary is Romance in origin, as are quite a few derivational morphemes (*re-*, *-tion*, etc.), but no one denies that English is still a Germanic language. Likewise, Turkish is indisputably Turkic, and Urdu is indisputably Indo-Aryan, despite the fact that both languages have large numbers of loanwords from Arabic. In fact, even a cursory comparison of Modern Hebrew with some other modern Semitic languages, including any of the many

Neo-Aramaic dialects or one of the South Ethiopian languages (Amharic, Harari, Wolane, etc.) reveals that Hebrew is far more Semitic in character than they are, in terms of morphology, syntax, and lexicon (Goldenberg 1996). Moreover, Akkadian, the oldest-attested of the Semitic languages, exhibits strong influence in phonology, syntax, and lexicon from the non-Semitic Sumerian. Yet no one would deny that Akkadian is a Semitic language.

In short, like all Semitic languages, Hebrew has been influenced by other, non-Semitic languages. It has lost some of the phonemes that were present in biblical times; it has borrowed many foreign words; and some features of its syntax (like SVO word order) may have been influenced by European languages. But Hebrew is undoubtedly a Semitic language, both from a diachronic and synchronic perspective.

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Sociolinguistics of Modern Hebrew

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The chapter characterizes Modern Hebrew as having developed in a highly multilingual setting. This evolved, initially, from a century of Jewish immigrations starting in the 1880s, bringing languages from Europe, the Balkans, the Middle East, and North Africa. Subsequently, late 20th-century immigrations from the former Soviet Union and Ethiopia and an influx of global languages further increased multilingualism in the small area of what was known formerly as Palestine (or Eretz Yisrael 'the Land of Israel') and, since 1948, as Israel. The impact of these incoming languages on Modern Hebrew is described as depending on varying sociolinguistic factors of languages-in-contact, including an asymmetric interaction pattern that evolved between Hebrew and Palestinian Arabic which, together with more general socio-historical factors, created a multitude of communal varieties, and different registers, genres, styles, and codes of usage. The chapter also briefly considers issues of language, gender, and power as well as language policy and planning in this complex sociolinguistic setting, concluding with general comments on the current linguistic landscape of Modern Hebrew.

1. The multilingual setting of Modern Hebrew

'The Land of Israel' has always been multilingual, most prominently so since the emergence of Modern Hebrew, first in Europe then in Palestine (see Chapter 2). Incoming waves of Jewish immigrants, beginning with the 1880s, first predominantly from Eastern Europe, then from all over the Jewish diaspora, spoke Jewish languages and varieties, such as Yiddish, Judezmo, and Judeo-Arabic, in addition to co-territorial languages such as Polish, Turkish, and Berber. This fusion resulted in a highly complex, dynamic, multilingual mosaic with substrata of some 40 languages (Shohamy & Spolsky 2002: 118–119). Such intense contact, especially in circumstances of unequal prestige or 'market value' of the languages in the local sociolinguistic context, typically triggers a gradual process of koineization: Certain features are selected, mostly from the more prestigious varieties, others rejected, largely from less prestigious varieties. The result is a hybrid koiné, eventually spoken

by the majority as a native language or as a style. Modern Hebrew (MH) in its mainstream form, General Modern Hebrew (GMH), is in fact the result of a koineization process – selecting and fusing the most widespread, non-stigmatized features from the major incoming varieties (Blanc 1968; Colasuonno 2013: 3). With the rising hegemony of GMH, the ‘exilic’ languages and ethnolects were denied public space recognition under a ‘melting pot’ integrationist policy that lasted until the 1970s. However, this turned out to be more of an ideal than a reality. In practice, the pace of convergence to Hebrew and of divergence away from it was determined by socio-cultural circumstances. These included factors of ethnolinguistic vitality – solidarity with the ethnic community, prestige of the native languages or varieties, social mobility, and integration of the in-group, and institutional support (Yaeger-Dror 1988, 1994: 114).

The three major historical factions of diaspora Jewry are, roughly, in conventional nomenclature, Ashkenazi (European), Sephardi ‘Spanish’ (mostly Balkan), and Mizrahi ‘Eastern’ (Middle East and North Africa).¹ Each introduced different immigrant languages and pronunciation traditions of liturgical Hebrew.

1.1 Languages of Ashkenazi Jews

The Ashkenazis, mostly from Eastern Europe, constituted between 80–88% of the Jewish population in Palestine in 1948 (Ben-Rafael 2002: 74; Lefkowitz 2004: 87; and see Chapter 2). They were thus dominant in establishing current usage and formal language policies and in influencing further linguistic developments. Yiddish, Russian, Polish, and other East European languages constituted major substrata languages for the emerging GMH. The Ashkenazis, as a group, were the speediest in shifting to Hebrew (Ben-Rafael 1994: 89). Yiddish was retained as a community language only in some of the most segregative Hasidic factions, known as *Kanóim* (MH *kana'im*) ‘zealots’ within the Haredi (ultra-orthodox) communities (Assouline 2013: 145, 2015: 123; 2017; Berman D. 2007: 107; Spolsky & Shohamy 1999: 217–227). These Yiddish-speaking Haredi groups, estimated at between 5%–8% of the Jewish population of Israel (Tannenbaum, Abugov & Ravid 2006: 474), adhere largely to an anti-Zionist ideology, and maintain a triglossic situation. Their community language is Israeli Haredi Yiddish (Assouline 2017), known as *máme lošn* ‘mother tongue.’ Their language of liturgy, *lošn kóydeš* ‘tongue-of holiness = the

1. The term ‘Ashkenazi’ is a gentile adjective derived from the Biblical proper name Ashkenaz, a descendant of Noah, which came to designate Germany and Northern Europe in Jewish communities since the Middle Ages. In common parlance, though not in sociolinguistic literature, the term Sephardi often includes the group differentiated here as Mizrahi, forming just two groups of descent (Ben-Rafael 2008: 106).

holy tongue', is Classical Biblical Hebrew (together with its later Aramaic component) pronounced in an Ashkenazi tradition. MH, in its standard non-Ashkenazi pronunciation, is termed *ívris* (MH *ivrit*), and is the public 'they-code' for external communication, much like English in Jewish ultra-orthodox communities of the English-speaking world or Dutch in Antwerp. Yiddish serves as a barrier or 'fence' against external influence, considered a danger to separatist groups. It is also a symbolic vehicle of group identity, ideology, distinctiveness, and values, a function recognized as typical of small minority group languages (Tannenbaum & Abugov 2010: 74). In writing, however, the distinction between *lošn kóydeš* and *ívris* is often equivocal, undermining the strict ideological dichotomy of holy vs. profane (Assouline 2013, 2017: Chapter 3; Bleaman 2015).

1.2 Languages of Sephardi Jews

The Sephardi community, after its expulsion from Spain and Portugal in the 15th century, moved in two main directions: A large eastern branch settled in the Balkans and spoke Judezmo (also known as Ladino, (E)spanyol(it) or Judeo-Spanish); and a smaller western branch settled in Northern Morocco where they developed a unique Maghribi variety of Judezmo called Haketia (*ħakitiya*) which was, however, subsequently replaced by Spanish, Judeo-Moroccan, or Judeo-Berber (Ben-Rafael 1994: 51–52; Spolsky & Shohamy 1999: 227–231).

By the late 1990s, Judezmo speakers in Israel numbered some 100,000, all aged over 55 (Spolsky & Shohamy 1999: 210, 230). As its speakers did not form distinct communities, Judezmo declined along with other co-territorial languages of the Sephardis, such as Turkish, Greek, and Bulgarian. As against no fewer than nine newspapers in Judezmo published in the early years of statehood, with the most current journal *Aki Yerushalayim* 'Here (is) Jerusalem', initiated in 1979 and described by Bunis (2003: 66) as the only entirely Judezmo journal in the world, having been discontinued in 2017.

In addition to Judezmo as a domestic language, veteran Sephardi communities in the "holy cities" of Jerusalem, Hebron, Tiberias, and Safad developed distinct Judeo-Arabic dialects, such as Jerusalem Judeo-Arabic for external communication (Piamenta 1992; Talmon 2000: 201, 209–210).

1.3 Languages of Mizrahi Jews

The establishment of the state of Israel heralded a series of immigrations of Mizrahi Jews. By 1961, the demographic balance had reversed, with 44% of the Jewish population now Mizrahi or non-Ashkenazi, a balance sustained into the 1990s

(Ben-Rafael 2002: 74; Lefkowitz 2004: 87). Today Judeo-Arabic is the L1 or a heritage language of about 16% of the Jewish population (Mar'i 2016: 92). Other groups of Mizrahi immigrants spoke Jewish Neo-Aramaic and Judeo-Persian, as well as Berber and Kurdish as co-territorial languages, with English or French functioning in some cases as cultured or elite colonialist languages (Mendel 2014: 254 n.2). This rather heterogeneous group was discursively represented as poverty-stricken and uneducated, although many of the immigrants were in fact far from this stereotype (Lefkowitz 2004: 87).

For speakers of Judeo-Arabic or Jewish Neo-Aramaic, the shift to Hebrew was easier than for speakers of unrelated, non-Semitic languages, on grounds of linguistic proximity (Burstein-Feldman et al. 2010: 227). The repression of Arabic, at least in the public sphere, was also facilitated by the negative attitude of many immigrants from Arabic-speaking areas, more than other Jewish groups, towards Arabic as the language of their contemporary enemies and former oppressors (Yaeger-Dror 1988: 290). At the same time, however, sociolinguistic factors impeded the acquisition of Hebrew, giving rise to a 'rejection pattern' (Shohamy & Spolsky 2002: 117). These included a long detention in the transit camps, then relocation to the peripheries of the Galilee and the Negev, living in closely-knit multi-generational families in large, homogeneous communities. A lack of immediate pressure to shift to the new language characterized their residential and social isolation, minimal social mobility, and low-status professions, where just a basic Hebrew was needed for everyday communication. Moreover, the ideal of GMH monolingualism was dictated by Ashkenazis, many of whom represented for the Mizrahis an alien, often domineering, culture of European-style secular nationalism, rather hostile to mother tongues. The attitude of the large measure of Mizrahi immigrants to both the Jewish tradition and to their mother tongue was, in contrast, generally highly positive. Besides, the cursive script of MH, now heavily impacted by Ashkenazi and Judezmo substrata, differed from their own Sephardi script (Henshke 2013b: 209–210). Another obstacle for the shift to Hebrew was gender-related: As women had been exposed very little (if at all) to Hebrew in the diaspora (see §4.1), and since it was typically mothers who provided the primary linguistic input to children, the retention of immigrant languages was directly proportionate to women's seclusion at home, which characterized primarily the Mizrahi communities (Aslanov 2016: 11–12). Consequently, the shift to Hebrew was slower and less pervasive in Mizrahi communities, especially those from the North African Maghreb. MH and French were the prestige languages, while Judeo-Arabic varieties continued to be spoken as low-status domestic vernaculars for up to three and even four generations in a lengthy situation of transitional bilingualism or multilingualism (Ben-Rafael 1994: 89; Bentolila 1994: 89; Henshke 2013b: 210; Rosenthal 2010: 67).

1.4 Russian, Ethiopian, global languages, and transnationalism

From the 1970s to the 1990s large waves of immigration arrived from Ethiopia and the former Soviet Union. Due to the overlapping chronology but very different backgrounds and culture, the two groups showed distinct patterns of linguistic adaptation. Ethiopian Jews, speaking Amharic (90%) and other Ethiopian languages, now constitute almost 2% of the Israeli population. Like the Mizrahi immigrants, they experienced social isolation, but unlike other large Jewish groups, their Judaism was not easily accepted by the rabbinical institutions. Moreover, they knew no Hebrew, did not use its script, and did not share the reverence others had for it, since their language of liturgy was Ge'ez, the classical Semitic language of Ethiopia.² Only the relatively few middle-class members of the community spoke (and valued) English. The conventional teaching methods of Hebrew to adults turned out to be unsuitable for the largely illiterate population, only 10% of whom had completed between 5 to 12 years of formal schooling. Despite a strong desire to learn Hebrew in order to integrate into Israeli society, these factors resulted in a long-lasting culture shock and retention of the home languages of immigrants of Ethiopian extraction (Ben-Rafael 1994: 145–147; Stavans & Goldzweig 2008: 64–66).

Russian-speaking immigrants arrived in two major waves. The first, in the 1970s, numbered around 160,000. Driven by Zionist ideals, some had already secretly studied Hebrew. They were quick to assimilate linguistically and culturally, often assuming high-status professions, and making no special efforts to preserve Russian or to form ethnic communities. The subsequent post-Soviet wave, in the 1990s, brought over 900,000 native speakers of Russian, Ukrainian, Georgian, Yiddish, and other languages to Israel, as the west had closed its gates to emigrants from the former Soviet Union. Russian became the main minority language of Jews in Israel, 20% of whom spoke it natively.³ Those arriving in the post-monolingual policy period rode on the success of Mizrahi Israelis' fight for a more multicultural atmosphere. But as products of the Soviet Russian-only policy, they were largely monolingual. Only about a third found jobs matching their typically high academic qualifications, while the rest, especially the elderly and women, had to settle for low-status jobs that did not require a high level of Hebrew. Many dropped

2. Also of Eritrea, whose Jewish population emigrated, especially during and following its war of independence (1961–1991), largely to Israel.

3. About 15% of immigrants from the former Soviet Union spoke Russian as an additional L1. Coming from predominantly Muslim countries of the Caucasus, Central Asia, and Bukhara, this community has remained rather more segregated than the Ashkenazi (European) Russian community in Israel (Alfi-Shabtay & Edgar 2012: 108–109; Ben-Rafael 1994: 149; Remennick 2003: 433).

out of the government-funded Hebrew classes for Jewish immigrants, opting to rely on spontaneous acquisition (Golan 2013: 183). These conditions, along with high regard for Russian culture and values, fostered strong ethnolinguistic vitality, resulting in retention of Russian in a culturally autonomous community with its own economic infrastructure, political representatives, media, and social networks, all in Russian (Ben-Rafael 2002: 76–77, 2008: 95–96, 107–108; Burstein-Feldman et al. 2010: 231–232; Remennick 2003). This was facilitated by the widespread presence of Russian in the public sphere and on the media, not always welcomed by non-Russian speaking old-timer Israelis.

English and French enjoy a special status. The former was spoken natively across the widest Jewish diaspora area (the US, the UK, Canada, Australia, South Africa). Most of its 200,000 native speakers arrived after 1967, as exposure to English rocketed due to rising economic and political ties with the US, tourism to and from Israel, openness to western culture, and the introduction of television in 1968 (Reshef 2008a: 738). Today, knowledge of English is a marker of high social and educational status, due to its great popularity and prestige as the uncontested global lingua franca, language of global communication, business, academia, journalism, tourism, and professionalism of all sorts (Ben-Rafael 1994: 181–183; Burstein-Feldman et al. 2010: 232–233; Reshef 2008a; Shohamy & Spolsky 2002: 115, 119; for English influence on Modern Hebrew, see §1.5). A comparative study of the acquisition of Hebrew language and Israeli identity by preschoolers from immigrant families speaking Amharic, Russian, and English showed the latter to be least assimilative in disposition, due to the extremely high market value of their L1. Identity feelings among the Russian-speakers in this sample were dependent on their L2-Hebrew competence levels. Finally, the Amharic-speaking children sampled acquired Hebrew more slowly than the others (even though there was no external community support for their L1), since their parents could not speak the language (Armon-Lotem et al. 2013).

French in Israel, described in terms of ‘multiple francophonies’ (Ben-Rafael & Ben-Rafael 2011), is spoken by some 6% of Israeli Jews either natively or as a language of culture. It was studied at Alliance schools in the Balkans and some Middle Eastern locations, and was spoken by many of the upper-class Mizrahis, particularly from the Maghrib. Some families gave up Judeo-Arabic but retained French as more prestigious; others kept both as family languages for different registers (Ben-Rafael 1994: Chapter 15).

Recent waves of immigration, bringing in many speakers of French and Russian, enjoy a new immigration pattern, known as *insertion*, replacing the formerly dominant *assimilation* model. As members of a new transnational community, they retain a hybrid model of ‘dual homeness’ with cultural and physical ties to their homeland as well as digital communication with other emigrant communities who share the

core value of cultural continuity and an ethos of cherishing their native culture. The French-speakers (many originally from the Maghrib) tend to be younger, of higher social status and more religious than the former newcomers. They often maintain their connections and businesses in France and at the same time implement their novel Francophone culture in the digital media, forming part of the current linguistic landscape (see §6) of their new places of residence (Ben-Rafael 2002: 76–77, 2008: 96; Ben-Rafael & Ben-Rafael 2010: 327, 2011: 41, 67).

1.5 Impact of foreign languages on Modern Hebrew

As noted, the early Ashkenazi immigrants spoke primarily Yiddish, Slavic languages and, to a lesser extent, other European languages. These, as well as many general European elements, had a tremendous effect on the rapidly consolidating Hebrew, where to this day Ashkenazi influence prevails at all linguistic levels (Blanc 1965; Dubnov 2013; Kutscher 1982: 212–219; Rubinstein, Sichel & Tsirkin-Sadan 2015; Sagi 1997; Taube 2015). Mizrahi languages, in contrast, had very little effect on the consolidation of GMH under Ashkenazi hegemony since the first mass immigrations. The post-1948 Mizrahi immigrants arrived on the scene rather late and, preoccupied with the fight for survival, were unable to exert effort in promoting their culture and home languages which, as a result, were not perceived as a potential threat to Hebrew. This enabled their survival as peripheral home languages, in contrast to Yiddish, which was aggressively repressed as symbolic of all that was negative in the diaspora (see Chapter 5, §2.1.3). As vibrant home languages, Judeo-Arabic varieties constituted the substratum for the MH variety termed below ‘Type 2’ (§2.1). Their influence on mainstream GMH increased in later koineization and accommodation processes promoted by a political upheaval in 1977, which released a rise in ethnic pride and the resurgence of Mizrahi culture, led by second-generation Mizrahis.⁴ Lexical items of Judeo-Arabic origin that have entered mainstream MH include emotive and intimate address terms (§2.1), with several terms becoming gendered and ethnic stereotypical labels in Hebrew slang (§4.2).

As the substrate language of the respected veteran Sephardi community, Judezmo was more influential than is generally recognized. Thus, in phonology, the 5-vowel system of Judezmo and the Sephardic pronunciation of Hebrew was adopted (see Chapter 6); the modal complementizer *ke* was calqued; numerous

4. Mizrahi traditions that gradually diffused and are now widely recognized include wedding customs such as the *xína* ‘henna’ ceremony and post-Passover *Maymúna* celebrations. For music, see §3.4.

borrowings include diminutive suffixes *-iko* (M.SG) and *-ika* (F.SG) and lexical items such as (*e*)*sponjar* ‘to mop the floor’, which entered as a noun, *spónja*, following a Hebrew periphrastic verb: *la’asot spónja* ‘to do *spónja*, to wash the floor’ (Francez 2015; Schwarzwald 1993, 2013a; Schwarzwald & Shlomo 2015).

The prominent effect of Russian, Yiddish, and General European elements on early Modern Hebrew, in its formative state, has already been noted (§1.1) and contrasts with the lack of impact of later Russian immigrations in the 1970s and 1990s.

The dramatic rise of English influence has received considerable scholarly attention (Burstein-Feldman et al. 2010: 232; Reshef 2008a; Rosenhouse 2013; Vaisman 2011: 163–164). As the administrative language in Mandatory Palestine (1918 to 1948), English served for communication between Jews and Arabs. The borrowings it provided to these languages, however, are mostly limited to certain typically masculine spheres, such as military (*áfter* ‘evening leave’), transportation (*ámbreks* ‘handbrakes’, *pánčér* ‘flat tyre’), and sport (*fawl* ‘free kick’). The massive global language impact of English on MH, as on other languages, started in the 1970s and today is pervasive across discourse types. This includes the overt borrowing of nouns (‘loser’), phrases (‘total loss’), adjectives (‘crispy’), and even conjunctions (‘once’). Modern digital-era verbs are innovated by root extraction from English lexemes: *leanter* ‘to press ENTER’ (Regev 1997: 82), *legagel* ‘to google’, *lelankek* ‘to link’ (Vaisman & Gonen 2011: 15). More pervasive than direct loans, however, are countless calques (‘weekend’, ‘more than welcome’, ‘cup of tea’, ‘it feels like’). Imported constructions popular in contemporary journalistic writing include the contrastive-concessive pattern for seeing the bright side of things as in example (1) and parenthetical hedging uses of ‘well’, adopted by the Hebrew discourse marker *uvxen* as in (2):

- (1) *ulay lo... aval hey...*
 maybe NEG... but hey
 ‘It may not be the case that ... but hey...’

Journalist Raanan Shaked, describing a nostalgic visit to his navy unit after 30 years:

- (2) *ve-ha-yam haya uvxen oto yam*
 and-the-sea was well same sea
 ‘And the sea was, well, the same sea’

[the weekly magazine *šiv’a yamim* ‘7 days’, 20.4.18: 28]

In sum, MH has been greatly influenced by the numerous substrata of its speakers, as shown in a recent volume dedicated to syntactic contact phenomena (Doron 2015). A particularly interesting case of asymmetric interaction is its relation with the local Palestinian Arabic, as noted next.

1.6 Interaction with Palestinian Arabic

Arabic, in the pre-state era, entered Modern Hebrew via two routes (Avishur 2003: 15–20; Henkin 2011a: 64–70; Mar'i 2016: 86–87): On the one hand, through carefully planned lexical coining, subject to much learned debating and controversy (§5; also Chapter 5); on the other hand, concurrently, settlers were actively borrowing terms from Palestinian Arabic, the local *lingua franca*, for urgent practical needs. A basic difference between the products of these two routes is that while the learned coinages of language planners were constructed in strict compliance with Hebrew phonology and grammar, concealing their Arabic origin, the spontaneous borrowers simply adopted lexical items as they heard them. Re-analysis and folk etymology were common, as in the case of the Arabic proverb *illi fāt māt* 'that which is gone is dead', understood as 'Elifat has died' (Henkin 2011a: 69–70, 2013: 146).

Much like Christian pilgrims of the time, the early immigrants romanticized the Arab peasant (*fallāh*) and the Bedouin, envisaged as continuers of the biblical lifestyle, or as a 'romantic reflection of primeval Jewish self' (Mendel 2014: 22). Ideological concepts such as 'redemption of the land, of labor and the language', especially prevalent in agricultural settlements, reflected the goal of 'reclaiming' the land and labor from those who had 'temporarily preserved it'. Lexical and phraseological items pertaining to farming, dress, foods, and society were borrowed into MH – and also into Palestinian Yiddish (Kosover 1966). Phatic items introduced included greetings, curses, blessings, proverbs, and children's games. Significantly, Arabic *ṣabr* 'prickly pear' became *cabār~cavár* or, colloquially, *cábar* 'Sabra', the symbolic nickname of the new native Israeli (Blanc 1956/1989; Henkin 2011a: 68, 2013: 146; Regev 1997).

Political and social tensions, however, soon brought about a conception of Arabic as the 'language of the enemy' (Mar'i 2016: 87–88). This lowered its status, especially since 1948, as a repository of lexical and cultural sources. Palestinian Arabic, like Judeo-Moroccan, contributed new lexical items mainly to negative slang (§3.1) and subversive counter-culture language, relating to underworld, crime, and drugs (Mar'i 2013a: 173–178, 2013b; Rosenhouse 2008: 62; Rosenthal 2010). The study of Einat and Livnat (2013) on subversive prison argot in Israel reveals over half (53%) of the 500 argot items they analyzed to be loans from (or influenced by) Arabic. An analysis of MH slang in Rosenthal's (2006) dictionary reveals a high percentage of Arabisms in spheres ranking low on the social status hierarchy: 33% in the category of curses, 18% in drugs, 14% in crime, police, and jail (Henkin 2011a: 71–72, 2013: 148). Palestinian Arabic *ṣāhb-ak* 'friend-2sg' 'your friend' has yielded a new derogatory MH verb, *histaxbek* denoting fake "friendship" for the sake of social or material gains. A prominent morphological loan is

the Arabic passive participle pattern *maCCūC*: When constructed with Hebrew roots it carries emotive, often hyperbolic values, primarily negative, as in *mag'ul* 'revolting' (MH *magil*), but sometimes positive: *magnuv* 'stolen' > 'terrific'. A lexical loan, borrowed together with syntactic features, is *áxla* 'great, awesome', from the Arabic comparative-superlative *áhla* 'sweeter/st' (Gafter & Horesh 2015). Early loans that have lasted include the welcoming greeting from Arabic *áhlan* truncated from the original *áhlan wa-sáhlan* '(you're part of the) family, and (on a) plain (smooth going)'.

Today Arabic is the home and school language of some 20% of the population in Israel, in communities of Muslims (83%), Christians (9%), and Druze (8%) (Amara 2013: 2; Yitzhaki 2011: 96).⁵ Only 10% live in mixed Jewish-Arabic locations and 90% are employed outside their communities (Ben-Rafael 2002: 77; Ben-Rafael et al. 2004: 14, 2006: 12–13). With Hebrew formally taught from elementary school on (§5), most adults are bilingual to an extent depending on intensity of contact – by virtue of residence, education, or work relations. The importance of Hebrew for social mobility is perceived as greater than that of Arabic, promoting a largely instrumental, rather than integrative, motivation for acquisition and a pattern of linguistic *integration* rather than *assimilation* (Amara 1999: 209, 2013: 2, 6, 2015: 184). Typically, in-group discourse of young adults is characterized by intensive language mixing, with much borrowing, loan translations, and codeswitching. These are most widespread in the Druze communities of the Galilee and Haifa vicinities, as these Druze men all perform compulsory military service duty, and are thus immersed in Hebrew, day and night, for three years (§3.7).

In sum, the role of Hebrew and Arabic in their asymmetric relations is contrastive for the two major populations in Israel. In the early stages of their coexistence, Arabic served the purpose of 'stepping in' for the Jewish incomers, for reentering the promised land after an absence of two thousand years, when Arabic ruled. Over time, however, Hebrew is increasingly viewed as a means for the local Arabic-speaker of 'stepping out (and up)' from the minority environment to the general Israeli public space (Henkin 2011a: 62).

5. The Circassian Muslims, numbering some 3,000, speak their own Northwest Caucasian language, unwritten until lately. Their school language is now Hebrew (Myhill 2004: 2).

2. Communal varieties of Modern Hebrew

For a language first spoken natively in the 20th century, MH has developed a remarkably wide range of spoken and written language varieties.⁶ *Regional dialects* are not expected to develop in conditions like these, of recent emergence in a small area densely networked by modern media and transportation (Ravid 1995: 8). True, certain lexical items, at least in popular belief, characterize specific locations and are popularly considered evidence of local dialects, and lists have been compiled for such cases (for example, Rosenthal 2007: 95–104), but most linguists would not consider them full linguistic systems. *Communal varieties* include two distinct types – General and Mizrahi Modern Hebrew – which show a tendency to converge (§2.1), alongside of numerous more restricted varieties (§2.2), including religious or Jewish Hebrew, kibbutz lexicon, army language, and a ‘basic’ learner variety. These varieties may be aligned on a complex, three-dimensional axis, combining *regional*, *socio-ethnic*, and *religious* dimensions. The *regional* perspective differentiates locations along a scale ranging from central to peripheral, with peripheries characterizing large regions in the north and south of Israel, as well as numerous underprivileged neighborhoods or towns in non-peripheral regions, such as South Tel Aviv, Jaffa, or Ramle. In contrast, well-to-do residential neighborhoods and kibbutzim in the geographical peripheries do not show these linguistic features. The *socio-ethnic* scale differentiates mainstream GMH from other ethnolects, predominantly Mizrahi, while the *religious observance* scale ranges from secular, moderately observant (so-called *masorti* ‘traditional’) to orthodox-religious and ultra-orthodox.

Although each scale may be seen as distinct, in practice they overlap or cluster together, forming two major dialect types.

2.1 Two major dialect types⁷

The mainstream dialect or koiné, General Modern Hebrew, which is considered unmarked, is opposed to a rather heterogeneous group of varieties, characterizing geographical and social peripheries. Since the question of how to define the non-mainstream varieties – regional dialects? sociolects? ethnolects?

6. The term ‘varieties’ as used here subsumes sociolects and styles, since a given variety may be a sociolect for some speakers and a style for others, as is shown below in the case of the high-school ‘tough male’ variety (§2.1).

7. A communal variety is not necessarily located in a single place – religious, kibbutz, army, and ‘basic’ varieties are all widespread.

religiolects? – is still unsettled (Henshke 2017), they will simply be called Type 2, contrasting with the mainstream Type 1.

Type 1: General Modern Hebrew (GMH), also called ‘General Israeli’ or ‘Israeli Koine’ (Blanc 1968; Yaeger-Dror 1988: 287), is based on the speech habits of the major group of pre-state immigrants.

Type 2: Mizrahi Modern Hebrew, formerly labeled ‘Oriental Israeli’ (Blanc 1968), is predominant in communities with Mizrahi majorities. It reflects a substratum of maghrebi Judeo-Arabic, spoken by the largest ethnic group, 14% of the Jews in Israel in 1988 (Ben-Rafael 1994: 95). Deviations from the mainstream Type 1 are due to interlanguage phenomena, such as simplification and heavy interference from the substratum. All linguistic domains are involved: *phonology* – normative but socially stigmatized pharyngeal consonants *ʕ* and *ħ* and to a lesser extent apical *r* and monophthongized *ey* (See Chapter 6); *morphology* – substandard paradigm leveling, e.g., *ot-ax* ACC-2SG.F for prescribed *ot-ax* ‘you’ (see Chapter 8); *morpho-syntax* – interference from the Arabic past progressive compound constructed of the past tense of ‘be’ plus the active participle, e.g., *hayíti yošev* ‘I was sitting’; *syntax* – omission of the definite direct object marker *et* (this morpheme, unique to Hebrew, is problematic for non-native speakers in general). Other categories, including semantic shifts, dislocation, echo and anchoring constructions, are discussed in Henshke 2015a, 2015b, 2017; see also Chapter 5, §1.3).

Type 2 lexicon includes *reversed kinship terms*, whereby parents address their children as *mámi* ‘mom’, *abúya* or *ába* (sometimes with the Yiddish endearing suffix *-le*) ‘dad’:⁸

- (3) *amár -ti l-o ába, tiftax televízya*
 said -1SG to-him dad open:IMP/FUT.SG.M television
 ‘I said to him: Dad, turn on the TV.’ [Galey Zahal radio station, 16.8.17]

Ongoing study of Type 2 varieties (Henshke 2013a–2017) shows a gradual transition from geographical terms, like ‘Hebrew of the periphery’, to communal terminology. The most recent term, ‘Traditional-Mizrahi Hebrew’, locates this variety part-way between mainstream GMH and Jewish Hebrew. Aslanov’s (2016: 7) term ‘language of the transit camps’ refers to transitory absorption camps where immigrants were housed, sometimes for years, following a period in tents, pending relocation to permanent housing. Mizrahi immigrants typically moved out much later than Ashkenazis, and retained the ‘transit camp’ dialect long after being resettled in the peripheries.

8. Although extremely common in Palestinian Arabic, reversed kinship terms seem to have entered MH via Judeo-Arabic (Henkin 2011a: 76–77, 2013: 148–149).

The differences between the two types are a result of the historical circumstances explained above (§1) – including time of arrival, residential patterns, social mobility, support patterns – and also of different approaches to Zionism and tradition. In contrast to the Ashkenazi immigrants, the Mizrahi Jews did not see Zionism as a break with their exilic past, but rather as a harmonious continuation of their pre-immigration values and as consistent with their traditional way of life, language, and moderate religious observance (Henshke 2017: 144–145). Arriving after Hebrew had consolidated and guaranteed its priority, their languages were not considered a threat; they were relocated to the peripheries in large homogeneous communities, where Judeo-Arabic continued to serve as home language for three or even four generations, flavoring their Hebrew as Type 2.

Socio-educational studies on spoken and written language of Type 2-speaking schoolchildren from disadvantaged localities have debated the applicability of concepts such as Basil Bernstein's restricted vs. elaborate code and deficit vs. difference theory (Bernstein 1964, 2004). Conflicting findings have emerged in this respect in the domains of phonology, lexicon, grammar, syntax, register scale, and discourse (Cais 1981, 1983, 1984; Davis 1981; Ravid 1995: 8–10; Vidislavsky 1984).

With regard to the more general sociolinguistic issues of *accommodation* and *koineization*, Giles' Speech Accommodation Theory (Giles, Coupland & Coupland 1991) predicts that speakers of a marked, non-mainstream dialect will converge toward the dominant or standard dialect (by assimilating and down-toning or by avoiding differences) to the degree that they desire social approval from members of the dominant culture. Conversely, they are predicted to diverge from the standard (by highlighting differences) and accentuating their own distinct culture as an expression of ethnolinguistic (or group) vitality and of solidarity with the in-group (Yaeger-Dror 1988, 1994). In the Israeli context, both convergence and divergence patterns can be found between the two MH types – in dynamic, often elusive patterns of interaction. In the first three decades of statehood, Giles' convergence model ruled in a form where “an elite... diffuses its code among the rest of the society in order to achieve uniformity based on its own values” (Ben-Rafael 1994: 88). This convergence towards the socially favored Type 1 has resulted in a tendency among second-generation Type 2 speakers to give up stigmatized variants, especially in the public sphere; to reject the Arabic languages and culture of their parents; and to distance themselves from anything that is ‘too Arabic’. This results in a tendency to opt for French at school or to drop Arabic as soon as possible (Mendel 2014). The subsequent decline in the ‘melting pot’ policy and the 1977 political upheaval noted earlier (§1), as well as rising socioeconomic mobility, high rate of intermarriage, and constant mutual interaction – at school, in the army, and the workplace – resulted in a process of koineization, blurring the borders between the two types of MH. On the other hand, Type 2 speakers may adopt divergence

patterns in political, social or ideological discourse, in order to highlight Mizrahi identity, challenging the elitist social norms. Examples abound in different domains, particularly in popular music (§3.4). Likewise, a new and very active wave of Mizrahi Hebrew poetry has emerged, known as *ars poética*, a pun on the Latin expression *ars poetica* and the slang Arabic loan-word *šars* ‘gangster, hoodlum’ used by Type 1 speakers pejoratively for Mizrahi male stereotypes (§4.2). These patterns appear to constitute a reversal of the predominant status hierarchy, with the less prestigious dialect and culture becoming dominant.

Words, phrases, and constructions from Type 2, originally characteristic of Judeo-Moroccan speakers, are entering mainstream Type 1, where they range from stylistic markers of an intended, performed register (Gaftar 2016) to fully integrated, unmarked items. These include *endearment address terms*, such as *nešama* ‘soul’, *kappára* ‘expiation, penance’, *hayim šeli* ‘life mine = my life’, *aḥ šel-i* ~ *aḥ-i* ‘brother mine ~ brother-POSS.1SG = my brother ~ bro’.⁹ So Prime Minister Netanyahu, of Ashkenazi descent, congratulated the Eurovision song contest winner Neta Barzilai with “just two words”:

- (4) *kapára aláyix*
 expiation upon-you:SG.F
 ‘I love you so much I’d take your penance on myself > you’re the best, I’d die for you’

Since this expression is not likely to be part of his everyday lexicon, Netanyahu seemed to be ‘performing’ mizraḥiness (Gaftar 2016) by means of convergence strategies typical of politicians seeking support from this large sector (§3.5). Lexical Type 2 items have also entered printed media, primarily in interviews with speakers highlighting their communal identity. For example, *kappara*, *nešama*, and *aḥ~ax šeli* clustered together in an interview with the prominent sports journalist-broadcaster Ofira Asayag, in the weekly magazine *šiva lelot* ‘Seven Nights’ [21.7.17: 4]. Prominently, in the realm of education, the Integration Law of 1968 opened schools in privileged areas to students from underprivileged areas. Type 2 speech, for many a natural home dialect, became for the Ashkenazi boys a deliberate style, assumed for a macho effect, in juvenile rebellion to the authority of teachers and parents or ‘friction with middle class establishment’ (Matras & Schiff 2005: 150). This style, which persists in military slang (§2.2.3), includes calling each other *ya aškenázi* ‘you Ashkenazi’ as a good-humored derogatory term of address. Aslanov (2016: 16) sees this as a reversal of the prestige hierarchy, contributing to an educational affirmative action effect. He compares it to the trend, in

9. See the address term *mon frère* ‘my brother’ for strangers as a marker of ethnocultural French in Israel (Ben-Rafael & Ben-Rafael 2011: 46); also English ‘bro’.

contemporary western societies, of mainstream middle-class youngsters adopting discourse styles and semiotic marking of the peripheries, such as African American Vernacular English and rap style, or North African immigrants' speech in France and Belgium.¹⁰ This has been criticized as 'cultural appropriation'.

2.2 Intersecting varieties of Modern Hebrew

Additional communal varieties that intersect with the two major types may be distinguished in the Israeli sociolinguistic arena.

2.2.1 *Jewish Hebrew*

Israeli Jewish communities are traditionally classified according to degree and type of observance, categorized in Israeli parlance as, variously, 'secular,' 'traditional,' 'observant,' 'religious-orthodox,' or '*haredi*' 'fearful = ultra-orthodox', with ethnic identity and social status also intersecting with these categories (Ben-Rafael & Sharot 1991).¹¹ These groups differ in lifestyle, attitude towards Zionism, and language, with what is termed here 'Type 2' represented by 'Traditional-Mizrahi Hebrew' (Henshke 2017: 148). The term *ivrit yehudit* 'Jewish Hebrew' covers the entire non-secular end of the scale, in speech and writing. When used as a literary style by writers of religious background, it is not always easy for secular readers to process (Bliboim 2012).

The linguistic hallmarks of Jewish Hebrew are mainly lexical and phraseological. God's name, under taboo, may be written as the Hebrew letter for /h/, pronounced in diverse euphemistic formulas including 'the holy one, blessed be He' and 'creator of the world'. Type 2 varieties may include Judeo-Arabic items (Henshke 2017: 150), some of which have entered mainstream Type 1; Ashkenazi religious speakers often express praise by *yišar kóax* 'may your strength remain = keep up the good work' whereas Mizrahi speakers are more likely to use *ħazak u-varux* 'strong and-blessed'. Semantic marking of Jewish Hebrew typically includes the preservation of original religious meanings of lexemes that have undergone secularization in GMH, e.g., *sidur* 'prayerbook' > 'arrangement, task' (Schwarzwald 2013b). Diverse writing conventions identify a writer as religious, for example, heading every page

10. Remennick (2003: 443, 448) attests to what looks like a similar upgrading of minority language Russian in high schools. In particular, the Russian expletive *blat* is noted as very common in blog language (Vaisman 2011: 174–175; see also §3.6).

11. According to the Central Bureau of Statistics of Israel, 2009, about a third of the adult Jewish population in Israel defines itself as 'orthodox,' 'religious' or 'observant' (Gonen 2011: 280 fn. 7), and 8% as 'haredi' (Shukrun-Nagar 2014: 157).

with (Aramaic) initials standing for ‘with the help of Heaven’. Haredi writing, as on public billboard announcements or wall posters, known as *paškvil-im* ‘pasquil-PL’, is replete with abbreviations that are totally obscure to outsiders.

Language that is both normative and ‘pure’ is valued along this spectrum. Ben-Rafael (2008: 109) attributes normative standardized Hebrew to the orthodox Zionist sector known as *dati-leumi* ‘national-religious’, while the ultra-orthodox *haredi* groups are more extreme in their demand for ‘clean language’, such as euphemisms, taboos, and circumlocutions. Their overarching ethos of ‘modesty’ includes rules for quality and quantity of talk, strategies of politeness and face saving, and avoidance of taboo topics, gossip, strong language, and slang (considered ‘street language’). In these tight-knit communities, collectivist norms of behavior and language are very strict, especially with respect to women, who are active in passing these on to girls, thus reinforcing them at home. Moreover, only girls are explicitly taught these norms of modest language at school (Oryan 1997).

Despite expectations that the daily repetition of canonical religious texts should help establish correct pronunciation, at least of the specific lexemes that recur in these texts, adherence to normative morphophonological rules, such as vowel-reduction in certain de-stressed positions, was not found to correlate with religious observance. Only a very minor, nonsignificant advantage was found for religious background when reading aloud certain fixed expressions in the canonical texts, and none at all when those same lexemes occurred outside such collocations (Gonen 2011).

The meta-language of formerly secular ex-convicts who attend religious academies (*yešivot*) as part of a rehabilitation and re-socialization process shows an awareness of how violent language nurtures violent behavior (Timor 1996; Timor & Landau 1998). They strive to change their language from a subversive prison argot (Einat & Livnat 2013) to a clean religious variant, often with hybrid results:

- (5) *kibálti kriz*¹² *šel yahadut*
 I.got crisis of Judaism
 ‘I got a fit of Judaism = I went crazy with religion’ [Timor 1996: 70]

2.2.2 *Kibbutz lexicon*

Hundreds of lexical items, formulas, and concepts specific to the kibbutz way of life and language, of particular kibbutzim or groups of neighboring kibbutzim, show substantial changes in this system over time (Rosenthal 2001: 41–46, 2007: 105–110; Schwarzwald 2013b). Traditionally, children spent most of the day in the ‘children’s house’ and went to their parents’ ‘room’ in the afternoon, known as *hakama*

12. From French *crise*, this is a slang lexeme for an addict’s bodily reaction to drug deprivation.

‘raising = being woken’ from their 2–4 afternoon naptime, returning in the evening to the children’s house for the *haškava* ‘laying down’, which in Jewish Hebrew denotes a funeral prayer. Their food was prepared in the communal kitchen by the children’s cook, known as *mevašél-et[^] yeladim* ‘cook.cs.sg.f children’. This term might sound rather shocking to an outsider, since it could also refer to a woman who ‘cooks children’, rather than ‘cooks for children’.

2.2.3 Army language

Military usage is by nature terse and concise, and needs to be understood only by insiders. This invites acronyms, initialisms, abbreviations, blends and cryptic lexicon in general. 2,100 items are listed in a recent dictionary (Rosenthal 2015). Some such opaque acronyms spark innovative etymologies (e.g., QMBC *kambac*, acronym for *kcin[^] mivcaim* ‘officer.cs operations = operations officer’, is jokingly etymologized as *kam b-a-cohoráyim* ‘rise:MSG in-DEF-noon = gets up at noon’). Newly derived verbs include *lešafcer* from the noun *šifcur*, itself a blend from *šipur[^] cura* ‘improvement.cs form = improving the look (of some army object)’.

Type 2 elements are common here. For example, a 3rd person variant of the vocative ‘my brother’ noted earlier is *ax šelo* ‘his brother’, abundant in male army style, as in (6).

- (6) *ma kore ax šelo?*
 what is.happening brother his
 ‘What’s going on, his brother? = what’s up, bro?’

Since reserve military duty keeps many men (and some women) in touch with the military over a period of many years, military items tend to spread to general use. There is also considerable overlap between the language of soldiers and that of the immediately preceding age-group, namely male high schoolers (see §2.1).

2.2.4 Basic variety Hebrew

In L2 acquisition theory, Selinker’s (1972) concept ‘Interlanguage’ refers to the learner’s L2, on a scale that gradually approaches target language proficiency in accordance with factors such as age and intensity of exposure, degree of immersion, and motivation. Interlanguage phenomena include interference from L1 as well as other deviations from L2 due to general acquisition processes, such as analogy and meta-analysis. A major factor in Selinker’s interlanguage theory is fossilization, which occurs when progress stops somewhere along this scale, despite ongoing input. Immigrants who arrive at an advanced age, especially those who do not take formal courses in Hebrew, are prone to fossilization at a rudimentary level, sufficient just for basic communication. The same is true of foreign workers, asylum seekers, and refugees, whose distinct language has been labeled ‘broken Hebrew’,

‘pidgin’, or ‘Basic Variety’.¹³ It is governed by a relatively small set of organizational principles, many of which are independent of both L1 and L2 (Donitsa-Schmidt, Golan & Olshtain 2001: 53; Golan 2013: 186):

(7) *makábi Tel Aviv yeš xazak xazak*

Maccabi Tel Aviv EXIS strong strong

‘Maccabi Tel Aviv is ~ has a very strong team’

[Donitsa-Schmidt, Golan & Olshtain. 2001: 60]

The minimal lexicon and rudimentary grammar include key content words, such as ‘wages’, ‘rest day’, ‘good’, ‘fast’ and infinitives replacing verbs inflected for agreement. The lack of linguistic flexibility necessitates diverse means of compensation, including overextension, paraphrase, and innovation, such as repetition for stressing plurality: ‘people people people’ for ‘many people’ (Golan 2013: 186). Interacting with speakers of Basic Variety Hebrew and new immigrants, local Hebrew-speakers, even grade schoolers (Ravid, Olshtain & Ze’elon 2003), often use Foreigner Talk, which they perceive as easier for the interlocutor to understand.

3. Registers, genres, codes and styles

Under this wide umbrella of varieties, certain distinctive features of MH reflect its unique development from a predominantly written language to a multileveled native language with a fully developed register scale ranging from formal, elevated, polite registers down to slang (§3.1; see also Chapter 2). Of particular interest is the delayed entry and entrenchment of spoken language in genres of literature (§3.2), performing arts (§3.3), song and music (§3.4). Mass communication and media coverage likewise reflect the sociolinguistic context (§3.5), as do contemporary digital language (§3.6) and bilingual codes in the major bilingual communities (§3.7). Issues of registers, genres, codes and styles are, of course, intricately intertwined with the notions of standard, normativity, and prescriptivism. For the intriguing and complex relations between these in Modern Hebrew, see Berman 1997; Ravid 1995: 6–8; and Chapter 5 in this volume.

13. Many of the laborers in construction and agriculture arrive from Romania, Turkey, Thailand, and some African countries. Most do not speak English, which is more typically used initially with domestic aid workers from the Philippines, India, and Nepal (Colasuonno 2013: 3; Donitsa-Schmidt, Golan & Olshtain 2001: 55; Shohamy & Spolsky 2002: 122).

3.1 Register scale

The development of registers (in the sense of Biber & Conrad 2001) in Modern Hebrew was highly atypical in the sense that higher registers of literary language preceded the emergence of spoken MH (Henshke 2013b: 207; Regev 1990: 363; and see Chapter 2 in this volume).¹⁴ The early monolithic literary basis lacked spoken registers, both high and low. Deferential address forms, for example, were sorely missed by European immigrants whose native languages coded status differences, one result of which is that early bureaucratic written MH is rich in third person address forms and other markers of polite, deferential language (Reshef 2002). The dominant native Israeli ethos, in contrast, was based on a discursive tradition of classless ideology (Lefkowitz 2004: 86). Representing a society of equality and socialist collectivism, it rejected all expressions of politeness, indirectness, and status hierarchies. This speech style or anti-style, known as *dúgri* or 'direct' language, was bold, straightforward, tough, assertive, laconic, and blunt to the point of rudeness (Ben-Rafael 1994: 58–62, 2002: 71, 2008: 98; Katriel 1986, 1999; Katriel & Griefat 1988). It displayed scorn for wordiness, polite language, formulas and manipulative speech behavior attributed to the submissive exilic Jew. In the Israeli context, it contrasted sharply with the Arabic concept of *musāyara* 'going along with', also characteristic of Mizrahi culture.

Two other objects of disdain on the part of the new, Ashkenazi Sabra generation were, on the one hand, high elevated normative language, and, on the other, non-native speech (see Chapter 5, §2.2.3). Instances where prescriptive demands coincided with non-native performance, such as the Mizrahi pharyngeals, were doubly stigmatized. This elitist, 'cool nonchalance' disregard for normativism, wordiness, and non-nativeness "can be viewed as the communicative correlate of the Sabra's proverbial thorns" (Katriel & Griefat 1988: 304). The secular, elitist, Ashkenazi native was symbolized by this fruit, prickly on the outside but sweet on the inside, since the external wrapping is irrelevant, what counts is the essence (§1.6).

The *dúgri* ethos has waned since the 1970s, leaving some traces in the army, high school, university or pub discourse (Ben-Rafael 2008: 98). The importance of ethnicity and collectivism has similarly diminished, giving way to a more bourgeois, individualistic, career-centered lifestyle (Bloch & Lemish 2005: 49). Radically opposed to the direct style, and crosslinguistically more common, is a tendency for hedging and down-toning which now prevails, most prominently by means of discourse markers such as *kaze* 'such' and *keilu* 'as if, like' (Maschler 2009). Originally associated with youth culture, 'the *kaze-keilu* generation', these discourse

14. In fact, many solecisms associated today with spoken MH actually predated its emergence, and may be found in early Modern Hebrew literature (Reshef 2016).

markers now occur across all ages and styles (Maschler 2001, 2002; Ravid & Berman 2006: 126–127).

Going back to the early state period, the result of the two opposing forces, deference and bluntness, as well as factors such as normativity, was a split into registers stretching along a continuum or style scale (Regev 1990: 6). Scholars differ in the number of registers they identify in MH: Eldar (2006–2007: 45–46) contrasts an everyday spoken standard with a formal standard, based on written language; Blanc (1968: 242–243) distinguishes four styles: elevated, average formal, average informal, untutored. Matras & Schiff (2005: 151) present a scale of variation (both sociolectal and stylistic), with four varieties: Formal (normative), Educated, General Colloquial, and Working-Class Vernacular.

Formal language of high registers is distinct in both lexicon and grammar, the latter identified with at some aspiration for normative grammar. In the case of MH, however, normative grammar is not readily accessible to the average standard speaker, whereas an elevated lexicon is relatively easy to recognize and to adopt.

Intentionally ‘low’ language is likewise produced predominantly via lexical means, primarily slang. Israeli slang has always drawn intensively from foreign languages, since Hebrew, due to its formerly hallowed status as a liturgical language, was largely lacking in this domain (Rosenthal 2006, 2007). The major sources were initially Yiddish and Arabic, and to a lesser extent Russian. Today, Yiddish is no longer an active contributor; Russian is minor; Arabic is a source for mainly negative slang (§1.6). In semantic spheres ranking higher on the social status scale, foreign source languages are western: *ledakter* ‘to study for a PhD’, *meteor* ‘rising star’.

3.2 Spoken language in literature

Until the 1940s native MH was considered a newborn, immature language, not fit for writing or, indeed, for any cultured mode of expression (Ben-Shahar 1994: 106). Vernacular was permitted, in the mimetic or dialogue mode within narratives, only in representing the broken Hebrew of Mizrahi immigrants.¹⁵ Native Ashkenazis, in contrast, were portrayed as speaking in a literary language. It was not until the 1970s that authentic spoken MH was actually used in original Hebrew writing, preceding its use in translated literature (Ben-Shahar 1995: 198–199; Bliboim 2010). From the start, efforts to represent the Mizrahi immigrants, especially by Ashkenazi writers, were patronizing and the result parodying: an artificial, invented sociolect, with low

15. Later it began to represent the permanent marginalized variety, or fossilized Interlanguage underlying our Type 2 (§2.1). It was only rarely portrayed as a voluntary style or register (Oppenheimer & Bliboim 2013: 8–9, 12–13).

lexicon, often high grammar, invented items from immigrant languages, for example, Arabisms of no particular dialect, creating a stereotypical, low class, ethnically marked ‘other’ (Ben-Shahar 2004, 2016). Notably, Palestinian Arabic interspersed in the speech of Type 1-speakers was not portrayed as inferior in the literature of the 1940s (Oppenheimer & Bliboim 2013: 12, fn. 4). As noted earlier (§1.6), adoption of Palestinian linguistic and cultural elements was popular and quite prestigious in the pre-State period – in contrast to the fate of Mizrahi elements, in both everyday and literary discourse.

Since the 1980s, the language of literary dialog has become more authentic and has penetrated the language of narrative as well. Children’s literature, where ‘high Hebrew’ prevails by virtue of pedagogical considerations, is always a step behind in this process (Ben-Shahar 1994). On the language of immigrants in this literature see Sela (2001).

Traces of immigrant languages and indigenous Arabic are common in MH literature dealing with the various communities. Analysis of Judeo-Arabic elements in the works of several well-known writers produced a hierarchy of semantic-cultural categories by tendency to appear in Judeo-Arabic, with or without some form of glossing into Hebrew. Topping the list were blessings, curses, proverbs, foods, and certain cultural concepts that tend to defy translation, flavoring the text with ethno-cultural language. In the following example (from Eli Amir’s 1984 novel *Scapegoat*) a Baghdadi Judeo-Arabic blessing (bolded) is immediately followed by its Hebrew translation (Avishur 2003: 25–46; Horvitz 1998):

- (8) **šāš** -t **idē-k** (*tevoráx-na yadáy-ix amár-ti*)
 live:PST -3SG.F hands-2SG.F (be.blessed:FUT-3PL.F hands-2SG.F) say:PST-1SG
 ‘Blessed be your hands (blessed be your hands), I said’ [Horvitz 1998: 67]

3.3 Performing arts (theater, film, drama)

As in printed literature, spoken language made a gradual entry in the theater and later still in cinema. A study on the language of the 1912 play *Allah Karim*, with Ashkenazi and local Arab protagonists, shows attempts at sporadic, symbolic representation of spoken Ashkenazi Hebrew and Arabic respectively within a high Hebrew base, resulting in a hybrid language, as in the literature (Di-Nur 1992: 176–183; Mar’i 2013b: 123).

Movies up to the 1950s were characterized by elevated styles of speech. Their costly production, dependence on official institutions, non-native origin of the writers, and preoccupation with the technical novelties of the medium left no space for stylistic innovation in ‘trivial’ matters of speech representation. Moreover, elevated language was deemed appropriate for the ideological messages delivered in this

medium. The gradual admission of non-high-register language started mainly for representing children and local Bedouin (Bar-Ziv Levy 2015: 78–79), then Mizrahis. Early representation of MH again, as in literature, was artificial and hybrid, with slang and invented lexemes, often in exaggerated portions, striving to produce a comic effect (Ben-Shahar 2004: 93). The satirical writer Ephraim Kishon's immortal character Salah Shabati, an uneducated, unskilled, emotional Mizrahi of unspecified ethnicity, speaking an inauthentic, stereotyped, generic-Mizrahi dialect, started a genre called, disparagingly, 'bourékas movies' (Ben-Rafael 1994: 133).¹⁶ Bar-Ziv Levy's (2016) analysis of the first noticeable occurrence of spoken Hebrew in a 1955 movie raises intriguing findings on the ethnic stereotypes, as molded by literary conventions: the two young native Israeli heroes were an Ashkenazi youngster, Dan, who spoke high, normative Hebrew, ostensibly fit to be heard by the contemporary audience; and his Yemeni-origin buddy, Sa'adya, who spoke MH – but, significantly, of the mainstream or Ashkenazi Type 1, not the Type 2 actually spoken in his community. Paradoxically (but in line with this shift), his speech is more *dúgri* than that of his Ashkenazi friend, and it is he who propagates the 'one nation, one language' ideology by reproaching immigrant youth for not speaking Hebrew all the time. The conclusion yielded is of mutual legitimizing: The Yemeni boy's acceptance into mainstream society was apparently enabled by his speaking Type 1 MH; and he, in return, paved the way for spoken MH into the cinema (Bar-Ziv Levy 2016: 120).

A new genre of humoristic sketches, performed on stage, then recorded and spread nationwide, enjoyed tremendous popularity for many decades; extracts of varying lengths are still memorized, at least partially, by many. The extremely popular singer-comedian trio *Ha-gašáš ha-xiver* ('The Pale Tracker') created a new meta-linguistic language, packed with punning innovations and extreme register shifts. Mor and Sichel's (2015) analysis of their early programs in the 1960s highlighted a major meta-sociolinguistic motif – challenging traditional respect for normativity and formal, wordy Hebrew, promoting instead the *dúgri* or *táxles* 'get to the point' style (§3.1). In terms of sociolects, these sketches brought together stereotypical proponents of the main communities and their linguistic features, although they still failed to challenge the hegemony of Type 1, with its Ashkenazi-*cábar* ethos.

16. Puff pastry *bourékas* of Balkan origin (<Turkish *börek*) were associated in Israel with Bollywood-style movies, much like popcorn and soda.

3.4 Song and music

The bulk of pre-State songs belonged to an invented pseudo-folk genre called *zémer ivri* ‘Hebrew song’ or *širey érec-israel* ‘songs of the Land of Israel’. Their language remained extremely high-register and lexically rich, even while poetry and prose literature were already accepting a new medium-high standard (see Chapter 2 and also Reshef 2003, 2008b: 515). Songs were particularly rich in traditional-type parallelisms (e.g., *báa mnuxa la-yagéa /u-margóa le-amel* ‘Rest has come to the tired/ and calm to the hardworking) and triplets (e.g., *šúru, hábitu ur’u* ‘Regard, gaze, and see’). The still popular nursery rhyme that accompanies children going around in a circle holding hands begins with the biblical imperative form *šúg-a* ‘encircle’, which today is unanimously understood by children (and their parents) as ‘cake’ (normative *ugá*). Spoken MH was at first restricted to minor genres such as ‘street songs’, considered vulgar, therefore mostly unwritten, and subject to constant improvisation. It then filtered into a new light genre, the *pizmon* (from the verb *le-fazem* ‘to hum, sing softly’), written by prominent songwriters, sometime also renowned poets, especially for satirical theatre and light entertainment (Reshef 2008b: 526). A sub-genre of the *pizmon* introduced Arabisms, Yiddishisms, and MH slang, and became popular in youth movements and get-togethers. In the first decades of the State, songs written especially for the IDF entertainment singing troupes were in normative Hebrew with sprinklings of vernacular interspersed (Reshef 2012). Once introduced into the public space, these songs were adopted and sung by all, notably in public singing sessions, popular to this day.

It was not until the 1970s, when rock, pop and ethnic music came to the fore, that GMH became the basic unmarked language of songs. In this process, the Type 1 back /r/ [R] gradually replaced the Sephardic trilled [r], which had formerly been imposed on singers and announcers of all backgrounds. Mizrahi singers with a native trilled [r] sometimes converged to the Type 1 variant or even produced a coarticulated “fudged” {rR}, interpreted as reflecting simultaneous convergence and divergence tendencies (Yaeger-Dror 1993: 194, and see Chapter 6). Divergent phonology remained more prominent in Mizrahi music, first restricted to weddings and disparagingly called in the 1980s ‘cassette-music’. It gradually gained access to public music stations as *zémer yam tixoni* ‘Mediterranean song’. This became a relatively non-stigmatized cover term for popular music of Arabic, Persian, Turkish, and Greek flavor and is now very popular (Ben-Rafael 1994: 134; Yaeger-Dror 1988: 289).

3.5 Mass communication and media

Sociolinguistic research on mass communication and media language in MH includes socio-pragmatic and rhetorical issues of positioning in interview discourse (Weizman 2008), sociolectal accommodation for pragmatic positioning (Shukrun-Nagar 2016), representation of speech in the journalistic interview (Ben-Shahar 2010), and media coverage of non-mainstream sectors (Shukrun-Nagar 2014). The latter, for example, shows that the tiny, extreme Haredi faction *ha-eda ha-ħaredit* ‘DEF-community DEF-fearful = the ultra-orthodox community’, constituting just 5% of the Israeli Haredi world, is usually presented in the media simply as ‘Haredi’, and is thus generalized to the entire sector; moreover, even when singled out as a faction, the wording usually extends its extreme nature to the entire Haredi world (Shukrun-Nagar 2014: 154–155). The 2013 election discourse, on TV, internet, and in printed media, showed rhetorical sociolectal shifting as parties attempted to converge with their potential voters of the different communities, and alienate them from rival parties by means of sociolectal differences. For example, in approaching the very large North African community, the highly distinctive Judeo-Moroccan lexeme *diyálna* ‘our’ (party) was used. Similarly, the metalinguistic slogan ‘if Shabbat for you is not just Shlomi (alluding to the popular Mizrahi singer Shlomi Shabbat), then our party...’ targeted an audience on the spectrum from mildly observant to religious (Shukrun-Nagar 2016: 416).¹⁷

3.6 Digital language

Digital communication in Israel was initially dominated by English. Technical obstacles, especially when changing script and direction, hindered the transition to Hebrew and the local minority languages. Many, especially in academic circles, still prefer to communicate in English while in the young bilingual communities, Arabic and Russian scripts alternate with Hebrew and transcription in bilingual digital languages (§3.7).

Digital MH today, as a hybrid mode of spoken language coded in a written medium, shares many characteristics with digital languages elsewhere, including contractions, acronyms, phonetic spelling, playful innovations, and iconic duplication of letters. English vocabulary particularly is abundant in MH digital language, and English morphemes too may occur, as in *idkun-eyšn* ‘updating’ from *idkun* ‘updating’ and the English *-(a)tion* derivational suffix (Vaisman & Gonen 2011: Chapters 1–2).

17. For the extremely popular but rather short lived genre of political and social communication known as ‘bumper-sticker culture’, see Bloch 2000; Shlesinger & Livnat 2001.

The additional physical limitations of text messaging are common across languages: a small screen and different keyboards for numbers and punctuation make reading and writing costly in terms of effort. The resulting tendency to minimize characters, however, promotes synthetic morphology characteristic of high MH, whereas spoken MH prefers analytic, syntactic variants, notably in possessive and accusative structures. Compare, for example, synthetic, bound *hoda-ot-ay* ‘message-s-POSS.1SG’ ~ *ha-hoda-ot šel-i* ‘DEF-message-s POSS-1SG’ both meaning ‘my messages’ (Borochofsky Bar-Aba & Kedmi 2010: 47–50; see, too, Chapters 8 and 15). The result of this clash of typological vectors, the analytic and the synthetic, is a hybrid heterogeneous code, juxtaposing ‘high’ and ‘low’ forms, as in (9), where the first two words are low-register loan words from Arabic and the third is a high-register synthetic accusative construct.

(9) *sabába be-kef odi* *-ex axar-kax*
 cool in-fun inform:FUT.1SG -2SG.F later

‘Cool, great, I’ll let you know later’ (Borochofsky Bar-Aba & Kedmi 2010: 50)

A distinct blog style that has attracted scholarly attention characterizes teenagers labeled *fakácas*, representing the stereotype of snobbish, upper class Tel Aviv girls, associated with notions of cuteness, luxury, glamour, narcissism, romance, fashion, and showy behavior (Vaisman 2011; Vaisman & Gonen 2011: Chapter 3). Graphic symbols of this style include girlish colors (pink) and a chaotic mixing of Hebrew and English letters, digits, and signs. Linguistic markers include devoicing for an effect of softness and indulgence (*afal* for *aval* ‘but’) and lexical glocalization (mix of global and local items), most prominently from English, Spanish, and Japanese.

3.7 Hybrid bilingual codes

The two largest bilingual communities – speakers of Russian and of Arabic – are characterized by distinctive patterns of codeswitching. Their language choices are governed not only by competence of interlocutors, but also by socio-pragmatic considerations, which differ in these two communities. Remennick’s (2003) study of Russian-speaking families shows that, as typical in immigrant settings, the children soon become the weak link for Russian, while the elderly are least competent in Hebrew. As a result, intergenerational communication may be problematic. Some parents invest efforts in fighting this, by implementing a Russian-only policy at home in order to delay attrition, as children from kindergarten on are immersed in Hebrew. This contrasts sharply with the policy of the veteran immigrants of the 1970s, most of whom tried to speak only Hebrew with their children. Outside the home, proficient bilinguals may avoid Russian in public space, keeping it for private in-group discourse. Remennick notes a teacher at a public high school who

testified to using only Hebrew with her bilingual colleagues inside the classroom, but Russian at lunch breaks outside. Hebrew also serves as the code of formal distance, maintained in addressing Russian-speaking strangers, especially superiors or veteran immigrants of the 1970s, as speaking Russian may be conceived as imposing familiarity.

Alfi-Shabtay & Zhurbitzky's (2013) study of the mixed code, called 'Hebrush', as used among middle-aged bilingual immigrants, showed some 30% of the words to be Hebrew. These are mostly nouns, often suffixed by Russian case endings. In (10) the MH noun *pnimiya* (bolded) is truncated in order to receive the vocalic Russian accusative suffix:

- (10) *ya pošl-a rabotat' v pnimiy-u*
 I went-SG.F work:INF in boarding.school-ACC
 'I went to work in a boarding school' [Alfi-Shabtay & Zhurbitzky 2013: 38]

Hebrew words served mainly two shallow translation gap-filling functions, according to the following classification by Weizman (2010): (i) concepts that lack a Russian equivalent, such as *ulpan*, denoting sponsored Hebrew classes for adult new immigrants and (ii) more commonly, concepts whose conventional Russian equivalents lack the local-cultural overtones of the Hebrew lexical item: a father saying 'second grade' in Hebrew rather than in Russian may be (possibly inadvertently) highlighting the alienness of the local educational system to newcomers, such as himself and his interlocutor.

In contrast to the second generation Russian-speaking high-schoolers who are fluent bilinguals, their Negev Arabic-speaking peers are basically monolingual, since Hebrew is taught rather passively by predominantly Arabic-speaking teachers (§5). A dramatic change occurs in early adulthood, when they enter institutes of higher education or the work market and Hebrew becomes their major means of communication outside home. Intensive Arabic-Hebrew codeswitching becomes the absolutely predominant unmarked code of Bedouin students and working adults in the public space (Henkin 2011a: 89–92, 2015, 2016). As in the Russian case of (10) above, *mixed morphology* is common. Moreover, the similar morphology of Hebrew and Arabic enables hybrid verbs, typically Hebrew stems in Arabic inflections (Henkin 2011a: 89, 2015: 29). In (11), MH is bolded:

- (11) *b-a-sgor to'ar f-al-Bi.Ey klali*
 IND-1SG-close degree in-DEF-B.A general
 'I'll graduate in the general BA (degree program)'

Here the MH future stem follows two Negev Arabic prefixes, the indicative morpheme and the first person singular prefix of the present-future verb.

A comparative study of borrowing and codeswitching patterns among students from the main Arabic-speaking communities of the Galilee found clear differences in intensity. As expected (§1.6), the Druze top the list: 14% of the discourse sampled consisted of Hebrew elements, a rate twice as high as that established in the Bedouin sample, ranked second; in other urban and rural Christian and Muslim communities the codeswitching rate ranged from 4%–6% (Brand 2015; Rosenhouse & Brand 2016). As for the motivation to codeswitch, in the young Negev population, a delicate bilingual balance seems to serve the needs of the speakers' complex ethnic-civic-social identity: too little Hebrew would raise suspicion of the speaker's incompetence in Hebrew, placing him at the inferior rank of children and old women; but too much Hebrew would make him sound snobbish and disloyal to his Palestinian ethnicity (Henkin 2011a: 90–91). Intensive switching to Hebrew and bilingual punning are exploited humoristically to display flexibility, even virtuosity, and linguistic superiority vis-a-vis the monolingual Hebrew speakers (Henkin 2009, 2011a: 91, 2011b).

Digital texts of young bilinguals with Russian and Arabic as home languages show similar patterns of codeswitching and borrowing from Hebrew, and playful use of digital means (§ 3.6). In the early digital period when in Latin script and digitals, only Latin scripts were available, both communities innovated similar transcription strategies, with digits standing for additional phonemes of Russian (Vaisman & Gonen 2011: 51–52) and Arabic (Elhija 2017). In the following two samples of mixed codes, we find Hebrew elements (italicized) inserted within the matrix languages (bolded) – Russian in (12) and Arabic in (13). Since both of these languages have consonants that lack a letter in the Latin script, one consonant in each of these examples is represented by a digit: in (12), all in Latin characters and digits. 4 stands for Russian /č/, probably referring to Russian *četyre* 'four'; in (13) 5 stands for Arabic /x/ which resembles it somewhat.

(12) *lo nahon.. ya bemet rad -a 4 to ty histadár-ta*
 not true... I really happy SG.F that you:SG settled-2SG.M
 'That's not true. I really am happy that you got settled'

(13) **5erbat el.mdbesit** [Elhija 2017: 429]
 broken.down:3SG.F DEF.printer [cf. MH *madpéset*]
 'The printer broke down' [Elhija 2017: 429]

The use of Latin script is now largely replaced by Russian, Arabic and Hebrew scripts, with mixed scripts and codes often alternating within a single discourse text.

Other studies of codeswitching in Israel include MH switching with Spanish, both Judezmo and Latin-American (Berk-Seligson 1986; Held-Dilaroza 2008, 2009, 2012), English (Maschler 1991, 1994, 1997, 2000), Yiddish (Assouline 2017;

Berman D. 2007); French (Ben-Rafael & Ben-Rafael 2011). Burstein-Feldman et al. (2010: 229) note several other studies on Hebrew switching with diverse languages.

4. Language, gender, and power

Hebrew specifies gender for nouns, verbs, participles, adjectives, pronouns, and numerals (see Chapter 7). This typological trait makes issues of gender and social order, as coded in the language, salient and inescapable. Some are common cross-linguistically, including a general androcentric bias and some recent countermeasures (§4.1); others are specific to the developmental path of MH and its unique socio-cultural symbols (§4.2). Special attention is accorded the sociolinguistics of the cross-linguistic generic ‘you’ in MH (§4.3).

4.1 Gender bias and countermeasures

As in many other languages with gender systems, masculine forms in MH are unmarked or gender-common, serving for mixed or gender-unspecified groups (Goldenberg 2013: 161; Livnat 2006: 169; Muchnik 2015: 7–8). In this system, the marked feminine forms are often less prestigious than the masculine parallels, so in MH *mazkir* ‘official, clerk’ and *ganan* ‘gardener’ enjoy a higher status than their feminine counterparts *mazkira* ‘office secretary’ and *ganénet* ‘kindergarten teacher’ respectively (Livnat 2006: 174; Muchnik 2015: 201–202). Different images are invoked: *ravak-a zken-a* ‘single-SG.F old-SG.F = spinster, old maid’ was conceptualized by 60% of respondents to a questionnaire as a 32-year-old woman, while *ravak zaken* ‘single.MSG old.MSG = old bachelor’ was conceptualized by 70% of the same respondents as a 60-year-old. Courtroom discourse analysis and a comparison of men and women poets shows women in these professions to be more often referred to by first name than men (Bogoch 1999; Muchnik 2015).

A gender bias particular to Modern Hebrew in pre-State and mass immigration periods derived from gender-specific patterns of schooling in the diaspora: Jewish boys studied canonical texts, written in Hebrew, while girls typically had no formal Hebrew education. This made early Modern Hebrew a ‘father tongue’, alongside ‘mother tongues’ such as Yiddish (Muchnik 2015: 144–145; Schwarzwald 2013b). Learning Hebrew was most challenging for women who remained at home with the children all day, and were thus less exposed to the new language. This role division lasted longer in Mizrahi families, making acquisition, integration, and social mobility all the more difficult for both mothers and children, who typically saw very little of their fathers due to extremely long working hours (Aslanov 2016: 11).

Today, as in many societies, awareness of gender biases in language has prompted preventative measures in official MH. Explicit guidelines for non-sexist language in written public announcements were first issued in 1984 by the Ministry of Education, and have been obligatory in job ads in the media since 1995 (Muchnik 2015: 189–191). The linguistic means for this include non-inflected forms such as infinitives in modal constructions (e.g., *na li-xtov* ‘kindly to-write = please write!’ and alternating forms (*atem/n mitbakš-im/ot* ‘you.M.PL./F.PL are requested-M.PL/F.PL’). This dual-form technique, especially if repeated over several consecutive forms, marks the usage not only as stylistically ‘heavy’ but as pedantic, even pompous, especially since the high visibility of feminine plural forms contrasts with their rareness in ordinary MH discourse.¹⁸ Alternatively, an explicit general note is added that ‘the text is formulated in the masculine form but includes both genders’.

4.2 Gendered symbols and stereotypes

The cultural-linguistic ethos of *dúgri* or ‘straight talk’ (§3.1) lies at the intersection of Israeli nationalism and ‘masculine Judaism’, striving to assert normative masculinity, Jewish virility and power as characterizing ‘the new Hebrew man’ (Levon 2015). In their study of engendered cultural symbols and stereotypes, Bloch & Lemish (2005) claim that the highest compliment for a man, even long after the wane of the *dúgri* culture, is simply *géver* ‘man’ or, more emphatically, *géver géver* ‘man man’; *géver amiti* ‘man real.M.SG = a real man’; *áhla géver* ‘great guy’. The antithesis of *géver* is the Yiddish word *fráyer* ‘sucker’, and being labeled so is the greatest possible insult to the Israeli man, as it symbolizes “the ‘other’, foreign, Diasporic Jew, who is passive and weak, or in short, ‘feminine’” (Bloch & Lemish 2005: 46). They suggest that the feminine label, *fráyerit*, may be somewhat less of an insult for a woman, as it reflects feminine values of caring for others, constantly weaving a metaphorical solidarity net in contrast with the stereotypically competitive male Israeli’s symbol of a pyramid. This highly stereotypical contrast-frame places women in a paradoxical situation: like men, they resent being seen as *fráyeriyot* (PL of *fráyerit*), but at the same time, according to the writers, they may be so by socialization.

Several gendered derogatory labels designate low-status female and male stereotypes – originally Mizrahi and eventually spread to all ethnic backgrounds (Vaisman & Gonen 2011: 39–40). The term *fréxa*, possibly a merge of the diminutive forms of Arabic *farha* ‘joy’ (also a north African Judeo-Arabic personal name for women) and

18. In fact, the tendency to eliminate this crosslinguistically rare category dates back to Biblical Hebrew. In the case of pronouns and past tense verbs the phonetic similarity between the feminine plural suffix *-en* to the masculine plural *-em* no doubt contributed to their merging.

farxa ‘chick’ (FSG) signified a Moroccan girl who ‘rebelled against family tradition by identifying with American/global culture and fashion’ (Vaisman 2011: 162). Male parallels include *ars* (from Arabic *šars* ‘pimp’), phonetically close to *arsi* ‘poisonous’, and *šáxčax*, an invented onomatopoeic item imitating the Moroccan pronunciation of sibilants, as perceived by GMH speakers (Henkin 2011a: 76; Rosenthal 2010: 68). For *fakáca*, characterized as the ‘digital *fréxa*’, see (§3.6).

4.3 Male as norm in generic ‘you’?

The early transition to Hebrew as national language was easier for men, as noted, due to their education in the diaspora, based on Hebrew texts, from which women were traditionally barred. To this day, ultra-orthodox Yiddish-speaking Israeli women feel obliged to veil their unmediated understanding of Classical Hebrew texts – due to their competence in GMH – so as not to overstep their limits (Assouline 2014). Sa’ar (2007) argues that Hebrew and Arabic-speaking women in Israel show a marked preference for ‘masculine talk’ over ‘feminine talk’, reflecting ‘male as norm’ systems of masculine order.¹⁹ Evidence of this tendency, in this view, is women’s predominant use of masculine generic ‘you’, even in situations pertaining solely to women, such as ‘when you (M.SG) become a mother...’ (Sa’ar 2007: 407). Contradictory findings, however, emerge in the unpublished 26,000 word Hebrew ‘generic-you’ corpus of the author of this chapter. In a sample of newspaper interviews with 16 women, all interviewed by female journalists in 2017, 98% of generic ‘you’ turned out to be feminine forms. Moreover, the feminine generic ‘you’ may appear in a monologic male column. In (14) the journalist Yair Nitzani describes his daughter moving with her boyfriend to an apartment (freely translated into English).

- (14) I admit I was just a little envious: what could be more cool than to leave home at 23 ... start the day with fresh mint rather than stale parents and do whatever **you.FSG** like (*ma še-ba lax*) because life is all ahead of **you.FSG** (*lefanáyix*) and dad’s no longer behind **you.FSG** (*meaxoráyix*)

[*Shishabat* weekend supplement of *Israel Hayom* ‘Israel today’ 16.9.16: 17]

The discourse topic is clearly a factor: When AA, wife of a notorious criminal, talks about the challenges she faces in her family life, she consistently uses only feminine

19. The Hebrew generic ‘you’ has been found, as in other languages, in several socio-pragmatic functions, such as invoking empathy and shunning responsibility (Grossman 2013; Horvitz 1999; Livnat & Yatziv 2012; Timor 1996); a developmental cross-linguistic study on discourse stance finds generic ‘you’ to be relatively infrequent in the Hebrew sample (Berman 2005). Only two of these consider the feminine generic form.

generic ‘you’, but switches to the masculine generic ‘you’ when explaining, ostensibly from her husband’s point of view, why he does not abandon crime: ‘It’s not that simple when **you.M.SG** (*ata*) are deep inside’ [*Shishabat* 23.9.16: 39].²⁰

5. Language ideology and educational policies

The complex and dynamic interaction between top-down regulatory processes of institutional planning and implementation as against spontaneous, natural development of native MH (as discussed in Chapter 5) shows that the early assimilationist ‘one nation, one language’ ideology, promoting Hebraization of family names and toponyms (Avishur 2003; Efrati 2010: 22; Mar’i 2016; Zivan 2001) gradually began to give way to a more tolerant approach, fostering cultural pluralism, multiculturalism (Ben-Rafael 2002, 2008) and plurilingualism (Burstein-Feldman et al. 2010). This was supported both by worldwide globalizing tendencies and the massive immigrations of Russian-speaking Jews (Amara, Donitsa-Schmidt & Mar’i 2016: 13 fn. 4). The next stage was to take active steps to preserve the disappearing heritage languages. A new educational policy encouraged immigrants to retain their native languages, and National Authority councils were established for Yiddish and then Ladino culture, and for subsidizing and promoting cultural and linguistic activities (Bunis 2003: 70–71; Spolsky & Shohamy 1999: 211, 213). All this, of course, came rather too late for most of the immigrant languages.

This policy of ‘subtractive’ or ‘replacive’ bilingualism (Shohamy & Spolsky 2002: 116; Uhlmann 2010: 295) vis-à-vis immigrant languages contrasted with the ‘additive bilingualism’ approach towards indigenous Arabic. Since the 1922 Mandatory Order (Amara, Donitsa-Schmidt & Mar’i 2016: 16–17; Yitzhaki 2011: 95), restated in the Declaration of Independence in 1948, the status of Arabic as an official language requires bilingual conduct by state authorities in all official functions. De facto, however, Arabic is clearly a minority language in Israel, with a low linguistic market value as cultural capital (Burstein-Feldman et al. 2010; Uhlmann 2010: 295, 2017: 27). This is true in all spheres of life: from government services, media in general and public TV (Yitzhaki 2011: 96–99) to educational language policy and linguistic landscape (§6).

Educational language policy in Israel posits three officially compulsory languages in all mainstream (non-religious) schools: Hebrew, English, and Arabic. English is taught from grade school on and, along with Hebrew, is required in both the final matriculation exams and the national university entrance exams. Indeed,

20. From the weekly magazine of the daily newspaper “Israel Today”

competition with this prestigious language, as well as the ongoing Arab-Israeli conflict and the diglossic nature of Arabic, are all factors that inhibit learning Arabic as L3 (Amara, Donitsa-Schmidt & Mar'i 2016: 19; Koplewitz 1992: 41; Yitzhaki 2011: 100). Although Standard Arabic is officially compulsory in grades 7–9, it is still actually replaceable by French in many cases (Uhlmann 2017: 26). Moreover, almost no teachers of Arabic as L2 are native speakers (and teachers of Hebrew in the Arab sector are likewise rarely native Hebrew speakers). In stark contrast, the number of native-speaking English teachers was assessed at some 40% of all English teachers in Jewish high schools in the 1990s (Burstein-Feldman et al. 2010: 233; Shohamy & Spolsky 2002: 119; Uhlmann 2017: 24). This allows English to be taught as a thriving language of communication, whereas Arabic tends to be taught as a passive receptive skill, in what Uhlmann (2010: 292–294, 2017: 24) labels a 'Latinized' manner. The dilemma of choosing between Standard and Colloquial Arabic, or perhaps a little of both, is still ongoing. On the one hand, pupils very quickly realize that Standard Arabic does not enable them to communicate; on the other hand, colloquial varieties are very local and non-prestigious, and do not give access to the language of the media, which is generally Standard Arabic, let alone literature; moreover, most teachers cannot teach in Arabic (of any kind).²¹

In most schools of the Haredi educational system, which are independent and separate for boys and girls, Hebrew is the language of instruction (Tannenbaum & Abugov 2010: 75; Tannenbaum, Abugov & Ravid 2006: 473). In some, boys start with Hebrew and progress over the years to Israeli Hasidic Yiddish, which is also the language of instruction in some girls' schools (Spolsky & Shohamy 1999: 214, 220–224).

Today, alongside the 2,000 schools teaching in Hebrew (Shohamy & Spolsky 2002: 122) some 500 minority schools teach in Arabic, with state control over curriculum and staff employment (Yitzhaki 2011: 99). In these minority schools Hebrew is compulsory from grade 2 or 3 (Amara 2015: 184; Shohamy & Spolsky 2002: 124), including the study of Bible and Hebrew language and literature. Some of the hard sciences are taught at high schools at least partially from Hebrew textbooks (Talmon 2000: 206). An alternative system, though not without difficulties, is that of bilingual schools and preschools, numbering seven and located from Beer-Sheva in the south to the Galilee in the north, where an equal number of Arabic- and Hebrew-speaking faculty teach in their respective native languages (Yitzhaki 2010: 338).

According to the '3+ policy' system announced in 1995 by the Ministry of Education, foreign languages are to be treated as important resources: every

21. For a historical overview of educational policies regarding Arabic in Jewish schools, see Mar'i 2016. For more on Colloquial Arabic in primary schools see Shohamy & Spolsky 2002: 121.

schoolgoer in Israel should study his/her L1 (Hebrew or Arabic), L2 (the other in this pair) and L3 – English (which today is indeed L3 for minorities, but for Hebrew-speakers it is L2). Additional languages such as Russian, Amharic, Yiddish, Judezmo, French, and German are to be encouraged (Burstein-Feldman et al. 2010: 233; Shohamy & Spolsky 2002: 122–125). On language policy and usage in institutes of higher education, see Amara, Donitsa-Schmidt & Mar'i 2016; Burstein-Feldman et al. 2010: 229–230; Kheimets & Epstein 2005; Koplewitz 1992: 38–39; Mar'i 2016: 105–106; Myhill 2004: 193; Uhlmann 2010, 2017).

6. Linguistic landscape

This major factor in the Israeli sociolinguistic mosaic has attracted scholarly attention in recent times (Amara 2002, 2015; Ben-Rafael et al. 2004, 2006; Henkin 2011a; Isleem 2015; Mar'i 2016). The relations between community languages, especially Hebrew and Arabic, and English in official and commercial signs, reflect official and de facto linguistic policies. A 2004 survey in Hebrew-speaking environments found Hebrew on all signs; English on 50%; Arabic on 6%. In Arabic-speaking locations (Nazareth, Tira, and Jaffa), where one might expect a reversal, Hebrew appeared in 94% and was the sole language in nearly a quarter (24%) of all signs, whereas Arabic appeared in 70% of the signs and was sole language in just 5%, reflecting the very dominant presence of Hebrew in the linguistic landscape even in purely Arabic-speaking communities (Ben-Rafael et al. 2004: 22). A 2010 follow-up study in the same purely Arabic-speaking locations found more Arabic than Hebrew; but in localities that are either mixed or close to Hebrew-speaking centers, 66% of the signs were monolingual Hebrew (Amara 2015: 185–187).²² A 2015 comparative study of Druze localities – in the Haifa area as against Lower Galilean areas further away from Hebrew-speaking centers – found Hebrew to be significantly more visible than Arabic or English in both; Isleem (2015: 24–25) concludes that the ethnolinguistic vitality of Arabic may be declining in these particular locations. On the issue of linguistic landscape, however, a differentiation is crucial between official, top-down and non-official, community-level signs.

In *official* inter-city road signs, Arabic follows Hebrew and English is third. The Arabic form is often just a transliteration of the Hebrew name, ignoring an existing Arabic name (Mar'i 2016: 103). So symbolically, Hebrew *yeruśaláyim* (transliterated YRWŠLYM) is transliterated YRWŠLAYM (*yerūśalāyim*) for Arabic, ignoring the conventional Arabic name, Al-Quds, while the English name 'Jerusalem' is

22. A relatively high presence of English was found in Nazareth, due to its prominent role in Christianity.

retained.²³ Arabic is not fully represented in the linguistic landscape of public institutions, such as hospital wards and train stations. In naming upcoming bus stops, as displayed electronically inside buses, the Arabic letters are not always properly combined in sequence.

In *non-official* signs in Arab localities, Hebrew is paradoxically more prevalent than in the top-down official signs (Ben-Rafael et al. 2004: 27), particularly in commercial centers, reflecting the instrumental and symbolic association of Hebrew with modernity, western consumerism, and education. This is strongest in Druze villages around Haifa (Isleem 2015: 25). In contrast, Arabic predominates in more domestic environments, and in the context of communal, religious, and ethnic values of 'local, Arab Islamic, identity' (Amara 2015: 191–192).

A noticeable transformation of the linguistic landscape has occurred in urban areas populated by recent immigrant communities that speak French or Russian. The French, for example, keen to retain their home language and culture, have transformed the linguistic landscape of locations where they reside in large numbers, most visibly in the city of Netanya. But this francophonic material is aligned with the other components of the local urban landscape, including Russian and English, creating a unique multicultural fabric in each setting (Ben-Rafael 2008: 108; Ben-Rafael & Ben-Rafael 2010).

7. Concluding comment

The Israeli sociolinguistic arena is extremely varied and dynamic. As a newly spoken language, with only written models to draw from, Modern Hebrew developed registers, genres, and styles based on its two sociolects, the dominant Ashkenazi Type 1 or GMH and the Mizrahi Type 2, each strongly influenced by its substratum mother tongues. The initial integrationist policy, repressing all foreign languages (excluding indigenous Arabic) and promoting unilateral convergence of Type 2 to Type 1, was gradually replaced by more pluralistic and multicultural policies, opening options of mutual stylistic convergence and divergence. Simultaneously, the strict norms barring spoken MH from literature, song, and performing arts were relaxed, enabling both Types 1 and 2 in all these genres. In the asymmetric interaction between MH and Palestinian Arabic, patterns of codeswitching, borrowing, and linguistic landscape in Arab localities show the importance of Hebrew for Arabs as a means to 'step out' from the domestic to the general public sphere; a similar role characterizes English for all Israelis, Jews and Arabs, in a wider circle of international horizons.

23. A common compromise hybrid in Arabic is *ʔuršalīm (al-quḏs)*.

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Prescriptive activity in Modern Hebrew

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This chapter surveys prescriptive activity and discourse in Modern Hebrew from historical and sociolinguistic perspectives. The first prescriptive efforts in the pre-Mandate period (up to 1918) were part of an intensive language planning process aimed at creating a uniform functional national language based on classical Hebrew sources. After the establishment of the State of Israel in 1948, the nationalistic tone of public discourse in Israel increased, and with it prescriptive activity, up until the 1970s. At a very early stage in the formation of the speech community, even prior to World War 1, two types of ideal (hegemonic) Hebrew began to emerge: *institutional* (planned), reflecting a nationalistic and puristic stance grounded in the Jewish past, and *native* (unplanned), reflecting a contrasting anti-institutional stance. Both types are still active in contemporary public discourse in Israel, and together constitute a complex approach to prescriptivism and the concept of correct language.

1. Introduction

Contemporary Modern Hebrew (MH) is the result of language planning activity which transformed an ancient language serving as the written medium of Jewish communities in the diaspora into the spoken national language of the new Jewish settlement in Palestine. The intensive and ideological nature of this activity and the inherent tension within Hebrew between old and new combine to make issues of prescription and prescriptivism remarkably relevant, and so meaningful, for MH users. The goal of this chapter is to outline the history of MH prescriptivism, starting from the establishment of the Hebrew Language Committee in 1889, and to delineate the prescriptive discourse it has evoked. Section 1 treats basic conceptual and terminological distinctions and delineates the ideological character of prescriptive activity, particularly in national contexts. Section 2 provides a historical sociolinguistic survey of the principles underlying prescriptive activity in MH during two periods: pre-state and statehood, focusing on the conflict between planned

and unplanned developments and their social and cultural ramifications. Section 3 discusses selected issues in pronunciation, grammatical structure, and lexicon. The fourth and final section provides concluding comments.

1.1 Prescription, norms, and standards

Two terminological distinctions are proposed below: between prescriptivism and normativism, and between prescriptive and conventional norms. Prescriptivism, the focus of this chapter, represents a position that advocates adherence to an explicit system of linguistic codes stipulated by institutional authorities such as national language academies. Linguistic normativism refers to a more general adherence to a conventional system of linguistic codes in a specific culture, which involves acceptability on the one hand and obligatoriness on the other. As such, it is a social notion that does not necessarily involve officially prescribed codes, but reflects a wide range of sociolinguistic issues, such as attitudes towards other languages and non-prestigious linguistic varieties, association of linguistic behavior with social status, and political correctness, among others. Prescriptivism, then, can be viewed as a specific case of normativism. In academic discourse, *normativism* and *normative* are often used interchangeably with *prescriptivism* and *prescriptive*, and this applies, too, to the specific situation of Israeli Hebrew. As noted, here the two terms are deliberately distinguished.

A second distinction is between prescriptive and conventional norms: Rosén (1953: 4–6) was apparently the first to distinguish the two for MH: one set by prescriptivists, which he labeled *norm*, the other typical of or associated with the educated elite, which he labeled *standard* (and see, too, Berman, 1989: 109–111; Blanc, 1968; Ravid, 1995, Chapter 1). While this is an important observation in itself, Rosén's choice of terminology is misleading, since both labels are ambiguous, as he himself notes. As already mentioned, *normativism* and *normative* have a dual sense, while *standard* may denote different kinds of linguistic norms, most notably prescriptive or socially prestigious (Milroy & Milroy, 1985/1999: 150–151; Reshef, 2015: 6–8; van den Berg, 2005: 145–146). The present chapter adopts, rather, the distinction made by Raphael Nir (2011: 61) between *conventional norm* and *prescriptive norm*, while the term *standard* refers here to the result of standardization (§1.3 below). Myhill (2004) proposes a similar solution, distinguishing between prescriptive and (text-based) norms and prestige-based norms.

1.2 Prescriptive discourse

Prescriptive discourse refers to the domain in which linguistic prescriptions are formulated, explained, institutionalized, negotiated, ridiculed, rejected, and so forth. As such, it is part of a wider sociocultural polysystem (Even-Zohar 1990: 9–26) involving other areas – ideological, technological, commercial, and so on – of linguistic activity and communication.

Prescriptivism stimulates a highly diversified and multifaceted discourse, ranging from official usage guides to everyday dinner-table conversations, and encompasses both linguistic prescriptions and metalinguistic discussions. This diversity derives from numerous factors, such as variety of participants, including institutional authorities (language academies, education systems, publishing houses, broadcasting agencies, etc.) as well as expert individuals (grammarians, lexicographers, educators, language scholars, writers, and statesmen) on the one hand, and non-specialist users, on the other. A second factor is the diversity of perspectives and goals: language education and cultivation, linguistic (and social) uniformity, conservatism and purism, establishment of or resistance to authority, etc. A further factor is the variety of mediums involved in prescriptive discourse, including style and usage guides, codices of linguistic pronouncements, dictionaries, pamphlets, school curricula and textbooks, newspaper columns and letters to the editor, spots on radio and television, message boards, Facebook pages, etc., each with its own conventions, history, circulation, and typical audience. A fourth factor is the diversity of ‘tone’ or ‘key’ (Hymes, 1972: 62), in the sense of varying degrees of formality, authoritativeness, resoluteness, argumentativeness, learnedness, etc. Finally, diversity of topics also has an effect on the nature of prescriptive discourse, which may concern both particular linguistic items or more general issues.

As a case-study illustrating the diversity of prescriptive discourse in MH, consider the pronouncement of the Academy of the Hebrew Language regarding the use of feminine gender in titles of authority, work position, and so on. In Hebrew, feminine titles are typically formed by addition of an inflectional suffix to the masculine form (e.g., *nevia* ‘prophetess’ from *navi* ‘prophet’), but not all feminine forms are lexicalized, and the masculine forms are often used for both sexes (e.g., *séren* ‘(military) captain’; see Gadish 2013a). A meeting of the plenum of the Academy in 2012 stipulated that it was legitimate to apply a feminine suffix to the title of any position occupied by a woman (e.g., alongside of the set expression *roš^h memšala* ‘head:cs government = prime minister’, a female prime minister may be referred to as *roš^{at} memšala* ‘head:cs.sg.f government = female prime minister’). No fewer than four different official online texts of the Academy refer to this decision, in addition to the protocol of the meeting noted earlier.¹ The first three are posted

1. <<http://hebrew-academy.org.il/wp-content/uploads/meeting-328.pdf>> (16 July 2019).

on the Academy's website, the fourth on its Facebook page. Of interest here is not only this diversity, but also the fact that alternative texts regularly coexist within the discourse.

Thus, an initial press release (20 November 2012) regarding the matter was issued via the media to experts and non-experts alike, in keeping with the Academy's policy of maintaining contact with the general public (Gadish 2013b: 18b–19a).² The statement was, accordingly, phrased so as to appeal to readers, supplemented briefly by a comment on the reasoning behind the decision and its practical implications. A second reference was a paragraph in the section on decisions regarding grammar (typically referring to morphology rather than syntax).³ The Academy's decisions constitute official laws (§2.2.2), also intended for practical application, so that their wording is highly concise and formal (Tene 1996: 234–235) and consequently monologic (not unlike the “authoritative word” described in Bakhtin 1981: 342–344), and, in fact, the paragraph about feminine titles is highly succinct. A third reference is a page in the “articles” section (of 15 January 2013), introducing an article (Gadish 2013a) which expands on the historical and practical aspects briefly touched on in the press release.⁴ It demonstrates, in a one-page outline, that the formation of feminine titles is a regular and natural feature of Hebrew since ancient times, and asserts that “the decision was not meant to meet any certain ideological stipulation”.⁵ This text, which targets the learned public, is more comprehensive and enlightening than the former two, and also more academic than the press release, and more accessible and informative than the official decision.

A fourth reference is a post added to the Academy's official Facebook page on International Women's Day (8 March) in 2017.⁶ This is a more popular text, summarizing Gadish's paper without including bibliographical references, which might have seemed too academic for a Facebook post, and without renouncing ideological implications, which in this context might have appeared anti-feminist. Unlike the former texts, here members of the general public can participate actively in the discourse. The post elicited 30 comments, 466 reactions (458 of which were likes),

2. <<http://hebrew-academy.org.il/2012/11/20/בכזו-במרחש-שהייתה-האקדמיה-בכזו-במרחש>> (16 July 2019).

3. <<http://hebrew-academy.org.il/topic/hahlatot/grammardecisions/terminology-ordinance/4-1-שימושי-לשון>> (16 July 2019).

4. <<http://hebrew-academy.org.il/2013/01/15/צורר-לנשיא-על-צורר>> (16 July 2019).

5. The translations from Hebrew throughout the chapter are those of the author.

6. <<https://www.facebook.com/AcademyOfTheHebrewLanguage/posts/1391698027566916:0>> (16 July 2019).

and 40 shares. Some of the commentators accepted the authority of the Academy with a follow-up question or supportive data, while others challenged the decision, for example, by claiming that the decision was not in fact feminist.

1.3 Prescriptivism, ideology, and nationality

Prescriptive activity is essentially ideological, since it is based on a culturally-constructed hierarchical practice of assigning social values to particular linguistic varieties and usages. It is therefore a territory of struggle over social and national identity. This regulative conduct, typical of the operation of human cultures (Even-Zohar 1990: 15–17), is an integral part of a larger indexical formation of language ideologies that includes extralinguistic categories like morality, aesthetics, and citizenship (Agha 2003: 236–237; Irvine & Gal 2000: 37). Here, value assignment does not refer to a simple axis of correct (right) and incorrect (wrong), but rather to a dynamic configuration of overlapping conceptual oppositions: proper/improper, standard/non-standard, pure/impure, native/non-native, high/low, classical/non-classical, beautiful/ugly, etc.

Prescriptivism, notably, endeavors to conceal its ideological nature by generating authority (Bourdieu 1984/1993: 66; Cameron 1995/2012: 12–15) and by assuming a uniform coherent linguistic framework, which translates into simple clear-cut rules and distinctions. As such, it disregards the fact that prescriptive rules are subjective, man-made ordinances and not a transcendental truth. Prescriptive activity, particularly of an institutional nature, may thus have considerable impact on a given language, including selection of an official variety, its structural makeup and uniformity, and the ideological and emotional stances of speakers towards their own usage and that of others.

Relevant in this connection is the process of *standardization*, a hallmark of prescriptivist activity closely associated with construction or maintenance of a national identity (Elspaß 2005: 23–24; Kaplan & Baldauf 1997: 65–67). Standardization typically involves the following three characteristics (Blommaert 2006; Fishman 1972/1989: 299–309; Gill 2012): (i) Hierarchy: in nationalist thought, language is conceived as a key pivot of national identity, and hence as a site of social stratification, with national membership and civil status measured in relation to an ideal standard language and an image of an ideal language user; (ii) Totality: national authority is viewed as an undisputed omnipresence extending to all aspects of social life (education, status, civil rights, mass media, nomenclature, border control, etc.), incurring marked intolerance to non-national languages and non-standard varieties; (iii) Most importantly, the synthesis of *authenticity* (simplicity, naturalness, and authenticity, which are associated with “true” manifestations of

language – vernaculars and ancient texts), *modernity* (nationality and statehood, rationality, efficiency, progress towards an ideal future, and the concept of regulation), and *unity*. This threefold trademark of national languages is profoundly pertinent to MH, and serves as a key element in analyzing MH prescriptive discourse in the present study.

A case in point for MH is the exploitation of prescriptivism in ethnic discrimination in Israel, where a dominant socio-economic and symbolic distinction prevails between two major population groups: *ashkenazim*, Israelis of European descent, and *mizraḥim*, Israelis of Asian or North-African descent (Gaftar 2016; Yaeger-Dror 1988; and see, too, Chapter 4). A common strategy in Israeli public discourse, the media, and literature is identification of *mizraḥim* with inarticulate or vulgar language (Henshke 2017; Mishani 2004) to differentiate them from *aškenazim*, who are allegedly better speakers, and therefore better citizens. One manifestation of many is the denunciation of so-called *mizraḥi* features as incorrect language. Many such features can be traced back to Judeo-Arabic (Henshke 2017: 140; cf. Blanc 1968: 247–248). An enlightening illustration is a 2017 post in a highly active closed Facebook group for Hebrew enthusiasts (over 10,000 members), encouraging users to name the solecism that irritates them the most. This post yielded over 300 (main) comments, manifesting varied language ideologies. While the list of repudiated features is hardly representative or exhaustive, and more than a few of the so-called solecisms are in fact correct according to the prescriptive norm, many of the usages cited, often more than once (42 out of a total 391 = 10.7%), are ones stereotypically associated with *mizraḥi* speakers (see the list below), without any parallel group of *ashkenazi* solecisms. In other words, the association of “bad language” with *mizraḥim* is significantly stronger than with *ashkenazim*.⁷ The sociolinguistic reality is, of course, much more nuanced: so-called *mizraḥi* features may be used by non-*mizraḥi* speakers, and are not necessarily used by all Israelis of Asian or North-African descent. The important thing here is the social meaning conveyed by these features.

Participants noted several features of Judeo-Arabic background (without realizing that this is their origin): the compound tense *haya* ‘was’ + participle instead of the ordinary past tense; *ha-báyit* ‘the house’ or *la-báyit* ‘to the house’ instead of *ha-báyt-a* ‘homewards’; the locative preposition *b-* ‘in, at’ in *yašav/šaxav baricpa* instead of the preposition *al* ‘on’ in *yašav/šaxav al haricpa* ‘sat/lay on the floor’; use of the singular forms *mixnas* instead of the plural *mixnasáyim* ‘trousers’ and *taxton* instead of plural *taxtonim* ‘underwear’; *šata* (= drank) *kadur* instead of *bala* (= swallowed) *kadur* ‘took a pill’; *mazag óxel*, literally ‘poured food’, instead

7. Thanks to Roey J. Gaftar for help in formulating this observation.

of *higiš óxel* ‘served (solid) food’; and the hypocorism *kapára*, literally ‘expiation’ (Bliboim 2016; Henshke 2013; Yehudit Henshke, personal communication). Other phenomena noted were general *mizrahi* (or allegedly *mizrahi*) features: the monothongized pronunciation of *šte* instead of *štey* ‘two’ in the construct state and other cases of *ey* instead of *e* (Matras & Schiff 2005 :160–161; Neuman 2013: 248); *otex* instead of *otax* ‘you’ for the feminine singular accusative pronoun; vowel shifting in some weak verbs with defective roots (such as *e* instead of *i* with roots ending in *y*, e.g., *niséti* instead of *nisíti* ‘I tried’; or switching the stem-initial vowel in the *hifil* pattern, e.g., *maziz* instead of *meziz* ‘moves:TR.’ or *hivin* ‘understood’ for past tense *hevin*; see, further, Chapters 7 and 8’; and hypocorisms like *nešama*, literally ‘soul’, *cadik*, literally ‘righteous, a saint’ (Bliboim 2016; Yehudit Henshke, personal communication).

Although, as noted, stereotypically *mizrahi* usages abound in the discussion, their ethnic identity is never explicitly expressed, reflecting that prescriptive discourse typically strives to hide its ideological motivations under the guise of allegedly unequivocal rules. It seems, then, that the participants were motivated not only by their desire for language cultivation, but also by their wish to exploit the inherent status and authority of the prescriptive norm for construction of social boundaries.

1.4 Attitudes towards prescriptivism

Prescriptivism traditionally incurs resentment among both linguists and non-linguists. Modern linguistics views prescriptive activity as a parochial, puristic, non-objective, anti-rational, and anti-scientific intervention in so-called natural language, with a clear distinction between descriptive and prescriptive approaches featured in every introductory class or textbook (Cameron 2012: 3–5; Fishman 1983: 107–108; Milroy & Milroy 1985/1999: 3–6). However, in certain cases, linguists have engaged in prescriptive activity (as in the case of Latvia, Lithuania, and other European nations of “late dialect selection” languages; see Strelēvica-Ošņina 2016; Tamaševičius 2016). Generally speaking, the descriptive/prescriptive dichotomy tends to be currently challenged, with contemporary scholars viewing prescriptivism as an integral part of sociolinguistic behavior, so of interest to linguists. Some note that descriptive regulations, too, are basically normative and ideological, and that avoiding discussion of linguistic correctness ultimately leaves this important area of public discourse in the hands of non-experts (Azar 2009: 28–30; Cameron 2012; Taylor 1997: 14–16).

Lay speakers and writers exhibit various degrees of allegiance to prescriptive notions and actions: They may embrace prescriptivism for ideological, pedagogic, practical, or other reasons, while not necessarily accepting all prescriptive

pronouncements (Cameron 2012: 13–15; Fishman 1983: 115–116; Tamaševičius 2016: 250–251). On the other hand, linguistic authority often develops outside the circle of the prescriptive norm, in cases where a specific variety of non-conventional usage may acquire social prestige, coming to express favorable qualities like independence, coolness, roughness, authenticity, and so on (Coupland 2007: 127–129; Niedzielski 2005). Whether positively valued or repudiated, the prescriptive norm is a cardinal point of reference by which users position themselves (and others) in the sociolinguistic context.

The attitude towards prescriptivism in Israel is rather complex, since (i) the foremost prescriptive authority, the Academy of the Hebrew Language, is also a research institute (§2.2.2), and many of its members are linguists, hence the distinction between linguists and prescriptivists may be obscured; (ii) there is a marked discrepancy between prescriptive and conventional norms (§2.2.3). Typical examples of the public's attitude towards the Academy of the Hebrew Language appear, among more conservative ones, in user comments on its Facebook page. For example, in 2016 the Academy added a post on the inflected forms of the irregular verb *namas* 'melt' (*nif'al* of the root *m-s-s*), in which the prescriptive forms, unfamiliar to most users of MH, were introduced alongside their conventional counterparts, for example, *namásti* 'melt:3.PST.1SG = I melted', instead of the prescriptive *nemasóti*.⁸ The first comment to the post (out of 54) expressed disapproval of the Academy's approach by arguing that since language is preeminently a means of communication, it should be intelligible, hence the conventional forms are more "natural". The response of the Academy's representative to this comment is indicative of its overall approach (§2.2.2): the intention of the post, it reveals, is to inform the public and strengthen its affinity with classical Hebrew rather than to prescribe.

2. Prescriptive activity in Modern Hebrew

2.1 The pre-state period (1889–1948)

The status of Hebrew in the period prior to its so-called revival (on this controversial nomenclature, see Mor 2017: 3; Or 2016: 20–25), beginning at the end of the 19th century, was essentially equivocal, since it did not enjoy the status of a native or living spoken language, yet was used in Jewish communities for various ritual, literary, and practical purposes (Harshav 1993: 115–119; Mor 2017; and see Chapter 2 in this volume). These usages involved numerous different traditions, styles, and

8. <<https://www.facebook.com/AcademyOfTheHebrewLanguage/posts/1223348197735234:0>> (16 July 2019).

norms (Cohen 2012: 214; Glinert 1988: 415–416), but generally speaking Hebrew functioned as a pan-Jewish language, the Hebrew alphabet served as a pan-Jewish script, and the Bible served as the primary and ultimate source for defining Hebrew grammar. These traditions were supplemented by the revival of Jewish nationalism and literary innovation in 19th century Eastern Europe, which generated preliminary stabilization and modernization in the form of unofficial standardization which in turn led to consolidation of structural and stylistic norms along with an emergent national awareness, involving modernity and secularization on the one hand and adherence to tradition on the other (Glinert 1987, 1991: 215–218; Ornan 1984: 245–248; Reshef 2013b: 409a–b).

2.1.1 *Initiatory attempts*

In pre-state Palestine, as late as the end of World War I, use of spoken Hebrew was limited, mainly among adults, and by no means universal, or unified, in speech or writing well into the 1920s and 30s (Reshef 2015, and Chapters 1 and 2 in this volume). The linguistic insecurity of the early MH users engendered zealous and dictatorial prescriptive discourse (Barak & Gadish 2008: 23–24; Kuzar 2001: 133–134), as reflected in the two laconic lists of dos and don'ts published by the Hebrew Language Committee in 1908 and 1911 (Reshef 2012: 177–179).

The first efforts to regulate the language were surprisingly meager and sporadic, made mostly by idealistic individuals (Aytürk 2012: 49), as documented in the proceedings of the Hebrew Language Committee, which was originally established by language enthusiasts in 1889, but active for less than a year. Its subsequent re-establishment in 1904 by the Palestine Teachers' Association saw the inception of a new phase of organized – although not necessarily uniform – prescriptive activity.

In its early days, MH underwent typical processes of language planning (Cooper 1989; Eldar 2010; Kaplan & Baldauf 1997: 30–49): *selection* of a national standard and its *implementation* (status planning), *standardization* through production of codices of rules, and *elaboration* in order to adjust the national language to its modern functions (corpus planning). The initial phase was selection of Hebrew as the national language of the new Jewish settlement in Palestine. This step was practical as much as symbolic, since Hebrew was not only active and familiar in different Jewish communities, but also the mark of Jewish unity and a shared Jewish past – in keeping with the nationalistic enterprise of the early planners, which included turning Hebrew into a modern “all-encompassing language” of communication, education, administration, literature, etc. (Ornan 1984: 227). Unlike other national languages, the task of MH planners was not to select and elevate a specific vernacular, since Hebrew was already a high-register rather than a vernacular variety, but rather to qualify it for modern usage.

A second facet of the early days of MH language planning was that of *implementation*, carried out by several measures: establishing various committees and organizations dedicated to dissemination of Hebrew speech in Palestine through conferences, meetings, publication of reading materials, Hebrew lessons, and so forth (Efrati 2004: Chapters 1, 2; Elboim-Dror 1986: 192–193, 368–369); foundation of Hebrew-speaking schools and kindergartens in Palestine and Europe (Reshef 2013b: 410a–411a; Bar-Ziv Levy & Sichel 2018: 92–94); enforcement of a monoglot ideology in the public sphere, as in municipal and commercial signposts (Reshef 2012: 152–157, 2015: 22–26); fighting for recognition of Hebrew alongside English and Arabic as an official language in British Mandate Palestine (Efrati 2004: 201–209; Reshef 2015: 21–22); and from 1936 on, Hebrew-language broadcasts over the radio station of the British Palestine Broadcasting Service in collaboration with the Hebrew Language Committee (Liebes & Kampf 2009).

A third planning measure was *codification* or standardization, in the form of formal prescriptions (decisions) of the Language Committee on matters of grammar, terminology, pronunciation, orthography, and transcription, documented in the *Proceedings of the Hebrew Language Committee* (1912–1928), *Leshonénu*, since 1929 the official organ of the Language Committee and later the Academy of the Hebrew Language, and other platforms; language columns in newspapers, some of which were later compiled and published as books (Dalmatzky-Fischler 2000: 144–146; Reshef 2015: 310); language manuals and practical grammars and dictionaries (Cohen 2012: 215–216; Shalom 2012: 122–124); and school curricula (Elboim-Dror 1986).

A fourth type of planning took the form of *elaboration*, aimed at modernization, by means of publication of professional and technical lexicons (§3.3), development of new stylistic norms, as in journalistic and administrative writing (§2.1.3); and initiation of Hebrew and Hebrew-oriented cultural activities (Elboim-Dror 1986: 159, 237–238, 383–340; Elboim-Dror 1990: 113–115).

2.1.2 *Nationalistic underpinnings*

Several distinct motivations underlie these various facets of pre-state prescriptive discourse, all of which remained relevant following 1948 as well (see Albeck 2013: 303a–304b; Barak & Gadish 2008: 11–13; Bar-Asher 2012, Chapter 5; Bar-Asher 2014; Ben-Asher 1969: 141–154; Or 2016). Most can be defined by a single goal, of constructing a functional language out of the gamut of inherited components and varieties of Hebrew. Prescriptive discourse in the pre-state period was thus the realization of the three axes of a national standard (§1.3), in the sense defined below.

The first dimension composing such a standard is *unity*, in the sense of the attempt to eliminate heterogeneity, both among speakers and in the language itself.

This also entails purism, both external, in denunciation of the influence of foreign languages, and internal, in prescribing avoidance of intermixing of different phases or styles of Hebrew usage (Bendavid 1967: 264–269; Peretz 1968: 366–372).

A second dimension of a national standard is *authenticity*. In the national (Zionist) discourse of Hebrew, this translated into adherence to the classical Hebrew sources – primarily the Bible, secondarily Mishnaic literature (the Mishna, the Tosefta, Midrashic literature, and the Talmudim), symbolic of an ideal original, pure, and natural language (termed “restorative normativism” by Rabin 1985). Reliance on classical sources remains the lodestone of Hebrew prescriptive discourse (Bar-Asher 2014: 90; Ben-Asher 1969: 141). In practical terms, it quite typically repudiates usages resulting from dynamic internal developments or foreign influences, and often evokes hostility or suspicion towards post-classical (diasporic) elements. In addition to being non-classical, the latter are considered anti-modern, particularly with respect to Ashkenazic Rabbinic Hebrew (Cohen 2004; Glinert 1987: 40–43; Or 2016: 209–212). Ideologically, this is a manifestation, on the one hand, of Jewish historical unity (Ben-Ḥayyim 1992: 13–15) and, on the other, of the ancient Semitic origin of Hebrew, which brings it closer to Arabic, the other Semitic language which was spoken in Palestine (on duality in the attitude of the Language Committee towards Arabic, see Or 2016: 259–263).

Prescriptivists have interpreted the notion of adherence to classical sources in different ways, some preferring Biblical Hebrew alone and others tending to Mishnaic Hebrew, some using specific criteria and others addressing vague concepts like “the spirit of the language” (Ben-Asher 1969: 138–140, 146; Birnbaum 2014: 508), some being more tolerant than others of including later phases of Hebrew and the Aramaic portions of classical texts. Whatever the approach, the classical sources alone are clearly inadequate to the planning of a functioning modern language, since the linguistic data they contain are necessarily partial and lack reference to numerous topics relevant to modern life (Harshav 1993: 83). Consequently, prescriptive rulings are often highly subjective, reflecting personal preferences rather than an accepted (normative) method (Albeck 2013: 304b; Ben-Ḥayyim 1992: 59; Rabin 1983: 48).

The third dimension of a national standard is *modernity*, in the sense of precision, logic, systematicity, and efficiency, with the object of transforming ancient Hebrew into an ideal fully-functioning national language through processes of regulation, simplification, and secularization. It also entails, contrary to the principle of authenticity, potential inclusion of contemporary linguistic conventional norms.

Supplementing these three facets of standardization is the notion of linguistic aesthetics, which may be interpreted as standing for authenticity or modernity (Or 2016: 78–79), and the example of ideal modern writers.

A typical example is the discussion of Izhaç Epstein (1947: 103–104), a pioneer of language education in the pre-state period and a scholar of language education, on the appropriate order of expressions of first, second, and third persons, originally published in his language column in the daily newspaper *Davar* on July 27, 1928. Here, Epstein infers from the biblical expression ‘I and your people’ (Exodus 37.16) and similar usages that:

Unlike the European etiquette is the Hebrew etiquette (as well as the Arab, the Roman, and the Greek). It is a rule in our language: the first person precedes the second person, and the second precedes the third ... the national pride which prompts us to use no other language but our own shall grant us courage to cleanse it of any self-dismissive acts of imitation.

These statements touch on all three facets of a national standard noted above: (i) *unity* – use of the first person plural pronouns: ‘our language’, ‘us’, presupposes shared ideology and linguistic practice; (ii) *authenticity* – reliance on the classical sources (the Bible and the Babylonian Talmud) and preference for ancient Mediterranean cultures, Semitic as well as Hellenistic, over modern European codes; and (iii) *modernity* – national pride and a regulative approach to the practices of everyday life.

2.1.3 *Conflicts and divergence*

Substantial tensions among the various groups engaged in prescriptive activity appeared soon after the founding of the Hebrew Language Committee in 1904, marking the beginning of a long struggle over the desirable nature of MH. The most bitter dispute prevailed between educators (and others involved in promoting use of Hebrew speech) and the Language Committee. Members of the Language Committee feared financial and organizational subjugation to the Palestine Teachers’ Association and its sub-committees. The Language Committee was occupied with scholarly-based codification work in Jerusalem, isolated from the main sites of spoken Hebrew (Tel Aviv and the new agricultural settlements), whereas teachers and the pioneers who came to Palestine with the Second Aliya wave of immigration (1904–1914) were concerned with more immediate and pressing tasks of implementation like standardizing terminology used in schools. Moreover, the very concept of language planning was incompatible with their socialist and individualistic values. Disputes were also common between prescriptivists and writers, between the Language Committee and the Jewish establishment in Europe, and even internally among members of the Language Committee (Aytürk 2012; Dalmatzky-Fischler 2000; Efrati 2004; Glinert 1991: 225–231). All parties involved appeared to share a modernistic and nationalistic outlook, but differed in their specific motivations, ideologies, and goals.

Eventually, the stabilization of MH occurred outside the confines of the Language Committee, often without institutional regulation, resulting in consolidation of a blueprint for norms of usage, particularly in domains neglected by the Language Committee, like syntax and style. Most of these were stabilized by the 1930s, as evidenced in, for example, administrative correspondence and signposts of the Tel Aviv municipality; the *hapoel hacair* ('the young worker') periodical, the official organ of the political party of that name, as well as everyday spoken usage (Reshef 2015, 2016; Reshef & Helman 2009).

This intensive activity generated an additional source of tension, highlighting the growing difference between the old and the new. During the First Aliya period (1882–1904) languages other than Hebrew were generally tolerated, and so Yiddish, Russian, Arabic, and other vernaculars could be heard in both the public and private sphere (Bar-Ziv Levy & Sichel, 2018: 82–83, 104–107; Eldar 2010: 52, 55). This echoed traditions of the old, manifestly multilingual Jewish world prior to the process of revival (Bartal 1993: 146–147; Harshav 2010). By contrast, the immigrants of the Second (1904–1914) and Third Aliya (1919–1924) waves of immigration imposed a fierce monoglot ideology (see Blommaert 2006: 243–245, following Silverstein 1996) which rejected foreign languages, most significantly Yiddish, the ultimate embodiment of the repudiated European pre-modern Judaism, Ashkenazic pronunciation, and traditionalist post-biblical literature in general (Bar-Ziv Levy & Sichel, 2018: 104–107; Elboim-Dror 1986: 250–252, 1990: 381; Even-Zohar 1990: 178–179; Harshav 1993: 153–168; Shohamy 2008: 209–215). These newer immigrants were not the first to show a zeal for a pure local Hebrew and a contempt for foreignisms; the children of the First Aliya immigrants, the first native speakers of MH (nicknamed “Sabras”; see Almog 1997: 13–14), exercised a similar language ideology in the first years of the 20th century (Bar-Ziv Levy & Sichel 2018: 98–103). Two salient illustrations of the monoglot character of the Second Aliya are the momentous event of the “Language War” in 1913, a struggle over the language of instruction at the Technikum institute in Haifa, in which students played a pivotal role (Aytürk 2012: 57–58; Bar-Ziv Levy & Sichel 2018: 103–104; Reshef 2013b: 411b–412a), and the vehement, often violent, activity of the League of Defenders of the Hebrew Language, a puristic activist youth movement founded in 1921 in reaction to multilingualism in Palestine (Helman 2002: 373–380; Shohamy 2008: 214).

The anti-diasporic spirit, deviation from the prescriptive norm, and the growing influence of young people were harbingers of a more general generational shift (§2.2.3). In the years between the Third Aliya and the establishment of the state in 1948, consolidation of conventional usages proceeded rapidly, with a gradual shift away from prescriptive norms. Concurrently, the Hebrew Language Committee increased its prescriptive activity, mainly in the realm of lexical planning (Gadish 2013b: 9a–10a; Glinert 1991: 232–233), and language columns grew more popular

in the press (Dalmatzky-Fischler 2000: 145–146) in the endeavor to improve the seemingly imperfect language of MH users, who were either new and earlier immigrants or native speakers of Hebrew, most of them still young (Mor & Sichel 2015: 138–140).

2.2 Prescriptivism in Israel since 1948

By the late 1940s, the new native-Hebrew cultural identity had already reached maturity (Even-Zohar 1990: 175–176), but the establishment of the State of Israel in May 1948 modified the status of MH, transforming it overnight into the official and institutionalized modern nation-state language (Harshav 1993: 173). This transition did not involve significant changes in the structure of the language, but had an immense impact on the image of MH in the eyes of its users and hence on language ideologies and prescriptive activity (Mor 2017: 10–11).

2.2.1 *The rise in nationalism and prescriptivism*

In the early years of statehood, until the end of the 1950s, prescriptive activity continued to expand, with an increasingly more dominant nationalist character. These included concerted efforts to strengthen the national status of Hebrew, both practically and symbolically, and to place it at the forefront of national activity, for example, through the speedy formation of state and military terminology, imposition of Hebrew in Israeli embassies abroad, attempts to constitutionalize the official status of Hebrew, and the establishment of the Supreme Council of Culture in 1952, subordinated to the Ministry of Education, whose tasks included dissemination of Hebrew (Efrati 2010). Increased purism was also evident at this time, for example, in insistence on Hebraising foreign first names, toponyms, and titles of institutions. This activity found expression in debates and proposals in the Knesset (Israel's parliament), intensive publication of lists of proposed Hebrew names, and a lengthy conflict over the name of the Academy of the Hebrew Language – ending in acceptance of the Greek term *akadémiya* (Ben-Ḥayyim 1992: 116–122; Efrati 2010). This trend of “pure” language set a precedent since it established a strong connection between language, nation, and state: Uniform proper Hebrew was seen as a demonstration of strong national identity and independence.

The linkage of language–nation–state is still dominant in national discourse in present-day Israel. Over the years it has yielded various status-planning initiatives aimed at improving the public and constitutional status of Hebrew, for example, in the form of state and public organizations, bill proposals, and conferences (Efrati 2010). Most of these were unproductive, but did have the effect of arousing discussion and impacting public discourse on Hebrew. A typical illustration appears in a

speech delivered on 23 October 1989 by Yitzhak Navon, then Minister of Education and Culture, at the 102nd meeting of the Knesset, marking “The Year of the Hebrew Language”. Navon lists “four primary causes of damage” (an allusion to the opening of the *Neziqin* tractate of the Mishna, an ancient Jewish codex of civil law), one of which is the excessive use of foreign words in MH, which he considered a cultural and civic problem: “what is disturbing and enraging is the self-effacement before any external phenomenon and parochial imitation and craving for the big world, so to speak. This is not a linguistic problem; it is rooted in the psychocultural – to what extent are you true to your culture, familiar with it, proud of it” (quoted in Efrati 2010: 130).

There was also an increase in formal prescriptive discourse. The target audience of prescriptivists had changed, and with it their objective: it was no longer a heterogeneous insecure group of new immigrants and children lacking in a basic knowledge of Hebrew, but rather an entire nation which was, in the eyes of prescriptivists, in urgent need of more detailed and systematic guidance. This led to intensive codification, public discussions over the required nature of prescriptive activity, and the redeployment of the prescriptive body of knowledge to adjust it to the new national reality, particularly denunciation of post-classical elements common in the pre-state period that had overnight become inappropriate – that is, non-modern, non-native, and inauthentic (Kaddari 1978: 12; Mor 2017: 10–13).

These manifestations of nationalist-oriented prescriptivism and purism were accompanied by more routine activities, such as decisions on matters of grammar, orthography, punctuation, and transcription as well as publication of volumes of the Academy’s *Proceedings* and professional wordlists (Fellman 1974: 99; Gadish 2013b: 13a–14b). These were further supplemented by instruction in language use and dissemination of Hebrew through radio broadcasts (Efrati 2010: 166–170; Rotenberg 2007: 41–43) and Hebrew classes for new immigrants (Morag 1959: 261).

2.2.2 Institutionalization and expansion

In 1953, after several years of controversy, the Academy of the Hebrew Language was established by law, taking over from the now extinct Hebrew Language Committee, and fulfilling a long-awaited dream, articulated as early as 1913. It had several significant ramifications. First, the authority of the Academy is recognized by the Law of the Supreme Institution for the Hebrew Language, approved by the Knesset on 27 August 1953, and its decisions have the status of state laws. Second, the Academy enjoys state funding by law. Third, like the Language Committee, the professed goal of the Academy is to combine preservation of authentic (i.e., ancient) properties of the language with modernization, but while the former needed to exercise primary language planning, principally accommodation of Hebrew to modern usage

through lexical innovation and grammatical regulation, the latter is occupied with more advanced and subtle management, essentially research activity and direction of a fully-functional language (Ben-Ḥayyim 1992: 118–120, 132–133; Efrati 2010, Chapter 2; Gadish 2013b).

Even though the Academy's decisions are binding by law and authoritatively formulated, they are only very partially implemented by the general public. They refer mainly to an ideally formal Hebrew rather than to common usage, reflecting the Academy's allegedly democratic process of decision-making, rather than an attempt to produce a uniform code of laws (Albeck 2013: 304b–305a; Bar-Asher 2012: 150–151). Importantly, the Academy refrains deliberately from implementation or enforcement of its rulings, regarding them, rather, as suggestive and optional, nor does it in principle formulate rules regarding style and syntax, which are conceived as matters of personal preference. This course of action weakens the impact of the bulk of the Academy's decisions, since it fails to provide Hebrew users with a conclusive practical set of rules, thus allowing intervention on the part of other, less competent, prescriptive authorities, including so-called “self-appointed purists” (Glinert 1991: 235).

Another significant factor that affected the prescriptive discourse of the 1950s was the introduction of structuralist linguistic methods, mainly by Haiim Rosén and Haim Blanc, into the scholarly discourse concerning MH, studies which triggered debates over its nature and administration. The new approach challenged the prevalent academic treatment of the language, which saw MH through the prism of language planning and which integrated research with language cultivation. The strongest advocator of the latter approach was Ze'ev Ben-Ḥayyim, a one-time president of the Academy, who played a pivotal role in shaping its prescriptive stance (Birnbaum 2000: 340–345; Nahir 1978: 50–51; and see Kuzar 2001: 152–185 for discussion of the debates from a discourse-analytic cultural study perspective). The tension between these two approaches is still evident in scholarly discourse on MH.

The influential activity of individual prescriptivists and language columnists like Isaac Avinery and Yitzhak Peretz, dominant in the pre-state period, increased in the 1950s and 1960s, but has been declining since the 1970s, presumably due to a diminishing demand – and tolerance – on the part of Hebrew users for intensive prescriptive guidance (Gonen 2013: 848b–849a; Mor 2016: 327–328; Tene 1996: 221; and see above §1.4). In the past few decades, the Academy of the Hebrew Language remains the primary prescriptive authority (Birnbaum 2000: 346), while newspaper columns on language (e.g., *ha-zira ha-lešonit* ‘the language arena’ by Ruvik Rosental in *Maariv* and *me-ha-safa pnima* ‘from language inward’ by Elon Gilad in *Haaretz*) nowadays are meant for enrichment rather than instruction.

Since the 1980s, copy-editing programs in different academic institutions in Israel have produced numerous editors, proofreaders, and stylists versed in the Academy's

decisions, who work in publishing houses, scientific institutions, non-profit organizations, governmental offices, broadcasting agencies, etc. Such unplanned standardization functions within a prescriptive discourse, both official and unofficial, that is still characterized by multiplicity of motivations and opinions (Gonen 2013: 851b).

Two other potential areas of prescriptivism are the school system and broadcasting media. In spite of the close collaboration between the Language Committee and the Palestine Teachers' Association in the pre-state period, the activity of the Academy of the Hebrew Language was considered irrelevant by the state system of education as represented by the Ministry of Education and teachers' organizations, being largely reduced to authorization and publication of the Academy's decisions and other enterprises with relatively little educational impact (Efrati 2010: 204–207; Fellman 1974: 100). The major systematic modifications introduced into the Hebrew language curricula over the years do not generally follow the Academy's guidelines, but rather reflect changes in educational policy, pedagogical approaches, language research, and the linguistic reality in Israel. This is illustrated, for example, by the shift in the 1950s from "the formal method" of language teaching, based on memorization of grammatical rules of Classical Hebrew, to the "functional method", with a focus on contemporary language and an emphasis on the correction of solcisms over teaching of grammar (Rabin 1985: 274; Rosner 2009; Shalom 1999).

The school curricula in Israel seek to promote an ideal correct language, and the textbooks are traditionally prescriptive (Nahir 1978: 49–51), although not necessarily in line with current Academy decisions (Bar-Asher 2012: 177–178; Ben-Asher 1969: 37–38). More often than not they prescribe the more classical or formal form and reject its non-classical or informal counterpart. For example, they recommend use of the verb pattern *pa'al* for the middle-voice verb *avad* 'be/get lost' rather than the intransitive *nif'al* form *neevad* of current usage (Ben-Asher 1969: 75–76), and reject the extension of the preposition *biglal* 'because of' to use as a clausal conjunction *biglal še-* 'because, since' (Dubnov & Mor 2012: 101–102). They also refrain from problematic issues such as the complex set of rules governing the negation of a participle with *lo* (Ben-Asher 1969: 59; see, on the last issue, Chapter 16).

Broadcasting media represent another area of prescriptive activity. The basic linguistic norms of Hebrew broadcasting were constructed, in collaboration with the Hebrew Language Committee, by *Kol Yerushaláyim* 'the Voice of Jerusalem', the Hebrew-language department of the Palestine Broadcasting Service, which began operating in March 1936. These norms included a formal style of expression and adherence to ideal forms of pronunciation, grammar, and lexicon, in line with the institutional variety of Hebrew (§2.2.3) and BBC style (Efrati 2010: 165–167; Liebes & Kampf 2009; Penslar 2003: 6).

In 1948 *Kol Yisrael* 'the Voice of Israel' was formed as the successor to *Kol Yerushaláyim*, and in 1965 the Israel Broadcasting Authority was established. Language

management in these institutions – as well as in the Israeli television broadcasting, which began in 1968 – has been particularly strict and puristic from inception, primarily in editing of news broadcasts, commercials, and children’s programs, as codified in a comprehensive, authoritative language guide by Bendavid & Shay (1974; and see, too, Efrati 2010, Chapter 5; Marco 2008, 2009; Rotenberg 2007). Several motivations appear to underlie this extreme prescriptivist approach: (i) radio was considered an effective instrument of language education; (ii) the language advisors, primarily Baruch Harel (Berger) and Abba Bendavid, leaned towards official language policy and prescriptivism rather than research; (iii) they felt that announcers, broadcasters, and reporters needed simple, practical rules rather than flexible recommendations. Interestingly, these recommendations were regarded with reservations both by scholars (cf. §1.4) and teachers, as well as by some broadcasting professionals.

Other branches of broadcasting activity include the army radio station *Galei Tzahal* ‘Airwaves of the IDF (Israel Defence Forces)’, established in 1950, and numerous local stations operating since the 1990s. Not surprisingly, language regulation in these newer stations is far weaker than in the older, more established institutions, while even national radio and television stations have become increasingly less puristic in recent decades. This may well be because fewer programs are composed in advance, with more reliance on extempore productions, and broadcasting is becoming increasingly more commercial and less educational in orientation (Almagor-Ramon 2014; Marco 2008, 2009).

2.2.3 *Changing values*

During the pre-state period, two dominant varieties of Hebrew developed within the Jewish settlement in Palestine: institutional and native. The institutional (planned) variety was based on classical Hebrew sources. The language planners expressed reservations about natural linguistic changes and perceived MH as an immature language still in the process of stabilization. Its literary and educational character meant that it came to symbolize formality, solemnity, and purism (Bendavid 1967: 308–313; Ravid 1995: 6–8; Reshef 2015: 35–38, 305–306). The language attitude typically associated with the institutional variety is reflected in the following statement, the concluding words of a 1937 paper on children’s language and the cultural responsibility of writers for children:

Penmen, give heed to your words! Not all acts of jugglery and mockery are of blessing; this exaggeration will take revenge on our language, particularly in our times, when our language is coming back to life, widening its horizons, and ameliorating its manifestations. We need to be careful with every petty detail, and far be it from us to take this lightly, otherwise it might fail on us and lapse back to a chaotic non-language. (Barlas 1937: 190)

The other was a native Sabra variety (see §2.1.3), the unplanned variety which evolved out of daily life in Palestine. The Sabras were distinct in terms of age group, ethnic identity, and class, and their language was grounded in an ethos of animosity towards the foreign and non-native, particularly post-biblical Hebrew, the elevated institutional variety (and its prescriptivism), and the language of new immigrants (Almog 1997; Katriel 1986). A typical expression of this language attitude is the following statement from the introduction of a popular Hebrew dictionary of slang:

Stiff-necked pedants, who refuse to acknowledge and take into account the wonderful metamorphoses which constantly occur in our language, end up speaking a kind of Hebrew that is beautiful, but also dead. Reality, thank God, is stronger than any academic decision, and the beauty that has been awakened will never be similar to the one which emitted its snores for two thousand years.

(Ben-Amotz & Ben-Yehuda 1972: vii)

The native variety, whose origins can be traced to the pre-Mandate Ottoman period (§2.1.3), was largely ignored until the 1940s, in the hope that its young speakers would adjust their language to the prescriptive norm. Only after the establishment of the state, did the structural and ideological difference between the two varieties become openly recognized (Mor & Sichel 2015: 138–145; Morag 1959: 257; Reshef 2013b: 413b–414a; Yaeger-Dror 1988: 290). Additionally, the large waves of new immigrants in the 1940s and 50s led to a fear of the changes induced by major demographic changes while, on the other hand, the native-born Sabras who were beginning to acquire more influential positions in the new state of Israel came to increasingly query the customs of the older, non-native generation.

Both varieties acquired the status of a legitimate language, in the sense of a linguistic variety that enjoys a prestigious and binding position in an institutional hierarchy (Bourdieu 1984/1993: 66; Mor & Sichel 2015: 137–138; cf. §1.3). The institutional variety became the prescriptive norm of the new nation-state, finding a place in formal prescriptive discourse, belles-lettres, speeches, certain domains of public broadcasting, etc., while the native variety became the general conventional norm, even among educated speakers and public figures (Rabin 1983: 50–52; Efrati 2010: 105–107; Gafter 2016: 38). The gap between these varieties is particularly conspicuous in two types of variation: (i) a prescribed feature may be unfamiliar to or too elevated for conventional usage, such as many details of the prescribed pronunciation (§3.3.1), inflection of items in certain verb-paradigms (§1.4), use of the accusative marker *et* after the existential *yeš* ‘there is’ and other impersonal predicates, and many more (see Cohen 2014: 104–105; Sadka 1997: 502–510; and illustrations from numerous linguistic domains in Chapters 6, 7, 8, 12, 15 of this volume); (ii) more surprisingly, a prescribed feature may be perceived as a solecism,

e.g., *niséti* instead of *nisíti* ‘I tried’ (§1.3; and see, too, Cohen 2014), *hayošev roš* instead of *yošev haroš* (see Chapter 14) – where, in both cases, the prescriptive norm allows the two alternatives.

An illustration of the growing disparity between the two norms is the following statement, made by a senior radio music programmer in the Israel Broadcasting Authority: “Eventually, two different Hebrew languages will develop: the ‘beautiful’ one, for the open mike, and the human [i.e., common] language, spoken when the switch is turned off” (Harnik 1972: 15, quoted in Efrati 2010: 180–181).

Two conflicting elitist stances prevail in the public discourse in Israel underlying this divergence: a conservative nationalistic stance, which regards correct language as a national asset and a symbol of both the Jewish past and current Hebrew culture (Efrati 2010: 108; Glinert 1991: 236), and an anti-institutional stance, which views the conservative concept of correct language and prescriptivist activity as patronizing, outmoded, and unrealistic (Rabin 1983: 54). The complexity of prescriptive rules and multiplicity of opinions and authorities (§2.2.2) mean that most Hebrew users are not familiar with the details of the prescriptive norm, and if they find interest in matters of correct language, their attention is mainly focused on the symbolic contrast between the two norms.

3. Some illustrations

This section considers the issues reviewed above in relation to three domains of MH structure: Pronunciation (§3.1), Grammar – mainly identified with morphology in Hebrew studies (§3.2), and Lexicon (§3.3).

3.1 Pronunciation

The question of correct or desired pronunciation surfaced at a very early stage of the prescriptive activity. In 1913 the Hebrew Language Committee published a list of decisions in this matter in its *Proceedings* (The Hebrew Language Committee 1913: 49). These decisions essentially endorsed the so-called Sephardic or Oriental pronunciation, in fact an abstraction of a variety of traditional pronunciations practiced by different Sephardic Jewish communities (Blanc 1968: 243–244; Segal 2008: 54). The main features distinguishing it from the rival Ashkenazic pronunciation are contrastive stress (primarily final, but also penultimate), the realization of “soft” *tav* as *t* or *θ* (and not *s*), and retention of the ancient Palestinian five-vowel system (*i, e, a, o, u*) and several Semitic (non-European) consonants, most significantly *w* and the pharyngeals *ħ* and *ʕ* (Eldar 1989: 32–33; Morag 1959: 249–252;

Segal 2008: 54). However, the Language Committee's decisions did not stipulate the complete adoption of the Sephardic pronunciation. Ashkenazic traditions were followed in (i) eliminating the fricative alternants of *gimel* (γ) and *dalet* (δ), (ii) maintaining the fricative alternants of *bet* (ν) and *tav* (θ), and (iii) choosing affricate (ts) rather than the Arabicized emphatic articulation for *šade* (Bar-Asher 2012: 134–135). Sephardic pronunciation was apparently favored over other possible pronunciations because it was thought to be authentic (similar to Classical Hebrew and Arabic and antithetical to the Ashkenazic tradition), on the one hand, and modern (precise, planned, and aesthetic), on the other (Ben-Ḥayyim 1992: 248–253; Harshav 1993: 153–159; Or 2016: 62–63, 111–128; Segal 2008: 54, 65–66). In theory, the Galilean pronunciation, which evolved in the schools of the Galilee area in the 1890s, and the Yemenite pronunciation were also possible candidates, in line with the notions of authenticity and precision, but they were rejected – the former was too rural and provincial to become a national modern language (Bar-Adon 1975; Segal 2008: 56–60), and the latter was practiced by only a single Jewish community (Morag 1959: 250).

With regard to vowels and word-stress, the Sephardic pronunciation was predominant in pre-state Palestine, but this was so without institutional planning, even before the decisions of the Language Committee (Elboim-Dror 1986: 370–374; Harshav 1993: 154–155; Ofer 2007). With regard to consonants, in contrast, most of the Language Committee's decisions, particularly those going against Ashkenazic conventions, were not carried out (Bar-Asher 2012: 136–137; Or 2016: 61, 125–126), and the conventional pronunciation which eventually stabilized in pre-State Palestine, after an unplanned process of levelling, was a fusion of the general Sephardic pronunciation with Ashkenazic features (Reshef 2013b: 413a; Reshef 2015: 319; and see, too, Chapter 6).

Prescriptive efforts were made over the years to change this state of affairs, but without much success. Attempts to implement the prescribed pronunciation, for example, through foundation of the Council for the Cultivation of Speech and attention to pronunciation and diction used by the Israel Broadcasting Authority, were few and largely futile. In fact, the original 1913 rules have never been either enforced or modified (Albeck 2013: 303a; Bar-Asher 2012: 135–140; Morag 1959: 254; Tene 1996: 225–230). The current position of the Academy of the Hebrew Language on this matter is stated in a page on its website which concerns the pronunciation of plene *šere*:⁹

9. <<http://hebrew-academy.org.il/2011/05/01/יריצה-תייגה>> (16 July 2019)

At the beginning of the 20th century the Hebrew Language Committee set the rules of correct pronunciation, based primarily on the Sephardic pronunciation tradition, both in vowels and consonants. However, the actual pronunciation that emerged among the majority of speakers was an integration of two traditions – the Sephardic and the Ashkenazic (the vowels are essentially Sephardic, and the consonants essentially Ashkenazic). Today the Academy does not intervene in matters of pronunciation. (The Academy of the Hebrew Language 2011)

The ideal pronunciation (in fact an approximate one) was therefore reduced to radio news broadcasts on *Kol Yisrael* and at highly formal ceremonies. Several Sephardic consonantal features, most significantly *ħ* and *ʕ*, were preserved in the speech of *mizrahim* (§1.3; and see, too, Chapter 4), marking it as distinct from general Israeli pronunciation. This is not the result of language planning, but rather of tradition preservation. In Israeli society, these Sephardic-*mizrahi* features are stereotypically associated with low socio-economic status on the one hand and non-nativeness on the other, and have been in decline from as early as the 1960s (Blanc 1968: 246; Gafter 2016).

Matters of pronunciation were the topic of various less recent prescriptive texts, often bemoaning not only the neglect of the prescribed pronunciation, but also the careless and inarticulate character of current Hebrew speech and the lack of national and cultural unity that it reflects (Avinery 1964: 307b–308a; Har-Zahav 1930: 32; Peretz 1968: 379–380).

3.2 Grammatical structure

In the prescriptive discourse of Hebrew, grammatical structure, by which reference is typically to morphology, is regarded as the essence of the language, distinguishing Hebrew from other (European) languages and linking it to earlier periods in its history.¹⁰ The prescriptive treatment of grammar is remarkably conservative, focusing mainly on the status of post-classical phenomena and recent developments; fluctuation between codification of irregular biblical forms (authenticity) and a systematic set of rules (unity and modernity), including minimizing irregular forms; and decisions regarding matters that cannot be determined on the basis of classical sources (Ben-Ḥayyim 1992; Cohen 2004, 2014).

The Language Committee and the prescriptivists of the British Mandate period were primarily devoted to lexical work, treating sporadic details rather than systemic

10. The term ‘grammar’ is used here as it is used by the Academy of the Hebrew Language, as a cover term for a broad range of phenomena that are mainly morphological, but also include some aspects of syntax, on the one hand, and vocalization, on the other.

issues in the grammatical domain (Eldar 2010: 127–128, 134; Or 2016: 230–236). Until the 1940s, the structure of MH developed gradually through a combination of planning activity and unplanned leveling processes (Reshef 2013a: 401a; Reshef 2015). In 1941 the Language Committee formed the Grammar Committee, which to this day is one of the most active branches of the Academy of the Hebrew Language, with the task of deciding on various grammatical matters, usually after an in-depth examination, then presented to the Academy’s plenum, where they are discussed and eventually approved (Ben-Ḥayyim 1992: 137–138; Cohen 2014: 100–101).

In 2014, the Academy published a compilation of its rulings on matters of grammar, concluding a decade-long line of discussions, decisions, and publications (The Academy of the Hebrew Language 2014: 7–8). New decisions are published in the Academy’s website.¹¹ As Tene (1996: 235–240) pointed out, the decisions are based on an ideal language, in line with the tradition of Hebrew grammars, which requires a command of Hebrew grammar typically lacking among contemporary users of Hebrew. As a result, the decisions are often impracticable and irrelevant for the bulk of Hebrew speaker-writers, including schoolgoers. As for syntax, the Academy considers it a matter of style (§2.2.2), treating syntactic issues only seldom. Rulings in this field originate in the activity of individual prescriptivists, which are often incompatible with each other.

Decisions regarding grammar are essentially based on the classical Hebrew sources – preeminently the Bible, but also Mishnaic literature and later corpora (Morag 1959: 255; Ben-Ḥayyim 1992: 138; Cohen 1998; and see above, §2.1.2). Two other, more “modern”, factors are at play: unplanned developments in MH, particularly if they are not in conflict with classical patterns (Birnbaum 2000), and preference for simple and uniform sets of rules (Cohen 2014: 103; Gonen 2013: 850b). For examples see Albeck (2013: 304a–b); Gadish (2013b: 14a) and Chapters 7 and 8 in this volume.

3.3 Lexicon

Lexical planning – determining vocabulary for ordinary usage as well as literary and scientific registers – was the main concern of the Hebrew Language Committee from its inception in 1889, and more markedly from 1904 on. It included not only coinage of new words and approval of existing ones, but also elaboration of a reliable *modus operandi* (see the guidelines listed below) and publication of word lists (Eldar 2010). Since this activity, unlike the rulings on pronunciation and grammar, were not in conflict with conventional norms, it was largely accepted by

11. <<http://hebrew-academy.org.il/topic/hahlatot/grammardecisions>> (16 July 2019).

early speakers of Hebrew (Morag 1959: 259). Some of the Jewish leaders in Europe, on the other hand, were suspicious of what they saw as impetuous word coinage. This may have been an expression of fear and helplessness in the face of the rapid changes that Hebrew underwent in Palestine, far from the Jewish centers of Eastern Europe (Efrati 2004, Chapter 4; Eldar 2010: 96–105).

In the Language Committee days, lexical expansion was conducted gradually (Aytürk 2012: 51–53; Eldar 2010: 90–94, 117–118), in order to maintain loyalty to the classical Hebrew sources on the one hand (authenticity) and to planning principles – intelligibility, practicality, and esthetics – on the other (modernity).

The Academy of the Hebrew Language follows very similar guidelines (Albeck 2013: 300b–302a; Biala 1993: 10–27; Gadish 2013b: 17a–b), based on four main principles: (i) adjustment of an ancient Hebrew word for modern usage, in accordance with the seminal pronouncement of Yehiel Michael Pines, one of the founders of the Hebrew Language Committee: “The greatest possible virtue of a new word is if it is not new” (Pines 1893). This may require philological work and may involve a change in the function of the word, such as in the case of the epithet *hiloni* ‘secular’ which originally meant ‘non-priest’ (Bar-Asher 2012: 100–102); (ii) coinage of a new word from existing Hebrew elements (roots, patterns, affixes, and lexemes), such as *midraxa* ‘sidewalk’, from the root *d-r-k* ‘tread’ combined with the pattern *miqṭala*; *milon* ‘dictionary’, formed through suffixation of the derivational suffix *-on* to the noun *mila* ‘word’. Eliezer Ben-Yehuda’s proposal to invent new Hebrew roots artificially, in order to avoid the adoption of foreign words, was rejected (Eldar 2010: 120–124; Or 2016: 134–137, 156–160); (iii) coinage of a new word with the aid of an element – root or lexeme – from another Semitic language, most significantly Arabic or Aramaic, for example, *rišmi* ‘official’ is based on the Arabic word *rasmi* (Rosén 1956: 77); and (iv) creation of a new root from a non-Semitic word, such as *nitrel* ‘neutralize’ (Bar-Asher 2012: 164), or adoption of an entire non-Semitic word, like *rádyo* ‘radio’. The strong resistance of the Language Committee to foreign elements was gradually replaced by a more tolerant attitude (Eldar 2010: 158–159, 187; Morag 1959: 260–261; and for further examples of current word-formation processes, see Chapters 8 and 9 in this volume).

The creation of new words was not limited to the official Language Committee and the Academy. Individuals like the poets Avraham Shlonsky and Yonatan Ratosh and the statesmen David Remez and Moshe Sharet coined new words as well, some of which were successful (Bar-Asher 2012: 95–96, 108, 153; Eldar 2010: 88–89). Individual members of the Language Committee also coined new words, independently of the activity of the Committee, like Yehiel Michal Pines, Hayim Nahman Bialik, and most significantly Eliezer Ben-Yehuda, who not only created many new words, but also helped disseminate them in his newspapers and

dictionaries (Eldar 2010: 89–94). Currently, the Academy maintains this practice through the activity of the Committee for Words in Daily Use (Gadish 2013b: 17a).

In addition to general lexical expansion, the Language Committee also practiced terminological modernization through compiling lexicons of professional and technical terminology in collaboration with experts in the fields in question (Ben-Ḥayyim 1992: 113–114; Eldar 2010). The Academy has broadened this enterprise through the activity of the Central Terminological Committee and provisional terminological committees. Their conclusions are presented to the Academy's plenum for approval, and are then published (Eldar 2010: 155; Gadish 2013b: 14b–15a) – nowadays in electronic form alone. The professional terminological activity of the Academy involves not only word coinage, but also, and more importantly, the regulation of existing terms. An online searchable database of the lexicons of the Language Committee and the Academy has been accessible for the public since 2001 (Gadish 2013b: 15a–b).¹² As of October 2017, it includes about 230 lexicons (as stated on the website) and about 110,000 different terms (Ronit Gadish, personal communication).

Since the work of lexical planning has an effect on the language, it necessarily evokes broad issues of language planning, for example, the expansion of quadrilateral and denominative roots, one-word terms versus phrasal expressions, the regularity of form–meaning correlation, and correspondence to terminology in other languages (Bar-Asher 2012: 107–108, 146–150; Ben-Ḥayyim 1992: 136, 334–349; Gadish 2013b: 15b–17a). The Academy's protocols of the discussions over lexical issues and the final results of their planning in the form of lexicons and wordlists suggest that the Academy oscillates between a conservative approach, striving to protect the purity and classical character of Hebrew, and a more flexible approach, taking into consideration conventional norms and spontaneous developments (Eldar 2010).

Occasionally the Academy seeks the assistance of the public to find a term, a practice going back to the time of the Language Committee (Barak & Gadish 2008: 15).¹³ Even though the Academy publishes new terms, many of them remain unknown to the public (Glinert 1991: 235–236). Varied factors determine the success of a new word term, relating to such issue as its form, transparency, dissemination, and potential rivals, and more often than not it is difficult to anticipate which terms will be accepted and which disregarded (Alloni-Fainberg 1974; Biala 1993; Barak & Gadish 2008: 18; Gadish 2013b: 17b–18a).

12. <<http://hebrew-terms.huji.ac.il>> (16 July 2019).

13. See the page *min hašētaḥ* 'from the field' on its website: <<http://hebrew-academy.org.il/topic/milim/minhashetah>> (16 July 2019).

4. Concluding notes

MH is a typical case of a planned language, involving many features characteristic of language planning: hierarchy, totality, national character (authenticity, modernity, and unity), purism, acts of selection, implementation, codification, and elaboration, and so forth. The singularity of MH finds expression mainly in the indisputable status of the classical sources in formal prescriptive discourse (§2.1.2) and the ambivalent stance towards the concept of correct language in public discourse (see below). A gradual decrease in the authority and prestige of language planners and prescriptivists is evident throughout the history of MH, with a continuing impact to this day.

Hebrew prescriptive activity is in fact a domain of national struggle – not only over the image of a national language, but also over national identity itself and its cultural, political, and social implications. It therefore reflects disputes between generations, ethnic groups, classes, and ideological camps. The most prominent struggle prevails between the two varieties of legitimate language noted earlier, manifesting distinct conceptions of a national language: institutional (planned) and native (unplanned). This represents a profound ideological divide in the collective linguistic conscience of MH users, dating back to the Ottoman period (§2.2.3). It involves duality in the definition of Israeli (hegemonic) nationality in general – statehood vs. nativeness. Rather than a simple dichotomy, the situation is one of a continuous collision of contradictory elements. In this respect, prescriptive activity is deeply indicative of human behavior in general because it concerns a fundamental tension between two aspects of a language: the symbolic (and collective) and functional (and individual).

Despite a seemingly homogenous appearance, formal Hebrew prescriptive discourse is not uniform, but rather incorporates various, often conflicting, outlooks, tenets, and traditions. Nowadays the Academy of the Hebrew Language is the leading prescriptive authority, but due to lack of collaboration with the school system, certain broadcasting agencies, and other media, as well as additional factors like the conservatism and complexity of the prescriptive norm, the Academy's decisions are not always observed by or even familiar to the public (§2.2.2). The history of prescribed pronunciation (§3.1; see also §2.1.3) reveals that this has been the state of affairs from the start. In other words, a tradition has been established of elitist prescriptive activity that is more or less detached from the general public.

Ultimately the Hebrew prescriptive norm is part of a wider schema of conventions (§1.1), one of many features of the polysystem of Hebrew culture. Ever since the emergence of MH, prescriptive activity has been a site of self-definition, through which the Hebrew/Israeli collective established and negotiated a national identity and constructed its ideal image, its connection with its past, and its attitude towards the outside world.

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Notes on Modern Hebrew phonology and orthography

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This brief survey chapter starts by characterizing the phonemic inventory of consonants and vowels in Modern Hebrew (MH). It then notes departures from earlier stages of the language, such as the full or partial merger of historical “emphatic” stops with plain stops, the loss of pharyngeal and glottal phonemes (“gutturals”), degemination, and the loss of active phonological rules, such as vowel lengthening and reduction, which together account for the much reduced inventory of both consonants and vowels in all present-day usage, including “Mizrahi” and even traditional pronunciations. Selected phonotactic features of MH phonology – syllable structure, CV alternations, consonant clusters, stress, and word length – are then touched on. A final section deals with the essentially conservative Hebrew orthography, as compared with the dynamics of its phonology.

1. Introduction¹

This chapter concludes the introductory part of the present volume. It provides a brief summary of key facets of Modern Hebrew phonology, starting with the phonemic inventory of consonants and vowels in present-day Modern Hebrew (§2), followed by comments on diachronic processes that led to the present-day distribution of these elements (§3), notes on selected phonotactic features of the language (§4), with specific reference to word-stress (§5), and comments on current systems of orthography and spelling (§6).

1. Unlike the general background information contained in the five other chapters in Part I, this chapter deals with a particular domain of MH structure, aimed at providing information on key facets of the morpho-phonology of MH relevant to discussions of morphology in Part II. Readers are referred to the special issue of Brill’s *Journal of Afroasiatic Languages and Linguistics* [BJALL] devoted to Phonetics and Phonology of Modern Hebrew, edited by Bat-El, Cohen & Faust.

The phonemic inventory of MH depicted for consonants and vowels (§2) represents the Hebrew spoken by immigrants of Ashkenazi origins who immigrated to pre-State Palestine from Europe. As discussed in earlier chapters of the volume, their attempt to “revive” Hebrew as a means of everyday spoken communication resulted in a compromise between the Ashkenazi and Mizraḥi traditions of pronunciations, with the former prevailing largely in the consonantal system, and the vowel inventory and stress-patterns adopted from the Sephardi ‘Spanish’ tradition of speakers of non-Ashkenazi origin in the Jewish pre-state settlement in Palestine (see Chapters 2, 4, and 5). The result was a simpler, smaller phonemic inventory, motivated by the willingness of speakers of Ashkenazi background to adopt the Sephardi pronunciation, on the one hand, and the difficulty they experienced in articulating pharyngeal and “emphatic” consonants that were peculiar to Mizraḥi Hebrew, on the other (see §2).

Unlike the general background information contained in the five other chapters in Part I, this chapter deals with a particular domain of MH structure, aimed at providing information on key facets of the morpho-phonology of MH relevant to discussions of morphology in Part II. Readers are referred to the forthcoming special issue of Brill’s *Journal of Afroasiatic Languages and Linguistics* [BJALL] devoted to Phonetics and Phonology of Modern Hebrew, edited by Bat-El, Cohen & Faust.

2. The phoneme inventory of Modern Hebrew

2.1 Consonants

Table 1 presents the inventory of MH consonantal phonemes in terms of place and manner of articulation, with voiceless items preceding voiced in cases where there is a phonemic contrast (Ben-David & Berman 2007; Bolozky 1997, 2013; Chayen 1973; Laufer 1990, 1992; Rabin 1973; Weinberg 1966). It provides a fairly maximalist approach to the MH consonant inventory, which includes marginal phonemes that are limited to loanwords or are distributionally or socio-linguistically restricted in some way. Following Table 1 are comments on the pronunciation and distribution of individual sounds, with a brief survey of diachronic processes that led to the complex distribution of MH phonemes provided in §2.2.

Table 1 includes phonemes that are largely or entirely limited to loanwords (or native words derived from loanwords), marked in square brackets. Phonemes that are limited to particular varieties of MH or are otherwise distributionally limited are given in parentheses.

Table 1. The consonant inventory of Modern Hebrew

	Labial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
Stop	p b	f v	t d			k g			(ʔ)
Affricate			ts	[tʃ] [dʒ]					
Fricative			s z	š [ʒ]		x-χ ʁ		(h) (ʕ)	(h)
Nasal	m		n						
Approximant	[w]		l		j	ɣ			

Following are comments on individual phonemes listed in Table 1.

The alveolar affricate /ts/, represented phonemically in the following chapters by /c/, is the only affricate that occurs consistently in native lexical items. The only inherited palato-alveolar phoneme is the fricative /ʃ/, represented in the rest of the volume as /š/. The other three palato-alveolar phonemes are the voiced fricative /ʒ/ (ž) as in *žaner* ‘genre’, *bež* ‘beige’ and the two affricates – voiceless [tʃ] (č) as in *čizbat* ‘tall tale’, *ričrač* ‘zipper’, and voiced [dʒ] (j) as in *juk* ‘cockroach’, *jins* ‘jeans’. These three segments have a relatively low frequency of occurrence, since they are generally restricted to loanwords, in which they function as distinct phonemes (Laufer 1998; Ornan 1982/2016). However, they also occur in words derived from loanwords, which are arguably native words. For example, the verbs *le-čaper* ‘to-treat, give a reward’ and *le-nažes* ‘to-nag’ are derived from the borrowed nouns *čupar* ‘treat’, and *nižes* ‘nuisance’ and can be inflected just like any other native verb.

Phonetically, the realization of /x/ varies between a velar and a uvular fricative. The labiovelar /w/ occurs mainly in loanwords from Arabic and English. While loanwords from Arabic are consistently pronounced with /w/, as in the discourse marker *wálla* (‘huh,’ ‘wow!’), the realization of English-origin loanwords with an original /w/ varies between /w/ and /v/, although variants with /v/ are increasingly rare in present-day Hebrew (compare the name *wášington* ~ *vášington*).

MH has a single rhotic phoneme that shows considerable sociolinguistic and inter-individual variation. Scholars disagree on the pronunciation of the rhotic phoneme depicted as /r/ in Table 1 which manifests considerable variability from one speaker to another and even in the usage of a single speaker. Historically it appears to have been pronounced as a flap [ɾ] in classical Hebrew and as a flap or a trill [ʀ] in Ashkenazi diaspora Hebrew. The more recent analysis of Cohen, Savu and Laks (2013), based on acoustic experiments, reveals that in current usage, this phoneme tends to be a dorsal approximant [ʁ], which is significantly more likely to undergo fortition in onset than in other positions, with females showing more variation in this respect than male speakers. Pronunciation of this segment thus emerges as a

distinct marker of different varieties of native Hebrew, typically carrying over to speakers' pronunciation of its counterparts in other languages.

The pharyngeal phonemes /ħ/ and /ʕ/ are generally limited to Mizrahi varieties of Hebrew and as such, their use tends to be highly indexical, indicative of specific social groups and ethnic backgrounds. In varieties with the pharyngeal /ħ/, a distinction between /ħ/ and /x/ is phonemic (see Gafter 2016a, 2016b, and Chapter 4 in this volume). The glottal stop /ʔ/ and the glottal fricative /h/ are generally not realized in current speech, particularly in the case of younger or less puristic speakers.

2.2 Vowels

The vowel inventory of MH has also been considerably reduced in comparison to earlier periods, leaving it with five vowel phonemes, /i ε a o u/ which are close to cardinal vowels in pronunciation. The MH vocalic inventory also includes three diphthongs – *ay*, *oy*, *uy* – as in *pnay* 'leisure', *noy* 'beauty', *asuy* 'likely' respectively. Some speakers also distinguish between short /e/ and long /ey/ in both length and diphthongization, as in singular versus plural suffixes (e.g., *more* 'teacher:SG.M' versus genitive construct-case *morey* 'teacher:CS.PL.M = teachers of') (see Neuman 2013). Overall, however, pronunciation of the vowel system of MH is relatively consistent across the population of native speakers.

3. Some diachronic processes leading to current sound patterns

This section notes a series of processes that led to leveling of phonological distinctions and the loss of segments documented for the classical Biblical period of the language. One such process involves the loss of 'emphatic' consonants. Biblical Hebrew had several 'emphatic' obstruents, which are thought to have been pharyngealized or velarized, and are represented here as pharyngealized for simplicity's sake. In post-Biblical Hebrew, the 'emphatic' stops merged with simple stops, thus: /t^ʕ/ merged with /t/, which is pronounced today the same as the voiceless alveolar stop; /q/ with /k/ – today the same as the voiceless velar stop; and the 'emphatic' fricative /s^ʕ/ shifted to the alveolar affricate /ts/.

In Biblical Hebrew, single (i.e., non-geminated) non-emphatic stops were allophonically fricativized or spirantized except in syllable-initial, including word-initial, position – a process that originally applied to all six non-emphatic stops (*p*, *b*, *t*, *d*, *k*, *g*) but was subsequently limited to three (bilabial *p* and *b* and velar *k*). The phonological status of the historically fricative variants *f*, *v*, *x* of the respective stops /*p b k*/ in MH is a matter of controversy between more traditional or prescriptive views and analyses based on current usage. The former adhere to

the classical analysis of stop-fricative variation as allophonic, as, for example, in *b-v* alternations for words based on the consonantal root *š-b-r* ‘break’, which include verb-forms like *šavar* ‘broke’, *li-šbor* ‘to-break’, *šavur* ‘broken’, and nouns like *šéver* ‘fracture’, *švira* ‘breakage’. Traditional rules of spirantization, based largely on currently neutralized, historical processes of consonant gemination and vowel lengthening (see, for example, Ben-Asher 1969; Ephrat 1980; Ornan 1973; Tur-Sinai 1954) have become opaque to most speakers of MH, leading to considerable variation between and even within individuals in whether and where they apply (Barkai 1972; Ben-Horin & Bolozky 1972; Bolozky 1980; Ravid 1978, 1995: 8–13; Schwarzwald 1976, 1980). This applies in both directions, from stop to spirant and vice versa, so that of the examples from the root *š-b-r* given above, it is common to hear both *lišvor* (for prescribed *lišbor*) and *šabur* (cf. prescribed *šavur* or feminine *šbura* for prescribed *šavura*).

These and numerous other deviations from prescribed forms common in current MH pronunciation, and often attributable to the leveling of classical morphophonological distinctions, are further noted in Chapter 7 on Inflection.

4. Phonotactics

This section considers the syllable structure of MH in three related areas: CV alternations, consonant clusters, and word-length. The classical CV and CVC syllabic structures of Biblical Hebrew have been extended in Modern Hebrew usage in various directions. Cohen-Gross (2013, 2015) describes these as consisting of the following alternatives: *C(C)V(C)* representing at least one or at most two consonants in the onset, plus a single vowel in the nucleus and a single (optional) consonant in the coda. These restrictions apply primarily to native stems without additional linear morphology, as in the following examples: minimal CV in *bo* ‘in-it:SG.M’, CCV with an initial consonant cluster as in the noun *pri* ‘fruit’, and CCVC as in *stav* ‘fall, autumn’, tolerating broad initial-consonant clustering in contrast to prescriptive dictates (cf. the earlier example of prescribed *šavur-a* ‘broken-F’ versus current *švura* or *šbura*). In current pronunciation, the above set of syllable structures can be extended to isolated V (*a* as in *afor* ‘grey’, *i* as in *ipur* ‘make-up’), initial CCC (as in *štrúdl* ‘apple-tart’, *sprey* ‘(hair)spray’), and even final CCC (as in the loan word *tekst* ‘text’).

These and other extensions of the classical syllable structure of Hebrew show the effect of leveling of phonological processes that applied at earlier stages of the language (§3), yielding two major developments in current syllable structure: First, current Hebrew allows VC syllables with no consonantal onset. This typical feature of MH is entailed by neutralization of pharyngeal and glottal (‘guttural’) /ʔ/, /ʕ/,

and often /h/ to zero, as in words like *em* ‘mother’, *ir* ‘town’, so that the surface form [*arim*] could stand for either the 1st person future verb with initial *alef* meaning ‘I-will-raise’, for the plural of *ir* ‘city’ with initial *ayin*, and also for the plural of *har* ‘mountain’ with initial *heh*. Analyzing such words as comprising a consonantal onset requires considerable abstraction from actual production, reflecting the orthography of MH to this day rather than its current pronunciation (§6).

A second important feature noted earlier is that MH allows initial consonant clusters, thereby departing from the classical occurrence of an epenthetic vowel in words like *dli* ‘bucket’, *prusa* ‘slice’. MH generally observes co-occurrence restrictions on occurrence of identical or even homotopic consonants defined by McCarthy’s (1981, 1986) Obligatory Contour Principle (OCP) as earlier defined for adjacent radical elements in Semitic languages by Greenberg (1950), McCarthy (1994). Consequently, Hebrew words typically do not contain sequences of identical or homotopic consonants, nor do they generally tolerate adjacency of sonorants or of historical gutturals (Schwarzwald 2010). Final consonant clusters are also tolerated in some but not all loanwords, as in *test*, *sport*, *ĵins* ‘jeans’ and other examples cited by Schwarzwald (2004) as well as in past tense verbs ending with 2nd person feminine singular marker *-t* (e.g., *halaxt* ‘went:2SG.F’, *hizrakt* ‘injected:2SG.F’).

Vowel reduction or deletion, which applied systematically in Classical Hebrew, is still retained in MH, particularly in pretonic and antepretonic position (see §5 on word-stress). For example, in verbs, but not in nouns or adjectives, a non-high vowel was typically elided in a pretonic open syllable (e.g., *katav* ‘write:B1.PST.3SG.M = he wrote’ ~ *katva* ‘she wrote’, *katvu* ‘they wrote’). These processes are largely observed in MH, whereas antepretonic *a* deletion is largely morpho-lexically motivated today.

A further feature of the phonotactics of MH touched on here is the issue of word-length, which is affected to some extent by word-class assignment (see Chapter 9 on Parts of Speech). Thus, Hebrew nouns may consist of between one and four syllables with a preference for bisyllabic, followed by trisyllabic, structures – 47% and 13% compared with only 5% monosyllables in the dictionary-based count of Cohen-Gross (2015). Verb-stems, in contrast, are typically at least bisyllabic, depending on the particular verb-pattern and whether the verb-root is full or defective (see Chapters 7 and 8).

Monosyllables in general are not common in Hebrew, being confined to a few basic or non-derived items like *dli* ‘bucket’ or to defective verbs like past tense *ba* ‘came’ or imperative *bo!* ‘come!’ from the root *b-w-ʔ*. They are most common in function words like the pronoun *hem* ‘they’ and the prepositions *al* ‘on’, *ad* ‘until’. Nir & Berman’s (submitted) text-based analysis of extended texts elicited in English and Hebrew reveals that across the lexicon of thousands of word (tokens), bisyllabics were most favored, followed by trisyllabic.

5. Stress

Native (and nativized) Hebrew words generally have word-final stress, which typically shifts under suffixation, e.g., *kadúr* ‘ball:SG.M’ vs. *kadur-im* ‘ball:SG.M-PL.M’ = ‘ball ~ balls’ (Bat-El 1993; Cohen & Ussishkin 2013; Mel’čuk & Podolsky 1996; Podolsky 1981, 1991; Rosén 1957). Several classes of words take penultimate stress, like nouns in the so-called ‘segolate’ pattern *CéCeC* (e.g., *yéled* ‘child, boy’, *séder* ‘order’), and also in part of the verb-system, for example, with the unstressed feminine suffix *-et*, *kotev* ‘write:PRS.SG.M’ vs. *kotév-et* ‘write:PRS.SG.M-SG.F’ = ‘he ~ she writes’. Stable penultimate stress is retained in several classes of noun-stems including (i) acronyms under suffixation such as *mankal* ‘general.manager:SG.M’ vs. *mankál-im* ‘general manager:SG.M-PL.M’ = ‘general manager ~ managers’ (Bat-El 1994, 2000; Bolozky 1999; Ravid 1990); (ii) polysyllabic feminine nouns in the segolate pattern e.g., *tizmóret* ‘orchestra’, *nazélet* ‘cold = snuffle’ (Bat-El 1993; Becker 2003; Bolozky 1995); (iii) words ending in a two-vowel sequence due to *a*-epenthesis before a historical word-final low consonant (*šavúa* ‘week’, *tapúax* ‘apple’); as well as (iv) several lexical categories, including: proper names (cf. the adjective *yafá* ‘pretty:SG.F’ versus the woman’s name *Yáfa*, the plural noun *rexovót* ‘streets’ versus the name of the city *Rexóvot*); some familiar kinship terms (*íma* ‘Mom’); names of children’s games (compare *klafim* ‘cards’ with *kláfim* ‘game of cards’ and counting out lists with penultimate stress on the usually final-stressed numbers *rišon*, *šeni*, *šliši* ‘first, second, third’).

Penultimate or antepenultimate stress is the rule in the case of foreign words like *rádyo*, *šokolad*, *ótbody*, *univérsita* – a rule that does not apply in the case of words borrowed before modern times, often from Greek as in *sanegór* ‘defendant’, *ictadyón* ‘stadium’ (Bolozky 1978). However, stress may but need not be shifted to word-final when native Hebrew suffixes are appended, as in *univérsita* vs. plural *universita-ót*, *sanegór* vs. plural *sanegór-im* (Schwarzwald 1998).

Stress-assignment is occasionally phonemic, for example distinguishing between *rácu* ‘they ran’ vs. *racu* ‘they wanted’, the noun *táam* ‘taste’ vs. the verb *taam* ‘tasted:PST.3SG.M’, the noun *šáxar* ‘trade’ vs. the past tense *saxar* ‘traded:PST.3SG.M’ (Bolozky 2000) as well as the orthographically distinct *bánu* ‘we came’ with a historical medial *ʔ* and final-stressed *banú* ‘they built’. Finally, in current Hebrew speech, secondary stress tends to alternate. Counting backwards from the main stress, every other syllable carries secondary stress as in: *ve-à-xavér* ‘CONJ-DEF-friend:SG.M = and the boyfriend’; *kšè-a-mèna(h)élet* ‘CONJ-DEF-manager:SG.F = when the head-mistress’ (Bolozky 1982). If more than one secondary stress is involved, the further away it is located from the main stress, the stronger it is. The distribution of secondary stress suggests that Hebrew prefers regular alternation of strong and weak syllables. This accounts for the destressing of a weaker beat or vowel deletion when

secondary stress clashes with the primary stress of an adjacent word, as in: *šlošá yèladím* ‘three children’ > *šlošá yeladím* ~ *šlošá yladím*, as well as for (variable) stress movement in closed-class grammatical items to avoid stress clash: *atá bá* ‘are you coming?’ ~ *àta bá* (~ *tabá*).

6. Notes on Hebrew orthography

The following brief comments on MH orthography and spelling are motivated by the powerful impact of the essentially conservative written language on educated speakers’ perceptions of phonetic distinctions and phonological processes in their language (Ravid 2012; Shimron 2006). These are manifested from a young age, including the psycholinguistic salience of consonantal elements (Tolchinsky & Teberosky 1998).

The essentially consonantal or *abjad* nature of the Biblical Hebrew script (Daniels 1996, 2002) of 22 letters is retained to this day in the narrow script (*ktiv xaser*) of MH. Table 2 shows how these 22 letters are pronounced (even if with different phonetic values than their hypothetical original rendering), merged with other consonants, or elided in MH (see Table 1 above).

MH reader-writers have access to two main non-strictly consonantal scripts: *ktiv menukad* ‘spelling pointed = vocalized script’ (so-called *ktiv xaser* ‘lacking = narrow’) and *ktiv lo menukad* ‘non-pointed script’ (so-called *ktiv male* ‘full script’). The first refers to the Tiberian tradition of diacritics introduced over a millennium ago; it includes representations of the classical vowels including the no-longer phonetically accessible distinctions between theoretically long and short vowels or vowels differing in quality like the diacritic signs *kamats* and *patax*, both rendered as *a* in MH. Today, this system is mastered only by experts, and is used restrictedly, for example, in Biblical texts, poetry, and children’s primaries. The second representation, the so-called *plene* system, is the one adopted by most educated but non-Hebrew specialist writers. It uses *matres lectionis* in the form of the weak consonantal elements *ʔ*, *h* and the glides *yod* and *waw* (the latter two in addition to their roles as standing for consonantal *y* and *v*) to represent front and back vowels respectively (compare, for example, plene *ʔyšh* versus ‘narrow’ *ʔšh* for the word pronounced *iša* ‘woman’; or *ʔwzn* for narrow *ʔzn* pronounced *ózen* ‘ear’ (Ravid 2012: 81–83). While the extended system of *plene* spelling by the historical glottals and glides helps resolve some such opaque representations, non-specialists are not familiar with the specifications laid down by the Hebrew Language Academy in this respect, nor does use of *plene* orthography resolve the issue of extensive homography in current Hebrew (see, from different perspectives, Daniels 1996,

Table 2. Merging and loss of orthographic consonants in general Israeli pronunciation

Letter name		Historical	Current
alef	א	ʿ	0 or ʔ
bet, vet	ב	b ~ v	b ~ v
gimel	ג	g	g
daled	ד	d	d
heh	ה	h	0 or h
vav	ו	w	v
zayin	ז	z	z
chet	ח	ħ	x
tet	ט	t	t
yod	י	y	y
kaf, xaf	כ	k ~ x	k ~ x
lamed	ל	l	l
mem	מ	m	m
nun	נ	n	n
samex	ס	s	s
ayin	ע	ʕ	0 or ʕ
pe, fe	פ	p ~ f	p ~ f
tsade	צ	ts	c
kof	ק	q	k
resh	ר	r	r
shin, sin	ש	š s	š s
tav	ת	θ	t

2002; Mishori 2009; Ravid 2012). For example, the three letters ספר can stand for *séfer* ‘book’, *šfar* ‘border’, or *sapar* ‘barber’, while plene סופר could stand for *sofer* ‘writer’ or *supar* ‘was told’, as well as the loan word *super* ‘super(market)’, and the 3-letter sequence בנו could be pronounced *banu* ‘built:PST.3PL = they built’, *bánu* ‘in-us’, *bnu* ‘build:IMP.2PL = build!’ or *bno* ‘son:POSS.3SG = his son’ (Bar-On 2010).

Currently, then, because of the phonetic leveling and losses noted above (§3), the 22 consonants of the Hebrew alphabet, essentially the same as in Biblical times, are under-represented in the variety of pronunciation of both consonants and vowels described in this chapter.

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PART II

Morpho-lexicon

Inflection

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Inflection in Modern Hebrew is described as involving the following categories: Tense (Past, Future), Mood (Imperative), Person, Number, and Gender in verbs; Number, Gender, and Construct-State in nouns; Number and Gender in adjectives. Most inflection is manifested by suffixes, except for Person inflection on Future tense verbs. Inflection is obligatory for Tense in verbs (except for nominalized forms) and in Prepositions, Adjectives, and Participles. Noun inflection varies, depending on the features of Count for Number and Animacy for Gender. Accusative-case marking on verbs and Genitive-case marking on nouns are increasingly replaced by analytic alternatives in Modern Hebrew. The chapter first details the pronominal system, and then proceeds to description of the major lexical classes of Verbs, Nouns, and Adjectives, concluding with a brief discussion of conservative features as against variability and changes in MH inflection.

1. Introduction

Inflection in MH as in many languages is a linguistic domain where morphology, syntax, and the lexicon meet, affecting many but by no means all of the inflectional categories distinguished in the literature, as surveyed from different points of view and for different languages by scholars such as Anderson (1985, 1988); Aronoff (1976); Bauer (1988: 73–87) and, more recently, Bickel & Nichols (2007); Blevins (2015, 2016); Corbett (2015). Among the categories *not* marked by inflection in MH are aspect and case (except, for habitual past and for accusative and genitive case, both of which have analytic options), with marking of mood confined to imperatives, and voice marked by a mixture of inflection and derivation (Chapters 8, 10). A uniquely Semitic feature of MH as of classical Hebrew inflection is prefixal inflection of prepositions fused with non-nominative personal pronouns (§2 below).

As is generally the case, inflectional categories in MH are usually associated with specific word classes (Bybee 1985), with number and gender applying to nouns, verbs, adjectives, and pronouns; tense and nonfiniteness, mood, and voice – to

verbs; person – to verbs, pronouns and prepositions; possessive marking – to nouns; and accusative marking – only marginally to verbs. Inflection in Hebrew is largely linear, characterized primarily by suffixation, often with modification of the stem vowel, with prefixation occurring only in person marking on verbs in future tense. This rich set of markings means that Hebrew is characterized as an inflecting language, with a great deal of syntactic *agreement* marked by inflection, as illustrated in the excerpt in (1) from a contemporary novel (and see, too, Chapter 12).

- (1) *kše-ha-ʔorħ-im* *ha-ʔaħer-im* *qám-u* *le-sivuv[^]*
 when-DEF-guest-PL.M DEF-other-PL.M rise:B1.PST-3PL to-round:CS
ha-riqud-im *ha-rišon*, *nišʔár-nu* *šney-nu* *la-šévet¹*
 DEF-dance-PL DEF-first, remain:B2.PST-1PL two:M-1PL to-sit
 ‘When the other guests got up for the first round of dancing, the two of us
 remained sitting.’ [G. Chomsky 2017]

The noun *ʔoreaħ* ‘guest’, in the masculine plural form *ʔorħim* (current pronunciation *oréax* ~ *orxim* respectively) entails agreement with the adjective *ʔaħer* ‘other’ (*axer* ~ *axerim*) and the verb *qam* ‘got up’ (*kam* ~ *kámu*) in number and gender. In the construct-state expression *sivuv[^] harikudim* ‘round of dances’, the first, head noun in the genitive case is bound to the second modifying noun – marked by a caret, see Chapter 14) – while the adjective *ha-rišon* ‘the-first’ agrees with the head noun in number (singular) and definiteness, as against the second, modifying noun *rikud-im* ‘dance-s’, which is inflected for plural. The form *nišʔár-nu* ‘remained-1PL’ is inflected for tense (past), person (first), and number (plural), a form that would be retained if there were also an overt pronoun subject *ʔanaħnu* ‘we’ (*anáxnu*). The free form of the (masculine) numeral *šnáyim* ‘two’ is inflected in the bound construct state form *šnéy-nu* ‘two:M.CS-1PL’ ‘the two of us’.

The present chapter focuses on the *morphology* of inflection in MH, with syntactic aspects of current usage detailed elsewhere (for example, Ravid & Schiff 2015; and see, too, Chapter 11 on Nominalizations, Chapter 12 on Agreement, and Chapter 15 on Genitives). Inflection in Hebrew applies mainly to the major word classes of Verb, Noun, and Adjective (§§3 to 5), as well as to other lexical categories such as Prepositions before Pronouns (§2) or the Existential Negative marker *en* (§2.2.5.2). Most closed class items are uninflected – including conjunctions like *ve-* ‘and’, *še-* ‘that’, as well as floating operators like *gam* ‘too’, *rak* ‘only’. Table 1 lists lexical-class items in MH that can or must take inflection: Pronouns, Verbs, Nouns, and Adjectives, with Prepositions and closed class grammatical items detailed in the relevant subsections.

1. The Hebrew items in (1) are given in transliterated form, to represent written Hebrew (see *Transcription and Coding* Appendix).

Table 1. Inflectional categories in MH, listed by chapter subsections

Section	Word class	Inflectional category
§2	Pronouns	Person, Number, Gender following prepositions, numerals Possessive in nouns Accusative in verbs
§3	Verbs	Tense Mood Nonfiniteness (Infinitive, Gerund, Action Nominals) Person, Gender, Number
§4	Nouns	Gender, Number Construct state
§5	Adjectives	Gender, Number Construct state

As noted, most inflectional categories are obligatory, including: *pronominal* inflection on prepositions and numerals (§2.2.1); *person* inflection on verbs in past and future tense (§3.2); *number* and *gender* on verbs in past and future and in *benoni* participles (§3.3), and adjectives (§5). Other inflections are partially optional, since they are restricted to certain semantic categories in some cases, and have analytical alternatives in others (§2 and §4).

The *data-base* for oral materials in this chapter is based largely on the author's collection of spoken usages as specified in each case, supplemented by examples from corpora of interactive conversational usage ("CoSIH: The Corpus of Spoken Israeli Hebrew," n.d; Dekel 2014; Maschler 2009) and elicited expository and narrative texts (Berman & Nir-Sagiv 2004: 341–343, the latter as detailed in Chapters 11 and 14). Examples of written MH are mainly from newspapers, the internet, and MH novels, as specified in each case.

In representation of *Hebrew forms*, since focus in this chapter is on morphological facets of inflection, phonological factors are noted only occasionally (see Chapter 6). Accordingly, phonetic variations are disregarded in most cases, with representations being generally phonemic.² As generally assumed in this volume, final stress is taken as the default, with (ante)penultimate stress marked by an *accent aigu*.

2. This includes not representing distinctions between the four back consonants or "gutturals" (historical glottals *h*, *ʔ* and pharyngeals *ħ*, *ʕ*), although these are partially realized by some Israeli speakers (Gaftar 2016b, 2016a) and still reflected in the largely morphological underpinnings of contemporary Hebrew spelling (Ravid 2012).

2. Pronouns

The first category reviewed here is the closed class items of personal pronouns. Most of the inflections described in this chapter are common in other languages, too, but those applying to the pronominal system of Hebrew are largely confined to Semitic languages, where they serve to this day as a unique means of case-marking. Except for pronouns serving as grammatical subjects (and the special case of *ze* ‘it, this, that’, see Chapter 9), all non-nominative personal pronouns take the form of inflectional suffixes bound to a preceding prepositional element, specifying grammatical and adverbial relations such as accusative, dative, genitive or locative, temporal, concessive, etc. Moreover, the system uniquely relates to all grammatical categories relevant to inflection in Hebrew, including not only number (singular, plural) and gender (masculine, feminine), but also person (1st, 2nd, 3rd), so providing a convenient point of departure for discussion of inflection in MH in general.

Traditionally defined as words that can function as a noun phrase standing on their own, pronouns in Hebrew as in other languages refer either deictically to the participants in a given discourse (e.g., *I, you*) or, more usually anaphorically, to an entity mentioned elsewhere in the discourse (e.g., English *he, she, it, this*). In fact, this basic definition (“Oxford Dictionaries” n.d.) refers only to free or independent personal pronouns, like Hebrew nominative singular *hu* ‘he’, *hi* ‘she’ or plural *atem* ‘you’, *hem* ‘they’ (§2.1 below). These contrast with ‘dependent’ or ‘bound’ personal pronouns which, unlike in many languages of Standard Average European (Bhat 2007), are suffixed obligatorily to prepositions and numbers, and optionally to other lexical categories (§2.2).

Also unlike many SAE languages, MH does not have a category of *relative pronouns*, with relative clauses marked by the invariant subordinating marker *še-* (occasionally alternating in formal style with *ašer* or, following an initial participle, the definite marker *ha-*, as detailed in Chapter 18). In direct object relatives, the relativized noun may, and with prepositional objects, must have a pronominal copy, thus: Subject: *ha-talmid še-nixšal* ‘the-student that-failed’; Direct Object: *ha-talmid še-hixšálnu (ot-o)* ‘the-student that we-failed (ACC-him)’; Prepositional Object: *ha-talmid še-dibárnu al-av* ‘the-student that we-talked about-him.’ MH does, however, have *interrogative pronouns* for nominal entities – *mi* ‘who’ for humans and *ma* ‘what’ for inanimates – as well as the indefinite pronouns *mí-še-hu/hi* ‘who-that-M/F’ = ‘someone-he/she’, *má-še-hu* ‘something’ (typically reduced to *mišu* ~ *mášu* in speech).

The Hebrew *personal pronoun* system consists of ten elements, two of which – the plural feminine 2nd and 3rd persons – are increasingly rare in current usage. As noted, these pronominal elements can be free or independent (§2.1) – in which case they are written as separate orthographic items – or else bound or dependent, suffixed either obligatorily, optionally, or occasionally to a range of both open- and closed-class lexical items, (§2.2).

2.1 Independent, free pronouns

The ten independent personal pronouns listed in Table 2 are inherited from Classical Hebrew – the Bible and the Mishna (Cohen 2016: 33–59).

Table 2. Personal pronouns in MH, by person, number, and gender

Person	Singular		Plural	
	Masculine	Feminine	Masculine	Feminine
1st	<i>ani</i> (<i>anoxi</i>)		<i>anáxnu</i> (<i>ánu</i>)	
2nd	<i>ata</i>	<i>at</i>	<i>atem</i>	(<i>aten</i>)
3rd	<i>hu</i>	<i>hi</i>	<i>hem</i>	(<i>hen</i>)

Each pronoun is structurally unrelated to other members of the system, although some share certain orthographic or phonological elements (initial *alef* for 1st and 2nd person, initial *h* for 3rd, medial or final *t* for 2nd person, and *n* for 1st singular, plural, and plural feminine). In spoken usage, *ani* ‘I’ and *anaxnu* ‘we’ are basic for 1st person, with *anoxi* and *ánu* largely confined to formal or literary contexts. Singular 2nd and 3rd person *hu* and *hi* are distinguished mainly by their vowels, since the initial *h* is often not pronounced, and masculine plural 2nd and 3rd person *atem* and *hem* generally serve for both masculine and feminine referents, with the feminine *aten* and *hen* rare except in very formal style.

The system of *person inflection* is asymmetric: 1st and 2nd Past and Future tense verbs take person-marking affixes alone *or* together with independent subject pronouns – e.g., both *ani haláx-ti* ‘I go:B1.PST-1SG’ and also *haláx-ti* ‘go:B1.PST-1SG’ both meaning ‘I went’ – but 3rd person and Present tense or participial *benoni* verbs require overt independent pronouns. These alternatives are illustrated in (1) and (2) with, and in (3) without personal pronouns.

- (1) *hi ti-hye be-séder*
 she FUT.3SG.F-be in-order
 ‘She’ll be all right’ [CoSIH]
- (2) *ani lo maxzir-a l-ax telefón-im*
 I not return:SG-2SG.F to-2SG.F telephone-PL
 ‘I’m not returning your calls’ [CoSIH]
- (3) *paxáde-ti še-šaxáx-ti éyze yom^ hulédet o mášu*
 afraid:PST-1SG that-forget:PST-1SG which day:CS birth or something
 ‘I was afraid that I forgot someone’s birthday or something’. [CoSIH]

Independent (nominative case) pronouns function as subjects of different types of clauses as in (2) and (3) or as isolated utterances, as in (4).

- (4) *mi amar? ani*
 who said? I
 ‘Who said? I (did)’.

[From a discussion in class]

Free nominative pronouns are often reduced in speech, as in the examples in (5) from Polak-Yitzhaki (2007) and Schwarzwald (2016a: 255–256):

- (5) *ani > an:* *an lo xošev* ‘I don’t think (so)’
ani > ni: *be-Diksi ni lo aí-ti* ‘In Dixie I was-not = haven’t been’
ata > ta: *š-ta ba ve-omer* ‘that = when you come and say’ [CoSIH]
anaxnu > naxnu: *efo naxnu omdim* ‘Where (do) we stand?’
atem > tem: *tem amur-im leasig matara* ‘you:PL.M should achieve (an) aim’

These features of rapid-speech reduction of subject pronouns highlight their closeness to the person markings in a sense that they function as replicating. For discussion of alternations between “attached, overt, and proclitic” pronominals in spoken Hebrew, see Polak-Yitzhaki (2007), and for further analysis of structural and semantic features of the system of personal pronouns in MH, see Cohen (2016).

2.2 Dependent pronouns

The categories of person listed in Table 2 for independent subject pronouns also apply to ‘dependent’ pronouns in the form of inflectional suffixes that are obligatory with prepositions, the case-markers accusative *et* and genitive *šel*, and with some numerals – a hallmark of Semitic pronominal systems.³ Two groups of dependent pronominal suffixes are specified as Set I and Set II in Table 3 – taking ‘singular’ versus ‘plural’ inflections respectively.⁴ Forms in parentheses in Table 3 are rarely used, with speakers generally not distinguishing between singular *e* and plural *ey*. The forms in Table 3 are described in Sections 2.2.1 to 2.2.5 below for prepositions, nouns, verbs, numerals, and other closed class items.

3. The term *inflectional affixes* is preferable here to “clitics” since many of these suffixes differ in form from their corresponding independent pronouns, and they are sometimes stressed, unlike clitics (Gerlach & Grijzenhout 2000).

4. Historically, Set 1 inflections were attached to singular base nouns ending in a consonant, while Set 2 were attached to plural base nouns ending in a vocalic diphthong, e.g., *ragl-i* ‘my leg’ from *régel* ‘leg’, *ragl-ay* ‘my legs’ from *ragláyim* ‘legs’ (Bauer & Leander 1965: 250–260).

Table 3. Two sets of dependent (bound) pronominal suffixes, by type of base, person, number, and gender

Set I				
Person	Singular		Plural	
	Masculine	Feminine	Masculine	Feminine
1	<i>-i (-ni)</i>		<i>-ánu, -énu</i>	
2	<i>-xa</i>	<i>-ex, -ax, -x</i>	<i>-xem</i>	<i>(-xen)</i>
3	<i>-o (-no, -nu, -hu)</i>	<i>-a(h) -ha</i> <i>(-na)</i>	<i>-am, -hem</i>	<i>(-an, -hen)</i>

Set II				
Person	Singular		Plural	
	Masculine	Feminine	Masculine	Feminine
1	<i>-ay</i>		<i>-é(y)nu</i>	
2	<i>-é(y)xa</i>	<i>-áyix</i>	<i>-e(y)xem</i>	<i>(-e(y)xen)</i>
3	<i>-av</i>	<i>-é(y)ha</i>	<i>-e(y)hem</i>	<i>(-e(y)hen)</i>

2.2.1 *Prepositions + pronouns*

Inflection is obligatory with prepositions – those marking direct and prepositional objects and other arguments, adverbial phrases, and with the genitive marker *šel* constructions. Compare: nominative *ani* 1SG ‘I’ / dative *li* ‘to-me’; nominative *ata* 2SG.M / locative *be-xa* ‘in ~ at-you’; nominative *(h)em* 3PL / ablative *me-hem* ‘from them’; nominative *anáxnu*.1PL / benefactive *bišvil-énu* ‘for-us’; nominative *at* ‘you.3SG / accusative *ot-ax*.’ Since pronouns cannot stand alone when preceded by a preposition or the genitive and accusative markers, non-fused forms like **le + ani*, **be + ata*, **ecl +anaxnu*, **min + hem*, as well as **šel ata*, **et ani* are ungrammatical at all levels of usage.⁵ As shown in Table 3 above, prepositions are divided between those that take Set I (§2.2.1.1) as against Set II (§2.2.1.2) pronominal suffixes.

2.2.1.1 *Prepositions with Set I pronominal suffixes*

Most Set I prepositions end in a consonant, illustrated for the basic dative preposition *l-* ‘to’ and the more complex benefactive *bišvil* ‘for’ in (6), with other prepositions in this set listed in (7).

5. Only very young preschool children make such errors (e.g., *bišvil hu* ‘for he’ instead of *bišvilo* ‘for him’, *bli ani* ‘without I’ in place of required *bil-aday* ‘without me’ or modified as in *al-e-hu* ‘on him’ (Berman 1985). Even uneducated speakers do not violate this requirement, although – as noted below – they do not always use the normatively prescribed correct fused form.

- (6) *l-* ‘to’, *bišvil-* ‘for’: *l-i*, *bišvil-i* ‘to/for-me’, *le-xa*, *bišvil-xa* ‘to/for-you:SG.M, l-ax, *bišvil-ex* ‘to/for you:SG.F, *l-o*, *bišvil-o* ‘to/for-him’, *l-a*, *bišvil-a* ‘to/for-her’, *l-ánu*, *bišvil-énu* ‘to/for-us’, *la-xem*, *bišvil-xem* ‘to/for-you:PL, *la-hem*, *bišvil-am* ‘to/for-them’
- (7) **Locative** *betox* ‘inside’, *leyad* ‘next-to’, *ecel* ‘by, at’, **directional** *letox* ‘into’, *likrat* ‘towards’, *saviv* ‘around’, **causative** *biglal* ‘because of, due to’, **benefactive** *avur*, *baavur*, *lemaan* ‘for (the sake of)’, **adversative** *néged* ‘against’, *leumat* ‘as against’, **substitutive** *bimkom* ‘instead-of’

Examples (8a) to (8d) present documented uses of such forms:

- (8) a. *ze yoter mi-day bišvil-i*
it more than-enough for-me
‘It’s too much for me’. [CoSIH]
- b. *lo as-u afilu stártap biglal-énu*
no do:PST.1B.3PL even startup because-of:1PL
‘They didn’t even make a start-up because of us’. [CoSIH]
- c. *li-xyot al-pi ekron-ot o le-xanex likrat-am*
to-live according-to principle-PL or to-educate towards-3PL.M
‘to live according to principles or educate towards them’. [Dan Givton.
2010. <http://en.calameo.com/read/000842843cb286dbe227b>]
- d. *ha-olam kul-o negd-énu*
the-world:M all-3SG.M against-1PL
‘The whole world’s against us’. [Title of song by Yoram Tahar-Lev]

The system is fraught with irregularities, affecting both the prepositional stem and/or the pronominal suffix, so that many such combinations need to be learned by rote, as individual lexical items. For example, (i) the preposition *betox* ‘inside’ + 2nd person pronoun lowers the syllabic *e* as though the final *x* of the preposition were pharyngeal *ħ*, to yield *betox-axa* ‘in.you-2M.SG’, *betox-axem* ‘in.you-2M.PL’, rather than expected *betox-exa*, *betox-exem*. (ii) The free stem of the accusative marker *et* changes to *ot-* when inflected, thus: *ot-i* ‘me’, *ot-xa*, *ot-ax*, *ot-o*, etc. (iii) The comitative preposition *im* ‘with’ is usually inflected with the suppletive stem *it-*, as in *iti* ‘with me’, alternating with regular *imi* (or literary *imadi*) only in high register. (iv) The prepositions *mi-* ‘from’ (*min* in its free form) and *kmo* ‘as, like’ are also irregularly inflected, thus: *mi-*: *mim-éni* ‘from me’, *mim-xa*, *mim-ex*, *mim-énu~mim-éno*, *mim-éna*, *mim-énu~meit-ánu*, *mi-kem*, *me-hem~mi-hem*; *kmo-*: *kamó-ni* ‘like me’, *kamó-xa*, *kamo-x*, *kamó-hu*, *kamó-ha*, *kamó-nu*, *kmo-xem ~ kamó-xem*, *kamó-hem ~ kmot-am*. As indicated, these two prepositions also take suppletive forms: *mi-* alternates with *me?et* in 1st plural, to avoid overlapping with the 3rd masculine singular forms, and *kmo-* alternates with *kmot-* in 3rd masculine plural.

The numerous inconsistencies in the Preposition+Pronoun system have led to a situation where the spoken usage of even educated speakers often differs from the normatively prescribed forms above. For example, *ot-xem* ‘them’ in place of prescribed *et-xem*, *mim-xem* ‘from you.2PL’, *kamó-xem* ‘like you.2PL’ in place of *mi-kem*, *kmo-xem*; *otex* ‘you.2F.SG.ACC’ instead of *otax* (possibly by analogy with the high-frequency forms like *lax* ‘to you’, *šelax* ‘of you = yours’); *bišvilahem* ‘for them’ instead of required *bišvilam* and *ecl-ahem* ‘by them’ instead of required *ec-lam*. These departures from prescribed forms are due to a combination of factors of historical origin that are not accessible to non-expert speaker-writers of MH, as well as to the more general tendency to paradigmatic regularization.

2.2.1.2 Prepositions with Set II pronominal suffixes

Set II prepositions, which generally though not necessarily end in a vowel, are inflected as illustrated for the preposition *el* ‘to, towards’ in (9a), with other prepositions that take the same pronominal suffixes listed in (9b).

- (9) a. *el* ‘to, towards’ – *el-ay* ‘towards me’, *el-é(y)xa*, *el-áyix*, *el-av*, *el-é(y)ha*, *el-é(y)nu*, *el-é(y)xem* (normative: *al-e(y)xem*), *el-e(y)hem* (normative: *al-e(y)hem*)
 b. *al* ‘on’, *meal* ‘on top of’, *taxat* ‘under’, *lifney* ‘before, in front of’, *mitaxat* ‘underneath’, *odot* ‘about, regarding’, *axarey* ‘after’, *biydey* ‘by, at the hands of’, *biladey* ‘without’, *klapey* ‘towards’, *legabey* ‘according to’, *meaxorey* ‘behind’, *al yedey* ‘by’

Use in context of Set II preposition + pronoun forms is illustrated in (10a) to (10d).

- (10) a. *ani agia lefan-áyix*
 I 1SG-arrive:FUT before-2SG.F
 ‘I’ll arrive before you!’ [CoSIH]
 b. *yom-áyim axr-e(y)hem haya yoter xam*
 two-DUAL after-3PL.M was more hot
 ‘Two days later it was hotter.’ [CoSIH]
 c. *hu mamšix le-hitkadem el-é(y)xa*
 he continue:BEN.PRS.SG to-advance towards-2SG.M
 ‘He’s continuing to advance towards you’ [CoSIH]
 d. *ani somex al-e(y)xem*
 I rely:BEN.PRS.SG on-2PL
 ‘I rely on you’ [CoSIH]

As noted, most prepositions taking Set II suffixes end with a vowel and are spelled with a final *yod*, but they also display numerous anomalies and often depart from prescribed forms in current usage, as illustrated in (11).

- (11) a. *Set II prepositions that end in a consonant* (e.g., *el* ‘to’, *al* ‘on’, *meal* ‘on top of’, *táxat* ‘under’, *mitáxat* ‘underneath’, and *odot* ‘about’) often take Set I suffixes in 2nd person feminine singular, yielding *el-ex*, *al-ex*, *meal-ex*, *taxt-ex*, *mitaxt-ex* instead of required *el-áyix*, *al-áyix*, *meal-áyix*, *taxt-áyix* and *mitaxt-áyix* respectively.
- b. The preposition (*mi*)*táxat* ‘under, below’ takes Set I suffixes in 3rd person plural, yielding (*mi*)*taxt-am* instead of (*mi*)*taxt-é(y)hem*.
- c. The preposition *ben* ‘between, among’ manifests a split paradigm, taking singular suffixes from Set I and plural from Set II, thus: *ben-i* ‘between me’, *ben-xa*, *ben-ex*, *ben-o*, *ben-a(h)* – *ben-é(y)nu*, *ben-e(y)xem*, *ben-e(y)hem*.⁶ The 3rd plural ending is often also taken from Set I, yielding colloquial *benam* along with *benehem*, as in (12).

- (12) *klav-im medabr-im ben-am le-ven acm-am*
 dog-s talk-PL between-3PL to-between self-3PL
 ‘Dogs talk amongst themselves’.
 [<https://www.youtube.com/watch?v=UjaNRSrvhgc> (27.8.2018)]

In sum, inflection of preposition + non-nominative pronouns remains obligatory at all levels of usage, even though the numerous irregularities of the system in both base preposition and pronominal suffix have led to inconsistencies between the normatively required forms and everyday colloquial usage. Nonetheless, fusing of prepositions and pronouns, so that personal pronouns except for nominatives typically do not stand alone, to this day constitutes a major inflectional system in the grammar of MH, retained in full from its ancient sources.

2.2.2 Pronominal suffixation on nouns

Pronominal suffixes on nouns indicate a genitive relationship, most typically possession. In this, MH differs from Classical Hebrew, where possession was invariably expressed by bound pronouns, since MH has an analytical alternative for marking genitive case on nouns by means of an inflected genitive marker *šel* ‘of’ (see Chapter 14 on Genitive Constructions). The examples in (13) are from Genesis 3: 16 (with the MH pronunciation in parentheses), and analytical alternatives in MH given in (14).

- (13) *ʔel-hāʔišā ʔamar harbā ʔarbe ʔiššəbōnek wəheronek bəʔešeb teldī banīm wəʔel-ʔišek*
təšūqātek wəhu yimšāl-bāk
 (MH: *el haiša amar, harba arbe icvonex veheronex; beecev teldi banim veel išex*
tšukatex vehu yimšol bax)

6. Some speakers pronounce this as *beyn*, in contrast to *ben* ‘son’, and this is true, too, of the plural suffixes *-eyxem* and *-eyhem*.

‘Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and thy desire shall be to thy husband, and he shall rule over thee.’ (King James Version)

- (14) a. *icvon-ex* ~ *ha-icavon šel-ax* ‘your sorrow’
 b. *heryon-ex* ~ *ha-herayon šel-ax* ‘your conception, pregnancy’
 c. *iš-ex* ~ *ha-iš šel-ax* ‘your husband / man’
 d. *tšukat-ex* ~ *ha-tšuka šel-ax* ‘your desire’

Singular nouns take Set I pronominal suffixes irrespective of gender, as in the examples in the masculine nouns in (14a-c) and the feminine *tšuka* in (14d). In contrast, plural nouns take Set II suffixes, again irrespective of gender, as (15) for masculine *dvarim* ‘things, words’, feminine *haxlatot* ‘decisions’, and dual *yadáyim* ‘hands’.

- (15) a. ***dvarim***: *dvar-ay* ‘my words’, *dvar-é(y)xa*, *dvar-áyix*, *dvar-av*, *dvar-é(y)ha*, *dvar-é(y)nu*, *divr-é(y)xem*, *divr-e(y)hem*
 b. ***haxlatot***: *haxlatot-ay* ‘my decisions’, *haxlatot-é(y)xa*, *haxlatot-áyix*, *haxlatot-av*, *haxlatot-é(y)ha*, *haxlatot-é(y)nu*, *haxlatot-é(y)xem*, *haxlatot-é(y)hem*
 c. ***yadáyim***: *yad-ay* ‘my hands’, *yad-é(y)xa*, *yad-áyix*, *yad-av*, *yad-é(y)ha*, *yad-é(y)nu*, *yed-e(y)xem*, *yed-e(y)hem*

Possessive marking on nouns has three main forms: (i) *singular feminine* nouns ending in *-a* take the consonant *t* before the pronominal suffix (e.g., *bakaša* ‘request’ > *bakašat-am* ‘their request’), *tšukat-ex* ‘your desire’ in (14d)⁷; (ii) *masculine plural -im* and *dual -áyim* are replaced by the suffix *-ey* added to the stems (e.g., *dvarim* > *divrey*, *yadáyim* > *yedey*); and (iii) nouns with the *feminine plural -ot* remain the same in both free and bound possessive forms, with Set II pronominal suffixes added to the word as a whole, as in *haxlatot* > *haxlatot-ay*. Nouns ending in *e* are rarely inflected for possession, but when they are, the vowel *e* is omitted before the suffix (e.g., *more* ‘teacher’ > *mori* ‘my teacher’). There were no examples of a singular noun ending in *i* inflected for possession in the data-base.⁸

Noun inflection is relatively restricted in MH, generally confined to formal discourse and literature, with the analytical construction with the inflected genitive marker *šel* of far higher frequency of occurrence in MH. Semantically, if not stylistically, the bound and analytic constructions are largely interchangeable, thus

7. Some analyses propose that the final *-t* is part of the underlying representation of the noun, which is omitted when in free form, not as a bound stem.

8. For example, the noun *kóši* ‘difficulty’ is inflected only in the plural, thus: *kšayim* ‘difficulties’ > *kšay-ay* ‘my difficulties’, *kšay-av* ‘his difficulties’.

bound *arc-énu* ‘our country’, *arcot-é(y)hem* ‘their countries’ and analytic *haárec šel-ánu*, *haaracot šel-ahem* both stand for ‘our country’, ‘their countries’ respectively.

Certain categories are, however, typically inflected for possession in both spoken and written usage, as listed in (16) – from Avioz (2004: 179–198), Dubnov (2000), Ravid & Cahana-Amitay (2005):

- (16) a. Kinship terms, e.g., *ax-íxa* ‘your-M.SG brother’, *išt-i* ‘my wife’
 b. Body parts, e.g., *pi-v* ‘his mouth’, *e(y)n-ay* ‘my eyes’
 c. Judgement terms, e.g., *daat-am* ‘their opinion’, *acat-o* ‘his advice’
 d. Abstract deverbal and de-adjectival nouns, e.g., *bakašat-i* ‘my request’, *girsat-o* ‘his version’
 e. Stages in the lifetime, e.g., *yaldut-i* ‘my childhood’, *neur-av* ‘his youth’

On the other hand, the forms listed in (16) can all alternate with their analytic alternatives, and are both common and acceptable in everyday MH usage. Compare for (16a) *ax šel-xa*, for (16b), *ha-pe šel-o*, for (16c), *ha-bakaša šel-i* and *ha-girsa šel-o* for (16d).

Nouns are also inflected for possession in some frozen or idiomatic expressions, e.g., *be-e(y)n-ay* ‘in my eyes’ meaning ‘in my opinion, as I see things’, *ze lo be-yad-ay* literally ‘it is not in my hands, it’s out of my control’, or address terms such as *ax-i* ‘my brother’ in the slang sense of ‘bro’, and *yakirat-i* ‘my dear (to a female)’. Formulaic expressions are illustrated in (17).

- (17) a. *kax dark-o šel olam*
 so way-3SG.M of world
 ‘Such is the way of the world’.
 **kax ha-dérex šel olam*
 b. *zixron-am li-vraxa*
 memory-3PL.M to-blessing
 ‘of blessed memory’
 **ha-zikaron šel-ahem li-vraxa*
 c. *ki-xtav-o ve-xi-lšon-o*
 as-written-3SG.M and-as-language-3SG.M
 ‘Exactly as written, word for word’
 **kmo ha-ktav šel-o ve-kmo ha-lašon šel-o*

In sum, pronominal suffixation of nouns, unlike the case with prepositions, conforms largely to traditional prescription. This can be attributed to the fact that – again unlike with prepositions – the bound inflected form of nouns is largely a high-register residue of earlier forms of expression, except in certain restricted contexts. Elsewhere, MH has shifted increasingly to the use of an analytical form with the genitive marker *šel*.

2.2.3 Pronominal suffixation on verbs

Pronominal suffixes on verbs are rare, restricted to verbs that take direct object accusative case, and confined to formal and literary registers. In such cases, a verb may take a special subset of Set I pronominal suffixes instead of the accusative marker *et* added to the verb stem, which remains intact, as shown in (18) for the verb *li-rot* ‘to see’.

- (18) a. *hu raá-ni ~ hu raa oti* ‘he saw me’
 b. *reiti-ha ~ raíti ota(h)* ‘I saw her’
 c. *lirot-am ~ lirot otam* ‘to see them’

As the examples in (18) indicate, the bound pronominalized forms of accusatives are largely opaque, and untutored or non-expert speakers do not have full command of the system (Kaplan & Berman 2015). Besides, at nearly all levels of usage except extremely formal register, the analytic options with inflected *et* > *ot-* are preferred.

In contrast to verbs, where a pronominal suffix denotes an accusative object, in gerunds and action nominals they may also indicate subject nouns. Compare, for example, infinitive + accusative *lehacil-am = lehacil otam* ‘to save **them**’ with gerundive *be-hacil-am* ‘in-saving-their’ = *kše-hem hicílu* ‘when **they** saved’ or with the action nominal *be-hacalat-am* ‘in-salvation-their / them’ where the pronominal suffix is ambiguous as between accusative ‘on their being saved’ = ‘someone saved them’ and nominative ‘on their saving someone else’ (see, further, Chapter 11). In terms of usage, infinitives are suffixed by a pronominal accusative more often than other forms, the others being very infrequent, possibly because – in contrast to the finite forms in (19) below – the form remains the same as with the more familiar and commonly used prepositional suffixes (Ben-Asher 1976: Doron in press; Muchnik 1992).

The examples in (19) give contexts where accusative inflections occur for tensed verbs or with an infinitive (19d), with the commonly used alternative added following a tilde ~ .

- (19) a. *ahav-tí-ha ~ aháv-ti ot-a*
 love:PST-1SG-ACC.3SG.F her ~ love:PST-1SG ACC-3F.SG
 ‘I loved her’ (a song written by Tirtsá Atar and performed by
 by Shlomo Artsi)
- b. *Moše hirgi-o ~ Moše hirgía ot-o*
 Moshe calm:PST-ACC.3SG.M ~ Moshe calm:PST ACC-3SG.M)
 ‘Moshe calmed him’ (Muchnik 1992: 123)
- c. *lo pgaš-ti-v od ~ lo pagáš-ti*
 No meet:PST-1SG-ACC.3M.SG more ~ no meet:PST-1SG
ot-o od
 ACC-3SG.M more
 ‘I never met him again’ [ibid: 134]

- d. *hitkašár-ti le-hodía-xa ~ le-hodía lexa še-ha-tor nikba le-teša*
 call:PST-1SG to-inform-2SG.M še-the-appointment set:PST to-nine
 ‘I called to inform you that the appointment was set at 9:00’
 [from a doctor’s office]

(20a) to (20c) below give examples of *gerundives* taking a nominative pronominal suffix standing for the subject of the verb, with (20d) an example of an action nominal in a similar construction (See Chapter 11 on Nominalizations).

- (20) a. *be-kor-o et ha-itonim ~ kše-hu kara et*
 in-reading:GER-3M.SG ACC the-newspapers ~ when-he read:PST ACC
ha-iton-im
 the-newspaper-s
 ‘While reading / When he read the newspapers’ (Ben-Asher 1976: 35)
- b. *be-cet-am min ha-pgiša ~ kše-hem yac-u*
 in-leaving:GER-3PL from the-meeting ~ when-they leave:PST-3PL
min ha-pgiša
 from the-meeting
 ‘When leaving/ When they left the meeting’ [news report on the radio]
- c. *bi-mlot šana le-mot-a(h) ~ kše-mal-a*
 in-completing:GER.CS year to-dying:GER-3SG.F ~ when-complete:PST
šana še-hi mét-a
 year that-she died:3SG.F
 ‘at the end of one year to her death (her dying)’ [newspaper announcement]
- d. *Reuven nizkar bi-šhiyat-o ~ še-hu šaha*
 Ruben recalled in-staying:VNOM-3SG.M ~ that-he stayed
 ‘Ruben recalled his sojourning = that he spent time’
 (Ben-Asher 1976: 30)

In sum, pronominal suffixation on verbs, like on nouns, is optional, with analytic counterparts, typically with the accusative marker *et* and a direct object pronoun, being generally favored. Person inflection of pronouns in gerunds refers to the subject, whereas with derived action nominals it may refer either to the subject or object of the activity. Since gerunds are highly restricted in current Hebrew usage, pronominal suffixation on verbs is generally giving way in MH to alternative, more analytical forms of expression.

2.2.4 Pronominal suffixation on numerals and other closed class words

The numbers from 2 to 5 obligatorily take bound pronominal forms when in the genitive plural, in the sense of, say, ‘the two of us = both of us’, with a distinction between masculine and feminine observed only with the numeral ‘two’, thus: masculine *šnýim* ‘two’ > *šne(y)-nu* ‘the two of us’, feminine *štáyim* ‘two’ > the *šte(y)-nu* versus *šloša* ~ *šaloš* ‘three:M ~ three:F’ > *šlošténu*. Since the stem of the bound form of the numeral meaning ‘two’ ends in a vowel, it takes Set II pronominal suffixes, with the endings *-xen* and *-hen* often replaced by masculine *-xem*, *-hem* due to the common avoidance of 2nd and 3rd person feminine plural forms noted earlier. This goes along with a more general neutralization of gender distinctions in the numeral system of MH (Glinert 1977; Gonen & Rubinstein 2016; Meir 2005, 2008, 2013; Ravid 1995a). Moreover, stress assignment of 2nd and 3rd person plural is also in a state of flux. The commoner, normative placement of stress on the suffix is often replaced by penultimate stress on the stem, as in *šné(y)-xem*, *šné(y)-hem* ‘the two of us, of them’, possibly by analogy with the 1st person plural *šné(y)-nu*.

Although pronominal suffixes can be added to the numerical stems from 2 to 10, suffixes are added only up to number 5, with no occurrences found of, say, **šešt-énu* ‘the six of us’, **tišat-am* ‘the nine of them’, in the data-base examined. Also, only construct-state masculine forms are used to denote both feminine and masculine referents in numbers, as noted earlier for *šlošténu* ‘the three of us’, which could refer to three women, three men, or three people, as well as *arbat-am* ‘four-3PL.M = the four of them’, *xamešt-an* ‘five-3PL.F = the five of them’, as against the gender distinction in the separate numbers, *šloša*, *araba*, *xamiša* ‘three:M, four:M five:M’, *šaloš*, *arba*, *xameš* ‘three:F, four:F, five:F’.

As noted, the gender distinction in numerals has largely eroded in current colloquial usage, no doubt due to the anomalous fact that the feminine form is, atypically, morphologically simpler, with the masculine form taking the generally feminine ending stressed *-a* (see, further, §3.5 and §4 below), while the masculine construct-state forms constitutes the base for pronominal suffixes on the numerals 2 to 5.

In addition to the categories reviewed so far, other closed class items also take pronominal suffixes, often with a change of stem. These include reflexive pronouns (e.g., *écem* ‘thing, essence’ > *acm-i* ‘myself’, *acm-o* ‘himself’), quantifiers (e.g., *rov* ‘most’ > *rub-am* ‘most of them’, *kol* ‘all’ > *kul-ánu* ‘all of us’), and occasional high-register adverbs (e.g., *levad* ‘alone’ > *levad-am* ‘by themselves, on their own’, *leat* ‘slowly’ > *leit-o* ‘in his own time’). Other closed class items that can take pronominal suffixes in more formal style are the existential particle *yeš* ‘(there) is, are’ > *yešnam* ‘there are’, its negative counterpart *en* ‘is ~ are not’ > *eni~enéni* ‘I am not’, *eno~enéno~enénu* ‘he is not’, and the highly formal inflection of presentative markers such as *hine* and *harey* ‘here, behold’ > *hineni*, *hare(y)ni* ‘here I am, behold me’.

Except for the across-the-board observation to this day of inflectional fusion of prepositions and their following non-nominative pronouns, pronominal suffixation in MH is largely in a state of flux, deviating from prescribed forms when maintained, and often replaced by more analytic, non-inflected options elsewhere of pronominal suffixation in the numeral system of MH.

In sum, as noted at the outset of this section, this analysis of MH inflection is introduced by reference to the system of personal pronouns prior to discussion of the more pervasive systems of agreement on the major lexical categories of verbs, noun, and adjectives (§3, §4, §5 respectively). Not only is pronominal affixation a key facet of MH morphological structure taken over from classical times, the classification of pronouns presented in Table 2 has important implications for understanding person inflection in verbs (§3.5 below). Another relatively unique feature of this system is the variability of the forms from which it is constituted (defined above as divided between Set I and Set II suffixes), leading across time to considerable differences between prescribed and colloquial spoken usage. Besides, non-nominative prepositions are unique in the grammar of MH, since they alone must take pronoun suffixes as inflections. Elsewhere, *pronominal suffixation* on nouns and verbs, as with systems like numerals and other closed class items noted above is highly variable in usage, and generally confined to high-register, formal style in current Hebrew.

The remainder of the chapter deals with the inflectional systems of the three major lexical classes of content words – Verbs, Nouns, and Adjectives. These are traditionally divided into two major morphological categories in Hebrew grammar – Verbs, on the one hand, and ‘nominal’ Nouns and Adjectives, on the other (see Chapter 8 on Derivation). The two are dealt with separately below, with Verbs analyzed in terms of consonantal *roots* and prosodic *templates* (§3.1), while Nouns (§4) and Adjectives (§5) are analyzed as associated with morphological *patterns* traditionally termed *miškal-im* (‘weight-s’).

3. Verb inflection

As in other languages, semantically, verbs in MH serve to express activities, states, and changes-of-state. As in other Semitic languages, the categories of temporality and voice, as well as of transitivity and valence, are typically realized by morphological alternations in the verb, with a key feature of verbs in Modern as in Classical Hebrew being that they are formed by combination of a consonantal root and template affixes (§3.1). The rich system of *verb inflection* includes marking for Tense (§3.2), Imperative mood (§3.3), nonfinite and nominalized forms (§3.4), as well

as for Subject-Verb agreement (§3.5), and optional marking of accusative suffixes (§2.2.3 above).

Focus here is on *structural* features of verb inflection, without taking into account verb syntax or semantics, topics discussed from various perspectives in other studies of MH (e.g., Arad 2005; Berman 1978: 139–181, 2014; Doron 2003a, 2003b, 2007; Glinert 1989: 121–137; Goldenberg 1998; Kalev 2015, 2017; Laks 2011, 2013; Rosén 1977: 190–205). For example, *binyan* templates and root structures (*gzarot*) are discussed below only with reference to their relevance to inflection (§3.1), with brief reference to verbs with weak or defective roots (§3.5). Various other facets of the *binyan* system are dealt with in the remaining chapters of this section of the present volume, on Derivational Morphology (8), Parts of Speech Categories (Chapter 9), Voice Alternations (10), and Nominalizations (11).

3.1 Root and templates

All (although not only) verbs in MH are formed in discontinuous combinations of root and template affixal patterns, termed *binyanim*. As unpronounceable, discontinuous elements, roots are represented by two to four consonants representing the historical and, to this day, orthographic representations of these elements (e.g., *q-w-m* ~ *q-m* as in *kam* ‘rise, get up’, *q-š-r* ‘tie, connect’, *t-q-š-r* ‘communicate’). Roots with more than four consonants – up to a maximum of seven – are not common, mainly derived from loan words, e.g., *f-l-r-t-t* – *flirtet* ‘flirt’, *ʔ-b-s-t-r-q-t* – *ibstrek* ‘write an abstract’ (Aronoff 1994: 24–130; McCarthy 1981, 1984, 1985). Most common roots are in the canonic triconsonantal form, with quadrilaterals increasing due to root extraction from longer nouns or loan words and addition of an affixal consonant to triconsonantals (Berman 2012; Nir 1999; Ornan 2003; Sasaki 1996; Schwarzwald 2001: 21–38, 2016b; Yannay 1974).

The seven *binyan-im* – literally ‘building-s, construction-s’ – termed variously in different research traditions, ‘conjugations’, ‘prosodic templates’, ‘morphological patterns’ – are named for the past tense, 3rd masculine singular of the root *p-f-l* ‘act, do’. For ease of reference, these are numbered here and elsewhere in this volume by Bn. As detailed in Chapter 8 on Derivational Morphology and Chapter 9 on Parts of Speech, these represent different, though often semantically related, morph-syntactic values, listed in (21) for the root *k-t-b* (with the initial and final root consonants alternating with the fricatives *x* and *v* respectively, as noted in Chapter 6). The verbs are represented in the morphologically simplex form of Past tense, 3rd Person, Masculine, Singular.

- (21) a. B1 *pa'al* (*qal*): *katav* ‘write’
 b. B2 *nif'al*: *nixtav* ‘(be) written’
 c. B3 *hif'il*: *hixtiv* ‘dictate = cause to write’
 d. B3Ps *huf'al*: *huxtav* ‘be dictated’
 e. B4 *pi'el*: *kitev* ‘address, cc’
 f. B4Ps *pu'al*: *kutav* ‘be addressed, be sent a copy’
 g. B5 *hitpa'el*: *hitkatev* ‘correspond with, write to’

Inflection of the *binyan* templates is relatively straightforward in so-called ‘full’ or ‘regular’ verbs based on three or four consonants which are realized in all forms of a given verb based on the same root. However, a large proportion of roots are *defective* due to historical processes involving ‘weak’ consonantal elements (gutturals, glides), mainly inherited from the classical periods of Hebrew, and of high-frequency to this day. Compare, for example, the ‘regular’ B1 infinitive *li-CCoC* as in *k-t-b* > *li-xtov* ‘to-write’ with infinitives in the same template of verbs with weak roots *?-k-l* > *le-exol* ‘to eat’, *n-p-l* > *li-pol* ‘to fall’, *q-w-m* > *la-kum* ‘to get up’; in B3 past tense *hiCCiC* - regular *hixtiv* ‘dictate’ versus defective *heexil* ‘give to eat = feed’, *hipil* ‘drop, cause to fall’. (For details of such alternations, see Ashkenazi, Ravid & Gillis 2016; Bolozky 1982, 1999; Ravid, Bar-On et al. 2016b; Schwarzwald 1977, 1984; Seroussi 2014; and see, too, in this volume, Chapter 8, Chapter 9).

Table 4 illustrates interaction of the derivational *binyan* templates with the five inflectional categories of Mood and Tense in MH for the full roots *r-q-d* ‘dance’ and the defective root *y-š-b* ‘sit’ in two different *binyan* patterns, with tense-marked forms in the morphologically simple form of (3rd person) masculine singular. These and other alternations in tense/mood categories of MH are detailed in the following sections.

Table 4. Alternation of verb-inflections in two (non-passive) *binyan* patterns, for verbs with the full root *r-q-d* ‘dance’ and the weak root *y-š-b* ‘sit’

<i>Binyan</i>	Root	Gloss	Infinitive	Imperative	Future	Past	<i>benoni</i> Present
<i>pa'al</i>	<i>r-q-d</i>	‘dance’	<i>li-rkod</i>	<i>(ti)rkod!</i>	<i>yirkod</i>	<i>rakad</i>	<i>roked</i>
	<i>y-š-b</i>	‘sit’	<i>la-šévet</i>	<i>(te)šév!</i>	<i>yešev</i>	<i>yašav</i>	<i>yošev</i>
<i>hif'il</i>	<i>r-q-d</i>	‘dance+CAUS’	<i>le-harkid</i>	<i>tarkid!</i>	<i>yarkid</i>	<i>hirkid</i>	<i>markid</i>
	<i>y-š-b</i>	‘seat’	<i>le-hošiv</i>	<i>tošiv!</i>	<i>yošiv</i>	<i>hošiv</i>	<i>mošiv</i>

3.2 Tense inflection

MH verbs marks verbs in three different tenses – “past”, “present”, and “future” – where the quotation marks indicate that these are structural labels, with no reference to their syntactic function or semantic content. The terms *past* and *future* tense refer here to forms that require agreement with the subject in person as well as number

and gender, whereas *present* is represented by the *benoni* ‘intermediate’ verbal category that is not marked for person, but – like the nominal categories discussed below (§4 and §5) – only for number and gender, both when functioning as a participle and as present tense.⁹ As indicated in Table 4, Tense inflection involves stem alternations in the *binyan* templates (Aronoff 1994: 132–149).

Regular (non-defective or weak) verbs with three or more consonantal radicals have two basic syllabic structures, represented below as +RVRVR+ and +RRVR+ (Schwarzwald 1996a), where R denotes a root slot that may contain more than one consonant (e.g., in the *pi’el* loan-verb *flirtet* ‘flirt’, both R1 and R2 have two consonants each – *fl*, *rt*). The *plus sign* stands for either derivational or inflectional affixes, where *binyan*-marking elements are analyzed as derivational (e.g., the *n* + in B2 *nif’al*, *hit* + in B5 *hitpa’el*, *hi* + or *hu* + in B3 and B3ps *hif’il* and *huf’al*, respectively); and person, gender, and number affixes as inflectional (see §3.5).

These two basic syllabic structures of verb templates are differentially distributed across the *binyanim*: +RVRVR+ occurs across the three tenses in the *binyan* patterns *pi’el*, *pu’al*, *hitpa’el* (including *polel* and *hitpolel*), in the past and present of *pa’al* and the future of *nif’al*, and +RRVR+ occurs in future tense of *pa’al* and in past and present of *nif’al*, as well as in all tenses in *hif’il* and *huf’al*. An initial *y-* constitutes the 3rd person marker in Future tense (see §3.5), while an initial *m-* marks present tense in most templates, except for *pa’al* and *nif’al*.

These variations are illustrated in (22) for Future and Present Tense in the morphologically simplex form of 3rd person masculine singular.

- (22) *nif’al* – *yikatev* ‘will be written’, *nixtav* ‘is ~was written’
pi’el – *yešalem* ‘will pay’, *mešalem* ‘pays, is paying’
pu’al – *yešulam* ‘will be paid’, *mešulam* ‘is (being) paid’
hitpa’el – *yištalem* ‘will pay off’, *mištalem* ‘pays off, is profitable’¹⁰
hif’il – *yašlim* ‘will complete’, *mašlim* ‘completes, is completing’
huf’al – *yušlam* ‘will be completed’, *mušlam* ‘is (being) completed’
polel – *yesovev* ‘will turn around:TRANS’, *mesovev* ‘turns around:TRANS’
hitpolel – *yistovev* ‘will turn around:INTR’, *mistovev* ‘turns around:INTR’

The most consistent vowel scheme across tenses occurs in the templates *pu’al*, *huf’al*, *hitpa’el*, *polel*, and *hitpolel*, which invariably take +RuRaR+, +uRRaR+, +itRaReR+, +RoReR+, and +itRoReR, respectively across different tenses. The templates *pi’el* and *hif’il* have two basic vowel schemes: RiReR+ and hiRRiR+ in the past, +RaReR+

9. Berman (1978: 139–141, 2014) suggests that the ‘intermediate’ nature of *benoni* verbs is best captured by characterizing them as zero tense, contrasting with [-Tense] infinitives and imperatives and with [+Tense] past and future forms.

10. Metathesis occurs in the *hitpa’el* template with sibilant-initial roots.

and +aRRiR+ in the present and future, respectively, where the initial vowel *i* in the past tense changes to *a* in the other tenses, e.g., in *pi'el* – *šilem* ‘paid’, *mešalem* ‘pays’, *yešalem* ‘will pay’; in *hif'il* – *hišlim* ‘completed’, *mašlim* ‘completes’, *yašlim* ‘will complete’

The *nif'al* (typically intransitive, change-of-state or passive) template has two basic vowel schemes, niRRaR+ in the past and present masculine singular, thus: *nigmar* ‘was-finished, done’, *nigmar* ‘is-finished, is done’, *yigamer* ‘will-be-finished, done’ (Schwarzwald 2008), where the first two homophonous forms were historically differentiated by a final long vowel in the *benoni* and a short vowel in past tense. The similar pronunciation of past and present masculine singular in *nif'al* verbs, in contrast to the clearly distinguished forms of *pi'el* and *hif'il*, causes children to over-extend the *pi'el* present tense form *miCaCeC* to *nif'al* verbs in present tense, yielding *mikanes* ‘go in:PRS.M.SG’ in the same pattern as future or imperative *tikanes* with initial *m-*, instead of *nixnas*, or *miradem* ‘fall asleep’ in place of normative *nirdam* (Berman 1983; Ravid 1995b: 42, 113; Ravid & Vered 2017), while colloquial adult usage, too, replaces the normative imperative *hikanes*, future *tikanes* ‘(will) go in!’ by truncated *kanes* for the imperative.

The most basic and high-frequency B1 *pa'al* is unique in alternating vowel patterns across past, present, and future-tense stems. (i) The basic vowel scheme in *past tense* is RaRaR (e.g., *rakad* ‘(he) danced, was dancing’), but some verbs inherit one of two other vowel schemes from Classical Hebrew: RaReR (e.g., *yašen* ‘sleep’), and RaRoR (e.g., *yaxol* ‘can’).¹¹ A verb like *katon~katen* ‘be unworthy ~ get smaller’ is confined to high register usage as in the formulaic expression *katónti* ‘I am unworthy’, with the form *katan* in general use. (ii) *Present tense* forms include the unmarked RoReR form (e.g., *roked* ‘dance’), along with the highly marked RaReR form for a few quite common verbs, (e.g., *yašen* ‘sleep’, *gadel* ‘grow’), which are typically regularized to RoReR in juvenile or less educated usage. And (iii) the *future tense* of the *pa'al* template has two basic vowel schemes, yiRRoR, and yiRRaR, depending partly on whether they have historically low ‘guttural’ elements as R2 and R3 (compare *yišmor* ‘willguard’ with *yicxak* ‘willlaugh’) and partly on lexical accident (compare *yixtov* ‘will write’ with *yilmad* ‘will study’). (iv) Another asymmetry in the high-frequency *pa'al* pattern is that, in contrast to active, transitive verbs in *pi'el* and *hif'il* which have passive participles based on the present tense *benoni* form of passive *pu'al* (*mefu'al*) and *huf'al* (*muf'al*), the *pa'al* system contains yet another asymmetry: It has a distinct passive participle form *CaCuC* as in *šamur* ‘guarded’, *natun* ‘given’, *katuv* ‘written’ (Berman 1994; Saydon 2017).

11. Use of RaRaR is sanctioned by the Academy of the Hebrew Language for historical RaReR, but not for RaRoR verbs, yet the form *yaxal* ‘could, was able to’ in place of more normative *yaxol haya* is the common form in everyday usage.

In sum, tense alternations are generally fairly systematic, except for a high degree of variation in the most common pattern B1 *qal* / *pa'al* (Berman 1993; and see Chapter 8 on Derivation) and in its intransitive, middle-voice, or passive counterpart B2 *nif'al*.

3.3 Mood inflection

Modality distinctions can be expressed in various non-inflected forms, since MH differs from the classical language in its paucity of grammaticized mood. Instead, speakers may use *lexical* verbs involving irrealis mood (e.g., *raca* ‘want’, *bikeš* ‘ask, beg’, *civa* ‘order’, *daraš* ‘demand’, *ixel* ‘wish’, often followed by *infinitives* (e.g., *bikeš la-šévet* ‘asked to-sit = asked (the addressee) to sit), by *še-* ‘that’ clauses (e.g., *bikeš še-yešvu* ‘asked that (they) sit’), or by lexical and syntactic means combined as in (23):

- (23) a. *efšar le-taken oto levad*
 possible to-fix him alone
 ‘(it’s) possible to fix = it can be fixed by oneself’
 [conversation between two students]
- b. *hayiti amura la-avod ba-báyit*
 be:PST.1SG supposed.F to-work at-home
 ‘I was **supposed** to work at home’
 [university student relating a personal experience]
- c. *ke-ezrax ani doreš šéket*
 as-citizen I demand:PRS.SG.M silence
 ‘As a citizen I demand silence’ [Roy Yanovsky, YNET 21.8.2015]
- d. *lo le-ašen kan*
 not INF-smoke here
 ‘Smoking is forbidden here’ [Notice in a public health clinic]
- e. *hu meaxel še-lo yugaš ktav^ išum*
 he wish:PRS.SG.M that-not submit:PASS.FUT.3SG.M indictment
 ‘He hopes that an indictment will not be submitted’
 <<https://news.walla.co.il/item/1811189>> (22 November 2017)
- f. *be-kef hayí-ti gára it-xa levad*
 with-pleasure be:PST-1SG reside:PRS-SG.F with-3SG.M alone
 ‘I’d love to live only with you’ [CoSIH]

Discussion below is confined to use of grammatically expressed Imperative mood, which in MH takes dedicated Imperatives or else Future-tense inflections for expression of requests, orders, commands, and other types of directives. These occur in all the *binyan* verb templates except for the passive *pu'al* and *huf'al* and take the same stem as Future-tense stems without (2nd) person-marking prefixes.

Imperative forms in MH are closely related to the future tense paradigm, with defective-root verbs remaining largely identical to classical usage (e.g., *ten!* 'give:B1.IMP.SG.M', *lexil* 'go.away:B1.IMP.SG.F'). Unlike earlier Hebrew however, where imperatives were morphophonologically distinct from the future paradigm, MH imperatives have been reshaped in two main ways: As identical to future forms (e.g., *t-sader et ze* '2SG.M-arrange:B4 ACC it = you'll fix it' and also imperative 'fix it!', most particularly in the *hif'il* conjugation (e.g., *t-atxil-i* '2SG-begin-SG.F' stands for both Future 'you'll begin' and Imperative 'begin!'); or by lopping off the initial future prefix, as indicated by the parentheses in Table 4. There are thus marked differences in imperative marking between the classical forms that established the norm for MH (Gesenius 1910: 510–511; Joüon & Muraoka 2011: 620–621) and those in colloquial usage today (Bat-El 2002; Berman 1985: 289–290; Bolozky 1979). Current imperative forms also reveal leveling of various historical phonotactic processes: for example, (i) they typically fail to apply historical rules of spirantization (Henkin 1997; Schwarzwald 1983); (ii) the future marking 2nd person prefixal *t* creates an uninterrupted initial consonant cluster (e.g., in three different *binyan* patterns – *telamdi* > *tlamdi* 'teach:SG.F!', *tišma* > *tšma* > *čma* 'listen:SG.M!', *tistalek* > *tstalek* > *ctalek* 'go away:SG.M!'), and see, further, Bar-Adon (1966), Bolozky (1981 1997); (iii) required vowel changes are disregarded (e.g., normative *izv-i*, *izv-u* 'leave-IMP.F.SG.!' 'leave-IMP.PL' > Imperative = Future *taazvi*, *taazvu* or Imperative = truncated Future *azvi*, *azvu*), and (iv) prosthetic *hi* is replaced by the future form in *hifil* (compare formal, classical *hašlex*, *hašlīxi*, *hašlīxu* 'discard:IMP-SG.M, SG.F, PL' with the usual *hifil* future forms favored today *tašlix*, *tašlīxi*, *tašlīxu* respectively, standing for 'get rid of!, throw away!').

Imperatives are generally *negated* by a special prohibition marker *al* 'don't!' preceding the Future form of the verb (e.g., *al tagzīmi* 'don't exaggerate:SG.F!', *al tagīd li* 'don't tell:SG.M me!', *al tatxīlu iti* 'don't start:PL with.me!'). In contrast, the general negator *lo* 'no, not' is used with Future tense verbs to express declarative future rather than imperative prohibition, as in (24) below. (See, further, Chapter 16 on Negation).

- (24) a. *ad xameš lo ta-zuz*
 until five not will-move:2SG.M
 'You won't budge before 5 o'clock'
 b. *še-lo tiškexi otam šam*
 that-not will.forget:SG.F ACC.3PL them there
 'Just so you don't forget them there'

It thus emerges that, on the one hand, in marked contrast to the rich range of irrealis inflections in classical Hebrew, MH has no separate inflectional paradigm dedicated to expression of distinctions of mood or modality (Bybee & Fleischman

1995; Palmer 1986). On the other hand, the language today makes innovative use of alternations of future verb prefixes and of truncated stems, typically marked for (2nd) person, number, and gender – positive (for requests, demands, orders) and negative (for prohibition) – as the means par excellence of encoding irrealis mood in MH.

3.4 Infinitives, gerunds, and action nominals

Another three forms related to verb inflection in MH are infinitives, gerunds, and action nominals (Ben-Asher 1972: 34–53, 1976; Berman 1978: 287–323; Bolozky 1999: 102–114; Ravid 1999; Rosén 1977: 101–106; and see Chapter 11 on Nominalizations). The discussion that follows refers to automatic or grammaticized formation of these three verb-derived forms, all three related to the *binyan* templates (see §3.1), with infinitives and gerunds sharing future-tense stems in non-defective verbs with full, canonic consonantal roots.

Infinitive forms are regularly marked by prefixal *l-* ‘to’ plus the future-tense stem in the form of (i) *li-* with regular roots in the *pa'al* conjugation (e.g., *li-šbor* ‘to-break’, *li-lmod* ‘to study’, (ii) *le-* in the other conjugations (e.g., *pi'el* – *le-saper* ‘to-tell’, *nif'al* – *le-hikanes* ‘to-enter’, *hif'il* – *le-hamtik* ‘to-sweeten’, *hitpa'el* – *le-hitkanes* ‘to-assemble’ and (iii) *la-* in verbs based on defective roots (e.g., *n-t-n* > *la-tet* ‘to give’, *l-q-h* > *la-káxat* ‘to-take’, *y-š-b* > *la-šévet* ‘to-sit’. Infinitives are typically invariant and non-inflected, although they may in very formal style take bound accusative pronouns, as in *li-r'ot-o* ‘to-see-him’, *le-havi-énu* ‘to-bring-us’ (see §2.2.3). They play a variety of different functions in MH, as a language lacking in auxiliary verbs and with only minor reliance on other non-finite verb forms in current usage (Berman 2018, and see, too, Chapter 11 on Nominalizations).

Gerunds have similar stems to infinitives, but are modified by inflection, being typically preceded by prefixal or other prepositions (e.g., *l-* ‘to’, *b-* ‘in, at’, *k-* ‘as, while’, *mi-* ‘from’, or *axarey* ‘after’, *bizman* ‘during’ respectively), and they require a bound nominal referring to the subject of the verb, either a pronominal suffix or a noun in construct state, as illustrated in (25).

- (25) a. *n-g-š* [hif'il]: *be-hagi-o*
 in-arrive:GER-3SG.M
 ‘on his arriving, when he arrived’
 <<https://www.academy.ac.il/>> (27 November 2017)
- b. *y-c-ʔ* [pa'al]: *mi-cet-o*
 from-come.out:GER-3SG.M
 ‘from its coming out, since its emergence’
 <<https://www.facebook.com/AmOvedBooks>> (27 November 2017)

- c. *m-w-t* [pa'al]: *mot*[^] *ha-rabanim*
 die:GER.CS the-rabbis
 'the dying of the rabbis'
 <<http://www.klafkosher.com/>> (27 November 2017)

Gerunds may be analyzed as typically having two allomorphs, one in the construction PREP-GER:CS NOUN (e.g., *be-šévet*[^] *ha-memšala* 'in-sitting of the-cabinet = while the cabinet was meeting') and a second with a pronominal suffix (e.g., *be-šivt-am ba-knéset* 'in-sitting-their in-the Knesset = during their sitting in Parliament').

The abstract *derived Action Nominals* of verbs take markedly different forms depending on the *binyan* template of the base verb, as shown in Table 5 for the full root *g-d-l* 'grow, get bigger' and the defective roots *h-l-k* 'go', *q-w-m* 'get-up, rise' (see, further, Chapter 11).

Table 5. Canonic and defective-root action nominals in (non-passive) *binyan* templates

Root	<i>pa'al</i>	<i>hif'il</i>	<i>pi'el</i>	<i>hitpa'el</i>
Canonic	RRiRa	haRRaRa	RiRuR	hitRaRRut
<i>g-d-l</i>	<i>gdila</i> 'growing'	<i>hagdala</i> 'enlargement'	<i>gidul</i> 'growth'	<i>hitgadlut</i> 'aggrandizement'
Defective				
<i>h-l-x</i>	<i>halixa</i> 'walking'	<i>holaxa</i> 'leading'	<i>hilux</i> 'gear, gait'	<i>hithalxut</i> 'walking around'
<i>q-w-m</i>	<i>kima</i> 'rising'	<i>hakama</i> 'raising'	<i>kimum</i> 're-establishment'	<i>hitkomemut</i> 'uprising'

Nonfinite and nominalized forms of verbs are not inflected in the two strictly passive templates, *pu'al* and *huf'al*, but their action nominals may be expressed by their equivalent counterparts in *pi'el* and *hif'il*, while the passive *nif'al* forms are today often used in nominalized form (Laks 2017). Moreover, as indicated in Table 5, and as discussed in detail in the literature on Action Nominals (see Chapter 11), there are numerous anomalies in the system, including in forms based on full, non-defective roots, making them closer to derivational than to more regular inflected paradigms. This is particularly the case for the basic *pa'al* conjugation, which takes special forms in the case of weak roots, as illustrated in (26).

- (26) i. *a* insertion to RaRiRa with an initial historical guttural as in *halixa* 'going', *axila* 'eating' with an initial *alef*, *aliya* 'ascent' with an initial *ayin*, *xatira* 'rowing' with an initial *het*;
 ii. RiRa with glide medial roots, e.g., *kima* 'getting up' from *q-w-m*, *šiva* 'returning, coming back' from *š-w-b*;

- iii. idiosyncratic vowel alternations with full, nondefective roots, such as *gneva* ‘stealing, robbery’ from g-n-b, *cxok* ‘laughing, laughter’ from c-ħ-q, *sina* ‘hatred, hating’ from s-n-ʔ, *deaga* ‘worry(ing)’ from d-ʔ-g, *avoda* ‘working, labor’ from ʕ-b-d;
- iv. some verbs take an Action Nominal in the canonic form for another *binyan*, e.g. the *piel* nominal pattern RiRuR in *rikud* ‘dancing’ from the *paal* verb *rakad* ‘dance’ (in contrast, to, say the converse case of *hagira* ‘migration’ from the *piel* verb *higer* ‘migrate’).

The other *binyan* templates observe more regular forms of Action Nominals, with two notable exceptions in the typically active (often denominal) *pi'el* and *hif'il* templates. The first has two other forms of abstract derived nouns, *RaRaRa* and *RiRóRet*, in addition to canonic RiRuR, often due to polysemy of the related verb, as illustrated in (27), while *hifil* verbs may have a derived abstract noun in *heRReR* in addition to canonic *haRRaRa* as in (28)

(27) *q-b-l* ‘get, receive, accept’ > *kibul* ‘volume, capacity’
kabala ‘reception’

b-q-r ‘visit/criticize’ > *bikur* ‘visiting’
bakara ‘checking, control’
bikóret ‘criticism’

(28) *s-k-m* ‘agree’ > *haskama* ‘agreeing’, *heskem* ‘agreement’
b-d-l ‘differ’ > *havdala* ‘differentiation’, *hevdel* ‘difference’

In terms of morphophonological alternations, then, (i) the basic *binyan* template *pa'al* has the most varied set of *Infinitives*, primarily in the case of numerous high-frequency defective verbs and in *Action Nominals*; (ii) the *Action Nominal* patterns in many cases take the shape of non-productive forms inherited from classical periods of Hebrew; (iii) a lexically rather than grammatically governed case of allomorphy in *Action Nominals* occurs when a given *root* + *binyan* combination has two derived nominals, as illustrated in (27) and (28); and (iv) defective verbs with initial ʔ, *y*, *w*, or *n* are conjugated like regular verbs in *pi'el* and *hitpa'el* (e.g., *le-abad* ‘to lose’, *le-hitabed* ‘to commit suicide’; *le-yašev* ‘to settle’ *le-hityašev* ‘to settle down’); and vowel deletion seems not to occur in *hif'il*, *polel*, and *hitpolel* inter alia because of the identity of the final consonants in the last two of these three templates (Schwarzwald 2004: 45–47).

In sum, this survey of the morphological structure of the three verbal nominals or nominalized verbs in MH – Infinitive, Gerund, and Action Nominal – shows that all share a close association with the *binyan* system of verb templates. Infinitives and Gerunds reflect their irrealis character as being directly related to Future stem forms, constituting cross-the-board inflectional systems in the

language. In terms of usage, Infinitives, marked by an invariant prefixal *l-*, are typically non-inflected, and are pervasive in different functions across the grammar of Modern Hebrew – both intra-clausally in complementing modal and aspectual verbs and in clause-combining functions of syntactic and discursive connectivity. As such, they play a key role in current Hebrew usage, which is typically lacking in reliance on auxiliaries as well as on other non-finite forms like gerunds and participles (Berman 2018). In contrast, Gerunds, occurring in syntactically complex constructions as essentially bound construct-state forms that require a surface subject, are rare in common spoken usage today, confined mainly to written newspaper and other formal or literary styles. Again, in marked contrast to these two verbal-noun constructions, Action Nominals are far more varied in surface form, sharing features of both across-the-board inflectional paradigms and of derivational processes lacking in clear one-to-one form/meaning mappings in the language (see, further, Schwarzwald 2002: units 5–6, and Chapter 11 on Nominalizations).

3.5 Agreement marking for person, gender and number inflection

Modern Hebrew has retained much of the rich system of *agreement* marking of earlier periods of the language, described below in terms of morphophonemic structure. (Details of “mismatches” between the controlling noun and its associated predicate or modifying element are provided in Chapter 12 on Agreement, substantiated by authentic examples of documented usage). Verbs are inflected for Subject-Predicate agreement in Number and Gender and, in Past and Future, for Person as well. The system reflects two major asymmetries: (i) Past Tense verbs take only suffixal inflections, while Future Tense is marked by prefixes as well as suffixes, as illustrated in (29); (ii) Present Tense (participial *benoni*) is unmarked for Person but, like the nominal system of Nouns and Adjectives (§4 below) it is marked only for Number and Gender. In addition, Imperatives take the same suffixes as 2nd person Future (see §3.3 above) and, also as noted earlier, 2nd and 3rd person feminine plural suffixes are often merged with their masculine counterparts in current usage.

The examples in (29) for the root *s-p-r* in the *pa'al* and *pi'el* templates indicate that person-marked verbs may, and most often do, occur without surface subjects, as against 3rd person and *benoni* form verbs.

- (29) *s-p-r* ‘count’ *pa'al* / ‘tell’ *pi'el*
- Past 1ST SG: (*ani*) *safár-ti* ‘I counted’ / (*ani*) *sipár-ti* ‘I told’
 - Fut 2RD PL: (*atem*) *ti-sper-u* ‘you will count’ / (*atem*) *te-sap-r-u* ‘you’ll tell’
 - Pres SG.F: *ani, at, hi sofér-et* ‘I, you:F, she count(s)’ / *ani, at, hi me-sapér-et* ‘I, you:F, she tell(s)’

- d. Pres PL.M: *anaxnu, atem, hem sofr-im* ‘we, you:PL, they count’ / *anaxnu, atem, hem me-sapr-im* ‘we, you:PL, they tell’

Future prefixes are always unstressed, while stress on suffixes varies, as illustrated in (29): the ones starting with a consonant are unstressed, while those starting with a vowel are stressed. These affixes alternate between normatively prescribed and current colloquial usages. For example, (i) as illustrated below for the root *s-p-r* ‘tell; cut hair’ in the generally regular *piel* template, in Past 2nd plural the prescribed suffixal stress *sipar-tém* ‘you:PL told’ is typically replaced by stem-penultimate stress as *sipár-tem* so regularizing the paradigm for past tense. In Future tense, which manifests most irregularities and changes in usage since the classical periods, (ii) spoken usage typically merges the 1st person initial *alef* marked prefix with the 3rd person *y*-marker (e.g., *ani a-saper* ‘I will tell’ vs. *hu yesaper* ‘he will tell’ > *ani yesaper, hu yesaper*. This may originally have been due to assimilation of the final off-glide *y* of the 1st person pronoun *ani* and the initial *y* of 3rd person future. However, in the course of time this has become quite general colloquial usage, as shown when an adverb like *miyad* ‘right away’ intervenes between the pronoun and the future suffix, as in *ani miyad yesaper, hu miyad yesaper* (Bolzky 1981).

A third variation, as noted earlier, occurs in the case of (iii) required vowel-lowering with root-initial historical gutturals in both Future Tense and Infinitives with the same stem: *alef* initial verbs like *ʔ-s-p* ‘collect’, *ʔ-r-z* ‘pack’ were traditionally constructed with iterated *e*, thus: *ye-esof* ‘he-will-collect’, *le-eroz* ‘to-pack’, but these and many other common *alef* initial verbs in the *paal* pattern are today “regularized” to manifest *a* lowering, thus colloquial *ya-asof* ‘he will collect’, *la-aroz* ‘to-pack’ on a par with *ayin*-initial verbs like *ʕ-m-d* ‘stand’, *ʕ-l-y* ‘go up’, as in future *ya-amod* ‘he will stand’, infinitive *la-alot* ‘to go up’ (see Chapter 6 on Phonological Features of Modern Hebrew). Imperatives, likewise based on future stems, also show considerable variation, as noted in (§3.3), by and large being the same as Future forms in 2nd person.

In contrast to these numerous morphophonemic alternations and shifts from earlier forms of usage, *benoni* ‘intermediate’ Present Tense forms, are generally the same as in classical usage, with the exception of two common verbs with the required *CaCeC* stem in *benoni* – *gadel* ‘grow:INTR’, *yašen* ‘sleep’ (on a par with adjectives like *šamen* ‘fat’, *raze* ‘thin’), which are typically regularized to substandard *godel, yošen* in present tense (cf. MASC.SG *kotev* ‘write(s)’, *sofer* ‘count(s)’). As in their classical role as participles, *benoni* present tense verbs are inflected for Number and Gender, but not for Person, so showing the same alternations as nouns and adjectives (see §§6–7). They also manifest syntactic agreement with their associated nouns both when functioning as verbs in the Present tense or as nonfinite participles (Berman 2014 2017; and see Chapter 12 on Agreement).

4. Nouns

Nouns constitute the largest group of words in the Hebrew lexicon, differing from verbs in taking a variety of word-formation alternatives: (i) basic, non-derived forms including loan words; (ii) discontinuous root and pattern combination; (iii) stem and external affixes; (iv) compounding; (v) blends; and (vi) acronyms (Berman & Seroussi 2011; Schwarzwald 2002: unit 4; Seroussi 2011; and see, further, Chapters 8 and 9 on Derivational Morphology and Parts of Speech, respectively). Derived nouns may also take the same form as other morphological categories, including participial (present tense) *benoni* forms functioning as agent and instrument nouns, and as different types of adjectives, both passive resultatives and active attributes (Ravid, Bar-On et al. 2016b), factors which likewise have an impact on how nouns are inflected.

Number and gender inflection in nouns is the topic of rich research in modern linguistics (for example, Beard 1982; Bochner 1984, 1993; Corbett 1991, 2000). *Number* inflection is viewed as derivational in some languages, including in some analyses of Hebrew (Schwarzwald 1991a). Hebrew *gender* inflection, as in, say, Romance languages, is partially semantically motivated, representing different biological entities in the case of animate nouns. On the whole, however, both gender and number inflections are an integral part of the grammar of Hebrew, sharing features of inflection in a range of morphological categories.

All animate nouns have *biological gender*, typically marked by the endings *-t*, stressed *-á*, *-it*, and unstressed *-et* (e.g., *par-para* ‘bull-cow’, *rofe-rofa* ‘male-female doctor’, *saxkan-saxkanit* ‘actor-actress’, *pasal-pasélet* ‘sculptor-sculptress’).¹² All inanimate nouns have *inherent grammatical gender* for either masculine or feminine (e.g., Masculine *šáar* ‘gate’, *kóva* ‘cap, hat’ versus Feminine *délet* ‘door’, *migbáat* ‘brimmed hat’). Several generalizations apply across both animate and inanimate nouns with respect to gender. (i) Gender is the major *categorizing criterion* for declension of nouns in Modern as in ancient Hebrew. (ii) Unlike, say, Romance languages, where gender is indicated on the articles, in Hebrew gender is identified by word-ending. (iii) This typically takes the form of suffixes on feminine nouns, both animate and inanimate, as well as on participles and adjectives, so that Feminine is structurally the more ‘marked’ category. (iv) Masculine nouns are far more frequent in occurrence than their feminine counterparts (Ravid & Schiff 2012 2015), and relatedly, when referring to or talking about both females and males, masculine gender applies to verb and adjective agreement. Finally, (v) gender agreement plays a major role in Hebrew syntax from subject noun to predicates and from

12. Two nouns are exceptional in referring to both sexes: – *šulya* ‘apprentice’, *koléga* ‘colleague’.

head noun to modifying adjectives and demonstratives (see, further, Chapter 12 on Agreement Alternations).

Across the system, the factor of gender affects how nouns are inflected. Most nouns ending with a consonant or with any vowel other than stressed *a* are Masculine (e.g., *kir* ‘wall’, *aron* ‘closet’, *kóva* ‘hat’, *mare* ‘sight’, *dli* ‘pail’, *avokádo* ‘avocado’, *íglu* ‘igloo’), while those ending with stressed *-á* or *-it* and unstressed *-et* are Feminine (e.g., *mora* ‘woman teacher’, *midraxa* ‘sidewalk’; *balašit* ‘female detective’, *karit* ‘cushion’; *miflécet* ‘monster’, *rakévet* ‘train’). Loan words ending with unstressed *a* are also treated as feminine (e.g., *univérsita* ‘university’, *diléma* ‘dilemma’) as are numerous words that end in *-it* or *-ut*, ending in the historical voiceless alveolar stop *t* (spelled with *tav*) as against emphatic or retroflex stop *ṭ* (spelled with *tet*), both today pronounced the same (see Table 1 in Chapter 6 on Phonology). Compare, for example, Feminine *kapit* ~ *kapiyot* ‘teaspoon~s’, *xanut* ~ *xanuyot* ‘store-s’ with Masculine *taklit* ~ *taklitim* ‘record-s’, *xanut* ~ *xanutim* ‘mummy~ies’, where the singular noun in each case ends in the same sound, but is to this day spelled differently.

This last set of examples shows that the generalizations formulated above are subject to numerous exceptions, in part due to changes from earlier stages of the language (Chapter 6). For example, words ending in *-a* and spelled with the letter *aleph* are masculine, while those spelled with final *he* are feminine (compare Masculine *mimca* ‘finding’ with final *aleph* with Feminine *memra* ‘saying’ with final *he*). Related to the earlier comparison of the two historical *t* phonemes, word-final *tav* used as a suffix is feminine, but as part of the root it is masculine (compare Feminine *erut* ‘wakefulness’ from the adjective *er* ‘awake’ + the abstract noun suffix *-ut* with the Masculine noun *šerut* ‘service’ from the root *š-r-t*).

There are also numerous *lexical exceptions*, as in nouns that are phonologically masculine but grammatically feminine (e.g., *gader* ‘fence’, *kikar* ‘square’, *éven* ‘stone’). Masculine *cómet* ‘intersection’ and a few other inanimate nouns can take either gender in agreement (e.g., *šémeš* ‘sun’, *dérex* ‘way’, *rúax* ‘wind’, *kos* ‘glass’, *panim* ‘face’), which are generally treated as feminine in MH. The variability of gender assignment means that the gender of many nouns needs to be memorized.

Number inflection for masculine versus feminine plural, sometimes for dual is marked by suffixation of *-im*, *-ot* and *-áyim* respectively to the singular form, while several nouns occur only in plural form, as illustrated in (30)¹³

13. This group could also include words like *nisu’in* ‘marriage’, *tfilin* ‘phylacteries’, *gerušin* ‘divorce’, ending with the Aramaic plural form *-in* inherited from Rabbinical Hebrew, which is no longer productive.

- (30) a. **Masculine Plural -im:** *panim* ‘face’, *yisurim* ‘suffering’, *levanim* ‘undergarments’, *šimurim* ‘conserves’, *elohim* ‘God’, *bealim* ‘owner’
 b. **Feminine Plural -ot:** *korot* ‘happenings’, *halixot* ‘manners’, *šonot* ‘miscellany’, *atikot* ‘antiquities’, *gvurot* ‘age eighty’, *xadašot* ‘news’
 c. **Dual -áyim:** *máyim* ‘water’, *šamáyim* ‘sky’, *misparáyim* ‘scissors’, *mix-nasáyim* ‘trousers’, *nekudatáyim~nekudotáyim* ‘colon (in punctuation)’

The *pluralia tantum* form nouns like those in (30) vary in agreement for gender: Nouns ending in *-im* and *-áyim* are mostly masculine, while those ending in *-ot* tend to be feminine (cf. *raxamim* ‘mercy’, *máyim* ‘water’, *misparáyim* ‘scissors’ with Masculine agreement, whereas *šonot* ‘miscellany’ is feminine and *panim* ‘face’ takes either feminine or masculine agreement (generally ‘face’ as feminine and metaphorical ‘aspect’ as masculine). Some of the nouns in (30) have a corresponding form in the singular with a different meaning, so not reflecting inflectional alternation, as in (31), with the singular noun given first, the plural or dual version following it.

- (31) Masculine: *lavan* ‘white:ADJ’/*levanim* ‘underwear’, *šuur* ‘lesson’/*šuurim* ‘homework’, *ofan* ‘wheel’/*ofanáyim* ‘bicycle’
 Feminine: *halixa* ‘walking, gait’/*halixot* ‘manners’, *kora* ‘rafter’/*korot* ‘happenings’.

The following sections deal with inflections for Gender (§4.1), Number (§4.2), and Construct State (§4.3) respectively.

4.1 Gender inflection: Masculine and feminine

Inflectional alternation of gender is confined to animate nouns, as noted, as illustrated for both animates and inanimates in (32) below (for details, see Schwarzwald 1982 1991b 2002: Unit 11).

- (32) a. Human:M-F: *more-mora* ‘teacher’, *šofet-šoféte* ‘judge’
 b. Animal:M-F: *sus-susa* ‘horse-mare’, *tarnegol-tarnególet* ‘rooster-hen’

Some common nouns, often kinship terms, manifest lexically suppletive alternations, as in (33).

- (33) *av-em* ‘father-mother’, *xatan-kala* ‘groom-bride’, *géver-iša* ‘man-woman’, *gamal-naka* ‘camel:M-F’, *arye-levia* ‘lion-lioness’

Some animal-names do not alternate for gender, being marked as either masculine (e.g., *naxaš* ‘snake’, *xilazon* ‘snail’, *šilšul* ‘earthworm’, *širšur* ‘tapeworm’) or treated as feminine (e.g., *toláat* ‘worm’, *dvora* ‘bee’, *čfardéa* ‘frog’, *cipor* ‘bird’).

Some nouns are not inflected for gender for pragmatic reasons. For example, *mohel* ‘circumciser’ is male for religious reasons, and if a woman were to perform the same operation she would not be called **mohélet*; *arel* is a man who did not undergo circumcision, hence, not a Jew (no **arela*); *menéket* ‘wet nurse’ can only be a woman; *šinanit* ‘dental hygienist’ is a typically female profession, so there is no **šinan*.¹⁴ As a rule, then, feminine inflection is marked by suffixation to the masculine noun, and the reverse is rare (e.g., *alman* ‘widower’ from *almana* ‘widow’, *yon* ‘male pigeon’ from *yona* ‘pigeon’).

4.1.1 Suffix distribution

Four suffixes mark feminine gender: (i) stressed *-a* – *iša* ‘woman’, *para* ‘cow’; (ii) unstressed *-et~ -at* – *gvéret* ‘lady’, *tarnególet* ‘hen’ (and, with historical gutturals) *pošáat* ‘female criminal’, *toláat* ‘worm’; (iii) stressed *-it* – *kupait* ‘female cashier’, *snunit* ‘swallow’; and (iv) final *-t* – *yadit* ‘handle’, *yaldut* ‘childhood’.¹⁵

Inherited from the classical periods of Hebrew, the distribution of these suffixes is more regularized in MH than in the former periods, being quite straightforward except for masculine nouns with the vowels *e* or *a* in the final syllable. Choice of the feminine inflectional suffixes is governed by various phonological, morphological, and semantic factors relating to the masculine noun, along the following lines: Stressed *-a* is the least structurally restricted, whereas the unstressed suffixes *-et* and *-at* are confined to certain morphological categories, with *-at* typically added to masculine nouns ending in the historical gutturals *h* and *ḥ* and *ʕ*. The suffix *-it* is attached to loan words and to certain morphological categories and semantic classes, while the suffix *-t* is mainly confined to masculine nouns ending in *-i*. As noted earlier (§3.5), *benoni* forms are included in this section because many agent and instrument nouns as well as adjectives have the same surface form as verbs in the *benoni* (Berman 1978: 2017; Ornan 1971; Schwarzwald 2002: unit 11).

The ten entries numbered (34i) to (34x) specify classes of feminine endings which generally apply to both nouns and adjectives.

(34) (i) #C(C)V(C)#: All monosyllabic nouns take the stressed suffix *-a* in the feminine, e.g., *sar-sara* ‘minister-woman minister’, *dod-doda~dóda* ‘uncle-aunt’, *šed-šeda* ‘demon’, *gdi-gdiya* ‘kid, young goat’, *dov-duba* ‘bear-she-bear’.

(ii) Xi#: Most nouns ending in *-i* take the suffix *-t*, e.g., *sini-sinit* ‘Chinese’, *cimxoni-cimxonit* ‘vegetarian’, *yisreeli~yisreelit* ‘Israeli’, and this applies to adjectives

14. In the past, kindergarten and nursery-school teachers were women, labeled by feminine *ganénet*. Nowadays it is not clear what to call men who perform this role, particularly since masculine *ganan* refers to a gardener.

15. Historically, these suffixes are all derived by various processes from an underlying *-Vt* morpheme (Bauer & Leander 1965: 506–513).

as well (e.g., *recini-recinit* ‘serious’, *modérni-modernit* ‘modern’). Note, however, that some gentilic nouns referring to ethnic, geographical, or religious origins that are stressed on the final vowel in the masculine take different feminine endings than their corresponding adjectives: The adjective takes the suffix *-t* while the noun referring to a female takes *-a*. Compare, for example, *nešika carfati-t* ‘kiss:F french:F = a French kiss’ with gentilic *carfatij-a yaf-a* ‘French:F beautiful:F = a beautiful Frenchwoman’; *ha-emuna ha-yehudi-t* ‘the-faith the-Jewish:F = the Jewish faith’ with *yehudij-a maamina* ‘Jew-F believing-F = a devout Jewess’ and similarly *itaklit ~ italkiya* ‘Italian’, *aravit ~ araviya* ‘Arabic ~ Arab’, *rusit ~ rusiya* ‘Russian’, etc. (Rosén 1956: 236). This is a very common but not across-the-board alternation, as in cases like the following: *parizai-parizait* ‘Parisian’ (no **parisaiya*), *litai-litait* ‘Lithuanian’, *lúbi-lúbit* ‘Lybian’, *meksikáni-meksikánit* ‘Mexican’. Moreover, a few nouns and adjectives taken over from classical times and ending in *-i* also take the suffix *-a* for the feminine, as in *šeni-šniya* ‘second’, *naki-nekiya* ‘clean’, *ani-aniya* ‘poor’, *tari-triya* ‘fresh’.

(iii) & (iv) XuC#, XiC#: Masculine Nouns and Adjectives whose final syllable includes the high vowels *u* or *i* take only the feminine suffix *-a*, as follows, with final *-u*: *šavuy-švuya* ‘captive’, *arus-arusa* ‘fiancée’, *garuš-gruša* ‘divorced person’; with final *-i*: *asir-asira* ‘prisoner’, *madrix-madrixa* ‘instructor’, *pakid-pkida* ‘clerk’, *talmid-talmida* ‘student’.

(v) XoC#: Most nouns and adjectives with the vowel *o* in the final syllable of the masculine also take the feminine suffix *-a*, e.g., *yatom-yetoma* ‘orphan’, *lakóax-lakoxa~lekoxa* ‘customer’, *tixon-tixona* ‘medial’, *karov-krova* ‘(a) relative, near’. However, when the masculine ends with the diminutive suffix *-on*, the feminine suffix is (*ón*)-*et*, as in *barvazon-barvazónet* ‘duckling’, *pkidon-pkidónet* ‘petty official’, *dubon-dubónet* ‘teddy bear’ (Boložky 1994). Relatedly, the nouns *tinok* ‘baby’ and *tarnegol* ‘rooster’ take the unstressed feminine *-et*, in *tinóket*, *tarnególet* ‘chicken’, possibly also indicating diminutive (see Chapter 8).

(vi) XeC#: Masculine nouns that end in the syllable XeC take one of two feminine suffixes *-a* or *-et/-at*. Two masculine patterns take the feminine suffix *-a*: (a) segolate nouns with the penultimate stress pattern CéCeC pattern, as in *yéled-yalda* ‘boy-girl’, *mélex-malka* ‘king-queen’, *néxed-nexda* ‘grandson-granddaughter’, *égel-egla* ‘calf-heifer’; and (b) pattern CaCeC, also shared by adjectives and some participle forms of *pa'al*, as in *xaver-xavera* ‘friend’, *namer-nemera* ‘leopard’, *šaxen-šxena* ‘neighbor’, *zaken-zkena* ‘old man-woman’.

Unstressed *-et~ -at* is added to masculine nouns ending in XeC in two cases: (a) in the pattern CiCeC which typically denotes people with defects as in *ilem-ilémet* ‘mute’, *xereš-xeréšet* ‘deaf’, *iver-ivéret* ‘blind’, *giben-gibénet* ‘hunchback’ and (b) in nouns and adjectives which are formed like participles in all verb *binyan* templates except for *hif'il*, as in *oyev-oyévet* ‘enemy’, *menahel-menahélet* ‘director’, *mitabek-mitabéket* ‘wrestler’, *rokéax-rokáxat* ‘pharmacist’.

(vii) **Xe#**: In most nouns ending with the vowel *e* in the masculine, the feminine suffix *-a* replaces the final vowel, similarly to participle forms of roots of type R-R-y in *pa'al* and *hif'il* (e.g., *more-mora* 'teacher, *kone-kona* 'customer', *ofe-ofa* 'baker', *marce-marca* 'lecturer'). A few nouns and adjectives based on defective roots of type R-R-y (§3.1) – which are formed like participles (a) of the *binyan* conjugations *nif'al*, *huf'al* and sometimes *hitpa'el*, and (b) of type R-R-? in *pa'al*, *pi'el* and *hitpa'el* – take the feminine suffix *-t*, as in (a) *nilve-nilvet* 'adjunct', *nire-niret* 'visible', *muvne-muvnet* 'structured', *mušve-mušvet* 'comparable', *mištane-mištānet~mištana* 'changing' and (b) *xote-xotet* 'sinner', *medake-medaket* 'depressing', *meyave-meyavet* 'importer' (normative: *meyabe~meyabet*), *mitrape-mitrapet~mitrapa* 'recuperate'.

(viii) **XaC#**: Masculine nouns ending with the vowel *a* have a variety of feminine endings, mainly *-a*, with other suffixes depending on various factors, as specified below. Thus, (a) the feminine suffix *-it* is added to many agentive nouns in the CaCaC pattern, as in *sapar-saparit* 'hairdresser', *šadar-šadarit* 'broadcaster', *xazan-xazanit* 'cantor'; and also (b) to nouns ending in the agentive suffixes *-an*, *-ar*, *-ay*, e.g., verb-derived *badxan-badxanit* 'joker', *rakdan-rakdanit* 'dancer', as well as noun-stem based *madan-madanit* 'scientist', *čelan-čelanit* 'cello player' (*čelo* 'cello'); *gizbar-gizbarit* 'treasurer', *kaspar-kasparit* 'bank teller', *sandlar-sandlarit* 'shoemaker', *safsar-safsarit* 'profiteer, speculator'; *banay-banait* 'builder', *ramay-ramait* 'swindler'; *bankay-bankait* 'banker' (see, further, Chapter 8).

The feminine unstressed suffix *-et/-at* is added (a) to nouns in the *benoni* forms of *nif'al*, *pu'al* and *huf'al* – as in *nispax-nispáxat* 'attaché', *metoraf-metoréfet* 'crazy', *muamad-muamédet* 'candidate', *muvtal-muvtéléet* 'unemployed'; and (b) to many agentive CaCaC nouns – as in *zamar-zaméret* 'singer', *xayal-xayélet* 'singer', *kanar-kanéret* 'violinist', *tayar-tayéret* 'tourist', *dayar-dayéret* 'tenant'.

In nouns and adjectives ending in the masculine as **XaC#** with duplicate consonants, generally indicating diminutives, the stressed feminine suffix *-a* is added, as in *adamdam-adamdama* 'reddish', *šfanfan-šfanfana* 'tiny rabbit', *raanan-raanana* 'fresh', while other instances of final **XaC#** in the masculine, are lexically marked for *-a*, as in *ayal-ayala* 'deer', *axbar-axbara* 'mouse', *šutaf-šutafa* 'partner', *akar-akara* 'sterile'.

(ix) **Xa#**: The class of nouns and adjectives formed as participles of R-R-? roots in *nif'al*, *pu'al* and *huf'al*, take the feminine suffix *-t*, but the vowel *a* changes to *e*, as in *nimca-nimcet* 'present, existing', *meduka~meduke-meduket~medukaa* 'depressed', *mevuta-mevutet* 'pronounced', *mukpa-mukpet* 'frozen', *mumca-mumcet* 'invented'.

(x) **Loans and acronyms**: All loan nouns and acronyms take the suffix *-it* in the feminine, as in (a) loan nouns like *student-studentit* 'student', *asistent-asistentit* 'assistant', *psixolog-psixológit* 'psychologist', *šef-šéfit* 'chef', *štínker-štínkerit* '(slang)

informer', but in these cases, *-it* is unstressed, in contrast to native Hebrew stems (Schwarzwald 2013); and (b) acronyms like *xak-xákit* 'member of parliament' < *xaver-knéset*; the slang term *dapar-dapárit* 'imbecile' < *derug-psixologi-rišoni* 'primary psychological ranking'; *mankal-mankalit~mankálit* 'CEO, chief executive officer' < *menahel klali* 'director general' (see, further, §4.2.7).

The rich variation and numerous factors governing which of the ten classes of feminine suffixes in (34) is selected for a particular syllabic structure, morphological class or subclass of nouns (and adjectives) suggests that feminine marking on nouns in MH is in many ways more akin to processes of lexical derivation than of grammatical inflection, particularly in the case of the pattern *CaCaC* (see, further, Chapter 8).

This proposal is supported by the *numerous lexical exceptions* to the principles formulated in (34). For example, in the domain of agent nouns: *rofe-rofa* 'physician' (rather than **rofet*), *mumxe-mumxit* 'expert' (rather than **mumxa~*mumxet*), *ezrax-ezraxit* 'citizen', and *pirxax-pirxaxit* 'rascal' (rather than **ezraxa*, **pirxaxa*). Other exceptions are the adjectives *tipeš* 'silly' and *pikéax* 'quick-witted': Although formed like *CiCeC* in (34-vi), they take the feminine form *tipša* and *pikxit*, already attested as early as the 16th century, rather than **tipešet* or **pikáxat*. Further, the kinship terms *ax-axot* 'brother-sister', *xam-xamot* 'father-mother-in-law' are the only ones formed with the addition of the feminine suffix *-ot*.

Poetic language also manifests numerous variations, particularly in marking the feminine of *benoni* participles, due to prosodic considerations like meter and rhyming, as illustrated in (35).

- (35) a. *yošva* for conventional *yošévet* 'sitting' (Haim Naxman Bialik's poem
hi yošva laxalon 'She is sitting at the window')
- b. *mazhéret* for *mazhira* 'shining', *nexmédet* for *nexmada* 'sweet'
(Levin Kipnis' verse *Rakéfet* 'Cyclamen')
- c. *kxalxélet* for *kxalxala* 'pale blueish' (Nathan Alterman's poem *hayalda*
Ayélet 'The girl named Ayelet', translated from Kadia Molodovska)
- d. *šfanfanit* for *šfanfana* 'small rabbit' (Miriam Yalan Shtekelis's verse
lašafan yeš báyit 'The rabbit has a house')
- e. *homiya* for *homa* 'sighing' (Naftali Herz Imber's *Hatikva* 'Hope' =
the Israeli national anthem)

The suffix *-et* is also used instead of the expected feminine form of the adjectival participle of *hif'il* in certain formulaic expressions, e.g., *vaada matmédet* 'standing committee' (cf. *matmida*), *seuda mafséket* 'fast-breaking meal' (cf. *mafsika*), *magédet atidot* 'fortune teller' (cf. *magida*), *zxuxit magdélet* 'magnifying glass' (cf. *magdila*).

Despite these and other irregularities, the marking of Feminine Gender on animate nouns and on adjectives is confined to a restricted set of largely morphophonologically governed alternations which almost invariably mark feminine by adding a suffix to the masculine stem, so characterizing Feminine as the more marked of the two available genders in MH.

4.2 Number inflection

Number inflection in Hebrew as in other languages is determined by the feature [+Count], since only count nouns can be pluralized (Corbett 2000). On the other hand, assignment of this feature is circular, since count nouns are defined by their ability to take inflectional suffixes (Avioz 2004; Meir 2006; Schwarzwald 1991a 2002: unit 12).

Several classes of nouns are typically *non-count*, including (i) most proper names – e.g., male *Gil, Ofir, Reuveni, Shafrir*, female *Shoshána, Orit, Smadar, Dvóra, Bráxa, Dorit*, either male or female *Nóam, Yóna, Yuval*; (ii) mass nouns like *zahav* ‘gold’, *késef* ‘silver’, *ec* ‘wood’, *kérax* ‘ice’, *nexóšet* ‘copper’, *dam* ‘blood’, *méši* ‘silk’; (iii) collective nouns, e.g., *con* ‘herd (sheep, goats)’, *bakar* ‘cattle’, *tayéset* ‘squadron’, *cibur* ‘public’; (iv) names of diseases like *cahévet* ‘jaundice’, *sakéret* ‘diabetes’ (normative: *sukéret*), *nazélet* ‘cold = sniffle’, *sartan* ‘cancer’; (v) knowledge domains like *arxitektúra/adrixalut* ‘architecture’, *psixológya* ‘psychology’, *múzika* ‘music’, *filológya* ‘philology’, *étika* ‘ethics’; and also (vi) the bulk of abstract nouns like *kípaon* ‘freezing; stagnation’, *ahada* ‘sympathy’, *kavod* ‘honor’, *cédek* ‘justice’, *óni* ‘poverty’, *zikna* ‘old age’, *alímut* ‘violence’.

Some nouns in the typically non-count categories (i) to (vi) may be pluralized, generally involving a difference in meaning. For example, with Proper Names, in the song about *kol ha-Dáliyot ve-ha-Sárot ve-ha-Rínot* ‘all the Dalias and the Sarahs and the Rinas’, and in other documented examples in (36).

(36) a. Mass nouns:

lekixat[^] *dam-im* *be-maabad-ot*

taking:CS blood-PL in-laboratory-PL

<<http://www.muvtal.co.il/>> (11 December 2017)

b. Diseases:

anáxnu ed-im *le-keev-im*, *nazal-ot xroniy-ot*, *xulša*

we witness-PL.M to-pain-PL.M, cold-PL.F chronic-PL.F weakness

‘We experience pains, chronic colds, and weakness’.

<<https://www.facebook.com/DoritFoxHeal/>> (11 December 2017)

c. Abstract nouns:

yešu hu el ve-adam, aval elu štey[^] fizik-ot nifrad-ot
 Jesus he god and-man, but these two:CS physics:PL.F separate-PL.F.
 ‘Jesus is God and a man, but these are two separate physical entities’.

<<https://www.gilihaskin.com/>> (11 December 2017)

d. Abstract nouns:

ʔalimuy-ot: ʕal yicug-eha šel ha-ʔalimut
 violence:F-PL on representation-3PL.F of the-violence
ba-sifrut ha-šivrit ha-ḥadaš-a
 in.the-literature:F the-Hebrew:F the-new-F

‘On the representation of (types of) violence in Modern Hebrew literature’
 [Title of a book by Shay Rodin, Tel Aviv: Resling 2012]

Number inflection in MH is also susceptible to certain *phonological* restrictions. For example, nouns ending in *-iyut* (like *išiyut* ‘personality’, *mumxiyut* ‘expertise’) and *-ónet* (as in *xatix-ónet* ‘tiny little bit’, *tipšónet* ‘silly little fool’) resist pluralization in ordinary usage (Avioz 2004: 92–103; Bat-El 1997).

4.2.1 Plural suffixes

Three suffixes mark plural inflection: Masculine *-im*, Feminine *-ot*, Dual *-áyim*. The first two are gender-associated in animate nouns, in adjectives, participle forms, and in some noun *mishkal* patterns. Choice of plural suffixes in non-animate nouns is more arbitrary. In contrast, the suffix *-áyim*, which typically marks duality, serves as the *plural* form in certain categories: in some body parts (e.g., Feminine *yad-yadáyim* ‘hand-s’, *regel-ragláyim* ‘leg-s’, *ózen-oznáyim* ‘ear-s’, *safa-sfatáyim* ‘lip-s’, *bérex-birkáyim* ‘knee-s’, Masculine *šad-šadáyim* ‘breast-s’, *nexir-nexiráyim* ‘nostril-s’) and certain other nouns that convey a sense of duality (e.g., Feminine *šen-šináyim* ‘tooth-teeth’, *cipóren-cipornáyim* ‘finger nail-s’, *náal-naaláyim* ‘shoe-s’, *gérev-garbáyim* ‘sock-s’ (normatively Masculine), and Masculine *kav-kabáyim* ‘crutch-es, *magaf-magafáyim* ‘boot-s’. As these examples indicate, most nouns taking dual plural forms are feminine in the singular (Glinert 1976; Schwarzwald 1996b; Tobin 1988). On the other hand, some dual body parts are pluralized by *-im* or *-ot* (e.g., *zróa-zroot* ‘arm-s’, *gaba-gabot* ‘eyebrow-s’, *rea-reot* ‘lung-s’, *marpek-marpekim* ‘elbow-s’, and *éšex-ašax-ašaxim* ‘testicle-s’).

The suffix *-áyim* serves as a semantically motivated *marker of dual* contrasting with the regular plural, in (i) temporal units and (ii) units of counting and measurement, as shown in Table 6a and 6b respectively.

The dual marker, although restricted in the conventional lexicon to the semantic categories noted above, may be extended to other contexts, indicating its partial productivity. This is often done jocularly, as in the examples in (37) or in verse as in (38) respectively (Schwarzwald 1996b; Toury 1992).

Table 6. Nouns marking times and amounts with dual and regular plural marking

a. Temporal terms		
Singular	Dual	Plural
<i>yom</i> 'day:M'	<i>yomáyim</i> 'two days'	<i>yanim</i> 'days'
<i>šaa</i> 'hour:F'	<i>šaatáyim</i> 'two hours'	<i>šaot</i> 'hours'
<i>xódeš</i> 'month:M'	<i>xodšáyim</i> 'two months'	<i>xodašim</i> 'months'
<i>šavúa</i> 'week:M'	<i>švuáyim</i> 'two weeks = fortnight'	<i>šavuot</i> 'weeks'
<i>šana</i> 'year:F'	<i>šnatáyim</i> 'two years'	<i>šanim</i> 'years'
b. Amount terms		
Singular	Dual	Plural
<i>mea</i> 'hundred:F'	<i>matáyim</i> 'two hundred'	<i>meot</i> 'hundreds'
<i>élef</i> 'thousand:M'	<i>alpáyim</i> 'two thousand'	<i>alafim</i> 'thousands'
<i>paam</i> '(a) time:F'	<i>paamáyim</i> 'twice'	<i>peamim</i> 'times'

(37) *ha-šir ha-ze ala šlab-áyim*
 the-song:M the-this:M rose rung-DUAL
 'This song went up two rungs' (often heard on the radio hit-parade)

(38) a. *maase ba-xatul-áyim*
 story in-cat-DUAL
 'A story of two cats' [Title of a children's verse by Ayin Hillel]

b. *caar lax ve-caar l-i ... bo-i, iša, ...*
 sadness to:2SG.F and-sadness to-1SG... come:IMP-SG.F, woman,...
la-aruxat^ caar-áyim
 to-meal:CS sadness-DUAL
 'Sorrow to you and sorrow to me... come, woman ... to a meal of double
 sorrow' [from a poem by Avraham Chalfi, a play on words
 between *aruxat^ cohoráyim* 'meal:cs noon = lunch'
 and an invented dual form of *cáar* 'sorrow']

c. *ʔecba-áyim beyn šfat-áyim, cifcuf-áyim*
 finger-DUAL between lip-DUAL, whistle-DUAL
 'Two fingers between (two) lips, two whistles'
 [Alilot Miki Mahu, A children's story in verse by Avraham Shlonsky]

In sum, the plural masculine marker *-im* and the syncretic feminine plural *-ot* are fundamental parts of the grammar of MH, unlike the lexically restricted dual marker *-áyim*. Yet the latter, too, if not part of the automatically generated inflectional apparatus of the language, is an integral, readily available component of the mental lexicon of speakers and writers.

4.2.2 Distribution of plural suffixes

The suffixes *-im* and *-ot*, as noted, mark the plural of most animate nouns as well as of participial forms, adjectives, and certain nominal patterns. The forms in (39) illustrate agent nouns and adjectival attributes (hence all animate), with masculine singular-plural forms in (39a) and their feminine counterparts in (39b).

- (39) a. *more-morim* ‘teacher-s’, *sapar-saparim* ‘barber-s’, *nadvan-nadvanim* ‘philanthropist-s’, *šofet-šoftim* ‘judge-s’, *menahel-menahalim* ‘director-s’, *madrix-madrixim* ‘instructor-s’, *mélex-mloxim* ‘king-s’, *pakid-pkidim* ‘clerk-s’, *nadv-ndivim* ‘generous’
- b. *mora-morot*, *saparit-sapariyot* ‘hairdresser-s’, *nadvanit-nadvaniyot*, *šoféteš-šoftot*, *menahélet-menahalot*, *madrixa-madrixot*, *malka-malkot* (normative: *melaxot*), *pkida-pkidot*, *nediva-nedivot*

The plural forms of *non-animates* is less predictable. While many nouns with typically masculine endings take the plural suffix *-im* as in (40a) and those with feminine endings tend to take the suffix *-ot* as in (40b), there are many exceptions, some of which are listed in (41).

- (40) a. **Inanimate Masculine nouns with plural *-im*:** *gir-girim* ‘chalk-s’, *séfer-sfarim* ‘book-s’, *kadur-kadurim* ‘ball-s, pill-s’, *mištar-mištarim* ‘regime-s’, *mitve-mitvim* ‘layout-s’
- b. **Inanimate Feminine nouns with plural *-ot*:** *dira-diroš* ‘apartment-s’, *madpéset-madpasot* ‘printer-s’, *kapit-kapiyot* ‘teaspoon-s’, *avit-avitot* ‘spasm-s’, *dmuš-dmuyot* ‘image-s’.¹⁶

Lexical exceptions to regular plural formation are illustrated in (41a), for masculine nouns ending in plural *-ot* and the converse for feminine in (41b).

- (41) a. **Inanimate Masculine nouns with plural *-ot*:** *kir-kirot* ‘wall-s’, *šulxan-šulxanot* ‘table-s’, *šilton-šiltonot* ‘government-s’, *aron-aronot* ‘cupboard-s’, *mare-marot* ‘view-s’
- b. **Inanimate Feminine nouns with plural *-im*:** *levena-levenim* ‘brick-s’, *mila-milim* ‘word-s’, *éven-avanim* ‘stone-s’, *šana-šanim* ‘year-s’

The numerous mismatches between the gender of the singular noun and of its plural suffix illustrated in (41), including very common words, require rote learning of plural forms. These are a major problem in the acquisition of Hebrew inflectional morphology well into school age (Levy 1983; Ravid & Schiff 2009; Schiff, Ravid & Levy-Shimon 2011).

16. Animate nouns are also occasionally pluralized in lexically exceptional ways, e.g., *av-avot* ‘father-s’, *iša-našim* ‘woman-women’, *pilégeš-pilagšim* ‘mistress-s’, all inherited from Biblical Hebrew.

Another type of irregularity arises where nouns can be pluralized in more than one way. In a few instances, where singular and plural are semantically related, the singular indicates the generic type whereas the plural indicates the units included in this generic type, (e.g., *xita-xitim* ‘wheat ~ sheaves of wheat’, *afuna* ‘collective peas’ vs. *afunim* ‘isolated peas’, *mei-meáyim* ‘bowel-intestines’). As in other languages, some nouns can be pluralized in more than one way, typically in the cases of polysemy (Corbett 2000), as shown for MH in Table 7.

Table 7. Nouns with more than one plural form

Singular	Gloss (i)	Plural (i)	Gloss (ii)	Plural (ii)
<i>kéren</i>	horn:F	<i>karnáyim</i>	fund, capital:F	<i>kranot</i>
<i>cipóren</i>	nail:F	<i>cipornáyim</i>	carnation:M	<i>cipornim</i>
<i>écem</i>	bone:F	<i>acamot</i>	thing, object:M	<i>acamim</i>
<i>ot</i>	letter (of alphabet):F	<i>otiyot</i>	sign:F	<i>otot</i>
<i>éser</i>	ten	<i>esrim</i> ‘twenty’	ten	<i>asarot</i> ‘tens’
<i>adaša</i>	lens:F	<i>adašot</i>	lentil:F	<i>adašim</i>

Some words have two plural suffixes with no change in meaning, but used in different contexts, demonstrated here by four common nouns with alternating feminine and masculine plural suffixes: *yom* ‘day’, *šana* ‘year’, *iša* ‘woman, wife’, *mila* ‘word’. (i) The plural of *yom* is *yamim*, but the suffix *-ot* occurs in certain construct-state expressions from Rabbinical Hebrew (e.g., *yem-ot*[^] *ha-gšamim* ‘day-CS.PL the-rains = the rainy season’ vs. MH synonymous *yemey*[^] *ha-gšamim* ‘the days of rain’); *yem-ot*[^] *ha-mašiax* ‘day-CS.PL the-Messiah = the days of the Messiah, better days to come’. Similarly, *yem-ot*[^] *ha-xol* ‘day-CS.PL the-week = weekdays’ alternates with MH *yem-ey* *ha-xol* ‘weekdays, non-holy days’. Modern expressions use only *yemey* (cf., *yem-ey*[^] *ha-beynáyim* ‘day-CS.PL the-medial = the Middle Ages’, *yemey kedem* ‘days of yore’).

The plural of *šana* ‘year’ is *šanim*, but in the construct state and with the addition of personal possessive pronouns, the form *šnot-* is used (e.g., *šnot*[^] *xayéynu* ‘the years of our lives’, *šnot*[^] *ha-esre* ‘years:CS of the-tens = the teens’, *meytav šnotav* ‘his best years’), while the set expression *šanot tovot* ‘lit: years good:PL’ refer to greeting cards for the Jewish New Year.

The noun *iša* ‘woman, wife’ has the suppletive plural form *našim*, but *nešot* is commonly used in the construct state and with possessive pronouns (e.g., *nešot*[^] *ha-tayasim* ‘the pilots’ wives’, *nešot*[^] *hakótel* ‘the women of the Wailing Wall = women fighting for the right to pray equally to men’, *nešot ha-mea ha-esrim* ‘the women of the twentieth century’, *nešotav* ‘his wives’). These occur along with masculine-form construct-state plural in an expression like *nešey Xabad* ‘the women of Chabad’, *našav* ‘his wives’.

The usual plural of the feminine noun *mila* ‘word’ is *milim*, but in the construct state and with possessive pronouns, only *milot* is used (e.g., *milot*[^] *yesod* ‘basic words’, *milot*[^] *yaxas* ‘words:cs relations = prepositions’, *milotav* ‘his words’).

4.2.3 Minor plural forms

The suffix *-ot* has an allomorph *-aot*, restricted largely to nouns of loan origin, especially Aramaic and/or inherited from rabbinical literature, as in (42).

- (42) Masculine *maške-maškaot* ‘drink-s:m’, *mikve-mikvaot* ‘ritual bath-s’, *teatron-teatraot~teatronim* ‘theatre-s’; Feminine, *dugma-dugmaot* ‘example-s, *tavla-tavlaot* ‘table, chart’, *universita-universitaot* ‘university-ies’, *kliše~klišaa-klišaot* ‘cliché-s’, *kursa-kursaot* ‘armchair-s’, *girsa-girsaot* ‘version-s’

Some such nouns occur, less frequently, with the suffix *-ot* *dugmot*, *tavlot*, *kursot*, *girsot*. Although, as noted, plural suffixation is often arbitrary on non-animate nouns, a few minor generalizations emerge in this respect. First, a few feminine animal nouns that have no masculine counterpart, some of which are noted above in Section 4.1, take the plural suffix *-im* (e.g., *dvora-dvorim* ‘bee-s’, *kina-kinim* ‘louse-lice’, *nemala-nemalim* ‘ant-s’, *ez-izim* ‘goat-s’, *cipor-ciporim* ‘bird-s’, *cfardeá-cfardeim* ‘frog-s’, *toláat-tolaim* ‘worm-s’, *yona-yonim* ‘pigeon-s’). On the other hand, other feminine animal names that have no masculine counterpart in Hebrew are pluralized by gender (e.g., *xasida-xasidot* ‘stork-s’, *anafá-anafot* ‘heron-s’, *cira-craot* ‘wasp-s’, *xipušit-xipušiyot* ‘beetle-s’, *letaa-letaot* ‘lizard-s’)

Second, a few feminine plant names take the suffix *-im*, whether indicating the generic type in the singular unit or singular versus plural (e.g., *géfen-gfanim* ‘grapevine-s’, *šošana-šošanim* ‘rose-s’, *šibólet-šibolim* ‘stalk (of grain)-s’, *seora-seorim* ‘barley-ies’, *teena-teenim* ‘fig-s’ (and see also, above, *xita* ‘wheat’ and *afuna* ‘pea’, *adaša-adašim* ‘lentil-s’). Other recently coined feminine plant names are pluralized by the suffix *-ot* (e.g., *agvaniya-agvaniyot* ‘tomato-es’, *cnonit-cnonyot* ‘small radish-es’, *banána-banánot* ‘banana-s’, *xása-xásot* ‘lettuce-s’).

Third, most masculine nouns in the patterns *CiCaCon*, *CeCaCon* and, to a lesser degree *CiCCon*, *CeCCon*, take the plural suffix *-ot*, as in (43a) and (43b), with a few exceptions in (44).

- (43) a. *a šigaon-šigonot* ‘craziness-es’, *kišaron-kišronot* ‘talent-s’, *zikaron-zixronot* ‘memory-ies’, *rišayon-rišyonot* ‘permit-s’, *geraon-geronot* ‘deficit-s’, *herayon-heryonot* ‘pregnancy-ies’, *iparon-efronot* ‘pencil-s’
 b. *dimyon-dimyonot* ‘imagination-s, similarity-ies’, *šilton-šiltonot* ‘government-s, ruling-s’, *midron-midronot* ‘slope-s’, *xešbon-xešbonot* ‘calculation-s’, *elbon-elbonot* ‘insult-s’

- (44) *bitaon in-bitonim* ‘mouthpiece-s, organ-s’, *gizaron-gizronim* ‘etymology-ies’ (alternating with *gizronot*); *miznon-miznonim* ‘buffet-s’, *xelbon-xelbonim* ‘protein-s’, *timron-timronim* ‘maneuver-s’

Some nouns in these templates take two plural suffixes (e.g., *pizmon-pizmonim~pizmonot* ‘popular song-s’, *širyon-širyonim~širyonot* ‘armor-s’, *kilšon-kilšonim~kilšonot* ‘pitchfork-s’, and *pitron~pitaron-pitronot~pitronim* ‘solution-s’). Frequencies checked on the internet indicate that the first of the two options is more commonly used. Other minor variants of plural assignment on non-animate nouns are detailed in Avioz (2004), Schwarzwald (2002: unit 12: 125–130).

4.2.4 Stress assignment in plural forms

The plural suffixes are stressed in words of Hebrew origin, as in most of the examples in the preceding sections, but this does not apply to “non-integrated” lexical items, including: loan words, slang terms, acronyms, and children’s games words (Schwarzwald 2013). In the latter cases, word-stress remains on the stem, unlike the corresponding Hebrew words. Compare the native noun with its sometimes homophonous outlier form in: (i) *séter-star-ím* ‘secret-s’ versus the loan word *méter-métr-im* ‘meter-s’ or *gan-ím* ‘garden-s’ versus *gen-gén-im* ‘gene-s’; (ii) the gentilic noun and denominal adjective *dromi-dromiy-ím* ‘southerner-s’ versus the slang term *drómi-dróm-im* ‘people from poorer neighborhoods in the south of the city’ or the noun *cipor-cipor-ím* ‘bird-s’ versus the (loan word) *čupar-čupár-im* ‘fringe benefit-s’; (iii) the inanimate noun *tor-tor-ím* ‘turn-s, line-s’ versus the acronym *yor-yór-im* ‘chairperson-s’ (= *yošév* ‘sits’ + *roš* ‘head’), or *mazgan-mazgan-ím* versus *mankal-mankál-im* ‘CEO, chief executive officer-s’ (= *menahel* ‘director’, *klali* ‘general’); and (iv) the noun *buba-bub-ot* ‘doll-s’ versus the nursery term and pet address term *búba-búb-ot*, and the regular noun *klaf-ím* ‘cards’ versus the nursery term *kláf-im* ‘game of cards’.

These examples show that plural stress distinguishes integrated from non-integrated lexical items in MH, yielding a semantic distinction that is analogous to the varying plural suffixes attached to homonymous singular stems (Table 7 above). The examples given in these sections indicate that in many cases, plural markers are lexically rather than grammatically assigned in MH. In the case of outlying elements (loan words, slang terms, etc.), the plural markers are grammatically assigned as masculine or feminine, but the stress remains on the stem rather than shifting to the suffix as in the case of native Hebrew nouns (and adjectives).

4.2.5 Plural assignment in complex nouns

The last class of nouns considered under the heading of plural formation are nouns made up of more than a single lexical element. Like the *acronyms* noted in the preceding section, *blends* are pluralized as fully fused wordlike forms, in contrast to construct state *compound nouns*. Although blends take plurals like single words (Bat-El 1996, 2013; Berman 1989), they manifest a considerable amount of variety as illustrated in (45).

- (45) a. *rakével~raxbal-rakavlim~raxbalim* ‘cable car’ < *rakévet* ‘train’, *kével* ‘cable’
 b. *midrexov-midrexóvim~midrexovot* ‘pedestrian mall’ < *midraxa* ‘sidewalk’,
rexov-rexovot ‘street-s’
 c. *šxordínit-šxordíniyot* ‘dark-haired woman dyed blond’ < *šxora* ‘black:F’,
blondínit ‘blond:F’
 d. *rešamkol-rešamkolim* ‘tape-recorder-s’ < *rešam*^ ‘writer:cs’, *kol* ‘sound, voice’

In contrast, *noun compounds* in construct-state form are treated as a combination of two separate nouns, and the first noun is pluralized, as illustrated in (46).

- (46) a. *bet^ séfer – batey^ séfer* ‘school-s < *bet*^ ‘house:cs’, *batim* ‘houses’, *séfer* ‘book’
 b. *rav^ méxer – rabey^ méxer* ‘bestseller-s’ < *rav* ‘many’, *rabim* ‘many:PL’,
méxer ‘sale’
 c. *ktav^ et – kitvey^ et* ‘periodical-s’ < *ktav* ‘writing’, *et* ‘time’
 d. *xadar^ ha-morim – xadrey ha-morim* < ‘the staff room-s’, *xéder* ‘room’,
morim ‘teachers’
 e. *ben^ adam – bney^ adam* ‘person-s, human being-s’ < *ben* ‘son’, *adam*
‘Adam, person’

Although all the examples in (46) are highly lexicalized as compound nouns, the fact that the initial head noun is pluralized and not the following modifying noun points to these constructions as not fully fused as grammatically single words (see Chapter 14). This is even more marked in the few construct-state compounds where *both* the initial (head) noun and the following (modifying) noun are pluralized, as in (47).

- (47) a. *roš^ pérek – rašey^ prakim* ‘headline-s’ < *roš* ‘head’, *rašey* ‘heads:cs’,
pérek-prak-im ‘chapter-s’
 b. *ben^ dod ~ bney^ dodim* ‘cousin-s:m’ < *ben* ‘son’, *bney* ‘sons:cs’, *dod-im*
‘uncle-s’
 c. *talmid^ xaxam ~ talmidey^ xaxamim* ‘learned person-s:m’ < *talmid* ‘stu-
dent:m’, *talmidey* ‘students:cs’, *xaxam-im* ‘wise:PL, rabbi-s’ = ‘religious
scholars’

Potentially, these could have taken the usual form of plural head plus singular modifier (e.g., *rašey pérek*, *bney dod*, *talmidey xaxam*) but these do not constitute the plurals of these set construct-state expressions, making them similar to regular Noun Adjective phrases in manifesting plural as well as gender agreement (see Chapter 12). In general, then, pluralization of compound nouns constitutes a clear criterion distinguishing them from the more fused, unitary blends noted above.

4.3 Construct state inflection

As detailed for non-inflectional facets of the system in Chapter 14 on Genitive, construct state constructions expresses a variety of relations between two nouns, the first of which (*nismax* ‘attached, dependent’) is the head of the construction, and the second (*somex* ‘attachee’) expresses a variety of relations (see also Berman 1978: 231–276; Glinert 1989: 24–49; Rosén 1977: 125–187; Shlesinger 1994: 40–47).

Inflection in construct state affects only the first constituent (*nismax*), incurring overt morphological changes in two main cases: The consonant *-t* is added to feminine nouns ending in stressed *-a* as in (48i); and the ending *-ey* replaces the dual and plural suffixes *-áyim* or *-im*, as in (48ii) and (48iii) with examples taken from current newspapers.

- (48) (i) *simla* ‘dress’ > *simlat*[^] *šabat* > ‘Sabbath dress’
kvuca ‘group’ > *kvucat*[^] *horim* ‘a group of parents’
kita ‘class’ > *kitat*[^] *oman* ‘artist’s class/studio’
- (ii) *yadáyim* ‘hands’ > *yedey*[^] *ha-zaken* ‘the old man’s hands’
miškafáyim ‘glasses’ *miškefey*[^] *kria* ‘reading glasses’
mixnasáyim[^] ‘pants’ > *mixnesey*[^] *piğama* ‘pajama pants’
- (iii) *sfarim* ‘books’ > *sifrey*[^] *bišul* ‘cook books’
batim ‘houses’ > *batey*[^] *éven* ‘stone houses’
avanim ‘rocks’ > *avney*[^] *bazélet* ‘basalt rocks’

As these examples show, the *stem vowel* may change in the construct state, as in: *báyit* > *bet*, *yadáyim* > *yedey*, *miškafáyim* > *miškefey*, *mixnasáyim* > *mixnesey*, *sfarim* > *sifrey*. These changes are due to a variety of morphophonological factors, most of which derive from Classical Hebrew. They apply mainly to bisyllabic or multisyllabic nouns with one of the vowels *a*, *e*, or *o* in their free, non-construct state form, whereas monosyllabic nouns with the vowels *a*, *u* and *i* rarely change. Vowel shifting in the stem of construct-state nouns that are not marked as such by suffixal endings often has the same effect as the addition of a stressed suffix, as in (49)

- (49) *matos* ‘airplane’ > *metos*[^] *krav* ‘combat plane’ (cf. *metos-im* ‘airplane-s’)
makom ‘place’ > *mekom*[^] *mistor* ‘hiding place’ (cf. *mekom-ot* ‘place-s’)
marak ‘soup’ > *merak*[^] *yerakot* ‘vegetable soup’ (cf. *merak-im* ‘soup-s’)
xéder ‘room’ > *xadar*[^] *morim* ‘teachers’ lounge = staffroom’ (cf. *xadar-im*
‘room-s’)

In other cases, changes in the stem of the initial head noun are due to assignment of a particular morphological subclass, as in (50).

- (50) *gizra* ‘shape’, plural *gzar-ot* ‘shapes’ > *gizr-ot*[^] *ha-póal* ‘the verb classes’
simla ‘dress’, plural *smal-ot* ‘dresses’ > *siml-ot*[^] *kala* ‘bride’s dresses’

The fact that stem-change occurs in only some (classes of) nouns leads to numerous departures from the prescribed forms in everyday usage, yielding such non-changing forms as *matos*[^] *krav*, *makom*[^] *mistor*, *gzarot*[^] *hapoal*, *marak*[^] *yerakot* along with the required forms listed in (49) and (50). Other common examples are use of forms like *pagaz-ey*[^] *ha-oyev* for *pigz-ey haoyev* ‘the enemy’s munitions’, *nisayon*[^] *xayim* for *nisyon*[^] *xayim* ‘life experience’ (Berman 1981, Gonen 2009a 2009b; Schwarzwald 2016a).

Another departure from normative requirements is the shifting of the definite article to the initial rather than the second noun (e.g., *ha-sxar*[^] *dira* ‘the apartment rent’ instead of *sxar*[^] *ha-dira*) or adding the definite marker *ha-* to both constituents as in: *ha-moécet*[^] *ha-mnahalim* ‘the board of directors’ for normative *moécet*[^] *ha-menahalim* (Shatil 2016; and see Chapter 14).

Construct state constructions typically combine two nouns, but they may take the form of an adjectival *nismax* followed by a nominal *somex*, where the adjective specifies an attribute of the head noun (Bliboim 2001; Halevy 1992, 2007, 2016). This is shown in (51), with examples taken from Halevy (2007, 2016) – and see, further, Chapter 14.

- (51) a. *pikadon kcar*[^] *mo^oed*
deposit short:CS appointed.time
‘a short-term deposit’
b. *dir-ot* *cmud-ot*[^] *karka*
apartment:F-PL attached-CS.PL ground
‘ground floor apartments’
c. *na^aara khula-t*[^] *‘enáyim*
girl blue-CS.F eyes
‘blue-eyed girl’
d. *yedidut* *rab-at*[^] *šan-im*
friendship:F numerous-CS.F year-PL
‘age-old friendship’

Bound Adjective + Noun constructions like these are low frequency, mostly confined to literary style. In contrast, as shown by numerous studies, both formal-structural and usage-based, Bound Noun + Noun construct state forms are still very productive in MH although the language has alternative analytical options for expressing genitive relations (Berman 1988, 2009; Berman & Ravid 1986; Bliboim & Shatil 2014; Borer 1988; Danon 2008; Doron & Meir 2013; Halevy 2016; Hazout 2000; Ravid & Zilberbuch 2003; Siloni 2001). The complex situation described here for construct state inflection shows extensive morphological variability, such that suffixal changing of *-a* to *-at* and *-áyin* and *-im* to *-ey* is still systematically retained, but stem-changes and definiteness marking are in a state of flux.

5. Adjectives

This section is relatively short, both because there are far fewer lexical items in this category than verbs and nouns (Ravid, Bar-On et al. 2016b; Ravid & Levie 2010; Ravid & Schiff 2015), and also because (i) many of the morphological generalizations regarding gender, number, and construct-state inflection are similar to those that apply to the other “nominal” categories of Nouns and Participles, while (ii) syntactic facets of Noun-Adjective agreement in both copular clauses (e.g., Masculine *ha-sir haya rek* ‘the pot was empty’ versus Feminine *ha-sira hayta reka* ‘the boat was empty’) and noun phrases (e.g., Singular *sir rek* / Plural *sirim rekim* ‘an empty pot / empty pots’) are discussed in Chapter 12 on Agreement Alternations.

Here, note first that all adjectives are inflected suffixally for gender (§5.1) and number (§5.2) and, occasionally, for construct state, while gender and number agreement is governed by the subject noun of the sentence or the (preceding) head noun in noun phrases. Suffixes used in inflecting adjectives are listed in Table 8, with the singular masculine representing the unmarked base form.

Table 8. Inflectional suffixes on adjectives, by number and gender

	Singular	Plural
Masculine	Ø	<i>-im</i>
Feminine	<i>-á, -t, -et/-at, -ít</i>	<i>-ot</i>

5.1 Gender inflection in adjectives

As in the case of nouns, four types of suffixes are added to a masculine base for forming the adjective: *-a*, *-et ~at*, *-t* and *-it* with, as noted in §4.1, the suffix *-at* an allomorph of unstressed *-et*, restricted to adjectives ending in historical *ʕ*, *h*, and *ħ*. The feminine suffix stressed *-a* is attached to most adjectives, especially (i) monosyllabic – e.g., a masculine Noun-Adj phrase like *iš tov o ra* ‘man good or bad = a good or bad man’ changes to feminine alternant *iša tov-a o ra-a* ‘woman good-F or bad-F = a good or bad woman’; (ii) masculine adjectives having *o*, *u* or *i* in the final syllable – e.g., the copular sentence *hu gadol* ‘he (is) big’ versus *hi gdol-a* ‘she (is) big’, the noun phrase *žaket yafe* ‘jacket nice = a nice jacket’ versus *simla yaf-a* ‘dress pretty-F = a pretty dress’.

Two classes of adjectives take the unstressed *-et~ -at* feminine marking suffix, in the same way as nouns (§4.1): First, adjectives taking the form of *benoni* participles in all *binyan* verb templates except *hif'il*. Compare, for example, the masculine versus feminine singular forms for *pa'al* in *bolet-bolétet* = the verb ‘stand out’, the adjective ‘conspicuous’; for *nifal nif* in *nistar-nistéret* ‘hidden’; for *piel* in *mešagáa-mešagáat* = the verb ‘madden’, the adjective ‘maddening’, slang ‘great’, on the one hand, as against the pattern *hif'il* in *margiz-margiza* = the verb ‘annoy’, the adjective ‘annoying’. Second, again similarly to nouns, adjectives in the *miškal* pattern *CiCeC* take *-et ~ -at* unstressed suffixes marking feminine (e.g., *iver-ivéret* ‘blind:M-F’, *keréax-keráxat* ‘bald:M-F’).

The suffix *-t* is added to (typically denominal) adjectives ending in *-i* which are stressed in native words, but not in loan words (see §4.1.1 above; Schwarzwald 2016a; and Chapter 8 on Derivational Morphology). Numerous examples of this kind include, for native words – *ofyani-ofyanit* ‘typical:M-F’, *leumi-leumit* ‘national:M-F’, *groni-gronit* ‘guttural:M-F’ – and for loan words: *fizi-fizit* ‘physical:M-F’, *obyektívi-obyektívít* ‘objective:M-F’, *fanáti-fanátit* ‘fanatical:M-F’. A few adjectives ending in *i* take the feminine *-a* suffix preceded by the glide *y*, all non-denominated and inherited from Biblical Hebrew: *šeni-šniya* ‘second:M-F’, *tari-triya* ‘fresh:M-F’, *ani-aniya* ‘poor:M-F’, *naki-nekiya* ‘clean:M-F’.

The suffix *-it* is rare in adjectives (though very productive in nouns, as noted in §4.1.1), occurring with the agentive, hence human, pattern *CaCCan* often specifying (human) attributes, and the adjective *axzar-axzarit* ‘cruel:M-F’ (e.g., *daykan-it* ‘pedant(ic):M-F’, *šatkan-it* ‘taciturn:M-F’, *rašlan-it* ‘negligent:M-F’).

These different alternations for feminine gender in both singular and also their plural counterparts (with the endings *-a > ot*, *it > iyot*) demonstrate the close morphological association between nouns and adjectives in Hebrew to this day.

5.2 Number inflection

Unlike nouns, adjectives are inflected for number by suffixation only of *-ím* for masculine and *-(iy)ót* for feminine. Moreover, addition of plural suffixes to adjectives regularly depends on the singular adjectival form, in a fully regular alternation, unlike the numerous irregularities in noun plural marking discussed in the preceding section. Adjectives ending (i) in a consonant add a plural suffix to the base form (e.g., *kal* ~ *kal-im*, *kal-ot* ‘easy:SG ~ easy:PL.M, PL.F’), those ending (ii) in *i* either add the glide *y* before the suffix or lengthen the vowel in the masculine (e.g., *recini-reciniy-im* ~ *recini-im*, *reciniy-ot* ‘serious:SG-PL.M, -PL.F’; and (iii) in adjectives ending in a vowel *e* (invariably *e*, not *o* or *u*) the stem final vowel is replaced by plural *-im* or *-ot* (e.g., *yafe-yaf-im*, *yaf-ot* ‘pretty:SG-PL.M, -PL.F’). Pluralization of adjectives in these three classes may involve phonological adjustments of the stem such as vowel reduction or vowel shifting, as in singular *gadol* ‘big’ versus plural *gdol-im*, *gdol-ot*, or *naki* ‘clean’ versus plural *nekiy-im* ~ *neki-im*, *nekiy-ot*.

In adjectives formed by zero derivation from *benoni* participles in the verb templates *pa'al*, *pi'el*, *hitpa'el* as well as adjectives in the pattern *CiCeC*, the stem-final vowel *e* is elided (e.g., respectively, *bolet* ‘conspicuous’ versus plural *boltim*, *boltot*; *mealef* ‘instructive’ versus plural *mealfim*, *mealfot*; *mitpatéax* ‘developing’ versus plural *mitpatxim*, *mitpatxot*; *iver* ‘blind’ versus plural *ivrim*, *ivrot*). In contrast, stem-final *a* is retained in adjectives derived as participle forms of the verb templates *nif'al*, *pu'al* and *huf'al* (e.g., *nistar* ‘hidden’, plural *nistarim*, *nistarot*; *mecuyan* ‘excellent’, plural *mecuyanim*, *mecuyanot*; *mušlam* ‘perfect(ed)’, plural *mušlamim*, *mušlamot*).

As noted earlier, number inflection of adjectives depends on the inherent gender of the noun in both clausal subject-predicate agreement and in noun-adjective phrasal agreement. On the other hand, whereas plural marking of nouns in isolation may conflict in gender with the morphophonological form of the base noun – as discussed in Section 4.2.2, and illustrated in (41) above – adjective plurals invariably follow the gender of the *singular* noun in such cases (e.g., *kir-ot lvan-im* ‘wall:M-PL white:M-PL’, *mil-im aruk-ot* ‘word:F-PL long:F-PL’). This leads to common attraction to the same plural endings in both noun and adjectives, so that in everyday speech, sequences such as *kirot levanot*, *milim arukim* are common (as illustrated under the heading of “mismatches” in Chapter 12 on Agreement Alternation). The asymmetry between irregular Noun + regular Adjective plural endings proves a challenge for processing abilities, since speakers are used to adding the same or similar endings to both the noun and its following adjective(s). The problem is particularly difficult for children and for second language learners, even at advanced stages (Ravid & Schiff 2009, 2015).

6. Concluding remarks

As noted at the outset of this chapter, MH is an inflectionally rich language, retaining much of the earlier, classical marking for the categories of Gender and Number in the nominal classes of Nouns, Adjectives, and Participles, and of Tense and Person marking on Verbs in Past and Future. Moreover, inflection applies across-the-board to Verbs and Adjectives, but in Nouns, Gender marking is inherent and semantically arbitrary except for animates, while Plural Number is restricted to count nouns. Inflection is most typically linear and suffixal, except for prefixal marking on Future Tense forms.

Three features of Hebrew inflection are typologically distinct: (i) the fact that Pronouns, except when functioning as grammatical subjects, are always inflectionally suffixed to Prepositions; (ii) inflection interacts morpho-phonologically with the derivational patterns or prosodic templates, most particularly in relation to the verb *binyan* system (Ravid, Ashkenazi et al. 2016; and see, too, Chapter 8 on Derivation); and (iii) verbs alone are restricted to native means of formation by root plus template combinations, whereas nouns and adjectives include non-derived forms and loan words as well as words derived linearly by stem and affixes, having a marked effect on e inflection of these lexical classes.

As against these conservative features of MH inflection inherited from earlier stages of the language, the system shows considerable variation and change in current usage. Some such trends include: leveling of paradigms in pronominal suffixation, so that the distinction between Set I and Set II preposition + pronoun combinations may be merged (e.g., *otax* > *otex* ‘you:ACC.2SG.F’ *bišvil-am* > *bišvil-ahem* ‘for-3PL.M = for them’); loss of marking for Feminine Gender 2nd and 3rd person plural; merging of 1st person singular with the 3rd masculine singular prefix in Future tense; restricted use of inflected categories such as Gerundives and bound accusative marking of direct object pronouns on verbs; optionality of use of construct-state relations between two nouns in favor of more analytic options with the inflected genitive marker *šel*, except for some semantic categories; and fluctuation of the initial noun in bound construct state constructions when this involves stem-changes rather than or in addition to suffixal marking.

In spite of the complexity and irregularities characterizing Inflection in MH, children acquire the bulk of the system by age 3 to 4 years (Berman 1985; Lustigman 2012), before they master its derivational system, evidence of how deeply entrenched inflection is in their language. Moreover, late-emerging features of the system, such as use of construct-state constructions, bound possessives, and accusative marking on verbs, are typically confined to more elevated registers, reflecting higher levels of literacy (Kaplan & Berman 2015; Ravid & Zilberbuch 2003). And, as with other

languages, with age and increased literacy, use of the inflectional system stabilizes to become both more varied but less variable.

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Derivation

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The chapter reviews derivational morphology in MH, as a domain critical to lexical organization and content, with analyses based largely on empirical psycholinguistic studies and distributional frequencies. Interrelations between derivation and inflection are considered, with derivational processes analyzed as representing one-to-many and many-to-one relations of form and meaning. Four major means of derivation are delineated: non-linear root-pattern affixation, linear suffixation on stems, zero-derivation, and stem or root reduplication. Verbs are analyzed as distinct from nominals (nouns and adjectives), the *binyan* system of verb conjugations is reevaluated, with a distinction between two subsystems of morphological, semantic, and syntactic interrelations, taking into account the role of *benoni* present-tense/participials, defective roots, frequency of use, transitivity and voice, and verb semantics. Nouns are analyzed in terms of ontological categories such as Agent, Instrument, Location, and Adjectives are described as basic, verb-derived, and noun-based, and Adverbs are noted as morphologically marginal in MH.

1. Introduction

The chapter aims to provide a usage-based account of Hebrew derivational morphology, relying primarily on empirical, data-based psycholinguistic studies. Derivational morphology, a well-established domain in linguistics, is a prominent feature of Modern Israeli Hebrew, straddling grammar and lexicon, involving word-structure, semantics, and syntax. The goal of this introductory section is to demarcate the boundaries of Hebrew derivational morphology taking into account both general and Hebrew-specific factors. Recent usage-based accounts of morphological learning, use, and change have turned towards the word – rather than the morpheme – as the fundamental unit in both inflection and derivation (Blevins 2016; Bonami & Stump 2016; Traugott & Trousdale 2013). In this view, the main challenge for language users is to forge reliable relationships between words with shared components so that morphology as a system emerges from

usage (Ackerman, Blevins & Malouf 2009; Ackerman & Malouf 2013; Diessel & Hilpert 2016). In line with this approach, in what follows, morphology in general, and derivational morphology in particular, is treated as the main organizational device of the lexicon. Focus is thus on how words are organized in the *lexicon*, as critical to analysis of derivation in contemporary Hebrew.

Modern Israeli Hebrew, a Semitic language with a long and complex history, incorporates a patchwork of native and borrowed morpho-lexical devices and systems, raising the question of what precisely constitutes ‘derivational morphology’ in the language. One example of the inflection/derivation interface is the Hebrew *benoni* ‘intermediate’ participle (e.g., the form *megašer* ‘bridging’, root *g-š-r* in the *pi’el* verb pattern). The *benoni* participle serves, on the one hand, as the present-tense in the temporal paradigm of verbs and is thus part of inflection; concurrently, it is also a common means for coining new nouns and adjectives in current Hebrew and so participates in derivation (Ravid, Bar-On et al. 2016). Hebrew passives are another example of the complex interface of derivational morphology with varied facets of the grammar. The nature of voice operations is subject to considerable debate in the linguistics literature, from syntactic (Alexiadu & Doron 2012) to lexical/derivational accounts (Haspelmath 1990; Keenan & Dryer 2007; and see Chapters 10 and 13). In Hebrew, formation of passive constructions is based on shifts from active to passive *binyan* patterns, two of which (*huf’al* and *pu’al*) are passive-dedicated, while another (*nif’al*) is multifunctional, expressing various other transitivity and temporality notions (Berman 2014; Berman & Nir-Sagiv 2004; Ravid 2004; Ravid & Vered 2017; Schwarzwald 2008).

Against this background, three considerations underlie the present chapter. First, derivational morphology is construed as a structure-meaning constellation of systems of varied sizes, which in MH drives lexical processing, usage, innovation, and learning, and interfaces with a range of phonological, lexical, and grammatical processes in the language. These systems are presented from the point of view of mature native-speaking usage, with information on child language incorporated where relevant. A second decision was to base the current analysis of Hebrew derivational morphology on both spoken and written corpora, given the morpho-orthographic nature of the literate lexicon of native-speaking adults (Gonnerman, Seidenberg & Andersen 2007; Olson 1994, 2016). Although analysis of the interface of Hebrew morphology with its spelling is beyond the scope of this chapter, studies point to its critical role in Hebrew lexical knowledge (Gillis & Ravid 2006; Ravid 2001, 2005, 2012; Ravid & Bar On 2005). A third, related decision was to take into account historical features when relevant to current grammatical facts. While spoken Hebrew is phonetically and phonologically very different from its classical origins (Boložky 1997; Schwarzwald 2001a; and see Chapter 6), its morpho-phonology and morphology carry distinct imprints of

previous historical periods (Berman 1978a; Bolozky 2003a; Ravid 1995; Ravid & Shlesinger 2001). For example, the historical verbal versus nominal (nouns, adjectives, and *benoni*) split constitutes a major organizing principle of the present chapter. In sum, with grammar viewed as a continuum from syntax through inflection and derivation to the lexicon, issues in derivational morphology are analyzed below on the basis of general linguistic, Hebrew-specific, and psycholinguistic motivations combined.

The chapter examines the composition of the domain of derivational morphology in current MH usage, rather than aiming to confirm or falsify linguistic theories. Importantly, however, it is in principle grounded in Usage-Based (psycho) linguistics, so rejecting the division between language knowledge and language use (Diessel 2014; Michaelis 2013). Grammar is regarded here as a dynamic network of complex constructions, combining specific structural patterns with particular functions or meanings (Hilpert 2014), which are created, learned, and modified through usage in varied communicative contexts. Underlying this analysis is the assumption that repeated processing of the units constituting a given construction results in associative links leading to the emergence of automated processing units, that is, categories (Diessel 2015). Under this view, the accessibility and cohesion of derivational categories on a continuum are driven by frequency, similarity, regularity, saliency, and other principles of associative memory (Bybee 2002).

Sources of evidence derive from large corpora of spoken and written Modern Hebrew combined with experimentally designed psycholinguistic elicitations (as detailed in Appendix A below). Importantly, all the materials analyzed were produced by well-educated, but non-expert adult and adolescent native speakers of Hebrew whose usage was communicatively oriented rather than guided by meta-linguistic expertise, and these were supplemented by data from children of similar backgrounds. The data-base thus largely disregards literary or journalistic texts produced by expert writers with specialized knowledge and individual skills that make them less likely to provide relevant insights into how derivational morphology is deployed in current Hebrew. In order to ensure the general applicability of the description, the data-base takes into account mainly productive or prevalent phenomena, so excluding minor or non-productive categories with little evidence in the type of corpora relied on here. Decisions for inclusion were informed by distributions of phenomena in the corpora together with relevant research-based considerations referred to in what follows.

2. Structural classes of Hebrew derivational morphology

The Hebrew lexicon is analyzed below as organized in two major classes, based on current-day morphological, semantic, and syntactic criteria, as well as by historical sources. One is *Verbs*, with predicate-oriented semantics and dedicated morphological devices. Another is *Nominals*, with ontological semantics and nominal morphological structures, including nouns, *benoni* structures, derived abstract nominals, and adjectives. On the assumption that structure is the vehicle that encodes meaning and function, this section considers formal facets of Hebrew derivational morphology, focusing on word-formation processes up to and including relevant morpho-phonological alternations.

Four formal devices serve Hebrew derivation, reviewed below in order of degree of productivity: non-linear root-pattern affixation (§2.1); linear suffixation on stems (§2.2); zero-derivation or syntactic conversion (§2.3); and stem plus root reduplication (§2.4). Of these, root-pattern affixation serves mainly (but not exclusively) in derivation, stem suffixation serves both inflection and derivation, conversion transforms verbs to nominals, while reduplication is highly restricted. Compounding, although considered a major derivational device in many languages (Lieber 2009), is excluded from the current chapter in order to focus on word-internal processes (see Chapter 14 on genitive constructions).

2.1 Root and pattern interdigitated (non-linear) affixation

The major structural device organizing the Hebrew lexicon is non-linear affixation of two sub-lexical morphological primes – the Semitic *root* (Hebrew *šóreš*) and the prosodic *pattern* known by the Hebrew term *tavnit* (Boložky 2012; Ravid 2006a).¹ The root and pattern are complementary morphemes, which intertwine to make up the stem of Hebrew words (Berman 2012; Boložky 1999; Nir 1989; Ravid 2003; Schwarzwald 2000). For example, the verb *limed* ‘teach’ and the noun *talmid* ‘student’ are based on the shared root *l-m-d*, intertwined with two different patterns. As a consonantal, discontinuous entity, the Semitic root is not pronounceable, and as a sub-lexical bound morpheme, it has no lexical category, and is thus invariably supplemented by a pattern which determines the shape of the basic, non-inflected stem. Patterns provide prosodic templates interspersing root radicals like *g-d-l* with vowels, for example: *gadol* ‘big’ (pattern *CaCoC*) and *gdula* ‘prominence’ (pattern

1. The term *tavnit* traditionally covers the two major non-linear constructions providing the phonological shape and categorial classification of Hebrew words – *binyan* conjugations in verbs and *miškal* patterns in nominals.

CCuCa), often preceded or followed by a small set of pattern affixes, as in *megudal* ‘grown’ (pattern *meCuCaC*) or *haCCaCa* (*hagdala* ‘enlarging’).² Pattern morphemes determine the basic morpho-phonology of native stems, including root-radical slots, vowel combinations, and stress assignment – either word-final stress in most words, or penultimate, as in *gódel* ‘size’.³

Root and pattern morphology is responsible for a uniquely Semitic organization of the lexicon. The large majority of Hebrew content words can be grouped into derivational word families sharing a single root in different patterns across the three open-class categories of verb, noun, adjective (Ben Zvi & Levie 2016; Berman 2003; Schwarzwald 2002). The notion of ‘root’ relates primarily to the consonantal skeleton and, to a lesser extent, to the basic referential content of the derivational family (Ravid 1990; Ravid, Ashkenazi et al. 2016). For example, the *g-d-l* family contains verbs like *gadal* ‘grow’, *higdil* ‘enlarge’, and *gidel* ‘raise’⁴; adjectives like *gadol* ‘big’, *magdélet* ‘magnifying (glass)’, *megudal* ‘grown’ and *mugdal* ‘enlarged’; and nouns like *megadel* ‘grower’, *hagdala* ‘enlargement’, *gidul* ‘growth’, *migdal* ‘tower’, *gódel* ‘size’, *gdula* ‘prominence’, and *gadlut* ‘grandeur’ – all of which can be interpreted as sharing a core sense of ‘big, large size’.⁵ Since all verbs and many nouns are composed of root-and-verb pattern structures, the Hebrew lexicon is permeated by morphological relations, which enable the creation of new, root-mediated words. Even morphologically simplex words such as borrowed *torpédo* yield consonantal skeletons that are combined with patterns to create new root-based words such as the verb *tirped* ‘obstruct’ (R. Nir 1989). This lexical organization by root-based morphology is manifested in most conventional Hebrew lexicons and dictionaries (Even Shoshan 2003; and see Chapter 9 on Parts of Speech Categories).

In addition to their phonological role, patterns serve as the categorical component of the non-linearly composed word. Nominal patterns, termed *miškalim*, literally ‘weights’ (Avineri 1976; Ravid 1990; Schwarzwald & Cohen-Gross 2000), classify words into ontological categories representing notions such as Agent, Instrument, Place, Collection, and Abstractness (Ben Zvi & Levie 2016; Ravid 1990, 2005). Consider, for example, nouns based on the root *h-š-b* ‘think’ like agent *xašav* ‘accountant’, instrument *maxšev* ‘computer’, and abstract *maxšava* ‘thought’; or the

2. This follows Semitic linguistic tradition by specifying root radicals in the pattern by upper-case C’s, so that *meCuCaC* represents the pattern of *megudal*, and *CóCeC* – the pattern of *gódel*.

3. The only stress marking specifically noted in the current chapter.

4. Verbs are represented in their traditional past-tense citation form, so that while the form *limed* is glossed as ‘teach’, it actually means ‘taught’.

5. Derivational families may contain semantically non-related members like *gdil* ‘tassel’, sharing the consonantal skeleton but not ‘grow’ semantics.

root *r-k-b* that yields agent *rakav* ‘coachman’, instrument *merkava* ‘carriage’, and collective *rakévet* ‘train’.⁶ Verb patterns, termed *binyanim*, literally ‘buildings’, classify verbs by syntactico-semantic functions and by *Aktionsart* categories linked to verb-argument structure and syntactic relations (Berman 1993; Dattner 2015; Ravid, Ashkenazi et al. 2016). For example, *higdil* ‘enlarge’ and *gidel* ‘raise’ are transitive, causative verbs; *nirga* ‘calm down’ and *hitraga* ‘relax’ are low-transitivity, inchoative verbs; while *hitkatev* ‘correspond (with)’ and *hitxabe* ‘hide’ are respectively reciprocal and reflexive, middle voice verbs.

Root-and-pattern morphology constitutes the Semitic highway to Hebrew word-formation by roots connecting clusters of words with shared consonantal skeletons and lexical reference, as well as by morphological patterns grouping together words with the same prosodic structure and shared semantic category – as in *CaCuC* passive resultative adjectives like *šavur* ‘broken’, *katuv* ‘written’, *gamur* ‘finished = done’ (Berman 1994). The array of some 60 Hebrew patterns (Ravid 1990; Schwarzwald 2002) with their particular structural and semantic affinities yields a situation in which Hebrew words fall into a small number of categories containing similar, tightly linked morphemes, conveying salient semantic content, with strong internal associations (Bar-On & Ravid 2011; Ravid & Bar-On 2005). These features make the root-and-pattern system highly accessible to speakers, and learnable from early on (Berman 1985; Ravid 2003), constituting a foremost organizational factor in the core Hebrew lexicon (Ashkenazi et al. 2016).⁷

2.1.1 *Types of root structure*

The Hebraic morphological tradition classifies roots into two major categories – *full* and *defective* (Bolzky 2007; Schwarzwald 2002; Seroussi 2014). Table 1 (adapted from Ashkenazi et al. 2016) delineates the different structural categories of Hebrew roots.

(i) *Full roots* constitute the regular category of root in Hebrew, consisting of three (or four) consonantal root radicals (e.g., *g-d-l* ‘grow’, *d-g-d-g* ‘tickle’). Such roots participate in constructing canonical, transparent stems for two reasons: (1) all root radicals are invariably realized in stems in which they occur, as a consistent set of easily identifiable consonants; and (2) the derived stem is similar in form to the canonical pattern. For example, in the *g-d-l* word-family above, *migdal* ‘tower’

6. Roots are represented morphologically, differentiating between homophonous yet orthographically distinct radicals, so as to disambiguate them as much as possible (Berman 2016; Ravid 2012).

7. By the ‘core lexicon’, reference is to the most frequent words acquired early on and shared by all speakers of the language, as testified by token distributions in spoken corpora.

Table 1. Types of root structure in MH (Ashkenazi et al. 2016)

Category name	Root type	Example
Full	Tri-consonantal	<i>g-d-l</i> 'grow'
Quadriliteral	Quadri-consonantal	<i>š-r-b-t</i> 'scribble'
Reduplicated quadriliteral	Quadri-consonantal, reduplicated C_1C_2	<i>q-l-q-l</i> 'spoil'
Final reduplicated quadriliteral	Quadri-consonantal with reduplicated C_3	<i>š-r-b-b</i> 'mix'
Denominal quadriliteral	Denominal quadri-consonantal	<i>š-n-y-n</i> 'interest' from noun <i>inyan</i> 'interest'
Final tri-consonantal reduplication	Tri-consonantal roots with identical C_2C_3	<i>s-b-b</i> 'turn around'
<i>n</i> -initial	C_1 <i>n</i> deletes in consonant clusters	<i>n-p-l</i> 'fall' > <i>li-pol</i> 'to-fall'
?-initial	C_1 ?, realized as <i>o</i> in some <i>pa'al</i> verbs	?- <i>h-b</i> 'love'
<i>y</i> -initial [subset (i)]	C_1 <i>y</i> deletes in consonant clusters before <i>c</i>	<i>y-c-b</i> 'set up' > <i>hiciv</i> 'install'
<i>y</i> -initial [subset (ii)]	C_1 <i>y</i> , realized as <i>o</i> in consonant clusters	<i>y-r-d</i> 'get down'
<i>y/w</i> -medial	C_2 medial glide (<i>y</i> or <i>w</i>)	<i>r-y-b</i> 'fight' <i>q-w-m</i> 'get up'
?-final	C_3 ?	<i>m-c-?</i> 'find'
<i>y</i> -final	C_3 <i>y</i>	<i>b-k-y</i> 'cry'
Composites	Roots containing more than one defective category	<i>b-w-?</i> 'come' (<i>w</i> -medial and ?-final)

and *higdil* 'magnify' transparently demonstrate the structures of the nominal pattern *miCCaC* and the verb pattern *hif'il* respectively.

(ii) *Modifications of full roots* may render stems with full roots less canonical and so more opaque. Three such morpho-phonological categories are noted here. First, the traditionally termed *groniyot* 'gutturals', including pharyngeal radicals with consistent consonantal value (Bolzky 2015) are often associated with vowel-lowering.⁸ For example, where the root ?-*m-c* yields the noun *maamac* 'effort' in the pattern *miCCaC* (cf. transparent *migdal* 'tower'); the root *h-m-l* yields *xemla* 'compassion' in pattern *CiCCa* (cf. *simxa* 'joy'); and the root *p-š-r* yields *páar* 'gap' in *CéCeC* (cf. *séfer* 'book') (Bolzky 1995a; Laks, Cohen & Azulay-Amar

8. The label 'consonantal' also includes the voiced pharyngeal fricative (*áyin*), the unvoiced pharyngeal fricative *h*, and consonantal *h*. These have been neutralized in the general Israeli Hebrew pronunciation, but still have partial or full phonetic expression in the *mizraxi* Mid-eastern pronunciation, and very clear morpho-phonological behavior (as detailed in Ravid 2012).

2016). Second, roots with members of the stop/spirant pairs *p/f*, *b/v*, *k/x* alternate under complex morpho-phonological conditions, as a pervasive feature of current Israeli Hebrew morpho-phonology (Bolzky 1972, 1997, 2013a; Ravid 1995; and see Chapter 6). As a result, a single root may have two or even more allomorphs in different morpho-phonological contexts. For example, root *p-z-r* ‘scatter’ alternates with *f-z-r* in *pizur* ‘scattering’ versus *tifzoret* ‘bulk’; and *k-t-b* ‘write’ is expressed by *k-t-v* in *hitkatev* ‘correspond’ and *ktiv* ‘spelling’, by *x-t-v* in *hixtiv* ‘dictate’ and *tixtovet* ‘correspondence’, and by *k-t-b* in *ktuba* ‘marriage contract’. A third problematic category consists of (full) roots with initial sibilants – *s*, *z*, *c*, *š*, *ž* and *č* – (e.g., *c-l-m* ‘picture’), which undergo metathesis with the *hitpa’el* prefixal *t-* as in *hictalem* ‘get photographed’ (cf. *hitkadem* ‘advance’).⁹ This alternation is restricted to verbs in *hitpa’el* and their action nominal counterparts in *hitCaCCut* (e.g., *histadrut* ‘union’ from root *s-d-r* ‘order’, cf. *hitkadmud* ‘progress’), with a marked effect on Hebrew spelling (Bolzky 2017a; Ravid 2012).

Figures 1a and 1b present the proportions of full (trilateral and quadrilateral) and defective verbal root categories in a corpus of about half a million verbs tokens, mostly spoken (Ashkenazi 2015; Levie et al. submitted).

Figures 1a and 1b show that close to 80% of verb lemmas in the corpus consist of full roots, in contrast to about 70% defective root tokens in usage. Since the notion of ‘root’ here relates to the domain of verbs, these distributions shed light on the structure of the Hebrew lexicon in terms of verb-roots.

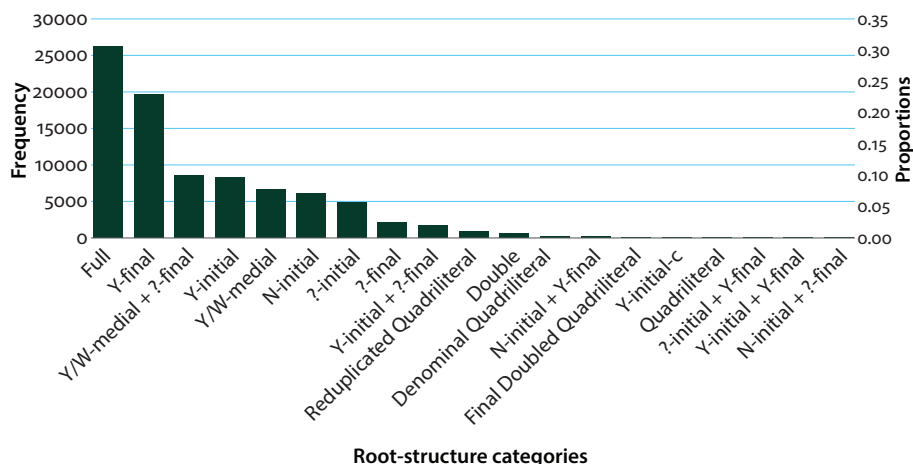


Figure 1a. Categories of root-structure in the database: tokens [N = 86,239 verb tokens], (from Levie et al. submitted)

9. And in some cases, also voicing assimilation, e.g., *hizdakek* ‘need’, based on root *z-q-q* – cf. *hitkadem* ‘advance’, showing not only metathesis but also the voicing of the *hitpa’el* *t* to *d*.

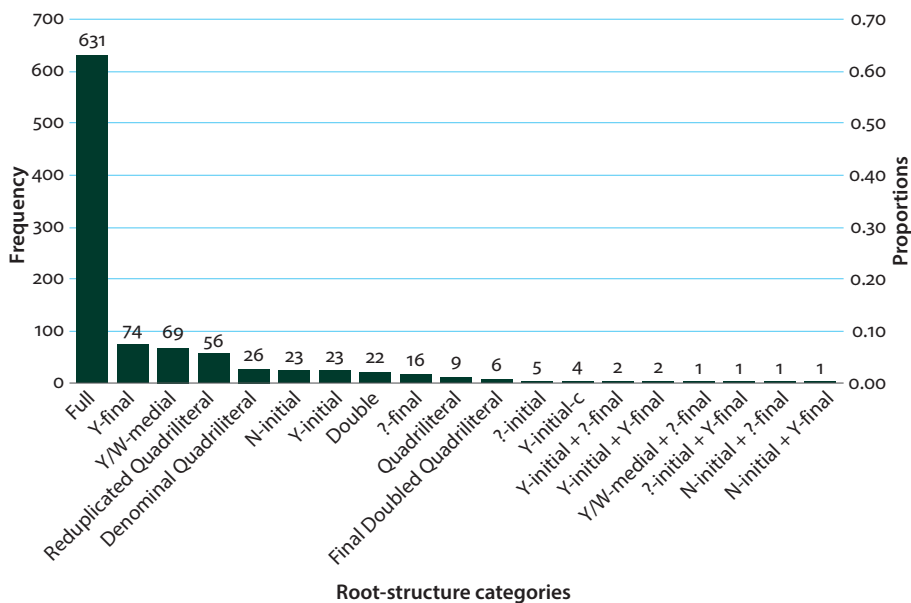


Figure 1b. Categories of root-structure in the database: types (N = 972 different roots) (from Levie et al. submitted)

(iii) *Defective roots* (termed *alulim* [Arabic ‘sick’] in the Hebraist tradition) may be considered the *irregular* Hebrew root category, yielding non-canonical, opaque, morpho-phonologically variant stems, with fewer root radicals realized in words constructed out of them. For example, compare *mesiba* (root *s-b-b*) and transparent *mixlala* ‘college’ in the same pattern *miCCaCa*. In what follows, root categories are analyzed in terms of their consistent morpho-phonological behavior (Aronoff 1976), taking into account the historical and orthographic forms to which they correspond and which still largely motivate how they alternate and are pronounced (Ravid 2012).¹⁰

The distributions of defective root categories (*gzarot*) in verbs presented in Figures 1a and 1b show that the largest group of defective roots (61% of root tokens, 24% root types) are those termed *naxim* ‘silent, unpronounced’. This class consists of verbs with non-obstruent, weak radicals *y*, *w*, or *?* or *y*-final roots, as in *b-k-y* ‘cry’ (23% tokens, 8% types);¹¹ *w/y*-medial roots like *q-w-m* ‘get-up’ (18% tokens, 7% in

10. Thus, roots containing apparently defective radicals but whose morpho-phonological behavior corresponds to full roots were considered full in the current analysis – e.g., root *c-y-r* ‘draw’ or *n-h-g* ‘lead’.

11. The unvoiced pharyngeal fricative *h* alternates with *y* when representing a vowel, e.g., *rei* ‘looking glass’ and *mara* ‘mirror’, both based on root *r-?-y* ‘see’.

types);¹² and *y*-initial roots like *y-r-d* ‘go down’ (12% tokens, 4% types).¹³ Another, smaller class of defective roots are *ʔ*-initial roots like *ʔ-p-y* ‘bake’ (6% tokens 1% types) and *ʔ*-final roots like *q-r-ʔ* ‘call, read’, which account for 2% tokens and types (see Ravid 1995, 2012 for details).¹⁴ Depending on the morpho-phonological environment of specific roots, ‘silent’ roots yield open syllables where consonants are expected in transparent stems, resulting in a smaller consonantal skeleton in the word. For example, the root *r-w-c* ‘run’ relates verbs like *rac* ‘run’ (cf. full root in *gadal* ‘grow’), *heric* ‘make run’ (cf. *higdil* ‘enlarge’), and nouns like *rica* ‘running’ (cf. *gdila* ‘growing’), *meroc* ‘race’ (cf. *migdal* ‘tower’) and *merica* ‘wheelbarrow’ (cf. *mixlala* ‘college’). Spoken words based on composite defective roots often realize only a single root consonant, as in root *b-w-ʔ* ‘come’ (with *w*-medial and *ʔ*-final radicals) yielding *hevi* ‘bring’, *mavo* ‘preface’. In writing, however, non-consonantal radical(s) in such words are typically and systematically spelled out by the *matres lectiones* letters ם, ן, ן, ן (Ravid 2012; Tolchinsky 2003).

A second, smaller class of defective roots are those termed *xaserim* ‘missing’. These consist mainly of roots with initial *n*- (e.g., *n-g-ʔ* ‘touch’), which deletes in consonant clusters, as in the future-tense verb *yipol* ‘will fall’ (cf. regular *yisgor* ‘will close’) or the noun *mapal* ‘waterfall’ (cf. *migdal* ‘tower’). The resulting form again contains fewer consonants than the canonical structure, but in this case, there is no trace of the missing *n*- in written Hebrew. Figures 1a and 1b indicate that *n*-initial “missing” roots account for 7% of all root tokens and 2% of all root types in the corpus.¹⁵ The third defective category is termed “double” in roots like *s-b-b* ‘go around’ or *p-r-r* ‘crumble’.¹⁶ Double roots may show up transparently with their full root structure in new words (e.g., nouns *sivuv* ‘turn’, *perur* ‘crumble’), but also in older forms with opaque structures (e.g., the past tense, transitive verb *sovev* ‘turn’ as compared with canonical *kilel* ‘curse’ with a full root structure). Double roots (only 1% of tokens, 2% of types) also tend to show up with a smaller root skeleton as in the verb *hesev* ‘settle down’ (cf. *higdil* ‘enlarge’ in the same *binyan* verb pattern) or noun *hafara* ‘violation’ (cf. *hagdala* ‘enlargement’). The major difference between defective and full root structural classes is thus consonantal rather than

12. Mostly due to the extreme prevalence of the modal/motion root *b-w-ʔ* ‘come’.

13. Including composites of these categories, e.g., *y-c-ʔ* ‘get out’, both *y*-initial and *ʔ*-final.

14. Mostly due to (i) the extreme prevalence of the modal/motion root *b-w-ʔ* ‘come’; and (ii) the prevalence of root *ʔ-m-r* ‘say’, one of the most frequent roots in adults’ productions.

15. A small category of roots starting with *y*- followed by *c* (e.g. *y-c-g* ‘demonstrate’) behaves like *n*-initial roots. The numbers were too small to affect the distributions in 1a and 1b.

16. Not to be confused with final doubled quadrilaterals.

vocalic, since defective classes – both “silent” and “missing” – have impoverished consonantal skeletons compared with full root classes.

Two processes of language change are under way in this domain in contemporary Hebrew. First, the number of different defective classes is shrinking, with defective verb classes merging with each other and also affecting structures based on full roots, due to erosion in MH of the vocalic difference between defective and full classes and within different defective *gzarot* (Ravid 1995). One major example is the current shift to treating all defective verbs in the *hif'il* conjugations as *hef'il* rather than as alternating between initial *a*, *i*, and *e* as in present tense *mapil* > *mepil* ‘drops, makes fall’, past tense *hikir* > *hekir* ‘knew, was familiar with’ (Bolzky 2007). This process is also spreading in past tense *hif'il* from verbs with defective roots to verbs based on full root structures (Trachtman & Meir 2017).

At the same time, the proportion of verb types based on defective roots in the Hebrew lexicon (less than a quarter of the total Hebrew root lexicon) tends to be shrinking, continuously leaking towards full, non-defective constructions by addition of regular roots and substitution of transparent for opaque forms. Consider the example of a double root such as *h-n-n* which underlies older, rare words with diminished skeletons (e.g., the *nif'al* verb *nexan* ‘be endowed’ or the noun *txina* ‘supplication’), but which shows up as a full root in transparent structures (e.g., the verbs *xanan* ‘endow, pardon’ (*pa'al*) and *hitxanen* ‘plea’ (*hitpa'el*), the adjective *mexonan* ‘gifted’ and the noun *taxanunim* ‘entreaties’). These two processes have the effect of reducing the variety of structural verb-classes, limiting them essentially to those with either a full or a diminished consonantal skeleton.

2.2 Stem plus suffix linear affixation

A second major device in Hebrew derivational morphology is linear (concatenating) affixation, a structural operation shared by inflection and derivation, as in plural *iton-im* ‘newspaper-s’ and derived *iton-ay* ‘journal-ist’, both based on *iton* ‘newspaper’ (Bolzky 2017b; Schwarzwald 2009). Non-linear morphology remains dominant, while linear derivation, an increasingly important device, is restricted to the nominal domain, and relies almost exclusively on suffixation (Ravid 2006a; Schwarzwald 2003). Derivational prefixes in MH are largely borrowed (e.g., European *anti-*, *pro-* or Aramaic *du-* ‘bi’ or *tlat-* ‘triple’) with no phonological relationship to the stem (Shlesinger 1989), although some prepositions serve double duty as native prefixes, like *ben-* ‘between/inter’, *al-* ‘on/super’, *tox-* ‘inside/intra’, *av-* ‘father/proto’ (Schwarzwald 2002). For present purposes, the description of linear derivational morphology is restricted to suffixation as a productive device applying systematically to nominals.

Unlike root + pattern combinations, linear morphology is based on stems, typically words, in the sense of prosodic entities containing both consonants and vowels. The core lexical component of a linearly constructed word is a noun or adjective (e.g., *mexona* ‘machine’/*mexona-i* ‘mechanic’, *muxan* ‘ready’/*muxan-ut* ‘readiness’).¹⁷ The derivational suffix (such as *-an*, *-ut*, *iya*) specifies the lexical category and ontological semantics of the derived word (e.g., *psantr-an* ‘piano:AGT = pianist’, *bot-ut* ‘crude:ABSTR = crudeness’, *tik-iy-a* ‘file:LOC = filing cabinet’). The base word may be morphologically complex, as in *maxševon* ‘calculator’, from *maxšev* ‘computer’ (root *ḥ-š-b* and Instrument pattern *maCCeC*), or simplex (e.g., *tik* ‘bag, file’). Suffixation may operate recursively, as in the noun *enoš* ‘human’ > derived adjective *enoš-i* ‘humane’ > the abstract noun *enoš-iy-ut* ‘humaneness’. Linearly suffixed words reflect relatively clear boundaries between their lexical stem and categorial affix, rendering them more transparent, less fused than root and pattern combinations. On the other hand, linear suffixation, both inflectional and derivational, shifts word-stress to the added final syllable, resulting in re-syllabification (Ravid 2006a), a process that is often accompanied by stem changes, as in *šana/šnat-on* ‘year/cohort’ (Ravid & Schiff 2009).

Historically, linear structure is a relatively latecomer to Hebrew morphology compared with root plus pattern derivation (Bolzky 1999). Although both are attested in Biblical Hebrew, non-linear Semitic structures were originally more prevalent, but as Hebrew structure became more analytic in post-Biblical periods, linear formation expanded to include extremely productive suffixes like those illustrated earlier (Bolzky & Schwarzwald 1992; Shlesinger 1989). Schwarzwald’s (2001b) examination of Hebrew dictionaries and texts revealed about half the entries as non-linearly constructed, with linear derivation under 15%, while recently innovated words divided equally between one quarter non-linear and one quarter linear. This change has enriched the vocabulary of Modern Israeli Hebrew considerably, providing the basis for formation of new lexical classes such as *i*-suffixed denominal adjectives that make up nearly 40% of current adjectives (Ravid, Bar-On et al. 2016; Schwarzwald 2001a). In terms of usage, linear derivation in nominals is an advanced, literate device for the expression of complex ideas, mastered by Hebrew-acquiring children years later than command of the Semitic root-and-pattern morpheme-level (Ravid 2006a). That is, despite its seeming transparency,

17. Very few linearly formed nouns are not based on actual words, e.g. *rišmi* ‘formal’ and *recini* ‘serious’, both coined during the revival of Hebrew on the basis of Semitic words. And this applies, too, to words that take foreign bases as stems, e.g. *normali* ‘normal’ or *kolektivi* ‘collective’, in contrast to English stems, which are often sub-lexical elements, as in *ident-ity*, *ident-ic-al*, *ident-ify*.

linear suffixation is not necessarily easier for speakers to process or more prevalent than non-linear affixation in current Hebrew.

Linear suffixation may take a different form and function in extra-grammatical *attitudinal suffixes* (Körtvélyessy 2014), a common, structure-preserving strategy in children's Hebrew (Hora et al. 2007; Ravid 1995, 1998). These include juvenile *-i* and teenage *-uš* (e.g., *píli* 'elephant:DIM', *ínfuš* 'infinitesimal.maths:DIM'), common in familiar child and adolescent interaction (Ravid & Ben Simon in progress). Unlike derivational suffixes, attitudinals are typically gender-neutral, they attach indiscriminately to nouns (*xatúli* 'cat:DIM', *bat-mícvuš* 'bat-mitzva:DIM'), adjectives (*gadóli* 'big:DIM'), as well as to function and social words (*háyuš* 'hi:DIM'), leaving stem stress and stem structure intact. The absence of category constraints renders attitudinal marking applicable in almost any context, appropriate for the task of social and personal bonding.

2.3 Zero-derivation

The process by which a word changes lexical class without change in form, by zero-derivation or syntactic conversion (Bauer & Hernandez 2005), is common in the shift from nouns to verbs in certain languages and a highly productive derivational process in English, as in (*to*) *eye*, *page*, *doctor* (Clark & Clark 1979). Given the non-linear structure of verbs, Hebrew zero derivation cannot take the same N > V route, which is always mediated by the root. For example, the lexical parallel of the English zero conversion of *document:N* > *document:v* would involve extracting a root skeleton from *mismax* 'document' and combining it with the *pi'el* verb-pattern to yield the verb *mismex* 'document:v'. In contrast, a highly productive process in Hebrew converts nouns and adjectives from present-tense verbs (Berman 1978a; Ravid 1990). As a structurally non-invasive process, V > N zero formation is a favored choice of young children applied when seeking to name a person or object in both experimental and natural conditions (Berman 1999; Clark & Berman 1984; Levie, Ben-Zvi & Ravid 2017; Ravid 1995). For example, a child (aged 2;7) coined the noun *mexaber* 'connector' (from the same form of the verb in *pi'el* present-tense 'connects, connecting') to denote a string running from one side of a room to another. Zero-derivation from *binyan* verb-patterns is also highly productive in conventional adult Hebrew as a means of creating agent and instrument nouns (Ravid, Bar-On et al. 2016). Well-established nouns include *moxer* 'seller = vendor' (*pa'al*), *marce* 'lecturer' (*hif'il*), *meavrer* 'fan' (*pi'el*), *mitamel* 'gymnast' (*hitpa'el*) and adjectives like *nif'al nirgaš* 'excited', *hif'il madhim* 'amazing', and *pu'al menukar* 'alienated, distant'.

2.4 Reduplication

Reduplication is a non-linear process productive in many languages (Spencer 1991: 150–156), in which part of the stem is repeated, as in *xazir* / *xazarzir* ‘pig/piglet’. In Hebrew, reduplication is less systematic and more restricted than the two major derivational devices of root+pattern and linear suffixation described above (Bolzky 2013b; Hora et al. 2007). In nominals, reduplication (*kof/koff* ‘monkey/baby monkey’, *šaxor/šaxarxar* ‘black/darkish’) is strongly associated with diminutive meanings and attitudes such as attenuation, informality, endearment, or contempt (Grandi 2005; Hora et al. 2007; Körtvélyessy 2014). In a recent experimental study (Ravid & Ben Simon in progress), reduplication emerged as the preferred diminutivization vehicle in older age groups, especially among adults. In verbs, given the obligatory Semitic root-and-pattern structure, reduplication applies to roots rather than stems, creating full, quadrilateral roots, often from less transparent ones such as, for example, *milmel* ‘babble’ based on *m-l-m-l* (from *m-l-l* ‘verbalize’) (R. Nir 1993).

Below, verbal and nominal derivational morphology are treated separately for verbs (§3), nouns (§4), and adjectives (§5), as autonomous systems with numerous points of convergence.

3. Derivational morphology in verbs

Hebrew verbs constitute the most typical habitat of root-and-pattern morphology. They express the full range of verb-oriented meanings of activities, events, processes, and states by a single means: non-linear affixation of roots to patterns in the small, closed system of seven *binyan* (literally ‘building’) conjugations traditionally termed *pa'al* (or *qal*), *nif'al*, *hif'il*, *huf'al*, *pi'el*, *pu'al*, and *hitpa'el*.¹⁸ Since no single verb form can be designated as “basic” (corresponding, for example, to English *sleep*, *run*, *understand*), the notion of verb *lemma* is taken as the unique combination of a specific root with a specific *binyan* (Berman 1978b, 1993, 2012; Schwarzwald 1981). For example, the root *y-r-d* in combination with *pa'al* means ‘go-down, descend’, while its *hif'il* counterpart has the causative meaning of ‘take down’; the root *b-y-š* in *pi'el* is a transitive activity verb meaning ‘put to shame’, while in *hitpa'el* it forms the middle voice intransitive ‘be-ashamed’. Both cases demonstrate the important difference between a root and a verb, since they represent two verbs that share the same root but constitute two separate verb lemmas

18. The root *p-s-l* ‘act, do’ is traditionally used in naming the *binyamin*, and *pa'al* is often termed *qal* literally ‘light, not heavy’ because of its CVCVC syllable structure, distinguishing it from “heavy” *binyan* forms like *pi'el* which historically contained geminate medial consonants.

(Bolzky 1999). For reader convenience, the Hebraist convention of using the morphologically simplex form of Past tense, 3rd Person Masculine Singular is adopted throughout the chapter to illustrate such combinations. The four verbs mentioned here are referred to as, respectively, *yarad* ‘go down’, *horid* ‘take down’, *biyeš* ‘shame’, *hitbayeš* ‘be-ashamed’.

The *binyan* conjugations are analyzed below as the key derivational system organizing the Hebrew verb lexicon.¹⁹ The seven members of the *binyan* system illustrated in Table 2 provide a morphological basis for new-verb formation, clustering together to express verb-oriented semantics and syntactic verb-argument relations. Systematicity of particular combinations and lexical meanings of *binyan* with a specific root, as well as the size and internal composition of derivational verb families, are only partially predictable, so that fine-grained information on Hebrew verb semantics needs to be learned for each verb lemma in context (Berman 2003; Ravid 1990; Ravid, Ashkenazi et al. 2016).

Table 2. Temporal (= tense and mood) paradigms of the seven *binyan* conjugations (P = tense/agreement prefixal markers ʔ y t n [ʔ“תאי])

Temporal stem ↓ <i>binyan</i>	Past tense	Present tense <i>beynoni</i>	Future tense	Imperative	infinitive
<i>qal</i>	<i>CaCaC</i>	<i>CoCeC CaCuC</i>	<i>PiCCoC</i>	<i>tiCCoC</i>	<i>li-CCoC</i>
<i>nif'al</i>	<i>niCCaC</i>	<i>niCCaC</i>	<i>PiCaCeC</i>	<i>tiCaCeC</i>	<i>le-hiCaCeC</i>
<i>hif'il</i>	<i>hiCCiC</i>	<i>maCCiC</i>	<i>PaCCiC</i>	<i>taCCiC</i>	<i>le-haCCiC</i>
<i>huf'al</i>	<i>huCCaC</i>	<i>muCCaC</i>	<i>PuCCaC</i>	---	---
<i>pi'el</i>	<i>CiCeC</i>	<i>meCaCeC</i>	<i>PeCaCeC</i>	<i>teCaCeC</i>	<i>le-CaCeC</i>
<i>pu'al</i>	<i>CuCaC</i>	<i>meCuCaC</i>	<i>PeCuCaC</i>	---	---
<i>hitpa'el</i>	<i>hitCaCeC</i>	<i>mitCaCeC</i>	<i>PitCaCeC</i>	<i>titCaCeC</i>	<i>le-hitCaCeC</i>

3.1 Structure and use of *binyan* patterns

Note, first, the fundamental difference between nominal and verbal patterns, traditionally termed *miškalim* ‘weights’ and *binyanim* ‘buildings’ respectively. A *miškal* is a single pattern shared by all its members, as in *miCCéCet* for *mirpéset* ‘balcony’, *mivréšet* ‘brush’, *mišbécet* ‘square’. In contrast, as shown in Table 2, each of the five non-passive *binyan* conjugations consists of a set of five temporal patterns uniquely marking past, present, future, imperative, and infinitive forms for that *binyan*. Table 2 shows, for example, that *pi'el* past-tense stems take pattern *CiCeC*, present-tense stems, *meCaCeC*, and infinitives, *le-CaCeC* (e.g., *diber* ‘talked’,

19. I use the term ‘conjugation’ here to mark the distinction between a *binyan* and the patterns that make up its temporal categories (mood and tense).

medaber ‘talks, is-talking’, *ledaber* ‘to-talk’. The two passive *binyan* conjugations *pu'al* and *huf'al* consist of three patterns each, since they do not have imperative and infinitive patterns.²⁰ Altogether, the *binyan* system consists of 31 temporal patterns spread across seven *binyan* conjugations, as shown in Table 2.

While the temporal paradigms of *binyan* conjugations are inflectional in nature, they are of relevance in the present context for several reasons. First, they demonstrate the affinity between inflection and derivation, since under the present analysis, verb inflectional paradigms (marking tense and mood) in fact make up the derivational entity referred to as a *binyan* conjugation, so underscoring the connection between grammatical and lexical features of Hebrew word-formation. This also explains why a *binyan* is a more abstract entity than a *miškal*, since learning or using a verb in a given *binyan* requires speakers to manipulate a set of patterns rather than a single pattern, unlike in the case of noun patterns. Note that this abstract construal of *binyan* is not always accompanied by phonological uniformity. For example, automatic command of a verb based on the root *s-r-g* ‘knit’ in the *pa'al* pattern requires the Hebrew speaker to relate three phonologically different entities – past tense *sarag*, present tense *soreg*, and the modal stems shared by future tense *yisrog*, imperative *srog*, and infinitive *li-srog*.²¹ While the temporal paradigms of *hitpa'el* and *huf'al* are phonologically uniform, differing only in their tense/person prefixes, those of *pi'el*, *pu'al* and *hif'il* are more variegated, whereas *pa'al* and *nif'al* are composed of phonologically diverse patterns.

Grammatical categories and morphophonological factors that impinge on the use and interpretation of the different *binyan* verb patterns are discussed below as follows: present-tense/participial *benoni* forms (§3.1.1), defective roots (§3.1.2), frequency of use (§3.1.3), transitivity and voice (§3.1.4), verb semantics (§3.1.5).

3.1.1 Benoni (present tense/participial) patterns

Historical as well as contemporary considerations set apart present-tense verb forms (termed *benoni* ‘intermediate’) as structurally and functionally different from other tense stems (Berman 1978a: 139–159; 2014, 2017). Verbs in past and future tense carry agreement marking for Person, Number, and Gender (e.g., *bikar-t* ‘visit:PST-2.SG.F = you visited’, *te-vakr-i* ‘FUT.2-visit-SG.F = you’ll visit’), whereas Present-tense stems are inflected only for Number and Gender, not for Person, like nouns and adjectives (*mevaker/mevakéret/mevakrim/mevakrot* ‘visit, criticize:SG.M/SG.F/PL.M/PL.F’). Moreover, as shown in Table 2, the present-tense patterns of five of the *binyan* conjugations (except for *pa'al* and *nif'al*) take the prefix

20. Except for the two typically Passive *binyanim*, *huf'al* and *pu'al*, which have no imperative and infinitive stems.

21. This deliberately does not take into account the various allomorphs of *pa'al* or the effect of defective roots on verb structure.

m- (e.g., *mevašel* ‘cooks, is-cooking’ in *pi’el*, *mešupac* ‘is-(being) renovated’ in *pu’al*, *maklit* ‘records, is-recording’ in *hif’il*, and *mitrašem* ‘is-impressed, has the impression’ in *hitpa’el*). The *m-* prefix also occurs in several *miškal* patterns (e.g., *miCCaC*, *miCCoC*, *miCCaCa*, or *miCCéCet*), hence also a salient marker of nominals (Ravid 1990, 1995). In what follows, present-tense verb patterns are divided into the two classes of (i) three resultative perfective *benoni* forms of passive *binyanim*, marked by the vowel *u* (Berman 1994; Ravid, Bar-On et al. 2016):²² *CaCuC* in *pa’al* (e.g., *šavur* ‘broken’), *muCCaC* in *huf’al* (e.g., *musbar* ‘explained’) and *meCuCaC* in *pu’al* (e.g., *mekumat* ‘creased’); and (ii) the five non-passive participial *benoni* forms (e.g., *hif’il mazhir* ‘brilliant’ or *pi’el mehamem* ‘stunning’).

The participial status of *benoni* stems and their structural affinity to nouns and adjectives play a special role in Hebrew derivational morphology, since present-tense *benoni* verbs may serve for zero-derivation of agent and instrument nouns as well as of adjectives. For example, the noun *šofet* ‘judge’ and the adjective *bolet* ‘salient’ both take the form of *CoCeC*, the present-tense temporal stem of *pa’al*. Similarly, the nouns *nivxan* ‘examinee’ and *nispax* ‘attaché ~ attachment’ take the present-tense pattern of *nif’al*, *mazkir* ‘secretary’ takes the *hif’il* present tense pattern, and *me’amen* ‘coach’ is in the *pi’el* form of *meCaCeC* present tense. *Benoni* patterns account for as high as around 40% of the adjectives in the Hebrew lexicon (Ravid, Bar-On et al. 2016). The autonomy of the *benoni* patterns as a derivational device is reflected in *benoni*-formed nominals that do not have corresponding verbal forms, as in the nouns *rofe* ‘physician’ (*CoCeC*, *pa’al*), *measef* ‘straggler’ (*meCaCeC*, *pi’el*) and the adjectives *šakuf* ‘transparent’ (*CaCuC*, *pa’al*), *neeman* ‘loyal’ (*niCCaC*, *nif’al*), *muclax* ‘successful’ (*muCCaC*, *huf’al*), or *menumas* ‘polite’ (*meCuCaC*, *pu’al*). As a result, a large part of the Hebrew *benoni* lexicon is grammatically indeterminate, so that designation of lexical category needs to take into account syntactic and pragmatic context (Ravid, Bar-On et al. 2016). For example, the form *metapes* might be interpreted as a present-tense verb meaning ‘is climbing /climbs’, as a noun ‘(human) climber, (plant) creeper’, or as an adjective ‘climbing’ (Itai & Wintner 2008), representing a structural inflectional/derivational category that is essentially determined by usage.

3.1.2 The effect of defective roots

Defective roots entail reduced consonantal structures and vowel changes in the *binyan*-derived stems depicted in Table 2. Many irregular stems typically contain open syllables in the presence of roots with *y*, *w* and *ʔ* - e.g., *lomar* ‘to-say’ (root

22. In addition to the pattern *CoCeC*, part of the *pa’al* verb paradigm, the perfective *CaCuC* pattern traditionally associated with active *pa’al* and inchoative/passive *nif’al*, though not strictly verbal, is also presented here for both historical and current psycholinguistic motivations (Pe’er, 2013).

?-*m-r*, infinitive *pa'al*, cf. *lirkod* ‘to-dance’, with full root *r-q-d*); *namog* ‘dissipate’ (*m-w-g* in past tense *nif'al*, cf. *nimsar* ‘to be handed over’, *m-s-r*), or *marce* ‘lecturing’ (*r-c-y* in present-tense *hif'il*, cf. *masbir* ‘explaining’, *s-b-r*). The specific form of the irregular verb stem depends on the combination of structural root category, *binyan* conjugation, and temporal pattern, as well as inflectional marking for agreement (see Chapter 7 and Chapter 12). While this topic is critical to learning and use of Hebrew morpho-phonology (Ravid 1995), elaboration is beyond the scope of the current chapter.

3.1.3 *Binyan* distributional frequencies

Taking the *binyan* conjugations as seven autonomous entities in the Hebrew lexicon, Figures 2a and 2b present the distributions of *binyan* conjugations in a database of nearly half a million (485,908) words. The corpus, composed mostly of spoken discourse produced by native Hebrew-speaking adults, adolescents, and children from mid-high SES backgrounds, contained altogether 82,239 verb tokens and 1,483 verb types (Levie et al. submitted; and see, too, Appendix A).

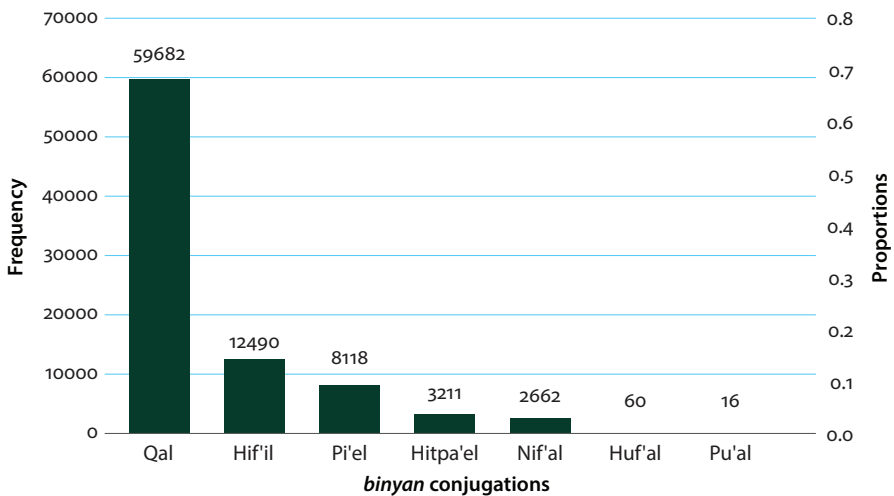


Figure 2a. Distribution of *binyan* conjugations in the database: verb tokens (N = 82,239) (from Levie et al., submitted)

Figure 2a confirms earlier findings (Berman 1993; Berman, Nayditz & Ravid 2011; Ravid, Ashkenazi et al. 2016) showing that *pa'al* is the most pervasive *binyan* in usage across all communicative contexts, with an average of 70% of verb tokens; this is followed by *hif'il* (15% of tokens) and *pi'el*, with *hitpa'el* and *nif'al* constituting a small part (under 5% each) of these distributions, and Passive *pu'al* and *huf'al* largely non-occurrent. Figure 2b indicates that the structure of the Hebrew lexicon is more balanced than its usage. While *pa'al* still accounts for 30% of verb lemmas,

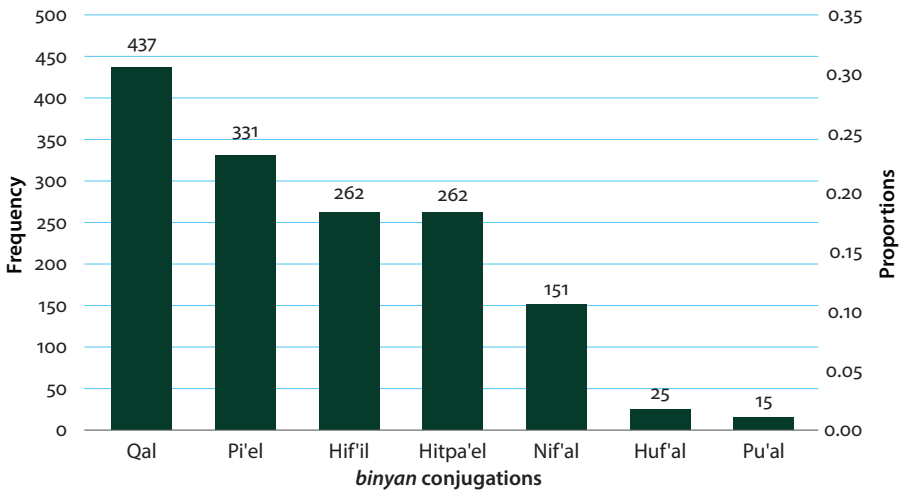


Figure 2b. Distribution of *binyan* conjugations in the database: verb types (N = 1,483) (from Levie et al., submitted)

pi'el and *hif'il* together make up a chunk of 40% verb types, with 30% dedicated to *hitpa'el* and *nif'al*, and 3% *huf'al* and *pu'al* passives.

To assess the impact of production mode, compare the *binyan* distributions in a corpus of narrative and expository texts drawn from this database, written by grade-school, middle-school, and high-school students, young adults in military and civil service, and adults, containing 34,888 word tokens, 6,707 verb tokens and 865 verb lemmas (Figures 3a,b).

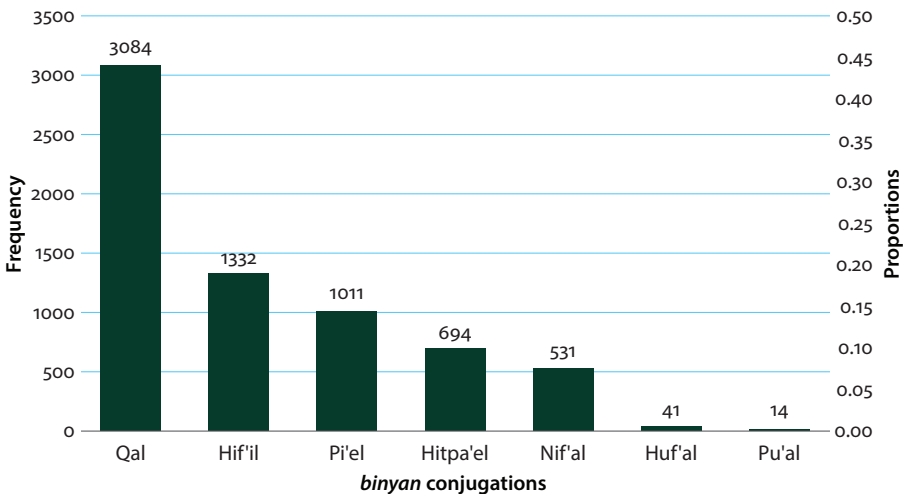


Figure 3a. Distribution of *binyan* conjugations in written corpora: verb tokens (N = 6,707) (from Levie et al., submitted)

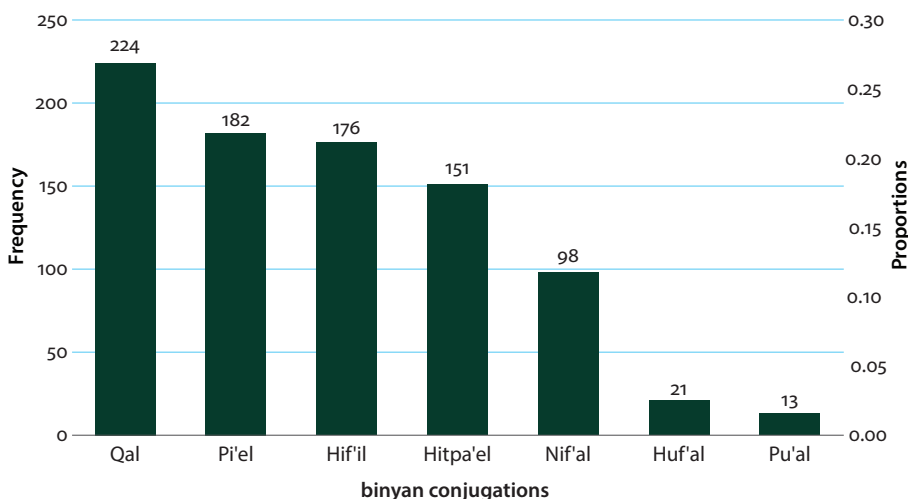


Figure 3b. Distribution of *binyan* conjugations in written corpora: verb types (N = 865) (from Levie et al., submitted)

In tokens, *pa'al* occupies less than 50% of the verbs, *pi'el* and *hif'il* 35%, and *hitpa'el* and *nif'al* together, close to 20%. In types, the five non-passive *binyanim* are evenly distributed, with almost 30% occupied by *hitpa'el* and *nif'al*, and 4% by *pu'al* and *huf'al*. Taken together, these distributions reflect the written language usage of educated, though non-expert Israelis and their school-aged children, pointing to the structure of the Hebrew lexicon in general and the fact that different *binyan* distributions serve as distinct markers of different communicative contexts, especially spoken versus written Hebrew.²³ The grammatical and semantic motivations underlying these distributions are described in the following sections.

3.1.4 *Binyan semantics and syntax*

Structurally, the *binyan* system can be seen as corresponding to Romance verb conjugations, which are morpho-phonological in nature (Monachesi 2005), but semantically, it is more similar to Slavic verb formation, which expresses aspect and verb-semantics or *Aktionsart* (Svenonius 2004). The Hebrew *binyanim* systematically convey three interrelated notions: transitivity relations, temporality (as construed in Vendler 1957), and *Aktionsart* (lexical aspect). In Modern Hebrew, these are realized by two distinct *binyan* sub-systems, both of which encode largely similar functions: The older, more frequent, core subsystem (henceforth – I)

23. It also includes children's storybooks, consisting of about 50,000 word tokens (see Appendix A).

of *pa'al*, *nif'al*, *hif'il* and *huf'al*; and the more contemporary, morphologically productive subsystem II of *pi'el*, *pu'al* and *hitpa'el* (Boložky 2009).²⁴ As shown below, this classification is motivated by semantic and functional as well as by morpho-phonological factors.

3.1.5 *Transitivity and voice*

One major function of the *binyan* system is representation of higher or lower transitivity values, with transitivity construed as a property of the clause where, following Hopper & Thompson (1980), a given verb expresses the effective transfer of activity from agent to patient. (Morpho-syntactic properties of Voice Alternations and of Transitivity and Valence are discussed from different perspectives in Chapters 10 and 13 of the present volume). In the framework of Hebrew *binyan* morphology, transitivity is largely translated as Voice – active, middle, and passive – with a special role assigned to causativity (Levin 2010). Following Berman (1993) and Ravid and Vered (2017), Table 3 depicts the configuration of transitivity within each sub-system by *binyanim* expressing differing degrees of agentivity, volitionality, and object affectedness, with correspondingly richer or poorer verb-argument structures and Accusative *et* marking. It also shows that Hebrew passive morphology is based on the three transitive *binyan* patterns – *pa'al*, *hif'il* and *pi'el* – each associated with a dedicated passive counterpart: *pa'al* with *nif'al*, *hif'il* with *huf'al*, and *pi'el* with *pu'al* (Ravid & Vered 2017).²⁵ The following analysis is based on recent semantic and distributional findings in the data-base described in Appendix A.

Table 3. The transitivity configuration of the seven *binyanim* along the dimensions of transitivity, voice, and sub-systems

Transitivity	HIGH	LOW	
	Agentive, causative Rich argument structure		Non-agentive Poor argument structure
Voice	Active	Corresponding passive	Middle
Sub-system I	<i>qal</i>	<i>nif'al</i>	
	<i>hif'il</i>	<i>huf'al</i>	<i>nif'al (hif'il)</i>
Sub-system II	<i>pi'el</i>	<i>pu'al</i>	<i>hitpa'el</i>

24. The so-called “heavy” Subsystem II *binyanim* had historically geminated medial radicals, so that today they serve as the habitat for quadrilateral root-formation.

25. The current analysis includes only genuine passives, excluding adjectival *benoni* resultatives.

3.1.5.1 *Transitivity in Subsystem I: pa'al, hif'il, huf'al, nif'al*

The *pa'al* conjugation is not only the most frequent *binyan*, it also serves as a base-line form, in many cases identified with the perceived meaning of the root (e.g., *ganav* 'steal', *axal* 'eat', *ba* 'come'). The *hif'il* pattern serves for prototypical, basic expression of transitivity and morphological causativity, especially in spoken and child Hebrew, including many highly agentive, object-affecting verbs (e.g., *hexbi* 'hide:TRANS', *hevi* 'bring'), often associated with two or three arguments and marked by Accusative *et* (Berman 1993).²⁶ The high-transitivity of *hif'il* is underscored by three sets of shared-root pairings in sub-system I: (i) In *pa'al*, verbs typically express a less transitive sense of self-initiated basic activity compared with their causative or highly agentive *hif'il* counterparts (compare *katav/hixtiv* 'write / dictate', *rac/heric* 'run/make run', along with a few patient-oriented verbs like *nafal/hipil* 'fall off/drop:TRANS', *kafa* 'freeze = become frozen'/*hikpi* 'freeze = make frozen'); (ii) *huf'al* verbs constitute the passive counterpart of *hif'il* verbs (e.g., *hixtiv/huxtav* 'dictate / be-dictated', *hipil/hupal* 'drop/be-dropped'); and (iii) non-agentive *nif'al* verbs express middle voice, as in *nirdam/hirdim* 'fall asleep/make sleep', *nimšax/himšix* 'last, go-on / continue.TRANS', *nidham/hidhim* 'be-amazed/amaze'. In marked contrast to basic *pa'al* and high-transitivity *hif'il*, verbs in *nif'al* typically express low transitivity in subsystem I, as in *nigmar* 'end', *nocar* 'arise', *neelac* 'be compelled', *nira* 'appear, seem', *neelav* 'be-offended', taking only prepositional rather than direct, accusative-marked objects, as in *nitkal be-* 'stumble upon', *nimas le-* 'be fed up' (Raz-Salzberg 2017).²⁷ Another, less prominent role of *nif'al* is the passive counterpart of verbs in *pa'al* with most *nif'al* verbs ambiguous as between middle and passive voice (e.g., *nistam* 'be clogged'). In a writteh corpus containing 165 *nif'al* tokens (Raz-Salzberg 2017), only 10 tokens had a non-ambiguous passive reading (e.g., *nikba* 'be determined', *nilmad* 'be learned', *nimdad* 'be measured', *nigram* 'be caused'). A currently less productive role of *hif'il* is in a small, restricted class of double-value verbs with both causative and middle voice, inchoative readings (e.g., *hišxir* 'blacken = make/become black'; *hivri* 'recover = become/make healthy'). Like English 'move and change' verbs, which can serve in both transitive and middle functions, such *hif'il* verbs participate in both constructions as in *Danny, targia et ha-kélev* 'Danny, calm the dog' and *Danny, targia* 'Danny, calm-down' (and see, further, comments on labile or ambitransitive forms in Chapter 13 on Transitivity and Valence).

26. Emphasis here is on 'morphological', since semantic causativity can also be expressed in *pa'al* – compare *pa'al harag* 'kill' and *hif'il hemit* 'make die, put to death'.

27. A few active, agentive, and volitional *nif'al* verbs occurred in younger children's texts, typically with a dative or other preposition, e.g., *nitpal le-* 'pick on', *nidxaf le-* 'push in, intrude', *nigaš le-* 'go up to', and *nilxam be-* 'fight'.

3.1.5.2 Transitivity in Subsystem II: *pi'el-pu'al-hitpa'el*

Transitivity values are expressed in this sub-system in a similar, but rather less varied set of relations. The base form in this subsystem, *pi'el*, generally has a transitive, agentive, often even causative function (e.g., *kines* 'assemble, bring together' or *miten* 'temper, modify'). However, *pi'el* verbs are not so necessarily and strongly transitive as those in *hif'il*, they include more intransitives (*hises* 'hesitate', *tipes* 'climb', *xiyex* 'smile', *tiyel* 'travel'), and fewer transitive verbs, often taking prepositional objects (e.g., *tipel be-* 'tend to, look after', *sixek im* 'play with'). *pi'el* also has fewer genuinely causative verbs than its *hif'il* counterpart (examples are adjective-participial based forms like *ximem* 'heat' from *xam* 'hot', *rikex* 'soften' from *rax* 'soft'). Importantly, given the absence of a corresponding *pa'al*-like *binyan* that hosts both intransitive and transitive verbs, *pi'el* serves the basic transitive role of verbs in Subsystem II (e.g., *nixeš* 'guess', *bišel* 'cook', *siper* 'cut hair', *tiken* 'fix', *kilef* 'peel').

Voice configuration is clearly demarcated in this subsystem, with active *pi'el* verbs frequently pairing with passive *pu'al* (as in *tipel/tupal* 'take care of/be-taken care of', *sider/sudar* 'arrange/be-arranged'), on the one hand, and with non-agentive, middle-voice, medial passive *hitpa'el* (as in *rikex/hitrakex* 'soften = make soft/become soft', *siper/histaper* 'cut hair/get a haircut'), on the other. Subsystem II is thus rich in active/passive/middle voice triplets such as *sider/sudar/histader* 'arrange/be arranged/get arranged', *kilef/kulaf/hitkalef* 'peel/be-peeled/peel off'. Importantly, *pi'el* and its counterparts serve as a major, highly productive vehicle of new-word derivation in Hebrew by extracting a root skeleton from any extant word, mostly from nouns, as the bulk of the Hebrew lexicon, but also from other classes (Bolzky 1978, 2003a).²⁸ For example, the verb *gišer* 'mediate' is derived from the noun *gēšer* 'bridge' via the root *g-š-r*, and the shared root of the triplet *xisel/xusal/hitxasel* 'wipe out, finish off/be wiped out/become extinct' derives from the adverb *xasal* 'enough'. This productive function and the resulting quantity of new verbs in Subsystem II render it more regular and more predictable than the older sub-system.

3.1.6 Verb temporality

A second dimension of semantics in the Hebrew *binyan* system is captured by Vendler's (1957) notion of temporality as expressing the notions of activity, state, achievement, and accomplishment. While specific verbs may express different temporal notions, concern here is with the systematic expression of temporality by *binyan* derivational morphology. A recent analysis of child-directed adult speech (Ashkenazi 2015) indicates that *hif'il* and *pi'el* are best characterized by values of transitivity and causativity, whereas the Vendlerian classification is particularly

28. In this, they correspond to the process of zero derivation or conversion in English (Clark & Clark 1979).

appropriate for characterizing the two non-transitive *binyanim* – *hitpa'el* and *nif'al*. As high as around three-quarters of the 1,504 *hitpa'el* tokens (108 types) designated durative events (e.g., *hitgaléax* ‘shave oneself’, *hityapéax* ‘sob’, *hitnaheg* ‘behave’), with the remaining one-quarter referring to durative events with an endpoint – Vendler’s category of ‘accomplishment’ (e.g., *hictanen* ‘get a cold’, *hitorer* ‘wake up’, *hitlaxlex* ‘get dirty’). In contrast, about half of the 171 *nif'al* tokens (18 types) were telic or punctual (e.g., *niftax* ‘open up’, *nikra* ‘tear’, *nirtav* ‘get wet’, *nirdam* ‘fall-asleep’) (corresponding to Vendler’s ‘achievement’), while about one-quarter expressed state (e.g., *nimca* ‘exist, be located’). This innovative analysis indicates that the temporal distinction between *hitpa'el* durativity (with or without endpoint) versus *nif'al* telicity lies at the core of *binyan* verb semantics and the distinction between Subsystems I and II.

3.1.7 Verb semantics (*Aktionsart*)

Another dimension of *binyan* functions that, again, is primarily relevant to the distinction between the two typically intransitive, middle-voice *nif'al* (the older Subsystem I) and *hitpa'el* (Subsystem II) concerns the specific syntactic-semantic functions expressed by these two patterns: inchoativity (change of state), reflexivity (where agent and object refer to the same entity), and reciprocity (where two agents are involved in the event), along with a few *hif'il* verbs like *hexlim* ‘recover = get well’ – notions that are discussed in rather different perspective in Chapter 10 on Voice Alternations. Analysis showed that in adult speech addressed to children, about a quarter of *hitpa'el* verb tokens were inchoative (e.g., *histayem* ‘end = be-terminated’), about 20% were reflexive (*hitxabe* ‘hide oneself’), and only 2% were reciprocal (*hitnašek* ‘kiss each other’), where reflexive and reciprocal semantics requires agentive subjects, unlike inchoative events. The remaining half of *hitpa'el* tokens did not express any of these functions (e.g., *histakel* ‘look’), with a similar breakdown of verb-types, revealing a relatively even distribution of inchoative, reflexive, and idiosyncratic functions. *nif'al* verbs, both tokens and types, were overwhelmingly (75%) inchoative (e.g., *nirtav* ‘get wet’, *neelam* ‘disappear’), with the remainder lacking a clear functional designation (*nitkal* ‘encounter, stumble on’). Table 4 summarizes the voice, temporality categories, and *Aktionsart* functions of the low-transitivity *binyanim* in each of the two subsystems.

Table 4. Voice, Vendlerian temporality and *Aktionsart* in the low-transitivity *binyanim*

<i>binyan</i>	Transitivity	Voice	Vendlerian temporality	<i>Aktionsart</i>
<i>hitpa'el</i>	Mostly low	Middle, Medial Passive	Durative, Accomplishment	Inchoative, Reflexive, (Reciprocal)
<i>nif'al</i>	Low	Middle, Passive	Telic (Accomplishment)	Inchoative

3.1.8 Overview of *binyan semantics and syntax*

In sum, the seven-*binyan* system is configured in two sub-systems, each expressing a full range of transitivity, Vendlerian temporality, and *Aktionsart* properties that constitute the semantic-morphological organization of the verb lexicon and of Hebrew clause syntax, allowing for fine-grained expression of verb-based meanings. High-transitivity, highly agentive, often causative events with multiple participants are mostly encoded in *hif'il* and *pi'el*, productively interacting with passive-voice *huf'al* and *pu'al* respectively. Low-transitivity, low-agentivity scenarios are chiefly encoded in middle-voice *nif'al* and *hitpa'el*; *hitpa'el* mostly expresses durative or accomplishment events, often with inchoative, reflexive, or reciprocal lexical aspect (where the last two are associated with higher agentivity); *nif'al* mostly expresses telic or accomplishment events, with inchoative lexical aspect; *pa'al* basic, transitivity-neutral, and high-frequency, interacts with all other *binyanim*, with *nif'al* and sometimes *hitpa'el* as its medial passive and passive counterparts, on the one hand, and with *hif'il* and *pi'el* adding transitivity and causativity, on the other. This overall configuration of the *binyan* system provides the means for specific, semantically nuanced, often redundant lexical expression (Laks 2013). For example, the notions of 'peel/be peeled' are expressed by both high-register *kalaf/niklaf* (*pa'al/nif'al*) and neutral-register *kilef/kulaf* (*pi'el/pu'al*); and the inchoative notion of 'get old' can be expressed by two high-register verbs (*zakan* in *pa'al*, *hizkin* in *hif'il*) serving as synonyms for the widely-used *hizdaken* in *hitpa'el*.

3.2 Derivational verb families

Hebrew verbs, based on seven *binyanim* and consisting of some 1,500 roots (Levie et al. submitted), give rise to a third major organizational mechanism of the Hebrew lexicon, derivational families based on the same root in different *binyanim*. Consider the earlier examples of root *g-d-l* > *gadal* 'grow', *higdil* 'enlarge', *hugdāl* 'be enlarged', *gidel* 'raise', *gudal* 'be raised', and *hitgadel* 'aggrandize oneself'; root *k-n-s* > *nixnas* 'enter', *hixnis* 'insert', *huxnas* 'be inserted', *kines* 'assemble:TR', *kunas* 'be-assembled:PASS', and *hitkanes* 'assemble:INTR'; and *z-m-n* > *hizmin* 'invite', *huzman* 'be invited', *zimen* 'summon', *zuman* 'be summoned', *hizdamen* 'happen on, chance to'.

3.2.1 Composition of derivational families

The composition of verb derivational families is defined along two related dimensions delineated above: (i) expression of verb-oriented transitivity, Vendlerian temporality, and *Aktionsart* semantics by designated *binyan* conjugations and (ii) configuration of the *binyan* system into two, often overlapping, sub-systems, as presented in Table 5.

Table 5. Derivational families across the *binyan* system

<i>Binyan</i> Root	Sub-system I				Sub-system II		
	Qal	Nif'al	Hif'il	Huf'al	Pi'el	Pu'al	Hitpa'el
1. <i>ṭ-ṣ-m</i>	<i>taam</i> taste	<i>nitam</i> be-tasted	<i>hitim</i> make taste emphasize	<i>hutam</i> be-made to taste, be- emphasized			
2. <i>š-k-b</i>	<i>šaxav</i> lie down	<i>niškav</i> lay oneself	<i>hiškiv</i> make lie down	<i>huškav</i> be-made to lie down			
3. <i>ṭ-w-s</i>	<i>tas</i> fly:INTR		<i>hetis</i> fly:TR	<i>hutas</i> be-flown			
4. <i>r-d-m</i>		<i>nirdam</i> fall asleep	<i>hirdim</i> make fall asleep	<i>hurdam</i> be-made to fall asleep			
5. <i>h-d-q</i>					<i>hidek</i> fasten:TR	<i>hudak</i> be- fastened	<i>hihadek</i> get fastened
6. <i>b-r-k</i>					<i>berex</i> bless	<i>borax</i> be- blessed	<i>hitbarex</i> feel blessed
7. <i>g-l-h</i>					<i>gileax</i> shave:TR	<i>gulax</i> be-shaved	<i>hitgaléax</i> shave:REFL
8. <i>š-g-ṣ</i>					<i>šigea</i> drive crazy		<i>hištagéa</i> go crazy
9. <i>g-n-b</i>	<i>ganav</i> steal	<i>nignav</i> be-stolen	<i>higniv</i> sneak in:TR	<i>hugnav</i> be- snuck in			<i>hitganev</i> sneak in
10. <i>m-c-ṣ</i>	<i>maca</i> find	<i>nimca</i> be-found be-located	<i>himci</i> invent supply	<i>humca</i> be- invented be-supplied			<i>hitmace</i> know one's way
11. <i>n-p-l</i>	<i>nafal</i> fall		<i>hipil</i> drop:TR	<i>hupal</i> be-dropped			<i>hitnapel</i> fall upon
12. <i>g-d-r</i>			<i>higdir</i> define	<i>hugdar</i> be-defined	<i>gider</i> fence off	<i>gudar</i> be- fenced off	
13. <i>p-c-c</i>			<i>hifcic</i> bomb	<i>hufcac</i> be-bombed	<i>pocec</i> explode	<i>pucac</i> be- exploded	<i>hitpocec</i> go off
14. <i>ṭ-b-d</i>	<i>avad</i> be-lost	<i>neevad</i> get-lost			<i>ibed</i> lose		<i>hit'abed</i> kill oneself
15. <i>ṭ-k-l</i>	<i>axal</i> eat	<i>neexal</i> be-eaten	<i>heexil</i> feed	<i>huaxal</i> be-fed	<i>ikel</i> consume	<i>ukal</i> be- consumed	<i>hitakel</i> get- consumed

Examples #1–4 in Table 5 show families restricted to the older sub-system I, examples # 5–8 – families restricted to the newer sub-system II, and examples 9–15 – families that cut across the two sub-systems. Such constellations of verbs observe the general transitivity-temporality-*Aktionsart* map described above, while the specific lexical semantics of each verb lemma provides for rich lexical variety. For

example, *hif'il* and *pi'el* verbs express causativity in different ways in examples #12, 13, and 15 in Table 5; *nif'al* ranges between passive and middle voice; and *hitpa'el* expresses a range of meanings including middle voice, durativity, and inchoativity (#5, 8, 15 in Table 5) as well as reflexive and generally agentive senses (#6, 7, 9, 11, 14). The two sub-systems sometimes express two shades of meanings (as in #12, 13, 15) but, as expected in derivational systems, individual verbs in the family display idiosyncratic semantics (e.g., *hitpa'el* in #10, 11, 14), and smaller verb groups in the family may be ambiguous (#1 10). Finally, due to the semi-productive nature of derivation, Table 5 contains numerous empty slots – predictably, due to transitivity relations (e.g., #3), and unpredictably (e.g., the empty *pu'al* slots in #8 and #14 passive), mostly in slots which can be readily filled if the occasion arises. Table 5 thus demonstrates how a large, inclusively systematic picture of Hebrew verb expression emerges out of such smaller patterns.

3.2.2 Family size and semantics

The size of a derivational verb family is determined by the number of *binyan* conjugations sharing a single set of root consonants. In actual fact, very few roots occupy all possible seven *binyan* slots; one such case is the *h-š-b* family, thus: *xašav* 'think', *nexšav* 'be considered', *hexšiv* 'take into account', *huxšav* 'be taken into account', *xišev* 'calculate', *xušav* 'be calculated', and *hitxašev* 'be considerate'; another is the *k-t-b* family: *katav* 'write', *nixtav* 'be written', *hixtiv* 'dictate', *huxtav* 'be dictated', *kitev* 'cc = send a copy', *kutav* 'be-cc-ed', and *hitkatev* 'correspond'. Such large root-related families with five to seven members very often require semantic adjustments, organizing into smaller, more semantically coherent groups (Bolzky 1986), as in the case of the 'think', 'calculate', and 'consider' meanings of the *h-š-b* family, or the 'enter' and 'assemble' notions in the *k-n-s* family. This process of semantic split is enhanced in families originating in ancient roots, expanded by novel coinages, especially in the newer Subsystem II. A clear example is the family based on *p-q-d*: *pakad/nifkad* 'visit, issue command/be visited, go AWOL', *hifkid / hufkad* 'deposit/be deposited', and *piked/pukad/hitpaked* 'command/be-commanded/count oneself'. As a result, smaller families, based on two or three *binyan* conjugations, tend to be more semantically coherent than larger ones. Compare, for example, the semantically split root *š-t-q* in Subsystem I (*šatak* 'be silent', *hištik* 'silence', *huštak* 'be silenced') versus Subsystem II (*šitek* 'paralyze', *šutak* 'be paralyzed', *hištatek* 'quiet down'), as against the more uniform semantic relations manifested in small families, like Subsystem I *daras/nidras* 'run over/be run over' or Subsystem II *nika/nuka/hitnaka* 'clean/be cleaned/get cleaned'. Relatedly, the family based on root *s-k-m* conveys the meanings of 'agree' (*hiskim* 'agree', *huskam* 'be agreed', *sikem* 'declare agreement', *sukam* 'be declared as agreed') and also 'add up, summarize' (*saxam* and *sikem* 'add-up:TR', *histakem* 'add-up to:INTR'). Other small families are based on homophonous root skeletons such as *ʔ-m-r* > *amar/neemar* 'say/be said' alongside

of *heemir* ‘rise, increase’ or *g-z-m* > *gazam* ‘prune’ versus *higzim* ‘exaggerate’. An estimated 20% of the verb families in the half-million-word database (Ashkenazi 2015) were found to be composed of homophonous roots such as *ʔ-b-q* > ‘dust’ ~ ‘struggle’, *s-p-r* ‘tell’ ~ ‘cut hair’, *q-r-ʔ* ‘read’ ~ ‘call’.

What emerges, then, is that due to historical processes of semantic and phonological drift, the Hebrew verb lexicon contains families of various sizes displaying verb polysemy and root homophony. Moreover, the often-held view of the Hebrew verb lexicon as composed of large families or even of many families is incompatible with findings from actual usage, as depicted in Figures 4a and 4b.

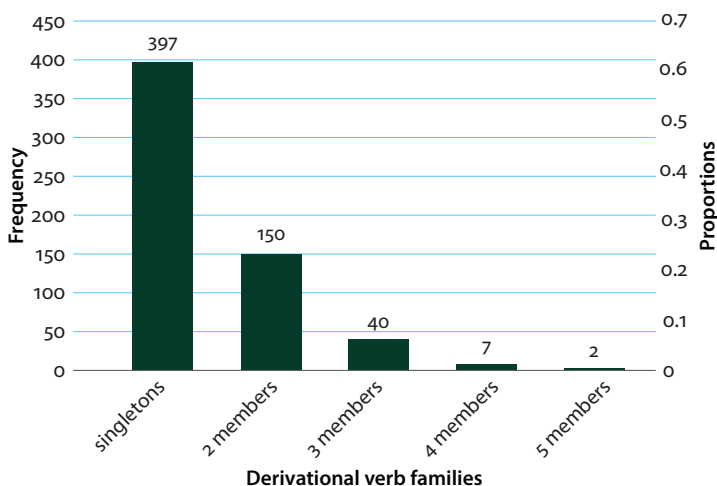


Figure 4a. Distributions of derivational verb families in a written corpus (N = 596 roots)

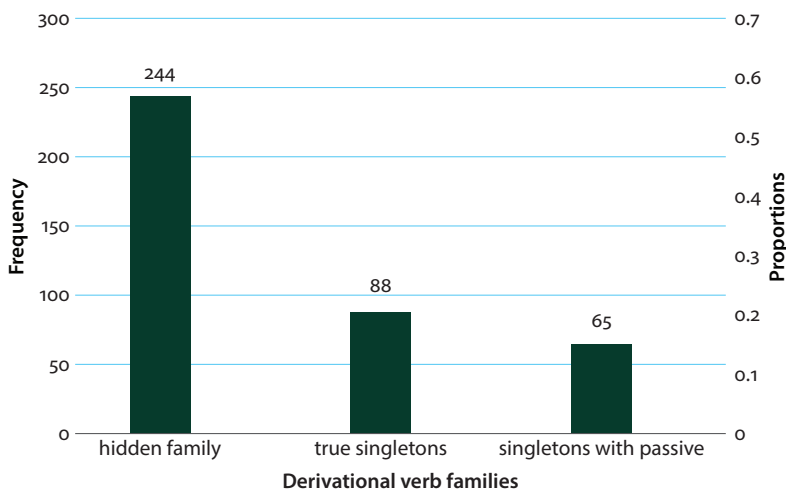


Figure 4b. Analysis of the 397 singleton roots in 4a

Figure 4a (Levie et al. submitted) shows that about two-thirds of the 596 roots in a written corpus were singletons, that is, did not have verbs in other *binyan* conjugations sharing the same root in the corpus. A quarter of the roots were in two-*binyan* families, and only 8% were in larger, three+*binyan* families. A further analysis of the 397 singleton roots in 4a (Figure 4b) revealed that over 60% did have “hidden families” in the undocumented verb lexicon (that is, not in the analyzed corpora), whereas close to 40% of these roots were either genuine singletons (like *šiker* ‘tell a lie’), with no other family members, or else had only a passive form as their one other family member (*tipel* ‘take care’ / *tupal* ‘be taken care of’). A similar analysis of a larger corpus with 972 roots, mostly composed of spoken Hebrew (Levie et al. submitted), showed an even larger number of singletons, with a corresponding 50% of singletons and singletons + passive counterparts, while two-*binyan* families continued to compose 25% of the database. Extrapolating from these analyses to the distributions of derivational families in Hebrew leads to the conclusion that the Hebrew verb lexicon consists of about 25% singleton verb lemmas (e.g., *karas* ‘collapse’, *tipes* ‘climb’, *hišta’el* ‘cough’), about 40% two-*binyan* families, including passive members (e.g., *kilel* / *kulal* ‘curse/be cursed’), and about one-third larger families. It makes sense, moreover, that more formal written and literary materials will manifest more different roots, and more and larger verb families, than colloquial spoken usage or child-related discourse.

3.3 New-verb derivation

The organization depicted above serves as the basis for derivation of new verbs in the case of incidental lexical gaps, mainly by younger speakers (Berman 1993, 1999; Berman & Sagi 1981; Ravid 1995) and in response to a need for new lexical items as the language expands and adapts to new contexts and situations. In verbs, the notion of ‘new’ can in principle refer to either *binyan* or root. There is no evidence for the introduction of new *binyan* conjugations into Modern Hebrew, despite the Mishnaic variants of *hitpa’el* (*nitpa’el*, e.g., *nitgala* for *hitgala* ‘be discovered’) and of *pi’el* (so-called *šif’el*, e.g., *šixrer* ‘set free’) (Bolzky 2010; Goldenberg 1995; Rabin 1969). The sole device for new-verb formation thus relies on the extraction, often accompanied by reconstruction, of root skeletons from extant words as a robust mechanism flexible enough to accommodate any need for verb coinage. This process extracts the entire consonantal skeleton from a word and recombines it with a verb pattern, usually in the newer sub-system of *pi’el*, *pu’al* and *hitpa’el*, which can accommodate a large number of consonants (Bolzky 1997), and can access a full range of transitivity-temporality-*Aktionsart* semantics. Importantly, this new-root derivation also applies to verb-derived nominalizations, as in the pattern *CiCuC* for *pi’el* (see, further, Chapter 11 on Nominalizations).

Root extraction from extant verbs is the favored means of internal expansion of verb derivational families (Bolzky 2007; Schwarzwald 2002). An example is the recent extension of the former singleton *t-q-l* from middle-voice *nitkal* ‘stumble on’ to causative *hitkil* ‘trip up’. In many cases, this leads to expansion from the older to the newer sub-system (e.g. *kitev/kutav* ‘cc, forward a copy’ from other verbs based on root *k-t-b*). But in fact any word in any class is accessible to skeleton root extraction (Bolzky 2003b), including nouns (e.g., *hitalmen* ‘became widowed’ from *alman* ‘widower’), adjectives (*niyed* ‘make mobile’ from *nayad* ‘mobile’), compound words (*idken* ‘update’ from *ad kan* ‘so far, till here’), as well as blends and acronyms (*minkel* ‘manage’ from *mankal* ‘CEO’). Spontaneous, rather than officially sanctioned, new-verb derivation invariably takes the shape of a transparent, canonically constructed verb that closely preserves the consonantal skeleton of its parent word (Bolzky 2004; Laks 2018; Ravid 1990). This includes retaining its original stop or spirant value (e.g., *kixev* ‘star’ from *koxav* ‘star’ in preference to normative *kikev*), and also explains the tendency for derivation in *hif’il* in cases of initial consonant clusters, as in *hišpric* ‘spurt’ from *špric* ‘spurt’ (Bolzky 2004).

Like many features of MH, root extraction and recombination with verb conjugations goes back to classical times (Bolzky 2003a; Ravid 1995 and see Bolzky & Berman, Chapter 10, Table 6), as in an ‘old’ verb like classical *heezin* ‘listen’ derived from *ózen* ‘ear’ (Avineri 1964). At the same time it manifests considerable productivity in the contemporary Hebrew lexicon. One indirect outcome is a constant increase in the proportion of full, regular roots and transparent verb forms at the expense of the shrinking class of defective, irregular roots with opaque verb forms. A second consequence of lexical expansion via root extraction is the ‘morphologization’ of the Hebrew lexicon, where simplex lexical items missing in morphological structure are linked to morphologically transparent verbs. One such process is extracting a regular root with consonantal *y* and *v* from monosyllabic nouns with a word-internal *waw* (*vav*) or *yod*. For example, the nouns *bul* ‘stamp’, *xut* ‘thread’ yield transparent new verbs such as *biyel* ‘stamp’ or *xivet* ‘wire’ (Ravid 1990, 2012). This process relates verbs based on glide-medial roots such as *cad* ‘hunt’, *sar* ‘move towards’ and *ba* ‘come’ to recently coined verbs like *ciyed* ‘provide’, *siyer* ‘tour, patrol’, *yibe* ‘import’, their related action nominals like *ciyud*, *siyur*, *yevu*, as well as nouns like *cayad* ‘hunter’, *sayar* ‘scout’, *savar* ‘longshoreman’. Thus, despite the prevalence of a small number of opaque verb forms in everyday usage and child-directed speech, much of the spoken and written verb lexicon of literate, educated Hebrew users consists of transparent root skeletons and verb forms.

A well-established means of relating nominals to transparent verb roots is by *secondary root formation*, where the consonantal skeleton of a word, including its root radicals as well as its derivational affixes, is extracted and re-used as the root

of a new verb (Boložky & Allon 2015; R. Nir 1993; Ravid 1990).²⁹ For example, the noun *takciv* ‘budget’ includes four consonants – the root *q-c-b* ‘allocate’ and the prefixal *t-* of the *taCCiC* pattern. To create a new verb, the extracted skeleton *t-q-c-b* is combined with the *pi'el* conjugation, yielding *tikcev* ‘(to) budget’, or the *benoni* passive form in *pu'al*, to yield *metukcav* ‘budgeted’. This new root is secondary in the sense that it includes a radical that was formerly an affix. Like all naïve new-word derivations, secondary roots preserve the structural skeleton and lexical semantics of the parent word. When the original root is defective, the resulting verb is tri-consonantal, as in *mider* ‘compartmentalize’ from *mador* ‘section, department’, based on root *d-w-r* ‘reside’ and pattern *miCCaC*; or *kimet* ‘quantify’ from *kamut* ‘quantity’, based on *kama* ‘several’ (root *k-m-y*) and the abstract suffix *-ut*. In both cases, the historical, defective root radical is replaced by an affix consonant, reassigned a root role.³⁰ When the original root is full, the resulting verb is quadri-consonantal, e.g., *mirkez* ‘center’ from *merkaz* (originally based on root *r-k-z* ‘concentrate’), or *tidrex* ‘give a briefing’, from *tadrix* ‘(a) brief’, based on root *d-r-k* ‘step’ and pattern *taCCiC*. The root of verb *timcet* ‘summarize, extract’ (*t-m-c-t*) actually has two reassigned root radicals, both the prefixal and suffixal *t* in *tamcit* ‘summary, extract’ (root *m-c-y*). Two affix consonants are extremely productive in deriving secondary verbs: prefixal and suffixal *-t* (prevalent in nominal patterns such as *taCCiC*, *taCCeCa*, or *miCCéCet*, as well as the abstract suffix *-ut*) and the productive prefixal *m-* discussed above. In contrast, suffixal *-n* (from *-an* or other *-n* suffixed derivations), is used in only a few cases (e.g., *hitanyen* ‘be interested’, based on *inyan* ‘matter, interest’, itself constructed from root *ṣ-n-y* ‘respond’). This low frequency is due to the relative rarity of *-n* suffixation, combined with the general scarcity of linearly derived words in comparison to the vast productivity of root-and-pattern words.

The productivity of *root extraction* in new-verb formation has increased the proportion of regular and quadri-literal verb roots in the general verb lexicon. And the process of *root reconstruction* has also served to establish the status of the root skeleton as an autonomous lexical entity mediating between source and new words. While some of these processes originated in earlier periods of Hebrew and dictates of the language establishment in contemporary Hebrew, most by now have an independent status, regardless of top-down interventions.

29. Examples are presented in *pi'el*, the basic *binyan* in the new subsystem, but derived secondary verbs can almost always take the passive *CuCaC* or the resultative *meCuCaC* forms, and often also *hitpa'el*, in addition to their nominalized forms like *CiCuC*.

30. Regularizing defective roots and adding on extra consonants is not a new phenomenon. See Wachter's (1971) proposal that *šif'el* verbs originate in four Biblical Hebrew weak roots (e.g. *š-k-n* ‘dwell’ based on *k-w-n* ‘stay’).

Root reconstruction expands and regularizes extant roots without directly extracting the root skeleton from a specific source word. Take, for example, the creation of a reduplicated quadri-literal root from a historically defective root, often one underlying mono-syllabic nouns, as in *g-l-g-l* 'roll' from 'double' *g-l-l* 'roll up, scroll' or *d-f-d-f* 'thumb through', from *daf* 'page, leaf', a process often adopted in the formation of onomatopoeic verbs (e.g., *zimzem* 'buzz'). Other root-reconstruction processes rely on templates (or constructions) emerging from the frequently 'radicalized' non-linear (pattern) and linear affixes *m-* and *-t-*. Thus, reconstructed roots may be expanded to include an initial *t-* in the absence of source words with prefixal *t-* patterns, as in the verbs *tizmen* 'synchronize' and *tidlek* 'fuel' (cf. the nouns *zman* 'time', *délek* 'fuel') or the adjective *metukšav* 'digital'. Note, in comparison, *tirgel* 'rehearse' from *targil* 'exercise', based on root *r-g-l* 'habit' and pattern *taCCiC*, or *tikšer* 'communicate', from *tikšoret* 'communication', based on root *q-š-r* 'tie' and pattern *tiCCóCet*. Reconstructed roots may include an initial *š*, as in contemporary *šinéa* 'transport', based on the classical motion root *n-w-š* 'move', *šidreg* 'upgrade', based on *d-r-g* 'step, rank', or *šixlel* 'improve', based on *k-l-l* 'whole'. This extends an early process in such verbs as Mishnaic *šixrer* 'set free' and *šibed* 'enslave', one that sparked a debate about a new *binyan šif'el* with a specific function of reiteration (Bolzoky 2010; Goldenberg 1995; Rabin 1969; Schwarzwald & Neradim 1995). Evidence, in fact, points to *š*-expanding extant roots recombining with *pi'el*, the main mechanism for new-verb derivation, for expressing high transitivity and causativity, as in the case of the root *š-d-p* in the verb *heedif* 'prefer' expanded with non-prefixal *t-* to create highly transitive *tiadef* 'prioritize' in *pi'el*. Finally, the last radical of root skeletons (extant or extracted out of nouns) may be reduplicated, as in *kidrer* 'dribble' based on the skeleton extracted from *kadur* 'ball', or diminutivizing *cixkek* 'giggle', based on *caxak* 'laugh'.

While new-root creation processes, including formation of quadriliteral roots, are a productive facet of Hebrew derivational morphology underlying coinage of new verbs and related words, they are not high-frequency in usage. Figure 1a above shows that out of over 86,000 verb tokens produced in a corpus of spoken and written Hebrew, only 1,153 (1%) were quadri-literal, most of them reduplicated.

4. Derivational morphology in nouns

As noted earlier, the term ‘nominals’ is an umbrella notion in Hebrew studies, traditionally covering both nouns (§4.1, §4.2) and adjectives (§5). In distributional terms, a 300,000-word token corpus of child-oriented speech (Ashkenazi 2015) contained some 60,000 noun tokens, as compared to about 55,000 verb tokens. The difference between verbs and nominals was more pronounced in terms of lemma types, with about 1,500 different nouns compared to 684 different verbs (compare the dictionary and internet listings in Chapter 9). Evidence points to even higher proportions of noun tokens (for difference reasons) in early child language (Berman 1981) and in written usage (Ravid 2006b; Ravid & Cahana Amitay 2005; Ravid & Zilberbuch 2003a, 2003b). Among young children, early nouns are more concrete and fulfill more roles than verbs (Hirsh-Pasek & Golinkoff 2008), but in literate, especially written Hebrew, nouns underlie the dense, complex syntax that conveys abstract thought (Ravid & Berman 2010; Ravid & Chen-Djema1 2015).

Many of the content words in spoken and written usage are thus nouns, but not all or even most of these are morphologically derived. This is because, unlike verbs, nouns (and adjectives) do not necessarily involve word-internal morphological structure for reasons including core-lexicon simplex (i.e., monosyllabic) nouns like *yad* ‘hand’, *sof* ‘end’; both older and currently borrowed nouns (e.g., *tarnegol* ‘rooster’, *safsál* ‘bench’, *pijáma* ‘pajamas’, *télefon* ‘telephone’, *kef* ‘fun’); kinship terms (*ába* ‘daddy’, *sávta* ‘grandmother’); proper nouns, brand names, etc. (Berman & Seroussi 2011; and see, too, Chapter 9 on Parts of Speech).

Here, concern is with morphologically complex nouns, the most structurally diverse of open-class items in Hebrew. Many nouns have non-linear, root-and-pattern structure – as in *mastem* ‘valve’, based on root *s-t-m* ‘stop up’ and the instrument-noun pattern *maCCeC*, *miklat* ‘shelter’ from root *q-l-t* ‘absorb’ plus place pattern *miCCaC*. This class of nouns also includes nouns patterned after present-tense/participial *benoni* forms, such as *soxer* ‘merchant, trader’ (root *s-ḥ-r*), *mone* ‘counter’ (root *m-n-y*), both in the *CoCeC* pattern of *pa'al*. Other nouns have linear stem-and-suffix composition, as in *ir-íya* ‘municipality, city hall’, from stem *ir* ‘city’ suffixed by place *-íya*, or reduplicated structure, as in *sak-ik* ‘little bag’, based on *sak* ‘sack’. And nouns can be combined to form blends, as in *maxazémer* ‘musical show’, from *maxaze* ‘play’ and *zémer* ‘singing’, or acronyms, as in *mankal* ‘CEO’, from the initial consonants of *menahel klali* ‘general director’ (Berman 1989; Ravid 1990).³¹ Finally, nouns form compound constructions to express complex

31. Inflectional suffixes may also be used for derivation, e.g., plural *šerutim* ‘restroom’ (cf. singular *šerut* ‘service’) and *taxtonim* ‘underwear’ (cf. *taxton* ‘underneath’), or feminine *gufa* ‘corpse’, based on *guf* ‘body’.

sub-categorization, as in *maxširey[^] xašmal* ‘electrical appliances’ (Berman 2009; Ravid & Assulin Tsabar 2017; Ravid & Zilberbuch 2003b; and see, too, Chapter 14 on Genitive Constructions). In usage, in a corpus of peer talk between children aged 2 and 8 years containing 5,999 noun tokens (Shoshany 2018), less than half the 842 noun lemmas were morphologically complex in the sense of manifesting one of the above word-formation devices. They took the following forms: non-linear *taxpóset* ‘costume’ from *ḥ-p-s* ‘dress up’, linearly suffixed *savlanut* ‘patience’ from *savlan* ‘patient’, and compound *kéres[^] xitux* ‘board:cs-cutting = cutting board’. Of these, the overwhelming majority were non-linearly formed, with few derivationally suffixed nouns, as predicted by Ravid (2006b).

The following description of derivational morphology in nouns takes into account three major derivational devices: (i) nonlinear root and *miškal* pattern affixation, including zero-conversion, (ii) linear stem suffixation, and (iii) reduplication – discussed in relation to semantic classes of nouns.

4.1 Ontological categories

The organizing principle of this part of the chapter is semantic, since the ontological categories expressing nominal content typically cut across structural systems. Derivational morphology in Hebrew nouns encodes lexical content in five different ontological classes, each with different structural devices: Agent nouns (§4.1.1), Instruments (§4.1.2), Location/Collectives (§4.1.3), Abstract and Action Nouns (§4.1.4), patterns devoid of meanings (4.1.5). Table 6 delineates these categories of nouns, with examples of different canonical devices.

Table 6.

Ontological category	Noun patterns	Noun suffixes	Reduplication
Agent nouns	<i>CaCaC</i>	<i>sapar</i> ‘hairdresser’	<i>-an</i> <i>mada-an</i> ‘scient-ist’
	<i>CaCCan¹</i>	<i>safran</i> ‘librarian’	<i>-ay</i> <i>iton-ay</i> ‘journal-ist’
	<i>CaCiCⁱ</i>	<i>pakid</i> ‘clerk’	<i>-ist</i> <i>bas-ist</i> bass ‘(guitar) player’
<i>Benoni</i> patterns			
	<i>qal – CoCeC</i>	<i>kone</i> ‘buyer’	
	<i>nif'al – niCCaC</i>	<i>nivxan</i> ‘examinee’	
	<i>hif'il – maCCiC</i>	<i>mafgin</i> ‘demonstrator’	
	<i>pi'el – meCaCeC</i>	<i>mehamer</i> ‘gambler’	
	<i>hitpa'el – mitCaCeC</i>	<i>mit'amel</i> ‘gymnast’	

Table 6. (continued)

Ontological category	Noun patterns		Noun suffixes		Reduplication
Noun attributes			DIM	<i>axbar-on</i>	Diminutive
			-on	'mouse-DIM'	
			DIM	<i>kar-it</i>	<i>klavlav</i> 'doggie'
			-it	'pillow-DIM'	<i>dagig</i> 'fish:DIM'
Instrument Nouns	<i>maCCeC</i>	<i>mavreg</i> 'screwdriver'	-on	<i>tiyul-on</i> 'stroller'	
	<i>maCCeCa</i>	<i>mazmera</i> 'pruning shears'	-it	<i>imun-it</i> 'track suit'	
	<i>miCCoC</i>	<i>maarox</i> 'rolling pin'			
	<i>miCCéCet</i>	<i>misgéret</i> 'frame'			
	<i>miCCóCet</i>	<i>mišxólet</i> 'pull-through'			
Place nouns	<i>miCCaC</i>	<i>miklat</i> 'shelter'	-iya	<i>maaf-iya</i> 'bakery'	
	<i>miCCaCa</i>	<i>mislaka</i> 'clearing house'			
Collective nouns	<i>CaCéCet</i>	<i>tayéset</i> 'flight squadron'	-on	<i>šir-on</i> 'sing (-along) book'	
	<i>CCuCa</i>	<i>kcuna</i> 'officers-COL'	-iya	<i>cimx-iya</i> 'flora (plant-COL)'	
Abstract nouns					
Action nominals	<i>qal</i>		-ut	<i>iši-ut</i>	
	<i>CCiCa</i>	<i>kfica</i> 'jump'		'personal-ity'	
	<i>CiCCa</i>	<i>simxa</i> 'joy'			
	<i>CCaCa</i>	<i>klala</i> 'curse'			
	<i>CCeCa</i>	<i>gneva</i> 'theft'			
	<i>nif'al</i>	<i>hicamdut</i> 'adhering'			
	<i>hiCaCCut</i>	<i>haxlata</i> 'decision'			
	<i>hif'il</i>	<i>hesder</i> 'arrangement'			
	<i>haCCaCa</i>	<i>kiluf</i> 'peeling'			
	<i>heCCeC</i>	<i>bakara</i> 'monitoring'			
	<i>pi'el</i>	<i>hitkadmud</i> 'progress'			
	<i>CiCuC</i>				
	<i>CaCaCa</i>				
	<i>hitpa'el</i>				
	<i>hitCaCCut</i>				

(continued)

Table 6. (continued)

Ontological category	Noun patterns	Noun suffixes	Reduplication
Initial root radical	<i>CaCéCet</i>	<i>saxévet</i> 'procrastination'	
	<i>CoCCa</i>	<i>toxna</i> 'software'	
	<i>CCuCa</i>	<i>kcuna</i> 'officer rank'	
	<i>CCóCet</i>	<i>któvet</i> 'address'	
	<i>CiCóCet</i>	<i>bikóret</i> 'criticism'	
	<i>CéCeC</i>	<i>écey</i> 'sadness'	
	<i>CóCeC</i>	<i>róshem</i> 'impression'	
	<i>CiCCon</i>	<i>shivyon</i> 'equality'	
	<i>CiCaCon</i>	<i>ikaron</i> 'principle'	
	<i>CaCiC</i>	<i>kacir</i> 'harvest'	
<i>m-</i>	<i>miCCaC</i>	<i>misxar</i> 'trade'	
	<i>miCCaCa</i>	<i>milxama</i> 'war'	
	<i>miCCéCet</i>	<i>mishméret</i> 'shift'	
<i>t-</i>	<i>taCCiC</i>	<i>tavxin</i> 'criterion'	
	<i>taCCeCa</i>	<i>tardema</i> 'slumber'	
	<i>tiCCéCet</i>	<i>tiféret</i> 'splendor'	
	<i>tiCCóCet</i>	<i>tikshóret</i> 'communication'	
	<i>taCCuCa</i>	<i>taxbura</i> 'transportation'	

ⁱ *CaCCan* in fact incorporates two *miškal* patterns – one geminated, e.g., *šakran* 'liar' and one non-geminated, as in the example in the table.

ⁱⁱ Again, this *miškal* pattern incorporates a geminated form, e.g., *abir* 'knight', and a non-geminated form, as in the example in the table.

Table 6 focuses on *miškal* patterns and derivational suffixes in the Hebrew lexicon that participate productively in formation of nouns in current usage rather than providing exhaustive coverage of the domain. The semantic categories and morphological forms listed in Table 6 underlie the discussion that follows, relating to *miškal* patterns (affixed to roots), derivational noun suffixation (based on words), and reduplication.

The following considerations underlie the form/meaning relations represented in Table 6. First, structures (patterns and affixes) listed under a specific ontological category occur in a considerable number of nouns, as attested by the research literature, supported, where possible, by empirical analyses of spoken and written corpora. Second, the semantic affiliation of certain devices might be controversial – for example, whether *CiCCa* as in *sina* 'hatred' is analyzed as a derived nominal related to *pa'al* or as a general pattern for encoding abstract nouns. Third, patterns that are non-productive – in the sense that they do not function for current new-word formation – or that are semantically

non-coherent (for example *CaCaC* as in *xadaš* ‘new’) were not included in this listing (Ravid 1990).³²

On the other hand, in the fourth place, non-meaningful yet productive patterns, like the segolate pattern *CéCeC*, are addressed here as important players in the derivational arena. Account also needs to be taken of the fact that nouns in certain forms do not necessarily reflect the canonic semantic values associated with that structure (e.g., the place noun *martef* ‘cellar’ in instrumental *maCCeC*, or the concrete noun *simla* ‘dress’ in abstract *CiCCa*). Moreover, Hebrew derivational morphology typically reflects one-to-many and many-to-one correspondences, so that the same ontological category may be expressed by several different devices (e.g., agent nouns in the patterns *CaCCan*, *CaCaC*, or with the suffix *-ay*), and most structural devices may each express several notions (e.g., both reduplications and the suffixes *-on* and *-it* may stand for diminutives). Further, presentation is neutral as to whether specific nouns or classes of nouns are strictly linearly or non-linearly formed (e.g., whether *sifrut* ‘literature’ is based on root *s-p-r* ‘tell’ and pattern *CiCCut* or on the stem *séfer* and abstract suffix *-ut*). This reflects the view that rather than being clear-cut, autonomous linguistic constructs, words are constructions whose frequently occurring structures provide templates for productive derivation. And it is line with Aronoff’s (1976) notion of lexical drift, providing for the many cases where ‘partially motivated’ words may not have transparent structure, such as the noun *xaklay* ‘agriculturalist’ (Bolzky & Allon 2015). Finally, all forms discussed below under the heading of ‘ontological categories’ are transparently derived, with a separate section (§4.6.2) dealing with nouns based on defective roots. Finally, all structural devices presented in this section are native to Hebrew (see Schwarzwald 2002 for a full list of native and non-native derivational devices).

4.1.1 Agent nouns

Agent nouns productively use both non-linear and linear devices for designating humans (and also instruments, as discussed below). The bulk of agent devices are non-linear, as are the two dedicated patterns, the historically geminated *CaCaC* (*malax* ‘sailor’, *kalkal* ‘chief steward’) and *CaCCan* (*xablan* ‘sapper’, *askan* ‘wheeler-dealer’).³³ In addition, pattern *CaCiC* also participates in agent noun

32. This is the non-geminating *CaCaC* covering several core nouns and adjectives (Ravid, Bar-On et al, 2016). The geminating *CaCaC*, which is a clear agent noun pattern, can host roots with three to five radicals (e.g., *nagar* ‘carpenter’, *šravrav* ‘plumber’).

33. *CaCCan* too has two traditional versions – the verb-derived geminated one (e.g., *xablan* ‘sapper’) and the non-geminated version (e.g., *safran* ‘librarian’). For the purposes of the current analysis, they are treated together.

derivation, as well as being a productive adjective pattern (Berman 1988). A list of some 280 *CaCiC* lemmas drawn from a 165-million word database (Linzen 2009) contained 45 agent lemmas (e.g., *zakif* ‘sentry’, *xanix* ‘trainee’) and 20 instrument, or object, lemmas (e.g., *agil* ‘earring’, *patiš* ‘hammer’).³⁴

Alongside these nominal patterns, five verb *benoni* patterns (listed in Table 6 by the five non-passive *binyan* conjugations) provide another, highly productive source of agent nouns (Laks 2015, 2017). These include zero-converted *benoni* verb forms which may have parallel verbal forms such as the *pa'al* form *moxer* ‘vendor, salesman’ (and also ‘sells, selling’, past tense *maxar*, future tense *yimkor*); *pi'el me-hager* ‘immigrant’ (and also ‘immigrate’, past tense *higer*, future tense *yehager*). And, as noted earlier, in some cases, *benoni* templates are autonomously used for this agent category, as in *šoer* ‘goalie’ in *CoCeC*, or *mehandes* ‘engineer’ in *meCaCeC*.

In addition to the variety of non-linear devices, Hebrew has two dedicated noun suffixes designating agent nouns: *-an* as in *ganan* ‘gardener’, from *gan* ‘garden’, or *mizraxan* ‘orientalist’ from *mizrax* ‘east’; and *-ay* as in *yomanay* ‘desk officer’, based on *yoman* ‘log’, or *maxsanay* ‘stock keeper’, from *maxsan* ‘storeroom’ (Bolzky 2017b).

Given the affinity between agent and instrument notions, nouns with agentive patterns and suffixes often express instrument content (similarly to English *computer* or French *ordinateur*) as in, for example, *vasat* ‘regulator’ in *CaCaC*, *galšan* ‘surfboard’ in *CaCCan*, or *mekarer* ‘refrigerator’ in *meCaCeC*. Moreover, many adjectives are included in agentive expression as a less robust expression of noun attributes (Markman 1989), e.g., *nistar* ‘hidden, esoteric’ in present tense *benoni nif'al*, or *paxdan* ‘coward’ in *CaCCan*. In fact, in a list of 130 *CaCCan* lemmas drawn from Linzen (2009), half were agent nouns (e.g., *kabran* ‘gravedigger’) and half – adjectives (*kamcan* ‘miser(ly)'). Relatedly, the interface of agent/attribute is assigned a specific sub-category in the current analysis, namely *noun attributes*. This sub-category is expressed by pattern *CiCeC*, traditionally designating negative human qualities and handicaps, e.g., *tipeš* ‘stupid, a fool’ or *xereš* ‘deaf, a deaf person’, and by two devices expressing diminutive content – suffixation and reduplication.

In many languages, quantitative and attitudinal facets of evaluation are grouped under the term *diminutive* (Dressler & Merlini Barbaresi 1994; Grandi 2005; Körtvélyessy 2014). *Attitudinal* diminutives, expressing intensification and attenuation, affection, playfulness, endearment, or contempt rely mainly on the extra-grammatical *-i* suffixed juvenile hypocoristic diminutive, as in *masaiti*

34. All analyses of nouns in the Linzen Corpus were carried out by Ronit Levie in preparation for a study on noun distributions in language acquisition.

‘truck:DIM’) (Hora et al. 2007; Ravid 1998); and on the loan suffix *-ush* (as in *báyuš* ‘bye, DIM’) common in young-adult speech and computer-mediated communication (Cohen-Gross 2013; Gonen & Weissman 2011). In contrast, *denotational* diminutives mostly express small size or volume, short duration, or young age (e.g., *sixónet* ‘chat’ based on *sixa* ‘conversation’) by two derivational devices – the suffixes *-it* (*paxit* ‘can’ < *pax* ‘bin’) and *-on* (*sirton* ‘film-clip’ < *séret* ‘movie’), and reduplication (*znavnav* ‘tail, DIM’, from *zanav* ‘tail’). A recent investigation of Hebrew speakers’ preferences regarding diminutive expression revealed that across tasks of comprehension, judgment, and production, reduplication and the linear suffix *-on* were favored by both adolescents and adults (Ravid & Ben Simon in progress). Adults preferred reduplication often in recursive stacking of linear diminutive suffixes (e.g., *kof/kofif/kofif-on* ‘monkey / monkey: DIM/monkey: DIM-DIM’) and with loan diminutive suffixes attached at the end (e.g., *zanav/znavnav/znavnav-on/znavnav-on-čik* ‘tail/tail: DIM/tail: DIM-DIM/tail: DIM-DIM-DIM’). Of the two diminutive suffixes, *-it* and *-on*, the latter is today clearly the default, supporting earlier findings by Bolozky (1994). In fact, Linzen’s (2009) corpus contained only 10 *-it* suffixed derived nouns, a small number of which had a diminutive sense (*magašit* ‘small tray’ from *magaš* ‘tray’, *tavit* ‘label’ from *tav* ‘sign’, and *kapit* ‘teaspoon’ from *kaf* ‘spoon’).

4.1.2 Instrument nouns

Instrument patterns typically begin with a prefixal pattern *m-*. Two dedicated instrument patterns – *maCCeC* (*masrek* ‘comb’) and *maCCeCa* (*masrega* ‘knitting needle’) are relatively productive in contemporary Hebrew. For example, 36 of the 50 *maCCeCa* noun lemmas identified in Linzen (2009) designated instruments (e.g., *maševa* ‘pump’). The five non-passive *benoni* verb patterns play a particularly central role in encoding instrument nouns (Laks 2017). While many agent noun forms (including those based on *benoni* templates) express instrument content (*šanay* ‘transformer’, *šadxan* ‘stapler’, *mediax* ‘dishwasher’), the converse does not apply, since instrument-type nouns do not productively express agentive content. They do, however, share form and content with other ontological categories. For example, place and abstract nouns often take either *miCCaCa* and *maCCeCa* forms interchangeably, as in *mištala/maštela* ‘plant nursery’, *mispara/maspera* ‘hairdressing salon’ (Laks 2015). Other instrument patterns also contain many nouns designating place and abstract content (e.g., *mišol* ‘path’ in *miCCoC*, *maaréxet* ‘system’ in *miCCéCet*). On the other hand, linear formation has no dedicated suffixes expressing instruments alone. Nouns suffixed by *-on* and *-it* may express both instrument content (e.g., *paamon* ‘bell’ from *páam* ‘time’, *xalalit* ‘spacecraft’ from *xalal* ‘space’) as well as other senses like diminution.

Both agent and instrument patterns and suffixes are learned early by children as conveyors of non-abstract content (Ben Zvi & Levie 2016; Berman 1999; Clark & Berman 1984; Ravid 2006b; Ravid, Levie & Avivi-Ben Zvi 2003), and so can be considered to be part of the core lexicon of Hebrew. This does not, however, translate into frequency in usage: The 842-lemma corpus of children's (aged 2–8) peer talk contained 72 (about 9%) nouns with typically agent and instrument patterns and suffixes (e.g., *kosem* 'magician', *maclema* 'camera', *maxševon* 'pocket calculator'), and about 50 (6%) others with non-typically agent and instrument meanings (e.g., *krixa* 'book cover' in *CCiCa*, an action or abstract nominal pattern). A separate analysis of written schoolage and adult texts (Ravid 2006b) showed about 15% of the nouns in agent roles, many of them in typical morphological forms (e.g., *xayal* 'soldier' in pattern *CaCaC*, or *muzikay* 'musician', suffixed by *-ay*).

4.1.3 *Collective and place nouns*

The notions of place/location and of collectivity are closely bound together in the mental lexicon (Langacker 1991; Ravid 2006b). Two linear suffixes are associated with the collective notion in MH. One, the suffix *-iya*, is not dedicated to collectivity alone, since along with words with clearly collective designation, such as *cimxiya* 'flora' (from *cémax* 'plant'), many *-iya*-suffixed words express location and collection together, as in *sifriya* 'library', from *séfer-iyá* 'book-PLACE/COLLECTIVE', *tinok-iyá* 'infant-PLACE/COLLECTIVE = nursery'; or *iriyá* 'municipality' (from *ir* 'city') used both for the city hall building and the abstract entity of 'city council'. Besides, *-iya* also designates other senses such as clothing (e.g., *gufiya* 'undershirt' from *guf* 'body', *xaziya* 'brassiere' from *xaze* 'breast'). A second derivational suffix expressing collectives is the multifunctional *-on* (also used in diminutives in §4.1.1 above) as in *milón* 'dictionary' based on *mila* 'word', *šeelon* 'questionnaire' from *šeela* 'question', *mexiron* 'price list' from *mexir* 'price'. Again, the suffix *-on* too has other senses, of place (*kanyon* 'mall') and instrument (*tiyulón* 'stroller'), as well as designating periodicals (*iton* 'newspaper', *šavuon* 'weekly magazine', *alon* 'newsletter').

The notion of collectivity is also often associated with non-linear patterns, mainly *CaCéCet* and *CCuCa*, both of which express collectivity – as in *šayézet* 'floodilla' and *tayéset* 'flight squadron' in *CaCéCet*, *kvuca* 'group' in *CCuCa*. But *CaCéCet* also designates (usually negative) abstract conditions as in *saxévet* 'procrastination' and *adémet* 'rubella', while *CCuCa* stands for abstract states as *kcuna* 'officer rank' and *kehuna* 'priesthood'.³⁵ And in the same way, *miCCaC* and *miCCaCa*, described

35. *CaCéCet* is termed 'the disease pattern' by Hebrew teachers and students, due to its usage in names for illnesses, e.g., *xacévet* 'measles', *yaéfet* 'jet lag'.

in Hebrew grammars as expressing location, often express an abstract meaning, as in *mištara* ‘police’, referring to the police station, the notion of policing, and the police as a collective authority.

In sum, the category of place/collections is less clearly demarcated in Hebrew derivational morphology than agents and instruments, since it is expressed by non-dedicated devices (both non-linear and linear), which often express other notions such as abstract states. In terms of usage, “The less demarcated character of place and collective patterns is reflected in their order of acquisition, indicating that they do not belong in the core lexicon of Hebrew” (Ben Zvi & Levie 2016). Only six noun lemmas (out of 842) in a large corpus of child speech had *miCCaC* and *miCCaCa* forms, all frequently used words like *midbar* ‘desert’, *mitbax* ‘kitchen’, and *mištara* ‘police’. About 10% of the nouns in written adolescent and adult texts (Ravid 2006a) had location/collective meanings, mainly in essays discussing social and moral issues.³⁶ And in adult usage, the analysis of Linzen (2009) identified 37 nouns in *miCCaCa* (20 of them denoting places, e.g., *midšaa* ‘lawn’, *mivšala* ‘brewery’) and 97 nouns in *miCCaC* (20 of them places, e.g., *misrad* ‘office’, *minxat* ‘helicopter landing pad’).

4.1.4 *Derived abstract nominals*

Derived nouns expressing varying facets and degrees of abstraction constitute the largest and most diverse nominal category in Hebrew derivational morphology (Berman & Seroussi 2011; Ravid 2004, 2006a; Ravid & Avidor 1998; Seroussi 2011). They are productively derived from verbs and adjectives by non-linear formation (e.g., *xisul* ‘eradication’ from *xisel* ‘eradicate’, *ómek* ‘depth’ from *amok* ‘deep’), and from adjectives also by suffixation (*rakut* ‘softness’ from *rax* ‘soft’). Given the wealth of non-linear abstract patterns, Hebrew is unique in using the same root to create multiple derived abstract nominals, as in the example of root *h-l-k* ‘go, walk’, deriving *halixa* ‘walking’, *holaxa* ‘conduction’, *hilux* ‘gait’, *halix* ‘procedure’, *ma-halax* ‘move’, *tahalix* ‘process’, *tahaluxa* ‘parade’, *halaxa* ‘(religious) rule of conduct’, and *halox ruax* ‘state of mind’.³⁷ Derived nominals, especially those closely related to the verb system, inherit the argument structure of the verbs they are based on, creating large and heavy noun phrases, especially in expository writing (Berman 1978a: Chapter 10; Ravid & Berman 2010; Ravid & Zilberbuch 2003a, 2003b). Hebrew derived nominals are skewed towards the feminine gender, with the abstract suffix *-ut*, and with many action nominals as well as numerous abstract

36. But note that in this analysis, the semantic designation was not isomorphic with the usage of designated structural devices.

37. Typically pronounced as *hélex ruax* in current Hebrew.

patterns marked by final *-a* and *-t* (Ravid 2012). This means that the more formal, literate lexicon of Hebrew has a larger feminine portion than its core lexicon counterpart (Ravid & Schiff 2015).

Different means of deriving abstract nouns are noted below, bearing in mind that, as generally the case in derivational morphology, the abstract semantics of derived nominals is often eroded, resulting in demotion to imageable, durative, collective, locative or even concrete senses (Ravid 2006b).

4.1.4.1 *Linear suffixation of abstract nouns*

Together with the denominal adjectival suffix *-i* (§5.2.2 below), the abstract-noun suffix *-ut* is one of the two most transparent suffixes in Hebrew morphology (Boložky & Schwarzwald 1992), as the only suffix dedicated to the expression of abstraction. It attaches to various classes of nominal stems, including adjectives (*mehirut* ‘rapidity’ from *mahir* ‘rapid, fast’), passive *benoni* stems (e.g., *mufraut* ‘mental disturbance’ in *huf'al*), and nouns (*nagarut* ‘carpentry’ from *nagar* ‘carpenter’). Importantly, it also occurs in the action nominal patterns of low-transitivity *binyan* conjugations (e.g., *hipagut* ‘being hurt, vulnerability’ in *nif'al*, *hitxadšut* ‘renewal’ in *hitpa'el*). The frequent occurrence of *-ut* on multiple stems has contributed to blurring the distinction between linear and non-linear formation, as in the case of pattern *CCiCut* (Boložky & Schwarzwald 1992), and it is the first abstract marker in children’s language, attaching to every possible stem along the route to mature abstract nominal expression (Ravid & Avidor 1998). In colloquial usage, more and more stems suffixed by *-ut* are supplanting the denser options of root and pattern stems, as in the case of *neimut* ‘pleasantness’ from *naim* ‘pleasant’ rather than established *nóam* ‘pleasantness’ from root *n-š-m* and pattern *CóCeC*.

4.1.4.2 *Action nominals*

Action nominals constitute the most systematic subclass of abstract nouns in Hebrew, being directly related to the verb system, as shown in Table 6 (and see, too, Berman 1978a: Chapter 10; Ravid 1999 2004; Ravid & Avidor 1998; and Chapter 11 in this volume). Action nominals designate the activity, process, event or state conveyed by the verb in noun form, closely following its semantic and morpho-syntactic properties, as in *pšita* ‘raid’ (verb *pašat*) in *pa'al*, *harxaka* ‘removal’ in *hif'il* (*hirxik*), or *hitkablut* ‘being accepted’ (*hitkabel*) in *hitpa'el*. Semantically, action nominal forms convey a range of verbal to nominal meanings, from gerundive (*iluf* ‘taming’) to derived or concrete meanings (*icur* ‘consonant’), and morphologically, they are systematically related to the *binyan* conjugations. The three transitive *binyan* conjugations each has a canonical action nominal pattern (*pa'al* – *CCiCa*, *hif'il* – *haCCaCa*, *pe'el* – *CiCuC*), of which *CCiCa* is the most prevalent pattern and *CiCuC*,

the most productive (Berman 1993; Ravid 1999; Ravid & Avidor 1998). The two highly transitive conjugations each has a secondary action nominal pattern which usually hosts less abstract nouns or is less productive than its canonical counterpart, thus: *hif'il* – *heCCeC* (as in *hexzer* ‘refund’, versus canonical *haxzara* ‘giving back’) and *pi'el* – *CaCaCa* (e.g., *sakana* ‘danger’ versus canonical *sikun* ‘endangering’), together offering additional, less predictably related derived plural nominals related to the same verb. Basic *pa'al* has several secondary nominals – mainly *CCaCa*, as in *deaga* ‘worry’ from the verb *daag* ‘worry’, *CCeCa* as in *šeela* ‘question’ from *šaal* ‘ask’, and *CiCCa*, as in *iska* ‘transaction’ from *asak* ‘deal with’. Action nominals sometimes also cross canonical *binyan* boundaries, as in *šiput* ‘judgement’ (*CiCuC*) corresponding to *šafat* ‘judge’ in *pa'al* rather than to non-existent **šipet* in *pi'el*; and *rikud* ‘dance routine’ (*CiCuC*) corresponding to *rakad* ‘dance’ in *pa'al* rather than to high-register *riked* ‘prance’ in *pi'el*.

Such variability is not found in the less transitive conjugations *nif'al* and *hitpa'el*, which take *-ut* suffixed, less lexicalized, more predictable and transparent action nominal patterns based on their infinitival stems, often vacillating between actual and possible wordhood, as in *hištaalut* ‘coughing’ (Ravid 1999). Also, speakers often prefer action nominals in the more active agentive counterparts *pa'al* and *pi'el* for *nif'al* and *hitpa'el* respectively, neutralizing the effect of voice in such cases as, for example, *bxira* ‘choice’ in *pa'al* rather than *hibaxarut* ‘being chosen’ in *nif'al*, *ipur* ‘make-up’ in *pi'el* rather than *hitaprut* ‘putting on make up’ in *hitpa'el* (Ravid & Avidor 1998). *nif'al*, as always, constitutes an interim case between passive and middle voice: it has both an action nominal pattern *hiCaCCut* (e.g., *hipardut* ‘separating’, from the verb *nifrad* ‘separate’), as well as an abstract nominal formed from its *benoni* stem, like the passive conjugations (e.g., *nifkadut* ‘being AWOL’, based on *nifkad* ‘go-AWOL’). The two passive conjugations *huf'al* and *pu'al* do not have action nominal patterns, instead deriving their abstract nominals like adjectives by attaching the *-ut* suffix to their present-tense *benoni* stem, e.g., *mesukanut* ‘being dangerous’ from *mesukan* ‘dangerous’ (*pu'al*), or *murkavut* ‘complexity’ from *murkav* ‘complex’ in *huf'al*.

4.1.4.3 Derived abstract nouns in nominal patterns

Hebrew has numerous other derived abstract patterns, related to specific verbs or adjectives in less systematic ways than action nominals. For example, *sixek* ‘play’ corresponds to *misxak* ‘play, game’ in *miCCaC*, while a recent slang term uses the canonical *sixuk* for ‘making it, success’. Table 6 lists the most prominent abstract patterns, first the non-prefixed ones (feminine and then masculine), followed by those prefixed by *m-* and *t-*. Note that several patterns listed earlier as designating places, collections, and even instruments also widely express abstract entities,

properties, events and processes – most notably *CaCéCet*, *CaCiC* (designating agricultural procedures like *xariš* ‘ploughing’), and especially *miCCaC*, *miCCoC*, *miCCaCa*, and *miCCéCet*. For example, 60 out of 97 *miCCaC* nouns in the Linzen (2009) corpus designate derived abstract nominals – e.g., *mitam* ‘correlation’, *mirdaf* ‘chase’, *mikcav* ‘beat’ – as against only 7 of the 37 *miCCaCa* nouns (*mitkafa* ‘offensive’, *miflaga* ‘political party’). Other patterns in Table 6 are more clearly dedicated to the expression of abstract states, concepts, and properties, e.g. *CiCCon* and *CiCaCon* (*civyon* ‘flavor’ or *kišaron* ‘talent’), *CóCeC* (*kóšer* ‘fitness’, *córex* ‘necessity’), *taCCiC* (*tasmin* ‘syndrome’, *taagid* ‘corporation’, *takriv* ‘close-up’), and the currently expanding *CoCCa*, with many recent digitally-related coinages like *nozka* ‘malware’.

4.1.5 *Structure devoid of meaning*

A last group of derived nouns are best characterized as representing ‘structure devoid of meaning’. Like the *binyan* system for verbs, *miškal* patterns and suffixes constitute a derivational system canalizing nominal expression into formal templates mapped onto coherent semantics, as shown above. But these same devices can also host items devoid of the category semantics, as in the case of *caméret* ‘treetop’, which does not express any of the meanings typically associated with *CaCéCet* – in line with the semi-productive, semi-predictable nature of derivational morphology and the lexicon in general. MH does, however, possess several more interesting cases of entire classes of patterns and/ or suffixes that are productive and transparently formed, yet devoid of any shared semantic content. The clearest example is the classical *segolate* pattern *CéCeC* (together with *CóCeC*, the only masculine noun plural patterns with penultimate stress), the most prevalent non-prefixed nominal pattern in Classical Hebrew (Avineri 1964; Bolozky 1995b 2013c). This pattern hosts nouns designating anything from concrete nouns (*bérez* ‘faucet’) through agent nouns (*mélex* ‘king’) to many abstract nouns (hence its inclusion in the abstract nominal category above) such as *séxel* ‘intelligence’, *véték* ‘seniority’, and *kéceV* ‘rhythm’. That this is one of the richest noun patterns in Modern Hebrew, too, as illustrated by the fact that out of 404 morphologically complex nouns produced by children aged 2–8 (Shoshany 2018), 72 (18%) were in *CéCeC* (e.g., *érec* ‘land’, *géšem* ‘rain’, *šéket* ‘silence’). And as noted earlier, in derivational suffixes, the multifunctional suffixes *-on* and *-it* cover almost all ontological categories as general ‘labels for things’, such as *mecion* ‘small market’ (based on *mecia* ‘(a) find’), or *diburit* ‘car phone’ (based on *dibur* ‘talk’).

4.2 Morphophonological facets of noun derivation

Two key factors affecting morpho-phonological facets of noun derivation are considered below: defective roots (§4.2.1) and suffixation (§4.2.2).

4.2.1 *The effect of defective roots*

The presentation of *miškal* morphology in the preceding sections focused on full roots, since these yield transparent structures. Overall, defective roots have a similar effect in both the nominal and verbal systems, giving rise to fewer consonantal stems and more vocalic variation. But defective roots play a more prominent role in nouns due to the smaller size of the verbal system in both number of patterns and of lexical items. As noted earlier (§3.1), all verbs rely on only seven *binyan* conjugations in 31 temporal patterns, not all of which are affected by defective root categories even within the same *binyan*. For example, *y*-initial roots form transparent stems in past and present *pa'al* (e.g., *yašav/yošev* ‘sat/sitting’), with only Future, Imperative, and Infinitive stems being opaque (e.g., *yešev/šev/la-šévet* ‘will-sit/sit (down)!/to-sit’). In contrast, there are about 50 different *miškal* patterns, each containing between a dozen to 50 and up to as many as 100 different nouns. Thus, whereas defective roots have only a relatively minor effect across and within *binyan* conjugations in verbs, each *miškal* pattern is affected across-the-board by root type, which has a marked impact on the structure of the nominal lexicon. Defective roots give rise to three morpho-phonological phenomena in nominals: (i) systematic allomorphy related to structural root categories, (ii) pattern mergers, and (iii) the emergence of new, autonomous nominal categories in productive allomorphs.

Allomorphic changes in nouns derive from the intersection of a particular root structure category with a specific *miškal* pattern. For example, vowels are lowered in the environment of historical gutturals and pharyngeals (Laks 2013), as in the penultimate stressed segolate *CéCeC* pattern: Compare regular *CéCeC* in the words *gešer* ‘bridge’, *séder* ‘order’ with non-pharyngeal medial radicals to nouns like *nécax* ‘eternity’ (root *n-c-ḥ*), *yáar* ‘forest’ (root *y-š-r*), *tóar* ‘rank’ (root *t-ʔ-r*) in *CóCeC*; and compare, too, the related feminine *CaCéCet* pattern as in *rakévet* ‘train’ to *CaCéCet* with a final pharyngeal in *kadáxat* ‘fever’ (root *q-d-ḥ*), *šapáat* ‘flu’ (root *š-p-š*). Allomorphs deriving from ‘silent’ (or ‘missing’) root radicals involve open syllables where consonants would be expected in the canonical pattern. Consider the following allomorphs in *miCCaC*, compared to canonical *mínhag* ‘habit’, based on full root *n-h-g*: *maamar* ‘article’ (root *ʔ-m-r*), *mivne* ‘construction’ (root *b-n-y*), *mabat* ‘glance’ (root *n-b-š*), *macav* ‘state’ (root *y-c-b*), *mosad* ‘institute’ (root *y-s-d*), *macof* ‘floater’ (root *c-w-p*), and *memad* ‘dimension’ (root *m-d-d*). When viewed across all patterns, new systematicities arise across similar morpho-phonological environments (in this case, a consonant cluster), as in, for example, *morad* ‘downward

slope' (*miCCaC*), *modaa* 'notice' (*miCCaCa*), *tofaa* 'phenomenon' (*taCCeCa*), and *toélet* 'benefit' (*tiCCélet*) – all based on *y*-initial roots.

As in verbs, defective roots affect the shape of nominal patterns, but their effect on nouns seems to be larger, resulting in pattern convergence or mergers. For example, the two nouns *matos* 'airplane' (instrument) and *maof* 'flight' (abstract noun), both with *w*-medial roots, share the same surface form which, based on pattern semantics, would be differentiated in words with full, transparent roots in the patterns *maCCeC* (*mavreg* 'screwdriver') versus *miCCaC* (*minhag* 'custom'). In the same way, the two feminine nouns *merica* 'wheelbarrow' and *mesima* 'assignment' share the same form, which again would be differentiated according to pattern semantics to *maCCeCa* and *miCCaCa* respectively. Pattern convergence is one more reason why *miškal* patterns 'leak' in form and consequently in function (Laks 2015, 2017). The fact that these morphologically complex, often abstract or lexically specific words are common in written language contributes to pattern convergence, since pattern vowels do not generally show up in Hebrew orthography (Bar-On & Ravid 2011; Bar-On, Ravid & Dattner 2017; Bolozky 1990; Ravid 2012).

The *type frequency* of nouns derived from defective roots in a pattern is relevant to the notion of a separate *miškal*. How many words should a structure incorporate in order to be designated *miškal*? An extreme example is provided by pattern *taCCeCa* (Levie 2013), considered a canonical pattern: Only five nouns based on full roots occur in this pattern (e.g., *tardema* 'hibernation'), that is, with the same transparent surface shape as the *miškal* label *taCCeCa*. In contrast, all other nouns in this *miškal* are based on defective roots, such as *toraša* 'inheritance' (root *y-r-š*), *tvuna* 'wisdom' (*b-y-n*), or *taxana* 'station' (*h-n-y*). The abundance of similarly structured nouns based on defective roots may at some point justify a new linguistic classification, where a number of defective sub-patterns might achieve autonomy. Sub-pattern *tCuCa*, based on glide-medial roots, which has dozens of common nouns like *tnua* 'movement', *tguva* 'response', *tšuva* 'answer', *tluna* 'complaint' is a good candidate for such autonomous structural status.³⁸

4.2.2 Stem changes under suffixation

Linear suffixation typically results in a process of re-syllabification and stress shift to the suffixed form, e.g., *kadúr/kadurít* 'ball/corpuscle', both pronounced with word-final stress. This process may also involve allomorphic stem changes, most prominently in inflectional suffixes of high-frequency usage (Ravid & Schiff 2009, 2012). Stem allomorphy may also result from derivation, although more restrictively, given the far smaller number of nouns that undergo derivational compared

38. However, a similar argument might be made for *-w*-medial roots in *pa'al*, which take a distinct form (*ba* 'come', *zaz* 'move') and are quite numerous (Ravid, Ashkenazi et al. 2016).

with inflectional suffixation (Ravid 2006a). As suffixes attach their initial vowel to a final stem consonant, word-final open-syllable words with masculine gender tend to delete the stem-final *e* (e.g., *maafe/maafiya* ‘pastry:M/bakery:F’), while feminine words attach *-t* to the final stressed *a*, as in *safa/sfaton* ‘lip/lipstick’. Further stem changes involve *a* deletion or reduction in the base word, as in *nasix/nesixut* ‘prince/princedom’, vowel change (*et/iton* ‘time/newspaper’), spirant/stop alternation (*rax/rakut* ‘soft/softness’, *kaf/kapit* ‘spoon/teaspoon’), and the surfacing of a double root radical, as in *lev/levavi* ‘heart/cordial’.³⁹ A noteworthy stem alternation is provided by the numerous *segolate* nouns noted earlier, where the free *CéCeC* stem alternates with its bound form *CiCC-*, as in *šémeš/šimšiya* ‘sun/parasol’, *géšer/gišron* ‘bridge/bridge:DIM’, or with *CaCC-* as in *yéled/yaldon* ‘boy/little boy’, *késef* ‘money’/*kaspo-mat* ‘ATM’.

In sum, morphophonological processes incurred by defective roots and suffixation result in many more systematically distinct noun forms than the number of canonical derivational patterns and suffixes. On the other hand, as shown above, defective roots result in the convergence of noun patterns. The review given here provides only an initial window on this topic, one that requires the kind of usage-based research in spoken (and written) corpora that has currently been conducted for verbs in MH (Levie et al. submitted).

5. Derivational morphology in adjectives

Adjectives constitute a less primary lexical category than either nouns or verbs, denoting attributes or properties of nouns (Lyons 1968). As a result, representation of adjectives in the mental lexicon is less richly structured and more arbitrary than with nouns (Markman 1989), they are more prone to variation in form and meaning (Bolinger 1968), they typically emerge later in language learning (Blackwell 2005), and serve as a yardstick for literate language knowledge (Berman 2004; Ravid & Levie 2010). In many languages, the category of adjectives is the smallest and most diverse, and in others it is absent (Aikhenvald 2007; Kotowski 2016), and Biblical Hebrew, too, lacked a morphological class of adjectives (Gai 1995; Gesenius 1910). Primary adjectival notions such as *tov* ‘good’ or *ra* ‘bad’ were expressed mainly by present-tense *benoni* verb forms, along with a small class of *-i*-suffixed nouns denoting ethnic origin, such as *yevusi* ‘of the nation of Yevus’. These *benoni* and suffixed forms, minor classes in classical Hebrew, lie at the core of present-day MH adjectival formation, as shown in Figure 5.

39. This example is included in the current context of stem change, although it involves denominal adjective derivation.

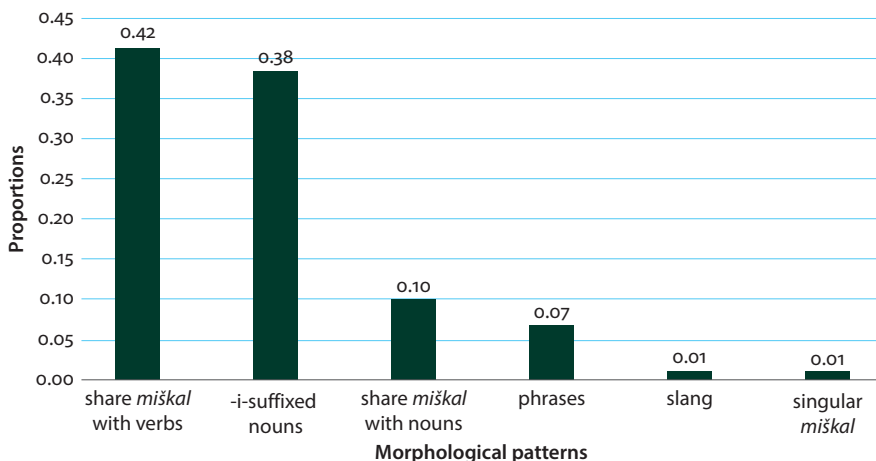


Figure 5. The morphological distribution of Hebrew adjectives (Ravid et al., 2016)

Analysis of all Hebrew adjectives listed in the Avneyon (2007) dictionary (Ravid, Bar-On et al. 2016) yielded the distributions depicted in Figure 5, showing that two major morphological categories – denominal and *benoni*-derived adjectives – make up most of the current adjective lexicon, with a smaller part denoted by adjectives sharing noun patterns.

5.1 Linear formation: Denominal adjectives

Denominal adjectives are linearly formed by attachment of the adjectival suffix *-i* to a nominal stem, usually a noun or a foreign word (e.g., *xašmali* ‘electric’ from *xašmal* ‘electricity’, *maasi* ‘practical’ from *maase* ‘deed, action’, and *altruisti* ‘altruistic’) with native words having final suffixal stress and loan words penultimate stress. Stemming from Biblical ethnic nouns, denominal adjectives evolved in Medieval Hebrew into a full-fledged morphological class, currently one of the two most productive classes of adjectives (38% of all adjective lemmas in MH). Structurally, denominal adjectives undergo the same stem changes as noted for nouns in the preceding section (e.g., *šigrati* ‘routine.ADJ’, based on *šigra* ‘routine.N’). In meaning, deriving denominal adjectives from nouns requires conceptualization of various properties of the base noun, as in *beti* ‘domestic, homey, home-made’ from *báyit* ‘house, home’. Consequently, analogously to Latinate nominally derived adjectives in English, in Hebrew these typically relate to a more advanced nominal lexicon, requiring rich conceptual and terminological knowledge (Berman 2004; Ravid & Levie 2010), mainly in written language, literary prose or journalistic and expository texts (Ravid 2004; Ravid & Zilberbuch 2003b; Ravid, Bar-On et al. 2016), and typically absent from early child language (Ravid & Nir 2000). Of 2,335 adjectives

judged by experts as belonging to the lexicon of well-educated speakers, close to one half (1,057) were denominal adjectives such as *timhoni* ‘eccentric’ (from *timahon* ‘wonder’), *garmi* ‘bony, osseous’ (from *gérem* ‘bone’), or *kompulsívi* ‘compulsive’.

5.2 Non-linear adjective formation

Two classes of adjectives rely on non-dedicated root plus pattern interdigitated structures from other lexical classes, as shown in Figure 5. One is the category of adjectives derived from *benoni* verbs (*meratek* ‘absorbing’ in *pi’el*, *madhim* ‘amazing’, in *hif’il*). Another class shares noun patterns (e.g., *batlan* ‘idler’, in *CaCCan*).

5.2.1 Verb-related adjectives

The large, highly productive category of adjectives based on the *benoni* patterns of the seven *binyan* conjugations constitutes 42% of all adjective lemmas, occurring in all communicative contexts and linguistic registers, such as *šavur* ‘broken’ in everyday spoken usage and *menuce* ‘feathered’ in a highly literate register (Ravid, Bar-On et al. 2016). This lexical list is further classified into the passive resultative and non-passive participial patterns.

5.2.1.1 Passive resultative patterns

Three present-tense patterns with the distinctive passive-related *u* host mostly, though not only, resultative adjectives: (i) *CaCuC* as in *saduk* ‘cracked’, resultative adjectives from the *pa’al* and *nif’al* conjugations (cf. transitive *sadak* ‘crack’ and medial passive *nisdak* ‘get/be-cracked’); (ii) *muCCaC* as in *musmax* ‘qualified’ in the present-tense form of passive *huf’al*, cf. the transitive *hif’il* verb *hismix* ‘qualify’; and (iii) *meCuCaC* as in *mekulkal* ‘spoiled’ in the present tense form of passive *pu’al*, cf. the transitive *pi’el* verb *kikkel* ‘spoil’. (Berman 1994; Ravid & Vered 2017). Pe’er’s (2013) analysis of the Avneyon (2007) dictionary identified 1516 adjective lemmas in these three patterns, accounting for about one-third (30%) of the adjectives in Ravid, Bar-On et al. (2016). Of these, 469 were in *CaCuC* (designated ‘the core resultative adjective class’), 325 in *muCCaC* (the most regular, transparent, and passive-like resultative pattern), and 722 in *meCuCaC* (the most productive adjective mechanism). Pe’er’s corpus analysis of resultative adjectives in child language showed *muCCaC* to be virtually absent from the peer talk of 2–8 year olds (Zwilling 2009), constituting a mirror image of the syntactic rather than adjectival use of *huCCaC* as the most typical, and hence adult-prominent passive (Ravid & Vered 2017). Similar distributions were found in Ravid, Bar-On et al. (2016), with 411 *CaCuC* and *meCuCaC* forms constituting over a third of the 1260 lemmas judged as basic, common adjectives (e.g., *hafux* ‘upside down’, *megulax* ‘shaved’), versus only 80 *muCCaC* forms (6%), e.g., *mustar* ‘hidden’ – supporting the findings

of experimental elicitations of these three *u-* marked constructions (Berman 1994). Adjectives in this set cover a wide range of perfective, endstate resultatives senses, with a few also serving as modal adjectives (*asur* ‘forbidden’, *mutar* ‘allowed’).

5.2.1.2 *Non-passive participial adjectives*

A second group of verb-related adjectives consists of the *benoni* patterns of the five non-passive *binyan* conjugations – *CoCeC* (*pa'al*, e.g., *bolet* ‘conspicuous’), *niCCaC* (*nif'al*, e.g., *neeman* ‘loyal’), *maCCiC* (*hif'il*, e.g., *maksim* ‘charming’), *meCaCeC* (*pi'el*, e.g., *medake* ‘depressing’), and *mitCaCeC* (*hitpa'el*, e.g., *mictayen* ‘outstanding’). These constitute a smaller part of *benoni*-based adjectives, and are commoner in colloquial, spoken contexts, making up only 167 (7%) out of 2,335 adjectives judged as belonging in the literate lexicon, and 186 (15%) of the 1260 adjectives judged as basic (Ravid, Bar-On et al. 2016). On the other hand, the highly transitive *hif'il* and *pi'el* conjugations readily host *benoni* verbs to form affective or evaluative adjectives akin to their English participial counterparts (e.g., *hif'il*-based *madhim* ‘amazing, wonderful’, *macxik* ‘amusing, funny’ and *pi'el*-based *meacben* ‘annoying’, *merageš* ‘exciting’).

5.2.2 *Noun-related adjectives*

About 10% of adjective lemmas in Figure 5 share patterns with nouns, mainly in agentive *CaCCan* (e.g., *baxyan* ‘crybaby’, *xaşdan* ‘suspicious’) and *CaCiC* (*ragil* ‘regular’, *taim* ‘tasty’), where the distinction between nouns and adjectives is not always immediately apparent. Most adjectives in noun-related patterns occur in largely colloquial usage; for example, 57 (5%) *CaCCan* lemmas occur among the 1260 basic adjectives. *CaCCan* forms also often take on the denominal *-i* suffix to yield more unambiguously adjectival items (e.g., higher-register *vatrani* ‘easy-going’ and *balšani* ‘linguistic’).

Adjectives in the form of *CaCiC* fall into two classes: largely older, frequent forms in the core lexicon (modal *carix* ‘necessary’, *xarif* ‘spicy’, *bari* ‘healthy’, *zahir* ‘careful’), and those with the productive function of denoting potential properties (similar to English *-able* adjectives), such as *axil* ‘edible’, *kavis* ‘washable’, *nagiš* ‘accessible’, largely confined to higher register, more lexically specific usage. In Ravid, Bar-On et al. (2016), the former appeared in adjective lexicons attributed to children aged 4–8, while the latter appeared in lexicons judged as typical of adolescents and adults.

5.2.2.1 *Diminutive adjectives*

Like nouns, basic adjectives may express diminutive meanings by reduplicating syllable structure, as in *šaxor/šaxarxar* ‘black/blackish’ or *katan/ktantan* ‘small/tiny’. Adjectives also take the diminutivizing *-on* suffix (e.g., *tipšon* ‘stupid, DIM’), but

the suffix *-it* does not serve for this purpose. An analysis of written texts produced by adolescents and adults found hardly any diminutive adjectives, reduplicative or otherwise, suggesting that they are a marginal class in current usage (Ravid & Levie 2010).

5.2.3 Non-productive adjectival structures

Several non-linear structures host basic, high-frequency core adjectives in small and non-productive classes, most sharing patterns with nouns, generally devoid of shared categorial meaning. These include the *CaCoC* colors pattern (e.g., *cahov* ‘yellow’, *sagol* ‘purple’, but also *arox* ‘long’), sharing the same stem structure but not morpho-phonological behavior with another very small *CaCoC* group, extremely frequent in usage (*karov* ‘close’, *raxok* ‘far’).⁴⁰ Other non-productive classes include *CaCaC* (*yašar* ‘honest’, *xadaš* ‘new’) and *CaCeC*, historically a *benoni* pattern of *pa'al* (*raev* ‘hungry’, *ayef* ‘tired’). All of these designate elementary states and properties of objects and people – color, dimension, shape, and basic sensations and emotions. In the analysis of Ravid, Bar-On et al. (2016) these forms were found almost only in core adjectives, judged typical of the adjective lexicons of children aged 4–8.

6. Adverbial constructions

Modern, like classical Hebrew, differs from Romance and Germanic languages in not having a productive class of morphologically derived adverbs. Instead, it typically expresses manner by means of prepositional phrases, as in *bi-mehirut* ‘with-speed = rapidly’, *be-haclaxa* ‘with-success = successfully’; or by other, more restricted other syntactic constructions, such as complex verb predicates, e.g., *miher laalot* ‘hurried to rise = climbed up quickly’ (Brandes & Ravid 2016; Nir & Berman 2010). A few adverbs are zero-derived from adjectives (e.g., *tasbir barur* ‘explain clear = clearly’, *tedaber yafe* ‘speak pretty = nicely’), typically in colloquial usage. There are also a few morphological devices for deriving adverbs by inflectional feminine suffixes attached to adjectives (Ravid & Shlesinger 2000). One is feminine *-t*, added to *-i*-suffixed adjectives (themselves derived from nouns), e.g., *telefōnit* ‘by phone’, *ekronit* ‘in principle’ and *klalit* ‘in general’ (based on *telefōni* ‘of the phone’, *ekroni* ‘principled’, and *klali* ‘general’, in turn based on *telefōn* ‘telephone’, *ikaron* ‘principle’, and *klal* ‘entirety’). Another inflectional means of deriving adverbs is

40. Compare the plural forms of *sagol/sgulim* ‘purple’ with *karov/krovim* ‘close’.

singular feminine marking such as *-éCet* and the ubiquitous feminine *-a* (e.g., *diber šotéf-et* ‘spoke fluently’, and *hivtiax neeman-a* ‘promised loyally’). A third is the plural feminine marker *-ot* as in *hitnaséax kcarot* ‘expressed oneself briefly’. Almost all such morphological manner expression is restricted to very high register, literary style, with extremely low frequencies in corpora.

7. Concluding notes

The Hebrew lexicon, like all lexicons, is made up of words (see Chapter 10 on Parts of Speech Categories.). But these words are very often morphologically constructed, based on usage of systematic constructs such as roots, patterns, conjugations, stems and affixes. The various systems of Hebrew derivational morphology delineated above are in constant interaction in both speech and writing, in ways beyond the scope of the current chapter (Ravid 2012). To note just a few of those discussed above: Verbs feed the nominal system with *benoni*-based nouns and adjectives, with *binyan*-anchored action nominals, and with root-based verb families extending to encompass nouns and adjectives. Nouns (and other lexical classes) in turn contribute new root skeletons to verbs, which then rebound back to the nominal system.

Recent usage-based accounts of morphological learning, use, and change have turned towards the word – rather than the morpheme – as the fundamental unit in both inflection and derivation (Blevins 2016; Bonami & Stump 2016; Traugott & Trousdale 2013). In this view, the main challenge for language users is to forge reliable relationships between words with shared components so that morphology as a system emerges from usage (Ackerman, Blevins & Malouf 2009; Ackerman & Malouf 2013; Diessel & Hilpert, 2016). In line with this approach, morphology in general, and derivational morphology in particular is viewed here as the main *organizational device of the lexicon*.

This chapter has attempted to provide a stable, top-down, empirically based survey that views derivational morphology as the major vehicle for the semantic and structural organization of the Hebrew lexicon, grounded in current, published and on-going corpus-based and experimental studies, encompassing both form and function of the web of devices serving this system. In view of the long history of the language, and the relatively short duration and rapidly-changing character of Israeli Hebrew delineated in Part I of this volume, both classical foundations and currently evolving phenomena were taken into account, with attention given to children’s and teenagers language usage as a prognosticator of language change.

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Appendix A. List of sources

Corpus	Age group	Mode	Size in Tokens	Source
Toddler Output	1;8–2;2 years	Spoken	72,086 words	Ashkenazi 2015 Ashkenazi, Ravid & Gillis 2016
Child-Directed Speech	30 years old	Spoken	299,461 words	Ashkenazi 2015 Ashkenazi, Ravid & Gillis 2016
Children's Peer Talk	2–8 years	Spoken	32,991 words	Zwilling 2009 Eitan 2017 Levie et al. submitted Shoshany 2018
Text Production	9 years to adults	Written	34,888 words	Berman & Verhoeven 2002 Hershkovitz 2015
Children's storybooks	Expert written	Written	49,384 words	Levie et al. submitted Grunwald 2015
Linzen's corpus	Blogs	Written, digital	165,000,000 words	Linzen 2009 Analyses by Ronit Levie

Parts of speech categories in the lexicon of Modern Hebrew

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Parts of speech in Modern Hebrew are analyzed in relation to three categories: Open Class items (Nouns, Verbs, Adjectives), Closed Class paradigmatically organized grammatical items (e.g., Pronouns, Case-Markers, Conjunctions), and Intermediate elements lying between the two (e.g., Prepositions, Adverbs, Floating Operators). The chapter considers what is meant by “a word” in Hebrew, taking into account the contrast between older and more current items as well as between conventional dictionaries and the mental lexicon, and the critical role of morphology in the Hebrew lexicon. The verb lexicon is characterized by types of consonantal roots (full versus defective) and the *binyan* conjugation patterns or prosodic templates. Nouns and adjectives are described as morphologically less restricted than verbs, including loan words that are partially integrated into the Hebrew phonological system, generally not constructed by the nominal morphological patterns (*miškalim* ‘weights’). So-called “function words”, traditionally grouped together under the label *particles* and analyzed here as members of either closed or intermediate classes of items, are also typically morphologically non-derived. The chapter concludes by summarizing current trends in lexical innovation in relation to productivity in the MH lexicon.

1. Introduction

The chapter surveys elements that make up the current Hebrew lexicon, focusing on Modern compared with earlier stages of the language and with languages of Standard Average European (SAE). The introduction reviews key aspects of lexical analysis relevant to MH, including the notion of “a word” in Hebrew (§1.1); the distinction between archaic and currently active or old versus new words (§1.2); comparison of conventional dictionaries and the mental lexicon (§1.3); the impact of derivational morphology on the Hebrew lexicon (§1.4); sources of data for the descriptions which follow (§1.5); and breakdown of parts-of-speech categories in conventional dictionaries and in online usage (§1.6). The bulk of the chapter (§2)

characterizes morphological, syntactic, and semantic properties of three classes of lexical items in current Hebrew: Open Class (OC) Verbs, Nouns, Adjectives (§2.1); Closed Class (CC) items including Pronouns, Determiners and Quantifiers, Case-markers, Conjunctions (§2.2); and Intermediate Class (IC) items lying between these two extremes, mainly Prepositions, Adverbs, and Discourse Markers (§2.3). The chapter concludes by considering the nature of “productivity”, innovativeness, and frequency in the current Hebrew lexicon (§3).

1.1 What’s “a word” in Hebrew?

The discussion that follows disregards controversies in the linguistics literature concerning what and how elements are represented in the lexicon (for example, whether bound morphemes are entered separately) and the principled division between lexicon and grammar. Rather, focus is on features that appear relevant to what speakers of MH know about “words” in their language – in the sense of the lexical items they can intuitively access in order to understand and produce verbal input and output when listening or speaking, reading or writing. Concern is with the knowledge of literate but “naïve” members of the MH speech community, rather than language experts such as professional writers and poets, Hebrew scholars, or language teachers.

The term “word” has two alternatives in Hebrew. (i) The more restricted is *teva* – literally a box or chest, also used for ‘ark’ in Biblical and ritual references, and for a bar in music. In language, this traditionally refers to a written word, hence graphically separated by a space from the words surrounding it (e.g., Ravid 1996, 2012). Written words in Hebrew are represented by at least two characters, going up to as many as 16 in a string like *LKŠHTHŠBNWYWTYNW* (= *li-x-še-hitxašben-u-yot-éy-nu*) ‘to-like-that-calculate :B5-NOM-PL-CS.PL.M-POSS.1PL = until our calculations’. (ii) The common term for ‘word’ is *mila*, applying to both written and spoken strings, the basis for coinages like *milon* ‘dictionary’, *milonai* (normative *milonáy*) ‘lexicographer’, *milonaut* ‘lexicography’.¹ Current usage-based studies indicate that most Hebrew words are bisyllabic, with several structural factors increasing their length (Ben-David & Bat-El 2016; Cohen-Gross 1995; Nir & Berman submitted; see also Chapter 6 on MH Phonology). These include the seven prefixally bound functors reviewed in (i) below: inflections that are typically linearly affixed to stems (e.g., *yéled* ‘child’, *yelad-im* ‘child-PL.M’; *yelad-éy[^]-nu* ‘child-CS.PL.M-POSS.1PL = our children’); and

1. Hebrew words are transcribed in broad phonemic form, to represent current spoken usage, and consonantal root elements are represented in symbols specifying their historical origin and current orthographic representations (see *Transcription and Coding*).

linearly concatenated morphological patterns (e.g., *yéled* ‘child’ > *yaldut* ‘childhood’ > *yalduti* ‘childish’ > *yaldutiyyut* ‘childishness’) along lines detailed in Chapter 7 on Inflection, Chapter 8 on Derivation).

Decisions concerning “what is a word” proved relevant for segmenting written and spoken texts into words in cross-linguistic research projects in which Hebrew was the only language not written in Roman script (Berman & Slobin 1994; Berman & Verhoeven 2002). The following issues arose in this connection, ranked in (1) below from most to least Hebrew-specific: (a) grammatical morphemes prefixed to the next word in Hebrew but written as separate words in the other languages; (b) compounds; (c) bound or multi-lexemic strings; and (d) contracted forms.

(1a) *Orthographically bound functors*: Across a large sample of texts – 320 in each of 7 languages (Berman & Verhoeven 2002) – the first five “words” with the highest frequency in the lemmatized corpus for Hebrew out of a total 37,249 were all orthographically bound elements, in decreasing order of frequency: *ve-* ‘and’, *ha-* ‘the’, *še-* ‘that’, *be- ~ ba-* ‘in (~ the)’, *le ~ la-* ‘to (~ the)’.² These “function words” or “grammatical elements”, termed *milyot* ‘particles’ in Hebrew grammars (see §2.2, §2.3 below), are all among the seven items – conjunctions, prepositions, and the definite article – that are orthographically bound to the following word, the two others being the prepositions *mi-* ‘from, of’, *ke-* ‘as, like’.³ Empirical evidence is lacking on how far non-tutored but literate speaker-writers of MH consider these as separate “words”, and their status in the mental lexicon is still subject to suitably structured analysis (but see Ravid 1996, 2012 in this connection).

(1b) *Compounds = bound smixut genitives*: Compounds – in the sense of bound construct-state genitive constructions – are typically represented by two separate words in writing.⁴ (See Chapter 14 on Genitive Constructions). For

2. The first three items also had highest frequency in the six other (Germanic and Romance) languages in our sample. In Hebrew, the first five items were followed by the orthographically separate *ze* ‘it, this, that’, *lo* ‘no, not’, *haya* ‘was’, *et* = the Accusative marker, and *šel* ‘of’, the genitive marker, in that order. To accommodate this discrepancy, and to avoid biasing comparisons of texts written in Hebrew with those in the other languages, we conducted two separate lexical counts for Hebrew – one treating these 7 items as separate words and one as part of the word they are attached to in writing.

3. The seven items are denoted by the acronym *משה וכלב MŠH VKLB* – pronounced [moše *ve-kalev*] literally ‘Moses and Kalev’. The preposition *ke-* is rare in current Hebrew usage (Schwarzwald 2016a), in contrast to the high-frequency *le-* ‘to, for’, *be-* ‘in, at’, *mi* ‘from, of’.

4. However, less tutored speakers may collapse them into a single word, as when children write *בית ספר bet[^] séfer* ‘house:cs book = school’ as *בצפר becefer* or when *יום הולדת yom[^] hulédet* ‘day:cs birth = birthday’ is rendered by *יומולדת yomulédet*, common in cellphone texting.

example, in a large data-base of written texts produced by educated Hebrew speakers, compounds are nearly always separated by a space, although highly lexicalized items may be written with a hyphen between the head and modifying noun. This does not solve the issue of whether compounds constitute “words” or “complex expressions” in the mental lexicon of Hebrew speakers. In a study where speakers were required to rank a list of 30 construct-state expressions from “like a single word” to “a random expression I am not familiar with” (Berman & Ravid 1986), participants showed considerable agreement on the expressions they ranked as “word-like”, suggesting that highly common, especially idiomatic construct-state [cs] expressions are listed as single elements in the mental lexicon, irrespective of how they are written. On the other hand, numerous such constructions were rated as not at all like a single word. Relatedly, a list of some two dozen construct state expressions were defined as “frozen compounds” by a team of graduate linguistics students from a data base of over 13,000 words in written and spoken Hebrew texts, including: *bat[^] zug* ‘daughter:cs couple = female partner’, *tsúmet[^] lev* ‘input:cs heart = attention’, *simxat[^] xayim* ‘joy:cs life = *joie de vivre*’ (Berman 2002, 2008; and see, too, Schwarzwald 2016a; Shatil 2016).

- (1c) *Multilexicemic expressions* (MLEs) – in Hebrew, as in other languages, numerous often idiomatic expressions consisting of more than a single (orthographic) word appear to be unitary elements in the mental lexicon (Barkema 1996; Guenther & Blanco 2004; Wulff 2008). In the introduction to her book on “restricted collocations in contemporary Hebrew”, Halevy describes these (in free translation from the Hebrew original) as “phrasal combinations that have become established (lit: institutionalized) in contemporary Hebrew” (1998: 15; see also Schwarzwald 2002a: unit 4 24–25). In MH, these semantically and lexically, often grammatically, bound or frozen expressions typically consist of two or more items separated orthographically by a space (§2 below). And they occur in different syntactic constructions, including lexicalized construct-state compounds like those in (1b) above and in adverbial-type expressions, for example: *dérex agav* ‘path, way back = by the way, incidentally’; *sof kol sof* ‘end all end = at long last’, *af-al-pi[^]-xen* ‘even-on-mouth:cs-thus = even so’ (§2.3). As in other languages, these range from idiomatically frozen combinations to relatively free collocations.
- (1d) *Contracted forms* – like *don’t, he’ll, we’re* in spoken English and elisions in French are not an established part of the grammar of MH, although common in casual speech is fusing of the accusative marker *et* with the definite marker *ha-* to yield *ta* – e.g., *ani lo moce et ha-séfer šel-i* ‘I not find ACC DEF-book of-me’ ~ *ani lo moce ta séfer šel-i* ‘I not find ACC.DEF book of-me’ – a phenomenon going back as far as the Dead Sea Scrolls. Personal pronouns are also typically reduced in casual speech, so that in the previous

example, *ani lo moce* might be pronounced as *anlo moce* (Polak-Yitzhaki 2007; Polak-Yitzhaki & Maschler 2016). Additionally, *acronyms* are extremely common in MH – going back to late Rabbinical usage and highly productive in *halachic* (Jewish law) writings from the Middle Ages on (and see, too, Ravid 1990; Schwarzwald 2002b).

The mental lexicon of speaker-writers of MH is thus a complex compilation of elements ranging from monosyllabic to multilexemic strings of items. In the interests of parsimony, our description of the wordstock of current Hebrew focuses on *monolexemic* items, generally in their citation form, in some cases as morphologically complex items.

1.2 Old versus new words

The distinction between “old” and “new” words (Aronoff 1976) is especially critical in MH given the unique socio-historical features of its development. A cultural factor that MH shares with other languages – possibly at a relatively accelerated rate – is the creation of new words to label contemporary knowledge-domains, artefacts, and recently derived entities. *Loan-word* borrowings were common in Hebrew from Biblical times (from Persian and other Middle Eastern languages) and from Aramaic and Greek in Mishnaic Hebrew. MH, too, has a vast stock of loan-words, imported from a variety of languages (Bolzky 1978a; Fisherman 1986; Schwarzwald 1998a). At one end are high-register words of Greek and Latinate origin, particularly in scientific, academic, and journalistic domains (e.g. nouns – *barométer, téleskop, psixolingvístika*; adjectives – *akadémi, kognítívi, modérni*; verbs – *le-tarped* ‘to-torpedo’, *le-sabsed* ‘to-subsidize’, *le-hitaklem* ‘to-acclimatize’) – with multisyllabic words generally marked by (ante)penultimate stress. At the other end of the scale of formality are *slang* terms, which reflect the differential impact of various contact languages over the past 100 years. Originally Yiddish and Russian influences predominated, while English was a major influence during the mandatory period and again today, under the influence of the media. Dictionaries of MH slang also point to (i) occasional borrowings from Bulgarian, Caucasian, Circasian, Czech, Dutch, Hatian, Hindi, Hungarian, Japanese, Ladino (Judeo-Spanish), Portuguese, Swedish; and (ii) heavy contemporary reliance on words from Arabic in all open-class lexical categories, such as *kef* ‘fun’, *mastul* ‘high on drugs’, *le-vaes* ‘to-upset’, accompanied (iii) by multiple in-group terms, most specifically army slang (Ben-Amotz & Ben-Yehuda 1972, 1982; Rosenthal 2005; Rosenthal 2014; Sappan 1971). Old versus new words in the lexicon of MH are also distinguished by the spread of structural categories that were rare at earlier stages of the language, such as action nominals and denominal adjectives (see Chapter 8 on Derivation,

Chapter 11 on Nominalizations), and lexicalized phrasal manner adverbs (Brandes & Ravid 2016; Nir & Berman 2010).

Other, non-Hebrew specific sources of vocabulary extension include grammaticalization and other types of categorial change, as when words are extended from their literal sense to use as *discourse markers* (§ 2.3.3 below) – e.g., the adjectives *gadol* ‘big, large’ extended to the sense of ‘terrific, amazing’ and *tov* ‘good’ to ‘well, okay’, or the existential particle *yeš* ‘(there) is’ to ‘wow!’, ‘that’s great!’. *Semantic shift* occurs with *religious* terms (e.g., *sidur* ‘prayerbook’, *kabala* ‘Jewish mysticism’), also used today in the mundane sense of ‘arrangement’ and ‘receipt’ respectively. *Metaphorical extensions* are another means: For example, the Biblical noun *dérex* ‘way, road’ was extended from ‘method, means’ but also one’s path in life, as well as in formulaic expressions like *dérex[^] érec* ‘way:cs land = respect, good manners’, *éven[^] dérex* ‘stone:cs way = landmark’.

Importantly, given the rich and readily accessible means of *derivational morphology* for new-word formation (§ 1.3), numerous *Hebrew-based* terms are constantly innovated in domains like science and journalism (e.g., *omanut* ‘art’ < *oman* ‘artist’, *sxaltani* ‘rational’ < *séxel* ‘sense, logic’, *le-ater* ‘to-locate’ < *atar* ‘site’; *maxšev* ‘computer’ < *le-xašev* ‘to-calculate’, *solela* ‘battery’ < *li-slol* ‘to-pave’). “New” words are typically derived by word-formation processes that are relatively *active*, ones that function extensively in current usage and form the basis for shaping new words” (Berman 1988a, 2012; Ravid 1990, 2003). The categories in (2) represent four morpho-semantic processes attested occasionally at earlier stages of the history of Hebrew that are prevalent in current usage, so distinguishing words innovated over the past hundred years from their predecessors are noted in (2).

- (2a) *Linearly concatenative affixation* occurs extensively alongside the more classical method of interdigitation of consonantal root plus morphological pattern – as in the earlier example of *yald-ut-iy-ut* ‘childishness’ (Bolozky 2004; Ravid 2006a; Schwarzwald 2006). As high as around 20% of the content words of current Hebrew appear to be constructed by stem- or word-external affixation (Ravid 2006a; Ravid & Malenky 2001) – mainly by suffixes like *-ut* for abstract nouns (e.g., *yaldut* ‘childhood’, *meuravut* ‘involvement’) and the denominal adjectival suffix *-i* as in *samxuti* ‘authoritative’ from *samxut* ‘authority’, *hegyoni* ‘logical’ from *higayon* ‘logic’ (for details, see Chapter 8 on Derivation).
- (2b) *Secondary roots*, formed by converting affixal consonants like *alef*, *tav*, *šin*, *nun* into root consonants, are another current means of word-formation (Schwarzwald 2016b). For example, the primary root *h-š-b* ‘think, account’ as in *xašuv* ‘important’, *xašiva* ‘thought’ is the basis for the nouns *maxšev* ‘computer’ and older *xesbon* ‘calculation’; these in turn yield the secondary roots *m-h-š-b* and *h-š-b-n* as in *le-maxšev* ‘to-computerize’, *memuxšav* ‘computerized’, *mixšuv* ‘computerization’, on the one hand, and *le-hitxašben* ‘to make a reckoning’,

hitxašbenut ‘(a) reckoning’, and the adjective *mexušban* ‘calculating’, on the other. Words based on secondary root-formation often reflect the relatively new option of *quadrilateral* roots (Yannay 1974), in both native and loan words, as in denominated verbs like *le-malcer* ‘to-wait (on tables)’ from *melcar* ‘waiter’, *le-hitʔaklem* ‘to-acclimatize’ from *ʔaklim* ‘climate’, *le-hašpric* ‘to-squirt’ from *špric* ‘splash, plaster-coating’ (in three different *binyan* patterns). Some studies suggest that as many as 40% of the consonantal roots in current Hebrew are constructed of more than the canonic three consonants (Berman 2012; Bolozky 2004).

- (2c) *Morphology-meaning pairings* of different word-patterns – *binyanim* in verbs and *miškalim* in nouns and adjectives – also differentiate current from earlier word-formation processes. Such shifts in preferred meanings include: in verbs, B4 *piʔel* was originally used to express intensive, but now serves mainly for denominal verb-formation; and B3 *hifʔil* no longer serves for inchoative change-of-state or middle voice senses, but is largely dedicated to transitive causativity, with B5 *hitpaʔel* taking over for the former (Berman 1993a); in nouns, the suffix *-an* is favored for coining agent nouns, both in the pattern *CaCCan* (e.g., *šadran* ‘announcer’ from *le-šader* ‘to-broadcast’) and in the linear stem + concatenated *-an* (e.g., *mizrex-an* ‘orientalist’ from *mizrax* ‘east’) in place of classical agent patterns like *CaCCaC* (*tabax* ‘cook’, *sapan* ‘sailor’) or *CaCiC* (*kacin* ‘officer’, *nasix* ‘prince’), and in adjectives, the formerly agentive *CaciC* pattern is today productive for expressing ‘-able’ as in *kavis* ‘washeable’, *nagiš* ‘accessible’ (Berman 1988a; Gadish 2007).
- (2d) *Denominative verb-formation* takes place today, as in the past, on the basis of triconsonantal verb-roots (e.g., Biblical *tadšeʔ* ‘be covered with grass’ from the noun *déseʔ* ‘grass’ or *wa-yeʔehal* ‘and-set up camp’ from *ʔóhel* ‘tent’). However, current denominative verb-formation is far less restricted, based on both loan words and multiconsonantal roots in MH (Bat-El 2004, 2006a; Berman 2003; Bolozky 1978b, 1982; Schwarzwald 2000; Ussishkin 1999a, 1999b).

1.3 Conventional dictionaries and the mental lexicon

Both conventional, published (monolingual) dictionaries and the mental lexicon of speaker-writers of a given language constitute highly organized repositories of linguistic knowledge, with some degree of overlap between them. Yet they differ in many respects, as detailed for MH by Seroussi (2011: 4–7), Schwarzwald (2004, 2016b). One such issue is that the primary organizational criterion of a dictionary is orthography, reflecting for Hebrew, either words in the sense of *tevoʔ* (§1.1) or based on consonantal roots, in both cases listing vocabulary in a format accessible mainly to expert or highly literate speaker-writers (Aitchison 2003a; Anshen & Aronoff 1999; Bolozky 1999). Second, lexicographers typically survey huge corpora

to decide what words to include but, in the case of Hebrew, they generally fail to specify which words are obsolete and which current. This contrasts with the mental lexicon of members of a given speech community, as more “natural” or “intuitive” sources of reference than conventional dictionaries (Aitchison 2003a; Di Sciullo & Williams 1987). The problem is exacerbated by the fact that Hebrew lacks established frequency lists based on both written and spoken language along the lines of European languages (see, further, §1.5 below).

As in all languages, the mental lexicon of Hebrew speakers differs from one individual to another, depending on subjective background factors of age, literacy, education, occupation, etc. Focus below is on principles underlying the word-stock available to most native, non-expert speaker-writers of “standard Hebrew” (Ben-Asher 1969; Berman 1987a; Muchnik 2015; Nir 1998; Ravid 1995; Schwarzwald 1999; and see Chapter 5 on Prescriptive Activity). In the present context, “availability” refers to comprehension and production of components of the lexicon, without necessarily involving explicit meta-linguistic formulation of the principles underlying their construction or etymological knowledge of their historical origins.

1.4 Role of morphology in the Hebrew lexicon

The division between new/old, live/obsolete, or active/inactive processes in the wordstock of current Hebrew underscores the critical role of *derivational morphology* in MH word-formation, including the existence of *word-families* of open-class items constructed out of the same consonantal root with a shared (though not necessarily fully transparent) core of meaning. This is illustrated in Table 1 for the two roots *g-d-l* roughly ‘grow, big’, *k-t-b* ‘write, inscribe’.

The blanks representing accidental lexical gaps in Table 1 demonstrate that particular combinations of root + *binyan / miškal* morphological patterns do not apply across-the-board. (In fact, for most roots gaps *outnumber* those that are actually realized). And the glosses in the table point to the non-predictability of form-meaning pairings in word families constructed from a given root. Nonetheless, these two relatively large word-families demonstrate the relevance of derivational morphology to characterizing components of the Hebrew lexicon (as elaborated in Chapter 8 on Derivation).

Table 1 shows that Verbs (§2.1.1 below) are invariably derived, constructed in one of the five *binyan* morphological patterns interdigitated with consonantal roots, whereas Nouns and Adjectives (§2.1.2, §2.1.3) include both derived and non-derived items. For example, alongside of derived words in *miškal* patterns like *miCCaC*, *CaCaCa*, and *miCCaC* in Table 1, the language has numerous non-derived basic nouns in the same semantic classes (e.g., derived *migdal* ‘tower’ but basic *crif* ‘hut’, *bikta* ‘shed’, derived *mixtav* ‘letter, missive’ but *igéret* ‘(written) card’, *pétek*

Table 1. Verbs, Nouns, and Adjectives based on the consonantal roots g-d-l and k-t-b~ x-t-v (verbs are represented in the morphologically simplex Past Tense, Masculine Singular and a dash represents lexical gaps)

Verbs:	g-d-l	'grow'	k-t-b ~ x-t-v	'write'
B1 <i>pa'al, qal</i>	<i>gadal</i>	'grow:INTR'	<i>katav</i>	'write'
B2 <i>nif'al</i>			<i>nixtav</i>	'written:PASS'
B3 <i>hif'il</i>	<i>higdil</i>	'enlarge, magnify'	<i>hixtiv</i>	'dictate:CAUS'
B4 <i>pi'el</i>	<i>gidel</i>	'grow, raise:TRANS'	<i>kitev</i>	'address, send copy to'
B5 <i>hitpa'el</i>	<i>hitgadel</i>	'aggrandize'	<i>hitkatev</i>	'correspond:RECP'
Nouns:				
Agent nouns:	<i>megadel</i>	'grower (of crops)'	<i>kotev</i>	'author'
			<i>mexutav</i>	'addressee'
Action nominals:				
B1 <i>pa'al</i>	<i>gdila</i>	'growing, growth'	<i>ktiva</i>	'writing, script'
B3 <i>hif'il</i>	<i>hagdala</i>	'enlarging/ment'	<i>haxtava</i>	'dictating/ion'
B4 <i>pi'el</i>	<i>gidul</i>	'growth, tumor'	<i>kituv</i>	'addressing'
B5 <i>hitpa'el</i>	<i>hitgadlut</i>	'aggrandizement'	<i>hitkatvut</i>	'corresponding/ence'
Other noun patterns:				
<i>CóCeC</i>	<i>gódel</i>	'size'		
<i>CCaC</i>			<i>ktav</i>	'(hand)writing'
<i>CCiC</i>			<i>ktiv</i>	'spelling'
<i>CaCaC</i>			<i>katav</i>	'correspondent, reporter'
<i>CaCaCa</i>			<i>katava</i>	'(news) report'
<i>CCuCa</i>	<i>gdula</i>	'greatness'	<i>ktuba</i>	'marriage-contract'
<i>CaCCan</i>			<i>katvan</i>	'typist'
<i>CaCCanut</i>			<i>katvanut</i>	'typing, stenography'
<i>CaCCut</i>	<i>gadlut</i>	'grandeur'		
<i>CCóvet</i>			<i>któvet</i>	'address, inscription'
<i>miCCaC</i>	<i>migdál</i>	'tower'	<i>mixtav</i>	'letter, missive'
<i>taCCiC</i>	<i>tagdil</i>	'(photo) enlargement'	<i>taxtiv</i>	'(a) dictate'
<i>maCCeCa</i>	<i>magdela</i>	'enlarger' *	<i>maxteva</i>	'writing-desk'
<i>tiCCóCet</i>			<i>tixtóvet</i>	'correspondence'
Adjectives				
<i>CaCuC</i>			<i>katuv</i>	'written'
<i>CaCoC</i>	<i>gadol</i>	'big, large'		
<i>meCuCaC</i>	<i>megudal</i>	'(over)grown'		

* The nouns *tagdil*, *magdela* are innovations restricted to technical usage in fields like photography and architecture. The pattern *maCCeCa* is normatively *miCCaCa*, thus *mixtava*.

‘(written) note’ respectively), as well as words derived by non-root + pattern processes noted earlier (linear affixation, loan words, acronyms, compounding).

In contrast to the three open-class categories in Table 1, *grammatical functors* (closed-class elements like pronouns and conjunctions and “intermediate” level prepositions and adverbs) are typically *not* derived by canonically Semitic interdigitating consonantal elements with affixal patterns (§2.2, § 2.3). These may take a free citation form or a bound, inflected form (e.g., *ani* ‘I’ ~ *oti* ‘me’, *al* ‘on’ ~ *alay* ‘on-me’ (see Chapter 7 on Inflection); and they may be lexically simplex or complex, mono- or multi-morphemic (e.g., *mi-pney*, literally ‘from the face of’ means ‘owing to, because of’, while *bi-švil* ‘for (the sake of)’ is constructed from the preposition *be-* ‘in, at’ and the noun *švil* ‘path’ (§2.3.1 below). These are trends rather than across-the-board processes. For example, the preposition *bead* ‘for, in favor of’ means much the same as *bišvil* but is constructed from the two prepositions *be-* ‘in, at’ and *ad* ‘until, up to’. And Adverbs (§2.3.2) occasionally belong to a family of words based on the same root (e.g., the adverb *leat* ‘slowly’ from the preposition *le-* and a derivative of the root *ʔ-t-t*, as in the adjective *iti* ‘slow’, and the noun *itiyut* ‘slowness’).

The interfacing of derivational and inflectional morphology is particularly marked in Verb paradigms, composed of derivational root + *binyan* pattern combinations combined with marking of inflectional categories of Tense (Present, Past, Future) and Mood (Infinitive, Imperative). This is clearly formulated in the following excerpt from Ravid et al. (2016a). “For example, the verb meaning ‘knit’ from the root *s-r-g* is inserted into three temporal paradigms in the *pa'al* pattern, thus: Past Tense *CaCaC* > *sarag*, Present Tense *CoCeC* > *soreg*, and *PiCCoC* [where P stands for Prefix] > Future *yisrog*, Imperative *tisrog*, Infinitive *lisrog* (where P stands for the temporal-marking prefix); while the verb meaning ‘go/come-in, enter’ is constructed from the root *k-n-s* inserted into two temporal paradigms in the *nif'al* pattern as follows: Past and Present Tense *niCCaC* > *nixnas* and *PiCaCeC* > Future *yikanes*, Imperative *hikanes*, Infinitive *lehikanes*. The description of the Hebrew lexicon in Section 2 below reflects how critically it is impacted by morphological factors, particularly derivational processes of word-formation.

1.5 Sources of data

Information regarding the current lexicon of Hebrew is based on rich prior research in the domain, with sources of data including dictionary counts, documented written and recorded spoken materials, and experimental elicitations.

Distributional data on word types and tokens are based on *dictionary counts* supplemented by analysis of an online *digital corpus* conducted by the first author. Searches of published dictionaries (conducted by Bolozky for nouns and adjectives, supplemented by data on verbs in Levie, Ben-Zvi & Ravid 2017) began with a count of the total number of word-types in the different part-of-speech categories listed

in the five-volume Even-Shoshan 1966–1970 dictionary, extended from the original 1947–1952 edition, and including the addenda of Reuven Sivan (Even Shoshan 1983). This monumental work aimed to cover the entire Hebrew lexicon across four historical periods (Biblical, Mishnaic, Medieval, Modern) specified as such in the published versions, with Biblical items unmarked as the default. For the present analysis, obsolete and archaic expressions were excluded, as were other items evaluated as no longer part of the lexicon of educated, but non-expert Hebrew speakers, such as elevated literary terms familiar mainly to language specialists and Hebrew scholars. This was done by checking each entry listed from the Even-Shoshan dictionary against the Morfix electronic data base (Morfix – Free Dictionary n.d.). The latter is based on Choueka's (1977) *Rav-Milim* 'many words' dictionary, constructed in consultation with a broad-based team of experts on what items actually belong in the Modern Hebrew lexicon, and constantly updated online.

In addition, a search of items in different word classes was conducted on the basis of an online corpus of 165 million words compiled and tagged by Tal Linzen (2009) based on blog posts, so representing relatively informal or unmonitored current Hebrew usage. A corpus of this size is bound to contain some tagging errors, but in the present case, they are relatively minor, ranging approximately from zero and 0.01% to 0.13% of total items (with interrogatives reaching as high as a 0.25% margin of error.)

These sources are supplemented by findings from three types of data characterizing the relative *productivity* of different word-formation processes in the MH lexicon. (i) Searches of a 5.3-million-word corpus of *published written materials*, mostly from daily newspapers downloaded from *Haaretz*, *Maariv*, and *Yedioth Aharonoth*, supplemented by some literary writing (three complete novels and several short stories) taken to represent a mid-level literary style accessible to the average Israeli reader (Bolzky 2009); (ii) analysis of 320 *unedited* written and spoken texts, narrative and expository elicited from 80 Hebrew-speaking school-children, adolescents, and adults (Berman & Nir-Sagiv 2004; Berman & Verhoeven 2002); and (iii) results of *structured elicitations* testing comprehension, judgment, and innovation of words in different lexical categories.

1.6 Quantitative breakdowns of parts-of-speech

Tables 2 and 3 give a general idea of the breakdown of lexical categories in the established versus the current lexicon of MH respectively. Table 2 lists *total* number of word-types in the Even-Shoshan dictionary, including words from earlier periods of the language, compared with the number of *live* word-types in the "sifted" version of Even-Shoshan, based on the Morfix/*Rav-Milim* digital dictionaries of current Hebrew.

Table 2. Total number of word-types in the Even-Shoshan dictionary across four historical periods compared with the sifted number of word-types in the Morfix/Rav-Milim dictionary of MH lexicon, by part-of-speech category

Part of speech	Even-Shoshan total wordstock	Morfix/Rav <i>Milim</i> live lexicon
Nouns	26,488	10,469
Verbs	10,923	4,291
Adjectives	7,233	3,679
Adverbs	419	330
Pronouns	39	30
Prepositions	46	46
Conjunctions	31	31
Total	45,179	8,876

Table 3. Frequency of occurrence of 165 million word *tokens* in different parts-of-speech classes in the Linzen online corpus.

Category	Tokens	Relative frequency
Noun	37,121,855	0.236
Verb	25,630,168	0.163
Adverb	12,698,523	0.080
Pronoun	12,227,820	0.077
Preposition	10,153,685	0.064
Adjective	9,444,230	0.060
loan	7,714,027	0.049
Conjunction	7,110,307	0.045
Proper Name	5,828,240	0.037
Accusative Marker <i>et</i>	4,764,032	0.030
Negator	4,487,629	0.028
Quantifier	3,295,424	0.020
Numeral	3,046,365	0.019
<i>šel</i> Genitive	3,013,297	0.019
Copula	2,905,672	0.018
Interrogative	204,5471	0.013
Participle = <i>benoni</i>	1,748,757	0.011
Existential	1,260,172	0.008
Modal	1,142,060	0.007
Interjection	632,185	0.004
Possessive	27,3013	0.001
<i>w</i> -Prefix [=‘and’]	145,329	0.0009
Number Expression	118,908	0.0007
Totals	156,807,169	

Table 2 shows that the two dictionaries share the same general trends in distribution of parts-of-speech categories: Open Class items account for nearly 100% of the items listed – 98.9% of the total wordstock and 97.7% of the live “sifted” lexicon. In both, Nouns account for over half the entries, with less than half the number of verbs, closely followed by adjectives. Of the other categories, Adverbs rate higher than Pronouns, Prepositions, and Conjunctions – which reflect the least change in number of items.⁵ Most markedly, the “current” lexicon as defined by the *Morfix/Rav Milim* dictionary contains only a little over one-third of the wordstock of the traditional Even-Shoshan dictionary, which includes items from three earlier stages of the language.

Table 3 compares these breakdowns with the frequency of word *tokens* in the larger, tagged online Linzen (2009) corpus of 165 million words, with Parts of Speech listed by frequency. The major categories are the same in Tables 2 and 3, although in the latter, closed class items are further broken down by application of Linzen’s morphological analyzer,

Even though the digital data in Table 3 refer to word-tokens and the dictionary counts of Table 2 to word-types, the findings for the two sets of data are largely consistent. Nouns head the list, followed (this time closely) by Verbs, together accounting for around one-third of words in the online corpus. The rest of the word-tokens together, excluding Adjectives, account for over half of the occurrences, consistent with the usage-based claim for the high frequency of closed class items like pronouns and conjunctions.

These distributional analyses underscore the *methodological* implications of word-counts and the notion of lexical frequency, since they reflect difficulties in comparing different dictionary listings and varied types of corpora, on the one hand, and problems of type-token relations and lemmatizations, on the other (Malvern, Richards, Chipere et al. 2004; Strömquist et al. 2002). The situation is particularly complex in MH, given the lack of established frequency lists, such as those available for most European and many other languages (see Berman 2012; Seroussi 2011 for surveys of partial frequency lists for MH). Established frequency lists for other languages typically not only encompass huge data-bases and a vast range of varieties of both written and spoken materials representative of different sections of the (native-speaking/writing) population, they yield counts that are generally derived by highly reliable statistical procedures not available to date for research on the MH lexicon (e.g., Davies 2009).

5. This contrasts markedly with the corpus-based counts of written and spoken texts in Hebrew and other languages (§1.5), where the lemmatized items with by far highest frequency of occurrence included only one OC item, the noun *beayot* ‘problems’ which occurred in the instructions to text-elicitation (Strömquist, Johansson, Kriz et al. 2002).

2. Types of lexical categories

Words are traditionally divided into two main Parts-of-Speech or Word-Class categories (Bisang 2011), labeled variously as content versus function words (Fries 1952), open-class versus closed-class items (Martinet 1960), or grammatical versus lexical elements (Talmy 2006). This binary approach still holds in research from different perspectives, including corpus-based studies (Biber, Johansson, Leech et al. 1999) as well as generative grammar (Abney 1987; Baker 2003) and lexical acquisition research (Bloom 2000; Clark 1993; Landau & Gleitman 1994). *Open-class* items – most generally, Nouns, Verbs, Adjectives – are typically affected by processes of both loss and innovation, such that some “old” words fall into disuse and “new” ones are added; they often undergo semantic change over time; and they carry some level of autonomous semantic content.⁶ *Closed class* categories, in contrast, are typically restricted in membership: Elements in a given category are interrelated and paradigmatically interchangeable, and their interpretation depends on their role in a given grammatical context. Importantly, linguists as far back as Bolinger (1968) agree that claims for “universal” word-class categories and the strict categorial distinctions between major lexical categories of N, V, A constitute a challenge for cross-linguistic analysis (e.g., Anward, Moravcsik & Stassen 1997; Haspelmath 2010; Schachter & Shopen 2007; Talmy 1985, 2000) and it is increasingly queried in current typological comparisons (Croft 1990, 2001; Haspelmath 2004, 2012; Ramat 2009; Vogel & Comrie 2000).

The Open- / Closed-Class dichotomy is extended here for characterizing components of the lexicon of Modern Hebrew, in accordance with typological and psycholinguistic research suggesting that parts-of-speech can best be viewed as placed along a continuum (Croft 2000; Gentner 1981; Gentner & Boroditsky 2001; Hopper & Traugott 2003; Schilperoord & Verhagen 2006; Slobin 1997 2001) and, in a generative framework (Corver & van Riemsdijk 2001).⁷ Here, a three-way distinction is drawn between Open Class (OC) items in the major categories of Verb, Noun, Adjective (§2.1); Closed Class (CC) grammatical functors including Pronouns, Determiners, Case-Markers, and Conjunctions (Section 2.2); and Intermediate Class (IC) elements like Prepositions and Adverbs that typically lie “in between” the two extremes of lexicon and grammar (§2.1.3).

6. See Evans & Osada (2005) for a wide-ranging and convincing discussion of ‘word-class fluidity’ and the question of whether there are languages that lack a division between the major lexical categories of Noun and Verb and how far Adjectives can be considered a widely attested part of speech.

7. Biblical Hebrew was generally characterized as having three classes of lexical items: Verbs, Nouns, and Particles (Hebrew *mil-iy-ot* ‘word-DIM-PL.F = little words’ (see, further, Sections 2.2 and 2.3).

2.1 Open class content words

Open-class categories readily allow for creation of new items to meet the changing needs of a given speech community. Of the different processes involved in Hebrew new-word formation, the commonest is derivation, supplemented by loan-word borrowings. Once a new item is added to an open word class, it typically takes on both the syntactic and inflectional features of other, established members of the same grammatical category. Members of the three major lexical categories in MH are often though not necessarily morphologically distinctive: Verbs are the structurally highly constrained, confined to a small subset of prosodic templates or *binyan* conjugations (§2.1.1); Nouns are structurally more diverse, and include basic and other non-morphologically derived elements (§2.1.2); and Adjectives are structurally the most varied of the three (§2.1.3). Modern Hebrew has little in the way of *zero derivation* or syntactic conversion: The only exception is use of present-tense, *benoni* ‘intermediate’ form participial verbs as one (out of many different) means for constructing agent and instrument nouns (Berman 1988b, 2017; and see, too, Chapter 8 on Derivation).

2.1.1 Verbs

Morphophonological factors play a critical role of in the verb lexicon of MH. These include: reliance on the *binyan* system for new-verb formation (§2.1.1.1); distributions of the *binyan* patterns in earlier and current usage (§2.1.1.2); comparison of old versus new verbs in current usage (§2.1.1.3); and the contrast between full or canonic and defective or weak verbs (§2.1.1.4).

The role of binyan patterns in the MH verb system

As noted from different perspectives in the two preceding chapters (Chapter 7 on Inflection and Chapter 8 on Derivation), formation of verbs in Modern as in classical Hebrew is confined to the five *binyan* conjugation patterns plus two inflectional passive patterns. This means that, depending on the view taken of non-concatenated word-formation in Hebrew (Berman 2003, 2012), they are composed of consonantal roots interdigited with affixal patterns (Berman 1999, 2016; Bolozky 1999, 2003), and they disallow “linear” construction in the form of external affixation to their stems (Bolozky 2004; Ravid 2006a; Schwarzwald 2006). Both historically and in contemporary usage, these patterns can be grouped into two sets of interrelated forms, the so-called ‘light’ or *qal* patterns (B1 *pa'al*, B2 *nif'al*, B3 *hif'il*) compared with the later developing ‘heavy’ patterns (B4 *pi'el*, B5 *hitpa'el*), so termed because their middle radical was originally geminate.

The semantic and syntactic functions of these patterns have undergone marked historical change – of the kind illustrated for “old” versus “new” denominative

verb-formation in Table 6 below. The basic and most ubiquitous *pa'al* or *qal* 'light' B1 pattern has highest frequency in general Hebrew usage, both written and spoken (Berman 1993a, 1993b; Schwarzwald 1982, 1996), as reflected in spoken and written input to young children (Ravid et al. 2016a, 2016b), as well as in children's speech output (Berman 1993a, 1993b; Dromi & Berman 1986). Moreover, the B1 *pa'al* or *qal* pattern is uniquely accessible to both intransitive and transitive verbs (e.g., intransitive *baxa* 'cry, weep', *kafac* 'jump', *yašen* 'sleep'; transitive *daxaf* 'push', *natan* 'give', *šavar* 'break'). On the other hand, this most basic pattern is largely inaccessible to innovation.

The four other patterns represent two distinct preferred syntactic contexts and valence values, syntactically transitive and intransitive constructions respectively, the first representing semantic focus on the *agent* as instigator of the event versus focus on the *theme* as the undergoer of an action or a change of state in the second (but see, Chapter 13 on Transitivity and Valence). The two *binyanim* hosting typically two- (or three-) place transitive verbs are mainly causative B3 *hif'il* and active B4 *pi'el*, as against the largely intransitive, often middle-voice or change-of-state B2 *nif'al* and B4 *hitpa'el* (Laks 2010, 2013b; Schwarzwald 2008).⁸ And they differ, too, in the semantic functions and derivational processes for which they are productively favored. Thus in current usage – as distinct from fossilized forms inherited from earlier periods of the language – the B3 *hif'il* pattern today serves most productively for deriving *causative* predicates (e.g., well-established B1 *caxak* 'laugh' ~ B5 *hicxik* 'make-laugh, amuse', novel B1 *tas* 'fly = aviate' ~ B5 *hetis* 'fly a plane', B2 *nixna* 'give in, surrender' ~ B3 *hixnía* 'defeat, cause to surrender'). Further, as shown in Tables 4 and 6 below, B4 *pi'el* serves mainly to denote agentive, generally transitive, activities, and so is the favored means of denominal verb-formation from both native and loan nouns and adjectives (e.g., *célem* 'image' > *cilem* 'photograph, take a picture', *púdra* > *pider* 'powder = put on make-up'). These observations are based largely on usage-based distributions noted in Berman (2003), Bolozky (1982, 1999, 2003) taking into account phonologically motivated analyses favoring the syllabic CVCVC structure of B4 *pi'el* for denominal new-verb formation in Bolozky (1978b), Schwarzwald (1996). Moreover, B4 *pi'el* verbs commonly alternate with intransitive change-of-state, middle-voice or reflexive predicates in B5 *hitpa'el* (e.g., *hictalem* 'be-photographed, have one's picture taken', *hitpader* 'powder oneself').

8. Transitivity here is defined as verbs requiring an object, where the two typically transitive patterns *hif'il* and *pi'el* generally take a direct object marked by the accusative *et* (Section 2.2 below), whereas the two intransitive patterns *nif'al* and *hitpa'el* do not, and so typically cannot be passivized. The latter may, however, take prepositional objects (e.g., *nixnas le-* 'enter into', *nilxam be-* 'fight with' and *hitnaged le-* 'resisted to' and *hištatef be-* 'participated in' respectively). Passives are clearly intransitive, focusing on the theme in Hebrew as in other languages.

Like intransitive B2 *nif'al*, B5 *hitpa'el* verbs express a variety of generally one-place predicates (theme-focused, middle-voice, change-of-state “unaccusatives”, reflexives, and reciprocals). B2 *nif'al* differs from B4 *hitpa'el* in also serving as a syntactic passive version of verbs in B1 *pa'al* (e.g., *ganav* ~ *nignav* ‘steal ~ be-stolen’, *lakax* ~ *nilkax* ‘take ~ be-taken’).

Table 4. Relative frequency of *binyan* pattern occurrence as percentage of total verbs in 4 text types (spoken and written narrative, spoken and written expository) produced by 20 schoolchildren compared with 20 adults (N= 2,531 lexical verbs)**

	B1 <i>pa'al</i>	B2 <i>nif'al</i>	B3 <i>hif'il</i>	B4 <i>pi'el</i>	B5 <i>hitpa'el</i>	Passive	
						B4 _{ps} <i>pu'al</i>	B3 _{ps} <i>huf'al</i>
Grade IV (9–10 years)	54.2	2.7	21.0	17.9	4.2	0.0	0.0
Adults (20s–30s)	44.0	9.3	19.6	16.0	8.0	1.75	1.4

** Lexical verbs are those marked for *binyan* patterns, excluding existential markers and copulas.

These patterns interact in a network of predicative relations between two sub-systems, represented schematically in Figure 1, where a solid line indicates high-frequency alternations and a dotted line stands for currently less common, largely frozen alternations between the patterns in question.

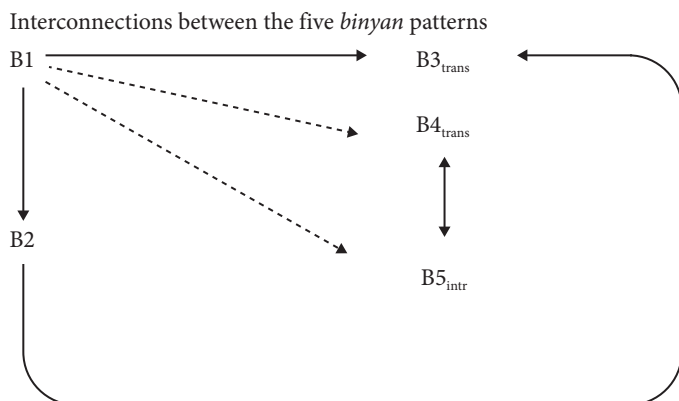


Figure 1. Interconnections between the five non-strictly passive *binyan* patterns [Based on Berman 2016: 19]

Figure 1 depicts productive patterns of new-word formation in MH (Bolzky 2009; Schwarzwald 1983), showing a strong connection between B1 *pa'al* intransitives to B2 *nif'al* passives or change-of-state unaccusatives, and between both B1 *pa'al* and

B2 middle-voice *nif'al* verbs to B3 *hif'il* causatives, on the one hand, and between B4 *pi'el* active transitive verbs and B5 *hitpa'el* middle-voice verbs, on the other. Minor, currently non-productive patterns – indicated by dotted lines in Figure 1 – cut across the two sub-systems: for example, relations between verbs basic in B1 *pa'al* and their traditional B4 *pi'el* “intensifiers” like *kafac* ‘jump’ ~ *kipec* ‘hop, skip’, or alternations between B1 intransitive and B4 transitive (e.g., *šaxan* ‘dwell’ ~ *šiken* ‘settle:TRANS’), as well as occasional triplets like B1 *zaxar* ‘remember’, B2 *nizkar* ‘recall’, B3 *hizkir* ‘remind’, B1 *šaxav* ‘lie, recline’, B2 *niškav* ‘lie down’, B3 *hiškiv* ‘lay, cause to lie’. Another minor pattern expresses iterative or completive aspect between B1 motion verbs and their B5 *hitpa'el* counterparts (e.g., *halax* ‘walk, go’ ~ *hithalex* ‘walk around’, *rac* ‘run’ ~ *hitrocec* ‘rush around’, *af* ‘fly’ ~ *hitofef* ‘fly away’). An important shift in MH is that such aspectual functions of the *binyan* system are marginalized and restricted to small subsets of items – in marked contrast to earlier stages of the language, as still highlighted in the teaching of Hebrew as both a first and second language (Berman & Neeman 1994; Coffin & Bolozky 2005). And see, further, Section 3 below.⁹

Distribution of binyan patterns in MH

Two sources of data provide rather conflicting evidence concerning the breakdown of these patterns in current usage. In terms of *frequency* of use, various sources demonstrate quite consistently the following continuum in terms of both type and token usage. As noted, most common are B1 *pa'al* verbs, next are the high-transitivity B3 *hif'il* and B4 *pi'el*, with lowest frequency scores yielded by the intransitive B2 *nif'al* and B5 *hitpa'el*. Relevant distributions are shown in Table 4, based on 160 written and oral, narrative and expository texts elicited from Hebrew-speaking schoolchildren and adults, coming to a total of 19,595 words (Berman 2008; Berman & Verhoeven 2002).

The breakdowns in Table 4 reveal clear trends in both age-groups across four different text types: B1 *pa'al* has highest frequency and the two passive *binyan* patterns, *pu'al* and *huf'al*, show negligible occurrence, even among the adults. They are commoner in written than in spoken usage, testifying to their relatively high register.¹⁰ The two active, transitive/causative patterns B3 *hif'il* and B4 *pi'el* are

9. Again, given the lack of a comprehensive frequency list for MH words, as noted earlier, productivity here refers to trends observed in distributions in corpus-searches and experimental findings.

10. These figures for low use of passives are consistent with a parallel data-base in Spanish, in contrast to the common reliance on passive constructions in subject-requiring languages like English, French, and Dutch (Berman 2011; Jisa et al. 2002).

next in frequency, somewhat more favored in personal-experience narratives than in expository discussion texts. And the two intransitive middle-voice patterns B5 *hitpa'el* and even more so B2 *nif'al* are low in frequency, increasing from childhood to adulthood, where use of the favored B1 *pa'al* goes down from a high of well over 50% among schoolchildren to around 40% usage among older speaker-writers. These figures appear reliable, since they reflect similar breakdowns of usage across a range of different interactive and narrative corpora analyzed in the naturalistic spoken usage of younger, preschool children as well as adults (Berman 1993a).

On the other hand, these distributions of *binyan* patterns in corpus-based usage are inconsistent with those in Table 5, which reflect dictionary-derived data, taken from the original list of 11,000 verb-*types* in the Even-Shoshan dictionary, after being “sifted” on the basis of the Morfix/Rav-Milim dictionary, yielding 4,291 verb-*types* taken to reflect the “active” or “live” lexicon of current MH usage (§1.5 above).

Table 5. Breakdown of verb *types* by *binyan* pattern in the sifted or “live” version of the Even-Shoshan dictionary, based on the Morfix/Rav-Milim listings, in percentages (N = 4,291)

	B1 <i>pa'al</i>	B2 <i>nif'al</i>	B3 <i>hif'il</i>	B4 <i>pi'el</i>	B5 <i>hitpa'el</i>	Passive		Total
						B4 _{ps} <i>pu'al</i>	B3 _{ps} <i>huf'al</i>	
Verb types	725	447	601	920	656	542	400	4,291
Relative frequency	16.9	10.4	114.1	21.44	15.3	12.63	9.3	

Table 5 shows a very different picture for the breakdown of the overall number of verbs listed in a dictionary of current Hebrew: The largely agent-focused patterns, typically B4 *pi'el* transitive, have by far the highest occurrence, over one-fifth of the verbs, followed by relatively similar amounts for the “basic” B1 *pa'al*, the *pu'al* passive version of B4 *pi'el*, and the active/causative B3 *hif'il* - in that order. And the theme-focused, intransitive B2 *nif'al* and *huf'al*, the latter the passive alternant of B3 *hif'il*, each rate around 10% each of the verb-*types* - together coming to around the same 20% as typically transitive and active, agent-focused *pi'el*. These discrepancies point to the difference between the total repertoire of verb types available to Hebrew speakers listed in a contemporary dictionary of Modern Hebrew vocabulary (Table 5), compared with the breakdown of verb tokens actually used by graduate level university students in producing different types of texts, both spoken and written, both relatively informal personal experience narratives and more formal expository talks and essays (Table 4).

Explanations for these distinctions relates to the more general discrepancy between receptive and expressive components of users' lexicons: more formal, often

theme-related options (like intransitives and passives in Hebrew) may well be familiar, but are less favored in usage than basic verb-types like B1 *pa'al* and B4 *pi'el*. The latter two differ markedly, however, in their current functioning, since *pa'al* is relatively inhospitable to innovation, in marked contrast to B4 *pi'el* as a highly favored means of new-verb formation in MH.

Full versus defective verbs

As discussed, again from rather different perspectives, in Chapter 7 on Inflection and Chapter 8 on Derivation, verbs are traditionally divided not only by *binyan* membership but also by *gzarot* (singular *gizra*) ‘paradigms’ or ‘verb-classes’, based on the nature of their root consonants. Discussion here is confined to two major classes of verbs, ones based on (i) full or canonic triconsonantal roots whose three radicals are realized in all words constructed out of them (as illustrated for the verb roots *g-d-l* and *k-t-b* in Table 1 above); and (ii) “defective” or weak roots, only some of whose radicals show up in words on which they are based (e.g., compare “full” *li-gdol* ‘to-grow’ from *g-d-l* with “weak” verbs like *la-asot* ‘to-do’ from the root *ʕ-s-y*, *la-vo* ‘to-come’ from the root *b-w-ʔ*, *li-pol* ‘to-fall’, from the root *n-p-l*. The composition of the class of “weak” roots is a matter of some controversy in the literature (see, for example, Bolozky 1982, 1999; Ravid et al. 2016a; Schwarzwald 1977; Seroussi 2014). Here we adopt an inclusive view, where “defective” verbs are all those based on roots that contain one or more “weak” consonants – the “gutturals” glottal ʔ, *h*, and pharyngeal ʕ and/or the glides *w*, *y* plus a few verbs with the sonorant *n* as in *li-pol* ‘to-fall’ from *n-p-l*, *la-tet* ‘to-give’ from *n-t-n*.

Different criteria of analysis as well as varied sources of data yield a complicated picture concerning defective versus full roots. *Dictionary counts* indicate that in the “total” Even-Shoshan listings, over one-third (39.7%) of verb-root types are defective, as against around 60% constructed from “regular” roots. This contrasts markedly with the distribution of verb-classes in the “live”, sifted dictionary, which lists under one-quarter (22.9%) defective versus over three-quarters (77.1%) types regular.

Psycholinguistic studies reveal a complex relation between root transparency and frequency of occurrence, with distributional favoring of regular verb forms in dictionary listings appearing unrelated to actual language use, where irregular verbs have high frequency. Seroussi’s (2014) study of derived nouns in MH showed that full, canonic roots proved more accessible and easier to process by adolescents and adults than their defective counterparts in both offline written and online priming tasks. She found that the difference between the two interacted with features of phonological, semantic, and syntactic structure as well as with usage-based factors of frequency and familiarity, leading her to conclude that “the full or canonic root

serves as an *anchor* for speaker-writers of Hebrew”, as what she terms a “stable” or regular entity on which they rely for interpreting unfamiliar words and for coining new ones. On the other hand, however, defective roots play a key role in early child language, both in toddlers’ initial repertoire of verbs (Berman & Armon-Lotem 1996; Lustigman 2012, 2016) and in adult input to young children (Ravid et al. 2016b). This suggests that words with defective roots are at the core of the everyday lexicon of basic verbs in Hebrew, including such common items as those meaning ‘come’, ‘go’, ‘give’, ‘take’, ‘put’, ‘sit’, ‘stand’, ‘sleep’, ‘eat’, ‘drink’ (and see, too, similar claims for English “strong verbs” in Bybee & Slobin 1982; Davies 2009; Schwarzwald 1989). This apparent contradiction between structural transparency and frequency of usage in the Hebrew verb system is supported by research demonstrating that not only are irregular forms typically high-frequency, occurring in everyday colloquial usage and in child language (Arnon & Clark 2011; Lustigman 2012), they are also resistant to change or regularization across time (Aitchison 2003b; Bybee 2007; Bybee & Hopper 2001; Schwarzwald 1982).¹¹

Distribution of old versus new denominative verbs

The contrast between the “old” and “new” repertoires of Hebrew verbs (§1.2 above) is illustrated in Table 6, which shows means preferred for *denominating* verbs in MH compared with earlier phases of the language (Berman 1999, 2003; Bolozky 1982, 2003). “Old” verbs refer to ones occurring in Biblical, Mishnaic, or Medieval Hebrew compared with “new” verbs established over the past 100 years, with the revival of spoken Hebrew. The figures in Table 6 are based on nearly 900 verbs formed from nouns at different periods in Hebrew that were analyzed for the following dimensions: (a) source of new-root – basic or primary versus secondary, loan versus native, (b) type of roots formed – quadrilateral, canonic triconsonantal, and weak or defective and (c) output *binyan* verb pattern – B4 *pi’el*, B5 *hitpa’el*, B3 *hif’il*, B1 *pa’al*.

11. To give just one example: Educated speakers of Hebrew quite typically lower the vowel of the infinitival to *a* in verbs whose roots begin with the historical glottal stop *alef*, yielding *la-aroz* for prescribed *le-eröz* ‘to-pack’, *la-asof* for normative *le-esof* ‘to-collect’, or *la-amod* instead of *le-omod* ‘to-estimate’. On the other hand, neither children nor adults regularize the *alef* initial verb *le-exol* ‘to-eat’ to align it with other verbs beginning with one of the three other gutturals, *ayin* (cf. *la-avod* ‘to-work’), *he* (*la-hafox* ~ *lafox* ‘to-turn upside down’), or *xet* (*la-xšov* ‘to-think’). The explanation clearly lies in the high frequency of the verb ‘to-eat’ in juvenile as well as other varieties of Hebrew (Berman 1987a).

Table 6. Breakdown of denominated verbs in Hebrew, by period and type of derivation, in percentages (N = 725: 550 “new” 175 “old”)

<i>Root derivation:</i>	Old	New
Primary	93	59
Secondary	2	22
Loan	5	19
<i>Root Structure:</i>		
CCC = Canonic	64	33
CCCC = Quadrilit	16	51
CC, CyC, CwC	19	16
<i>Output Pattern:</i>		
B4 <i>pi'el</i>	52	77
B5 <i>hitpa'el</i>	12	11
B3 <i>hif'il</i>	29	10
B1 <i>pa'al</i>	7	2

Table 6 shows a difference between more classical and newly-derived denominal verbs along all the dimensions analyzed: “Old” forms included (a) almost no “secondary” roots; (b) only some 15% quadriliteral roots; and (c) around 50% innovations in *pi'el* and another 30% in *hif'il* (e.g. Biblical verbs indicating direction of movement, like *le-hacpin* ‘go north’ from *cafon* ‘north’, *le-hasmil* ‘go left’ from *smol* ‘left’). In contrast, the figures for newly derived denominal verbs confirm general trends in current MH word-formation, namely: secondary-root formation involving affixal elements; reliance on multiconsonantal source-nouns (only 2% of Biblical roots and under 10% of all pre-Modern roots are quadriliteral compared with around 40% in MH); and a marked preference for B4 *pi'el* (over three-quarters) for constructing new verbs as against low reliance on *hif'il*, and almost no use of *pa'al*. (Relevant morpho-phonological explanations for these trends are provided in Bolozky 2004; Schwarzwald 2006).

In sum, Modern Hebrew verbs express the same ontologically based semantic categories of activities, states, changes-of-state, causation, etc. as verbs in Standard Average European. They are also similar to other languages in which syntactic valence is morphologically marked (as by Turkish suffixes, say, or the *se* detransitivizing marker of Romance), with some morphological classes in MH favoring transitive and others intransitive middle- or passive-voice syntactic constructions. In terms of ongoing processes of historical change, the morphology favored for different (though partial) form-meaning mappings in the verb system of MH differs markedly from such interrelations in earlier stages of the language – of the kind specified to this day in Hebrew-language textbooks and traditional grammars. Yet the system remains essentially conservative, since verbs invariably manifest a

non-concatenating Semitic morphology, restricted to a small set of prosodic templates that interact with the inflectional values of voice, tense, and agreement markers, as elaborated in earlier chapters of this volume. That is, while form-meaning mappings of Hebrew verbs are not fully predictable, and many of the commonest verb *binyan* alternations stem from earlier stages of the language, the system affords speakers readily accessible structural options for interpreting unfamiliar verbs and constructing new ones.

In this, verbs differ from the two other open class items in the language – nouns (§2.1.2) and adjectives (§2.1.3), as shown below.

2.1.2 Nouns

Hebrew nouns are structurally mixed in morpho-phonology and in word-formation (Berman 1988a; Ravid 1990, 2006a; Schwarzwald 2001, 2009), defined here by four main morphological categories: non-derived, derived by minor morphological processes, by compounding, and by canonical derivation, as outlined in (3i) to (3iv).

- (3i) *Non-derived nouns* – are of two types: *basic* or “primitive” terms, typically referring to animals, plants, and everyday objects, often of Biblical origin (Gesenius 1910) – e.g., *xamor* ‘ass’, *ec* ‘tree’, *xec* ‘arrow’ – and *loan* words with non-native stress and syllabic structure – e.g., *rádyo*, *télefon*, *ótobus*, *univérsita* (Bolzky 1978a; Fisherman 1986; Schwarzwald 1998a, 1998b).¹²
- (3ii) *Minor derivational processes* – are common in contemporary Hebrew nouns, but lexically restricted. These include *acronyms* like *mazkal* for *mazkir klali* ‘secretary general’, *um* ‘the U.N.’ for *umot meuxadot* ‘nations united = the United Nations’ (Anshen & Aronoff 1999; Ravid 1990); and *blends* constructed out of a relatively non-systematic clipping of the stems of two independent nouns, e.g., *katnóa* ‘motor scooter’ from *katan* ‘small’ + *nua* ‘move’, *midrexov* ‘pedestrian mall’ from *midraxa* ‘sidewalk’ + *rexov* ‘street’ (Bat-El 1996, 2006b, 2013; Berman 1989).

12. *Zero derivation* or *syntactic conversion* by means of which a noun is derived from another category is relatively rare in Hebrew (see Berman 2017) applying primarily to conversion of *benoni* participial or present-tense verbs to Agent or Instrument nouns respectively (e.g., *šofet* ‘judges, is-judging’ ~ ‘(a) judge’, *mehadek* ‘tie, attach’ ~ ‘(a) fastener’ respectively (see, too, Chapter 8 on Derivation and Chapter 14 on Genitive constructions). Another, more restricted process is of converting proper to common nouns, often with a negative connotation, e.g., the masculine personal names *térax* ‘(old) foggy, geezer’, *yóram* ‘nerd, geek’.

- (3iii) *Compounding processes* – combine two or more nouns with the initial head noun morphologically bound to the second, adjunct noun (marked here by \wedge and labeled *cs* standing for *construct-state*). Where such constructions are lexicalized, often idiomatic terms (e.g., *bet \wedge xolim* ‘house:cs sick:PL = hospital’, *baaley \wedge báyit* ‘owners:cs home = landlords’), they are assumed to be represented as singular elements in the mental lexicon (Berman 1988b, 2009; Borer 2009).
- (3iv) *Canonically derived nouns* – are constructed by two main word-formation processes, both dating back to Biblical Hebrew. “Interdigitated” nouns are derived by the typically Semitic non-concatenating processes, from a consonantal root combined with a set of several dozen affixal patterns, traditionally termed *miškalim* (literally ‘weights’). These are morphologically – and in part semantically – related to verbs and/or adjectives with a shared consonantal root, as illustrated in Table 2 above for the roots *g-d-l* and *k-t-b*. A second, currently highly productive means of deriving nouns is by linear concatenation of a word-stem plus external, usually suffixal, affix (Bolozky 1999; Ravid 2006a; Ravid & Malenky 2001; Schwarzwald 2001, 2006, 2009). These two processes are illustrated in (4) and (5) respectively, for the historical root *h-š-b*, with the sense of roughly ‘think, account’.
- (4) Interdigitated nouns from the root *h-š-b* ‘think, consider’:
xašav ‘auditor’, *xešbon* ‘account’, *maxšev* ‘computer’, *maxšava* ‘thought’, *xašiva* ‘thinking’, *xišuv* ‘calculation’, *taxšiv* ‘cost-account’
- (5) Linearly derived nouns from words with the root *h-š-b* ‘think, consider’:
xešbon-ai ‘accountant’, *xešbon-aut* ‘accountancy’, *xešbon-it* ‘receipt’, *xešbon-iya* ‘abacus’ – from *xešbon* ‘account, arithmetic, calculation’, *maxšev-on* ‘(pocket) calculator’ – from *maxšev* ‘computer’, *xašivut* ‘importance’ – from *xašuv* ‘important’,¹³ *xišuv-i* ‘computational’ – from *xišuv* ‘computation’

The two types of Hebrew “derived” nouns illustrated in (4) and (5) include several thousands of items in the current lexicon of Hebrew. Seroussi’s search of four monolingual Hebrew dictionaries revealed over 4,000 derived nouns in current use, and these excluded nouns judged by a team of linguistics majors to be non-occurrent in contemporary Hebrew (Seroussi 2011: 33–35). In general, derived nouns in Hebrew are morphologically complex and hence analyzable into structural components. Many of them, like those in Table 2, include large groups of “families of words” (De Jong, Schreuder & Baayen 2000) which share a common consonantal root, often

13. The *-ut* suffix is not necessarily linear, since it occurs not only attached to stems as in the example in (5), but also forms part of certain morphological patterns like the Action Nominals of *binyan niḥal* and *hitpa’el* (see Bolozky & Schwarzwald 1992), and because *u > i* in */xašuv+ut/ > xašivut* ‘importance, significance’ is not an automatic phonetic process, which suggests that *CCiC+ut* may actually be a discontinuous *miškal*.

with a shared core of meaning.¹⁴ Both types of derived nouns in Hebrew cover a range of presumably universal semantic categories, animate and inanimate entities, concrete and abstract natural and man- or machine-made.

As for predictability of form-meaning relations in the MH noun system, the examples in Table 2 above for the historical roots *g-d-l* and *k-t-b* show, first, that while the system is structurally productive, there are many *lexical gaps* for any one pairing of a given consonantal root plus affixal pattern. For example, the root *g-d-l* has no agent noun in the typically agentive pattern *CaCCan* (hypothetical ‘grower’);¹⁵ and neither *g-d-l* nor *k-t-b* occurs in the extremely common and semantically varied so-called *segolate* noun pattern *CéCeC* (e.g., *kéšer* ‘knot’ from the root *q-š-r* ‘tie’, *séfer* ‘book’ from the root *s-p-r* ‘tell’). Second, the system is not fully regular, since its form-meaning relations are often unpredictable. For example, the canonic action nominal pattern for verbs in the typically causative B3 *hif’il* pattern *haCCaCa* yields semantically transparent *hagdala* ‘enlargement, making-bigger’ from the basic intransitive verb *li-gdol* ‘to-grow, get bigger’. But the morphologically corresponding action nominal from the root *k-t-b*, *haxtava* ‘dictation’, has the relatively remote senses of ‘causing to write (down)’ both in the sense of writing words or passages that are dictated orally and also in the more abstract sense of ‘dictating terms, stipulating’. Relatedly, *g-d-l* and *k-t-b* happen to both form nouns in the *miCCaC* pattern that have a product meaning (*migdal* ‘tower’ and *mixtav* ‘letter’); but other nouns in this same pattern may belong to other semantic classes (e.g., place names like *misrad* ‘office’, *mitxam* ‘site’, *miklat* ‘shelter’ and other relatively concrete nouns like *mispar* ‘number’ from *s-p-r* ‘count’, *mišpat* ‘sentence’ from *š-p-t* ‘judge’). Further information on the productivity of Hebrew noun patterns is provided in Bolozky (1999), Ravid (1990), Schwarzwald & Cohen-Gross (2000), and Chapter 8 on Derivation. Table 1 also lists nouns constructed linearly from words based on these two roots, like abstract state nouns with the suffix *-ut*: *katvan-ut* ‘stenography’ from *katvan* ‘typist’, *gadl-ut* ‘greatness’ from *gadol* ‘big, great’, while (4) include the *-ut* ending abstract nouns *xešbonaut* ‘accountancy’,

14. These “shared meanings” are not always straightforward, as shown by the glosses in the examples in (4) and (5). This could well be due to the enormous impact of structural factors, first and foremost the consonantal root, only secondarily the morphological pattern or prosodic template, on how Hebrew speakers interpret words in their language or how perceive the degree of familiarity and relatedness between them (Berman 2012). This was clearly demonstrated by responses to a written questionnaire requiring Hebrew speakers to specify the familiarity and frequency of highly common and rarer nouns in current Hebrew (Seroussi 2011: 36–40),

15. In fact, there is a noun with this meaning in current usage, in the form *megadel* ‘grower’ as in *megadel^h cipornim* ‘grower:cs carnations = carnation grower’ – formed by zero derivation from the B4 *pi’el* verb in the *benoni* form *le-gadel* ‘to-grow:TRANS’.

xašivut ‘importance’. Linear affixation also applies to numerous other semantic subclasses, including place and collective nouns as well as concrete agent and instrument nouns. *Semantically*, interdigitated and linearly derived nouns both cover a wide range of ontological categories. They include concrete instrument nouns (e.g., *mazgan* ‘air-conditioner’ from the verb-root *m-z-g* ‘blend’, *dokran* ‘spike, pitchfork’ from the present-tense verb *doker* ‘prick’) and human agents (e.g., *sapar* ‘barber’ from *s-p-r* ‘cut hair’, *psantran* ‘pianist’ from *psanter* ‘piano’); place nouns (e.g., *miklat* ‘(a) shelter’ from *q-l-t* ‘take-in’ and *mafiya* ‘bakery’ from the *maafe* ‘pastry’ from the verb-root *ʔ-p-y* ‘bake’); collective nouns (e.g., *kvuca* ‘group’ from the root *q-b-c* ‘collect, gather’ and *birziya* ‘drinking fountain’ from *bérez* ‘faucet’ and on to fully abstract nouns like *maavak* ‘struggle’, *heseg* ‘achievement’, or *ahava* ‘love’ as well as nouns ending in *-ut* (Ravid 2006b). Derived nouns are often polysemous, with both concrete and abstract notions represented by a single surface term. Multifold meanings are illustrated by a traditional noun like *sidur* ‘prayer-book’ from the root *s-d-r* in the action nominal pattern *CiCuC*, today also with the Action Nominal meaning of ‘tidying (of a room, say)’ and also ‘arrangement’ or the slang term ‘fixing (someone)’; likewise, the noun *kabala* from the root *q-b-l* can mean, respectively, ‘acceptance’, ‘reception’, ‘system of mysticism’, or ‘receipt’ (see Chapter 11, Section *xyz* on Nominalizations).

Other changes in form-meaning pairings across time are noted in Section 1.2 above for the nominal pattern *CaCiC* (see, too, Gadish 2007). Another common process is extension of the final syllable of interdigitated patterns to stem-final derivations, as illustrated in (6) and (7) for the endings *-an* and *-ut*.

(6) *-an*

- i. in the verb-derived pattern *CaCCan*, e.g.
rakdan ‘dancer’ from the root *r-q-d* as in *li-rkod* ‘to-dance’,
mazgan ‘air-condition’ from the root *m-z-g* as in *le-mazeg* ‘to-mix’
- ii. as a word- or stem-based linearly added suffix, e.g.,
mizrexan ‘orientalist’ from *mizrax* ‘east’ [originally *mizraxan*]
tvustan ‘defeatist’ from *tvusa* ‘defeat’

(7) *-ut*

- i. in the verb-derived action nominal pattern *hitCaCCut*, e.g.,
hitkatvut ‘correspondence’ from the root *k-t-b* as in *le-hitkatev* ‘to-correspond’
hitbagrut ‘maturation’ from the root *b-g-r* as in *le-hitbager* ‘to-mature’
- ii. as a word- or stem-based linearly added suffix, e.g.,
manhigut ‘leadership’ from *manhig* ‘leader’
ovlanut ‘tolerance’ from *sovlan* ‘tolerant’

The endings *-an* in (6) and *-ut* in (7) are unusual in their largely one-to-one form/meaning mappings: concrete agent (or instrument) nouns with *-an* (Clark & Berman 1984) and abstract nouns with *-ut* (Bolzky & Schwarzwald 1992). However, while these forms have consistent interpretation, the semantic categories they encode can take other forms as well (e.g., *CaCaC* for agents like *tabax* ‘cook’, *malax* ‘sailor’, *katav* ‘reporter’) or *CiCaCon* for abstract states like *šigaon* ‘madness’, *cimaon* ‘thirst’, *xidalon* ‘expiration’. The endings in (8) illustrate the lack of uniform form-meaning mappings between the nouns constructed both with a given suffix as well as in a given surface pattern like *CiCaCon*.

- (8) *-on*
- i. in the verb-derived pattern *CiCaCon*, e.g.,
nicaxon ‘victory’ from the root *n-c-x* as in *le-naceax* ‘to-defeat’
dikaon ‘depression’, from the root *d-k-?* as in *le-dake* ‘to-depress’
 - ii. as a word- or stem-based linearly added suffix, e.g.,
švuon ‘weekly (paper)’ from *šavúa* ‘week’
milon ‘dictionary’ from *mila* ‘word’

As (8) shows, the *-on* suffix serves to derive both the names of periodicals like *iton* ‘newspaper’ from *et* ‘period’, *šnaton* ‘annual’ from *šana* ‘year’ and related collective nouns like *širon* ‘songbook’ from *šir* ‘song’, *milon* ‘dictionary’ from *mila* ‘word’, as well as a third class of diminutives, like *yaldon* ‘little boy’ from *yéled* ‘boy’, *xadron* ‘little room, cell’ from *xéder* ‘room’. This demonstrates, again, that one-to-one form/meaning relations in nouns are the exception rather than the rule, while different semantic classes still include numerous basic or non-derived nouns, both native and loan. This is particularly so in the case of substantive nouns with concrete senses (Lyons 1995) like kinship terms (*av* ‘father’), names of animals (*xatul* ‘cat’), natural objects (*ec* ‘tree’), and basic artefacts (*séfel* ‘cup’). On the other hand – as further discussed below (§3) – speakers tend to both interpret and coin unfamiliar nouns in relation to currently favored, more productive derivational processes and morphological patterns (Berman 1988a, 1999; Ravid 1990; Seroussi 2004, 2011).

While the main derivational processes of noun formation in MH, both linear and interdigitated, have their origins in earlier periods of the language, preferred form-meaning mappings tend to shift with time, as noted for verbs in the preceding section (and see, too, §3 below, and Chapter 8 on Derivation).

Table 7 illustrates such trends, taking as a case-study for nouns the class of names for *instruments* in Hebrew. These often take the same shape as the animate category of agent noun in Hebrew as in other languages, which today largely favor the ending *-an*, as illustrated in (6) above (Berman 1988a; Clark & Berman 1984). Traditionally, the instrumental patterns *par excellence* were *maCCeC* and *maC-CeCa*, along with less common use of agentive *-an* and the zero-derived *benoni*

Table 7. Breakdown of instrument nouns (N = 887) in different constructions in four monolingual dictionaries, ranked by percentage of “new” nouns (N = 66)

Form	ES [incl Sivan]	<i>Rav Milim</i>	BABY Slang	PHAS Army Slang	% new coinages
<i>maCCeC</i>	233	106			39%
<i>maCCeCa</i>	119	70	1		26%
<i>CaCaC</i>	30	18			10%
<i>-an</i>	64	25	1		8%
<i>-on</i>	14	5			5%
<i>meCaCeC</i>	48	36			5%
<i>-er</i> [loan]	17	9	22 (borrowed)	2	3%
<i>CoCeC</i>	16	13			3%
<i>-iya</i>	25	12	(1 borrowed)		2%
Total:	66	294	25	2	

participial B1 *CoCeC* or B3 *meCaCeC*. Bolozky (1999) compared dictionary entries for instrument nouns taking different forms: *maCCeC* (e.g., *mavreg* ‘screwdriver’, *maclema* ‘camera’, *CaCaC panas* ‘flashlight’; *-an* ending *mazgan* ‘(air) conditioner’; *-on* ending *mešivon* ‘answering machine’; *benoni* participle *kotel* ‘(fly)swatter’ or *mekarer* ‘refrigerator’; linear suffixation with *-iya* as in *simaniya* ‘(book)marker’; or the loan ending *-er*, as in *špricer* ‘sprayer’. Table 7 ranks occurrences of each of these constructions as the percentage of 66 newly innovated nouns in four monolingual Hebrew dictionaries: Even-Shoshan’s [ES] dictionary (1983, incorporating Sivan’s addenda) contains all vocabulary documented across four historical periods; the Morfix/*Rav Milim* dictionary [RM] represents the current or “live” lexicon of MH (Morfix – Free Dictionary n.d.); and two dictionaries listing slang terms, Ben-Amotz/Ben-Yehuda (BABY; 1972 1982) and Prolog’s Army Slang Lexicon (PHAS) represent the most casual type of colloquial usage.

As noted earlier, dictionary comparisons are not a reliable means for establishing lexical productivity for numerous reasons. In the case in point, the bulk of innovations in the Even Shoshan dictionary are from Sivan’s later supplement (Even Shoshan 1983), and these together account for only a small proportion of recently innovated instrument nouns listed (12.4%). On the other hand, the percentage of instrumental forms in the currently relevant *Rav-Milim* dictionary appear to reflect usage-based preferences, as follows: the prefixal *mV-* is by far most common in *maCCeC* (e.g. *mastem* ‘valve’, *macber* ‘battery’), followed by *maCCeCa* (*makdexa* ‘drill’), and the B3 *pi’el* zero-derived *meCaCeC* (*meavrer* ‘ventilator’), followed by the (agentive) ending *-an* (*mazgan* ‘air-conditioner’). Loan forms with foreign endings like Yiddish *-er* or Slavic *-ik* occur primarily in the slang dictionary BABY (22) and to a lesser extent (8) in Sivan’s addendum to Even Shoshan.

In contrast to findings based on other sources of data (e.g., Schwarzwald & Cohen-Gross 2000), in elicited production tests reported in Berman (1988a), instrumentals were realized in *-an* more than in *maCCeC*, *maCCeCa*, or *meCaCeC* (25% versus 19% and 15% versus 7%, respectively). This reflects the status of *-an* as the unmarked agentive pattern, as a general ‘performer’ category, including both instruments and agents. Only in judgment tasks, where other options were available, did *maCCeC* emerge as most common (e.g., in innovative *madgem* ‘a sampling instrument’), with about a third of the realizations (32% vs. 14% in the participial *benoni* form *meCaCeC* 11% in *maCCeCa*, and 11% in *-an*). When participants were asked to list any instrumentals that came to mind, *maCCeC* and *maCCeCa* together came up in nearly 30% of the instances, and the *benoni* (*meCaCeC*) in 25.5%. Productivity tests reported in Bolozky (1999) suggest the order *meCaCeC* > *maCCeC*-*+an* > *+on* > *maCCeCa* while, somewhat surprisingly, the *-iya* suffix characteristic of locational and collective nouns, was comparatively the most productive. Respondents might well have identified the instrument associated with the base item as the location in which it is processed or stored for use (e.g. *kúskus* ‘couscous’ > *kuskusiya* ‘couscous-making instrument,’ *kótej* ‘cottage cheese’ > *kotejiya* ‘instrument for producing cottage cheese’).

These findings for one particular sub-category of concrete nouns highlight two main features of the current Hebrew lexicon: First, speakers’ familiarity with the rich array of morphological options available for encoding a given semantic class of entities and, second, their clear preference for innovating by particular means out of all available options. And the latter trend is more reliably manifested in speaker responses to structured elicitations than in dictionary listings.

2.1.3 Adjectives

Adjectives are a structurally mixed class of forms, one that did not constitute a distinct morphological category in Biblical Hebrew (Amikam 1995; Gesenius 1910: 416–417; Joüon & Muraoka 2011: 487–491; Waltke & O’Connor 1990: 66, 256–258). Werner (1983) concludes from his survey of adjectives across different periods in the history of Hebrew in the Even-Shoshan dictionary that discontinuous or interdigitated derivation of adjectives is common to this day and that, if directly related to a particular verb, adjectives are likely to be realized in the participial *benoni* forms (similarly to Muchnik 1997). Examples include deverbal endstate, resultative, adjectives in the form of one of three passive participles: *CaCuC* -*katuv* ‘written’, *raxuc* ‘washed’, *meCuCaC* - *megulax* ‘shaven’, *menumak* ‘reasoned’, and *muCCaC* - *mulbaš* ‘clothed, worn’, *muskam* ‘agreed’. Another productive interdigitated device for adjective formation noted earlier is the pattern *CaCiC*, used today mainly for deriving ‘+able’-type adjectives like *raxic* ‘washable’, *kari* ‘readable, legible’ (Berman 1988a).

Below we re-analyze Ravid and Levie's (2010) classification of MH adjectives by their historical origins in terms of two morphological subclasses of "basic" adjectives in (9) and three sets of derived adjectives, based on adjectives, verbs, and nouns in (10), (11), (12) respectively. "Basic" adjectives include mono- and bi-syllabic words that were originally participles, which in MH typically have related verbs, both transitive-causative and intransitive change-of-state, as in (9i) and (9ii).

- (9) i. Mono-morphemic CVC items deriving from Biblical participles that refer to basic physical or internal attributes like *xam* 'hot', *tov* 'good', *ra* 'bad'. These are readily extended to both causative and middle-voice, transitive and intransitive verbs, as in B4 *le-xamem* 'to-heat', B5 *le-hitxamem* 'to-get hot, get warmed-up', and occasionally occur as B3 causatives like *le-hetiv* 'to-cause good', *le-hara* 'to-cause evil'.
- ii. A larger group of "basic" adjectives take the form of bisyllabic interdigitated root plus affix participial *CaCVC* patterns. These include (i) originally participial *CaCeC* like *ayef* 'tired' and related B4 *le-ayef* 'to-tire = make tired', B5 *le-hitayef* 'become tired, get tired', *yafe* 'pretty' with the related verbs B4 causative *le-yapot* 'to-beautify', B5 reflexive *le-hityapot* 'to-beautify oneself';¹⁶ (ii) the *CaCoC* pattern used mainly for color terms (e.g., *kaxol* 'blue', *yarok* 'green') and also, together with the *CaCaC* pattern, for dimensions (e.g., *gadol* 'big', *arox* 'long'; *katan* 'small', *raxav* 'wide'); and (iii) *CaCiC* for attributes (e.g., *mahir* 'quick', *samix* 'thick') which, as noted earlier, is today favored for coining adjectives of possibility like *kavis* 'washable', *šamiš* 'useable'.

Semantically, these "basic" adjectives typically refer to concrete attributes of physical shape, size, color, etc. and to internal states of being hungry, tired, happy (*raev*, *ayef*, *saméax* respectively). They are acquired early on by children – although, as in other languages, the adjective repertoire develops later than that for nouns and verbs (Ben-Zvi & Levie 2016; Berman 2004; Ravid et al. 2016b; Ravid & Nir 2000).

"Derived" adjectives include morphologically constructed diminutives based on adjectives (10), resultative end-state adjectives derived from verbs (11), and denominal adjectives based on noun stems as in (12).

- (10) a. Reduplicated diminutives, e.g. *katan* 'small' / *ktantan* 'tiny', *matok* 'sweet' / *mtaktak* 'sweetish, sacchariny'
- b. Stem plus suffix diminutives, e.g., *xamud* 'cute' / *xamúd-i* 'cutie', *katan* 'small' / *katan-čik* 'tiny'

16. The B1 verbal origins of these adjectives is still reflected in higher register B1 verbs like *yafi-t* '(became) beautiful-2SG.F = you're prettier now' from *yafe* 'pretty' or *ayaf-ti* '(became) tired-1SG = I became weary'.

Both processes of diminutive formation, including use of loan endings like Slavic *-čik*, have restricted productivity (Ben-Zvi & Levie 2016; Bolozky 1994; Hora, Ben-Zvi, Levie et al. 2006). Many are typically nursery terms, so not considered part of normative usage (Berman 1985; Schwarzwald 2013; Zeidner 1978).

Resultative adjectives, as noted, are derived from the passive participle forms (Berman 1994; Halevy 1992; Horvath & Siloni 2008; Mirkin 1962; Rosén 1956): as in (11):¹⁷

- (11) Resultative, endstate adjectives:
- a. B1 *pa'al* > *pa'ul* (e.g. *katav* > *katuv* 'write/written', *axal* > *axul* 'eat/eaten');
 - b. B4 *pi'el* > *mefu'al* (e.g., *giléax* > *megulax* 'shave/shaven', *sider* > *mesudar* 'fix, tidy / arranged, tidy');
 - c. B3 *hif'il* > *huf'al* (e.g., *hifil/mufal* 'activate/activated', *hikpi* > *mukpa* 'freeze/frozen').

These alternations, expressing activities that lead to resultant endstates, are productively associated with each of the three *binyan* patterns that have passive participial alternants, yet they still represent derivational word-formation processes with numerous gaps and suppletive forms. For example, the B4 *pi'el* derived adjective *meluxlax* 'dirty, dirtied' has a non-participial antonym in the form *naki* 'clean' along with resultative *menuke* 'cleaned', and another *pi'el* derived adjective *meupaš* 'rotten, moldy' has a non-derived antonym *tari* 'fresh'; and some verb-participial forms like those in (11) are occasionally based on nouns (e.g. *menumas* 'polite' from *ni-musim* 'manners'). On the whole, however, this subclass of verb-derived resultative adjectives is well-established and open to extension in MH, analogously to the past participle in, say, English (Beard 1976; Berman 1994; Clark 2004).

Denominal adjectives in MH are a prime instance of productive concatenative word-formation processes, derived by a bound stem or free form of a noun plus suffixal *-i*, as in native *tarbut* 'culture' / *tarbuti* 'cultural, cultivated', *beaya* 'problem' / *beayati* 'problematic', and loan *modérni*, *problemáti* (Mor 1996; Ornan 1998; Ravid & Shlesinger 1987; Schwarzwald 1998c; Taube 1990; and see, too, Chapter 11 Section xyz on Nominalizations). These may be of native or loan origin: In the first case, the *-i* suffix is stressed, in the second, stress is (ante) penultimate, as in the previous example. Denominated adjectives are typically high register, common in academic and journalistic discourse, and acquired only at late school age – even though they are structurally straightforward, requiring addition of an invariant suffix to a noun stem (Berman 2004; Ravid & Zilberbuch 2003). Semantically, they represent a range of attributive associations with their head nouns, as shown in

17. These are represented here by their morphologically simplex past tense or participial masculine singular forms

the comparisons with verb-derived resultatives in (12) and (13), representing conventional items in the established lexicon and children's coinages (Berman 1999).

- (12) a. Verb B4 *ties* 'industrialize' > Resultative Adjective *metuas* 'industrialized'
Noun *taasiya* 'industry' > Denominal Adjective *taasiyat-i* 'industrial'
b. Verb B4 *ciyer* 'draw' > Resultative Adjective *mecuyar* 'pictured, drawn'
Noun *ciyur* 'picture, drawing' > Denominal Adjective *ciyur-i* 'picturesque'

The verb-derived participials in (12) typically describe endstates, the result of the noun having been affected by the process or activity encoded by the verb. In contrast, adjectives derived from a source noun may have various not necessarily predictable meanings. This variability is illustrated in (13), showing children's innovative usages in the course of their spontaneous speech output (Berman 1999). Although typically one-time productions, hence not genuine coinages in current Hebrew, they reflect naïve speakers' construals of possible form-meaning relations in their language.

- (13) a. Noun *kérax* 'ice' > *krux-ot* 'iced-PL.F', the B1 Resultative Adjective form *pa'ul* passive coined by a 4-year-old boy to describe his hands being cold as ice, in the passive participle pattern *CaCuC* as against the conventional *kérax* 'ice' > Denominal *karx-i* 'icy, ice-like'
b. Noun *pérax* 'flower' > the B4 Resultative Adjective *mefurax* 'flowered' coined by a 5-year-old girl to describe a brightly colored dress, in place of the established Denominal Adjective *pérax* > *pirx-oni* 'florial'
c. *limon* 'lemon' > *meluman* 'lemoned' coined by another 5-year-old girl to describe the tea she was drinking, in contrast to the established noun-derived *limon* > *limon-i* 'lemony'

The examples in (13) show that while nouns quite easily form a Denominative Adjective by adding an invariant suffix, young speakers prefer the structurally more complex option of verb-based resultative participial adjectives – even if the latter are not always semantically appropriate. This again underscores the lack of any necessary, unambiguous form-meaning mappings in word-formation within or across languages, often due to historical factors affecting levels of usage. For example, English has numerous denominal adjectives, with an unstressed *-i* ending added to a monosyllabic noun, generally of native Germanic origin (e.g. *dirty*, *sandy*, *salty* and many more). These are typical of everyday colloquial usage and appear in very early child language as the basis for innovative coinages like *buttery*, *jammy* (Clark 1993). In contrast, *-i* suffixed denominated adjectives in Hebrew are typical of what Ravid (2004) terms “the literate lexicon” of current Hebrew and, while highly productive, they are less grammatically entrenched in the lexicon than verb-derived resultative participles.

In sum, adjectives in MH, unlike at earlier stages of the language, are constructed by a variety of morphological processes. These include highly productive verb- and noun-derived forms as in (12) and (13), which distinguish them structurally from both Verbs and Nouns, and minor processes of diminutive formation in (10). The “basic” stock of adjectives includes frozen, originally participial verb-forms, as in (9), only one of which – *CaCiC* for possibility – has a quite consistent form-meaning mapping in current usage.

Syntactically, MH adjectives remain noun-like in being inflected for agreement in number, gender and, also in definiteness when used attributively following the head noun in an NP (e.g., *ha-kubiy-ot ha-gdol-ot ha-éle* ‘DEF-block-PL.F DEF-big-PL.F DEF-this:PL = these big blocks’). Predicatively, they agree with the subject noun in copular clauses, such as *ha-kubiya hay-ta gdol-a ve-yeruk-a* ‘DEF-block:SG.F was-SG.F big-SG.F and-green-SG.F’ (see Chapter 7 on Inflection and Chapter 12 on Agreement).

Semantically, as noted, Hebrew adjectives cover a range of attributive functions, including what Beard (1993) terms both “possessional” (as in ‘a bearded man’, ‘iced coffee’) and “similitudinal” (as in ‘a friendly man’, ‘icy hands’). In Hebrew translation, these would not necessarily belong to the same morphological classes, thus: the verb-derived resultative participial *mezukan* ‘bearded’ would describe a man as having a beard, but the conventional term for ‘iced coffee’ – *kafe kar* – uses the basic adjective *kar* ‘cold’ (resultative *mekurar* from the same root means ‘having a cold’), and something that is ‘like ice’ in Hebrew is typically rendered by the resultative term *kafu* as in *af kafu* ‘nose iced = an icy nose, a nose cold as ice’.

These comparative comments demonstrate an important factor in lexical analysis: The same semantic distinctions may be expressed across different languages, including the distinction between possessive, similitudinal, and/or resultative end-state adjectival attributes. On the other hand, even – perhaps especially -- in a language with as rich a range of derivational options as Hebrew – one-to-one form/meaning correspondences within different word classes are the exception rather than the rule. Rather, as noted in Section 3, speakers’ usage reflects trends that are *favored* for such matchings.

In concluding §2.1 on the Open Class categories of Verbs, Nouns, and Adjectives, note that much of our description concerned *derivational morphology* as critical to characterizing the mental lexicon of MH (hence reiterating themes developed in greater depth in the preceding chapter on Derivation). This key feature of the major lexical classes of MH sets them apart from the lexical components dealt with in §2.2 and §2.3 below – closed-class and intermediate-class items respectively.

2.2 Closed class grammatical functors

This heading refers to items traditionally termed “particles”, Hebrew *miliyot* literally ‘little words’, also applied to many of those labeled ‘intermediate’ in §2.3 below, (Gesenius 1910: 293–308; Waltke & O’Connor 1990: 34; and see, too, footnote 5). These make up a broad, structurally and functionally mixed group of elements in MH as in other languages (Leow, Campos & Lardiere 2009; Pak, Sprott & Escalera 1996), and see, too, Zwicky’s (1985) characterization of “particles” as against “clitics”. Here, the term “closed-class” (CC) is restricted to items that are organized in *grammatical paradigms*, and so can alternate with one another in a given syntactic environment. Rather than having autonomous semantic content, closed class lexical items derive their meaning relationally, in contrast to other members of the same set and/or from their function in a particular syntagmatic construction. They typically are high-frequency in occurrence across genres and modalities (see fns. 2 and 6 above).

As the label implies, “closed class” items rarely serve for new-word formation. On the other hand, the derivational processes described above for Open Class items are occasionally apply to CC items (e.g., the verbs *le-ayen* ‘to nullify’ from the existential negator *en* ‘not be’, *le-ayex* ‘to modify’ from *ex* ‘how’ or the noun *mah-ut* ‘essence’ from *ma* ‘what’).

The same grammatical function can be encoded as either bound or inflected in two key cases in MH, reflecting the fact that items taking the form of closed class lexical items in some languages may be expressed by inflection in others (Slobin 1997). The two main cases of “optional” inflections are genitive and accusative markers (Cahana-Amitay & Ravid 2000; Kaplan & Berman 2015) and, in some cases, the subject pronoun (see, too, Chapter 7 on Inflection). Compare, first, for the Genitive, N + Pro – the analytic *ha-xaver-im šel-i* ‘DEF-friend-PL.M of-1SG’ with bound *xaver^ay* ‘friend:CS-1PL.M’ both translated by ‘my friends’; and for Genitive Noun + Noun – the analytic *ha-yelad-im šel ha-kita* ‘DEF-child-PL.M of DEF-class’ with bound *yald-ey^ ha-kita* ‘child-CS.PL.M DEF-class’ both standing for ‘the children of the class’ or the class’s kids’.¹⁸ Though the two alternatives differ in register and occurrence in MH, they are roughly synonymous in truth value. As shown by the free translations, the two versions do **not** represent a contrast such as ‘my

18. This example is from an oral personal-experience narrative related by a middle-school boy aged around 12 years, who started with the analytic form and then rephrased it in the bound, inflected form *yald-ey^ ha-kita*. This self-repair reflects the impact of frequency of this particular combination, as reflected in the following breakdowns kindly supplied by Ora Schwarzwald from Google (19.7.2007), where she found only 3,400 instances of analytic *ha-yeladim šel ha-kita* as against over 20,000 instances of the bound form *yald-ey^ hakita*.

friends' / 'friends of mine'. Rather, they emerged at different periods of the language with the genitive particle *šel* occurring in only late Biblical and mainly Mishnaic Hebrew. As such, they reflect the 'mixed' or 'fused' character of MH as drawing concurrently on preferred usages from on different periods in its history (Berman 2016; Halevy 2013; and see, further, Chapter 14 on Genitive Constructions).

A second type of analytic/bound alternation occurs in the case of pronominal accusative marking with transitive verbs. Compare everyday analytic *raí-ti ot-o* 'see:PST-1SG ACC-3SG.M' versus bound *reit-i-v* 'see:PST-1SG-ACC.3SG.M' both meaning 'I saw him'. Bound accusatives are far rarer than the bound genitive: They are grammatically highly restricted, confined to verbs that take the direct object marker *et* with a pronoun. Besides, unlike bound genitives, which speakers construct correctly by middle childhood, around age 9–10 years (Berman 1987b; Clark & Berman 1987), accusative suffixes are rare in even adult usage, they are confined to high-register contexts, their form is often not mastered by adolescence, and even educated adults do not always know how to construct the relevant fused forms (Cahana-Amitay & Ravid 2000; Kaplan & Berman 2015; Chapter 7 on Inflection).

A third example of pronouns occurring in MH both separately as closed class "function words" and as inflectional affixes is in use of (iii) *subject pronouns*, which in 1st and 2nd person past and future verbs are quite typically unnecessary, thus: *aní raí-ti ot-o* 'I see:B1:PST-1SG ACC-3SG.M' and *raí-ti t-o* 'see:B1:PST-1SG ACC-3SG.M' both stand for 'I saw him' (see Chapter 7 on Inflection). Another instance arises in the case of subject pronouns, which may be inflectionally attached and/or overt, or proclitic (truncated). Discourse-based analyses distinguishing between cases like *aní lo halax-ti* 'I not go:PST-1SG / *o lo halax-ti* 'not go:PST-1SG / *ni lo halax-ti* 'I-truncated not go:PST-1SG' -- all translatable as 'I didn't go' indicate that occurrence or lack of an overt pronoun subject represents functionally relevant distinctions (Polak-Yitzhaki 2007).

The closed-class lexicon of MH thus includes three categories of "optionally inflected forms" in the traditional case roles of genitive, accusative, and nominative. As noted, the inflectional alternatives still operative in current usage derive from older historical sources, but they function differently in terms of contexts and registers of use.

The rest of this section touches on the following closed class categories: Personal Pronouns, the Generic pronoun *ze* 'it, this, that', Determiners, Accusative and Genitive Case-Markers, and Coordinating and Subordinating Conjunctions (and see, too).¹⁹

19. This means we disregard an important group of "little words" in the form of floating operators like Hebrew *gam* 'also, too, as well', *af(ilu)* 'even', *kax* 'so, thus', which lie between what we call 'closed-class' and 'intermediate class' items, many of which have the role of 'discourse markers'.

2.2.1 *Pronouns*

Table 8 lists nominative pronouns in MH, replicating a similar tabulation in Chapter 7 on Inflection.

Table 8. Singular and Plural nominative-case personal pronouns in MH, by person and gender

	Form	Person	Gender	Gloss
Singular	<i>ani, anoxi</i>	1st		I
	<i>ata</i>	2nd	masc	you
	<i>at</i>	2nd	fem	you
	<i>hu</i>	3rd	masc	he
	<i>hi</i>	3rd	fem	she
Plural	<i>ánu, anáxnu</i>	1st		we
	<i>atem</i>	2nd	masc	you
	<i>aten</i>	2nd	fem	you
	<i>hem</i>	3rd	masc	they
	<i>hen</i>	3rd	fem	they

Table 8 is “inclusive” for two reasons: It includes both everyday and more literary versions of the first person pronouns, singular and plural; and it distinguishes between masculine and feminine forms of 2nd and 3rd person plural pronouns, although the feminine alternatives having fallen largely into disuse in MH. The 1st person options display an asymmetry in register and usage: singular *ani* is the ordinary, pervasive form of ‘I’ compared with the elevated literary *anoxi* (both of Biblical origin), while the plural ‘we’ of everyday usage is the corresponding Biblical form *anáxnu*, with the more formal Mishnaic *ánu* confined largely to written language, also serving as a common means of *majoris pluralis*.

Table 8 is confined to nominative-case pronouns that may occur as the grammatical subject of finite clauses. An essential feature of the Hebrew closed-class lexicon is that except in their free nominative form, all personal pronouns are fused with prepositional case- and adverbial-marking prepositions (for details, see Chapter 7 on Inflection). This is illustrated for different 1st person singular preposition+pronoun combinations in the example in (14i), excerpted from an account of a dispute between two men at a gas-station and in (14ii) for 3rd person masculine singular, from a quarrel the narrator had with his tent-mate during their army service.

- (14) i. *amár-ti lo še ani roce le-male šémen. azar li le-male*
 said:PST-1SG him that I want to-add oil. helped DAT.1SG to-add
šémen ... az ani mipo holex la-mištara le-hodia al nisayon
 oil ... so I from.here go to-police to-inform on attempt
le-ramot oti. hu kcat nivhal me-ha-takifut šeli
 to-cheat ACC:1SG. he little startled from-the-aggressiveness GEN.1SG
 ‘I told him that I want to-fill up with oil. (He) helped me to add oil. ... So
 from here I’m going to the police, to inform them of an attempt to cheat
 me. He was a bit started by my aggressiveness.’
- ii. *caák-ti al-av bišvil kol ha-šnatáyim še ani makir*
 shout:PST-1SG on-him for all the-two.years that I know
oto, amár-ti lo še hu lo ben^ adam
 ACC.3SG.M said:PST-1SG DAT.3SG.M that he not son:CS man
 ‘(I) yelled at-him for all the two years that I’ve known him, told him that
 he (wasn’t) a decent person.’

Each occurrence of a personal pronoun following a preposition or the case-markers accusative *et* (= bound *ot-*) and genitive *šel* takes a different form of an inflected suffix – except for nominative *ani* ‘I, *hu* ‘he’ in present tense, and the former occurs as suffixal *-ti* on past tense verbs like *amárti* ‘I said, told’, *caák-ti* ‘I yelled’ (for details, see Chapter 7 on Inflection).

As noted there, the system is fraught with morpho-phonological irregularities involving both stem changes of the free form of the preceding prepositional and contrasting nominal versus verbal pronominal endings. These take children a long time to acquire, and even educated adults do not necessarily use their normative form (Ravid 1995; Rom & Dgani 1985; and see, further, Chapter 7 on Inflection). In the database of oral texts produced by university graduate Hebrew-speakers, we found instances of the form *ecl-ehem* ~ *eclahem* in place of normative *eclam* from *ecel+hem* ‘at+they = at their place, by them’, *bišvil-ahem* instead of normative *bišvilam* ‘for-them’; and less educated speakers often use *otex* in place of required *otax* for direct object *et +at* ‘you:ACC-SG.F’ Apart from the nominative forms listed in Table 8, inflection of personal pronouns is thus a marked, obligatory feature of MH grammar, on the one hand, and one susceptible to considerable structural variation, on the other.

The pronominal term *ze* ‘it, this, that’ is particularly elusive to description (and see discussion of this “non-referential” element in Chapter 15 on Impersonal Constructions). As the three alternate glosses indicate, it is neither purely deictic nor strictly anaphoric while, as shown in Table 9 below, it can also serve as a demonstrative following the noun it modifies. As a pronoun, it cannot be identified as “neuter” gender, since it alternates with both *hu* ‘he’ and *hi* ‘she’ in several

contexts; and it has a feminine counterpart in *zo(t)*. For example, it can be the subject of a copular clause in either masculine or feminine form, as in *ze naxon* ‘it (is) right = that’s correct’ or *zo beaya* ‘it:F (is a) problem:F = it / that’s a problem’ respectively. Moreover, it may neutralize agreement in a way prohibited for the personal 3rd person pronouns *hu* ‘he’ and *hi* ‘she’. Consider the example in (15) from an oral expository text, copied here from Chapter 10 on Nominalizations.

- (15) *beayot ben anašim yexolot linvóa mi-élef ve-axat*
 problems between people can stem from-(a)-thousand and-one
sibot: im ze késef, im ze haclaxa, im ze karyéra im ze stam kina
 reasons: if it money:M, if it success:F, if it career:F if it just envy:F
 ‘reasons: whether it’s money, success, a career, or simply envy’

Syntactically, use of *ze* as an expletive subject in extraposed constructions is optional, and largely non-prescribed (see examples in Chapter 15 on Impersonal Constructions) as in *ze lo yafe le-daber kax* versus *lo yafe le-daber kax* ‘(it’s) not nice to-talk like-that’. Nor can *ze* be identified with impersonal or generic pronouns like French *on*, or German or Swedish *man*. Rather, *ze* is best analyzed as *pro-propositional* rather than *pro-nominal*. Unlike personal pronouns in Hebrew, which require gender and number agreement with their subject noun phrase, *ze* is not strictly referential. Instead, it pronominalizes entire propositions rather than expressions that refer to nominal entities, concrete or abstract (Ariel 1998; Berman 1978: 289, 365; Berman 1988a; and, from different perspectives, analyses of Fruchtman 1982; Goldberg & Kantor 2004; Halevy 2006 2013; Hazout 1994; Rubinstein 1968).²⁰ Accordingly, *ze* but not the 3rd person singular pronouns *hu* ‘he’, *hi* ‘she’, *hem* ‘they’ can serve as a linking element between (extraposed) infinitival subjects and their complements, as illustrated by the constructed examples with infinitival subjects in (16) and with derived action nominal subjects in (17).

- (16) a. *le-ašen ze asur*
 INF-smoke it forbidden
 ‘to smoke is forbidden’

20. Compare, for example, the constructed examples:

- i. *toda al ha-aruxa. hi hay-ta teim-a meod.* ‘thanks for the-meal:F. She (=it:F) was-F tasty-F very.’
- ii. *toda al ha-aruxa. ze haya naim meod.* ‘thanks for the-meal:F. It:M was:M pleasant:M very.’

In (i), the speaker is specifically referring to the meal and its culinary contents, using a feminine personal pronoun to agree with the feminine gender of the noun. In (ii) the speaker neutralizes the factors of gender and specificity by to refer to the entire event of the meal and everything that went with it. personal as a nounstrThe first example

- b. *la-šir ze naim*
 INF-sing it pleasant
 ‘to sing is pleasant = it’s nice to sing’
- (17) a. *ha-išun hu asur*
 DEF-smoking:VNOM.M he forbidden:M
 ‘smoking is forbidden’
- b. *ha-šira hi neim-a*
 DEF-singing:VNOM.F she pleasant-F
 ‘singing is nice’

2.2.2 Determiners

Determiners in MH include the article, demonstratives, and quantifiers. The only grammatical *article* is the definite marker *ha-* ‘the’, which agrees with the head noun in adjectives and demonstratives (Fruchtman 1982; Zur 1983). The definite article generally alternates with zero in non-definite contexts, although reduced *exad* ‘one’ is sometimes used for indefinite reference (e.g., *raiti iš xad šam še-hizkir li et ha-aba šeli* ‘I saw **man one** [= a man] there that reminded me of my father’). At present, this usage is not so pervasive as to have fully undergone grammaticalization from ‘one’ to ‘a’ on a par with, say, French *un(e)*, Spanish *un(a)*.

2.2.3 Demonstratives

Demonstratives are listed in Table 9, divided into proximal and distal, by number and gender.

Table 9. Proximal and distal demonstratives, by number and gender

		Masculine	Feminine	Gloss
Proximal	Singular	<i>(ha)ze</i>	<i>(ha)zot</i>	‘this, that’
	Plural	<i>(ha)éle ~ (ha)élu</i>	<i>(ha)éle ~ (ha)élu</i>	‘these, those’
Distal	Singular	<i>ha-hu</i>	<i>ha-hi</i>	‘that’
	Plural	<i>ha-hem</i>	<i>ha-hen</i>	‘those’

The distinction between proximal and distal in Table 9 is misleading. Rather, the forms labeled “proximal” in Table 9 are unmarked, and can be used for distal reference as well. This is shown by translations of the proximal and distal deictic contexts in (18) and (19) respectively – irrespective of whether they are used with or without the definite article.

- (18) a. *iš ze še-yošev kan kaet ...*
 man PRO.DEM.PROX that-sit:PRS here now
 ‘this ~ that man that’s sitting here now’

- b. *ha-iš ha-ze še-yošev kan kaet*
 DEF-man DEF-PRO.DEM.PROX that-sit:PRS here now
 ‘this ~ that man that’s sitting here now’
- (19) a. *iš ze še-yašav šam az ...*
 man PRO.DEM.PROX that-sit:PST there then
 ‘this/that man that was sitting ~ sat there then’
- b. *ha-iš ha-ze še-yašav šam az ...*
 DEF-man DEF-PRO.DEM.PROX that-sit:PST there then
 ‘this/that man that was sitting ~ sat there then’

In contrast to the alternative, context-dependent interpretation of demonstratives with (*ha*)*ze*, the forms listed as “distal” in Table 9 must take a definite marker, and can only have distal reference. Moreover, the plural forms *éle/élu/ha-lálu* all stand for something like ‘these’ or ‘those’, and non-definite *ze* (as in 19) and its feminine alternative *zo* versus *zot* are marked for high register. This system is thus undergoing change in MH, one requiring more detailed usage-based examination.

2.2.4 Quantifiers

Quantifiers are similar to their counterparts in other languages, including numerals and words standing for amount like those meaning ‘some’, ‘several’ ‘many’, ‘all’. Syntactically, they differ from other noun modifiers in being pre- rather than post-nominal (except for the numeral meaning ‘one’), and they agree with the head noun. Compare the everyday (20a) preposed version *harbe* ‘many’ with the more formal post-nominal *rav* ‘large collective’ as in *kahal rav* ‘crowd large = a large crowd’, marked for masculine or feminine plural in (20b)

- (20) a. *harbe ban-im ve-meat ban-ot*
 lots boy-PL.M and-few girl-PL.F
 ‘lots of boys and (a) few girls’
- b. *ban-im rab-im ve-ban-ot rab-ot*
 boy-PL.M much-PL.M and-girl-PL.F much-PL.F
 ‘Many boys and girls’

Preposing of quantifiers to the head noun also applies to *numerals* with the exception of the singular *exad ~ axat* ‘one:M ~ F’ which follows the noun it determines (see Chapter 7 on Inflection and Chapter 12 on Agreement).

2.2.5 Case markers

Two *case-markers* – accusative *et* and genitive *šel* – are typologically specific as closed-class items which (i) have no autonomous semantic content, (ii) have a single case-marking grammatical function, and (iii) do not alternate with other members of a paradigm. These properties do not apply, for example, to the dative

marker *le-* ‘to ~ for’: It functions in the case-marking senses of both transfer and benefaction (as in the Hebrew equivalent of ‘I gave the book **to** him’ and ‘I bought the book **for** him’) and also serves to mark direction and goal, hence is included in the next section, as a preposition. Accusative *et* has the following distinctive features: First, as noted earlier, it may be fused with the following definite article in colloquial use to derive the clitic *ta* (e.g., *ahávti et ha-raayon/ahávti ta-raayon* ‘I liked the idea’); second, it takes the bound form *-ot* when fused with pronominal suffixes (e.g., *oti* ‘me’, *ota* ‘him’, *otam* ‘them’); and third, it occurs only before nominals that are either marked overtly as definite or are inherently definite, as in possessives and Proper Nouns – as in (21).

- (21) a. *hu lakax sukariya / hu lakax et ha-sukariya*
 he took (a) candy / he took ACC the-candy
 b. *hi makira ota / hi makira et axot-i*
 she knows **her** / she knows ACC sister-my (= my sister)
 c. *hem ohavim múzika / hem ohavim et Motsart*
 they love music / they love ACC Mozart

The genitive marker *šel* ‘of’ is unique in that it occurs only in *nominal*, not in predicating contexts, so does not correspond to verb- or adjective-governed prepositions like English *of* (*speak of*, *be afraid of*) or French *de*. As shown in (22), and as detailed further in Chapter 14 on Genitive Constructions, it functions as a possessive marker with suffixed pronouns, or in two of the three types of genitive N[^]N constructions.

- (22) a. *ha-xaver šel-o* *ha-xaverim šel-anu*
 DEF-friend of-POSS.3SG.M DEF-friends of-POSS.1PL
 ‘his friend’ ‘our friends’
 b. *ha-xaver šel Dana* *ha-xaverim šel ha-moadon*
 DEF-friend of Dana DEF-friends of the-club
 ‘Dana’s (boy)friend’ ‘the members of the club’
 c. *xaver-a* *šel Dana* *xaver-av* *šel Dan*
 friend-POSS.3SG.F of Dana friend-POSS.3PL.M of Dan
 ‘a friend of Dana(‘s)’ ‘Dan’s friends’

Both accusative *et* and genitive *šel* each has a distinct syntactic site and function: *et* occurs between a transitive verb and a definite direct-object (*hu raa et ha-baxura* ‘he saw ACC the-girl’) and *šel* occurs between a head noun or noun-phrase and its modifying noun in genitive constructions (*ha-mare šel ha-baxura* ‘the-look of the-girl’). On the other hand, both items are morpho-syntactically like prepositions in being attached as bound prefixes to a following (personal) pronoun, thus: *hu raa oti aval ani lo raíti oto* ‘he saw **me** but I didn’t see **him**’; *ha-raayon haya šeli ve-ha-bicúa šelo* ‘the-idea was **mine** and-the-execution **his**’.

2.2.6 Conjunctions

The last set of closed-class items we consider here are *conjunctions* (Hebrew *milot*^A *kišur* ‘words:cs connection = connecting words’ or *kašarim* ‘connectors, connectives’). As in SAE, these items serve the syntactic function of *clause-combining* (as discussed in Chapter 18 on A Usage-Based Typology of MH Syntax). Lexically, *coordinating conjunctions* form a small closed-class of items, including unmarked *ve-* ‘and’ (Berman 1996), adversative *aval* ‘but’ alternating with exclusive *éla* corresponding to German *sondern* (Kail & Weissenborn 1984), *o* ‘or’ (Ariel 2016), while *aval* also has higher-register alternatives *ax* and *ulam*. Coordinating conjunctions also occur in *correlative constructions*, where the initial clause “primes” the second clause by marking an antecedent coordinator, e.g., *gam Y ... ve-gam X* ‘also Y ... and-also X = X as well as Y’; *o ... o* ‘either ... or’, *lo ... lo* ‘neither ... nor’, *omnam Y ... ulam X* ‘indeed Y... yet X’ – as do several of the subordinating conjunctions noted below.²¹

Two features distinguish *subordinating markers* (*mešaabdim*) in MH. First, a single element *še-* ‘that’ serves as a general subordinator or complementizer in the language, as follows. (i) It introduces Complement clauses, where it alternates with more formal register *ki-*; (ii) it marks Relative Clauses, where it alternates with the high register, more classical marker *ašer* ‘who ~ which’ and also, in the restricted context of relatives opening with a verb in a *benoni* form, with the definite marker *ha-*; and (iii) it occurs in a wide range of adverbial contexts (See Ariel 1978 and Chapter 18 of this volume for usage-based analyses of how these forms came to alternate in Modern Hebrew). The pervasiveness of *še-* in current Hebrew is evidenced by the common extension (in casual speech and across the board in young people’s usage) of the temporal conjunction *kše-* ‘as that = when’ is reduced to non-normative *še-* (e.g., from a university student’s narrative – *še-axi azav et ha-árec* ‘that-brother:POSS.1SG left ACC DEF-country = when my brother left Israel’).

Adverbial clauses are typically introduced by a lexical element specifying the semantic relation between the modifying and main clauses, with the former subordinated by the marker *še-* (for example, *kše-* alternates with higher register *ka-ašer* both meaning ‘when’). This is illustrated in the constructed examples in (22): A preposition introduces an adverbial phrase in (22a) – (24a) and an adverbial clause subordinated by *še-* in (22b)–(24b), with a bracket] marking a clause boundary.

21. The recurrence of the same lexical element in both the antecedent and following clause in correlative constructions like *o ... o*, *lo ... lo* effects the relative propensity for repetition in MH as in earlier stages of the language (see Chapter 18 on A Usage-Based Typology of MH Syntax).

- (22) a. *hu xika ad ha-erev*
 ‘He waited **until** the-evening’
 b. *hu xika] ad še-hi ta-gia*
 he waited] **until** that-she FUT-arrive
 ‘He waited **until** she’d arrive’
- (23) a. *hi nasa bli maspik késef*
 ‘She traveled **without** enough money’
 b. *hi nasa] bli še-yi-hye la maspik késef*
 she traveled] **without** that-FUT-be to.her enough money
 ‘She traveled **without** having enough money’
- (24) a. *hem exru lamrot xašivut^ ha-erúa*
 they delayed **despite** importance:cs the-event
 ‘They came late in spite of the importance of the event’
 b. *hem exru] lamrot še-ha-erua haya xašuv*
 they delayed] **in.spite** that-the-event was important
 ‘They came late although the event was important’

The alternation Preposition NP/Preposition *še* Clause is widespread, but not across the board. For example, the high-register conjunction *mi-kevan še-* ‘since, as – because’ does not have a prepositional counterpart, whereas the common causative marker *ki* ‘because’ occurs alone, without *še-* (Livnat & Yatsiv 2003). Yet the pervasiveness of the alternation is shown by extension in current usage of the preposition *biglal* ‘because of’ to the status of a causative conjunction in (25b).

- (25) a. *ha-tinok baxa biglal ha-kor*
 ‘The baby cried **because** of the cold’
 b. *ha-tinok baxa] biglal še-haya lo kar*
 the-baby cried] **because** that-was to.him cold
 ‘The baby cried because he was cold’

Morpho-syntactic features of MH prepositions in MH are further noted in the next section.

2.3 Intermediate elements

Two classes of words are analyzed below as “intermediate elements”, sharing features of both open-class OC and closed-class CC items – prepositions (§2.3.1) and adverbs (§2.3.2) – with “discourse markers” noted briefly (§2.3.3). These are relatively large classes of items and, while not as readily given to addition, change, or deletion as OC items, their membership is less fixed across time. Nor do such changes alter the interrelationships between other members of the group, since

unlike CC items, they fail to constitute grammatical paradigms. For example, the same meaning may attach to various such items, with differences mainly in level of formality, e.g., *for* (*the sake of*) can be conveyed by the dative *le-* ‘to’, and also by verb-derived *avur* from *avar* ‘pass, cross’ and the complex prepositions *bi-švil*, *be-ad*, *le-máan*. Besides, prepositions, adverbs, and discourse markers are typically *context-dependent*, not only in their syntactic environment but in their function in a given discourse. As such, they lie between open-class terms, which have autonomous conceptual content and serve propositional act functions like reference, modification, and predication, on the one hand, and closed-class functors like pronouns or determiners that serve to activate an abstract grammatical schema, on the other (Croft 1990, 2000; Schilperoord & Verhagen 2006).

Analysis of 320 unedited Hebrew language texts (narrative and expository, spoken and written) produced by 80 native Hebrew speakers identified 250 items (types and about ten times as many tokens) as not clearly OC or CC. These “intermediate” elements made up approximately 10% of the 2,400 word-types in the data-base, falling into two major types of constructions, “simplex” versus “compound” (see McMichael 2006). *Simplex terms* are historically monomorphemic stems or morphologically inflected or derived forms.²² They include words of classical Biblical and Mishnaic origin (e.g., temporal *axšav* ‘now’, *kvar* ‘already’, *etmol* ‘yesterday’, locative *kan* ‘here’, *šam* ‘there’), and items derived from other parts of speech: Nouns – e.g., *min* ‘kind, species = sort-of’, *paam* ‘time, step = once’; Verbs, often in the archaic absolute infinitive – e.g., *šuv* ‘return = again’, *harbe* ‘increase, multiply = a lot, much’, and also *nagid* ‘we’ll say = let’s say’, *kolel* ‘include = including’; or Adjectives – e.g., *pašut* ‘simple = simply, just’, *tov* ‘good = well, okay’, *yašar* ‘straight = straightaway, right-off’.

Complex forms account for all other “intermediate” elements, realized by three main surface combinations: (i) CC + CC – e.g., *ke-ilu* ‘as-if, as-though, like’, *ká-ma* ‘like-what = how much, how many’, *af-ilu* ‘even-if = even’, *gam-ken* ‘also-yes = also, too’; (ii) CC + OC – e.g., *zot omeret* ‘it:F says:F = that’s to say, in other words, that is’, *i-efšar* ‘non possible = impossible, can’t’, *eyn sfor* ‘no count = endless’; and (iii) IC (Preposition) + OC – as detailed in §2.3.1 §2.3.2 below. Other intermediate elements are set, formulaic, semantically idiomatic collocations or MLEs (§1.1 above) including, in our data base, expressions like *be-sof-o šel davar* ‘in-end-its of thing = eventually, in the long run’, *sof kol sof* ‘end all end = at long last’, *paxot o*

22. The only truly “primitive” or “basic” such terms in our data-base are slang loan-terms: English *okay*, Yiddish *nu* ‘so, well, get-a-move-on’, and Arabic *yalla* ‘hurry up, get going’, *yaáni* ‘so-to-speak, that’s to say’.

yoter ‘less or more = more or less’, *ad kedey kax* ‘until-for-such = to the extent’, *lo kol še-ken* ‘not all that-so = let alone’.²³

The “simplex” terms noted here, many of which occur in early child language, came to round only one-third of the intermediate lexical elements in our data-base. Of the “complex forms, the CC + CC constructions were rare, less than 5%, and the phrase-like multilexemic expressions were likewise not common (around 10%). That is, no fewer than half of all “intermediate” element types that we found took the form CC + OC, with Prep+OC types accounting for the vast majority, around 90%.

The special status of prepositions and adverbs as intermediate constructions was demonstrated experimentally for Hebrew in elicitations (Nir & Berman 2010), and by evidence from on-line processing and speaker judgments (Anward 2000) showing that use of such expressions is by and large pragmatically and/or discursively rather than structurally or even semantically driven. MH prepositions and adverbs, let alone discourse markers, function essentially as textually motivated “parts of discourse” rather than as semantically autonomous or structurally dependent “parts of speech”.

2.3.1 Prepositions

Prepositions, traditionally termed *milot[^] yaxas* ‘words:cs relation = relational words’, take three main forms in MH (Berman 1981).²⁴ The first class consist of the four *basic*, simplex forms of prepositions are known by the acronym בַּכִּלִּים *baxlam* standing for *bV-* ‘in, at’, *kV-* ‘as, like’, *IV-* ‘to, for’, and *mV-* ‘from’, where V stands for a vowel that alternates depending on the onset of the word that follows or whether it incorporates definiteness (Berman 1981). Apart from *mV*, a truncated form of the preposition *min* expressing source or separation, the other three incorporate the definite article *ha-*, thus: *ba-* ‘in/at the’, *ka-* ‘as/like the’, *la-* ‘to/for the’, so differing from other basic prepositions like locative *al* ‘on, about’, comitative *im* ‘with, by’.²⁵ An important syntactic function of these prepositions is linking transitive predicates to non-accusative objects, for example: *li-fgóa be-* ‘to-hurt (to someone)’, *le-sayea le-* ‘to-aid (to someone)’, *li-hyot axrai le-* ‘to-be responsible for’, *le-faxed mi-* ‘fear, be afraid of’, a function they share with other non-prefixed prepositions

23. These expressions are in essence semantically so specific and structurally so varied and unpredictable, that they are typically not at all multifunctional, serving in the same sense across usages.

24. Many of these items are not strictly speaking “words”, but bound morphemes specifying relations between elements.

25. In current usage, comitative *im* often serves in place of normative *be-* to specify instrumental case (e.g., *le-exol im pe male* ‘to eat with a full mouth’, *li-xtov im et novea* ‘to write with a fountain pen’. See Schlesinger 1989).

like *al* ‘on’ (e.g., *li-smox al* ‘rely on’), *im* ‘with’ (e.g., *le-hitmoded im* ‘to-cope with’), *axarey* ‘after’ (e.g., *li-rdof axarey X* ‘to-chase after X’). A highly productive means of constructing prepositions in MH takes the form of (basic) Prep + OC, extensively documented in the literature and confirmed by usage-based analyses of texts reported in Nir & Berman (2010). Examples include benefactive *bi-švil* ‘in-path = for (the sake of)’, a colloquial alternate for *le-máan* ‘for (the sake of)’; locative *be-tox* ‘in-middle = inside’; temporal *ka-avor* ‘as-pass = following’, *le-yad* ‘to-hand = next to’, *mi-pney* ‘from-face = because of, due to’; *al-ydey* ‘on-hands = by (means of)’, *le-fi* ‘to-mouth = according to’.²⁶ These combinations are structurally productive, and high-frequency in usage, but they are lexically constrained, initiated by one of the four “basic” case-marking prepositions, which do not alternate in these contexts. They are also the only prepositions that serve in construction of phrasal Adverbs of the type discussed in the next section (e.g., *bV* – ‘in, at’ in a string like *be-emet* ‘in-truth = really, actually’).

The “intermediate” status of prepositions in structure, semantics, and discursive function is supported by the Dutch-based analysis of Schilperoord & Verhagen (2006). They distinguish prepositions from other lexico-grammatical items as typically *ambiguous* elements that “occupy a kind of intermediate position . . . in some instances appearing purely grammatical, in others expressing conceptual content”. In MH, too, prepositions may have distinct semantic content expressing relations of benefaction, transfer, location, temporality, and cause. In other cases, particularly the structurally basic items, prepositions serve case relations that may be marked inflectionally in other languages (e.g., dative, instrumental, comitative); or they may be lexically arbitrary, governed by a predicate that takes a prepositional rather than an accusative direct object, as illustrated earlier for Hebrew verbs like those meaning ‘hurt’, ‘aid’, ‘fear’, ‘influence’.

2.3.2 *Adverbs*

The linguistics literature commonly views “adverbs” (Hebrew *toorey^ póal* ‘descriptions:cs verb = verb modifiers’) as a heterogeneous class of elements, consisting of numerous diverse lexical units that differ in both structure and function (Bisang 2011). Some researchers include adverbs with other OC elements (Biber et al. 1999; Fromkin & Rodman 1993; Radford et al. 1999); others treat them as distinct from OC items (Baker 2003: 200; Ouhalla 1999; Whitaker & Stemmer 1998); and Talmy (2000) regards them as closed class members of a minor grammatical category. These disparate classifications warrant including adverbs as an intermediate

26. An internet entry by Dr. Yaacov Levy on “Vocabulary of (Hebrew) Prepositions” lists dozens and dozens of such prepositional constructions formed from a basic preposition plus an open class item.

part-of-speech category between OC nouns, verbs, adjectives, and CC grammatical functors. Besides, many languages lack a distinct lexical category of adverbs (Hengeveld 1997). This was true, too, in Biblical Hebrew, with some researchers grouping together under the label “adverbs” a diverse range of particles, lexical items, and multilexemic expressions that include interjections, exclamations, as well as items expressing place, time, manner, etc. (Waltke & O’Connor 1990). In MH, too, such elements constitute a heterogeneous, non-uniform group of items, diverse lexically, semantically, in register, and in morphological structure and syntactic function (see, for example, Avinery 1962; Nir & Berman 2010). As illustration, Table 10 presents differences in register in terms used in MH for expressing basic adverbial notions of time and space.

Table 10. Monolexemic deictic adverbials, by register

Everyday colloquial	Higher, more formal register	Gloss
<i>axšav</i>	<i>ata</i>	‘now’
<i>az</i>	<i>azay</i>	‘then’
<i>po</i>	<i>kan</i>	‘here’
<i>šáma</i>	<i>šam</i>	‘there’

The Even-Shoshan dictionary lists 419 adverbial forms, and the “sifted” Morfix/*Rav Milim* – 330. Both include some borrowed adverbs, mostly from Latin (e.g., *aposterióri*, *grátis*, *inkogníto*) and French (*tet-a-tet*, *viz-a-vi*, *an-blok*), as well as musical terms from Italian (*andánte*, *alégro*, *legáto*). The “sifted” Morfix/*Rav Milim* lexicon contains 130 mono-morphemic adverbs, with the rest bi- or poly-morphemic or even multilexemic, a major means of adding adverbs to the current lexicon of Hebrew.

Historically, adverbs could be formed by a number of processes that no longer apply productively today (Mor 2013a, 2013b). These include (i) by syntactic conversion, with categorial shifts from nouns (*meod* ‘might’ > ‘very’), adjectives (*tov* ‘good’ > ‘well’), infinitive absolutes (*harbe* ‘increasing’ > ‘much’), or participles (*meuxar* ‘late:ADJ’ > ‘late:ADV’); (ii) marking by the suffix *-ām* in Classical Hebrew used in (high-register) Hebrew, such as *omnam* ‘indeed’, *xinam* ‘gratis’, *yomam* ‘by day’; (iii) by prefixing the definite article *ha-* ‘the’ to time units referring to the present time (e.g., *ha-yom* = ‘today’, *ha-šavúa* ‘this week’, *ha-bóker* ‘this morning’); and (iv) by appending the vowel suffix *-a* to form directional adverbs’ (e.g., *cafon* ‘north’ + *-a* > *cafóna* ‘northward’, *yerušaláyim* ‘Jerusalem’ + *-a* > *yerušaláyma* ‘towards Jerusalem’, *axor* ‘back’ + *-a* > *axóra* ‘backwards’).

Manner adverbs illustrate the structural diversity of “adverbs” as a semantically transparent conceptual category, which in some languages – although not in

Hebrew – have a distinct morphological marking (e.g., English *-ly*, French *-ment*).²⁷ Two recent analyses of manner adverbs in Hebrew (Berman & Nir 2011; Ravid & Shlesinger 2000) note the following structural sub-classes: (i) syntactic conversion = zero derivation from adjectives, as in the examples in (26); (ii) morphological affixation in (27); and (iii) the classically attested construction of adverbials by attaching one of the four basic, prefixal prepositions to a noun or adjective (28).²⁸

- (26) a. *hu od lo lamad le-daber tov be-ivrit*
 he still not learned to-talk **good** in-Hebrew
 ‘He still hasn’t learned to talk well in Hebrew’
- b. *im ani zozeret naxon*
 if I remember **right**
 ‘If I remember correctly’
- c. *ani lamadti kol-kax kaše*
 I studied all-thus **hard**
 ‘I studied so hard’

Zero derivation or conversion of adjectives to manner adverbs as in (26) was relatively uncommon in our corpus, restricted to a few common evaluative adjectives like those meaning ‘good’, ‘bad’, ‘right = correct’, ‘hard = difficult’, further evidence of the rarity of syntactic conversion of items from one word-class to another in MH compared with other languages (Berman 2017; Evans & Osada 2005).

A second strategy for constructing manner adverbs is, as might be expected, morphological. Two are classical, and lexically highly restricted in MH – the accusative suffix *-am* noted earlier as in *dumam* ‘silently’ (cf. current *be-dumiya* ‘in-silence’) or very formal use of the absolute infinitive in forms like *hetev* ‘well’ – versus the adjective *tov* in (26a) – *hayšer* ‘directly’ (cf. *yašir* ‘direct’), *harxek* ‘far away’ (cf. *raxok* ‘distant’), as well as the more common terms *harbe* ‘a lot of’ (cf. *rav* ‘a lot’), *maher* ‘quickly’ (cf. *mahir* ‘quick’). A rather more productive morphological device is addition of the feminine suffix *-t* to denominal adjectives ending in the invariant suffix *-i* (Avinery 1962; Ben-Asher 1972: 21–33; Muchnik 1997; Ravid & Shlesinger 1987; Schwarzwald 2002a: unit 4), as in the corpus-based examples in (27).

- (27) a. *ze haya yaxol lihyot davar tov kalkal-i-t*
 it was able to.be thing good **econom-ADJ-ADV**
 ‘It could have been a good thing economically’

27. In fact, Hengeveld (1992) includes manner adverbs in his proposed hierarchy of major lexical category, as follows: Verb > Noun > Adjective > (Manner) Adverb.

28. These examples are taken from Berman & Nir’s (2011) analysis of 320 written and spoken narrative and expository texts.

- b. *ani iš-i-t* *xoševet še-hu toe*
 I **person-ADJ-ADV** think that-he wrong
 ‘I personally think he’s wrong’
- c. *beayot eyle asuyot lihyot baalot* *miškal namux*
 problems those liable to.be owners (of) weight low
yaxas-i-t
relative-ADJ-ADV
 ‘Such problems are liable to have relatively little weight’
- d. *hitalel-u bo fiz-i-t,* *nafš-i-t*
 tortured-PL.M to.him **physic-ADJ-ADV, spirit-ADJ-ADV**
 ‘They tortured him physically (and) mentally’

The feminine suffix *-it* consisting of a marker of denominal adjectives plus the feminine ending *-t*, is lexically restricted to manner adverbs based on such adjectives. The Morfix/*Rav-Milim* dictionary lists only 27 *-it* adverbs, as a form found in Biblical Hebrew, too. Today, this construction is typically either formulaic, as in the combination ‘I personally’ in (27b) or high register usage, and its use was confined to high-school adolescents and adults in our study, not found in grade- or middle-school texts. Entirely missing from our corpus was use of the the ending *-ot* added to a passive particle, as in *gluy-ot* ‘overt-ly’, *brur-ot* ‘clear-ly’.

As against zero derivation in (25) and morphological forms in (26), the most productive means for deriving manner adverbs are *syntactic*, in two major construction types (Berman & Nir 2011; Nir & Berman 2010; Ravid & Shlesinger 2000): by means of a basic preposition plus another lexical item – most typically by *be-* ‘in, at, with’ combined with an abstract noun as in (28), or a noun expressing manner plus adjective as in (29).

- (29) *be-taut* ‘in-mistake = by mistake, mistakenly’
be-xavana ‘in-intention = with intention, intentionally’
bi-mhir-ut ‘with-rapid-ity = rapidly, speedily’
bi-ysod-i-ut ‘with-base-ic-ness = with thoroughness, thoroughly’

Use of a basic preposition attached to an otherwise independent lexical item is a common way of constructing *lexicalized adverbials* that function as discourse markers (§2.3.3see), e.g., *be-emet* ‘in-truth = really’, *be-muda* ‘in-conscious = consciously’, *ke-ilu* ‘as-though = like’, *ka-halaxa* ‘as-convention = properly’; *le-maase* ‘to-deed = in fact’, *le-mata* ‘to-down = downward’; and *mi-zman* ‘from-time = for ages’, *mi-yad* ‘from-hand = right away, immediately’. The preposition *be-* is the only one used productively and widely to construct manner adverbs like those in (29), but the construction of (basic) Prep + Noun in general – as in (30) – is extremely common in MH usage. These are totally open-ended, syntactically formed

constructions rather than lexical expressions, in which adjectives may alternate quite freely with an associated head noun that has the sense of ‘manner’ or ‘way’.²⁹

- (30) *be-ófen mute* ‘in-manner mistaken = wrongly’
be-dérex mexuvénet ‘in-way intended = intentionally’
be-cura mexuvenet ‘in-form intended = intentionally’
be-órax yesodi ‘in-fashion thorough = thoroughly’

Manner Adverbs in MH are thus most typically constructed by syntactically grammaticized means rather than, as might be expected, morphologically, as in languages like English or Spanish.³⁰

2.3.3 Discourse markers

A class of lexical items and MLEs that by definition are neither OC nor CC are those termed “discourse markers”. These essentially discursive, context-dependent elements typically manifest “heterosemy”, that is, “use of identical forms with different combinatories and different meanings” (Evans & Osada 2005) and, as such deviate syntactically, semantically, functionally, and also intonationally from their “literal” counterparts. Such elements have been discussed in depth for MH in a range of studies, particularly Maschler (2009) and see, too, for example Ariel (1998b), Henkin (1999), Ziv (1998 2001 2007). Many of these are traditionally subsumed by Hebrew grammarians under the blanket-term *miliyot* ‘little words = particles’ noted earlier in this chapter, or treated together with exclamations and interjections, which may or may not function as what are accepted as discourse markers in the literature on linguistic discourse. Examples in Hebrew include items like *pašut* ‘simple = simply, just’, *tov* ‘good = well (then), okay’, *naxon* ‘correct = isn’t that so?’, *be-emet* ‘in truth = really, actually’, *ke-ílu* ‘as though, as if = like’; and see, too, loan typically slang terms in fn. 24). The properties characterizing such elements place them at the outer edges of accepted word-class categories, even though they constitute part of the lexicon of Hebrew as of other languages. For these reasons, and because, as noted, they are dealt with in depth and detail elsewhere, this important component of the MH lexicon is not discussed at length in the present context..

29. Hebrew grammarians distinguish between the lexical expressions in (33) as *toorey[^] póal* ‘titles ~ labels:cs verb = adverbs’ that define a lexical category and the syntactic constructions in (34) labeled *teurey[^] póal* ‘descriptions:cs verb’ that are adverbials modifying the predicate as a whole.

30. Another case where MH prefers more analytic means to morpho-lexical derivations is in expression of comparative and superlative degree, where, constructions like *yoter ADJ mi-* ‘more Adjective than’ and *ha-xi* Adjective, *ha-*Adjective *be-yoter* ‘the most Adjective, the Adjective the-more’ correspond to, say, English *-er, -est*. respectively.

3. Productivity and innovation in the MH lexicon

In reviewing productive strategies of word-formation in contemporary Hebrew usage, reference is to speakers' preferences for lexical form-meaning matchings. Concern is thus with the options speakers intuitively favor for interpreting and coining unfamiliar or novel lexical items, rather than with structural constraints or grammatical licensing of derivational processes. The notions of "favoring" and "preferences" are critical here, highlighting the recognition that lexical productivity at any point in history or among any group of speakers is essentially a probabilistic rather than an across-the-board notion, referring to the likelihood that given a target meaning, members of the speech community will opt for one form/meaning match over another.

In research on the verb lexicon of MH, the authors of this chapter specify complementary criteria for word-formation productivity. Bolozky (1999) relies on the following three: (i) productivity or judgement tests of nonce words; (ii) comparing the content of new versus older dictionaries (as in §1.6 above), and (iii) following Baayen and Renouf (1996), counting *hapax legomena* in large language corpora. In this perspective, learned or academic neologisms, while rare, are likely to occur more than once in a sufficiently large corpus. In contrast, one-time spontaneous innovations arising in response to specific circumstances (including some cited from young children in the present chapter) are *not* likely to recur yet they in fact represent true productivity by ordinary more than the erudite neologisms coined by writers and scholars.

Berman (1993a) links productivity to the two factors of transparency of form-meaning relations and the relative activity of a morpho-lexical construction for encoding a meaning not yet represented in the lexicon (see §1.2 above). To this end, frequency versus productivity is analyzed in relation to the special status of the B1 *paal* verb-pattern, which has high-frequency but near-zero productivity in the current MH lexicon. Based on a combination of elicitation studies and analysis of spontaneous usage, Berman distinguishes three levels of "speaker productivity" as against "structural productivity", where the latter refers to the formal options available in the grammar of a language: (i) *nonproductive* form-meaning relations have become *frozen* or *fossilized*, like the alternation between B1 *pa'al* and B3 *pi'el* for expressing intensification or aspectual distinctions (§2.1.1.2); (ii) *semi-productive* form-meaning relations are transparent and recognizable by speakers – for example use of the *hifil* conjugation for expressing both transitive causativity and intransitive change-of-state – e.g., from the adjective *bašel* 'ripe' > *le-havšil* 'to ripen' means both 'to make ripe' and 'to become ripe'. This alternation applies to a largely frozen, fairly sizeable group of common verbs – analogously to the minor classes of past-tense forms in English (Bybee & Slobin 1982). On the other hand, *hif'il* remains highly

productive for deriving new causative verbs, while the inchoative sense has been taken over largely by intransitive *hitpael*, occasionally by *nif'al*, or else by syntactic periphrasis with an auxiliary verb meaning 'become'.³¹ The latter thus belong to a third class of (iii) *actively productive* form-meaning relations, representing speaker preferences both in their own speech output and in structured elicitation designs.

Findings summarized below for different parts-of-speech categories surveyed in the preceding sections are based largely on the latter type of data, that is, on structured psycholinguistic studies involving comprehension, judgment, and production of innovative form-meaning matches. These include Bolozky's (1999) "productivity tests" conducted with 50 adult Hebrew speakers asked to judge and also coin different form-meaning matches: for denominal verbs (e.g., 'become a snob', 'make someone snobbish' from the loan-noun *snob*, 'register as a patent' from the loan-noun *patent*); to coin novel adjectives on the basis of a variety of sentence frames (e.g., 'equipped with an antenna' from the loan-noun *anténa*, 'relating to a cabaret' from the loan-noun *cabaret*), and to coin abstract nominals from a range of sources (e.g., 'sending notes to one-another' from the noun *pitka* 'note', 'covering with panels' from the loan-noun *panel*). Also concerned with abstract nominals is the study of Ravid and Avidor (1998), who compared the performance of adults with that of children aged 5 to 15 years in constructing abstract nominals derived from verbs in different *binyan* patterns (e.g., participants were asked to define the activity of a person who *mitpalel* 'prays' (cf. established *tfila* 'praying, prayer') or of a machine that *mefocec* 'bursts things' (cf. established *picuc* 'explosion'). Berman (1993b 1993a) analyzed production and comprehension of novel verbs by adults compared with young children in structured elicitations and spontaneous speech output, while her (1987b 1999) studies tested the distribution of morphological patterns preferred by Hebrew speakers in interpreting and coining novel nouns in four semantic classes: agent, instrument, location, and collective. Ravid (1978 1990) and Ravid and Levie (2010) elicited and analyzed different word-formation processes in Hebrew noun and adjective formation. Further evidence for favored trends in new-word formation derives from the adult participants who served as controls in over a dozen studies on children's acquisition of derivational morphology in Hebrew reviewed in Ben-Zvi & Levie (2016).

Taken together, the few available corpus-based studies combine with a range of structured elicitations reveal high levels of agreement among educated native-speaking adults, as follows.³² First, they exhibit broad structural distinc-

31. This analysis contrasts with Halevy's claim for a large proportion of labile (ambitransitive) verb-forms in MH (see Chapter 15).

32. There are, however, clear generational differences, with older speakers more conservative, and young adults and especially those in the army and others highly impacted by contemporary

tiveness between the three *major classes* of V, N, and A – using *binyan* patterns for verbs, canonic interdigitated *miškal* patterns as well as linear suffixation for nouns, and interdigitated patterns for verb-derived adjectives and *-i* suffixation for noun-derived adjectives. Second, *within-class* consensus is also high: (i) for verbs – the high-frequency most neutral pattern B1 *paal* is rarely used in coinages, the active pattern B4 *piel* is predominant for denominal verb coinages from both native and foreign nouns, supported by intransitive versions of the same verbs in the typically inchoative or reflexive pattern B5 *hitpa'el* (e.g., P3 *le-saben* and P4 *le-histaben* meaning, respectively, ‘to-soap someone, something’ and ‘to-soap oneself’ from the loan-noun *sabon* ‘soap’), and the typically causative pattern B3 *hif'il* is preferred for deriving causative verbs from intransitive verbs as well as from adjectives (Berman 1993b, 2003; Bolozky 1999; Laks 2013a); (ii) nouns, too, demonstrate distinctiveness in form-meaning matchings; for example, the verb-based pattern *CaCCan* and linearly derived noun + *an* are widely preferred for agent nouns, *maC-CeC* for instrument nouns, and the endings *-ut* and *-iya* for abstract and place/collective nouns respectively (Berman 1999; Bolozky 1999; Bolozky & Schwarzwald 1992; Clark & Berman 1984; Ravid 1990; Seroussi 2004); while (iii) adjectives, too, divide up distinctively in both spontaneous usage and elicited derivations between the three *-u* marked interdigitated passive patterns for expressing endstate resultatives – *CaCuC*, *meCuCaC*, *muCCaC* (Berman 1994, 2004), the *CaCiC* pattern for deriving *-able* meaning adjectives (Berman 1987b; Ravid & Levie 2010), and denominal adjectives formed almost exclusively from nouns with suffixal *-i* (Ravid & Shlesinger 1987). Overall, then, empirical research shows, first, that participants make use of both interdigitated and linear derivation in coining nouns and adjectives, while confining verbs to a restricted set of *binyan* patterns; and, second, despite considerably polysemy and lack of one-to-one form/meaning matches, Hebrew speakers tend to apply these processes distinctively to particular semantic classes within each of the three major lexical categories.

Two other general observations emerge from these studies. First, favored patterns of natural, speaker productivity apply to current rather than to “old” words (Aronoff 1976). That is, they constitute actively functioning processes of word-formation in the language (Anderson 1985) as distinct from “fossilized” patterns that applied at earlier stages in the history of Hebrew, such as use of the pattern *CaCiC* for agent nouns or alternating of verb transitivity between change-of-state *nif'al* and causative *hif'il* verbs (Berman 1993b; Ravid 1990). A second property of these patterns is their avoidance of “minor” derivational options such as acronyms, blends, and clippings (Berman 1989; Berman & Seroussi 2011; R. Nir 1993; Ravid

media allowing themselves far more freedom in innovation and in form-meaning matches – a topic for separate study.

1990). These are common primarily in self-conscious neologisms of language planners or for commercial purposes in advertising and on the media (R. Nir 1993).

In sum, both in interpreting unfamiliar words and in coining novel items in their language, contemporary Hebrew speakers demonstrate highly consistent, even if by no means across-the-board, patterns of morphological preferences that reflect both between- and within- word class distinctiveness. Yet the composition of the mental lexicon of MH speaker-writers remains impacted by a large proportion of fossilized forms taken over from earlier periods and manifesting less currently productive processes of word-formation – forms which may themselves constitute the basis for constructing new words and adding to the current lexicon.

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Voice distinctions

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The category of voice in Modern Hebrew is perceived in the current study as displaying a set of oppositions between two or three *binyanim* (templates) for a single consonantal root, instantiating different argument structures that do not affect the inventory of semantic roles characterizing a given root as a lexical entry. These oppositions, once established, are examined for the complementary functional distribution of their members in a variety of contexts in written Hebrew. Although the semantic relationships between the *binyanim* are frequently unpredictable, the data show that systematic form-function oppositions can nonetheless be distinguished, denoting subtle voice distinctions as well as different degrees of argument participation in the event. These oppositions can play an important role in the text.

1. Introduction

Voice distinctions are expressed in the verbal system of Modern Hebrew through morphological alternations between the seven *binyan-im*, (literally ‘building-s, construction-s’) variably termed conjugations, morphological patterns, and/or prosodic templates.¹ When combined or interdigitated as affixal patterns with roots, these seven *binyan* patterns yield pronounceable verb forms. For example, from the root *l-b-š* – the *pa’al* verb (cited in the morphologically simplex form of past tense, 3rd person masculine) *lavaš* ‘wear, put on,’ *nif’al nilbaš* ‘be-worn,’ *hif’il* ‘dress (someone in something),’ *hitpa’el hitlabeš* ‘dress oneself;’ from the root *g-d-l* – *pa’al gadal* ‘grow, get bigger,’ *pi’el gidel* raise, ‘grow crops,’ *hif’il higdil* ‘enlarge, make bigger;’ or, in denominating verbs, from the nouns *dégem* ‘model’ *dugma* ‘example’ – verbs like *pa’al dagam* ‘sample,’ *hif’il hidgim* ‘illustrate;’ or from a loan word like *aqlim*

1. For different approaches to the topic – including Semitic typology and generative grammar – see, for example, Arad 2005: 25–31; Berman 1979, 1993; Bydłowski 1981; Doron 1999, 2003a, 2003b, 2008, 2013, 2015; Goldenberg 2013: 121–127, 199–202; Izre’el 2009; Mandelblat 2000: 206–238; Ravid & Vered 2016; Rosén 1977: 179–206; Schwarzwald 2009. See also, as referenced and dealt with from different perspectives in the present volume, Chapters 7, 8, 9 and Chapter 13.

climate – the *pi'el* verbs *iqlem* ‘acclimatize’ (someone, something) and *hitpa'el hit-aqlem* ‘be(come) acclimatized.’ (For the debate regarding root-based vs. word-based derivation, see Bolozky 2003; for a view midway between these two extremes, focusing on psycholinguistic processes in acquisition and new-word formation, see Berman 2003; for an investigation of frequency and productivity in the verb system of MH, see Bolozky 2009).

The semantic relations conveyed by the *binyan* patterns are not entirely predictable, so that many scholars assign *binyan* alternations to derivational rather than inflectional morphology (as surveyed in Bar-Asher Siegal 2015: 16; Doron 2003a: 12, 2008: 57; Schwarzwald 2002: Unit 5, 66, 88–89). Nevertheless, *binyan* patterns do sometimes manifest clear form-function oppositions and, of particular relevance here, voice oppositions, typically those relating to distinctions between active, passive, and middle voice. The expression of voice distinctions *morphologically* rather than through analytic means such as auxiliary verbs attested in many other languages is a typological feature of Semitic languages (cf. the differentiation between strict morphological passives and periphrastic passives in Keenan & Dryer 2007: 333–339). The analysis provided here is in accordance with Mel'čuk's (1993: 11) definition of the category of *voice* as “an inflectional category such that its gramemes specify such modifications of the basic diathesis of a lexical unit that do not affect its propositional meaning”.² Voice is thus perceived here as displaying a set of oppositions between two or three *binyan* patterns for a single root, instantiating different argument structures that do not affect the inventory of semantic roles characterizing this root as a lexical entry, that is, without increasing or decreasing its valency. These oppositions, once established in this study, are further examined in a variety of texts for their complementary functional distribution, both syntactic and discursive.

The three-way voice opposition considered here – active, passive, and middle – corresponds to the prototypical presentation in Shibatani 1998: 94: “**Active form:** The subject, as an agent, instigates an action that extends to an independent entity, patient, affecting it in such a way that it results in an altered state; e.g. *Bill killed John*. **Middle form:** The subject instigates an action that affects itself in such a way that it undergoes a change of state; e.g. the equivalents in languages with a clear middle of *Bill killed himself*, *Bill combed his hair*, *Bill sat (seated himself)*, *Bill turned*. **Passive form:** The subject, the patient, is in an altered state from undergoing a change of state caused by the action instigated by an independently functioning agent; e.g. *Bill was killed (by John)*”. See also references to relevant studies for different languages in Fox and Hopper (1994).

2. Mel'čuk states that voice is not an asemanic category. The semantic content of a particular voice concerns, in his view, the communicative organization of a message, rather than the situational meaning as such.

The chapter is organized as follows: Brief comments on active voice (§2) are followed by a description of passive (§3) and middle voice (§4). Since the perspective on voice in this study is corpus-driven, each statement is illustrated by authentic, and only occasionally by constructed, examples. While certain characteristic usages of voice distinctions in spoken Hebrew are noted, the present study focuses on a systematic account of voice alternations in the *written* language.

2. Active voice

Active voice in Hebrew is represented by the three *binyan* patterns *pa'al*, *pi'el* and *hif'il*. As stated in Doron (2003a: 17), *pa'al* may denote: the basic meaning of the verb (e.g. *raqad* 'dance'), *pi'el* - its intensive meaning (*riqed* 'dance around, cavort'), and *hif'il* - its causative meaning (*hirqid* 'make dance'). However, not all equi-root verbs attested in these *binyan* patterns in MH display such distinctions, as shown by pairs of verbs like *safar* count in *pa'al* and *siper* 'tell' in *pi'el* or *šilem* 'pay' in *pi'el* and *hišlim* 'complete/reconcile' in *hif'il*.

Verbs in the active voice may be transitive (*badaq* 'check,' *siper* 'tell,' *hidliq* 'ignite') or intransitive (*gadal* 'grow, get bigger,' *šiyeš* 'tweet,' *hexvir* 'turn pale').³ Two-argument active verbs may have counterparts in the passive voice (e.g., *nivdaq* 'be checked,' *supar* 'be told,' *hudlaq* 'be ignited'). Verbs in the middle voice are intransitive in nature, and are typically realized in the two intransitive *binyan* patterns - *hitpa'el* (e.g., *hitparek* 'come apart,' *hitargen* 'get organized,' *hitlabeš* 'get dressed') and *nif'al* (*nivhal* 'take fright,' 'be startled,' *niqla* 'get into (a situation),' 'be caught,' *niršam* 'register (onself), get registered') - and as such contrast with their active counterparts.

In Doron's (2003a: 11–14) analysis, the opposition between *pa'al* and *hif'il*, which she terms "the causative alternation", is of intransitive (both unergative and unaccusative) versus causative (e.g., *raqad* 'dance' / *hirqid* 'make dance,' *nafal* 'fall' / *hipil* 'drop/cause to fall'). In contrast, the opposition between *pa'al* and *pi'el*, "the intensive alternation" in her terms, is that of an unmarked action (*qašar* 'tie') versus a marked one (*kišer* 'connect').⁴ In her words: "... the intensive member of the pair is necessarily predicated of an active force, whereas the simple verb is not thus restricted." (Doron 2003a: 14). Berman's (1993, 2016: 17–20) usage-based analyses

3. As noted, since the database for this chapter concerns mainly written Hebrew, traditional orthography-based transcription of consonants like q, š are used rather than the broad phonemic transcription recommended for spoken Hebrew in the Appendix at the beginning of the volume. See, further, footnote 8 below.

4. These constructed examples are given here as they appear in Doron's article.

of large corpora of child and adult Hebrew indicate, however, that the *pa'al/pi'el* alternation is non-productive in MH, since it is displayed by only a small number of verbs in current usage, and expresses varied semantic relations (e.g., *qafaṣ/qipeṣ* 'jump/hop', *šavar* 'break'/*šiber* 'shatter', *patax/pitéax* 'open/develop', often but not necessarily with a shift in transitivity as in pairs like *šaxan* 'dwell, reside'/*šiken* 'house, accommodate', *lamad* 'learn, study'/*limed* 'teach').⁵ And, indeed, many of Doron's listed pairs of verbs may be considered as different entries in the dictionary. Nonetheless, her characterization of verbs in *pi'el*, contrasted with both *pa'al* and *hif'il* of the same root, as verbs whose subject can only denote an actor is insightful.⁶ Noteworthy, too, is her observation (Berman 2016: 18) that verbs in *pi'el*, when opposed to equi-root unaccusative verbs in *pa'al*, involve an increase in valency (see, further, Chapter 13 on Transitivity and Valence Alternations in MH).

3. Passive voice

Contemporary Hebrew has two passive systems: the actional passive (also termed agentive or syntactic passive in some analyses), expressing agent (*po'el*) / patient (*pa'ul*) relations and temporal oppositions, and the non-actional passive (also called adjectival passive), which describes the state of the patient and involves aspectual distinctions.

3.1 The actional passive system

An actional passive is usually defined by its potential contrast to a corresponding transitive active construction. In Modern Hebrew, this contrast is reflected by the use of the *binyan* patterns *pu'al* and *hitpa'el* vs. *pi'el*, of *huf'al* vs. *hif'il*, and of *nif'al* vs. *pa'al* (for a different view, considering *nif'al* and *hitpa'el* to be medio-passive forms, see Alexiadou & Doron 2012; Doron 2013, 2015: 761–763). The actional passive involves, as in many other languages, an inversion of grammatical roles: the object – in MH, most typically direct rather than prepositional – the affected patient of the active verb, is promoted to subject position, while its subject, the

5. Here also the examples are given as they appear in the article cited from Berman.

6. Hence the ungrammaticality of sentence (40b) in Doron's paper (2003a: 17): *ha-mexirim qipcu* 'the prices jumped up and down.' versus the grammaticality of sentences like (40a) *ha-yeladim/ha-mexirim kafcu* 'The children jumped./ 'The prices accelerated.', or (40c) *mašehu hikpic et-ha-yeladim/et-ha-mexirim* 'Something made the children jump / the prices rise (at an accelerated rate)'. Regrettably, the evidence provided to corroborate her insights consists almost exclusively of constructed examples, which in most cases do not allow for unequivocal judgments of acceptability.

deliberate agent, is demoted to the position of an optional complement. For further discussion of this process, see Taube (1997a: 15–18); for a reformulation of “the so-called standard analysis of the canonical passive within the Principles and Parameters framework” and for a discussion of the status of the agent in passive constructions, see Alexiadou and Schäfer 2013: 2–5). This alternation is illustrated in the examples (1a) to (1d), where the letters a to d represent the active forms, and those with an apostrophe (a' to d') their constructed passive versions.⁷

- (1) a. *mazkir* *ha-memšala* *masar*
 secretary:CS.SG.M DET-government:SG.F issue:PST.3SG.F
hoda'a.⁷
 announcement: 3SG.F
 ‘The Cabinet Secretary issued a press release.’⁸
- a'. *ha-hoda'a* *nimsera* *al-yede*
 DET-announcement:SG.F issue:B2.PASS.PST.3SG.F on-hand:CS.PL.F
mazkir *ha-memšala*.
 secretary:CS.SG.M DET-government:SG.F
 The press release was issued by the Cabinet Secretary.
- b. *ha-ṭexnay* *matqin* *axšav et* *ha-tanur*.
 DET-technician:SG.M install:PRS.SG.M now ACC DET-stove:SG.M
 ‘The technician is installing the stove now.’
- b'. *ha-tanur* *mutqan* *bi-yde*⁸ *ha-ṭexnay*.⁹
 DET-stove:SG.M install:PASS.PRS.SG.M in-hand:CS.PL.F DET-technician
 The stove is being installed by the technician.⁹¹⁰
- c. *roš* *ha-va'ad*[^] *ye-ṭapel* *ba-nose*.
 head:SG.M DET-committee:CS.SG.M FUT-deal:3SG.M in.DET-issue:SG.M
 The head of the committee will deal with the issue.

7. Most of the examples that follow are taken from authentic written texts of three kinds: Modern Israeli literature, daily newspapers, and internet sites.

8. The transcription of examples taken from written sources in this chapter, including the Hebrew titles of literary sources, follows, with minor modifications, the rules adopted in the Encyclopedia of Hebrew Language and Linguistics (Khan 2013), reflecting conventions of Semitic Linguistics, rather than a canonic IPA transcription. In examples from literary texts, forms are transcribed to represent prescribed norms of pronunciation (see Chapter 5), while examples from other sources are transcribed to represent current Hebrew pronunciation in MH as judged by the native-speaking author of this chapter. Conventional forms are retained for names of newspapers (for example, the daily *Haaretz*).

9. No distinction is made here between the two prepositions *al yede* and *bi-yde* in the agent phrase.

10. On passive participles that denote present tense, see Taube 2009.

- c'. *ha-nose yetupal bi-yde[^] roš*
 DET-issue:SG.M deal:PASS.FUT.3SG.M in-hand:CS.PL.F head:CS.SG.M
ha-va'ad.
 DET-committee:SG.M
 The issue will be dealt with by the head of the committee.
- d. *rofe mumxe bišea et ha-nituaḥ.*
 doctor:SG.M specialist:SG.M perform:PST.3SG.M ACC DET-surgery:SG.M
 A specialist performed the surgery.
- d'. *ha-nituaḥ buša bi-yde*
 DET-surgery:SG.M perform:PASS.PST.2SG.M in-hand:CS.PL.F
rofe mumxe.
 doctor:SG.M specialist:SG.M
 The surgery was performed by a specialist.

The active *binyan* patterns *pi'el* and *hi'fil* may each have two corresponding passive forms, thus creating the following three-component sub-systems: *pi'el* – *pu'al* – *hitpa'el* and *hi'fil* – *huf'al* – *nif'al* (as detailed in Chapter 8). However, *hitpa'el* and *nif'al* do not function as passives in all such alternations. For example, *hitpa'el* and *nif'al* are clearly middles in three-way oppositions such as *hivhil* 'frighten' – *huvhal* 'be rushed' – *nivhal* 'take fright,' *xileš* 'rescue' – *xulaš* 'be rescued' – *nexlaš* 'escape,' 'get free' or *qidem* 'promote' – *qudam* be 'promoted' – *hitqadem* 'advance'. Yet, in contrast to some analyses, which regard *nif'al* occurrences in such three-member oppositions as decausative forms (for example, Ben-Hayyim 1992: 70; Berman 1979; Schwarzwald 2008: 71), the view proposed here is that there are cases where they do, in fact, express passive argument structure, in the sense that a given agent, easily recoverable from the context, did actually carry out an action on a patient (see Taube 1997b). In such cases, *pu'al* and *huf'al*, typical of the actional passive, characterize the action as deliberate, whereas *hitpa'el* and *nif'al* are unmarked in this respect, as illustrated by the examples in (2) compared with (3) respectively.

- (2) a. *ha-diyun nuhal be-yad rama*
 DET-hearing:SG.M conduct:PASS.PST.3SG.M in-hand:SG.F high:SG.F
al-yede[^] xavre[^] qongres vatiqim.
 on-hand:CS.PL.F member:CS.PL.M congress:SG.M veteran:ADJ.PL.M
 'The hearing was conducted high-handedly by veteran members of
 Congress.' [Gad Ivgi, mida.org.il 8.3.2015]
- b. *prašim texniiyim hušmeṭu be-xavana.*
 detail:PL.M technical:PL.M omit:PASS.PST.3PL in-intent:SG.F
 'Technical details were deliberately omitted to facilitate explanation.'
 [Introduction to Artificial Intelligence – Decision Trees, Lior Friedman
 and Omer Geyger, *Ps://webcourse.cs.technion.ac.il* Winter 2013–2014]

On the other hand, an active construction in which the patient is not conceived as affected by an actor may lack a corresponding passive construction, even if the object is preceded by the syntactic transitivity marker *et*. Thus, sentences like (5a) and (5b) have no actional passive counterparts:

- (5) a. *šmo ha-‘ivri holem oto.*
 name:POSS.3SG.M DET-hebrew:ADJ.SG.M suit:PRS.SG.M ACC.3SG.M
 ‘His Hebrew name suits him well.’
- b. *hu lo hikir et ha-mitlonenet. hu lo hikir et he-ḥašud. hu lo hikir et ha-tiq.*
hu lo hikir et ha-mitlonenet ...
 he NEG know:PST.3SG.M ACC DET-plaintiff:SG.F
 ‘He did not know the plaintiff. He did not know the suspect. He did not know the case.’ [Uri Adelman, *Ša’ot metot*, p.162]

Affectedness may be limited to a specific context. For example, the verb ‘*azav*’ leave’ may have a passive counterpart – *ne‘ezav* be abandoned, as in (6a), since the leaving of the Muslims may have had a strong impact on the place they left, whereas the same verb in (6b) cannot be passivized, given the insignificant effect of the departure of a single person.

- (6) a. *ha-miṣar ha-kavuš ne‘ezav*
 DET-fort:SG.M DET-conquer:PTCP.PASS.SG.M abandon:PASS.PST.3SG.M
al-yede[^] ha-muslemim.
 on-hand:CS.PL.F DET-muslim:PL.M
 ‘The conquered fort was abandoned by the Muslims.’
 [he.wikipedia.org/wiki/מצד_עותרת]
- b. *hu ‘azav et ha-bayit be-gil 14.*
 he leave:PST.3SG.M ACC DET-place:SG.M at-age 14
 ‘He left home when he was fourteen.’

Relatedly, a full passive construction is sometimes used, as in example (7), in order to characterize an object of a perception verb as affected by the action (since the interceptions were not only seen, but also documented in pictures).

- (7) *ha-yiruṭim bi-yrušalayim: kax hem nir’u al yede golše “kikar ha-šabat”* ba-meyl
 ha-’adom šel kikar ha-šabat **hitqablu** tmunot rabot šel golšim šete’adu et yiruṭ
 kipat barzel šel 5 ha-raqeṭot.
hem nir’u al-yede golše[^] “kikar ha-šabat”
 they:PL.M see:PST.PASS.3PL on-hand:CS.PL.F surfer:CS.PL.M kikar ha-shabat
 ‘The interceptions in Jerusalem: this is how they were seen by the surfers of
 “The Sabbath Square”.’ (Headline).

Many pictures from surfers who documented the interception of the 5 rockets by the “Iron Dome” were received at the Red Mail of “Kikar ha-Shabat”.

<www.kikar.co.il> (11 July 2014)

Moreover, differences in the degree of affectedness that are neutralized in the active may be syntactically realized in the passive. Thus, both the active sentences in (8a), where the direct object is the affected patient, and in (8b), where it is the experiencer, have exactly the same active syntactic structure; yet they have different passive counterparts in (8c) and (8d) – by use of the preposition *min* from for marking the source/trigger of the experience, instead of *al yede* ‘meaning’ by which normally denotes the agent of the action where it is specified.

- (8) a. *mefaqed mišteret misgav amar ki ba'al ha-dira hit'orer lemišma re'ašim ve-hiftia et ha-poreš be-salon ha-bayit.*
mefaqed mišteret misgav hiftia et
 commander:CS.SG.M police:CS.SG.F misgav surprise:PST.3SG.M ACC
ha-poreš
 DET-burglar:SG.M
 ‘The Misgav police commander said that the owner woke up at the sound of noises and surprised the burglar in the living room.’
 <www.ynet.co.il> (updates 3.3.2008)
- b. *tguvato hifti'a oti.*
 reaction:SG.F-POSS.3SG.M surprise:PST.SG.F ACC.1SG
 ‘His reaction surprised me for a moment ...’
 [Aharon Kaplan, <www.nrg.co.il > (30 January 2016)]
- c. *poreš hufta al yede šořrim ve-qafaš mi-qoma šniya.*
poreš hufta al-yede^ šořrim.
 burglar:SG.M surprise:PASS.PST.3SG.M on-hand:CS.PL.F policeman:PL.M
 ‘A burglar was-surprised by police and jumped from the second floor’.
 [(Headline). <www.ashdodnet.com> (13 November 2016)]
- d. *ha'emet hi šelo hufta'ti me-ha-tguva ba-qibuš. le'umanim yeš be-kol maqom, ve-gam ba-qibušim šel ha-šomer ha-ša'ir.*
lo hufta'ti me-ha-tguva
 NEG surprise:PASS.PST.1SG.M from-DET-response:SG.F
 ‘The truth is, I was not surprised by the reaction on the kibbutz. There are nationalists everywhere, and in kibbutzim of the Hashomer Hatzair movement as well’
 [Nahman Gilbo'a, <mynetkibbutz.co.il> (10 March 2016)]

A lesser degree of affectedness, with the patient perceived as a participant in the event, is also expressed by the use of *hitpa'el* and *nif'al* as corresponding passive forms to *pi'el* and *hifi'l*, rather than of the expected *pu'al* or *huf'al*, as illustrated in (9a) and (9b).

- (9) a. *hitbaqašti bi-mforaš al yede ha-yo'ēšet ha-mišpaṭit šel ha-va'ada lo la'asot et ze.*
hitbaqašti al-yede[^] ha-yo'ēšet ha-mišpaṭit
 ask:PASS.PST.1SG.M on-hand:CS.PL.F DET-adviser:SG.F DET-legal:SG.F
 'I was explicitly requested by the legal adviser of the committee not to do it.' [www.knesset.gov.il/protocols/data/rtf/kalkala 10 May 2004]
- b. *hitragšut be-vet ha-xolim hadasa eyn kerem: xayehem šel šney yeladim nišlu*
 ...
xayehem nišlu
 life:POSS.^{MPL}PL.M save:PASS.PST.3PL
 'Excitement at the Hadassah Ein Kerem Hospital: the lives of two children were saved ...' [Michal Arieli, <www.hidabrut.org > (25 July 2016)].

Recently, mainly in informal writing, corresponding forms have emerged in *pu'al* and *huf'al*, as in (10a), (b). This phenomenon may be conceived as an instance of paradigm regularization:

- (10) a. *buqašti levaṭel et ha-miškun ha-rišon.*
 ask:PASS.PST.1SG.M to-cancel ACC DET-mortgaging DET-first
 'I was asked to cancel the first mortgaging.'
 <www.lawguide.co.il> (29 May 2015)
- b. 117 *mehagrim, u-va-hem šeš našim be-herayon, hušlu be-xof hayam, sfonit-mizraḥit le-virat luv, ṭripoli.*
šeš našim hušlu
 six:F woman:PL.F save:PASS.PST.3PL
 '117 migrants, among them six pregnant women, were rescued on the seashore northwest the capital of Libya, Tripoli.'
 <news.walla.co.il > (8 June 2016).

3.3 Discourse functions of the actional passive

Passive voice in general and sequences of actional passive in particular are typical of written press reports. The contextual situation being clear and the identity of participants easily retrievable from the context, the passive, focusing on the event itself, is particularly appropriate for this genre (Longacre 1983: 232; Sinha 1974: 631). These two properties of journalistic reporting apply far less in the case of literary texts, perhaps accounting for the relative infrequency of sequences of passive forms in belletristic prose. In contrast, use of passive is well attested in various media of correspondence on the web. Berman (2011: 344–347) observes that passives occur relatively infrequently in written expository texts elicited from Hebrew-speaking adults, a finding she explains as due to the availability of alternative rhetorical

options (such as subject impersonals and middle voice constructions) for conveying the discourse function of downgrading of agency to express a depersonalized discourse stance.

Passives occur in most cases without an overt marker of the agentive argument, so that they are readily integrated into a chain of predicates, mostly active-intransitive. Sharing the same grammatical subject, they play a significant role in preserving textual cohesion by maintaining a single theme throughout a given discourse unit, as in examples (11a) to (11d).

- (11) a. *Asaf kvar huṭas bi-mhirut derex ḥaṣar ha-‘iriyā, durdar ba-madregot, huṭraṣ la-reḥov. aḥar-kax huṭax bi-mxonit ḥona, be-faḥ ašpa, be-ovrim ve-šavim*

...

asaf huṭas durdar huṭraṣ
 asaf fly:PASS.PST.3SG.M roll:PASS.PST.3SG.M burst:PASS.PST.3SG.M
aḥar-kax huṭax bi-mxonit
 after-so slam:PASS.PST.3SG.M in-car:SG.F

‘Assaf had already been flown rapidly across the City Hall entryway, whirled down the stairs, volleyed into the street. Afterwards he was slammed into a parked car, a garbage can, passersby ...’

[David Grossman, *Mišehu laruṣ ’ito* 31.]

- b. *bi-sde ha-te‘ufa hošaṭnu et mismaxenu la-bodeq. Kšehitbarer lo šebiša‘ti et ha-peša ha-nora lehitḥaber le-‘arviya, ha-‘oneš lo iḥer lavo: ukavnu, tuš’alnu, nexqarnu, nivdaqnu u-mizvedotenu pušpešu*

ukavnu tuš’alnu nexqarnu
 delay:PASS.PST.1PL question:PASS.PST.1PL interrogate:PASS.PST.1PL
nivdaqnu u-mizvedotenu pušpešu

examine:PASS.PST.1PL and-suitcase:POSS.PL.F-POSS.1PL rummage:PASS.PST.3PL
 ‘At the airport we handed our documents to the inspector. When he found out that I had committed the horrible crime of associating with an Arab woman, the punishment was not long in coming: We were delayed, questioned, interrogated, examined and our suitcases were thoroughly checked ...’

[Naomi Hagar, *Haaretz* 21 February 2012]

- c. *ha-šavua amru bxirim be-‘EYPA”Q, ha-šdula ha-yisre’elit-yehudit be-wošington, šehem nevoxim ve-zo’amim le-’or ha-‘uvda šegam hem ne‘eqfu ve-xol ze qara bil’adehem.*

hem ne‘eqfu
 they:M bypass:PASS.PST.3PL

‘High officials of AIPAC, the Israeli-Jewish lobby in Washington, said this week they were embarrassed and angry in view of the fact that they had been bypassed and that all this happened without them.’

[Ben Kaspi, *Maariv* 1 February 2015].

- d. *Paul Kertis, še-ne'ešar ve-ho'ošam*
 Paul Kertis that-arrest:PASS.PST.3SG.M and-accuse:PASS.PST.3SG.M
 [...] *šuxrar*.
 [...] release:PASS.PST.3SG.M
 'Paul Curtis, who was arrested and accused [...] has been released.'
 <www.ynet.co.il> (updates 23 April 2013)

In example (11a), the cohesiveness of the string of four passive verbs is enhanced prosodically by the repetition of the vowel *u*, which distinguishes the passive voice forms of verbs in *pu'al* and in *huf'al* from their active counterparts in *pi'el* and *hifi'l* respectively (even though the passive form *hufraš* in (11a) does not occur in current Hebrew usage, it is acceptable here as part of a repetitive listing construction, as described in Chapter 17). In example (11d), the use of the passive is in fact preferable, since in rhematic attributive clauses which convey some new information, the implied predicative relation between the antecedent and the passive serves to create the direct link between the relative clause and its main clause. This link would otherwise require explicit marking by a referential pronoun (*še-oto* that -him = whom), assigning a greater degree of cohesion to the utterance as a whole.

The promotion of the object of the corresponding active verb to the subject position of the passive verb is interpreted in many studies as a process of *topicalization* (for example, Givón 1979: 186; Jespersen 1924: 167; Siewierska 1984: 222; Toyota 2008: 5).¹¹ A rather different view of this change of perspective in depiction of an event is proposed by Goldenberg (2007: 284). Discussing a passage in a description of a Gurage speaker, where both active and passive turns occur, he says: "The event is described here as if with alternating direction of transitivity, at one time the human persons are going and seeing, at another time it is the places and objects that are emerging, arriving and coming into sight, or literally make themselves discernable. [...] Even when the expressions representing both points of view are derived from the same lexeme, not always is one of them the plain construction and the other a passive transformation". The change of perspective on the event by the shift between arguments constitutes only one aspect of the actional passive construction. Another, no less important, facet is the change in the nature of the predication as a whole: A predication in which the patient (the endpoint of the action) is fronted may be presented as detransitivized (see Haspelmath's 1990: 32, 60 idea of "inactivization") as a saturated, complete event, rendering specification of the other participant superfluous. See examples in (12):

11. Topicalization is often indicated in MH by the complement-initial active construction. For the complementary distribution of these two constructions, see Taube 1999.

- (12) a. *hem higišu tluna ba-mišṭara. Zulzelu. u-le-qinuax, le-tadhematam, libsqind ne'ešar ba-averat iyum be-nešeq.*
hem higišu tluna ba-mišṭara.
 they:M file:PST.3PL complaint:SG.F in.DET-police:SG.F
zulzelu.
 disparage:PASS.PST.3PL
 ‘They filed a complaint with the police. They were derided. And to top it off, to their astonishment, Libeskind was arrested for the offense of making armed threats.’ <cafe.themarker.com> (blog 27 March 2011)
- b. *sne: “be’eynenu xāšuv ribonut yisre’elit.” dan margalit: “aval hi vutra.”*
aval hi vutra
 but she renounce:PASS.PST.3SG.F
 ‘Sneh: “From our perspective the important point is Israeli sovereignty.”
 Dan Margalit: “But it has been renounced.”’
 [Popolitika (radio program) 17 January 1994]
- c. *David Yosef: “hirgašti še’anu nirdafim ad šavar le’orex kol ha-dereḥ.” Reznik: mi biyeš etxem? ze šehugaš ktav išum buyaštem?” ya’ir levi sarax, paša vexaṭa ve-’atem buyaštem?”*
ze še-hugaš ktav išum
 this:SG.M that-submit:PASS.PST.3SG.M writ:CS.SG.M conviction:SG.M
buyaštem? ...
 shame:PASS.PST.3PL.M
 ‘David Yosef: “I felt that we were being relentlessly persecuted all along.”
 Reznick: “Who put you to shame? The fact that an indictment had been filed – were you shamed? Ya’ir Levy committed excesses, crimes, and transgressions, and you were shamed?”’ [Haaretz 15 January 1997]
- d. *ha-misṭaq šel endi ram be-zugot hufsad ba-ma’araxa ha-ḫamišit.*
ha-misṭaq hufsad
 DET-game.MSG lost.PST.PASS.3MSG
 ‘Andy Ram’s doubles match was lost in the fifth set.’
 [Miki Sagi, <www.ynet.co.il> (29 June 2009)].
- e. *lo, hi kvar huzreqa.*
 NEG, she already inject:PASS.PST.3SG.F
 [In reply to the doctors question whether a biopsy can be performed on the (female) patient]: ‘No, has already been injected.’
 [p. c. Tali Bar 8 November 2001]
- f. *goddamit! hušprašti.*
 DET-game:SG.M lost.F
 ‘I’ve been splashed all over.’ [the speaker opened a coke bottle]
 [p. c. Tali Bar 16 July 2002]

- g. *le-gabe salaṭ ḡarḡir yeš štey askolot [...] be-rola šayaxim la-askola ha-šniya, ve-’axare šaloš ṭe’imot mi-salaṭ ha-ḡarḡir šelahem, humarti.*

humarti

convert:PASS.PST.1SG

‘With regard to roquette salad there are two schools of thought [...] At (Café) Rola, they belong to the second school, and after three tastings of their roquette salad, I was converted.’

[Sagi Cohen, *Haaretz* 15 February 2015]

The specific nature of passive predications as saturated and complete constructions is further demonstrated by the occurrence of passive forms in *pu’al* and *hufal* at the beginning of a discourse unit (often in headlines). In such cases, they serve to present an entire event, with active forms appearing later in the same context and elaborating on it, as in examples (13a) and (13b). Note here that in (13b) the passive form is derived from an intransitive verb:

- (13) a. *’ušru luxot ha-šidurim šel qešet ve-rešet; ha-re’aliti lo hufxatva’adat ha-ṭelevezia šel ha-rašut ha-šniya [...] ’išra et luxot ha-šidurim šel zaxyani-yot aruṣ 2 qešet ve-rešet la-maḡašit ha-šniya šel 2013.*

’ušru luxot ha-šidurim

approve:PASS.PST.3PL board:PL.M DET-broadcast:PL.M

va’adat^ ha-ṭelevezia ’išra et

committee:CS.SG.F DET-television:SG.F approve:PST.SG.F ACC

luxot^ ha-šidurim

board:CS.PL.M DET-broadcast:PL.M

‘Reshet and Keshet Listings Approved; Reality TV not reduced (Headline). The Television Committee of the Second Authority [...] approved the listings of Channel 2 franchisees Keshet and Reshet for the second half of 2013.’ [Lior Averbach, <www.globes.co.il > (4 July 2013)]

- b. *ha-sod šepuṭpaṭ: be-’iqvot dvarav huv’u li-yxidat oqeš kalbanim ameriqa’im, šelamdu kešad lehaṭ’il be-’iraq klavim šomé ivrit.*

ha-sod še-puṭpaṭ

DET-secret:SG.M REL-prattle:PASS.PST.3SG.M

‘The secret that was leaked: following his words, American dog handlers in Iraq who had learned how to operate Hebrew-hearing dogs [i.e., dogs trained in Israel and then loaned to the Americans] were brought in to the “Sting” unit.’ [Amir Oren, *Haaretz* 2 November 2015]

This distinction between the presentation of an overall event and its elaboration can be also marked by the opposition *pu’al-hitpa’el*, as in (14), where the verb in the headline, which introduces the event, is in *pu’al*, while its elaboration in the

report itself is in *hitpa'el*, a *binyan* pattern which is usually employed for denoting imperfectivity.

- (14) *ha-tqifa be-sudan buš'a al yede meṭosim lelo ṭayasle-ta'anat ha-'iton ha-londoni*
ha-'sande ṭayms' tqifat xel ha-'avir hitbaš'a al yede meṭosim lelo ṭayas ...
ha-tqifa buš'a al-yede meṭosim lelo
 DET-raid:SG.F perform:PASS.PST.3SG.F on-hand:CS.PL.F aircraft:PL.M without
ṭayas tqifat^ xel^ ha-'avir hitbaš'a
 pilot raid:CS.SG.F force:CS.SG.M DET-air:SG.F carry.out:PASS.PST.3SG.F
al-yede^ meṭosim lelo ṭayas
 on-hand:CS.PL.F aircraft:PL.M without pilot
 'Raid in Sudan carried out by unmanned drone aircraft [headline].
 According to the London *Sunday Times*, the (Israeli) Air Force raid was carried
 out by unmanned drone aircraft ...' <news.walla.co.il> (29 March 2009).

As noted, passive constructions with an explicit agent typically marked by *al yde* by (means of) are infrequent. When an explicit agent does appear, it usually plays a role in the information structure of the utterance, as representing the element in focus, as in (15), where the important information is: who is finally responsible for the water rates.

- (15) *taarif ha-mayim niqba ka-yom al yede rašut ha-mayim ve-ha-biyuv. Manganon*
qviat ha-taarif nišlat, le-fixax, al yede ha-memšala ve-lo al yede ha-kneset.
ta'arif^ ha-mayim niqba al-yede^ rašut^
 rate:CS.SG.M DET-water set:PASS.PRS.SG.M on-hand:CS.PL.F authority:CS.SG.F
ha-mayim ve-ha-biyuv. manganon^ qvi'at^
 DET-water and-DET-sewage mechanism:CS.SG.M setting:CS.SG.F
ha-ta'arif
 DET-rate:SG.M
nišlat al-yede^ ha-memšala ...
 control:PASS.PRS.SG.M on-hand:CS.PL.F DET-government:SG.F
 'Water rates are currently set by the Water and Sewage Authority. The rate-setting
 mechanism is thus controlled by the government, not by the Knesset.'
 [Ido Baum, <www.themarker.com> (9 July 2013)]

Two types of passive sequences occur in the text: The first unfolds a narrative chain of events, while the second enumerates a series of events, not necessarily inter-dependent. In the first case, the order subject-predicate is variable, and a change of order may signal that the chain is coming to a close, as in the following example:

- (16) *al reqa kol elu, ve-zohi tmuna xelqit bilvad, nošar ha-maga'im axenu ha-falaštinim axare ha-kibuš be-1967. nošar qešer bilti emšai'im bne oto ha-am šenexeša, niqra ve-puzar. Agav kax nirqexa ve-ušva zehutenu ha-le'umit ba-tna'im haxi qašim ve-haxi mesukanim mibxinata šel ha-medina. tahalix ha-i'šuv hušlam sofit ba-šanim ha-'axronot, šnot ha-'intifada.*

nošar *ha-maga* *'im axenu*

create:PASS.PST.3SG.M DET-contact:SG.M with brother:POSS.1PL.M X

ha-falaštinim nošar *qešer ...* *'im bney*

ha-falaštinim create:PASS.PST.3SG.M contact:SG.M with son:CS.PL.M
oto

DEM.SG.M

ha-am *še-nexeša,* *niqra*

DET-people:SG.M that-divide:PASS.PST.3SG.M tear:PASS.PST.3SG.M

ve-puzar *nirqexa* *ve-ušva*

and-scatter:PASS.PST.3SG.M concoct:PASS.PST.3SG.F and-shape:PASS.PST.3SG.F

zehutenu *ha-le'umit* *tahalix* *ha-išuv*

identity:POSS.1PL DET-national:SG.F process:CS.SG.M DET-shaping:SG.M

hušlam *sofit* *ba-šanim* *ha-'axronot*

complete:PASS.PST.3SG.M finally in.DET-year:PL.F DET-last:PL.F

'Against the background of all these (facts), and this is only a partial picture, contact with our brothers the Palestinians was established after the conquest of 1967. Direct contact was made with members of the same people that had been divided, torn apart, and scattered. In doing so, our national identity was devised and shaped in the harshest and most dangerous conditions from the point of view of the State (of Israel). The shaping process was ultimately completed in recent years, the years of the Intifada.' [Haaretz 26 October 1990]

In contrast to the first type of sequence of passive forms, in enumerative chains recounting a series of events, detailing a series of non-hierarchically sequenced actions, the order is either subject-predicate (17a) and (17b) or predicate-subject (17c) and (17d). In many instances the enumerative chain specifies a general statement previously mentioned in the context (see examples (17b) to (17d)). Reduction of the number of variables in the sentence typical of the passive construction allows for a high degree of uniformity required in enumeration or listing (see Chapter 17 on Listing Constructions). The choice between the two possible orders within enumerative sequences seems to depend on the element put in focus: the order subject-predicate occurs when it is the subject that is highlighted. In such cases, the subject is usually undetermined and the verb is predictable, a combination typical ofthetic statements, as in (17a) and (17b). Note that in (17a) the first two passive forms and their subjects are derived from the same root. The reverse order is used when actions are juxtaposed, the subject being mostly undetermined, as in (17c) and (17d).

- (17) a. *aḥad ha-‘am mexapes dereḥ, berdičevsqi, pzur da‘at, mašia alṭernaṭiva reḥava yoter. Byaliq, ḡamur sever, šoqed al po‘eṭiqa nevu‘it šetedarben et ha-me‘aḡarim liqloṭ, brener mit‘ašben al gnesin ha-tašuš, berqovič taluš, maḡnif le-ḡotno be-targum garua [...] ha-ṭelenovela šel ha-sifrut ha-‘ivrit, raq be-yidiš. || šum vikuax lo vukax, šum ṭi‘un ḡadaš lo niṭ’an, drama mi-lifne me‘a šana nimtaḡat le-pihuq gadol, ma šehaya hu šeyihye, kax ba-ši‘ur haze.*

šum vikuax lo vukax šum ṭi‘un
 any debate:SG.M NEG debate:PASS.PST.3SG.M any argument:SG.M
 ḡadaš lo niṭ’an drama... nimtaḡat
 new:SG.M NEG argue:PASS.PST.3SG.M drama:SG.F stretch:PASS.PRS.SG.F
 le-pihuq gadol
 to-yawn:SG.M big:SG.M

‘Ahad-Haam searches for a way, Berdichevsky, absent-minded, offers a broader alternative. Bialik, stern-faced, works hard on a prophetic poet-ics that will spur on those who are late in understanding, Brenner gets angry at the exhausted Gnessin, Berkowitz is disconnected, flattering his father-in-law with a bad translation [...] the telenovela of Hebrew literature, but in Yiddish. || No debate has been held, no new argument presented, a hundred-year-old drama is stretched into a big yawn, what was, will be, thus in this class.’ [Oren Kakun, *Haaretz* 25 May 2006].

- b. *beyḡin erḡa et ha-misḡaqim ha-grandiyoziyim beyoter, be-ḡašqa‘at anaq ḡas-rat taqdim [...] || qave rakevet taḡtit ḡadašim nislelu, kvišim mehirim nosfu, kviše ṭaba‘at šemeqifim et ha-‘ir huqmu, ṭerminal anaq ḡadaš nivna bimyu-ḡad bi-nmal ha-te‘ufa šel beyḡin, parqim yeruqim ništelu ba-ir ha-‘afora.*

qave[^] rakevet taḡtit ḡadašim nislelu
 line:CS.PL.M train:SG.F under:ADJ.SG.F new:PL.M pave:PASS.PST.3PL
 kvišim mehirim nosfu kviše[^] ṭaba‘at ...
 road:PL.M fast:PL.M add:PASS.PST.3PL road:CS.PL.M ring:SG.F
 huqmu ṭerminal anaq ḡadaš
 erect:PASS.PST.3PL terminal:SG.M giant:ADJ.SG.M new:SG.M
 nivna ...

build:PASS.PST.3SG.M

parqim yeruqim ništelu

park:PL.M green:PL.M plant:PASS.PST.3PL

‘Beijing hosted the most grandiose games, with an unprecedented huge investment [...] || New subway lines were built, highways were added, ring roads surrounding the city were constructed, a giant new terminal was specially built at the Beijing airport, green parks were planted in the grey city.’ [Moshe Gilad, *Haaretz* 1 July 2012]

- c. *ha-yexida be-hanhalato šel iš xinux druzi, D"R salman falaḥ, samanka"l misrad ha-xinux, xolela me'uxar yoter mahapexa be-nose ha-xinux bi-xfare ha-druzim. || huxšeru morim, nivnu bate sefer, 'ubdu toxniyot limudim, niftexu bate midraš le-morim ve-le-morot ve-ha-inyan zaz beqešev anaq.*

huxšeru morim nivnu

train:PASS.PST.3PL teacher:PL.M build:PASS.PST.3PL

bate[^]-sefer

house:CS.PL.M-book:SG.M

'ubdu toxniyot[^] *limudim niftexu*

process:PASS.PST.3PL plan:CS.PL.F study:PL.M open:PASS.PST.3PL

bate-midraš

house:CS.PL.M-learning:SG.M

‘The unit, under the management of the Druze educator, Dr. Salman Falah, Deputy Minister of Education, later fostered a revolution in the field of education in Druze villages. || Teachers were trained, schools built, the curricula adapted, Teachers seminars for men and women were opened, and matters moved at a huge pace.’

[Dr. Akram Hasson, <mcd.org.il> (27 July 2011)]

- d. *ktav ha-hagana šel ha-'atar ynet be-parašat piṭure ha-'itona'im meta'er kešad hištamqa maševet ko'aḥ ha-'adam, || puṭru ovdim vatiqim še "alutam yeqara yoter", ve-tafqidim kmo katav xuš ve-'orex mada buṭlu.*¹²

puṭru ovdim ... ve-tafqidim ... buṭlu

dismiss:PASS.PST.3PL worker:PL.M and-duty:PL.M cancel:PASS.PST.3PL

‘The statement of defense of the Ynet site on the affair of dismissal of reporters describes how the workforce shrunk, || veteran workers who “were more expensive” were laid off and posts such as foreign correspondent and science editor were eliminated.’

[Oren Persiko, <www.the7eye.org.il> (23 February 2012)]

3.4 Impersonal passives

The impersonal passive in MH is an invariable verbal form (3SGM) governing a complement introduced by a preposition.¹³ Such constructions are rather infrequent in MH, occurring mainly in fixed formulaic expressions (Berman 1980: 764; but see Chapter 15 on Impersonal Constructions). Examples are shown in (18a) to (18c).

12. A chiasitic order (ab-ba) is often found in an enumeration of only two events.

13. Cf. Blau 1996: 114–123 (‘On the Impersonal Passive in the Bible’), who makes a distinction between the inflected passive on the one hand, derived from transitive verbs only, marking agreement between the verb and its subject, and the invariable passive (in 3SGM), on the other hand, which can be derived from both transitive and intransitive verbs and denotes the impersonal meaning.

- (18) a. *medubar* *bi-štey*[^] *haša'ot*[^] *xoq*
 discuss:PASS.PRS.3SG.M in-two:CS.F proposal:CS.PL.F law:SG.M
 These are two bills. <m.knesset.gov.il/news/pressreleases> (14 March 2016)
- b. *el ha-mavet anaḡnu holxim mi-tox hit'almut u-lelo haxana, ve-'el ha-nisu'in,*
šuv yesulax li al ha-hašva'a ha-'axzarit – anu nixnasim be-ḡoser muda'ut
u-va-'ašimat enayim.
yesulax *li* *al ha-hašva'a*
 forgive:PASS.FUT.3SG.M to:1SG on DET-comparison:SG.F
 We approach death out of ignorance and without preparation, and marriage, may I again be forgiven for the cruel comparison – we enter with a lack of preparedness and closed eyes. [Rothem, *Ahot rehoka* p. 89]
- c. [...] *ve-'af qušaš lo ve-le-bxirim aḡerim 10% min ha-saxar egev ha-mašav.*
qušaš *lo...* *10% min ha-saxar*
 cut:PASS.PST.SG.M to: 3SG.M 10% from DET-salary:SG.M
 [...] and he, as well as other senior executives, had their salaries cut by 10% due to the situation. [Haaretz 3 April 1992]

In contrast to the limited occurrence of impersonal passives, MH makes frequent use of the 3PL active form of verbs for expressing the notion of the impersonal (for comprehensive descriptions of impersonal constructions in MH, see Berman 2011; Melnik 2013; and Chapter 15 on Impersonal and Pseudo-Impersonal Constructions). Such constructions have three salient characteristics: Their subject is confined to an unspecified human agent, they do not allow a co-referential interpretation, and they imply agentivity (Berman 1979). Corresponding passive forms, on the other hand, are unmarked in this respect.

A comparison between passive forms and the 3PL active-form occurrences in the corpus examined for this study reveals that the passive is by far the more frequent in journalistic prose, whereas the 3PL active form is much more common in reported or cited direct speech. This state of affairs reflects the high frequency of the active impersonal in the spoken language. In contexts where both constructions occur, it is usually the 3PL active form that conveys agentivity. See Examples (19a) and (19b).

- (19) a. *'im hu be-sadir, hu ye'ašer miyad, milu'imniq yu'af mi-yhidato. Pa'am tafsu*
mišehu šhevi samim le-mesiba me-ha-qibuš šelo ve-he'ifu oto.
hu *ye'ašer* *milu'imniq* *yu'af*
 PRO.3SG.M stop:PASS.FUT.SG.M reservist:SG.M throw.out:PASS.FUT.SG.M
pa'am tafsu *mišehu* *ve-he'ifu oto*
 once catch:PST.3PL someone and-throw:PST.3PL
 'If he is a regular soldier, he will be arrested immediately. A reservist will be thrown out of his unit. Once they caught someone who had brought drugs to a party from his kibbutz and they threw him out.
 [Maariv, October 1992]

- b. *ha-sar le-šé'avar Gabay: "histiru me-ha-memšala ve-me-ha-šibur meda al mitve ha-gaz"*
ha-sar la-haganat ha-sviva le-šeavar avi gabay taan ha-yom (šabat) ki meda be-nogea le-mitve ha-gaz hustar me-ha-šibur.
histiru me-ha-memšala ve-me-ha-šibur
 conceal:PST.3PL from-DET-government:SG.F and-from-DET-public:SG.M
meda ... hustar me-ha-šibur
 information:SG.M conceal:PASS.PST.SG.M from-DET-public:SG.M
 'Former Minister Gabbay: "(They, people) concealed Information about the gas project from the government and public" [Headline]
 Former Environment Minister Avi Gabbay claimed today (Saturday) that information regarding the gas program was concealed from the public.'
 [Tal Shalev, <news.walla.co.il > (4 June 2016)]

For a detailed comparison between passives and impersonals, see Taube (2007). It is worth noting here that the two competing constructions share a common trait: They both occur with one argument only: in one case it is the agent as an unspecified individual or group of individuals or an institution, in the other it is the patient. The fact that only one argument is referred to enables focusing on the event itself (Siewierska 1984: 113) as illustrated in (20):

- (20) *ha-xoq xaxam, mi šema'amin bo yalex le-gan eden, ve-'im ata lo ma'amin bo telex la-gehenom, la-'eš. ve-kaxa gam im ha-baxura be-'iksal, šenisrefa. šesarfu ota, tiqanti. sarfu, nisrefa, meta.*
ha-baxura be-'iksal še-nisrefa. še-sarfu ota,
 DET-girl:SG in-iksal that-burn:PASS.PST.SG.F that-burn:PST.3PL ACC.3SG.F
tiqanti. sarfu nisrefa meta
 correct:PST.1SG burn:PST.3PL burn:PASS.PST.3SG.F die:PST/PRS.3SG.F
 'The law is wise. Whoever believes in it will go to paradise, and if you do not believe in it, you will go to hell, to the fire. The same with the girl in Iksal, the one who (was) burned. They burned her, I corrected him. (They) burned, (was) burned, she died/is dead.'
 [David Grossman, *Noxexim* nifqadim, p. 26]

4. Middle voice

Many discussions of the middle voice in the linguistic literature are semantic in orientation, with the affectedness of the grammatical subject of the verb presented as its main property (for example, Barber 1975: 17–18; Benveniste 1966: 172; Fox & Hopper 1994: 1; Klaiman 1991: 3, 45; Lyons 1968: 373). More structure-oriented definitions of the middle voice are discussed in studies relating to the origin of the term in ancient grammars of Sanskrit, Greek, and Latin (see for example Bakker 1994: 24; Collinge 1963: 235–238; Klaiman 1991: 1). Kemmer (1993: 3 121–123 1994) proposes “the relative elaboration of events” as a parameter for classifying the different types of the middle voice. She defines this parameter as the degree to which the constituents of a particular situation, in the sense of its participants and conceivable component subevents, are distinguished. Unlike two-participant events, in which the participants (the Initiator and the Endpoint) are completely separate entities, she explains, different types of the middle voice instantiate progressively lower distinguishability of the participants. Thus, the reflexive in her presentation is an intermediate situation type, in which some separation between Initiator and Endpoint is maintained, despite the essential co-reference of the participants. In the intransitive situation type, on the other hand, there is only one participant, with no conceptual distinction between the Initiating and Endpoint facets. The affectedness of the subject of the verb in the middle voice, in Kemmer’s view, is an outcome of the lower distinguishability of participants which characterizes the different middle types: Since Initiator and Endpoint are not separated, but necessarily the same entity, the Initiator is also affected by the same event. (Various other classifications of types of middle voice constructions are given, for example, by Creissels 2006: 28–32; Doron 2015; Kastner 2016; Kemmer 1994; Kulikov 2010: 395).

Based on the parameter of the degree of distinguishability, Kemmer (1993: 209) concludes that the middle voice functions as a strategy to signal a departure from the canonical transitive event type in the direction of an intransitive event type along a semantic transitivity continuum.

In what follows, the middle voice is analyzed in light of Kemmer’s parameter of distinguishability, in terms of the two typically intransitive *binyan* patterns, which are also the two main exponents of the middle voice in MH – *hitpa’el* and *nif’al*. (A diachronic survey of the Middle in Biblical Hebrew in particular, and in Semitic in general, is provided in Joosten 2000).

4.1 The non-actional passive

The non-actional passive system, often termed the adjectival passive, consists of the passive participial forms *pa'ul*, *mefu'al*, and *muf'al*, depicting a state with a single participant. These forms are opposed either to the corresponding past and future forms expressing the emergence (inchoativity) of such a state, as in (21a) vs. (21b),¹⁴ or to the present forms of *nif'al*, *hitpa'el* and *huf'al*, denoting an ongoing situation, as in (21c) and (21d).¹⁵

- (21) a. *ka'ašer ha-peša patuaḥ rašuy šeyihye xavuš ba-xaviša laxa u-šterilit ve-yeš lehaxlifa pa'amayim be-yom.*
ka'ašer ha-peša patuaḥ
 when DET-wound:SG.M open:PTCP.PASS.PRS.SG.M
 'When the wound is open it should preferably be dressed with a bandage that is moist and sterile and should be replaced twice a day.'
 <www.wikirefua.org.il>
- b. *ma la'asot 'im ha-peša niftaḥ? ha-tfarim alulim lehiqara o lehipataḥ be-šel hivašrut bašeqet, nefixut o daleqet ba'-ezor ...*
'im ha-peša niftaḥ le-hiqara o
 if DET-wound:SG.M open:MID.PRS.SG.M to-tear:INF.MID OR
le-hipataḥ
 to-open:INF.MID
 'What should one do if the wound opens up? The stitches are liable to tear or open up due to the formation of edema, swelling or inflammation in the area ...'
 <www.hadassah.org.il>
- c. *'im bayit ka-ze mitpareq mamaš kaxa – ve-ta'amin li hu meforaq, mamaš meforaq – ma yaxziq po maa'mad?*
'im bayit ka-ze mitpareq
 if house:SG.M like-this:SG.M dismantle:MID.PRS.SG.M
ve-ta'amin
 and-believe:FUT.3SG.M
li hu meforaq, mamaš
 to:1SG he dismantle:PTCP.PASS.PRS.SG.M truly
meforaq...
 dismantle:PTCP.PASS.PRS.SG.M

14. Hebrew does not have a special middle form equivalent to the non-actional passive participle *muf'al*. (See. Rosén 1977: 181.)

15. Of note here is the fact that passive participles indicate not only a situation happening spontaneously, but a state resulting from a deliberate action. For example: "*ha-pišqa ha-mušmešet huḥzera be-iqvot biqoret mišad ha-'orex.*" ('The ~~deleted~~ paragraph was reinserted following criticism by the editor'). See, further discussion in Meltzer (2007), Taube (1997a, 2009).

‘If a house like this one falls apart just like that – and believe me it is fallen-to-pieces, really fallen-to-pieces – what will hold up here?’

[*Haaretz* 11 March 1994]

- d. *ha-tahalix haze mu'aš, ve-od yu'aš be-harbe be-'iqvot hitpatxut ha-'inernet ...*

ha-tahalix ha-ze mu'aš,

DET-process:SG.M DET-this:SG.M accelerate:PTCP.PASS.PRS.SG.M

ve-od yu'aš...

and-more accelrate:MID.PASS.FUT.3SG.M

‘This process is being accelerated and will be much more accelerated following the development of the Internet ...’

<meyda.education.gov.il/files/noar/543.pdf> (15 October 2006)

The finite forms of the *pu'al* take part in the non-actional passive system as well, and may indicate, alongside the finite forms of *hitpa'el*, the coming into existence of the state designated by the corresponding passive participle. The productivity of this usage in MH (present also in earlier stages of Hebrew, see Yahalom 1980) is on the rise (Taube 2009: 326–328), as shown in examples (22a) to (22c).

- (22) a. *qšayeha šel NAS"A hem tolada šel ha-mešit ha-ħadaša šenošra aħare hitparquta šel brit ha-mo'ašot [...] ha-šiduiq la-ħašqa'ot ur'ar ve-hu safag maka nosefet ke-xol šeħexrif ha-mitun ha-kalkali ha-poqed et ha'olam ve-gam et aršot ha-brit.*

... ha-šiduiq la-ħašqaot

DET-justification:SG.M to.DET-investment:PL.F

'ur'ar

weaken:MID.PASS.PST.3SG.M

‘NASA’s difficulties are the result of the new reality created after the breakup of the Soviet Union [...] justification for investment was-weakened, and it suffered another blow with the recession plaguing the world and the United States as well.’

[*Haaretz* 5 September 1993]

- b. *gam aruš 10 taram le-ħason. ha-hagaša šela duyqa ve-šupra tox meni'at ha-lapsusim šeme'afyenim ota.*

ha-hagaša šela duyqa

DET-delivery:SG.F POSS.3SG.F precise:MID.PASS.PST.SG.F

ve-šupra

and-improve:MID.PASS.PST.SG.F

‘Channel 10 also contributed to Hasson. Her delivery became accurate and improved while avoiding the lapses that characterize it/her.’

[Ravit Hecht, *Haaretz* 20 December 2015]

- c. *le'aṭ he'evira et ešba'a ha-meṭupaxat al ha-šulayim ha-šxorim šel ha-brištol.*
 “davqa yafe” amra ve-hafxa et ha-’ešba livdoq ‘im puyxa ...
 ... ve-hafxa et ha-’ešba li-vdoq ‘im
 ... and-turn:PST.3SG.F ACC DET-finger:SG.F to-check if
puyxa
 blacken:MID.PASS.PST.3SG.F
 ‘Slowly she ran her well-groomed finger along the black edges of the poster board. “Rather pretty,” she said and turned her finger to check whether it had gotten blackened with soot ...’ [Yuval Shimoni, *Heder* p. 25]

With states depicted by adjectives (other than the participles mentioned above), the emergence of the state may be represented by any *binyan* pattern except *pi’el*, with differences depending on context and register. See examples (23a) to (23f) (the corresponding adjectives are marked in square brackets):

- (23) a. *mo’adone ha-himurim ba-darom yexolim lehamšix lifol lelo mafria:*
ha-maḥsan šebo me’axsenet ha-mišṭara “mexonot mazal” hitmale ad efes
maqom. [male]
ha-maḥsan ... hitmale ad efes maqom
 DET-warehouse:SG.M fill:MID.PST.3SG.M till zero room:SG.M
 ‘Betting clubs in the South can continue to operate without hindrance: the warehouse in which the police stores confiscated “slot machines” is filled to the brim.’ [Shimon Ifergan, <www.ynet.co.il> (14 February 2002)]
- b. *sarat ha-ḥuṣ hileri qlinṭon amra šehi nee’šva amuqot be-’iqvot moto šel*
yedida waren kristofer. [‘ašuva]
sarat^ ha-ḥuṣ amra še hi
 minister:CS.SG.F DET-exterior:SG.M say:PST.3SG.F that she
ne’ešva amuqot
 sadden:MID.PST.3SG.F profoundly
 ‘Secretary of State Hillary Clinton said she was profoundly saddened by the death of her friend Warren Christopher.’
 [Natasha Mozgovaya, *Haaretz* 19 March 2011]
- c. *asya he’edima al reqa xašašot mi-gidul ba-’inflašya be-’aršot ha-brit*
 [‘aduma]
*asya he’edima*¹⁵
 asia:SG.F redden:MID.PST.3SG.F
 ‘Asia turned red amid fears of an increase in inflation in the US.’
 [(Headline) Lior Gottlieb, <www.bizportal.co.il> (7 October 2005)]

16. The form *he’edim* may also have a causative meaning. For more information on this group of verbs having both inchoative and causative readings, see for example, Berman 1993; Doron & Rappaport-Hovav 2009: 20–21; Laks 2013.

- d. *maşavo hištaper vi-yxolet tifqudo şunta be-taxlit.*¹⁷ [šona]
vi-yxolet[^] *tifqudo* *şunta*
 and-ability:CS.SG.F functioning:POSS.3SG.M change:MID.PASS.PST.3SG.F
be-taxlit
 in-extreme:SG.F
 ‘His condition improved and his ability to function changed completely.’
 [Haaretz 1 December 2000]
- e. *rošo šel ha-rasar bişbeş şuv mi-tox ha-riqşa ve-tave panav huxhu od yoter ...*
 [kehim]
ve-tave[^] *panav* *huxhu*
 and-trait:CS.PL.M face:POSS.3SG.M darken:MID.PASS.PST.3PL
 ‘The drill sergeants head popped out of the rickshaw again and his features
 turned even darker...’ [Yuval Shimoni, *Heder* p. 202]
- f. *be-sifro “ma qara” šeyaşa la-’or bi-šnat 1964 mesaper doš al levaṭav ba’ašer*
le-hitbagruto šel sruliq [...]: “sruliq gadal bemiqšat me’az šehitxalti lehištameš
bo, lifne šanim rabot lemaday, ke-semel ha-medina. hu gava, şavaro ve-raglav
nihyu arukim, mabaṭo hexrif ve-na’asa – nidme li – piqeaṣ yoter. [gadol,
gavoha, xarif]
sruliq gadal ... *hu gava ...* *mabaṭo*
 sruliq grow:MID.PST.3SG.M he heighten:MID.PST.3SG.M gaze:POSS.3SG.M
hexrif...
 sharpen:MID.PST.3SG.M
 ‘In his book “What Happened”, published in 1964 Dosh tells about his
 doubts regarding Srulik’s growing up: [...] “Srulik” grew slightly larger
 since I started using him, not a few years ago, as a symbol of the state. He
 became taller, his neck and legs grew longer, his gaze sharpened and
 became – I think – smarter.’ <he.wikipedia.org/wiki/שְׂרוּלִיק>

Non-actional passive participles readily package a complex expression into a single adjectival form, for example *mezuqan* = *mi šeyeš lo zaqan* someone who has a beard. Some of these participles, often those from *pu’al* (Rosén 1956), are derived from nominals (marked in square brackets). Beside expressions like those in (24b) and (24e), there are many innovations due to professional jargons (24a); (24c) to (24d) and (25a) to (25b), as well as *ad hoc* expressions used in speech as in (26a) to (26c).

- (24) a. *xovot* *mesupaqim* [safeq]
 debt:PL.M doubt:PTCP.PASS.PL.M
 doubtful debts

17. See above, examples 22a–c.

- b. *baḫur mezuqan* [zaqan]
guy:SG.M beard:PTCP.PASS.SG.M
bearded guy
- c. *ayin mudleqet* [daleqet]
eye:SG.F inflame:PTCP.PASS.SG.F
inflamed eye
- d. *delet muzeqet* [az'afa]
door:SG.F alarm:PTCP.PASS.SG.F
alarm-triggered door
- e. *yom gašum* [gešem]
day:SG.M rain:PTCP.PASS.SG.M
rainy day
- (25) a. *ha-tnay ha-merkazi la-'aviruta šel zxut ha-dayarut ha-mugenet [...] hu megure ha-ne'avar yaḫad 'im ha-dayar. ha-ne'avar*
DET-transfer:PTCP.PASS.SG.M
'The cardinal condition for the transferability of protected tenancy rights [...] is the transferees having lived with the tenant.'
[Haaretz 22 September 1996]
- b. *be-hitḫašev ba-nesibot ha-meyuxadot šel ha-nilona huḫlaš šeroš agaf maš'abe enoš yinzof ba. ha-nilona*
DET-complain:PTCP.PASS.SG.F
'In consideration of the personal circumstances of the "complainee" it was decided that the head of the human-resources division would admonish her.'
[Haaretz 27 February 2000]
- (26) a. *ve-'ani hayiti bṭuxa še'ani kvar mešudexet [šadxaḅ]. mešudexet*
staple:PTCP.PASS.SG.F
'and I was sure that I'm all stapled. [*i.e* I have already finished stapling all my stuff].'
[personal communication]
- b. *at kvar muzhevet. [zahav] muzhevet*
gold:PTCP.PASS.SG.F
You're already gilded. [*sc.* You already have a Visa Gold credit-card]
[personal communication]
- c. *aval anaḫnu od lo mequnaḫim. [kinuaḫ] mequnaḫim*
dessert:PTCP.PASS.PL.M
'But we're not yet desserted. [*sc.* We haven't had dessert yet. (an eight-year old at the table).'
[personal communication]

4.2 Participles of *hitpa'el* and *nif'al* as exponents of potentiality

The participles of *hitpa'el* and *nif'al* – noted earlier as the typically intransitive and hence also middle-voice *binyan* patterns – occasionally convey potentiality of an event “conceived of as inherent in the entity [...], preferably in the patient of the potential event” (Haspelmath 1994: 163). Geniušené (1987: 261–262) and Kulikov (2010: 375) use the term “potential passive” for such cases, and Doron (2013), employs the term “dispositional” for sentences with finite forms of the same *binyan*, as in: *ha-xem'a lo nimrexa lo*. ‘The butter wouldn’t spread for him’, *ha-xultsa lo hitgahaša lo*. ‘The shirt wouldn’t iron for him’. (The examples as well as their transcription and translations are Dorons). See examples (27a) to (27b):

- (27) a. *ze maṭos qrav gadol u-me'uyaš, ba'al knafayim mitkavnenot ...*
knafayim mitkavnenot
 wing:PL.F adjust:PTCP.PRS.PL.F
 ‘Its a large manned battle aircraft, with self-adjusting wings ...’
 [Haaretz 19 May 1989]
- b. *ha-yisre'elim enam ohavim mexoniyot 'im gag niftax ve-'efšar limšo otan*
bi-mxire meši'a.
mexoniyot 'im gag niftax
 car:PL.F with roof:SG.M open:PTCP.PRS.SG.M
 ‘Israelis do not like convertibles (lit.cars with an opening roof) and you can find them at bargain prices. Tomer Hadar,’
 <www.calcalist.co.il> (8 August 2016)

Some additional examples are: *kise mitqapel* ‘folding chair,’ *sulam mit'arex* ‘extendable ladder,’ *berez nišlaf* ‘removable faucet,’ *sapa niftaxat* ‘convertible sofa,’ *maṣšev nisa* ‘portable computer = laptop.’ Forms of *nif'al* preceded by a negative particle are commonly employed to express the unlikelihood that an event will occur: *mavet bilti nimna* ‘an inevitable death’; *qešer bal yinateq* ‘an unbreakable link’ (see Rosén 1977: 192).

4.3 Reflexivity

One function typically associated with middle voice is that of reflexivity, a notion which is easy to define, but difficult to delimit (Creissels 2006: 25). This complicated state of affairs is underscored by the fact that in most cases the formal markers of reflexivity are used to denote other middle forms as well. Geniušené (1987: 27) points out yet another problem: the fact that in many studies the term “reflexive” is used to refer to both form and meaning. Faltz (1977: 3–4), with the aim of proposing an “archetypal reflexive context”, suggests that if a language has a grammatical device

which specifically indicates that the agent/experiencer and the patient in a simple clause expressing two-participant predication have in fact the same referent, then it can be called the primary reflexive strategy of that language. Kemmer (1993: 43) refers to Faltz's characterization of reflexivity in terms of its semantically prototypical situation as "the direct reflexive", and like Faltz presents coreferentiality between the two participants in the situation as its most important property. Frajzyngier (2000a), on the other hand, proposes the affectedness of the subject as the main function of the reflexive marker. Below, reflexive clauses in MH are described in terms of synthetic (morphological) versus analytic (syntactic) realization as contrasting in both structure and function, including the so-called "objective reflexive" with non-human subjects.

4.3.1 *Synthetic versus analytic reflexives*

As noted by Halevy (2013a, 2013b), reflexivity in MH can be expressed either synthetically by means of the *binyan* patterns *hitpa'el* and *nif'al*— as in examples (28a) and (28b), or analytically by adding the coreferential pronoun *ašmo* 'himself' as a complement to an active verbal form as in (28c) to (28d). In their generative analysis of reflexives in MH, Doron and Rappaport-Hovav (2009: 94), describe morphological reflexivity as a subset of the expression of reflexivity by the combination of a verb and an anaphor (for a rather different generative account of reflexive verbs see Reinhart and Siloni 2005). In usage-based terms of both types and tokens, there are relatively few reflexive verbs in *nif'al* (e.g., *nidxaf* 'push oneself' or *nitla* 'hang oneself'). In this they contrast with *hitpa'el* reflexives which are more commonly used reflexively.

Prototypical reflexives, such as *hitraṣeš* 'wash oneself', *hitlabeš* 'dress oneself, get dressed', presuppose, as noted, a two-participant transitive action, which is clearly exhibited in their analytic counterparts. (*hitgaleaṣ* 'shave' – *gileaṣ et ašmo* 'shave oneself').¹⁸ Moreover, most verbs of grooming, typical of reflexives in many languages, occur in *hitpa'el*.¹⁹ In the present context, discussion is restricted to reflexive forms that have counterparts in the analytic strategy. Thus, numerous verbs in *hitpa'el* and *nif'al* that take prepositional (never accusative) objects such as *hityaṣes el* 'refer to', *hitxašev be-* 'be considerate towards', *hitnapel al* 'set upon', *nitpal el* 'pick on' or *nixna le-* 'submit to', classified in Kastner (2016: 173) under the label "Figure reflexives", are not included in our discussion.

18. In some contexts, *hitraṣeš* or *hitlabeš* may be interpreted as passives, for example, when a mother says to a toddler "*bo nitlabeš*" ('let's get dressed'), it is in fact the mother who will perform the job. (I am indebted to an anonymous reader for this observation).

19. For a different view of 'grooming verbs' alongside with other middle verbs denoting 'change in body postures', 'non-translational motion', and 'translational one', see Kemmer 1994.

- (28) a. *ma hayu šrixim ha-saxqanim ha-yedu'im la'asot kde legalot et ha-007 šebahem? be-saxha-kol lehitgaleax ve-lehitlabeš* be-meṭav bigdehem.
be-sax ha-kol le-hitgaleax ve-le-hitlabeš
 in-amount DET-all to-shave:INF.REFL and-to-dress:INF.REFL
be-meṭav[^] bigdehem
 in-best:CS.SG.M garment:PL.M-POSS.3PL.M
 'What did the famous actors have to do in order to discover the 007 in themselves? Just shave and dress up in their fanciest clothes.'
 < docu.nana10.co.il > (10 November 2015)
- b. *sagi cohen mesakem šana: ha-be'alim nidxafu, ha-šefim nidxaqu*
ha-b'ealim nidxafu, ha-šefim nidxaqu
 DET-owner:PL.M push:REFL.PST.3PL DET-chef:PL.M shove:PASS.PST.3PL
 'Sagi Cohen sums up a year: the owners pushed their way in, the chefs were forced out' [(Headline) Sagi Cohen, *Haaretz* 24 September 2014]
- c. *ha-sipur kan medaber al tale qaṭan ve-xamud be-šem šemeriqo. Yeš la-horim šelo de'agot šeha-yeled šelahem holex neged ha-'eder [...] haya šarix lehis-tareq, šemeriqo sereq et ašmo bimqom šeyesarqu oto.*
šemeriqo sereq et ašmo
 šemeriqo comb:PST.SG.M ACC self: 3SG.M
 'The story here talks about a cute little lamb named Tzemeriko. Its parents worry that their offspring is going against the herd [...] There was need to comb one's hair ~ have one's hair combed, Tzemeriko combed his own hair, rather than letting others comb (his hair).'
 <www.tapuz.co.il/blogs> (29 November 2015)
- d. *kol exad doxef et ašmo od qsat, loxeš le-ašmo še'im xaveri yaxol, gam ani ašliax.*
kol exad doxef et ašmo
 every one:SG.M push:PRS.SG.M ACC self: 3SG.M
 'Everyone pushes himself a little more, whispers to himself: if my friend can, I will also succeed'
 <tigerstaekwondo.com> (Tamar-summer-camp.pdf August 2010)

As demonstrated in example (28a) above, as well as in many other examples such as *hitqaléax* 'take a shower', *histaben* 'soap oneself', *hitnateq* 'detach oneself', forms in *hitpa'el* denote reflexivity, most typically in relation to verbs in *pi'el*. Yet *hitpa'el* forms may also relate to forms in *pa'al*, e.g., *raxaš* (trans.) 'wash' – *hitraxeš* 'wash himself', and in *hif'il*: *hexbi* 'hide' – *hitxabe* 'hide himself'.²⁰ Forms in *nif'al* denote

20. Contrasts between forms in *pa'al* ~ *hitpa'el* or *pa'al* ~ *nif'al* derived from the same root may express an aspectual opposition where the intransitive forms in *hitpa'el* and *nif'al* express change of state or inchoativity, as in: *hityašev* 'sit down' – *yašav* 'sit', *hištateq* 'shut up' – *sataq* 'be silent'; *ne'emad* 'stand up' – *amad* 'stand'. *hitpa'el* and *nif'al* in such contrasts may also denote manner of

reflexivity mainly with regard to forms in *pa'al*, occasionally also to forms in *hif'il*: *hišmid* 'attach' – *nišmad* 'cling to'.

While the use of the synthetic strategy for expressing canonic reflexivity is lexically restricted, the use of an analytic construction is relatively open-ended, being accessible to all three active *binyan* patterns. As a result, analytic reflexive constructions often lack a synthetic counterparts (29a), or else the two strategies are semantically distinct as in (29b) vs. (29c) or (29d) vs. (29e):

- (29) a. *barur šeha-mordim lo hišlu et ašmam, šepe'ulotehem neged ha-germanim yavi'u le-nišaxon al ha-'oyev o le'hašalat rivevot ha-yehudim še'od notru ba-geṭo.*

ha-mordim lo hišlu et ašmam

DET-rebel:PL.M NEG delude:PST.3PL ACC self: 3PL.M

'Obviously, the rebels did not delude themselves that their acts against the Germans would lead to victory over the enemy or to the rescuing of the thousands of Jews still remaining in the Ghetto.'

[Uriel Feynerman, <meyda.education.gov.il>]

- b. *be-mahalax ha-'edut šelo satar et ašmo faṭima šuv va-šuv ve-'al kax he'iru lo ha-šofṭim pa'am aṣar pa'am.*

be-mahalax^ ha-'edut šelo satar et

in-course:CS.SG.M DET-testimony:SG.F his contradict:PST.3SG.M ACC

ašmo faṭima šuv va-šuv

self: 3SG.M faṭima again and-again

'In the course of his testimony Fahima contradicted himself repeatedly, about which the judges commented again and again.'

[Naama Cohen-Friedman, <www.ynet.co.il> (21 July 2014)]

- c. *loṣemet qarqal aṣeret histatra ša'a va-xeši me'aṣore siax – ve-ninzefa. be-ŠAHA"l xāšešu šehi xaṭufa.*

loṣemet histatra

fighter:SG.F hide:MID.PST.3SG.F

'Another Karkal fighter hid an hour and a half behind a bush – and was reprimanded. The IDF feared that she had been kidnapped.'

<www.ynet.co.il/articles> (24 September 2012)

movement, e.g., *hithalex* 'move about' – *halax* 'go/walk'; *hitno'ea* 'sway' – *na* 'move', *hit'ofef* 'flitter, fly away' – *af* 'fly'.

- d. *hi zoxeret ex nitleta be-yadeha al anaf šel eš gadol tox kede šehi omeret lahem: “aval ani yada’ti kol ha-zman.”*
hi zoxeret ex nitleta
 she remember:PRS.SG.F how suspend:REFL.PST.3SG.F
be-yadeha
 in-hands:POSS.3SG.F
al anaf šel eš gadol
 on branch:SG.M of tree:SG.M big:SG.M
 ‘She remembers how she suspended herself by her hands from the branch of a large tree and swung while telling them: “But I knew all along.”’
 <www.gshavit.net> (yitshak kronzon 2 April 1999)
- e. *be-sirṭon ha-hit’abdut šela hi nir’et yošet le-mirpeset dirata ve-tola et ašma al eš.*
 ... ve-tola et ašma al eš
 ... and-hang:PRS.SG.F ACC self: 3SG.M on tree:SG.M
 ‘In her suicide video she is seen going out to the porch of her apartment and hanging herself from a tree.’
 <www.makorrishon.co.il/nrg/online> (12 January 2017)

As both participants are formally represented in the analytic reflexive construction (the agent as subject of the verb, the patient as a referential pronoun), it may be used to explicitly mark intentionality of the action.²¹ This usage is evident in examples (30a) and (30b) below, in which the two strategies occur in the same context. Moreover, since the verbs in *nif’al* in the above-mentioned examples are readily interpreted as unaccusative inchoatives, the analytic construction chosen here asserts the reflexive-active meaning of the verb in the given context. In examples (30a) and (31a), the analytic construction appears in a self-correction made by the writer, with the aim of further emphasizing the intention of the agent. In (30b) the analytic construction expresses the assessment of the police that the act was intentional and not accidental. In (31b) the synthetic reflexive form occurs in a report, whereas the analytic one appears in a citation reacting to this report in an explicit way. In example (31c) the choice of the analytic reflexive construction is probably influenced by the fact that the reflexive pronoun is followed by another coordinated complement. Another possible factor could be the writers intent to emphasize the leadership of the agent.²²

21. On the complementary distribution of these two strategies, see also Doron & Rappaport-Hovav (2009: 93–94) and Halevy (2013a, 2013b), both of which studies include a diachronic description of their development.

22. I am indebted to Bracha Nir for suggesting this explanation.

- (30) a. *xeleq gadol min ha-'asupa nasav sviv šaloš maxloqot merkaziyot še'elehen niqla* A" B yehošua, o yoter naxon lomar *qala et ašmo* ba-šanim ha-'axronot.
niqla A" B yehošua, o yoter naxon l-omar
 shoot: MID.PST.3SG.M A" B yehošua, or more correct: ADJ.SG.M to-say
qala et ašmo ba-šanim ha-'axronot
 shoot: PST.3SG.M ACC self: 3SG.M in.DET-year: PL.F DET-last: ADJ.PL.F
 'A large part of the collection revolves around three main controversies in which A.B. Yehoshua found himself, or more precisely got himself into in recent years.'
 <www.kotar.co.il>
- b. *pšu'a ha-dqirov ha-layla be-'ašdod paša et ašmo*
švatim šel MD" A laxiš he'eniqv ha-layla tipul le-ven 23 šenišpa be-'oraḥ
beynoni mi-dqirov be-feleg gufo ha-'elyon. xaqirat ha-mišara he'elta ki en
xašad li-flilim ve-ha-ša'ir paga be-ašmo.
pšu'a^ ha-dqirov ... paša
 wound: PTC.P.CS.PASS.SG.M DET-stabbing: PL.F injure: PST.3SG.M
et ašmo
 ACC self: 3SG.M
le-ven^ 23 še-nišpa be-'oraḥ
 to-son: CS.SG.M 23 that-injure: PASS.PST.3SG.M in-way: SG.M
beynoni
 medium: ADJ.SG.M
 'Wounded in stabbing tonight in Ashdod injured himself (Headline)
 MDA [=Israel's Red Cross] Lachish teams tonight treated a 23-year-old, with moderate injuries from stabbing in his upper body. The police investigation revealed that there was no suspicion of foul play and (that) the young man hurt himself.'
 [Ofer Ashtoker, <www.ashdodnet.com> (30 March 2014)]
- (31) a. *bnaya Z" L hitnadev (yoter naxon nidev et ašmo la'alot la'azor ba-lexima*
tox hit'aqšut šeyitnu lo lehištatef) lefanot pšu'im me-'omeq ha-šeṭax
*ha-levanoni ...*²³
bnaya... hitnadev yoter naxon
 Bnaya volunteer: REFL.PST.3SG.M more correct: ADJ.SG.M
nidev et ašmo ...
 volunteer: PST.3SG.M ACC self: 3SG.M
 'Benaya of blessed memory volunteered (rather, volunteered himself) to go up and help in the fighting, insisting that they let him participate in evacuating the wounded from deep inside Lebanese territory ...'
 <Rotter.net/forum/scoops1/312379.shtml> (5 October 2016)

23. There exist also, mainly in the spoken language, forms like *hitnudav*, *hitpuṭar*, which combine the *hitpa'el* and the *pu'al binyan* patterns, and have the meaning, respectively, of 'was made to volunteer', 'was made to resign'.

- b. *ha-mišṭara ve-ha-praqlitūt mitkavnim levaqēš oneš xamur li-vne zug šenexšadim ki taqfu be-’ofen qaše et šxenam biglal šexašvu ki hu ganav me-hem maḫšev. orex dinam ʔo’en ki hem hitgonenu*
 [...] *ba-tmuna šel mašlemot ha-’avṭaxa ba-reḫov, nir’im ha-ne’ešamim kšehem yoš’im mi-betam le-xivun dirato [...]* *praqlitām šel bne ha-zug maf-rix et ha-ṭe’anot. “marši u-vat zugo hegenu al ašmam mipne toqef šeparaš le-diratam”.*

... *hem hitgonenu...*

... they defend:REFL.PST.3PL

marši

u-vat-zugo

hegenu

client:POSS.1SG.M and-girl-companion:POSS.SG.M defend:PST.3PL

al ašmam

on self:3SG.M

‘The police and the prosecution intend to ask for severe punishment for spouses suspected of brutally attacking their neighbor because they thought he stole a computer. Their lawyer argues that they defended themselves. (opening)

[...] On the images of the security cameras on the street, the defendants are seen leaving their home in the direction of his apartment minutes before the attack. The couple’s attorney refutes the allegations. ‘My client and his companion defended themselves against an intruder who broke into their apartment.’”

<news.nana10.co.il > (15 February 2013)

- c. *ve-le-’axar šetaqfu et ed ha-re’iya ve-bitō, ha-mešiv mileṭ et ašmo ve-’et xaverav mi-mqom ha-’avera.*

ha-mešiv

mileṭ

et

ašmo

ve-’et

DET-respondent:SG.M remove:PST.3SG.M ACC self:3SG.M and-ACC

xaverav

friends:POSS.SG.M

‘After attacking the witness and his daughter, the respondent removed himself and his companions from the crime scene.’

www.ruling.co.il 23.3.2016

The example in (32) shows that the two strategies may occasionally be considered free variants, with both strategies used alternatively throughout the entire text, the headline of which is given here:

- (32) *mexabel hitpošeš ba-supermarqet be-roš ha-’ayin; me’ataḫar kax pošeš ašmo mexabel ba-knisa le-’ari’el.*

mexabel hitpošeš

terrorist:SG.M blow:REFL.PST.3SG.M

pošeš

ašmo

mexabel

blow:PST.3SG.M self:3SG.M terrorist:SG.M

‘A terrorist blew himself up in Rosh-Ha-’ayin; a little later a terrorist blew himself up at the entrance to Ariel (opening).’ <*news.walla.co.il*> 13.8.2003

The analytic construction is also used with non-human grammatical subjects (see Geniušené 1987: 200; Halevy 2013b: 480), and in some cases, as in (33b) and (33c), it may be interpreted as denoting potentiality (see earlier, section §4.2), so replacing *nif'al* or *hitpa'el* when these are morphologically disallowed.

- (33) a. *atidanim xozim ki ha-qapiṭalism miša et ašmo ve-ʿalav lehamši et ašmo me-xadaš.*
ha-qapiṭalism miša et ašmo
 DET-capitalism:SG.M exhaust:PST.3SG.M ACC self:3SG.M
ve-alav
 and-on:POSS.SG.M
le-hamši et ašmo me-xadaš
 to-invent:INF ACC self:3SG.M a-new
 ‘Futurists predict that capitalism has exhausted itself and needs to reinvent itself.’ [opening]
 [Dr. Ushi Shoham Kraus, < www.ynet.co.il > (25 December 2015)]
- b. *šmigim le-grurim ha-metaqnim et ašmam be-miqre šel neqer*
šmigim le-grurim ha-metaqnim et ašmam
 tire:PL.M to-trailer:PL.M DET-repair:PRS.PL.M ACC self:3PL.M
 ‘Tires for trailers that repair themselves in the event of a puncture’
 [(Headline) <www.rechev.net>]
- c. *maxšire ha-šmiʿa ha-matʿimim et ašmam oṭomaṭit le-xol šlil ve-qol*
maxšire^ ha-šmiʿa ha-matʿimim
 instrument:CS.PL.M DET-hearing:SG.F DET-adjust:PRS.PL.M
et ašmam
 ACC self:3PL.M
 ‘Hearing aids that adjust themselves automatically to every sound and voice’
 [(Headline). <www.steiner.co.il>]

4.3.2 *Hitpa'el* interpreted as reflexive

A reflexive interpretation of a verb in *hitpa'el* may be suggested by the context. The presence of verbs of volition or of those expressing intention as in (34a) and (34c) below may enhance the reflexive interpretation of a *hitpa'el* form, an interpretation, which is further confirmed by the fact that they can alternate with corresponding synthetic constructions. Thus, *roša lehitpaneq* ‘want to pamper yourself’ in (34a) may be substituted for *roša lefaneq et ašmex* with the same meaning, whereas *taf-siqi lehitpaneq* ‘stop indulging yourself’ in (34b) such a substitution is somewhat inappropriate, at least in the given context.

- (34) a. *roša lehitpaneq aval yeš lax raq ša'a aḡat pnuya? ša'a ze kol ma še'at šrixa!*
roša le-hitpaneq
 want:PRS.SG.F to-pamper:INF.REFL
 'Want to pamper yourself, but you only have one hour free? An hour is all you need!' [Dita Ofarim, <www.ynet.co.il> (11 March 2007)]
- b. *aḡoti ha-te'oma mefuneqet me'od, xoševet šebiglal še'anaxnu aširim hi xayevet leqabel kol ma šehi mašbi'a alav, ex lešaxnea ota lehafsiq lehitpaneq?*
le-hafsiq le-hitpaneq
 to-stop:INF to-pamper:INF.MID
 'My twin sister is very spoiled, she thinks that because we're rich she must get everything she points at, how can we persuade her [how can she be persuaded] to stop indulging herself?'
 [(Opening) <www.askpeople.co.il> (4 March 2017)]
- c. *ani me'unyan lehatxil lehistaper ba-bayit [...] 'im yeš po xevre šemistaprim levad o mevinim be-ze – 'ex matxilim?*
ani me'unyan le-hatxil le-histaper ba-bayit
 I interested to-start:INF to-cut.hair:INF.REFL in.DET-home:SG.M
 'im yeš po xevre še-mistaprim levad
 if EXIST here guy:PL.M that-cut.hair:REFL.PRS.PL.M alone
 'I want to start cutting my hair myself at home. [...] If there are guys who cut their hair themselves or understand about it – how do you start?'
 <www.askpeople.co.il> (27 July 2015)

The verb *histaper* 'have one's hair cut', in example (34c), as well as verbs like *hištalem* 'have oneself photographed ~ have one's photo taken' or *hitra'ayen* 'be interviewed = grant an interview' are special in that they express events in which the patient has some control over an action performed by a separate actor, while being affected by it (cf. the terms "catalytic passive" in Barber 1975: 23; *passivité consentie* in Bydlowski 1981: 49; "secondary agent" in Roeper 1987: 298; and "reflexive-causative reflexives" in Geniušené 1987: 280–282).

4.4 Overlap between *hitpa'el* and *nif'al*

With some roots, both *hitpa'el* and *nif'al* are used to express the middle voice. In many such cases, the two forms may represent either two semantically distinct lexical entries (*hitpana* 'become available' – *nifna* 'turn aside'), or occasionally a less obvious difference in meaning (e.g., *mištakef* 'be reflected' – *niškaf* 'be viewed'). There are also instances in which the difference between the two *binyan* patterns is stylistic rather than semantic, the *nif'al* form being of higher register or used in restricted collocations (e.g., *hitgala* be revealed, 'emerge' – *nigla* [*le-eneynu*] 'become visible [to our eyes]'; *hitmale* 'become full' – *nimla* [*hitragšut*] 'become filled [with excitement]'; *hitxabe* 'hide (oneself)' – *nexba* [*el hakelim*] 'hide [in the corner]' = 'be

shy, self-effacing'; *hit'azer* [besavlanut] 'be patient' [lit. 'gird oneself with patience'] – *ne'ezar* [besavlanut] gird oneself with patience (for additional features of *nifal*, see Schwarzwald 2008: 71–72).

4.5 Reciprocity

Another common function of the Middle Voice in different languages is the expression of reciprocity, where both agentive subjects are engaged in the same activity or state (see Frajzyngier 2000b for a typological account of this category).

According to Kemmer (1994), the relevant property of reciprocal events resides in the degree of distinguishability of their component sub-events. In what she terms "ordinary reciprocals", the component sub-events are viewed as distinct (*John and Mary kissed each other for 15 minutes*), whereas in "naturally reciprocal events", the component events are viewed as a "single unitary event" (*John and Mary kissed for 15 minutes*). In MH, reciprocal constructions usually denote a mutual relation in which at least two participants carry out the same kind of action with respect to one another (35a), or are related to each other in the same kind of state (35b).

- (35) a. *hit'ahavu be-toxnit hekeruyot be'erom male ulam lo hitnašqu* of ha-šavua ha-a'aron histayma onat ha-selebs ve-medore ha-bidur be-germanya miharu ledaveax la-qor'im šeha-zug ha-menašeax [...] lo hitnašeq ba-toxnit...
- hit'ahavu ... ulam lo hitnašqu. ha-zug*
 love:INCH/RECP.PST.3PL but NEG kiss:RECP.PST.3PL. DET-couple:SG.M
ha-menašeax lo hitnašeq ba-toxnit
 DET-win:PTCP.PRS.SG.M NEG kiss:RECP.PST.3SG.M in.DET-program:SG.F
 'Fell in love on a full-nudity dating show but did not kiss [Headline]
 Last week the celebs season ended and the entertainment sections in German newspapers rushed to inform their readers that the winning couple [...] did not kiss on the show...' <e.walla.co.il > (10 October 2016)
- b. *ha-yerexim ha-šabta'iyim d'ion ve-re'a nir'im ke-mitmazgim bi-tmuna dmuyat ašlaya optit šešilma ha-xalalit qasini.*
nir'im ke-mitmazgim
 look:PASS.PRS.PL.M as-blend:RECP.PRS.PL.M
 'Saturn's moons Dione and Rhea look as if blending in an optical-illusion-like image filmed by the space-craft Cassini.'
 <www.hayadan.org.il> (28 September 2010)

Doron and Rappaport-Hovav (2009) analyze both reflexivization and reciprocalization in Hebrew as valence-changing operations. Halevy (2013c), on the other hand, on the basis of lexical reciprocals that lack transitive counterparts (such as *hitvakeax* 'argue' and *ne'evaqa* 'struggle') or that convey a mutual relationship event

where neither of the participants is agentive (e.g., *šne ha-šva'im hitmazgu ze ba-ze* 'the two colors merged' [with each other]), claims rightly that reciprocals in Hebrew cannot be considered as a straightforward valence-changing operation. A third approach is represented by Bar-Asher Siegal (2015: 18), who rejects any derivational relationship – morphological or semantic – between reciprocal predicates instantiated in the *hitpa'el*, on the one hand, and corresponding verbs in another *binyan*, on the other. It follows that he does not accept any analysis that views reciprocalization as a valence-changing operation adding, moreover, that reciprocals are not necessarily symmetric.

As in the case of reflexives in the preceding section, reciprocal relations can be coded in MH either synthetically, by using the *binyan* patterns *hitpa'el* or *nif'al*, or analytically, by a periphrastic construction consisting of a verb in the plural followed by the complex expression *ehad et'im hašeni* '(with) one another' or, in a higher register, *ze et'im ze* '(with) one another, with each other' (where, in the analytic construction, the predicate is not necessarily symmetric). A thorough comparison of these two strategies in Hebrew in terms of lexicalization as against grammaticalization, is provided by Halevy (2011, 2013c).

Example (36a) shows that sometimes either strategy is permissible in the same context, while (36b) demonstrates that in synthetic reciprocals, the partner may be implied, rather than explicitly mentioned in the sentence. Example (36e) represents a discontinuous construction, in which the verb is in the singular, and both participants are mentioned. Such a construction, according to Halevy (2013c), is usually selected when the two participants do not have the same prominence in the discourse, for example, when the subject is perceived as more agentive, or the complement is in focus. In (36c) through (36f), reciprocity is rendered by a variety of syntactic realizations, all of which refer to a meeting that took place between two sides.

- (36) a. *madhim: te'omim zehim xibqu exad et ha-šeni ba-rexem*
 [...] *bi-sqira šeha-'em avra ba-šavua ha-12, ha-te'omim nir'u be-verur*
kšehem meḡubaqim ve-'afilu maḡziqim yadayim [...] (*hem*) *noldu be-šalom*
ba-šavua ha-36 [...] *me-'az hem lo mafsiquim lehitxabeq.*
te'omim zehim xibqu exad et
 twin:PL.M identical:PL.M hug:PST.3.PL one ACC
ha-šeni ba-rexem ...
 DET-second in.DET-womb
me-'az hem lo mafsiquim le-hitxabeq
 from-then they NEG stop:PRS.PL.M to-hug:INF.RECP
 'Amazing: identical twins hugged each other in the womb (Headline)
 [...] in an inspection undergone by the mother in the 12th week, the twins
 were clearly seen hugging and even holding hands [...] (they) were born
 safely on the 36th [...] They have not stopped hugging since.'
 <healthy.walla.co.il> (15 June 2017)

- b. *ani lo ohev lehitxabeq aḵare seqs.*
ani lo ohev le-hitxabeq aḵare[^] seqs
 I NEG like:PRS.SG.M to-hug:INF.RECP after:CS sex:SG.M
 ‘I don’t like hugging after sex.’ <www.ynet.co.il>
- c. *aḵare 18 šanim šel neteq muḵlaṭ beyn ha-ADMO”R, ha-rav moše hager, li-vno yisra’el, nifgešu ha-šnayim ve-naflu ze al šavaro šel ze.*
nifgešu ha-šnayim
 meet:RECP.PST.3PL DET-two:PL.M
 ‘After 18 years of complete rift between the Admor, Rabbi Moshe Hager, and his son Israel, the two met and fell on each other’s neck (hugged each other).’ [Shlomo Tzezana, <www.makorrishon.co.il> (3 February 2002)]
- d. ‘*im hitpatxut ha-mašber, obama ve-putin soḵaḵu kama pe’amim ba-telefon, ax ad ko lo nifgešu ze im ze.*
ax ad ko lo nifgeš ze ‘im ze
 but until here NEG meet:RECP.PST.3PL DEM.SG.M with DEM.SG.M
 ‘As the crisis developed, Obama and Putin spoke a few times on the telephone, but until now have not met with one another.’
 <www.themarker.com> (7 June 2014)
- e. *talmide beit ha-sefer ‘pines’ pagšu et eli’ezer ben-yehudanexdo šel mexaye ha-safa ha-ivrit nifgaš ‘im talmide šixva D’ ke-ḵeleq mi-masoret biqurav be-vet ha-sefer.*
- e. *nexdo nifgaš ‘im talmide[^]*
 grandson:SG.M-POSS.SG.M meet:RECP.PST.3SG.M with student:CS.PL.M
šixva D’
 grade:SG.F D’
 ‘The students of the “Pines” school met Eliezer Ben Yehuda. (Headline). The grandson of the reviver of the Hebrew language met with fourth graders as part of his traditional visits to the school.’
 <gedera.muni.il > (26 December 2016).
- f. *tamid hifli’a oti ha-uvda šešnayim mi-gdole ha-sifrut ha-ivrit pagšu ze et ze ki-ne’arim be-yešiva nidaḵat bi-šnot ha-90 šel ha-me’a ha-19.*
šnayim mi-gdole[^] ha-sifrut ha-ivrit
 two:M from-great:CS.PL.M DET-literature:SG.F DET-hebrew:ADJ.SG.F
pagšu ze et ze ki-ne’arim
 meet:PST.3PL DEM.SG.M ACC DEM.SG.M as-boy:PL
 ‘I have always been mystified by the fact that two of the great figures of Hebrew literature met one another as boys in a remote Yeshiva during the 1990s.’ [Arik Glasner, <www.ynet.co.il> (25 February 2017)]

The multiplicity of reciprocal formulations reflected in (36), together with the fact that verbs in *hitpa’el* and *nif’al* that express reciprocity are limited in number, so

that most (transitive) verbs express reciprocity by analytical means (e.g., *medabrim eḡad 'im ha-šeni* ‘talk to each other’, *maskimim eḡad 'im ha-šeni* ‘agree with one another’, *hem makirim ze et ze* ‘they know each other’) combine to demonstrate that reciprocity, as posited by Bar-Asher Siegal (2015), is not a well-defined grammatical category in MH.

5. Concluding remarks

Although all seven *binyan* patterns can have more than one specific meaning, and the semantic relationships between them are frequently unpredictable, it transpires that when verbs of the same root occurring in two or more *binyan* patterns are examined in context, systematic form-function oppositions can nonetheless be distinguished in the verbal system of MH. Of particular relevance to the present chapter, subtle distinctions of voice can be observed between active and passive constructions, on the one hand, and active, passive, and middle constructions, on the other. Further, form-function oppositions suggesting different degrees of argument participation in an event are discernible between synthetic constructions in *hitpa'el* and *nif'al* and their analytic equivalents consisting of active forms of the same root and associated pronominal phrases.

As revealed by many of the examples from current written usage (literary, journalistic, and online), these distinctions of voice in general, and of the degree of argument participation in particular, have an important role in discourse, and are skillfully deployed by speaker-writers of MH, including in innovative coinages that demonstrate the relative productivity of *binyan* inter-relations, as illustrated throughout this study.

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Nominalizations

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The chapter details structural and usage-based properties of three types of verb shifts to nouns in MH: Action Nominals, Gerunds, and Infinitives. It starts by specifying morphological and syntactic criteria for these three constructions as nominalizations: They are fully productive grammatical systems; directly associated with verb *binyan* patterns; and alternate syntactically with their verbal source-forms, so often paraphrasable by tensed subordinate clauses. These criteria mean that several other classes of verb-related nouns are excluded from discussion, including: adjective-based stative nominals, nouns derived by syntactic conversion from *benoni* ‘intermediate’ participial *cum* present-tense verbs, and other classes of verb-derived nouns denoting Disease, Collective, Location, etc. The chapter characterizes (i) abstract Action Nominals, i.e., *šmot^ peula* ‘names:cs action’ = nouns/names of an action, activity, act’ (e.g., from the B1 verb *haras* ‘destroy’, *harisa* ‘destruction, destroying’ ~ *héres* ‘destruction’) and two constructions both termed *šem^ póal* ‘name:cs verb = the noun/name of a verb’ in the form of (ii) Gerunds (e.g., *be-hors-o* ‘in-destroying-his = on his destroying [something]’) and (iii) Infinitives (e.g., *la-haros* ‘to-destroy’).¹ The relatively recent Action Nominals are highly productive, although largely confined to more formal registers of usage, classical Gerunds are restricted to syntactically bound constructions and are relatively rare in current usage, while Infinitives are pervasive at all levels of usage, displaying a broad range of functions in the absence of other, less widely occurring, non-finite verbs. The chapter concludes by comparing the three constructions analyzed in relation to more general features of MH structure and use.

1. The caret sign ^ is used throughout to mark the initial, head noun in a bound construct-state (cs) genitive construction (e.g., *bet^ xolim* ‘house:cs sick:PL = home/ house of sick people – hospital’). See Chapter 14 on Genitive Constructions.

1. Introduction

The process of nominalization, defined here as an operation in which a verb is converted into a noun, has been of considerable interest in contemporary linguistics since Chomsky's (1970) groundbreaking paper comparing "derived and gerundive nominals" in English. Since in Modern Hebrew the processes involved are typically *morpho-syntactic*, the present chapter bridges between focus on morpho-lexicon in this part of the book, and Part III on syntax. Crosslinguistic background to the topic is provided by Comrie and Thompson's (2007) typologically motivated analysis of "lexical nominalization". The Hebrew-specific overview presented here derives from the author's doctoral dissertation (Berman 1973), as revised and recast in Chapters 7 to 10 of Berman (1978a). These earlier, structuralist-oriented analyses are elaborated below by findings from data-based research in the domain (e.g., Berman 1993a, 2004; Halevy 2007; Ravid 1999; Ravid & Cahana-Amitay 2005; Reshef 2012a, 2012b), supported by structured elicitations on related topics (e.g., Berman 1988b; Ravid 1978, 1990; Ravid & Avidor 1998; Seroussi 2004, 2011). Taking structuralist analyses as a point of departure, the chapter relies heavily on factors of speaker-writer usage such as frequency of occurrence in different registers of Modern Hebrew, as illustrated by authentic data detailed in §1.2 below. Focus is on three types of nominalizations that reflect morphological and syntactic features of both verbs and nouns, ranged below from most to least noun-like: Derived Action Nominals, Gerunds, and Infinitives. *Action Nominals* (§3) represent the "name of an activity or state" (Comrie & Thompson 2007: 334). In Hebrew, syntactically these display a mixture of verbal and nominal features, while morphologically taking the form of a unique set of *binyan*-related patterns or *miškalim* 'weights' (see Chapter 8 on Inflection and Chapter 9 on Derivation). *Gerunds* (§4) typically share the morphological stem of their associated Future-Tense verbs and they, too, are unmarked for Tense, Person, Number, or Gender, but they require a morphologically bound subject (pronoun or noun), and have more restricted syntactic structure and discourse functions than Action Nominals. *Infinitives* (§5) share the same verbal stem as Gerunds and, like them, lack marking for Tense, Person, Number, and Gender, from which they differ by occurring in a wide range of syntactic contexts and discourse functions. These three constructions differ both diachronically in their relative frequency and functions in the history of Hebrew (see Table 1 below) and synchronically, in Modern Hebrew, being distinct both from their antecedents and from each other in contextual constraints and frequency of occurrence. Today, Action Nominals, the most nounlike of the three constructions, are both lexically and syntactically largely productive and high-register in usage; Gerunds are the most constrained occurring in restricted syntactic environments, with a limited semantic function, and rare in colloquial

Table 1. Occurrence of three nominalized forms at different periods in the history of Hebrew

	Biblical	Mishnaic	Modern
Action Nominal <i>šiput</i> ‘judgment, judging’	(+)	+	+
Gerund <i>šfot-</i> ‘judging’	+	-	(+)
Infinitive <i>li-špot</i> ‘to-judge’	+	+	+

usage; Infinitives are structurally inflection-like, being regularly derived from all and any (non-passive) verbs, and pervasive at all levels of current usage.

The three target constructions share the following properties that distinguish them from canonic verbs and nouns: As verb-derived nominals, they (i) are productive *grammatical* constructions; (ii) involve *syntactic permutations* of their related verb-containing predicative clauses; (iii) *morphologically* share associated values for the *binyan* patterns or prosodic templates of the verbs from which they are derived; yet (iv) differ from verbs in not being inflected for the two typically verbal categories of Tense and Person (Bybee 1985).

1.1 Other verb-related nouns

The first three criteria – of constituting grammatically productive constructions, of alternating syntactically with verbs, and of being morphologically associated with a verbal *binyan* pattern – mean that analyses in this chapter do *not* include three other classes of nouns that are related morphologically and semantically to verbs or other predicating elements.

First, MH has a rich repertoire of *adjective-derived nouns* which semantically typically denote states rather than activities and morphologically take the abstract nominal suffix *-ut* (e.g., *meuravut* ‘involvedness, engagement’, *tipusiyut* ‘typicality’, *paštanut* ‘simplicity’, *kolaniyut* ‘noisiness’). As these examples show, they are often based on adjectives that are themselves derived from more basic verbs or nouns (Bolozky & Schwarzwald 1992; see, too, Chapter 7 on Inflection and Chapter 8 on Derivation).

Second, a unique type of verb/noun alternation in Hebrew is represented by the *syntactic conversion* of some, although by no means all, verbs in the *benoni* ‘intermediate’ construction into nouns (and adjectives) as, for example, in three different *binyan* verb patterns: *šofet* ‘judges, is judging’ and also the noun meaning ‘(a) judge’, *madrix* ‘guides, is guiding’ and also the agent noun ‘(a) guide, leader’ and the instrument ‘(a) manual’; *mehadek* ‘tightens, is tightening’ and also ‘stapler’.²

2. The letter “B” stands for *binyan* verb pattern, as follows: B1 = *pa'al* (*qal*), B2 = *nif'al*, B3 = *hif'il*, B4 = *pi'el*, B5 = *hitpa'el*. See *Transcription and Coding* section on Hebrew-specific coding conventions.

Such V > N conversion is semantically confined to the two related classes of Agent and Instrument nouns (Berman 2017; Berman, Hecht, & Clark 1982) and lexically restricted in which *benoni* form verbs also function as nouns in the current lexicon of Hebrew. These alternations constitute the only case of categorial *zero derivation* in Hebrew, but they fail to meet the lexico-syntactic criterion of grammatical productivity that applies to the three classes of verbal nouns discussed below since, as noted, *benoni* verb > noun / adjective alternation fails to apply across the exicon.

From these and other perspectives, the *benoni* ‘intermediate’ forms of Biblical Hebrew were syntactically largely participial and morphologically nominal, lacking the verbal features of Tense and Person (Goldfajn 1998; Gordon 1982). In Modern Hebrew, they retain their morphologically noun-adjective like properties, but syntactically function in two distinct capacities – as non-finite participles or as verbs marking present tense (both habitual and immediate) on a par with their past- and future-tense counterparts (Berman 2014; Givón 1977: 19; Rabin 2000). In an earlier analysis, these two distinct functions of *benoni* verbs in Modern Hebrew were uniquely specified as neither strictly finite [+Tense] – like Past or Future forms – nor non-finite [-Tense] – like Gerunds and Infinitives. Rather, they were defined as “zero-tense” markers of temporality, intermediate between the categories of finite and non-finite, re-analyzed as complements of the copula, elided to zero with verbs in *benoni*, but realized as *haya* ‘was’ or *yihye* ‘will-be’ in past or future tense (Berman 1978a: 179–182, Berman 2017). As noted, since only a subset of *benoni* verbs are lexicalized as (Agent or Instrument) nouns, this category is disregarded in the present context (and see, for an analysis highlighting their current productivity, Chapter 8 on Derivation).

Two of the criteria specified above – of alternating syntactically with verbs and being morphologically associated with a verbal *binyan* pattern – mean that a third type of what are sometimes termed ‘nominalizations’ are *not* included in this chapter. These are numerous other classes of nouns that are related morphologically and semantically to verbs, with which they share the same *consonantal root* including, for example, Agent nouns in the *CaCaC* or *CaCCan* patterns, Instrument nouns in the *maCCeC* or *maCCeCa* patterns, Place nouns in the *miCCaC* or *miCCaCa* patterns, and Abstract nouns in *CoCaC* or *CiCaCon* patterns or with the suffix *-ut* (see Chapter 8 for details). Termed “other verb-related nouns” in Berman (1978a: 387–418) and “names of an argument” as distinct from “names of an activity or state” by Comrie and Thompson (2007: 334), both types of nouns reflect processes of lexical nominalization. However, these other types of “verb-related nouns”, while *morphologically* derived from verbs or adjectives, differ from ‘verbal nouns’ since (i) they do not reflect *syntactic* traces of their predicative origins nor (ii) are they directly related to a particular *binyan* verb pattern. Treated as “derived nouns” in Seroussi’s (2011) large-scale study of different classes of such nouns, and analyzed

in earlier elicitation studies by Berman (1988b, 1999), Ravid (1978, 1990), and Seroussi (2004), they are considered elsewhere in this volume (in Chapter 8 on Derivation and Chapter 9 on Parts of Speech Categories).

1.2 Data-base

The chapter relies on several sources of authentic data (see Silverman 2006; Speer 2002), in the form of extended written and spoken texts elicited from educated native speakers of Hebrew, backed up by oral biographical interviews conducted by Hebrew-speaking adults with friends and family members. Two other sources of information derive from structured experiments eliciting relevant data from school-children and adults in oral usage, and the first chapters of a current Hebrew novel (Or 2015) representing a mixture of colloquial and more literary written Hebrew.³ Distributional frequencies derive mainly from the corpus of 80 texts – spoken and written, narrative and expository – elicited from 20 graduate level university students, native speakers of Israeli Hebrew, in the framework of a cross-linguistic study on developing text construction (Berman & Verhoeven 2002). The Hebrew adult sample (Berman & Nir-Sagiv 2004) consists of a total of 15,308 words and 2,260 clauses, with each text line corresponding to a clause, defined as “a unified predicate... that expresses a single situation-activity, event, or state” (Berman & Slobin 1994: 660–662).

Additional data derive from structured elicitations from Hebrew-speakers in various domains, such as coining novel nouns based on existent verbs or vice versa (Berman 1988b, 1999; Ravid 1978, 1990; Ravid & Avidor 1998; Seroussi 2004, 2011), supported by Ravid’s (1999) dictionary-based morphological analysis of action nominals. These are accompanied where relevant by data from adult input to pre-school Hebrew-speaking children (Berman 1985, 2016; Berman & Sagi 1981) as representing everyday, colloquial spoken Hebrew.

Three “verbal noun” constructions in MH

The most distinct, and distinctly noun-like, of the nominalized constructions analyzed below are so-called *šmot[^] peula* ‘nouns/names:cs action/activity/act’ = ‘Action Nominals’ (§3). Like the two other constructions analyzed below – Gerunds (§4) and Infinitives (§5) – they typically relate to the five non-passive *binyan* verb patterns. However, derived Action Nominals manifest numerous irregularities in

3. Illustration and comparison of different types of nominalizations are thus derived from much the same data-base as that used in Chapter 14 on genitive *smixut* constructions.

the transition from verb to noun, reflecting properties generally associated with derivational rather than inflectional morphology. In contrast, the two other types of verbal nouns – traditionally grouped together under the shared label of *šem[^] ha-póal* ‘name/noun:cs the-verb = verbal noun’ or *makor* ‘source, origin’ – form part of the inflectional systems of Hebrew, since they apply across the board to all and only verbs in the language. Gerunds and Infinitives are syntactically and discursively distinct, but are morphologically alike, both being based on the stem of Future Tense verbs and constructed in one of the five non-passive *binyan* patterns, and constituting non-finite verbal forms that lack marking for Tense or Person.

Traditionally, constructions labeled *šem[^] ha-póal* are divided into the two categories of *makor muxlat* ‘infinitive absolute’ and *makor natuy* ‘inflected infinitive’ also known as the *makor xavur* ‘infinitive construct’ (Ben-Asher 1976: 23). The *absolute infinitive* is disregarded here since it does not perform a nominal function, and was used primarily in Biblical Hebrew (e.g., *mōt tāmūt* ‘die you-will die’, *naśo? ʔeśaʔ* ‘bear I-shall-bear’). In MH, as in the two examples from the Bible, it co-occurs with the same verb in a finite form, and serves as an intensifying adverbial (e.g., *šamor ti-šmor alav* ‘guard FUT-guard:2SG.M over.him = guard you will guard on-him’ in the sense of ‘watch over him well’, *daber dabru rak emet* ‘speak speak:IMP.FUT.PL.M only truth’ meaning something like ‘you should (definitely) speak only the truth’). In the spoken corpus of MH consulted here, this form occurred only in the formulaic expression *hayo haya (paam)* ‘be was once = (once) there was’, as an opening to narrative accounts.

The present analysis follows the author’s earlier departure from traditional classifications (Berman 1973, 1978a: 287–295), dividing the second type of *makor* ‘source’ into two distinct morpho-syntactic categories, Gerunds (§4) and Infinitives (§5). The term *makor xavur* ‘source bound = non-free verbal noun’ suits what are termed here ‘gerunds’, since these cannot stand alone in two senses: They must be preceded by a preposition and they must be followed by a pronoun or noun in the bound, construct-state (see Chapter 14 on Genitive Constructions). As syntactically highly restricted constructions, Gerunds thus differ markedly from both Action Nominals and Infinitives. On the other hand, the traditionally termed ‘inflected infinitive’, labeled here *Infinitive*, in MH in fact reflects few if any of the properties of canonical inflectional morphology. It is invariably marked by a syllabic *l* + vowel attached to the Future stem, where the vowel alternates on morpho-phonological grounds depending on the particular *binyan* pattern and/or stem-initial consonant (e.g., *li-xtov* ‘to-write’, *la-asot* ‘to-do’, *le-daber* ‘to-talk’) rather than being part of a lexico-morphological paradigm (Berman 2018). And the only inflection it can take is a pronominal accusative object, which is both structurally highly restricted and largely in disuse in colloquial Hebrew today (Cahana-Amitay & Ravid 2000; Kaplan & Berman 2015; and see Chapter 7 on Inflection).

Each of the three ‘verbal nouns’ analyzed below represents, and often also integrates, facets of the form-function relations that existed between these construction at different periods in the history of Hebrew – in the sense of diachronic change rather than on the basis of sociolinguistic factors such as languages in contact (as considered, for example, in Doron 2016). Table 1 specifies the occurrence of the target constructions at different stages in the history of the language, with parentheses (...) indicating relatively marginal occurrence at a particular period of time.

Table 1 reflects the “typologically mixed” or “fused” nature of Modern Hebrew (Ben-Hayyim 1953; Berman 2016; Halevy 2013). Citing from Halevy’s translation of the updated version of Ben-Hayyim: “Nothing in it (Modern Hebrew) has died and so there exist – and are in use – different chronological layers side by side, not on top of one another, as in languages with a historic continuity” (Ben-Hayyim 1992: 59). Table 1 shows that Action Nominals (§3) were few and far between in Biblical usage, becoming established mainly from Mishnaic times; Gerunds (§4) are marginalized in MH, compared to their high frequency in Biblical Hebrew; and Infinitives (§5) emerge as the least marked or most neutral and ubiquitous of ‘verbal nouns’, in common use to this day.

1.3 Criteria of nominalness

The three constructions reflect different degrees of verbiness or nouniness (a term taken from Ross 1973). Criteria defined in an earlier study of “verbal nouns” in Modern Hebrew (Berman 1973: 12–56) included: marking by the definite article *ha-*; occurring as heads of bound *smixut* construct-state genitive constructions; modification by adjectives for nouns and adverbs for verbs. Two of the properties summarized in Berman (1978a: 280–286) emerged as most distinctive in this respect: Whether – like verbs – the target forms may take *verbal complements*, particularly the direct object accusative marker *et* as well as prepositional objects and other non-subject arguments; and/or – like nouns – they may take some form of *smixut* genitive constructions (see Chapter 14). For present purposes, the two dedicated case markers – accusative *et* and genitive *šel* – are taken as canonical identifiers of verbal or nominal constructions respectively (see Chapter 9).

1.4 Properties of ‘verbal nouns’ in MH

The verbal/nominal character of the three target constructions is reflected in traditional terminology, as follows: *šem[^] peula* ‘name:cs action = nomen actionis’ or ‘action nominal’ and *šem[^] pól* ‘name:cs verb = verbal noun’, also known as *makor* ‘source, origin’, and usually translated as ‘infinitive’ (See note 1 on use of the

caret sign and the label CS for ‘construct state’). Although, as noted, ‘gerunds’ and ‘infinitives’ share the same stem, and are traditionally treated together as *šem[^] póal* or *makor*, the two constructions differ markedly in inflection, syntactic structure, and discursive function as well as in current distribution.

The nominalizations analyzed below apply across the board in the grammar of MH, in which all and only verbs can be converted to Action Nominals, Gerunds, and Infinitives. As noted earlier, in generality of *form*, Action Nominals are somewhat less regular syntactically and morphologically *derived* forms, while Gerunds and Infinitives are *inflectional*, grammaticized categories in MH. The three classes of verbal nouns all meet the shared morphological criterion of being (i) associated with one of the five *binyan* patterns which shape the surface form of verbs in Hebrew (§2.1.1), excluding (ii) the two strictly passive *binyan* patterns B3_{ps} *hufal* and B4_{ps} *pual*. (See Chapter 10 on Voice Alternations in MH).

The three target constructions also meet the syntactic criterion of being paraphrasable by subordinate clauses, as in (2) through (4), where a documented example in (i) is paraphrased by a constructed sentence with a subordinate clause in (ii). The former occurred in talks and essays elicited from educated adults, using forms based on the *hitpa’el* verb *le-hityaxes le-* ‘to relate, refer to’ as bolded in (1) to (4).

- (1) VERB:
ba-dvarim še-katáv-ti hityaxás-ti le-šloša nosim
 in.DEF-things that-write:B1.PST-1SG relate:B5.PST-1SG to-three topics
 ‘In the things I wrote, I referred to three topics’
- (2) a. VNOM:⁴
sug[^] ha-hityaxas-ut klapey anašim gam
 type:CS DEF-relate:B5-VNOM.F towards people also
yi-kba ...
 FUT.3SG-determine ...
 ‘The type of attitude ~ relating towards others will also define ...’
- b. SUBORD:
ha-ófen še-mityaxas-im klapey anašim gam
 DEF-way that-relate:B5.PRS-PL.M towards people also
yi-kba ...
 FUT.3SG-determine ...
 ‘The way that (people) relate to people will also define ...’

4. The construction termed “action nominal”, as defined in this chapter is uniquely coded as VNOM. The accepted code NMLZ is not used here, since it applies to nominalizations in general.

- (3) a. GER:
be-hityaxas-i *la-nose* *šel alimut*
 in-relate:B5.GER-POSS.1SG to.DEF-topic of violence
 ‘In relating to the topic of violence ...’
- b. SUBORD:
kše-ani mityaxes *la-nose* *šel alimut ...*
 when-I relate:B5.PRS.SG.M to.DEF-topic of violence ...
 ‘When I relate to the topic of violence ...’
- (4) a. INF:
ha-nose še-hexlat-ti *le-hityaxes el-av be-xibur-i ...*
 DEF-topic that-decide:B3.PST-1SG INF-relate to-it in-essay-my ...
 ‘the topic that I decided to relate to in my essay ...’
- b. SUBORD:
ha-nose še-hexlat-ti *še-e-tyaxes*
 DEF-topic that-decide:B3.PST-1SG that-FUT.1SG-relate:B1
el-av be-xibur-i
 to-it in-essay-my
 ‘the topic that I decided that I would relate to in my essay ...’

The examples of verbal nouns in (2a) to (4a) – Action Nominal *hitaxayasut*, Gerund *PREP-hitayaxas-i*, Infinitive *le-hityaxes* – compared with the +Tense, +Person (or Number and Gender) in the constructed examples in (2b) to (4b) – demonstrate the close morphological and semantic association between these constructions and their source verb illustrated in (1). Below, the relative level of nouniness of each construction is considered: Action Nominals (§3.1) share many syntactic features with non-derived concrete nouns, Gerunds (§3.2) are syntactically highly constrained, and Infinitives (§3.3) are largely verb-like.

2. Derived action nominals [VNOM]

The *nomen actionis* construction termed *šem[^] pe'ula* ‘name:CS activity = action nominal’ by Hebrew grammarians (e.g., Ben-Asher 1967; Bendavid 1956) and structuralist linguists (e.g., Rosén 1956: 160; Rubinstein 1968: 88–89) relates to verb- rather than adjective-derived forms, denoting actions rather than states. These typically post-Biblical constructions (see Table 1), occurred only occasionally in the Bible as stylistic variants of the prevalent, more verbal form of *šem[^] ha-pó'al* ‘name:CS DEF-verb’ (Ben-Asher 1976). The action nominal became firmly established in Mishnaic usage – possibly under the influence of the Aramaic prevalent

at the time (W. Chomsky 1957: 189; Peretz 1967: 64; Rosén, 1956: 56 1962: 323; Segal 1936: 68).⁵

The excerpts from newspaper writing (*Haaretz*, 06.01.2017) in (5) to (7) show that Action Nominals occur in a variety of syntactic constructions in MH (prepositional phrases, genitive *smixut* constructions, etc.), in a range of syntactic relations (Subject, Direct Object, etc.). The target items are glossed with the *binyan* value for their base-verb followed by the gloss VNOM.

- (5) *zo-hi pe'ula šel hatrasa ve-tkia-t^*
 it-she act of defiance:B3.VNOM.SG.F and-insertion:B1.VNOM-CS
sakin be-gaba-m bota
 knife in-back-their scathing:ADJ.SG.F
 'It's an act of brazen provocation and back-stabbing towards them'
- (6) *ha-yozmot no'adu le-xayev minuy-o*
 DEF-initiatives were.meant to-obligate appointing:B4.VNOM.SG-POSS.3SG.M
šel memune xadaš
 of supervisor new
 'The initiatives were meant to enforce the appointment of a new director'
- (7) *ha-bniya me'éver la-kav ha-yarok hi*
 DEF-building:B1.VNOM.SG.F beyond to.DEF-line DEF-green PRO: 3SG.F
uvda kayémet
 fact existing
 'Building ~ construction beyond the green line is a living fact'

The examples of contemporary journalistic writing in (5) to (7) demonstrate several properties of these VNOM constructions. First, as the English translations of the bolded items indicate, the Hebrew construction termed *šem^ pe'ula* 'action nominal' appears to merge the distinction between what Chomsky (1970) termed derived versus gerundive nominals. Thus 'the destruction of the city' or 'the city's destruction' as well as 'the destroying of the city' and 'destroying the city', could all be rendered in one of the three Hebrew genitive *smixut* constructions with the same head noun *harisa* 'destruction, destroying': (i) *harisa-t^ ha-ir* 'destruction-CS DEF-city', (ii) *ha-harisa šel ha-ir* 'DEF-destruction of DEF-city', (iii) *harisa-t^-a₁ šel ha-ir₁* 'destruction-CS-POSS₁.3SG.F of the-city₁'. Derived action noun constructions contrast in this respect with their more verbal counterparts – gerunds and infinitives.

5. Some traditional scholars objected to the use of the action noun in Modern Hebrew, as an instance of "contamination" by foreign influences, favoring use of periphrastic constructions in the infinitive (e.g., Avinyan 1946: 565).

As demonstrated in (5)–(7), Hebrew action nominals derive from different *binyan* patterns: *tkia*, *bniya* in (5) and (7) are in the *CCiCa* pattern associated with their source verbs in B1 *pa'al* – *taka*, *bana* from the roots *t-k-š*, *b-n-y*; *hatrasa* in (5) in the *haCCaCa* pattern for verbs in B3 *hif'il* in the verb *hitris*, root *t-r-s*; and *minuy* in (6) in the *CiCuC* pattern of verbs in B4 *pi'el* from the verb *mina*, root *m-n-y* (see, further, Table 2 below). Third, these documented examples demonstrate that, like concrete, non-derived nouns, action nominals occur as heads of the three different genitive *smixut* constructions, in (15) – *tkiat^ sakin* in the bound construct state and *pe'ula šel hatrasa* in the free analytic genitive and, in (6), *minuyo šel memune* in the double genitive (see Chapter 14 on Genitive Constructions). In addition, the noun *hatrasa* in (5) is modified like any other noun by an adjective that agrees with it in number and gender, while in (7) the action nominal *bniya* ‘building, construction’ occurs as the head of a noun phrase modified by a following prepositional phrase in an adverbial role (cf. verbal *hem bonim me-éver la-kav ha-yarok* ‘they build ~ are-building beyond the green line’). Syntactically, the action nominal *hatrasa* in (5) occurs as the modifying adjunct noun of a genitive construction, in (6) *minuy-o* ‘appointing~appointment-POSS.3SG.M = his being appointed’ functions as the head of a Direct Object NP, while *ha-bniya* in (7) is the subject NP of the clause in which it occurs. These mixed nominal/verbal features in the syntax of action nominals in MH are noted further below.

Table 2. Morpho-phonological patterns of action nominals, by associated verb *binyan* pattern

<i>Binyan</i>	Source verb: PST.3SG.M	Action noun CCC*
B1- <i>qal/pa'al</i>	<i>kalat</i> ‘absorb’	<i>C(a)CiCa</i> <i>klita</i> ‘absorption, absorbing’
	<i>xasam</i> ‘block’	<i>xasima</i> ‘blockage, blocking’
B2- <i>nif'al</i>	<i>nisxav</i> ‘drag:INTR’	<i>hiCaC(a)Cut</i> <i>hisaxavut</i> ‘being dragged’
	<i>nimtax</i> ‘stretch:INTR’	<i>himatxut</i> ‘being stretched’
B3- <i>hif'il</i>	<i>hixtiv</i> ‘dictate’	<i>haCCaCa</i> <i>haxtava</i> ‘dictation, dictating’
	<i>hexlit</i> ‘decide’	<i>haxlata</i> ‘decision, deciding’
B4- <i>pi'el</i>	<i>nihel</i> ‘manage, run’	<i>CiCuC</i> <i>nihul</i> ‘management, managing’
	<i>pitéax</i> ‘develop:TRANS’	<i>pitúax</i> ‘development, developing’
B5- <i>hitpa'el</i>	<i>hitpatéax</i> ‘develop:INTR’	<i>hitCaC(a)Cut</i> <i>hitpatxut</i> ‘development, developing’
	<i>hitmaxa</i> ‘specialize’	<i>hitmaxut</i> ‘specialization, specializing’*

* Note: Examples are given only for non-defective verbs with three radicals that occur in all words in the same morphological family. Parenthesized *a* stands for *a* insertion in the context of historically guttural root elements.

Description of VNOMS focuses on four aspects of these constructions in MH: Morphology – the association of action nominal forms with the *binyan* verb patterns of their source verbs (§3.1); Lexical semantics – possible interpretations and alternations in the form of these constructions (§3.2); Syntactic properties – noun-like versus verblike features (§3.3); and Current usage (§3.4).

2.1 Morpho-phonological properties of action nominals

Items in this category are typically linked to one of the five non-strictly passive *binyan* patterns, (see examples (5) to (7) above). Table 2 presents regular or canonical derivations.

The alternations in Table 2 are not entirely regular or predictable (Ben-Asher 1967, 1972; Seroussi 2004). Ravid's (1999: 68) analysis of 600 common verbs in Modern Hebrew found an average of nearly 20% action nominals to be “non-automatically derived”, that is, not conforming to the canonic templates listed in Table 2. Of these, source verbs in B1 *pa'al* showed the highest rate of nearly one-quarter irregularity (24%) compared with the relatively regular forms in B2 *nif'al* (9%), taking into account that B1-derived action nominals had the highest, and B2 derived nominals the lowest, frequencies in the list. Deviations from canonic templates take several forms, illustrated in (i) to (v) below.

- i. Some action nouns *switch patterns*: For example, the action nominal of the B1 *pa'al* source verb *šafat* ‘judge’ is in the B3 *pi'el* pattern *CiCuC* in *šiput* ‘judgement, sentencing’,⁶ and the action nominal of the B3 *pi'el* verb *higer* ‘(im)migrate’ takes the B1 action noun form *C(a)CiCa* in *hagira* ‘(im)migration, (im)migrating’.
- ii. Some source verbs have *alternative* nominal patterns (e.g., B1 *pa'al* verbs have action nominals in several other patterns in addition to the paradigmatic *CCiCa*): Compare from B1 *ganav* ‘steal’/*gneva* ‘theft, stealing’, *tarax* ‘bother’/*tirxa* ‘taking pains’, *da'ag* ‘worry’/*de'aga* ‘worrying’, *paal* ‘act’/*peula* ‘action, activity’ (see Schwarzwald 2002: Vol. 2, §5.3.1: 80–81).
- iii. Scholars focusing on morphological form rather than syntactic structure and/or semantic content tend to include other relatively abstract nouns from the same root in the same category. One such case is verbs that have two alternating action noun alternatives, where the second is typically more concrete in sense.

6. The same source verb also has a recent action noun coinage in the canonic B1 form *CCiCa* in the form of *šfita* ‘judgement, sentencing’ – but this has a restricted sense of courtroom proceedings, whereas the older form *šiput* stands for the act or process of judgement or evaluation in general.

For example, B3 *hif'il* verbs may have vNOMS in both the canonic *haCCaCa* and the *heCCeC* pattern – e.g., *hisdir* ‘arrange, settle’ > *hasdara* ‘(act of) settling, arranging’ and *heCCeC* as in *hesder* ‘(an) arrangement’, *hiskim* ‘agree’, both *haskama* ‘(act of) agreeing’ and *heskem* ‘(an) agreement’, while B4 *pi'el* verbs may alternate canonic *CiCuC* with *CaCaCa*, as in *sikun* ‘risk(ing)’ ~ *sakana* ‘danger’, *kivun* ‘direction’ ~ *kavana* ‘intention’ from *k-w-n* (Seroussi 2004; Shatil 2014: 90–127).

- iv. Other common verbs appear to have *no abstract* action noun alternatives, as in the case of the B4 *pi'el* verb *sixek* ‘play (a game)’, which is nominalized as the event noun *misxak* ‘game’.⁷
- v. Many action nominals have *additional concrete meanings*, for example, *knisa* ‘entrance, entering’ from B2 *nixnas* ‘go ~ come in, enter’ can refer to the action of entering or to the physical entrance to a building; *kabala* ‘reception, receiving’ is polysemous, serving as a semantically canonic action nominal (where the “regular” vNOM *CiCuC* pattern for B4 verbs like *kibel* ‘get, receive’ has the non-action sense of ‘volume, capacity’) and also the event sense of a (welcoming) reception and the concrete sense of a receipt for payment. Other examples of such irregular or unpredictable alternations between the source verb and its derived vNOM(s) are detailed in Ben-Asher (1967), Berman (1978a: 346–349) and Schwarzwald (2002, Unit 10).

These lexical irregularities associate MH action nouns with derivational rather than inflectional morphology, a conclusion supported by analysis of their associated system of *binyan* verb patterns (see Berman 1993b, and Chapter 8 on Derivation). As against this proposal, Reshef (2012b: 94) points to the *regularization* of the action nominal in Modern Hebrew, to the extent that it has a “quasi-automatic” status, on a par with verb-tense inflection. An intermediate view of the construction, as sharing properties of both derivational and inflectional morphology is supported by Ravid (1990) and Schwarzwald (2002, unit 10: 249–296).

2.2 Lexico-semantic properties of vNOMS

Like action nominals in other languages, the construction labeled here vNOMS can generally refer to the act or process and/or the manner of a certain activity being carried out. (A detailed description of other options is provided by Bendavid 1956; and see, too, more contemporary analyses in Ravid 1999; Ravid & Avidor 1998; Reshef 2012a). This sets them apart from event nouns like the loan noun *koncert*

7. The canonical *CiCuC* form of vNOM *sixuk* is used in a current coinage to nominalize the slang expression *sixek ota* ‘played ACC.it.F = make it, score’).

or *hacaga* ‘(a) show’ (from B3 *le-hacig* ‘to present’), the same noun also serving as the action nominal ‘presentation, presenting’ from the same source verb. And it distinguishes them from a range of concrete nouns, both non-derived like *sus* ‘horse’, *kadur* ‘ball’, *šulxan* ‘table’ and verb-based; for example, from the B1 verb *katav* ‘write’, nouns like *mixtav* ‘letter’, *katav* ‘correspondent’, *katvan* ‘typist’, *katava* ‘newspaper report’, *mixtava* ‘writing-desk’ (Berman & Seroussi 2011). In isolation, VNOMS alone may be ambiguous as between a factual or manner interpretation, so that a term like *halixa-t-o* ‘going-POSS-3SG.M = his going, his departure’, from the B1 source verb *halax* ‘go, leave, depart’, could be interpreted as either the *fact* that he went or left or else the *way* that he left or walked.

Semantically, the bulk of action nominals in Modern Hebrew, particularly those of relatively recent coinage, have an action nominal (or gerundive) interpretation. Compare established B1 *xašav* ‘think’ and its associated action nominal *xašiva* ‘the act/process of thinking’ or the related product noun *maxšava* ‘thought’ with more recently derived nominals based on verbs with the same root – e.g., *xišuv* ‘reckoning, calculation’ from the B4 *pi’el* verb *xišev* ‘calculate’, *hitxašbenut* ‘accounting ~ getting even (with someone)’ from B5 *hitxašben* ‘make a reckoning with’ – which are typically action nominal in meaning.

In sum, command of the current repertoire of action nominals in MH involves both knowledge of the paradigmatic verbal *binyan* / nominal VNOM pairings plus additional, item-based knowledge of older, less regularized items, on the one hand, and lexical exceptions, on the other.

2.3 Syntactic properties

Syntactically, action nominals reflect their hybrid nature as ‘verbal nouns’. They lack specification for Tense and Person, and share several other features of simplex, non-derived nouns like *ax* ‘brother’, *kadur* ‘ball’ (Berman 2013; Berman & Seroussi 2011; Ravid & Berman 2010). Thus, they function as the heads of Noun Phrases; they can take the definite marker *ha-* ‘the’ and the typically nominal genitive marker *šel* ‘of’; and – as shown from newspaper usage in examples (5) to (7) above – they can occur in the three types of genitive constructions associated with nouns. In fact, of nearly 60 derived nominals identified in 20 student essays on the topic of social conflict, VNOMS occurred in construct-state bound genitive constructions as high as one-third of the time (19 out of 58). They can also, as shown in (8) and (9) below, occur as either the head or the modifier of genitive constructions: as the morphologically bound initial head noun in (8a) and (8b) – the first from an essay written by a woman on the problem of social conflict, the second in response to a written test eliciting definitions of abstract concepts like *maxšava* ‘thought’

(Seroussi 2011: 140) – and as the modifying nouns in (9a) and (9b) from an oral discussion and an oral narrative respectively.

- (8) a. *ha-bitaxon ha-fízi šel kol exad me-itanu tamun*
 DEF-security DEF-physical of each one of-us hidden
bi-vniya-t^ ha-xevra šel-exad me-itánu ánu
 in-building:B1.VNOM-CS.SG.F DEF-society of-one of-us us
 ‘The physical security of each one of us resides in the construction of our society’
- b. *hafala-t^ šrir-ey^ ha-móax*
 activation:B3.VNOM-CS.SG.F muscle-CS.PL.M DEF-brain
 ‘activation of ~ activating the brain’s muscles’
- (9) a. *hem yexolim le-vaker et dérex^ ha-hitnahagut šel-i*
 they are-able to-criticize ACC way:CS DEF-behavior:B5.VNOM of-me
 ‘They are free to criticize my way of behavior/behaving’
- b. *páar^ yaxas-ey^ ha-koxot ve-mida-t^*
 gap:CS relation-CS.PL DEF-strengths and-degree-CS.SG.F
ha-haška'a hem lo šavim
 DEF-investment/ing:B3.VNOM they not same
 ‘The discrepancy in power relations and the amount of investment [=effort] are not equal’

VNOMS are also *noun-like* in readily coordinating with other types of nouns, as in (10) – from an oral talk given by a man concerning problems between people, with VNOMS bolded and glossed by source *binyan*:

- (10) *im ze késef, im ze haclaxa, im ze karirya im ze*
 if it money, if it success:B3.VNOM, if it career, if it
stam kin'a
 simply envy:B4.VNOM
 ‘whether it’s (a matter of) money, if it’s success/succeeding, if it’s career, or if it’s simply envy/being envious’

Besides, VNOMS neutralize the verbal values not only of Tense and Person but also in many cases of Transitivity and Voice. As shown in the constructed examples in (2) to (4), VNOM constructions like those illustrated in (5), (6), and (7) could be replaced by subordinate clauses marked for Tense, Number, and Gender and – in Past and Future – also for Person, while neutralization of transitivity and voice is demonstrated by the verb *le-manot* ‘to-appoint’ in example (6). Similarly, the VNOMS *gibuš* ‘consolidation’, *xinux* ‘education’, *pitúax* ‘development’ from the active, transitive B4 verbs *gibeš*, *xinex*, *pitéax* can also serve as nominalizations of their

passive or B5 middle-voice intransitive counterparts – *gubaš* ~ *hitgabeš*, *xunax* ~ *hitxanex*, *putax* ~ *hitpatéax* respectively.

For example, the complement in the sentence *hu mexake li-ftixa-t[^] ha-kénes* ‘he (is) waiting for-opening:CS the-conference’ could be a nominalization of either a future-tense verb in *passive voice* – *še-ha-kénes yi-patax* ‘FUT-open:B2.PASS.3SG.M = that the-conference will-be-opened’ or of a subjectless *impersonal* clause *še-yi-ftex-u et ha-kénes* ‘FUT-open:B1-PL.M = that (they) will-open ACC the-conference’. And the same applies when the tense of the matrix clause is changed to past *hu xika* ‘he waited’ or future *hu yexake* ‘he’ll wait’. In other words, VNOM constructions are paraphrasable, as noted earlier, by subordinate clauses, which may take the form of tensed passive-voice or impersonal constructions, in themselves relatively less transparent types of predications (Berman 1993a, 2011; and see, too Chapters 13 and 15 on Transitivity and Valence and on Impersonal Constructions respectively).

The syntactically hybrid nature of Hebrew action nominals is reflected in the fact that they can retain their original *verbal complements*, including the verb-controlled accusative case marker *et* in (11a) – from an elicited personal-experience narrative, and in (11b) – from a newspaper review (*Haaretz* 23 June 2017, *Culture and Literature*).

- (11) a. *kax ze nimšax ve-nimšax ... ad azivat[^]-am*
 so it continued and-continued ... until departure:B1.CS-POSS.3PL
et ha-árec
 ACC DEF-country
 ‘That’s how it went on and on ... until their leaving ~ their departure from Israel’
- b. *be-et azivat[^]-am ha-mehira šel ex-ay et*
 at-time departure:CS-POSS.3PL DEF-rapid of brother-POSS.1PL ACC
mitxam[^] ha-festival, hem...
 site:CS DEF-festival, they...
 ‘at the time of the rapid exit(ing) of my brothers from the festival location, they...’⁸

The hybrid constructions in (11), where the nominal *aziva* ‘leaving, departure’ takes the verbal accusative marker *et* is confirmed by Halevy’s (2000) examination of texts in standard written Hebrew. She cites examples like: *havana-t[^]-o et ha-be’aya* ‘understanding:B3.VNOM.F-CS-3SG.M ACC DEF-problem = his understanding the / of the problem’; *te’ur-a[^] et ha-mikre* ‘description:B4.VNOM-CS.3SG.F ACC DEF-incident =

8. Certain modifiers (adjectives and adverbs) not pertinent to the topic at issue were omitted from these examples for the sake of brevity.

her describing / description of the incident'. Such accusative-marked nominals are rare in everyday usage, typical of more formal literary or journalistic writing.

On the other hand, action nominals typically take verbal complements in the form of *prepositional objects*, as illustrated in (12) from student essays on interpersonal conflict.

- (12) a. *mašmaut-o* *šel macav ze hi hafnaya-t^*
 significance:SG.F-POSS.SG.M of state this she direct:B3.VNOM-CS
mašab-ey^ *ha-xevra* *le-afikim* *lo yacraniyim*
 resource-CS.PL DEF-society to-channels not productive
 'The meaning of this situation is re-direction of social resources into non-productive channels'
- b. *ha-hakara* *ba-ravgoniyut* *ha-enošit* *yexola li-yot*
 DEF-recognition:B3.VNOM in.DEF-variation DEF-human can to-be
maftéax le ...
 key to ...
 'The recognition of human variation can be (a) key to ...'
- c. *margiš-im* *be-hitraxakut-am* *exad min ha-šeni*
 feel:B3-PL.M in-distancing:B5.VNOM-3POSS.PL.M one from DEF-other
 'One senses their removal/distancing from one another'

In (12a), the action nominal *hafnaya* 'redirecting' retains the prepositional object of its base verb B4 *hifna le-* 'direct to', in (12b) *hakara be-* reflects the B3 verb *hikir be-* 'recognize in, take cognizance of', while in (12c) the B5 verb *le-hitraxek* 'distance oneself' retains its ablative prepositional marker *min* 'from'.

VNOMS are also common in Prepositional Phrase constructions, like in nominalizations of adverbial clauses expressing simultaneity (Aksu-Koç & von Stutterheim 1994). This is shown in (13), where narrators described rapidly sequenced episodes in a short film (Chafe 1980).

- (13) a. *hem hitxilu la-lexet tox kdey axilat^* *ha-agasim*
 they began to-walk in during eat:B1.VNOM.CS DEF-pears
 'They began walking in the course of eating ... = while eating the pears'
- b. *tox kdey ha-histaklut* *ha-zo hu xovet be-ezešehi*
 in during DEF-look:B5.VNOM DEF-this he hits in-some
even ve-az...
 stone and-then ...
 'During this scrutiny ~ scrutinizing, he hits up against a stone and then ...'⁹

9. Such constructions were the source of much controversy in analysis of these and related texts, since some researchers felt they should be analyzed as separate clauses, even though "depleted" of clausal elements in the form of Tense, Person, and Transitivity marking.

Another syntactically verbal function of VNOMS, currently confined to elevated style or formulaic expression is in the function of *musa pñimi* ‘internal object’ (= cognate object, see Berman 1978a: 390–394; Fillmore 1968: 85–88). The examples in (14) are constructed, since the largely colloquial usage of the data-base detailed in §1.2 included no instances of this construction.

- (14) a. B1 *pa'al*:
hu canax cnixa xofšit
 he parachuted parachuting:VNOM free
 ‘He parachuted by free fall’
- b. B4 *pi'el*:
hu nitéax et ha-macav nitúax mavrik
 he analyzed ACC DEF-situation analysis brilliant
 ‘He gave the situation a brilliant analysis’

These can be analyzed as compensating in classical Hebrew for the lack of manner and other adverbials, whereas current Hebrew relies largely on prepositional phrases for this purpose (Berman & Nir 2011; Ravid & Shlesinger 2000; Chapter 9 in this volume). Compare, for example, a highly formal expression with a cognate object like *hi katva ktiva merušélet* ‘she wrote writing careless’ with current *hi katva be-cura merušélet* ‘she wrote in-way careless’ = ‘she wrote carelessly’.

To summarize the structure, meaning, and function of VNOMS in current Hebrew, consider the excerpt in (15) – clauses #55–68 from an essay written by a graduate student of the natural sciences on the topic of inter-personal conflict. VNOMS are marked in bold and consecutive clauses are marked (a) through (e).

- (15) a. *barur še-ycira-t^ misgarot xevratiyot ma'imot*
 clear that-creation:B1.VNOM-CS frameworks social suitable
yexolot li-yot pitaron li-tvax kacar
 can to-be solution:B1.VNOM to-term short
 ‘Clearly, the creation of ~ creating suitable social frameworks could be a short-term solution’¹⁰

10. The clause contains an agreement error, since the head noun *ycira* ‘creation’ is in the feminine singular, while the tensed modal *yexolot* is in the femine plural – agreeing with the adjunct noun feminine plural *misgarot* ‘frameworks’. (see Chapter 12 on Agreement). Further, the VNOM *pitaron* ‘solution’ from B1 *li-ftor* ‘to-solve’ (normative *pitron*) is not in a conventional morphological pattern for action nouns, but takes the form CiCaCon used commonly for stative nominals like *dikaon* ‘depression’, *kilayon* ‘extinction’. The action noun *ptira* in the expected CCiCa pattern is highly formal, used occasionally in a cognate object construction *ptirat^ ha-pitaron* ‘solving (of) the solution’.

- b. *davka ha-hakara* *ba-ravgoniyut* *ha-enošit*
 just DEF-acknowledgment:B5.VNOM in.DEF-variegation DEF-human
yexola li-yot maftéax le-haktana-t^ *ramat^ ha-beayot*
 can to-be key to-decrease:B5.VNOM-CS level DEF-problems
 ‘The very (act of) acknowledging human variation could be a key to decreasing the level of problems’
- c. *davka ha-xatira* *li-mecia-t^*
 just DEF-endeavouring:B1.VNOM to-finding:B1.VNOM-CS
ha-šone ve-lo li-mcia-t^ *ha-dimyon ben*
 DEF-different and-not to-finding:B1.VNOM-CS DEF-similarity between
anašim yexola le-hovil la-maskana ki kol adam hu olam
 people can to-bring to.DEF-conclusion that each person he world
bifney acmo
 in.front himself
 ‘The very endeavouring / aspiration to discovering / discovery of the difference and not the similarity between people might lead to the conclusion that every man is a world unto himself’¹¹
- d. *me-havana* *zo nigzérét*
 from-understanding:B5.VNOM this is.derived
ha-haaraxa li-xvodo šel kol adam ba-ašer
 DEF-appreciation:B5.VNOM to-respect:POSS of each man in.DEF-that
hu adam
 he man
 ‘From this understanding stems the appreciation of the respect due to every person as a person in himself’
- e. *hanxala-t^* *reiya* *zo la-maaraxot*
 endowment:B5.VNOM-CS seeing:B1.VNOM this to.DEF-systems
ha-xevratiyot še-yocéret ha-xevra ha-enošit yexola ...
 DEF-social that-creates DEF-society DEF-human can ...
 ‘Endowing ~ the endowment of this view to the social systems that human society creates may ...’

The 70-clause essay excerpted in (15) contained a total of 15 VNOMS (types) compared with only 4 in the 74 clauses of the oral talk the same woman gave on the same topic – a point elaborated in the next section. This is notable first, for the large

11. The abstract noun *maskana* ‘conclusion’ derives from the B5 verb *le-hasik* ‘to-conclude, infer’, but it has a “regular” VNOM in the form of *hasaka* ‘concluding’ as in the common collocation with a cognate object *hasakat^ maskanot* ‘concluding conclusions = the drawing of conclusions’. Such expressions, like cognate objects in general, demonstrate the use of repetition as a favored rhetorical device in Hebrew (Berman, 1986).

number of derived action nominals in an essay written by a non-expert, educated native speaker-writer of Modern Hebrew. Second, the bulk of these items do not stand alone as a Noun Phrase but are modified by (nominal) adjuncts or by (verbal) complements, reflecting their hybrid verbal/nominal status. VNOMS occur, on the one hand, with verbal complements in the form of prepositional objects in (15-b) *ha-hakara be-* ‘the recognition in’ and in (15-c) *ha-xatira le-* ‘aspiring to(wards)’; but vNOMS derived from verbs that take Direct Objects with the accusative marker *et* alternate with noun-like genitive constructions, including in bound CS (construct state) *smixut* constructions that occur at least once in four out of the five clauses in (15-a) to (15-e).

2.4 Distribution of vNOM constructions in MH

The excerpt in (15) illustrates that vNOMS in current Hebrew reflect a relatively elevated register, more typical of written materials than colloquial speech. In 40 expository texts produced by graduate students on the topic of interpersonal conflict – 20 written essays and 20 oral talks – vNOMS occurred only occasionally, far less than infinitives in the same corpus (see §5 below): 58 times in the written texts (out of a total 437 clauses) and even fewer (44 out of a total 773 clauses) in the generally far longer spoken texts of the same speaker-writers. The same participants also used vNOMS far oftener in their written than spoken texts in the less formal genre of personal-experienced narratives.

Reshef’s (2012b) examination of pre-state administrative documents leads her to conclude that use of derived action nouns is indicative of more general processes of “standardization” of MH from the 1950s onwards. In line with Ravid’s (1999) findings, Reshef (2012a) also notes the relative frequency of vNOM forms derived from the “basic” *binyan* patterns (B1 *pa’al*, B3 *hif’il*, B4 *pi’el*) compared with the “derived” B2 *nif’al* and B5 *hitpa’el*. She describes them as (translated from Hebrew) “a significant mark of literate, high-register usage in contemporary Hebrew” (Reshef 2012a: 417).

This effect of medium of production is illustrated by the contrast between the excerpt from a written essay on interpersonal conflict in (16). It contains no fewer than five Action Nominals in a single clause, as compared with its spoken counterpart in (17), produced by the same man on the same topic, expressing much the same content in five separate clauses, all except one with verbs in the infinitive form (§5see below). The bracket] in (17) marks clause boundary, and vNOMS are bolded.

- (16) *titu* *šel beayot* *himanut* *mi-mabat yašir*
 sweeping:B4.VNOM of problems avoidance:B2.VNOM from-look direct
mul *el mitaxat la-maxcélet*, *eyney[^] ha-yariv* *be-et[^] sakana*,
 opposite to under DEF-mat, eyes:CS DEF-opponent in-time:CS danger,
himaltut *me-imut* *yašir ve-cimúax*
 escape:B2.VNOM from-confrontation:B4.VNOM direct and-growth:B4.VNOM
šel or *ave mehira ke-šel pil* *moil lo meat¹²*
 of skin thick rapid as-of elephant helps not little
 ‘Sweeping problems under the carpet, avoiding direct gaze vis-à-vis the eyes of
 one’s opponent in time of danger, rapid flight from direct confrontation, and
 developing skin as thick as an elephant’s helps quite a bit’
- (17) *eh kmo le-tatot (sic) otam mitaxat le-fatéax* *or šel pil*
 er like INF-sweep them under INF-develop skin of elephant
ve-xadome, la-šatíax,] *okey toda*]
 and-so.forth, to.DEF-carpet okay, thanks
 ‘Er, I refer a little to all kinds of possibilities: How to try to disregard problems,
 er like to sweep them under the rug, er to develop an elephant skin and so on,
 that’s it, thanks’

Moreover, action nominals, both established and innovative, are conspicuously absent from children’s spontaneous usage (Berman 1999; Berman & Sagi 1981).¹³ In Ravid & Avidor’s (1998) structured elicitation, across adolescence and into adulthood, participants were not always able to produce the correct morphological form of a conventional derived nominal or to coin an appropriate innovative form in a context requiring nominalization of various source verbs. Relatedly, Seroussi’s (2004) study of the relationship between morphological regularity/irregularity and the relative semantic transparency or opacity of both canonic VNOM and more stative derived nominals from the same morphological family (e.g., the difference between *hevdel* ‘difference’ and *havdala* ‘ceremony marking Sabbath end’ from the B3 verb *le-havdil* ‘to-differentiate’, or *hakara* ‘knowledge, recognition’ versus *hekerut*

12. Both the written and spoken texts in (16) and (17) produced by this man, a graduate student in the exact sciences and a native speaker of Israeli Hebrew, deviate considerably from prescribed usage. Instead of the formulaic expression *letate beayot mitaxat la-šatíax* ‘to-sweep problems under the-rug ~ carpet’; he uses the noun *maxcélet* ‘(straw) mat’; the action nominal *cimúax* is generally confined to a botanical process, not accepted as the causative counterpart of the B1-derived VNOM *cmixa* ‘growth, growing’; and his use of the high-register verb *moil* ‘assist’ is in the singular, rather than the required plural agreement with the preceding conjoined subject NPs. And in his oral talk, he treats the B4 verb *le-tate* ‘to-sweep’ as if it ended in *yod* rather than *alef*, in the colloquial infinitive form *le-tatot* in place of prescribed *le-tate*.

13. Occasional examples include *hizuy* for *hazaa* ‘perspiring, perspiration’ from B3 *hizia* ‘perspire’ (Sivan, aged 4;11); *birux* for *braxa* ‘blessing’ from B4 *birex* ‘bless’ (Erez 5;2).

'familiarity, acquaintanceship' from the B3 verb *le-hakir* 'to know') showed that even young adults do not manifest command of a full range of form/meaning relationships in this domain. And the comparison of Ravid and Cahana-Amitay's (2005) of oral versus written narratives showed that only high-school adolescents and mainly adults used a relatively high proportion of derived nominals for expressing "predicative content" – with few such constructions in texts of younger schoolchildren.

In sum, Action Nominals are solidly established in the grammar of current Hebrew. At the same time, they combine morphological irregularity – mixing features of derivation and inflection; semantic abstractness – representing activities and states of affairs rather than concrete events or substances; and structural opacity – in coalescing verbal and nominal properties and eliminating morphological marking of person, tense, and voice (Berman 1993a). These properties account for the low frequency of action nominals compared with their source verbs in everyday spoken usage as against in more elevated or formal communicative contexts and written language.

3. Gerunds

The next two sections deal separately with the two forms of the so-called *šem[^] ha-pó'al* or *makor*, distinguishing between gerunds (this section) and infinitives (§5). The term *gerund* here refers to the construction traditionally termed *makor natuy*, literally 'inflected infinitive', since verbs in this form are typically preceded by a preposition, generally the basic, morphologically bound *be-* 'in, at' or *im* 'with'.¹⁴ The *makor natuy* is labeled the "infinitive construct" by some Hebraists, since it is invariably a bound, not free form, obligatorily occurring in the bound genitive construct state [CS] form followed by a (pro)nominal or noun (e.g., respectively *be-mot[^]-o* 'in-die:CS-POSS.3SG.M = on his dying, at his death', *leaxar mot[^] ha-mélex* 'after die:CS DEF-king = after the dying of the king ~ after the king's death' (see Chapter 14 on Genitive Constructions).

For these reasons (see §2 and details in Berman 1973, 1978a: 287–314), MH 'gerunds' are distinct from both absolute infinitives and from 'canonic infinitives'

14. The gerundive form occasionally occurs without a preceding preposition (e.g., *barux šuv-ex* 'blessed return.GER-POSS.2SG.F' = 'blessed be your return(ing)', *bo-o hiftá otánu* 'come.GER-POSS.3SG.M surprised us' = 'his coming surprised us'). This occurs mainly when the Action Nominal form is preempted in actual usage, e.g., *šiva* 'return.VNOM' of the same verb is largely reserved to the set expression of *šiva -t[^] ciyon* 'return.VNOM-CS Zion' = 'the return of ~ to Zion', while the Action Nominal form of the verb *ba* (root b-w-ʔ) 'come' *bia* is used mainly either in the set expression *bia-t[^] ha-mašíax* 'come:VNOM-CS the-Messiah' = 'the coming of the Messiah' or in the sense of 'copulation'.

(§5 below). Historically, as shown in Table 1, in contrast to their frequent and multifunctional occurrence in Biblical Hebrew, gerunds were largely replaced by the more noun-like *šem peula* ‘action nominal’ in Mishnaic Hebrew, while they are syntactically, semantically, and functionally highly restricted in current usage.

Syntactically, gerunds are unique in being obligatorily *bound* forms, confined to constructions of the surface form PREP+GERUND^(PRO)NOUN, where the post-posed (pro)nominal is morphologically bound to the gerund in construct case form, and the Subject of its finite counterpart is syntactically post-posed with intransitive verbs (e.g., *bo-o*^ ‘come:GER-CS.3SG.M ‘coming his’ is a gerundive form of *hu ba* ‘he came’).¹⁵ This is illustrated in the examples below – from an article in the *Haaretz* daily, dated 22.07.2016 (18); from a spoken account of a personal experience by a male graduate student (19); from an essay on interpersonal conflict written by another student (20); and from a woman graduate student in the humanities, writing on the same topic (21).

- (18) *be-vošv*^*-énu* *ke-xaverim be-vaada-t*^ *ha-mišne ...*,
 in-sit:B1.GER-CS-POSS.1PL as-friends in-committee-CS DEF-minor ...
nexsaf-nu *le-ha'alavot ve-gidufim*
 expose:B2.PASS.PST-1PL to-insults and-abuses
 ‘While (we were) sitting as members of the sub-committee ..., we were exposed to insults and abusive language’
- (19) *be-heyot*^ *i* *xélek mi-kvuca ktana ... nigáš-ti im*
 in-be:GER-CS-1SG.POSS part from-group small ... enter-PST.1SG with
šear^ *ha-muamadim ...*
 rest:CS DEF-candidates ...
 ‘Being part of a small group, I took (the exam) with the other candidates’
- (20) *be-vo*^ *enu* *la-dun be-nose ze,*
 in-come:B1.GER- POSS.1PL INF-discuss:B1 in-topic this,
a-vakeš txila ...
 FUT.1SG-ask:B1 first ...
 ‘in setting out to discuss this topic, I would first like to ...’
- (21) *ha-beayot kayamot ben bney-adam mi-yom*^
 DEF-problems exist between people from-day:CS
hivald^*-am ve-ad mot*^*-am*
 be.born:B2.GER-CS-POSS.3PL.M and-until die:B1.GER-CS-POSS.3PL.M
 ‘Such problems exist between human beings from the day of their being born till the day of their dying’

15. The single exception to the few occurrences of gerunds in a large corpus of spoken and written texts (§1.2) occurred in the fixed expression *li-vli heker* ‘to- without know:B3.GER = beyond recognition’ in a graduate student’s essay on the changes wrought by technology.

4. Infinitives

The commonest form of verbal noun in MH, traditionally labeled *šem^h ha-póal* ‘name (of) the verb’, corresponds largely to the category of infinitive in SAE. However, given the lack of grammaticized mood and aspect and the paucity of nonfinite verb-forms in current use, the Infinitive is multifunctional in MH, fulfilling many purposes relating to irrealis mood and nonfiniteness (Berman 2014) as well as to discourse connectivity (Berman 2018).¹⁶ And Hebrew infinitives have few genuinely nominal properties, in contrast to both the Gerund and the Action Nominal.

Morphologically – unlike the infinitive-marking suffixes in Germanic and Romance languages – Hebrew infinitives are identified uniquely by a prefixal *l-* ‘to’ (e.g., *li-gdol* ‘to-grow’, *la-xšov* ‘to-think’, *le-daber* ‘to-talk’) attached to the same stem as verbs in future tense. Alternations between the vowel preceding the stem of such forms are governed by morpho-phonological factors relating to the *binyan* pattern and the root-initial consonant, as illustrated in Table 3.

Table 3. Alternations in vowel preceding the stem of infinitives in MH

a.		
Binyan	g-d-l ‘grow’	k-t-b ‘write’
B1 <i>pa'al</i>	<i>ligdol</i> ‘to grow (INTR)’	<i>lixtov</i> ‘to write’
B3 <i>hif'il</i>	<i>lähagdil</i> ‘to enlarge’	<i>lähaktiv</i> ‘to dictate’
B4 <i>pi'el</i>	<i>lögadel</i> ‘to grow (TRANS)’	<i>laxatev</i> ‘to address’
B5 <i>hitpa'el</i>	<i>lähitgadel</i> ‘to boast’*	<i>lähitkatev</i> ‘to correspond’
b. Root-initial historical gutturals [of verbs in B1 <i>pa'al</i> binyan]		
<i>ayin</i>	<i>laavod</i> ‘to work’	<i>laasot</i> ‘to do, to make’
<i>het</i>	<i>laxšov</i> ‘to think’	<i>laxtom</i> ‘to sign’
<i>heh</i>	<i>laharog</i> ‘to kill’	<i>lahafox</i> ‘to turn’
<i>alef</i>	<i>leexol</i> ‘to eat’	<i>leesof</i> ‘to collect’

* This form is confined to liturgical, Aramaic-based texts.

Apart from these morpho-phonologically governed alternations, infinitives are invariable and non-inflected. The single exception is with verbs that take a direct object, which allow alternations between forms with bound pronominal suffixes and free accusative-form pronouns. Compare the bound forms in the following examples marked (i) for the bound form versus (ii) for their analytical alternatives: (i) *li-rot-énu* ‘INF-see:B1-ACC.1PL’ vs. (ii) *li-rot ot-ánu* ‘INF-see:B1 ACC-1PL’

16. In this, MH differs from colloquial Arabic, which lacks a corresponding form marking the category of infinitive (Laks & Berman 2014).

both meaning ‘to-see us’; (i) *le-hargi-o* ‘INF-soothe:B3-ACC.3SG.M’ vs. (ii) *le-hargia ot-o* ‘INF-soothe:B3 ACC-3SG.M’ both meaning ‘to-placate him’ (see Chapter 8 on Inflection). The bound and analytic forms of accusative marking are largely synonymous, but the former occurs mainly in more formal registers, it is a highly variable system dependent on the syllabic structure of the verb, and untutored non-language specialist speakers are not always sure how to construct the normative forms of a verb plus bound accusative suffix (Cahana-Amitay & Ravid 2000; Kaplan & Berman 2015; Schiff, Ravid, & Levy-Shimon 2011).

Syntactically, a nominal property of infinitives is that they can serve as grammatical subjects – typically of copular clauses – in cases of syntactic extraposition of a complement. In such environments, however, they are less fully nounlike than Action Nominals, since they cannot be pronominalized by a personal pronoun, but only by the more generically impersonal, propositional term *ze*. This is illustrated in the examples in (24), taken from Halevy (2007).

- (24) a. (Halevy 2007: 67)
li-yot saxir ze be'emet lo harbe késef
 INF-be salaried it really not much money
 ‘To be a salaried employee is really not much money ...’
- b. (Halevy 2007: 67)
le-vaker oto ba-bayit ze yiheye ha-davar ha-naxon la-asot
 INF-visit him in.DEF-house it will.be DEF-thing DEF-right to-do
 ‘To visit him at home would be the right thing to do’

The fact that infinitival surface subjects can be pronominalized uniquely by *ze* ‘it, this, that’ in present tense copular constructions underlines their verbal or predicative status. Unlike personal pronouns in Hebrew, which require gender and number agreement with their subject, the invariable *ze* is typically not strictly referential, pronominalizing entire propositions rather than expressions that refer to nominal entities, concrete or abstract (see Ariel 1998; Berman 1978b; Halevy 2006; and, from different perspectives, analyses of Hazout 1994; as well as Chapter 9 on Parts of Speech).¹⁷ In this, too, infinitives contrast with Gerunds, which rarely occur as subjects, as well as with Action Nominals, which can be pronominalized like fully referential nouns by personal pronouns with gender-agreement like *hu* ‘he’ or *hi* ‘she’ (Berman 1978a: 289, 365).

17. Compare, for example, the constructed examples:

toda al ha-aruxa. hi hayta te'ima meod. ‘Thanks for the meal:F. She was:F tasty:F very.’
toda al ha-aruxa. ze haya ta'im meod. ‘Thanks for the meal. It was:M tasty:M very.’

In (i), the speaker is specifically referring to the meal, using a feminine personal pronoun to agree with the feminine gender of the noun. In (ii) the speaker neutralizes the factors of gender and specificity to refer to the entire event of the meal and everything that went with it.

Infinitives also occur in *multifaceted* syntactic environments with varied discourse functions in MH, serving key roles both in VP expansion and in clause-combining connectivity, with two independent analyses (Cohen 2013: 211–220; Mor 2019) describing shifts in use of the infinitive as early as the Second Temple period, from a “subordinated adverbial form to the independent modal infinitive” (Cohen 2013: 211). One reason is the relative paucity – in fact the almost entire lack – of other *nonfinite* verbs in the language, specifically Gerunds and Participles. As demonstrated in § 4, Gerunds are highly restricted in meaning and use in current Hebrew. And the classically Participle-like function of *benoni* in Biblical Hebrew (Givón 1977; Goldfajn 1998; Gordon 1982) has been largely replaced in MH. Today, use of *benoni* ‘intermediate’ as a nonfinite verb form confined to two largely formal contexts: (i) In small clauses complementing verbs of perception and discovery, rare in conversational or oral narrative usage (Berman & Neeman 1994), and often replaced (non-normatively) by Infinitive forms;¹⁸ and (ii) use of *benoni* in adverbial clauses expressing attendant circumstances is likewise marginal in current usage, confined largely to literary contexts (Dubnov 2015). A lone exception in the oral data-base used here (§ 1.2) occurred in an adolescent’s narrative: *hem himšixu le-harbic lo, bixlal lo sam-im lev še-ha-mexanéxet nixnesa* ‘they continued to-hit him, at.all not put:B1.PRS.-3PL.M heart that-the-teacher entered = without paying any attention at all to (the fact that) the teacher had come in’. In today’s Hebrew, *benoni* forms in such contexts are largely replaced by tensed subordinate clauses, with *benoni* Main Clause verbs serving primarily as a counterpart to the finite Past and Future tense paradigms for expression of present time, and functioning only marginally as elements whose temporal interpretation is dependent on that of an associated finite clause.

These changes over time combined with the relative paucity of *nonfinite* alternatives (gerunds or *benoni* participles) highlight the shift in MH to reliance on Infinitive forms of the verb as the favored means of expressing nonfiniteness in current usage. Below, the varied functions of Infinitives range demonstrate increasing syntactic complexity, from lone isolated clauses to elaborate strings of clause-combining nonfinite subordination and coordination. Unless otherwise indicated, examples are taken from authentic texts elicited from educated native speakers of Israeli Hebrew.

The syntactically least complex use of Infinitives occurs in isolated “simple” clauses of two kinds. One is as a colloquial, non-inflected form of *Imperative mood*,

18. This shift is illustrated in Chapter 7 on Inflection, where – in an example taken from a contemporary novel – the verb in a small clause following the copular-type verb ‘remain’ takes the Infinitive form *nišár-nu la-šévet* ‘we-remained to-sit’ in place of the prescriptive, formally preferred *benoni* Participial form *nišár-nu yošv-im* ‘we-remained sit:PRS-PL.M’ in the sense of ‘we remained seated, stayed sitting’.

for expressing orders, requests, and prohibitions – as in the examples in (25) from mothers' input to their toddlers (Lustigman 2012).

- (25) a. *axšav li-šon!*
 now INF-sleep:B1
 'Now (it's time to go) to sleep'
- b. *le-exol yafe!*
 INF-eat:B1 nicely
 'Eat nicely = don't mess'
- c. *lo li-cok!*
 not INF-shout:B1
 'Don't shout'

A second case of isolated infinitives, mainly in spoken interaction, occurs by a process of “*insubordination*” (Evans 2007; Evans & Watanabe 2016), where clauses that the grammar ostensibly requires to be dependent are used on their own, as syntactically (if not discursively) autonomous nonfinite constructions. Examples are given below in (26) from a mother's input to her daughter Rotem (aged 2;1); from a conversation between two linguistics students in an interview setting in (27); and from an example of spoken usage that Halevy (2007: 68) terms “direct speech” in (28).

- (26) Mother: *ma la-asot la-nadneda?*
 what INF-do to.DEF-swing?
 'What to do = what should I do with to the swing?'
- Rotem: *lator = la-acor*
 INF.stop = to-stop:B1
 'stop (it) = you should stop it'
- (27) A: *az lama le-maase avar-ta?*
 so why to-fact move:B1.PST-2SG.M
 'So why did you in fact move?'
- B: *le-hakir anašim xadašim ve-li-yot be-xevra xadaša*
 INF-know:B3 people new:PL and-INF-be:B1 in-company new:F
 'To get to know new people and get into a new crowd'
- (28) *lama lo li-nsoa derex kviš^ ha-bik'a? yoter kacar mi-šam*
 why not INF-travel via road:CS DEF-valley? more short from-there
 'Why not to-go [=take] the Valley Road? It's shorter from there'

The examples in (26) to (28) are of infinitival clauses that are syntactically independent, lone clauses, but discursively they are embedded in a conversational context that provides them with the “missing” information. They constitute an interesting shift in current Hebrew usage which warrants further investigation (and

see Maschler 2018 on related, finite-verb constructions introduced by the subordinator *še-* ‘that’).

The remaining types of infinitival occurrences depicted below are all non-autonomous or “contingent”, that is, they depend for syntactic wellformedness and/or semantic interpretation on a tensed element that precedes them (in Clause-Internal constructions) or on an associated (preceding or following) finite clause. The examples in (29) to (31) below illustrate a particularly common use of Infinitives in *Clause-Internal “Extended Predicate”* (*nasu murxav*) constructions involving a tensed verb or verbal operator followed by an infinitive, or occasionally a participle. Azar (1977) and Blau (1966) note instances such as: (modal) *atid la-léxet* ‘(is) future (= due) to-go’, *asuy la-léxet* ‘(is) likely to-go’, *alul la-léxet* ‘(is) liable to-go’, *carix la-léxet* ‘must ~ has to-go’, *omed la-léxet* ‘stands (= is) about to-go’, *hitkaven la-léxet* ‘meant to-go’ and (aspectual) *hitxil la-léxet* ‘started to-go ~ walk’. The same label is used by Hebraists for a distinct construction, an auxiliary verb formed with the past tense form *haya* of the verb ‘be’ followed by a *benoni* intermediate form participle – e.g., *haya boxe* literally ‘was crying’, in the conditional sense of ‘would cry’ or the aspectual sense of habitual ‘would ~ used to cry’ (Berman 1980a; and see, too, fn.17). Here, rather, concern is with cases where infinitives serve as complements of tensed verbs or verbal operators, termed variously “predicate complement constructions” (Bloom, Tackeff & Lahey 1984), “complement-taking verbs” (Diessel 2004), or “complex VPs” (Givón 2009).

Numerous classes of semantic “triggers” serve as tensed precedents to infinitives in this type of construction. The commonest identified in our corpus were modal (like *yaxol* ‘can, be able to’, *carix* ‘must, have to’), aspectual (*hitxil* ‘begin’, *himšix* ‘continue, go on’), and affective or attitudinal (*ohev* ‘like’, *nehene* ‘enjoy’). More elevated, formal register alternatives in these three semantic classes are illustrated from in (29) to (31) below.

- (29) Modal:
- a. *ešar le-taken*
‘(it’s) possible to fix’
 - b. *hayiti amura la-avod*
‘I was supposed to work’
 - c. *aléxa li-lmod*
‘(it’s incumbent) upon you to learn’
 - d. *nitan li-rot*
‘(it’s) given to see = one can see’

Extended predicates are analyzed here as clause-internal, since the tensed trigger serves to modulate the predicate, rather than to constitute a separate situation (state, event, or activity), so warranting the status of a single “clause” in Hebrew as in other

languages (see Berman & Slobin 1994: 660–664). These constructions provide by far the commonest means of elaborating on the VP in MH, as a language lacking in grammatical auxiliaries (apart from the *haya* + *benoni* construction noted earlier). They occur from as young as age two years (mainly with the modal verb *roce/roca* ‘want:PRS.M/want:PRS.F’), and are common at all levels of usage, colloquial and literary, written and spoken. They also occur in *stringing* constructions, where two or more infinitives follow one another consecutively, for example: *hu raca le-hafsik le-xapes* ‘he wanted to-stop to-search = to stop searching’, *hem hexlitu le-hamšix le-nasot li-mco pitaron* ‘they decided to-continue to-try to-find (a) solution’.

Intermediate between clause-internal and clause-combining occurrences of infinitives are constructions with the surface form *Tensed Verb* + *Object* + *Infinitive*. These are illustrated in (30a) to (30c) from spoken narrative and expository texts, with clause boundary marked by a square bracket].¹⁹

- (30) a. *amárti lo] le-hafsik le-hacik la*
I.told to.him] INF-stop:B3 INF-bother:B3 to.her
‘I told him to stop bothering her’
- b. *ha-marce daraš me-itánu] le-hagiš et*
DEF-lecturer demanded of-us] INF-submit:B3 ACC
ha-avodot ba-zman
DEF-works in.DEF-time
‘The lecturerer demanded of us to submit [= that we submit] our papers on time’
- c. *seruv-o garam le-xul-am] la-xšov al ha-kol me-xadaš*
refusal-his caused to-all-of.them] INF-think:B1 on DEF-all from-new
‘His refusal caused everyone to re-think everything’

Such constructions, sometimes termed “small clauses”, are typically introduced by *verba dicendi* as in (30a), (30b), or by verbs of causation or enablement (30c), and their objects are typically but not necessarily pronominal, as in (31) from a picturebook narrative.

- (31) *ha-yéled amar la-kélev šelo] le-hizaher me-ha-dvorim*
DEF-boy said to.DEF-dog his] INF-take.care:B2 from-DEF-bees
‘The-boy told his dog to be careful of the bees’

19. These constructions, termed “nexus objects” by Jespersen (1922), are a matter of some controversy in current linguistics and in corpus-based analyses as to whether they belong to a single clause or represent two distinct clauses. The latter view is supported by the correspondence between non-finite infinitives and finite clauses introduced in Hebrew by *še*-‘that’, e.g., *amárti lo še-yafsik* ‘I told him that-FUT.3SG.M-stop:B3 = I told him (that) he should stop’ versus nonfinite *amárti lo le-hafsik* ‘I told him to-stop’.

Constructions like those in (30) and (31) share features of clause-internal infinitives, but do not comply with the “same subject” constraint where the object of the tensed clause is the implied subject of the infinitival. As a result, they are interpreted here as referring to two distinct states of affairs, so analyzed as separate clauses.

Another type of clause-combining infinitival constructions serve to express *non-finite Adverbial* subordination, commonly in in purpose clauses as in (32a) to (32c) as well as other Adverbial relations, alternatives in (33), comparison in (34) – all from different types of oral narratives.

- (32) a. *hu tipes al ha-ec] le-xapes et ha-cfardéa*
 he climbed on DEF-tree] INF-search:B4 ACC DEF-frog
 ‘He climbed the tree to look for the frog’
- b. *sovávti et ha-maxbéret] kdey li-vdok še-ze šeli*
 I.turned ACC DEF-notebook] in.order INF-test that-it mine
 ‘I turned the notebook over in order to check that it was mine’
- c. *betox ha-mišpaxa hu ha-xi xašuv] bišvil li-šmor al*
 inside DEF-family he DEF-most important] for INF-guard:B1 on
ha-lexidut šel-ánu
 DEF-unity of-us
 ‘Inside the family, he’s the most important for preserving our unity’

In the three purpose clauses, (32a) has no explicit marker, while in (32b) and (32c), the infinitive takes the preposition *kdey* ‘in order (to)’ and the more colloquial *bišvil* ‘for, so as (to)’, with *al mnat le-* ‘on sake to = in order to, for the sake of’ a more formal alternative. Examples (33) and (34) illustrate other types of infinitival Adverb clauses, substitutive and comparative respectively.

- (33) *higáti le-macav še] binkom le-hagid lo et ze] šaáliti oto]*
 I.reached to-state that] instead INF-say to.him ACC it] I.asked him]
im hu meunyan le-hamšix ...
 if he interested to-continue ...
 ‘I reached a situation where, instead of saying that to him, I asked him if he wanted to go on ...’
- (34) *la-šxena šel-ánu hayu minhagim megunim,] kmo li-zrok zével*
 to.DEF-neighbor of-us were habits despicable] like to-throw garbage
al xavley ha-kvisa šel-ánu
 on ropes DEF-laundry of-us
 ‘Our neighbor had despicable habits, like throwing garbage on our laundry lines’

These examples of infinitival Adverbial clauses in MH demonstrate a key feature of Hebrew infinitives: They are the only option (other than the highly restricted

Gerunds) for nonfinite verbs complementing a preposition – as in terms like *kdey* ‘in order (to)’, *bimkom* ‘instead (of)’, *kmo* ‘like’.

Yet another use of infinitives for nonfinite clause-combining occurs in various Complements constructions, traditionally termed “Noun Clauses”, and in Hebrew grammars known as *psukiyot tóxen* ‘content clauses’ (see Chapter 18). Infinitival complement clauses also take the form of embedded or indirect questions as in (35a) and (35b).

- (35) a. *ha-yéled šaal] efo le-xapes et ha-cfardéa šelo*
 DEF-boy asked] where INF-look ACC DEF-frog his
 ‘The boy asked where he should look for his frog’
 b. *hem lo yadu] ma la-asot im ha-šxena šelahem*
 they not knew] what INF-do with DEF-neighbor theirs
 ‘They didn’t know what to do with their neighbor’

Other nonfinite complements occur with infinitival clauses that are *complements of a copular clause* with a nominalized predicate, as in (36).

- (36) a. *ze haya be-axrayut-i] le-hagía ba-zman*
 it was in-responsibility-my] INF-arrive in.DEF-time
 ‘It was my responsibility to arrive on time’
 b. *lo hayta ešarut] la-avor la-cad ha-šeni*
 not was possibility] INF-pass to.DEF-side DEF-other
 ‘There was no chance of crossing to the other side’

Infinitival clauses thus serve an array of Complementizing functions, although in this capacity, unlike with Adverbials, speakers appear to prefer finite, tensed subordination – a suggestion which needs to be empirically validated.

The final type of syntactic bi- or multi-clausal environment based on infinitives are *coordinating constructions*, of the kind illustrated in (37) from talks given by 9-year-olds on the topic of “problems at school”.

- (37) a. *ha-more carix la-azor la-talmid] ve*
 DEF-teacher must INF-help:B1 to.DEF-student] and
le-hasbir lo] ...
 INF-explain:B3 to-him] ...
 ‘The teacher should help the student and explain to him ...’
 b. *ha-more asur lo li-cok al yeladim] ve*
 DEF-teacher forbidden DAT.him INF-shout:B1 on children] and
le- ... le-haxzik otam] ve la-káxat otam la-mnahel] ...
 INF- ... INF-detain:B3 them] and INF-take:B1 them to.DEF-principal
 ‘Teachers shouldn’t be allowed to yell at kids and keep them in and take them to the principal’

- c. *asur le-haatik eh yeled mi-yeled] gam lo la-tet*
 forbidden INF-copy:B3 er child from-child] also not INF-let:B1
le-haatik] lo la-xlom be-mivxanim] éla la-asot et
 INF-copy.B3] not INF-dream:B1 in-tests] but INF-do:B1 ACC
ze ...] keilu ata ose mivxan]
 it ...] as.if you do test
 ‘It’s forbidden for one kid to copy from another, nor to let them copy
 (should they be allowed to copy), or dream during tests, but you should
 do it as if you are taking a test’

These excerpts from schoolchildren’s oral expositions – particularly the extended text in (37c) – demonstrate the following structural features of MH infinitival clause-combining coordination as a means of achieving textual connectivity.

- i. When infinitival clauses are joined by coordination, the marker *le-*, *li-*, *la* is invariably repeated, never omitted, as a totally obligatory element of the infinitival construction in Hebrew.
- ii. The default, commonest means of coordinating infinitives like other syntactic elements in Hebrew, clausal or phrasal, is by the basic coordinating conjunction *ve-* ‘and’ (Berman 1996).
- iii. Other coordinating conjunctions include alternative *o* ‘or’ (Ariel 2016) and adversative *aval* ‘but’ (Dascal & Katriel 1977). Example (37c) includes a sophisticated type of coordination in use of conjunctions corresponding in meaning to the correlatives ‘neither ... nor’, where *éla* serves in a negating or exclusive sense of ‘but’ in contrast to the more neutral term *aval* for ‘but’ similarly to German *sondern* vs. *aber* (Kail & Weissenborn 1984).
- iv. Where more than two infinitival clauses are combined by coordination, tight cohesiveness is achieved by the strategy of “stringing” or “chaining” that is of joining one clause after another without any overt marker except in the final conjunct, as in (38).

This paratactic style of coordinated stringing of infinitival clauses is by no means confined to juvenile or colloquial usage, as in (38), the opening of a woman’s talk on interpersonal conflict, with infinitives bolded, followed by a free translation.

- (38) *beayot ben bney adam novot mi-sibot šonot] ve mi-écem tivo šel*
ha-adam] la-riv] le-hitvakéax] le-hitpalmes] le-hitxašben] ve-le-kane
 ‘Problems between human beings stem from different reasons and from the very nature of man to quarrel, to argue, to dispute, to keep score and to be jealous’

The excerpt in (38) shows that stringing of coordinated infinitival clauses is an accepted rhetorical strategy in Hebrew, since the speaker is a graduate student in

literature, and several of the verbs she strings together are in high register. The excerpt in (39), from another graduate student's talk on conflict is also replete with infinitives, packaged together in no fewer than *nine* consecutive clauses, the bulk of which are coordinated – except for the main clause in (39a), the complement clause in (39c), with two present-tense clauses complementing a clause with a string of two infinitives – (39e) and (39f). The dots at the end of each free translation indicate that the next clause is part of the same text.

- (39) a. *meod meod xašuv le-lamed otánu*
 very very important INF-teach:B4 us
 'It is very very important to teach us' ...
- b. *ve-gam kol exad beécem li-lmod beacmo*
 and-also all one in.fact INF-learn:B1 by.himself
 'and also (for) each one in fact to learn by himself' ...
- c. *le-hakšiv la-xaver šelo*
 INF-listen:B3 to.DEF-friend his
 'to listen [= attend] to his friend (classmate)' ...
- d. *le-nasot la-xšov]*
 INF-try:B4 INF-think:B1]
 'to try to think' ...
- e. *ex ha-xaver xošev*
 how DEF-friend think:B1
 'how his friend [= the other person] thinks' ...
- f. *le-nasot le-havin]*
 INF-try:B4 INF-understand:B3]
 'to try to understand'
- g. *me-efo hu magía*
 from-where he (is) coming
 'where he comes from' ...
- h. *ve-az ulay le-hacliáx le-šader be-oto gal*
 and-then maybe INF-succeed:B3 INF-transmit:B4 on-same wavelength
 'and then maybe we will succeed to transmit on the same wavelength' ...
- i. *ve-li-mnóa hamon beayot benénu*
 and-INF-prevent:B1 lots.of problems between.us
 'and to prevent lots of problems between us' ...

The passage in (39) highlights the pervasiveness of infinitives as a means of paratactic textual connectivity in Hebrew, while by no means demoting reliance on finite subordination, typically by the multifunctional conjunction *še-* 'that' (see Chapter 18). Of relevance in the present context is that infinitives play an important role in creating discourse connectivity in MH, serving as a favored, and

increasingly as the only, means of nonfinite coordination and subordination in MH, so assigning to them a nominal, sentential status not associated in Hebrew (or in SAE languages for that matter) with canonic, person- and tense-marked finite verbs. In this, MH seems to display some of the features of subordination in a language like Turkish, which typically takes the shape of “nominalized” non-finite clauses (Hennessy & Givón 2002; Lehmann 1988; Slobin 1995). A question that remains to be examined is the effect of text-type (genre, register, written or spoken) on relative frequency of finite clause-linkage versus non-finite coordination and subordination in MH where, as noted, the latter is increasingly confined to reliance on infinitival forms.

5. Comparing the structure and use of three verbal nouns in MH

This section starts with examples where different forms of the same verb are used in a single context; proceeds to consider possible renderings of a gerundive phrase from English; and concludes by summarizing properties of each of the three constructions.

In the excerpt in (40), a graduate student in the sciences giving a talk on violence in schools uses the same verb root *y-r-d al* ‘go-down on’ (in its slang sense of ‘bullying’) in three different inflected forms: infinitive *la-rédet*, action nominal *yerida*, participle *yored*.

- (40) a. *xélek me-ha-havay šel yeladim ... ze la-rédet al*
 part from-DEF-living of children ... it INF-go.down:B1 on
yeladim axerim
 children other
 ‘Part of kids’ way of life (at school) is to make fun of other kids’
- b. *ve-kol ha-yerida ha-zóti hi be-écem*
 and-all DEF-going.down:B1.VNOM DEF-that she in-fact
yocéret beayot
 creates problems
 ‘and all that kind-of making fun actually creates difficulties’
- c. *la-cad ha-yored*
 to.DEF-side DEF-go.down:B1.PTCP
 ‘to the side that’s making fun’

The example in (41) – repeating (16) above – shows use of infinitives in a talk on interpersonal conflict.

- (41) a. *efšaruyot ex le-nasot le-hitalem mi-beayot*
 possibilities how INF-try:B4 INF-ignore:B5 from-problems
 ‘possible ways of how to try to ignore problems’
- b. *kmo le-tatot (sic) otam mitáxat la-šatíax,*
 like INF-sweep them under DEF-carpet
 ‘like sweeping them under the rug’
- c. *le-fatéax or šel pil ve-xadome*
 INF-develop:B4 skin of elephant and-likewise
 ‘developing a thick skin and so forth’

The three-clause excerpt in (41) contains four infinitives, one of which is in a non-normative form – the infinitive of the B4 *pi’el* verb from the root t-t-? ‘sweep’ should be *le-tate* and not *le-tatot*, as common in colloquial usage. Compare this with use of action nominals in the essay written by the same man on the same topic in (42), the same as (17) above.

- (42) a. *šitot axerot yafot hen titu šel beayot el*
 methods other good they sweeping:VNOM.B4 of problems to
mitáxat la-maxcélet
 under to.DEF-mat
 ‘Other good ways are sweeping problems under the carpet’
- b. *himaltut mehira me-imut yašir*
 escaping:B2.VNOM quick from-confrontation:B4.VNOM direct
 ‘swift escaping from direct confrontation’
- c. *himanut mi-mabat yašir mul eyney ha-yariv*
 avoidance:B2.VNOM from-look direct against eyes DEF-opponent
be-et^ sakana
 in-time:CS danger
 ‘avoiding a direct look into the eyes of your opponenet in time of danger’
- d. *ve-cimúax šel or ave ke-šel pil*
 and-grow:B4.VNOM of skin thick as-of elephant
 ‘and growing a skin as thick as an elephant’s’

As noted earlier, across 40 different texts in the corpus analyzed, VNOMS were far commoner in written than spoken texts, but this disparity was less marked for infinitives, as follows: Written texts – 58 VNOMS / 113 INFS out of total 437 clauses; oral texts – 44 VNOMS / 175 INFS out of total 437 clauses. That is, infinitives were far more frequent than action nominals (let alone gerunds) across the sample.

To give a sense of the the structure and use of the three nominalized forms discussed above, consider possible translations of the title of Herbert Clark’s (1996) book “Using Language” in (43):

- (43) a. VNOM
ha-šimuš ba-safa
 DEF-use:B4.VNOM in.DEF-language
 ‘the use of language’
- b. GERUND
be-šameš ~ be-hištameš ba-safa
 in-use:B4.GER ~ in-use:B5.GER in.DEF-language
 ‘in using language’
- c. INF
le-hištameš ba-safa
 INF-use:B5 in.DEF-language
 ‘to use ~ make use of language’

The version in (43a) with an action nominal is well-formed and acceptable at all levels of usage, but it fails to convey the active, verb-like sense intended by the author of the English original, since it abstracts away from the actual activity of how language is used to perform actions. Besides, the accepted form of the action nominal *šimuš* ‘use, usage’ has the morphological form of B4 *pi’el* action nominals (see Table 2 above), so neutralizing the B5 *hitpa’el* pattern in which the verb occurs in the sense intended here, of *le-hištameš be-* ‘to use in / to make use of’, whereas the B4 *pi’el* form of the verb *le-šameš* governing the dative preposition *le-* has the sense of ‘serve for’ a given purpose. The gerundive use in (43b), on the other hand, is both inappropriate and ungrammatical: inappropriate because it opens with a prepositional marking of circumstance that is obligatory in Hebrew but unnecessary in the sense intended in the English original; and ungrammatical since it does not include the obligatory bound subject suffix, here translated as ‘our’. In contrast, (43c), with the infinitive, is wellformed in this context, and it was favored by all three English-to-Hebrew translators consulted by the author of this chapter – even though the sense of the Hebrew form is still less active than that of the English original, since it has an irrealis flavor associated with infinitives in general, rather than the actively engaged sense of the English gerundive ‘using’.

Another solution suggested as a possible but less favored option by two of the three translators was to use an impersonal construction as shown in (44).

- (44) *mištamš-im ba-safa*
 use:B5.PRS-PL.M in.DEF-language
 ‘people use language’

In (44), a subjectless impersonal construction is used, with the verb in 3rd person masculine plural, conveying a generic sense of activity that seems best to convey the idea of the English gerundive (see Berman 2011; and see Chapter 15 in this volume). One objection is that it implies (human) agentivity (Berman 1980b), so

directing attention to the people doing the using rather than to the activity itself. These attempts at translation demonstrate how important it is to examine a given set of constructions in terms of how they interact and complement one another within a given system in a given language rather than in comparison to seemingly corresponding forms in other languages.

In sum, the three constructions in this chapter represent different levels of relative “nouniness”, with action nominals the most noun-like and infinitives the most verb-like. Second, all three share their morphological identity with the *binyan* verb pattern system, but *VNOMS* are less regular in form, combining both structural and semantic features of derivational as well as inflectional morphology. In contrast, gerunds and infinitives form part of the inflectional paradigms of MH grammar, since they are invariably derived from their source verb and its associated *binyan* in both form and meaning. Third, they differ markedly in usage and register, from *GER* > *VNOM* > *INF* as follows: Gerunds are constrained by complex morpho-syntactic strictures, they are semantically restricted to circumstantial adverbial senses (typically of temporal simultaneity), they occur rarely in everyday usage, and are confined to more formal contexts of written language, journalistic and expository rather than literary. *VNOMS* are categorially the most mixed of the three since, for example, they can occur both with the strictly nominal genitive marker *šel* and with the verbal accusative marker *et*. In usage, Action Nominals are relatively common although not entirely predictable in morphological form, and largely restricted to more formal usage, often replaced by finite subordinate clauses in less elevated contexts. Infinitives are *the* non-finite form of verbs par excellence in MH: They function in a widely varied range of syntactic constructions; they occur at all levels of usage, written and spoken, everyday and more formal; and they play a crucial role as a primarily paratactic means of clause-combining connectivity in contemporary Hebrew, from literary prose to interactive conversation.

6. Concluding notes

The chapter aimed at extending earlier structuralist characterizations of ‘verbal nouns’ in MH – action nominals, gerunds, and infinitives – by distributional and functional analyses based on authentic usage-based spoken and written sources. Hebrew emerges as rich in nominal derivation, in the sense of categorial shifts from verbs and adjectives to nouns (§1, §2). Its major means for converting main or subordinate clauses to nominalized phrases are by means of Action Nominals (§3), morphologically associated with the *binyan* pattern of their source verbs and syntactically mixed, displaying traces of their verbal origins along with fully noun-like properties. They are semantically dense and categorially opaque, since they

neutralize the properties of person, tense, and often voice, of their source verbs. And they are constrained to more formal, high-level usage, commoner in writing than in speech.

Gerunds (§4) are to this day classed together with Infinitives in traditional Hebrew language studies under the shared label of *šem^h ha-póal* ‘verbal noun’ or *makor* ‘source’, both formed from the same morpho-phonological stem as other irrealis forms (imperatives and future tense). Yet unlike the latter, gerunds reflect marked diachronic change. While pervasive in Biblical Hebrew, gerunds today are syntactically, semantically, and discursively highly restricted to more formal written language and a few set collocations, of little significance in colloquial Hebrew usage.

Infinitives (§5) are the least nounlike of the three verbal constructions, playing important roles in MH syntax and pervasive in usage. First, in a language which is lacking in grammatical marking of aspect and mood, Infinitives fulfil various irrealis functions including as colloquial imperatives. Second, Infinitives have taken over as the category par excellence for expressing non-finiteness in MH, in which the two other non-finite constructions (gerunds and *benoni* participles) have fallen largely into disuse for this purpose. Third, Infinitives play a role in fleshing out and elaborating on verb phrases in tensed clauses in a language that is almost entirely lacking in auxiliary verbs.

It thus emerges that MH has relatively restricted options for syntactic nominalization. As such, these constructions contrast markedly with the rich repertoire of *morphological* devices for deriving varied classes of nouns from verbs and adjectives, as detailed in Chapters 8 and 9.

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PART III

Syntax

Agreement alternations in Modern Hebrew

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Agreement is a type of relationship between two linguistic elements, often characterized as an asymmetric relationship where one element, the *controller*, determines the agreement features of another, the *target*, within a particular syntactic domain. Although according to prescriptive grammars, agreement relationships are stable and deterministic, usage-based data reveal considerable variation. Building on data retrieved from *heTenTen* 2014, a billion-token web-crawled Hebrew corpus, we present and discuss two types of agreement alternations: (1) agreement targets which alternate between exhibiting feminine vs. masculine gender, full vs. default agreement, and formal vs. semantic agreement, and (2) controller competition, where an agreement target is controlled by one of two possible controllers. Naturally, this perspective on agreement highlights the exceptions and overlooks the regularities, yet we argue that an examination of such alternations provides clues as to the true nature of the agreement relation.

1. Introduction

Agreement is a type of relationship between two linguistic elements. An often-cited definition is the one proposed by Steele (1978: 610): “The term agreement commonly refers to some systematic covariance between a semantic or formal property of one element and a formal property of another”. An alternative characterization views agreement as an asymmetric relationship where one element, the *controller* (also source or trigger), determines the agreement features of another, the *target*, within a particular syntactic domain (Corbett, 2006). This chapter adopts the terminology of the latter.

Agreement in Modern Hebrew is controlled by nouns and involves the *phi* features (person, number, gender) and definiteness. It occurs in two domains: the noun phrase (NP) and the clause. As such, the semantic and/or formal properties of the noun determine the formal properties of linguistic elements within the NP it heads, and within the clause of which it is the subject. Although according to prescriptive

grammars, agreement relationships are stable and deterministic, usage-based data reveal considerable variation. It is this variation which is the focus of this chapter.

The source of the usage-based data is *heTenTen 2014*, a billion-token web-crawled Hebrew corpus specifically created in order to serve as a useful tool for linguistic research and for the development of natural language processing (NLP) applications (Baroni et al. 2009). The texts included in the corpus were automatically obtained from the web and then filtered and cleaned. In addition, they were morphologically analyzed and disambiguated. The texts are all written, yet they run the gamut from formal edited texts to personal blogs and online questions and comments, so that they represent diverse styles and levels of usage.

The *heTenTen 2014* corpus is available on the Sketch Engine, a corpus query system (Adam Kilgarriff & Tugwell 2004).¹ The Sketch Engine's Corpus Query Language (CQL) provides a way of defining complex queries which target morphological features of words (e.g., POS, lemmas, clitics) and which make use of logical operators (AND/OR/NOT). These features are particularly important when the goal is to cast a wide net to retrieve variations in general, and in particular discontinuous elements and various morphological inflections. Nevertheless, a wide net comes at a cost. Not all the retrieved results are necessarily instances of the intended structure. Often, only a manual inspection of each result can weed out the false positives. For this reason, quantitative data is presented here only when it was found to be sufficiently reliable.²

The chapter is divided into four sections, each discussing a different type of agreement variation. Section 2 examines contexts where the *gender* feature of the targets varies between masculine and feminine. The agreement variation discussed in Section 3 is characterized by *agreement vs. no-agreement*, referring to contexts where agreement targets either exhibit full agreement or impersonal (or default) agreement. Section 4 focuses on particular classes of nouns that trigger two types of agreement properties on their targets: *formal agreement* and *semantic agreement*. While the first three sections discuss cases where there is variation with regard to the properties exhibited by the agreement target, the variation in the focus of section 5 is caused by *controller competition*, where an agreement target is controlled by one of two possible controllers.

1. <http://www.sketchengine.co.uk>.

2. The data presented in this chapter pertain to tokens only. The frequency counts are raw frequencies. Normalized frequencies (i.e., per million) can be obtained by dividing the raw frequency by 1,083.

2. Feminine–masculine alternations

2.1 Plural marking

Number in Modern Hebrew (MH) is generally marked on nominals (including adjectives and *benoni* participles) with one of two plural suffixes *-im* and *-ot* and, with a far more limited distribution, with the dual–plural suffix *-áyim*. (See Chapter 7 on Inflection). The suffixes *-im* and *-ot* are associated with masculine and feminine gender respectively. The correlation between suffix form and gender holds unexceptionally with participial or present-tense (*benoni*) verbs (*holx-im* ‘walk, walking-PL.M’, *holx-ot* ‘walk, walking-PL.F’) and adjectives (*yafim* ‘pretty:PL.M’, *yafot* ‘pretty:PL.F’) and generally with animate nouns (*morim* ‘teachers:M’, *morot* ‘teachers:F’). With common nouns, however, this is only a tendency (Ritter 1995; Schwarzwald 1991). Thus, for example, the masculine nouns *makom* ‘place’ is pluralized with the feminine suffix *-ot* (*mekomot* ‘places’) and the feminine noun with the feminine form *šana* ‘year’ appears with the masculine plural suffix *-im* (*šanim* ‘years’).

The phenomenon of gender-mismatched plural marking is, in fact, very common. Four of the 15 most frequent noun lemmas in the corpus exhibit gender-mismatched plural agreement. An additional noun, (*yadáyim* ‘hands’), is pluralized with the plural-dual suffix *-áyim*, which functions in this case as a plural marker (see §2.2). These five nouns are listed in Table 1.

Table 1. Nouns with gender-mismatched plural marking

Singular	Plural	
<i>šana</i> (F)	<i>šan-im</i>	‘year’
<i>dérex</i> (F)	<i>drax-im</i>	‘way’
<i>makom</i> (M)	<i>mekom-ot</i>	‘place’
<i>olam</i> (M)	<i>olam-ot</i>	‘world’
<i>yad</i> (F)	<i>yad-áyim</i>	‘hand’

Nouns with gender-mismatched plural marking exhibit variation with respect to the gender agreement that they trigger. Thus, although they mostly trigger agreement according to the (grammatical/natural) gender of the singular form, in some cases their targets exhibit agreement which formally matches their plural suffix. For a developmental analysis of children’s use of such cases, see Ravid & Schiff (2009).

Consider for example *mekomot* ‘places’, a high-frequency plural masculine noun with a gender mismatched suffix. In an overwhelming majority of cases this noun, as well as others like it, triggers masculine agreement on its targets. Nevertheless, there is a non-negligible number of instances where feminine agreement marking appears on agreement targets such as adjectival modifiers, predicates, or anaphors.

In (1a), for example, *mekomot* ‘places’ triggers masculine agreement on its numeric quantifier and masculine plural agreement marking on its modifier and anaphor.³ Note that although the controller and its adjectival target agree in their grammatical gender their plural suffixes are formally mismatched (*-ot* and *-im*, respectively). In (1b) the numeric quantifier agrees in gender with the target, *mekomot* ‘places’, yet the modifier and predicate are marked as feminine plural with the suffix *-ot*, which formally matches the suffix of their controller, but not its grammatical gender.

- (1) a. *zé-hu* *exad* ***ha-mekomot*** *ha-yexidim* *ba-olam*
 this-is:3SG:M one:M the-places:PL.M the-only:PL.M in.the-world
ba-hem *nitan* *lirot* *zeevim* *ba-téva*.
 in.the-them:3PL.M possible to.see wolves in.the-nature
 ‘This is one of the only places in the world where it is possible to see wolves
 in nature.’
- b. *pánama hi* *exad* ***ha-mekomot*** *ha-yexid-ot* *ba-olam*
 Panama is:3SG.F one:M the-places:PL.M the-only-PL.F in.the-world
ha-maci-ot *le-bealey*[^] *menayot* ...
 that-offer-PL.F to-owners:CS stocks ...
 ‘Panama is one of the only places in the world that offer stock owners ...’

A similar situation occurs with feminine nouns whose plural suffix is *-im*. One example is the high frequency feminine noun *dérex* ‘way’. In its plural form it mostly triggers feminine plural agreement on its targets (2a). There are, however, numerous instances where the targets exhibit masculine plural markings. Thus, in (2b) the existential particle *yeš* is suffixed with a masculine plural suffix, in contrast to (2a), where the suffix is feminine plural (see, further, §3.2). Moreover, the adjective in (2b) is marked with masculine plural agreement. Similarly, in (2c), the feminine plural controller triggers masculine plural agreement on the pronominal clitic on the question word *ma* ‘what’ and on the verbal predicate that heads its modifying relative clause.

- (2) a. *yeš-nan* ***draxim*** *noxot* *li-nsia* *ad* *la-agam*.
 be-3PL.F ways:PL.F convenient:PL.F for-driving until to.the-lake
 ‘There are convenient ways to drive to the lake.’
- b. *yeš-nan* ***draxim*** *tovim* *yoter* *lehitmoded*.
 be-3PL.M ways:PL.F good:PL.M more to.cope
 ‘There are better ways to cope.’
- c. az *ma-hem* ***ha-draxim*** *še-omdim* *li-ršuténu?*
 so what-3PL.M the-ways:PL.F that-stand:PL.M to-our.possession
 ‘So what are the ways available to us?’

3. In all the example sentences in this chapter, the relevant agreement controllers appear in boldface and their targets are underlined.

Gender agreement variation is by no means limited to nouns with gender-mismatched plural marking, yet the corpus data clearly show that this class of nouns exhibits a greater tendency to trigger both feminine and masculine agreement on their targets.

2.2 Dual-plural marking

The dual-plural suffix *-áyim* appears on a restricted class of nouns and is not productive, with only a small subset of such nouns being genuinely dual (see Schwarzwald 1996 for a detailed discussion of this suffix, and Toury 1992 regarding its productivity; see, too, Chapter 7 on Inflection). These include expressions of time such as *šaa-šaataáyim* ‘hour’, *yom-yomáyim* ‘day’, *šavua-švuáyim* ‘week’, *xodeš-xodšáyim* ‘month’, *šana-šnatáyim* ‘year’. Others are *nekuda-nekudotáyim* ‘dot’, *gereš-geršáyim* ‘quotation-mark’, and *koma-komotáyim* ‘story = floor’. True duals stand in opposition to the singular and plural forms and cannot be quantified by numerical quantifiers (e.g., **arba šaatáyim* ‘four two-hours’). Although some nouns can be marked for duality, there are no dual forms in the inflectional paradigms of other parts of speech, so true duals trigger plural agreement on their targets.

Alongside true dual nouns, there are also *pseudo-duals*, which are marked with the dual suffix but denote plural nouns. Unlike genuine dual nouns, these can be modified by all numeric quantifiers (e.g., *arba yadáyim* ‘four hands’). Pseudo-duals fall into different categories: body parts which come in pairs (e.g., *enáyim* ‘eyes’, *oznáyim* ‘ears’), objects which come in pairs (e.g., *naaláyim* ‘shoes’, *garbáyim* ‘socks’, *magafáyim* ‘boots’), *plurale tantum* nouns (e.g., *ofanáyim* ‘bicycle’, *mixnasáyim* ‘pants’) and others (e.g., *šamáyim* ‘sky’, *máyim* ‘water’, *cohoráyim* ‘noon’).

Most dual body-part nouns are feminine nouns that trigger feminine plural agreement. There are however a number of masculine body-part nouns which appear with the plural marker *-áyim* and exhibit variability with respect to the gender marking that they trigger. One such case is *gaf-gapáyim* ‘limbs’, a masculine body-part noun which is modified predominately by feminine adjectives (86% of the occurrences).⁴ For example, there are 25 occurrences of *gapáyim elyonot* ‘upper:PL.F limbs’ and only five of *gapáyim elyon-im* ‘upper:PL.M limbs’.

A tendency to trigger variable gender agreement also occurs with *plurale tantum* nouns that appear with the *-áyim* suffix. The most frequent are: *ofanáyim* ‘bicycle’, *mixnasáyim* ‘pants’, *moznáyim* ‘scales’ and *sográyim* ‘parentheses’. The

4. Interestingly, the corpus data reveal that a more frequently used singular form of *gapáyim* ‘limbs’ is the feminine-marked *gapa* ‘limb’, whereas the masculine *gaf-gapim* is reserved for administrative and military units. This suggests a back-formation process, since the affixation of *-áyim* to a feminine form involves the insertion of *t* (e.g., *safa-sfatayim* ‘lip/s’).

singular forms of these nouns are rarely used.⁵ However, when they are used, they are invariably masculine (*ofan*, *mixnas*, *sogar*). Nevertheless, *plural tantum* nouns trigger both feminine and masculine agreement. Approximately 30% of the adjectives which modify *ofanáyim* ‘bicycle’ are feminine, although its singular counterpart *ofan* is clearly masculine, albeit very infrequent. For example, the phrase *ofanáyim xašmaliy-im* ‘bicycle electric-PL.M’ occurred 1,811 times in the corpus, while *ofanáyim xašmaliy-ot* ‘bicycle electric-PL.F’ was found 997 times. Consider sentence (3), where *ofanáyim* ‘bicycle’ triggers feminine plural agreement on its modifiers and on the verb which heads the relative clause that modifies it.

- (3) *yeš ofanáyim xašmaliyot mitkaplot še-nitanot le-hovala*
 be bicycle:PL.M motorized:PL.F folding:PL.F that-capable:PL.F to-transport
be-rexavim ciburiyim.
 in-vehicles public
 ‘There are folding electric bicycles that can be transported on public vehicles.’

A similar ratio was found with regard to the gender of adjectives modifying the masculine plural noun *magafáyim* ‘boots’ (697 masculine plural adjectives vs. 291 feminine plural adjectives).

The singular form *magaf* ‘boot’, however, almost invariably triggers masculine agreement, with less than a handful of cases where it is modified by a feminine adjective. Consider the example in (4), where the plural form triggers feminine plural agreement on its modifier and predicate, while the singular form triggers masculine singular agreement on its modifier.

- (4) *ha-xevra yaca be-digmey^ magafáyim gvohot*
 the-company came.out with-designs:CS.PL.M boots:PL.M tall:PL.F
še-mitparkot le-magaf namux
 that-collapse:PL.F into-boot:SG.M short:SG.M
 ‘The company came out with designs for tall boots that collapse into short ones’

2.3 Numerals and gender agreement

The cardinal numerals between 1–10 and those ending with one of them (e.g., 109, 310) have both feminine and masculine forms (e.g., *axat-exad* ‘one:F-one:M’, *šaloš-šloša* ‘three:F-three:M’). The numerals for tens, hundreds, etc. have a fixed form (e.g., *šlošim* ‘thirty’). In addition, the cardinal numerals have two forms: absolute (free) and construct (reduced/bound). Absolute numerals quantify indefinite NPs, while definite NPs appear with construct numerals. The four forms of the numeral 4 with the feminine/masculine nouns *morot/morim* ‘teachers’ appear in Table 2.

5. In fact, *moznáyim* ‘scales’ does not even have a singular form.

Table 2. The cardinal numeral four by gender and status

	Absolute numeral	Construct numeral
Feminine noun	<i>arba morot</i>	<i>arba^ ha-morot</i>
Masculine noun	<i>arbaa morim</i>	<i>arbaat^ ha-morim</i>

Gender distinction in the number system is the best-known example of deviations from norms in Modern Hebrew (Gonen & Rubinstein 2015; Meir 2005, 2013; Ravid 1995b). According to Meir (2005), to the chagrin of many, particularly educators and normativists, the distinction between feminine and masculine numerals in current-day Hebrew is gradually disappearing, despite intensive instruction at school. Meir cites the phrases *xameš šékel* ‘five:F shekel:M’ and *šaloš šavuot* ‘three:F weeks:M’ as examples of deviant forms, which are becoming widespread among large segments of society. The following sections examine the agreement patterns exhibited by the cardinal numerals, based on usage data retrieved by comprehensive corpus searches.

2.3.1 Preliminary definitions

Certain methodological limitations need to be specified to start with, deriving from morphological and orthographical issues that have a negative impact on the quality of the annotation produced by the automatic morphological analyzer. First, the phonological difference between the feminine numeral 8 (*šmone*) and its masculine counterpart (*šmona*) is not reflected in the Hebrew orthography. Consequently, the automatic morphological analyzer does not reliably recognize the gender of the written numeral. For this reason, the numeral 8 is excluded from the analysis. Second, there is no orthographic (or phonological) difference between the absolute and construct forms of the feminine numerals (see Chapter 14 on Genitive Constructions).⁶ This too causes inconsistencies and erroneous tags with regards to the status (i.e., absolute or construct) of the numerals. Consequently, in order to reliably and consistently distinguish between the two numeral types, the status assigned to numerals by the automatic analyzer is ignored. Instead, the following definitions are adopted:

Absolute numerals are cardinal numerals followed by absolute indefinite nouns (e.g., *arbaa morim* ‘four teachers’).

Construct numerals are cardinal numerals followed by a noun prefixed by *ha-* (e.g., *arbaat^ ha-morim* ‘the four teachers’).

6. One exception is the phonological distinction between the absolute *šaloš* ‘three:F’ and construct *šloš* ‘three:F’, which is not reflected in the orthography and only rarely in everyday speech.

Note that construct numerals also quantify definite construct-state NPs, yet these cases are excluded by this definition, due to the way definiteness is marked on construct-state NPs. The head noun does not reflect the definiteness of the phrase it heads. Rather, definiteness is determined by the adjunct, as illustrated in (5), where *xavrey* ‘members’, the head of the NP, is identical regardless of whether its adjunct (in square brackets) is indefinite (5a) or definite (5b) and (5c). Nevertheless, the status of the numerical quantifier is sensitive to the definiteness of its NP adjunct: absolute when the NP is indefinite (5a), and construct when it is definite (5b) and (5c).

- (5) a. *šloša* [*xavrey*[^] *lahaka*]
 three:M [members:CS.PL.M band]
 ‘Three members of a band’
 b. [*šlošet* *xavrey*[^] *ha-lahaka*[^]]
 [three:CS.M members:CS.PL.M the-band]
 ‘The three members of the band’
 c. [*šlošet* *xavrey*[^] *lahakat*[^] *ha-rok*]
 [three:CS.M members:CS.PL.M band:CS.SG.F the-rock]
 ‘The three members of the rock band’

Since the construct noun which immediately follows the numeric quantifier does not reveal whether the NP that it heads is definite or not and, moreover, the item which does determine the definiteness of the phrase can be embedded deeply in the construct-state NP, as in *ha-rok* ‘the-rock’ in (5c), it is difficult to form search queries which distinguish between the two cases. Consequently, all instances of numerically quantified construct-state NPs such as those in (5) are excluded from the corpus searches described in this section, and only *ha-* prefixed nouns are retrieved.

2.3.2 Absolute numeric quantifiers

Corpus searches of sequences of an absolute numeral followed by an absolute indefinite noun (e.g., *arbaa morim* ‘four teachers’) retrieved 1,203,842 instances. The distribution of these instances according to the gender of the numeral and the gender of the noun is given in Table 3.

Table 3. Gender matches and mismatches with absolute numeric quantifiers

	Feminine nouns		Masculine nouns	
Feminine numerals	549,079	99%	13,537	2%
Masculine numerals	5,127	1%	636,099	98%
Total	554,206		649,636	

Absolute feminine nouns appear with a masculine numeric quantifier in only 1% of their occurrences. With masculine nouns, the ratio of mismatched cases is slightly higher (2%).⁷ These findings are quite surprising in light of the general perception according to which gender distinctions are gradually disappearing in current-day Hebrew. One factor which may account for this discrepancy is the written nature of the texts, since gender neutralization may well be more characteristic of spoken language. However, as will become apparent from the style and content of the example sentences that follow, mismatches occur across different registers.

The 100 most frequent numerically quantified feminine nouns appear with masculine numerals slightly less than 1% of the time, on average. Two high-frequency nouns with a higher-than-average percent of mismatches are *peamim* ‘times’ (2% mismatches) and *draxim* ‘ways’ (3% mismatches). Following are examples of matched and mismatched numerals with each noun.

- (6) a. *kiday lehitamen šaloš ad árba peamim be-šavúa.*
 advisable to.train three:F to four:F times:PL.F in-week
 ‘It is advisable to train three to four times a week.’
- b. *yeš leexol šaloš ad arbaa peamim be-šavúa beca.*
 be to.eat three:F to four:M times:PL.F in-week egg
 ‘One should eat an egg three to four times a week.’
- (7) a. *hayom niskor šaloš draxim šonot le-haxanat[^]*
 today we.will.review three:F ways:PL.F different:PL.F to-preparation
ha-mucar ha-ze.
 the-product the-this
 ‘Today we will review three different ways of preparing this product.’
- b. *hu maxlit lehitgonen be-šloša draxim šonot.*
 he decides to.defend.himself in-three:M ways:PL.F different:PL.F
 ‘He decides to defend himself in three different ways.’

Note that in the gender-mismatched example (7b), although the numeric quantifier is masculine, the adjectives which modify the agreement target, *draxim* ‘ways’ is feminine plural. Thus, it is not the case that *draxim* ‘ways’ is perceived by the writer to be a masculine plural noun.

The average gender-mismatch rate of the 100 most frequent quantified masculine nouns is slightly higher than that of the feminine nouns: 1.7%. Of these, three nouns exhibit high rates of mismatches: *kcavot* ‘ends’ (24%), *šemot* ‘names’ (11%) and *yesodot* ‘elements’ (9%). Examples of gender-mismatched numerals with the three nouns are given in (8).

7. The gender classifications of the automatic morphological analyzer are not completely reliable, as some nouns which are tagged as feminine in the corpus are in fact masculine, and vice versa.

- (8) a. *ke-antropolog hu tamid be-diléma ben štey kcavot*
 as-anthropologist he always in-dilemma between two:F ends:PL.M
menugadim.
 opposing:PL.M
 ‘As an anthropologist he is always in a dilemma between two opposing sides.’
- b. *al kol šem šel iša yeš xameš šemot šel gvarim.*
 on every name of woman be five:F names:PL.M of men
 ‘For every name of a woman there are five names of men.’
- c. *ec zakuk le-arba yesodot bixdey lehitkayem.*
 tree needs to-four:F elements:PL.M in.order to.exist
 ‘A tree needs four elements in order to exist.’

Note the inconsistent agreement patterns exhibited by *kcavot* ‘ends’ in (8a). The noun triggers feminine agreement on the numeric quantifier which precedes it, and masculine plural agreement on the adjective which follows it. This is a mirror image of the agreement pattern in (7b).

The three masculine nouns which were found to exhibit a relatively high proportion of gender mismatches with their numeric quantifiers belong to the class of nouns with gender-mismatched plural marking (§2.1). This, in fact, characterizes nine of the ten masculine nouns with the highest mismatch percent of the 100 most frequent quantified nouns (mismatches ranging between 24% to 4%). The tenth noun is *rašim* ‘heads’, a masculine noun with a masculine-formed plural suffix, which appears with feminine numeric quantifiers 4% of the time. Gender-mismatched plural marking also characterizes the feminine nouns which exhibit higher rates of mismatches with numeric quantifiers (e.g., *pe'amim* ‘times’ & *draxim* ‘ways’ in (6) & (7) above). Nevertheless, numeric gender mismatches are by no means limited to nouns with gender-mismatched plural marking, as in (9).

- (9) a. *lifney arba xodašim hitxálti laavod ke-mitmaxe*
 before four:F months:PL.M I.began to.work as-intern
be-misrad ha-mišpatim.
 in-ministry the-justice
 ‘Four months ago I began working as an intern in the Ministry of Justice.’
- b. *maxon ha-tkanim kava arbaa ramot šel téken*
 institute the-standard defined four:M levels:PL.F of standard
le-bidud akústi.
 for-insulation acoustic
 ‘The Standards Institute defined four standard levels of acoustic insulation.’

Gender matches and mismatches are not evenly distributed across the different numerals. Table 4 presents the percent of occurrences of mismatches by numeral and gender.

Table 4. Gender mismatches with absolute numeric quantifiers, by numeral

Numeral	Feminine nouns	% Mismatch		Masculine nouns	% Mismatch	
2	231,277	0%	(šney)	287,903	2%	(štey)
3	133,285	2%	(šloša)	172,459	1%	(šaloš)
4	65,926	2%	(arbaa)	72,323	6%	(arba)
5	64,769	1%	(xamiša)	48,266	2%	(xameš)
6	25,016	1%	(šiša)	33,327	0%	(šeš)
7	25,817	1%	(šiv'a)	22,811	2%	(šéva)
9	8,116	2%	(tiša)	12,547	1%	(téša)

The proportion of mismatches exhibited by the different numerals ranges between 0% and 2% with one exception: *arba* ‘four.F’. In 6% of the cases where a masculine noun is quantified with the numeral four, the form of the quantifier is feminine, as illustrated in (8c). Moreover, two numerals found to be used relatively conservatively are the masculine *šney* ‘two.M’, which seldom quantifies feminine nouns, and the feminine *šeš* ‘six.F’, which rarely quantifies masculine nouns.

2.3.3 Construct numeric quantifiers

The gender-agreement patterns exhibited by plural nouns and their absolute numerals differ from those exhibited by construct numerals, bearing in mind that the construct form is used only when the quantified NP is definite. Moreover, due to search limitations the data presented here reflect only instances where definiteness is realized with the prefix *ha-* (as defined in §2.3.1).

Table 5 presents the distribution of agreement matches and mismatches across the gender of the quantifier and the gender of the head noun.

Table 5. Gender matches and mismatches with construct numeric quantifiers

	Feminine nouns		Masculine nouns	
Feminine numerals	158,513	93%	4,290	2%
Masculine numerals	12,621	7%	206,038	98%
Total	171,134		210,328	

With regard to plural masculine nouns, 2% are quantified with feminine construct numerals, similarly to what was found for absolute numerals (Table 3). This is not the case with feminine nouns, in which absolute and construct numerals exhibit considerably different agreement patterns. While only 1% of these nouns were found to be quantified by an absolute masculine numeral (Table 3), gender mismatches between the noun and its construct numeric quantifier are much more common with plural feminine nouns and account for 7% of the cases. Moreover, as indicated by the data in Table 6, where the individual frequencies of each numeral are presented, the percentage of mismatches varies across the different numerals, ranging from less than 1% with *šney* ‘two.CS.M’ to 25% with *šlōšet* ‘three.CS.M’.

Table 6. Gender mismatches with construct numeric quantifiers, by numeral

Numerals	Feminine nouns	% Mismatch		Masculine nouns	% Mismatch	
2	108,332	0%	(<i>šney</i>)	101,395	3%	(<i>štey</i>)
3	28,552	25%	(<i>šlōšet</i>)	48,924	1%	(<i>šlosš</i>)
4	12,409	18%	(<i>arba'at</i>)	19,835	2%	(<i>arba</i>)
5	11,457	14%	(<i>xamešet</i>)	11,433	1%	(<i>xameš</i>)
6	3,891	14%	(<i>šešet</i>)	16,206	0%	(<i>šeš</i>)
7	5,447	20%	(<i>šiv'at</i>)	9,110	1%	(<i>ševa</i>)
9	1,046	4%	(<i>tiš'at</i>)	3,425	2%	(<i>teša</i>)

Zooming in on the numeral ‘three’, which exhibits the highest percent of mismatches, we find that although the average percentage of mismatches is 25%, there is great disparity in the mismatch rate of individual nouns. Some plural feminine nouns are quantified by the masculine construct numeral *šlōšet*[^] ‘three:CS.M’ as many as 40% of the times they appear with the numeral three (as, for example, *draxim* ‘ways’, *kategóryot* ‘categories’ and *šitot* ‘systems’). The sentences in (10) illustrate the two agreement patterns with *kategóryot* ‘categories’ as controller.

- (10) a. *en havxana xad mašmait ben šaloš[^] ha-kategóryot*
 NEG distinction one meaning between three:CS.F the-categories:PL.F
ha-élu.
 the-these:PL
 ‘There is no unequivocal distinction between these three categories.’
- b. *lo tamid hitkayma ha-havxana ben šlōšet[^]*
 NEG always existed the-distinction between three:CS.M
ha-kategóryot halálu.
 the-categories:PL.F these:PL
 ‘The distinction between these categories did not always exist.’

2.3.4 *Single nouns with numeric quantifiers*

The numeric expressions discussed so far involve a numeric quantifier and an NP headed by a plural noun. An additional construction occurs where the quantified head noun appears in its singular form, prescriptively only when the size of the cardinal is 11 or more. The corpus data indicate that the use of singular quantified nouns is not restricted to numbers over 10, but for present purposes, focus is on the agreement patterns exhibited by this construction.

Nouns that appear in singular form with numeric quantifiers generally denote units of measure or currency, most commonly the abbreviated form *k"m* for *kilométer* ‘kilometer’ and *axuz* ‘percentage’, as illustrated in (11).

- (11) a. *ha-sade memukam ke-esrim ve-xamiša k"m me-ha-ir.*
 the-field located like-twenty and-five:M kilometer:M from-the-city
 ‘The field is located some twenty-five kilometers from the city.’
- b. *šišim u-šloša axuz me-ha-amerikáyim maašimim*
 sixty and-three:M percent:SG.M of-the-Americans blame
oti ba-preda.
 me in.the-breakup
 ‘Sixty-three percent of Americans blame me for the breakup.’

This construction is associated with the commonly cited example *xameš šékel* ‘five:F shekel:M’, used to illustrate the perceived demise of gender distinctions with numerals in Hebrew (see §2.3). This phrase, in fact, violates two prescriptive dictates: First, the noun is singular and the cardinal numeral is smaller than 11 and, second, the noun is masculine and its numeric quantifier is feminine.

The noun *šékel* ‘shekel’ is one of the 17 most frequent nouns that appear as singular nouns with absolute numeric quantifiers (construct nominals were excluded from this search). Table 7 presents these nouns sorted in descending order of percentage of gender mismatches. As can be seen, the distribution of gender mismatches in this construction is quite variable, yet their overall ratio is significantly greater than that of the construction where the numerated nouns are plural (see Table 3).

Table 7. Gender mismatches between singular nouns and numeric quantifiers

Nouns	Frequency	% Mismatch
<i>šékel</i> ‘shekel’	92	79%
<i>yom</i> ‘day’	235	22%
<i>méter</i> ‘meter’	675	16%
<i>kílo</i> ‘kilo’	614	16%
<i>gram</i> ‘gram’	171	16%

(continued)

Table 7. (continued)

Nouns	Frequency	% Mismatch
<i>lítér</i> 'liter'	218	15%
<i>axuz</i> 'percent'	1,210	14%
<i>dólar</i> 'dollar'	394	14%
<i>sentiméter</i> 'centimeter'	182	12%
<i>ton</i> 'ton'	199	10%
<i>iš</i> 'person'	285	6%
<i>mayl</i> 'mile'	170	5%
<i>kilométer</i> 'kilometer'	607	5%
<i>k'g</i> 'kg'	311	4%
<i>dúnám</i> 'land area unit'	329	2%
<i>k"m</i> 'km'	1,343	1%
<i>kilogram</i> 'kilogram'	161	1%

Example sentences of gender mismatches with the top four nouns in Table 7 are given in (12).

- (12) a. *af réšet lo yaca be-mivca šel xameš šékel*
 NEG chain neg came.out with-campaign of five:F shekel:SG.M
le-kos kafe.
 for-cup coffee
 'No (coffee-shop) chain came out with a deal of five shekels for a cup of coffee.'
- b. *axrey téša yom ba-basis hocíu otánu le-éyze*
 after nine:F day:SG.M in.the-base let-out:PL.M us to-some
áfter nexmad.
 off.duty.time nice
 'After nine days on base, they let us out for some nice off-duty time.'
- c. *maspik laléxet štey méter ve-laxazor habáyta.*
 enough to.walk two:F meter:SG.M and-return home
 'It's enough to walk two meters and go back home.'
- d. *šaloš arba kílo odfim yeš le-harbe banot.*
 three:F four:F kilo:SG.M extra:PL.M be to-many girls
 'Many girls have three-four extra kilos.'

The register of the examples in (12) reflects the type of language where this construction occurs, as informal and colloquial. In contrast, in the other examples in this section, gender mismatches occur in formal and probably edited publications, such as (8a) from a museum catalog and (10b) from a semi-academic article about art and astronomy.

Statistically, as the data in Table 7 indicate, *šékel* ‘shekel’ is a clear outlier, with the highest mismatch rate on the list (79%) and the lowest frequency (92).⁸ The extremely high rate of mismatches most likely contributes to *xameš šékel* ‘five:F shekel:M’ being a popular example of gender-mismatch in the language. Nevertheless, in light of the findings presented for this construction, as well as for nouns in the plural constructions described above, this example is neither representative nor typical.⁹

2.4 Plurals and gender agreement

Hebrew inflectional paradigms generally distinguish between plural-masculine and plural-feminine forms, but the latter exhibit variation with regards to the agreement marking on their targets: plural-feminine, as well as plural-masculine. This is not the case with plural-masculine nouns, which invariably trigger plural-masculine agreement, thus suggesting a process of gender neutralization.¹⁰ The following sections consider two agreement relations: subject–verb agreement (§2.4.1) and determiner–noun agreement (§2.4.2).

2.4.1 Subject–verb agreement with plural–feminine nouns

Subject–verb agreement in Hebrew involves person, number, and gender. The finite verbal paradigm includes distinct feminine and masculine forms for 2nd and 3rd persons in past and future tense (see Table 8). One exception is the 3rd person plural past form, for which gender distinctions are neutralized.

8. The data presented in the table do not include 70 instances of meta-linguistic discussions of this phenomenon.

- (i) *ani lo taharanit bixlal ve-ze ose li xarara lišmóa téša šékel.*
 I not purist at.all and-it makes to.me rash to.hear nine:F shekel:SG.M
 ‘I am not a purist at all but I come out in a rash when I hear “nine shekel”’

9. An additional characteristic of *šékel* ‘shekel’ in this construction is its relatively low frequency. This reveals one limitation of the methodology adopted for this chapter: in written corpora most numerals are not spelled out, but rather written as numbers. In fact, there are more than 35,000 attestations of a number preceding *šékel* ‘shekel’ and an additional 35,000 attestations of a number followed by *élef* ‘thousand’, *milyon* ‘million’, or *milyard* ‘billion’ preceding it. Naturally, nothing in this data-set serves as evidence for whether the author mentally used a feminine or masculine numeral.

10. In a study of agreement marking in newspapers and students’ writings, Schwarzwald (1979) found that 60% of the non-normative uses are due to feminine plural controllers triggering masculine plural agreement on their targets.

Table 8. Inflectional paradigm of plural verbs

	2nd person		3rd person	
	Feminine	Masculine	Feminine	Masculine
Past	<i>haláxten</i>	<i>haláxtem</i>	<i>halxu</i>	
Future	<i>teléxna</i>	<i>telxu</i>	<i>teléxna</i>	<i>yelxu</i>

Although the paradigm includes feminine forms, feminine plural subjects do not appear exclusively with feminine verbs as in (13a), but also occur with masculine verbs as in (13b).¹¹ Note that although the verb in (13b) is masculine, the anaphor *acmexen* ‘yourselves’ and the possessive clitic in *reconxen* ‘your wish’, both of which refer to the plural-feminine subject, are plural-feminine.

- (13) a. *be-šalav kólšehu aten timcána et acmexen*
 at-stage some you:2PL.F will.find:2PL.F ACC yourselves:2PL.F
mexapsot mitriya.
 searching:PL.F umbrella
 ‘At some stage you will find yourselves searching for an umbrella.’
- b. *aten timceu et acmexen ba-zrakorim benigud*
 you:2PL.F will.find:2PL.M ACC yourselves:2PL.F in.the-spotlights against
li-rconxen.
 to-your.wish:2PL.F
 ‘You will find yourselves in the spotlight against your wishes.’

The distribution of the agreement patterns across different NP-subject types and tenses is presented in Table 9 with examples restricted to cases where a plural verb immediately follows a feminine plural noun.

Table 9. Subject-verb agreement with plural feminine subjects

Verb tense	Subject	Total frequency	% Mismatch	Mismatch example
future	<i>aten</i> ‘you:2PL.F’	500	92%	<i>aten telxu</i> ‘you:2PL.F will.go:2PL.M’
future	PL.F noun	57,891	90%	<i>ha-yeladot yelxu</i> ‘the-girls:PL.F will.go:3PL.M’
future	<i>hen</i> ‘they:3PL.F’	7,757	77%	<i>hen yelxu</i> ‘they:3PL.F will.go:3PL.M’
past	<i>aten</i> ‘you:2PL.F’	123	7%	<i>aten haláxtem</i> ‘you:2PL.F went:2PL.M’
present	<i>aten</i> ‘you:2PL.F’	7,358	1%	<i>aten holxim</i> ‘you:2PL.F go:PL.M’
present	<i>hen</i> ‘they:3PL.F’	68,329	1%	<i>hen holxim</i> ‘they:3PL.F go:PL.M’

11. The use of masculine verb forms with feminine plural subjects is already attested in books of the Old Testament, written in the time of the Second Temple.

As the data in Table 9 indicate, there is a clear difference between the tenses. An overwhelming preference for masculine plural verbs with feminine plural subjects is found in the future tense, with the 3rd person pronoun *hen* showing a slightly weaker preference.¹² In the past tense, although gender distinctions are completely neutralized for 3rd person subjects (see paradigm in Table 8), this is not the case with 2nd person pronominal subjects, where 93% of their predicates exhibit feminine gender. Finally, the *benoni* present-tense/participial forms exhibit the lowest rate of alternations, with only 1% mismatches.

The use of feminine plural verbs in future tense is clearly exceptional, and occurs mainly in formal edited contexts. Many instances involve Biblical references (e.g., 145 occurrences of the archaic *acmotay tomárna* ‘my.bones will.say.PL.F’). Nevertheless, there are attestations of the feminine plural forms in contemporary and less formal contexts, as in use of the masculine plural verb in (14a) and the feminine plural verb in (14b) below.

- (14) a. *hayíti mecapa še-našim yelxu lilmod et*
 I.would expect that-women:PL.F will.go:3PL.M to.study ACC
ha-mikcoot ha-éle.
 the-subjects the-these
 ‘I would’ve expected women to go to study these subjects.’
- b. *lo haya mekubal še-našim teléxna lilmod be-veyt séfer.*
 NEG was accepted that-women:PL.F will.go:3PL.F to.study at-school
 ‘It wasn’t accepted for women to go and study at school.’

2.4.2 Determiners–noun agreement with plural–feminine nouns

Another area where plural–feminine controllers trigger variable gender agreement is in use of the inflected pronominal determiner *oto* ‘(the)same, that’. Table 10 gives the four forms of the pronominal determiner with singular/plural–masculine/feminine nouns denoting *that (same) teacher ~ those (same) teachers*. In such cases, the head noun can be optionally prefixed with the definite marker *ha-*, with no apparent semantic difference.¹³

12. It may be the case that the masculine plural pronoun *hem* is used with feminine plural referents instead of the feminine plural pronoun *hen*.

13. The determiners are identical to the accusative marker *et* in its inflected form, yet their use does not exclude use of an accusative case marker (e.g., *pagášti et ota ha-mora* ‘I met ACC the same teacher’).

Table 10. Prenominal determiners by gender and number

	Singular	Plural
Feminine	<i>ota (ha-)mora</i>	<i>otan (ha-)morot</i>
Masculine	<i>oto (ha-)more</i>	<i>otam (ha-)morim</i>

Although the inflectional paradigm includes specific forms for each gender–number combination, agreement variation does occur. The highest rate of gender agreement variation occurs between the prenominal determiners and feminine plural nouns. Similarly to previous agreement relationships discussed in this section, here too, there is remarkable diversity across lexical items. The rate of gender mismatch, where the masculine plural determiner *otam* precedes a feminine plural noun, ranges between 17% and 1% for the 20 most frequent feminine plural nouns occurring in this construction. Data regarding the 10 most frequent nouns are presented in Table 11.

Table 11. Gender matches and mismatches of feminine and masculine prenominal determiners with feminine plural nouns

Noun	FEM: <i>otan</i>		MASC: <i>otam</i>		Total
<i>šanim</i> ‘years’	5504	83%	1114	17%	6618
<i>draxim</i> ‘ways’	205	83%	43	17%	248
<i>milim</i> ‘words’	508	88%	67	12%	575
<i>tocaot</i> ‘results’	264	89%	32	11%	296
<i>dakot</i> ‘minutes’	299	89%	36	11%	335
<i>beayot</i> ‘problems’	354	89%	42	11%	396
<i>mišpaxot</i> ‘families’	250	90%	27	10%	277
<i>nekudot</i> ‘points’	332	91%	34	9%	366
<i>šaot</i> ‘hours’	820	91%	79	9%	899
<i>aracot</i> ‘countries’	261	92%	23	8%	284

At the top of the list is the noun *šanim* ‘years’, which is highly frequent and relatively variable with respect to the type of agreement it triggers on its prenominal determiner (17% mismatches). The examples in (15) illustrate the two patterns.

- (15) a. *bemahalax otan ha-šanim cavarti nisayon rav.*
 during those:PL.F the-years:PL.F I.gained experience a.lot
 ‘During those (same) years I gained a lot of experience.’
- b. *ha-tovéa nahag bemahalax otam ha-šanim be-masaiyot.*
 the-plaintiff drove during those:PL.M the-years:PL.F in-trucks
 ‘During those (same) years the plaintiff drove trucks.’

2.5 Gender agreement: Summary

Alternations with regards to the gender exhibited by agreement targets fall into two types: bi-directional and uni-directional. Bi-directional variation characterizes the use of gender-mismatched absolute numeric quantifiers. As shown in Table 3, the extent to which mismatching numerals are used with feminine nouns and masculine nouns is quite similar (1% vs. 2%). Bi-directionality is also found with respect to agreement triggering of nouns with gender-mismatched plural markings; feminine *-im* marked plural nouns may trigger masculine agreement and conversely, masculine *-t* marked plural nouns may trigger feminine agreement.

Uni-directional variations are asymmetric. One such case is the gender exhibited by construct-state numerals. Masculine construct numerals are used with plural feminine nouns to a much larger extent than feminine construct numerals with masculine nouns (see Table 5). The difference between the two directions is more apparent when individual numerals are considered (Table 6). An even more distinct case of uni-directional variation is found with feminine plural nouns, which show a tendency to trigger masculine plural agreement in particular domains. The opposite direction, namely masculine plural nouns triggering feminine plural agreement, is rare. Uni-directional variation also occurs with *-áyim* suffixed plural nouns. The data suggest that speakers associate this suffix with feminine gender regardless of the gender of the singular form.

3. Personal–impersonal alternations

A different type of agreement alternation involves constructions in which agreement targets alternate between exhibiting agreement with their controller and exhibiting default agreement (or no agreement at all). This section examines three contexts where this alternation is found: (1) verb-initial clauses, (2) the existential *yeš*, and (3) the question-word/quantifier *éyze* ‘which, some’.

3.1 Verb-initial clauses

One environment that is known to exhibit agreement alternation is predicate-initial clauses. In such constructions, verbs that precede their subject alternate between exhibiting full agreement with the subject and exhibiting impersonal (3SGM) agreement (see, for example, Berman 1980, 1992; Glinert 1989; Kuzar 2002; Melnik 2006; Ravid, 1995a; Ziv 1976).

The constructions most typically associated with this agreement variation are the existential and possessive constructions, as illustrated in (16) and (17) respectively. In present and future tenses, these constructions are headed by the verb *haya*

‘be’, which alternates between exhibiting full agreement with its NP argument, as in the (a) examples and exhibiting impersonal agreement, as in the (b) examples.

- (16) a. *netuney ha-inflácyá marim še-lo hayta aliya*
 figures the-inflation show that-not was:3SG.F increase:SG.F
mašmautit.
 significant:SG.F
 ‘Inflation figures show that there was no significant increase.’
- b. *gam lo haya aliya xazaka be-mispar ha-teunot.*
 also not was:3SG.M increase:SG.F strong:SG.F in-number the-accidents
 ‘Also, there was no strong increase in the number of accidents.’
- (17) a. *hayu li mikrim domim gam be-txumim axerim.*
 were:3PL to.me instances:PL.M similar:PL.M also in-domains other
 ‘I had similar instances in other domains as well.’
- b. *haya li mikrim rabim ka-éle*
 was:3SG.M to.me instances:PL.M many:PL.M like-these:PL
bemahalax šnotay.
 during my.years
 ‘I’ve had many cases like these in my lifetime.’

Since the verb *haya* ‘be’ serves as a copula as well as an existential predicate, corpus searches of the existential and possessive constructions retrieve relevant instances as well as multitudes of copular constructions, making it impossible to report reliable distributional counts of the two agreement patterns exhibited by these constructions.¹⁴ Lexical verbs, on the other hand, whose distribution is more restricted, are more amenable to a quantitative analysis.

The most notable agreement alternations occur in a verb-initial construction in which a dative argument intervenes between the verb and its subject (henceforth, the VDS construction). The most frequent lexical verb to exhibit agreement alternations in this pattern is *higía* ‘arrive’. In its intransitive instantiation (SV/VS), the verb means ‘arrive’, but in the VDS construction it means ‘owing to N ~ N deserves’. In the latter evaluative sense, the agreement controller (or the S argument) denotes that which is deserved, while the dative denotes the ‘deserver’.

Consider the following examples illustrating these two agreement patterns: In (18a) the verb exhibits number–gender agreement with the feminine singular subject, *hanaxa* ‘discount’; conversely, sentence (18b) is an instance of impersonal agreement – the verb is 3SG.M, regardless of the *phi* features of *hanaxa* ‘discount’.

14. But see Melnik (2014) for an empirical assessment of these variations in significantly smaller corpora of spoken language, where manual data inspections are possible.

- (18) a. *magía li hanaxa šel ezrax vatik.*
 arrive:SG.F to.me discount:SG.F of citizen senior
 ‘I deserve a senior citizen discount.’
- b. *magíya laxem hanaxa ba-arnóna.*
 arrive:SG.M to.you reduction:SG.F in.the-taxes
 ‘You deserve a tax reduction.’

The alternation between personal and 3SG.M agreement is not limited to singular nouns. In (19a) a plural subject controls the plural agreement on the verb, while in (19b) there is no agreement.

- (19) a. *haim magíim li picuyim al pi xok?*
 QUES arrive:PL.M to.me compensations:PL.M by law
 ‘Do I deserve compensations by law?’
- b. *haim magíya li picuyim kólšehem?*
 QUES arrive:SG.M to.me compensations:PL.M any:PL.M
 ‘Do I deserve any compensations?’

The distribution of personal and impersonal agreement in the *higía l-* construction is given in Table 12. Note that the data is limited to cases where the dative (i.e., a noun or pronoun prefixed by the preposition *l-*) immediately follows the verb and the noun appears in one of the two slots following the dative.

Table 12. Agreement variation with *higiya l-*

Controller features	Personal		Impersonal		Total
Singular–Feminine	859	62%	529	38%	1,388
Plural	592	56%	470	44%	1,062

Another verb that exhibits considerable agreement variation in the VDS construction is *nišar* ‘remain’. Here, too, the verb can exhibit full agreement with its subject as in (20a) and (21a), or exhibit impersonal 3 SG.M agreement as in (20b) & (21b).

- (20) a. *nišara li od šana le-siyum ha-tóar.*
 left:SG.F to.me more year:SG.F to-end the-degree
 ‘I have one more year left to complete my degree.’
- b. *nišar li šana lilmod.*
 left:SG.M to.me year:SG.F to.study
 ‘I have one year left to study.’
- (21) a. *lo nišaru li enérgyot lidog le-acmi.*
 not left:3PL.M to.me energies:PL.F to.take.care.of-myself
 ‘I had no energy left to take care of myself.’

- b. *lo nišar lahem mašabim kognitiviyim le-bakara acmit.*
 not left:3SG.M to.them resources:PL.M cognitive:PL.M for-control self
 ‘They had no cognitive resources left for self monitoring.’

A corpus investigation of instances of a sequence of the verb *nišar* and a dative followed by a noun (immediately adjacent or with one intervening word) retrieved the results presented in Table 13.

Table 13. Agreement variation with *nišar l-*

Controller features	Personal		Impersonal		Total
Singular–Feminine	472	78%	133	22%	605
Plural	756	84%	144	16%	900

Unlike *higía* ‘arrive’, the occurrence (or absence) of the dative argument with *nišar* ‘remain’ does not have an effect on its meaning. Nevertheless, the ratio of impersonal agreement is much smaller when no dative is used. Of the 224 instances where the nouns *caléket*, *calakot* ‘scar(s)’ appear as subject in the VS construction only 5 (2%) occur with an impersonal masculine singular verb. An example is given in (22).

- (22) *haim nišar calakot axarey nitúax af?*
 QUEST remain:SG.M scars:PL.F after surgery nose
 ‘Do scars remain after a nose job?’

3.2 The existential *yeš*

The existential and possessive constructions in present tense are headed by the existential particle *yeš*. This particle has a base (uninflected) form, but it can also be affixed to exhibit number–gender agreement (*yeš-na*:SG.F *yeš-nan*:PL.F, *yeš-no*:SG.M, *yeš-nam*:PL.M). Similarly to *haya* ‘be’ in the past and future tense (see (16) above), the existential *yeš* alternates between exhibiting number–gender agreement with the NP whose existence it expresses as in (23a) and appearing in its uninflected form as in (23b).

- (23) a. *yeš-na ešarut lekabel siyurim mudraxim.*
 be-3SG.F possibility:SG.F to.receive tours guided
 ‘There is a possibility of getting ~ it is possible to get guided tours.’
 b. *yeš ešarut lekabel tipul energéti.*
 be possibility:SG.F to.receive therapy energetic
 ‘There is a possibility of getting ~ it is possible to get energy therapy.’

Table 14 presents the distribution of the two agreement patterns across the number and gender of the noun immediately following the existential particle.

As is evident from the data, in most cases where a noun follows the existential particle *yeš*, the particle appears in its base form, with only 13% of the existential

Table 14. Inflected vs. uninflected *yeš* across number & gender

Controller features	Impersonal <i>yeš</i>	<i>yeš</i> + agreement	Total
Singular–Feminine	317,834 92%	26,421 8%	344,255
Singular–Masculine	561,916 93%	40,106 7%	602,022
Plural–Feminine	109,149 74%	38,070 26%	147,219
Plural–Masculine	216,353 73%	78,993 27%	295,346

particles that appear in this context being inflected. Yet there is, nonetheless, a clear distinction between singular and plural nouns. Regardless of the gender of the noun, the use of the inflected *yeš* is much more frequent for plural nouns than for singular nouns.

The existential particle is also used in the possessive construction, in which case it typically appears as the ‘V’ in a VDS construction, where the dative argument denotes the possessor and the S argument denotes the possessee. Example (24) illustrates the most common possessive construction: the particle appears in its base form, the possessor is pronominal, and the possessee follows the possessor. Of the 51,500 instances of this configuration (where the dative is a single word), only in a handful of cases does the particle *yeš* exhibit agreement with the NP possessee, that is *yeš-nan* instead of *yeš* in (24).

- (24) *yeš lo draxim mešunot lomar lax še-hu ohev.*
 be to.him ways:PL.F strange:PL.F to.tell you that-he loves
 ‘He has strange ways of telling you that he loves you.’

There are considerably more inflected particles in a variation of the possessive construction illustrated in (25). The possessor precedes the existential particle and in an overwhelming majority of cases it is a lexical NP, rather than a pronominal dative.¹⁵

- (25) a. *kmo kol davar ba-xayim, gam le-zugiyut yeš-nam yitronot*
 like all thing in.the-life also to-intimacy be-3PL.M advantages:PL.M
ve-xesronot.
 and-disadvantages:PL.M
 ‘Like everything in life, even couple relationships have their advantages and disadvantages’
- b. *le-gúgel yeš-nan draxim meod brurot ve-yeilot*
 to-Google be-3PL.F ways:PL.F very clear:PL.F and-effective:PL.F
lehilaxem be-xax.
 to.fight in-this
 ‘Google has very clear and effective ways of combatting this.’

15. See discussion of possessor-initial constructions in Melnik (2014), Netz & Kuzar (2011).

3.3 The question-word / quantifier *éyze*

A different context where impersonal and agreeing forms are used interchangeably is inside the NP, as when the closed class item *éyze* is used as a question-word in interrogatives as in (26a) or as an indefinite quantifier as in (26b).

- (26) a. *éyze céva at maadifa?*
 which:SG.M color:SG.M you prefer
 ‘Which ~ what color do you prefer?’
- b. *haya éyze zug še-higíya mamaš lifney*
 was:3SG.M some:SG.M couple:SG.M that-arrived right before
šat ha-sgira.
 time the-closing
 ‘There was some couple who arrived right before closing time.’

The lemma *éyze* is associated with three forms: *éyze* for masculine singular, *éyzo* for feminine singular and *éylu* for plural (both genders). Nevertheless, feminine and/or plural nouns exhibit variation with respect to the form this element appears when preceding them: feminine singular nouns take the feminine singular *éyzo* 66% of the time, with *éyze* used in the remaining 34%. This variation is found with the question-word function of *éyze* (27), as well as in its indefinite quantifier function (28).

- (27) a. *al éyzo beaya hi baa lehitgaber?*
 over which:SG.F problem:SG.F she comes to.overcome
 ‘Which problem is she trying to overcome?’
- b. *éyze beaya mišpatit yeš laxem?*
 which:SG.M problem:SG.F legal be to.you
 ‘Which legal problem do you have?’
- (28) a. *anašim divxu al éyzo beaya še-hitorera.*
 people reported on some:SG.F problem:SG.F which-arose
 ‘People reported about some problem that came up’
- b. *ze mare al éyze beaya šel škifut.*
 this indicates on some:SG.M problem:SG.F of transparency
 ‘This indicates some (kind of) transparency issue.’

With plural nouns, there is a notable difference between the two functions of *éyze* and the agreement patterns they exhibit. The proportion between the use of *éyze* and *éylu* as a question is similar to that found with feminine singular nouns.¹⁶

16. The quantitative data regarding *éylu* are not very reliable since an orthographically identical word functions as a coordinator ‘whereas’.

- (29) a. *lo lehaamin le-éylu dvarim nitan lehitgaagea.*
 no to.believe to-which:PL things:PL.M possible to.miss
 ‘It is unbelievable the things that it’s possible to ~ that a person can long for.’
- b. *meanyen oti lirot éyze dvarim hu yaxsof.*
 interesting to.me to.see which:SG.M things:PL.M he will.reveal
 ‘I am interested to see what things he’ll uncover.’

For the indefinite ‘some’ function the plural variant *i-éylu* is used as in (30).

- (30) *ba-kalkala mitraxašim i-éylu tahalixim lo brurim.*
 in.the-economy occur:PL.M some processes:PL.M not clear:PL.M
 ‘Some=various unclear processes are taking place in the economy’

Four forms, which are composed of *éyze* + the relativizer *še* + a personal pronoun (*hu* ‘he’, *hi* ‘she’, *hem* ‘they:M’ and *hen* ‘they:F’) also function as indefinite quantifiers. These forms invariably exhibit agreement with the nouns that follow them. An example with the feminine singular form is given in (31). Note that *éyzošehi* can be replaced by the feminine singular *éyzo* or the masculine singular *éyze*, with no change in meaning.

- (31) *hem meviim éyzošehi zavit mi-šelahem la-sipur.*
 they bring some:SG.F angle:SG.F of-their.own to.the-story
 ‘They bring some (= a type of) angle of their own to the story.’

3.4 Personal-impersonal agreement: Summary

The personal–impersonal agreement variations discussed in §3.1 and §3.2 involve subject–verb agreement in clauses, while §3.3 focused on agreement within the NP. Although the domains and nature of agreement are different for the existential *yeš* and the indefinite quantifier *éyze*, they both exhibited a marked sensitivity to number. In both cases, impersonal agreement is significantly disfavored with respect to plural targets: With *yeš*, the inflected form appeared with 74% of the plural nouns, as opposed to 8% with singular nouns (regardless of gender). The distribution of the impersonal *éyze* with plural nouns, too, is more restricted than its inflected counterpart. Although the masculine singular *éyze* can be used as a question word and as an indefinite quantifier with feminine singular nouns, it serves only as a question word with plural nouns, with a special plural form *i-éylu* serving as an indefinite quantifier.

Impersonal agreement in verb-initial constructions, including but not limited to the existential and possessive constructions, has been argued to be motivated by

considerations of information structure (Kuzar 2002; Melnik 2006, among others). The verb-initial word order, as opposed to the unmarked subject initial order, and agreement suppression are two strategies that language uses to signal the non-topic status of what is prototypically the subject (Lambrecht 2000). Moreover, as shown in §3.1, the likelihood of impersonal agreement increases with the introduction of a highly topical dative argument, which further diminishes the topic status of the syntactic subject.

4. Form/meaning alternations

This section focuses on agreement variations caused by “competing” properties of controllers. Some agreement controllers trigger two types of agreement on their targets: formal agreement, based on the structural (morphological) properties of the controller, and semantic agreement, which relates to the properties of the controller’s referent.

The assignment of grammatical gender to inanimate nouns is largely arbitrary, yet some generalizations can be found. Schwarzwald (2013) discusses different morphophonemic cues which correlate with the gender of nouns (e.g., stressed final *a* indicates feminine gender). In addition, as discussed below, certain semantic categories are associated with a particular gender, regardless of their morphophonological structure.

4.1 Place names

Names of countries and cities consistently trigger feminine singular agreement (Schwarzwald 2013), possibly due to the implicit presence of their feminine singular category names, *ir* ‘city’ and *érec* ‘country’. Thus, *Rishon LeZion* with its masculine-sounding name and *Ra’anana* with its feminine name both appear with feminine singular targets as in (32).

- (32) a. *ríšon le-cíyon nexšévet le-makom menumnam.*
 Rishon LeZion be-considered:SG.F place:SG.M sleepy:SG.M
 ‘Rishon LeZion is considered a sleepy place.’
 b. *raanána xozéret le-mapat ha-nadlan.*
 Raanana returning:SG.F to-map the-real.estate
 ‘Ra’anana is returning to the real estate map.’

Evidence for a tendency to associate place names with feminine gender occurs with the name of the village *bet léxem ha-glilit* (literally ‘the Galilean Bethlehem’).

- (33) *bet*[^] *léxem ha-glilit*
 house:CS.SG.M bread the-Galilean:SG.F
 ‘Bethlehem of the Galilee’

Bet[^] *léxem* is a construct state NP, headed by the masculine bound construct noun *bet* ‘house’, with *léxem* (literally ‘bread’) as its adjunct, a pattern characterizing many Hebrew place names (e.g., *Bet Yehoshua*, *Bet Zera*, *Bet Alfa*). The addition of the modifier *glilit* ‘Galilean’ distinguishes this northern village from the town of Bethlehem near Jerusalem. Importantly for the current discussion, the feminine gender of the modifier reveals the inherent feminine gender of *bet léxem* ‘Bethlehem’, regardless of the fact that its construct-state head *bet* ‘house’ is masculine in gender.

The association between place names and feminine gender does not apply across the board, since some trigger variable agreement. An example is *Bet Shearim*, a moshav (a masculine singular noun denoting a rural semi-cooperative settlement) and also the archeological site of an ancient settlement. Although the name is morphologically masculine, due to its masculine singular head, it triggers both masculine singular agreement (34a) and feminine singular agreement (34b).

- (34) a. *bet šearim šimeš kanire ke-makom kvura.*
 Bet She’arim served:3SG.M evidently as-place burial
 ‘Bet She’arim apparently served as a burial place.’
 b. *bet šearim ha-kduma memukémet al gvaot šeix abrek.*
 Bet She’arim the-ancient:SG.F located:SG.F on hills Sheikh Abrek
 ‘The ancient Bet She’arim is located on the hills of Sheikh Abrek.’

An additional example is *Kfar Vradim* (literally: village of roses), which belongs to a class of construct state NP names headed by *kfar* ‘village’ (see, also, *Kfar Neter*, *Kfar Yehoshua*, *Kfar HaHoresh*). *Kfar Vradim* is defined as a *yešuv* ‘settlement’, a masculine singular noun, and its head, *kfar* ‘village’, is masculine, yet the name triggers both masculine singular (35a) and feminine singular agreement (35b).

- (35) a. *kfar vradim niŋga be-ófen tmidi be-takcivey misradey*
 Kfar Vradim be.hurt:SG.M in-manner constant in-budgets ministries
ha-memšala.
 the-government
 ‘Kfar Vradim is constantly mistreated in government ministry budgets’
 b. *ba-kécev ha-ze kfar vradim tahafox lihyot*
 in.the-rate the-this Kfar Vradim will.become:3SG.F to.be
kfar refaim.
 town ghosts
 ‘At this rate Kfar Vradim will turn into a ghost town.’

Regardless of whether grammatical gender is assigned completely arbitrarily or by membership to a semantic class, formal (morphosyntactic) agreement involves the matching of the *phi* features of the target with the formal properties of the controller. Nonetheless, an agreement relationship can also be realized by matching the features of the target with the *semantic* properties of the referent of the controller (in most cases – its numerical property). Such a relation of “semantic agreement” is noted further in §5 below in the context of quantifiers and partitives, in examples (41c) and (50c).

4.2 Names of firms

“Competition” between the grammatical gender of the target and its semantic reference also occurs with the name of companies or firms, which typically trigger feminine singular agreement, possibly due to the fact that *xevra* ‘company, firm’ is a feminine singular noun as in (36a) and (37a). However, there are cases where verbal targets exhibit masculine plural agreement as in (36b) and (37b).

- (36) a. *bézek tictarex lehaalot et ha-tarifim.*
 Bezeq will.need:3SG.F to.raise ACC the-fees
 ‘Bezeq will need to raise its rates.’
- b. *bézek šuv heelu mexirim.*
 Bezeq again raised:3PL.M prices
 ‘Bezeq raised prices again.’
- (37) a. *íntel megayéset menahaley^ u-menahalot^ cvatim*
 Intel recruiting:3SG.F managers:CS.PL.M and-managers:CS.PL.F teams
la-mifal šela.
 to.the-plant her:3SG.F
 ‘Intel is recruiting male and female team heads for its plant.’
- b. *íntel karéga lo megaysim.*
 Intel currently not recruiting:PL.M
 ‘Intel is currently not recruiting.’

Company names can be used as a metonym for their employees. This is the case in the (b) examples in (36) and (37), where the verb exhibits plural marking in agreement with the semantic number property of the referent of the company name (i.e., a group of people).

4.3 Agreement variations with the noun *be'alim* 'owner(s)'

A more complex example of agreement variation occurs with the noun *bealim*, the morphologically plural form of the masculine singular noun *bá'al* 'husband, owner'. The plural form denotes plural 'husbands' and 'owners', but can also refer to a singular 'owner' (masculine or feminine). In the sense of 'owner/owners', the superficially plural noun *be'alim* triggers semantic number–gender agreement on its predicate, depending on the properties of its referent. Thus, in (38a), the masculine singular marked verb indicates a masculine singular referent, in (38b) it is a feminine singular referent, and in (38c) – masculine plural.

- (38) a. *ha-bealim hiskim miyad la-hacaa.*
 the-owners:PL.M agreed:3SG.M immediately to.the-offer
 'The owners immediately accepted the offer.'
- b. *ha-bealim tictarex lešadreg et emdat ha-meamen.*
 the-owners:PL.M will.need:3SG.F to.upgrade ACC position the-coach
 'The owners will need to upgrade the position taken by the coach.'
- c. *ha-bealim mesarvim lehipageš im ha-soxrim.*
 the-owners:PL.M refuse:PL.M to.meet with the-renters
 'The owners are refusing to meet with the renters.'

Landau (2016) observes that when *bealim* 'owners' is modified by a singular attributive adjective, its ambiguity with regard to number (and gender) is eliminated, a generalization that is corroborated by corpus data. For example, the subject in (39a) can only denote a singular–masculine owner, and the verb is marked accordingly. Similarly, the subject in (39b) can only be a singular–feminine owner.

- (39) a. *ha-bealim ha-xadaš meroken et kupat*
 the-owners:PL.M the-new:SG.M emptying:SG.M ACC fund
ha-xevra be-dividendim šmenim.
 the-company in-dividends fat
 'The new owner is emptying the company's funds by taking fat dividends.'
- b. *ha-bealim ha-noxaxit sūri byéler kanta et*
 the-owners:PL.M the-current:SG.F Suri Bieler bought:3SG.F ACC
ha-báyit ha-atik be-1988.
 the-house the-old in-1988
 'The current owner, Suri Bieler, bought the old house in 1988.'

With plural attributive modifiers the noun–modifier agreement is purely formal, so that semantic ambiguity remains. Consequently, although the subjects in (40) are modified with masculine plural attributive adjectives, the plurality of their referent is not fixed, and they can either trigger masculine plural or masculine singular agreement on their predicates. In (40a) the predicate reveals that the masculine

plural marked subject is indeed plural, while in (40b) the masculine plural marking on the subject is purely formal, and the agreement between the subject and the verb is semantic.

- (40) a. *ha-bealim ha-xadašim šoafim lefatéax*
 the-owners:PL.M the-new:PL.M aspiring:PL.M to.develop
et ha-yékev.
 ACC the-winery
 ‘The new owners are aspiring to develop the winery.’
- b. *ha-bealim ha-xadašim lo maca ma laasot im*
 the-owners:PL.M the-new:PL.M not found:3SG.M what to.do with
mexonat ha-rikma.
 machine the-embroidery
 ‘The new owner did not find what to do with the embroidery machine.’

4.4 Summary

The agreement alternations discussed in this section derive from the tension between the arbitrary gender assigned to inanimate nouns, the gender associated with some semantic classes, and the semantic properties of the referent (or whatever it stands for). Clashes between two or three dimensions ultimately result in agreement alternations, where speakers do not consistently rely on one single dimension when they “choose” the agreement properties realized on the agreement target. This competition between different dimensions is particularly striking with nouns such as *be'alim* ‘owners’, referred to in the literature as “hybrid nouns” (Wechsler & Zlatić 2003), which can simultaneously trigger formal agreement on one target and semantic agreement on the other.

5. Controller alternations

The previous section discussed cases where variation is due to different properties of the controller triggering agreement on the target. The phenomenon at focus in the current section is “controller competition”, where the agreement marking on a particular target can be controlled by different “competing” controllers, a phenomenon referred to in the literature as “attraction” (Deutsch & Dank 2011; Schwarzwald 1979). In what follows, three types of constructions are discussed:

- Construct-state NP: subject agreement with the syntactic or the semantic head
- Partitive NP: agreement with a part or with the complement
- Copulas with NP predicate: agreement with the subject or the predicate

5.1 Construct state NPs

The *phi* features of construct state NPs (see Chapter 14 on Genitive constructions) are determined mainly by the head of the N, so that when construct state NPs are agreement controllers, the agreement properties of the target match those of the head. There are, however, cases of agreement variation in such constructions, too, where the agreement properties exhibited by the target match the *phi* features of the construct adjunct instead, although not all construct state NPs exhibit variation.

One type of construct-state NPs that are involved in agreement alternations is quantified NPs (QNP), in which the head of the construct-state is a quantifier. Among the quantifiers that appear in the QNP construction are *kol* ‘all’, *rov* ‘most’, *marbit* ‘the majority’, *maxacit* ‘half’ and *meat* ‘few’. Danon (2013) distinguishes between three agreement patterns found in this domain. (41a) illustrates quantifier agreement (Q-agr), where the verb *nimlat* ‘escaped’ agrees with *rov* ‘most’. Conversely, the agreement pattern in (41b) is noun-agreement (N-agr): the verb is feminine singular, in agreement with the adjunct noun *uxlusiya* ‘population’. (41c) exhibits an additional option: semantic agreement, where the *phi* features of the target match the semantic properties of the NP’s referent (a group of people), a topic considered in §4.

- (41) a. [*rov*[^] *ha-uxlusiya* *ha-turkit*] *nimlat* *el*
 [most:CS.SG.M the-population:SG.F the-Turkish:SG.F] escaped:3SG.M to
ezor ha-hašpa *ha-italkit*.
 area the-influence the-Italian
 ‘Most of the Turkish population escaped to the area under Italian influence.’
- b. [*rov*[^] *ha-uxlusiya*] *xáya* *ba-ezirim ha-kafriyim*.
 [most:CS.SG.M the-population:SG.F] lives:SG.F in.the-areas the-rural
 ‘Most of the population lives in the rural area.’
- c. [*rov*[^] *ha-uxlusiya*] *lo* *noldu* *baaley dira*.
 [most:CS.SG.M the-population:SG.F] not born:3PL.M owners apartment
 ‘Most of the population were not born apartment owners.’

Not all QNPs exhibit agreement alternations. Thus, instances of Q-agr were not found with the quantifier *kol* ‘all’. Two quantifiers that do participate in agreement alternations are the masculine singular *rov* ‘most’ as in (41) and feminine singular *marbit* ‘most’ (42). The two quantifiers are near-synonyms, yet they differ with regards to their respective frequency and register, with the former, more colloquial terms, occurring 3.65 times more frequently than the latter, more elevated term. While there is considerable overlap between the adjuncts with which the two quantifiers occur, singular mass nouns such as *zman* ‘time’, *am* ‘nation’, *yom* ‘day’, exhibit a clear preference for *rov* ‘most’

In an overwhelming majority of cases, QNPs headed by *rov* ‘most’ or *marbit* ‘most’ trigger N-Agr on their predicates. With *rov* ‘most’, in 41,669 instances the predicate exhibited N-agr, whereas only 115 instances exhibited Q-agr, excluding cases where the adjunct noun was also masculine singular. Among these are 15 instances where the adjunct was *uxlusiya* ‘population’ (e.g., (41a)). Likewise, *marbit* ‘most’ was found to rarely control the agreement: 12,932 instances of N-agr (e.g., (42a)) vs. 20 instances of Q-agr (e.g., (42b)). All cases of Q-agr involved adjuncts which were singular mass nouns.¹⁷

- (42) a. [*marbit* *ha-dyétot*] *enan* *poalot*.
 [most:CS.SG.F the-diets:PL.F] NEG.3PL.F work:PL.F
 ‘Most diets don’t work.’
- b. [*marbit*^ *ha-ómes*] *tipol* *al ha-ragláyim*.
 [most:CS.SG.F the-load:SG.M] will.fall:3SG.F on the-legs
 ‘Most of the load will be carried by the legs.’

Agreement variations are also found with “kind-of” NPs, in a phenomenon which Corbett (2006: 65) calls “kind-of problems”. Hebrew has two kinds of “kind-of” NPs: construct-state (43a) and analytic genitive (43b).

- (43) a. *sugey*^ *ciporim*
 kinds:CS.PL.M birds:PL.F
- b. *sugim* *šel ciporim*
 kinds:PL.M of birds:PL.F

With construct-state ‘kind-of’ NPs, similarly to the QNPs discussed above, there is competition between the syntactic head (*sugey*^ ‘kinds-of’) and the adjunct with regards to which element controls the agreement of the NP’s targets.

Consider the following examples: In (44a), the controller of the agreement is the head of the NP, *sugey*^ ‘kinds-of’, and it has two agreement targets: the numeric quantifier and the predicate. Conversely, in (44b) the controller is the head of the adjunct NP, *moniyot* ‘cabs’, and it triggers feminine plural agreement on the quantifier and predicate.

- (44) a. *kayamim* *šney*^ *sugey*^ *bdikot* *le-ivxun* *ha-maxala*
 exist:PL.M two:CS.M kinds:CS.PL.M tests:PL.F to-diagnosis the-disease
 ‘There are two kinds of tests for diagnosing the disease.’
- b. *ba-ir* *poalot* *štey*^ *sugey*^ *moniyot*.
 in.the-city operate:PL.F two:CS.F kinds:CS.PL.M cabs:PL.F
 ‘Two kinds of cabs operate in the city.’

17. See discussion related to this in Section 5.2.

Gender variation in the context of numeric quantifiers is a general phenomenon, as discussed earlier in §2.3.3, yet “controller competition” plays a role in the use of the feminine quantifier *štey* ‘two:CS.F’ in (44b). In general, the feminine numeric quantifier *štey* ‘two.F’ is used conservatively; it quantifies plural masculine nouns in only 2% of the 287,903 instances where these nouns are quantified by ‘two’ (see Table 4). With ‘kind-of’ NPs, the rate of gender mismatches more than triples: 7% (of a total of 2,775). Of the 202 instances where the feminine quantifier is used, the adjunct was feminine in as high as 87% of the cases. In other words, the numeric quantifier of the construct head *sugey*^ ‘kinds-of’ is more likely to be feminine if the adjunct is feminine.

The correlation, however, is by no means exceptionless, and the agreement relationships are not completely consistent. Thus, alongside the variation patterns presented in (44) above, there are other, less regular cases, where two agreement targets of “kind-of” NPs do not exhibit matching *phi* features. In (45) for example, the predicate exhibits plural–masculine agreement and the numeric quantifier is feminine.

- (45) *yeš-nam štey*^ *sugey*^ *hašvaot*.
 be-3PL.M two:CS.F kinds:CS.PL.M comparisons:PL.F
 ‘There are two types of comparisons.’

This mismatch is in fact consistent with different agreement alternations discussed in this chapter. If *sugey*^ ‘kinds/types-of’ is the agreement controller, the occurrence of a feminine quantifier could be due to gender alternations with numerals (§2.3.3). Conversely, as a “kind-of” NP, the controller could be the feminine plural adjunct, *hašvaot* ‘comparisons’. This explains the feminine gender of the numeric quantifier. The masculine plural agreement of the predicate could be attributed to gender neutralization with plural nouns (§2.4.1).

Alongside QNPs and “kind-of” NPs, the corpus data reveal other nouns which are more prone to “relinquishing” the role of agreement controller to the adjunct rather than the head noun. These include *txila* ‘beginning’ (46), *hemšex* ‘continuation’ (47), and *mašmaut* ‘meaning’ (48) – all of which semantically imply the need for some type of complement or modification (see Chapter 14 on Genitive Constructions). When these nouns are heads of construct-state NPs, the controller is either the syntactic head, as in the (a) examples, or the head of the adjunct, as in the (b) examples.

- (46) a. [*txilat*^ *ha-maslul*] *nimcet* *be-merxak ke-xaci*
 [beginning:CS.SG.F the-route:SG.M] found.SG.F in-distance as-half
yom nesia me-ha-ir.
 day drive from-the-city
 ‘The beginning of the route is some half-day drive from the city.’

- b. [*txilat*^ *ha-maslul*] *nimca* *be-merxak halixa*
 [beginning:CS.SG.F the-route:SG.M] found:SG.M in-distance walking
kcara mi-pétax *ha-hostel*.
 short from-entrance the-hostel
 ‘The beginning of the route is a short walking distance from the entry to the hostel.’
- (47) a. [*hemšex*^ *ha-halixa*] *over* *beikar*
 [continuation:CS.SG.M the-walk:SG.F] passes:SG.M mainly
be-xóreš *patuax*.
 in-woodlands open
 ‘The rest of the walk mainly passes by open woodlands.’
- b. [*hemšex*^ *ha-halixa*] *hovila* *la-etgar* *ha-ba*
 [continuation:CS.SG.M the-walk:SG.F] led:SG.F to.the-challenge the-next
 – *mapal katan*.
 – waterfall small
 ‘The rest of the walk led to the next challenge – a small waterfall.’
- (48) a. [*mašmaut*^ *ha-davar*] *eyna* *lehitalemi mi-xašašot*.
 [meaning:CS.SG.F the-thing:SG.M] NEG.3SG.F to.ignore from-fears
 ‘The sense of the thing = the point is not to ignore suspicious’
- b. [*mašmaut*^ *ha-davar*] *hu* *še-ha-iša* *era*.
 [meaning:CS.SG.F the-thing:SG.M] is:SG.M that-the-woman awake
 ‘This means that the woman is awake.’

Partitives

Partitives in Hebrew are expressed with a construct state construction headed by a partitive quantifier, as described in the preceding section, or with a prepositional phrase headed by the ablative *me-* ‘from = (out) of’ (49b), as discussed below.

- (49) a. *maxacit*^ *ha-uxlusiya*
 half:CS.SG.F the-population:PL.F
 ‘half (of) the population’
- b. *xeci* *me-ha-uxlusiya*
 half:SG.M of-the-population:PL.G
 ‘half (of) the population’

Several quantifiers head *me-* partitives, the commonest being *xélek* ‘part’, followed by the lemma *axuz* ‘percent’, in all its forms, *kama* ‘some’, and fractions (e.g., *xeci* ‘half’ and *šliš* ‘a third’). Following are examples of three agreement patterns exhibited by these partitives.

- (50) a. [*xélek*[^] *me-ha-anašim*] *raca* *laseget*.
 [part:CS.SG.M of-the-people:PL.M] wanted:SG.M to.withdraw
 ‘Part of the people wanted to withdraw.’
- b. [*xélek*[^] *me-ha-anašim*] *rocim* *leyacer* *haclaxa gdola*.
 [part:CS.SG.M of-the-people:PL.M] want:PL.M to.create success big
 ‘Part of the people want to produce a great success’
- c. [*xeci*[^] *me-ha-uxlusiya* *ba-medina*] *sovlim* *mi-kax*.
 [half:CS.SG.M of-the-population:SG.F in.the-country] suffer:PL.M from-it
 ‘Half (of) the population in the country suffer from this.’

(50a) illustrates Q-agr, where the verb *raca* ‘wanted’ agrees with *xélek* ‘part’, the quantifier of the subject. The agreement pattern in (50b) is N-agr: the verb is masculine plural, in agreement with the noun *anašim* ‘people’. (50c) exhibits semantic agreement, where the target matches the semantic properties of the referents of the controller (a group of people) – as discussed earlier.

Danon (2013) identifies a correlation between the agreement pattern and the noun. More specifically, he observes that speakers tend to have a strong preference for N-agr with plural nouns, and Q-agr with collective singular nouns. This generalization is corroborated by the corpus data. Consider Table 15, which presents the distribution of the two agreement patterns, across different types of NPs. Note that masculine singular noun phrases are omitted from this table, since the partitive quantifier *xélek* ‘part’ is masculine singular, and thus there is no indication as to which part of the NP controls the agreement.

Table 15. *xélek me-* partitives: Agreement patterns by NP number & gender

SF nouns	PF nouns	PM nouns
Q-agr 3,539 59%	1,636 32%	4,182 27%
N-agr 2,448 41%	3,526 68%	11,198 73%
Total 5,987	5,162	15,380

The figures in Table 15 reflect the tendency of *xélek me-* partitives with plural nouns to trigger N-agr, as opposed to feminine singular nouns, which trigger Q-agr. Indeed, in 88% (altogether 240) of the occurrences of the feminine plural noun *našim* ‘women’ in this construction, the agreement pattern is N-agr. Conversely, in 81% (altogether 189), the quantifier of partitives with the feminine singular mass noun *uxlusiya* ‘population’, is the one that controls the agreement. Typical examples of the patterns with the two nouns are given in (51).

- (51) a. [*xélek gadol me-ha-našim*] *mešalmot et mexir*
 [part:SG.M big:SG.M of-the-women:PL.F] pay:PL.F ACC price
ha-globalizáciya.
 the-globalization
 ‘A big part of women pay the price of globalization.’
- b. [*xélek nikar me-ha-uxlusiya*] *mevin*
 [part:SG.M considerable:SG.M of-the-population:SG.F] understands:SG.M
et ha-safa.
 ACC the-language
 ‘A considerable part of the population understands the language.’

5.2 The copular construction

Two issues are considered under this heading: copula agreement alternations (§5.3.1) and copula constructions with partitives (§5.3.2).

5.2.1 Copula agreement alternations

The copular construction consists of a subject, a predicate and a copula, which, in some contexts is optional. In most cases, the copula exhibits agreement with the subject (52), as do predicates which exhibit agreement (e.g., the adjective phrase in 52b).

- (52) a. *ha-revaxim šel ha-xavarot ha-gdolat hem tocaa šel*
 the-profits:PL.M of the-companies the-big they:3PL.M result.SG.F of
ha-driša ha-govéret le-anan híbrídi.
 the-demand the-growing for-cloud hybrid
 ‘The profits of the big companies are a result of the growing demand for a hybrid cloud.’
- b. *ha-haxlata^ be-éze céva lefanek et cipornay lo*
 the-decision:CS.SG.F with-which color to.pamper ACC my.nails not
hayta pšuta.
 was:3SG.F simple:SG.F
 ‘The decision as to which color to pamper my nails with was not simple.’

There are, however, instances of variation with regards to the agreement properties exhibited by the copula. This variation is another instance of “controller competition”, where alongside cases where the subject controls the agreement properties of the copula, as in in (52), there are instances where the copula agrees with the post-copular NP (Doron 1983; Glinert 1989; Rubinstein 1968; Schwarzwald 1979).

It was impossible to conduct exhaustive searches of this construction, since, as illustrated in (52), material of varying types and lengths can intervene between the agreement controllers and targets so that reliable statistical information cannot be derived. What follows, then, consists of impressions regarding tendencies in this respect.

As noted, the unmarked controller of the agreement on the copula is the subject. Nonetheless, corpus searches revealed a non-negligible number of examples of the less common agreement pattern, where the controller of the agreement of the copula is the post-copular NP. The examples in (53) illustrate cases where a feminine singular predicate controls the agreement properties of the pronominal copula instead of the masculine singular subject as in (53a) and (53b), and instead of a feminine plural subject as in (53c).

- (53) a. *sidur*[^] *ha-šulxan* *hi* *ha-teritórya*
 setting:CS.SG.M the-table:SG.M is:SG.F the-territory:SG.F
ha-biladit *šeli*.
 the-exclusive my
 ‘Setting the table is my exclusive domain.’
- b. *libo* *šel ha-festival* *hi* *taxarut*[^]
 his.heart:SG.M of the-festival:SG.M is:3SG.F competition:CS.SG.F
sratim kcarim.
 films short
 ‘The heart of the festival is a short film competition.’
- c. *merivot* *ben* *axim* *hi* *dérex* *meula*
 quarrels:PL.F between siblings:PL.M is:SG.F way:SG.F superb:SG.F
lehitkonen la-xayim.
 to.prepare to.the-life
 ‘Quarrels between siblings are an excellent way to prepare for life.’

Similar examples are given in (54), yet in this case, the agreement controller is a post-copular masculine singular noun phrase.

- (54) a. *dugma* *le-tocar* *šel ha-tkufa* *hu* *bet*[^]
 example:SG.F of-product:SG.M of the-era:SG.F is:SG.M house:CS.SG.M
akíva be-rexov hércel.
 Aqiva in-street Herzl
 ‘An example of a product of this era is the Aqiva House on Herzl Street.’
- b. *klišaat*[^] *ha-klišaot* *hu* *sipur*[^] *gerušey-ha*
 cliché:CS.SG.F the-cliches:PL.F is:3SG.M story:CS.SG.M divorce-her
šel wéndi.
 of Wendy
 ‘The cliché of all clichés is the story of Wendy’s divorce.’
- c. *xzuyot*[^] *yocrim* *ba-réšet* *hu* *davar*
 rights:CS.PL.F creators:PL.M in.the-net is:SG.M thing:SG.M
xášuv.
 important:SG.M
 ‘Copyright on the net is an important thing.’

Instances of plural post-copular controllers are less common than those with singular controllers, yet there are examples of a masculine plural controller as in (55a) and a feminine plural controller as in (55b).

- (55) a. *makor tov le-sidan hem mucarey[^]*
 source:SG.M good:SG.M for-calcium:SG.M are:PL.M products:CS.PL.M
ha-xalav ha-šonim.
 the-milk:SG.M the-various:PL.M
 ‘A good source of calcium are the various dairy products.’
- b. *ha-rémez ha-tov beyoter hen ha-buot*
 the-clue:SG.M the-good:SG.M most is:3PL.F the-bubbles:PL.F
ha-mofiot be-cidey ha-steik.
 that-appear:PL.F in-sides the-steak
 ‘The best clue are the bubbles that appear on the side of the steak’

Most cases where the copula exhibits agreement alternations involve the present-tense pronominal copula, but some instances of predicate-controlled agreement with *haya* ‘was’ were also found as in (56).

- (56) a. *nešafim hayta dérex mecuyénet lehakir baxurim ceirim.*
 balls:PL.M was:SG.F excellent:SG.F way:SG.F to.meet men young
 ‘Balls (parties) were an excellent way to meet young men.’
- b. *eclénu ba-mišpaxa haskala haya davar*
 for.us in.the-family:SG.F education:SG.F was:3SG.M thing:SG.M
hexrexi ve-bsisi.
 essential:SG.M and-basic:SG.M
 ‘In our family, education was an essential and basic thing’

Agreement alternations in the copular construction are not unconstrained. Doron (1983, p. 91) suggests that the pronominal “agrees with the subject or the predicate, depending on which is ‘more referring.’” The data, however, reveal cases where the predicate is highly referential, for example, a particular house in (54a), as well as cases where the predicate is “predicative”, as in the case of the expression ‘an excellent way’ in (53c). At the same time the subjects of the above examples vary with regard to their definiteness or specificity, yet notwithstanding, some NP predicates were found to trigger agreement more than others, including terms like *dérex* ‘way’, *txum* ‘field, domain’, *davar* ‘thing’, and *tofa’a* ‘phenomenon’.

5.2.2 Partitives and copulas

Controller competition also occurs in the interaction of the copular construction with numeric partitives. When a numeric quantifier appears as the head of the partitive construction, its gender is controlled by the adjunct, when the partitive is

a construct-state NP (57a), or the complement, when it is a *me-* partitive (57b), as further discussed in §5.2 below.

- (57) a. *exad*[^] *ha-anašim* / *axat*[^] *ha-beayot*
 one:CS.SG.M the-people:PL.M / one:CS.SG.F the-problems:PL.F
 ‘one (of) the people / one (of) the problems’
- b. *exad* *me-ha-anašim* / *axat* *me-ha-beayot*
 one:SG.M of-the-people:PL.M / one:SG.F of-the-problems:PL.F
 ‘one of the people’ / ‘one of the problems’

Agreement variations occur when the partitive functions as the predicate in the copular construction. Thus, in (58) and (59), in the (a) examples the gender of the head of the partitive matches that of its adjunct or complement as is the case in (57). There are, however instances where the gender marking of the head of the partitive matches that of the subject (and, in turn – the copula), as illustrated in the (b) examples of (58).

- (58) a. *hi* *hayta* [*exad*[^] *ha-anašim* *še-azru*
 she:SG.F was:SG.F [one:CS.SG.M the-people:PL.M that-helped:3PL.M
li *meod*].
 to.me a.lot]
 ‘She was one of the people who helped me a lot.’
- b. *gólđa* *hayta* [*exat* *ha-išim* *ha-xašuvim*
 Golda was:SG.F [one:SG.F the-personalities:PL.M the-important:PL.M
yoter *be-toldot*[^] *yisrael*].
 more in.history:CS Israel]
 ‘Golda was one of the more important personalities in the history of Israel.’
- (59) a. *zihum*[^] *avir* *hu* [*exat* *me-ha-beayot*
 pollution:CS.SG.M air:SG.M is:3SG.M [one:SG.F of-the-problems:PL.F
ha-boarot *kayom* *ba-olam*].
 the-burning:PL.F today in.the-world]
 ‘Air pollution is one of the burning issues in the world today.’
- b. *nose*[^] *šixpul* *ha-tóxen* *hu* [*exad*
 issue:CS.SG.M replication:SG.M the-content:SG.M is:3SG.M [one:SG.M
me-ha-beayot *ha-nefocot* *ba-rešet*].
 of-the-problems:PL.F the-common:PL.F in.the-net]
 ‘The issue of plagiarism is one of the common problems on the Net.’

The masculine *exad* ‘one’ quantifies the feminine plural noun *baayot* ‘problems’ in 99 instances (1% of all cooccurrences). Of these, in 15 *exad* heads the NP predicate of a copular construction with a masculine subject. With the human masculine plural noun *anašim* ‘people’, the feminine *exat* ‘one’ appears in 85 instances (2%),

of which 35 are predicates of feminine subjects in the copular constructions. Others are unrelated to the copular constructions, yet their referent is a female person, including 17 instances where the feminine quantifier is used in conjunction with the masculine one, presumably to override the inherent masculine gender of *anašim* ‘people’ and express gender neutrality as in (60).

- (60) *le-kol exad ve-axat me-ha-anašim ha-mevugarim*
 to.each one:SG.M and-one:SG.F of-the-people:PL.M the-elder:PL.M
ba-mišpaxa šelānu yeš et ha-sipur šelo
 in.the-family our be ACC the-story his
 ‘Each one of the older people in our family has their own story.’

In sum, the occurrence of controller competition challenges formal approaches to agreement which assume that it is always the case that syntactic heads of NPs control agreement and that at the clausal level, agreement occurs exclusively between subjects and predicates. The phenomena presented in this section suggest that speakers are sensitive to cues other than syntactic structure when realizing agreement properties on targets. Semantic prominence, for example, seems at times to trump syntactic headedness. Especially challenging to formal approaches is the interaction of partitives and copulas, where the subject, as the agreement controller, controls the agreement properties not just of the copula but also of the partitive head within the predicate.

6. Conclusions

This chapter began with Steele’s (1978) definition of agreement as “some systematic covariance”. The corpus data, however, did not reveal systematicity. Rather, multiple instances of different types of agreement variations were found. The question that these data raise is whether it is indeed the case that agreement in Hebrew is chaotic or whether it is subject to rules other than the prescriptive ones. The proposal suggested here is that (at least) two aspects of the agreement system in Hebrew are responsible for the variations: transparency and function.

First, different agreement variation phenomena can be attributed to a lack of transparency in the morphological system. A prime example is the discrepancy between the form of plural suffixes and the gender of the nouns which they mark (e.g., the masculine plural noun *mekomot* ‘places’ with its feminine-formed plural suffix *-ot*). The usage-based data showed that nouns with gender-mismatched plural markers are more likely to trigger variable gender agreement on their targets. Indeed, linguistically-aware Hebrew speakers often hesitate when they need to express targets of plural nouns, such as an attributive adjective for *gderot* ‘fences’. In

order to determine whether they are masculine or feminine they ask themselves (sometimes out loud) “Is it *gader xadaš* ‘new:SG.M fence’ or *gader xadaša* ‘new:SG.F fence’?”. A similar situation occurs with the *-áyim* suffix, which predominately but not always pluralizes feminine nouns (“Is it *magaf xadaš* ‘boot new:SG.M’ or *magaf xadaša* ‘boot new:SG.F?’”).

The numerals, too, are notoriously vulnerable (Meir 2005, 2013), although the usage data did not conform to the general perception that this domain is especially unstable. The number system is a prime example of opacity. First, the morphological marking of gender on the numerals is the opposite of gender marking in general in Hebrew. While uninflected forms are predominately masculine with numerals, feminine numerals are basic (e.g., *xameš* ‘five:SG.F’) and masculine forms are suffixed with *-a*, the suffix that generally characterizes feminine gender (*xamiša* ‘five:SG.M’). In the analysis proposed here, this is a source of confusion that is reflected in bi-directional gender variations. An additional source of gender agreement variations is the fact that masculine numerals have distinct absolute and construct forms while feminine numerals have only one form. For this reason we find uni-directional variation with construct numerals, where speakers often opt for the transparent construct form (i.e., the masculine numeral) regardless of the gender of the noun.¹⁸

The second source of agreement variation relates to the discrepancy between the prescriptive agreement system and the function that speakers may associate with agreement. Here we find three different phenomena. One type of variation stems from the cues which speakers use to identify the agreement controller in a syntactically complex NP. The usage data show that it is not always the syntactic head of the NP that controls the agreement. Rather, as is evident from data regarding agreement patterns of construct state NPs and partitives, sometimes a semantically more prominent element within the NP is the controller. A different type of variation involves the agreement properties which speakers ascribe to the controller. Here, too, we find that alongside formal (morphosyntactic) properties, speakers may also “choose” to associate an agreement controller with information regarding the nature of the referent. The third phenomenon relates to subject–verb agreement. Variations in this context include the identification of an argument other than the canonical subject as the controller (in the copular construction) and the suppression of agreement altogether (in verb-initial constructions). Both cases suggest that speakers interpret what we refer to as “subject–verb agreement” not necessarily as a way to mark the relationship between a syntactic subject and its predicate, but rather as a way to mark a “distinguished NP argument” or the lack of one.

18. This may account for the low mismatch rate found with the numerals *šney*^ ‘two:CS.M’ and *šney*^ ‘two:CS.M’, which are not marked for status.

The present chapter framed the discussion of agreement in terms of variations. And, indeed, the corpus data revealed that speakers, even in their writing, do express variable agreement patterns. Although the corpus that was used is not balanced and is not designed to statistically represent current-day Hebrew, its enormous size and diverse sources do make up (at least partly) for these shortcomings. The naturalistic example sentences, often selected intentionally to approximate minimal pairs, paint a real picture of agreement variations. Naturally, this perspective highlights the exceptions and overlooks the regularities. However, to quote Barlow (2009: 189), “[r]ather than treating the feature discord patterns as exceptional, I would argue that such examples provide clues as to the true nature of the agreement relation.” A first step in this direction was taken in this chapter.

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Transitivity and valence

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The study explores a range of transitive constructions of varying prototypicality in Modern Hebrew (MH) referring to causal and non-causal events, including complex predicates, semi-transitive and lexicalized constructions, with transitivity analyzed as a morpho-syntactic category rather than a semantic concept. The chapter describes various types of alternations and variations in case-frame and argument structure in MH transitive constructions, noting the growing tendency towards labile alternation (ambitransitivity), particularly in the prototypical causative morphological pattern of the *hif'il* verb-template (e.g., *hilbin* 'whiten' serves both as causative 'make white' and inchoative 'become white'). In such cases, a change in the valence-frame of the verb does not necessarily involve change in the verb-morphology, yielding the claim that transitivity in MH does not depend exclusively on the semantic frame or morpho-phonological nature of the verb-pattern, but instead on the overall syntactic properties of the construction, which in turn is dependent on discourse requirements. Avoidance in discourse of the core O (object) argument is shown to occur even in highly transitive constructions, in which reader-hearers resolve the unrealized argument by context-based inferences and/or based on their communicative competence in conversational discourse.

1. Introduction

The common assumption in linguistic research is that a transitive construction is one containing a verb which describes an action that not only impinges on the object (O) argument-role but necessarily involves a change in its role, as in the case of verbs like *kill*, *destroy*, *break* (see, for example, Comrie 1989; Tsunoda 1985).¹ Each verb meaning is associated with a set of verb-specific micro-roles, which (potentially)

1. Following Dixon (1994) and other typologists, the labels A, O and S are used here to denote the core terms of prototypical transitive constructions: A (Agent) and O (Patient) and S as the sole argument of an intransitive predicate which, when canonically encoded in accusative-type languages like English and Hebrew, coincide with the notion of subject (S and A) and object (O).

correspond to arguments defining the valence-frame of the verb. Prototypical transitivity is thus understood as involving a maximal distinction between two core arguments, one controlling (A = agent) and one affected (P = Patient).² Elaborating on Talmy (1991), Croft (2012) suggests that transitivity be ranked in terms of the “force-dynamic relations” between one participant and the other, in lines with his earlier suggestion (Croft 1994: 39) that the notions ‘agent’ and ‘patient’ be defined in terms of the starting and end points of the prototypical event: A and P are natural delimiters so that an event with both A and P is maximally delimited. It follows that since O represents a resultant state, there is no subsequent transmission of dynamic force. In other words, in a prototypical transitive event, the A argument exerts force on the P argument that absorbs the force and so undergoes a change of state. However, transitive constructions in Hebrew, as in many languages, may be used in situations which deviate considerably from the prototype, for example with verbs of pursuit and stative predicates of perception and cognition, even though the subject referent of these verbs does not act on or affect a P (on categorization of transitivity in light of a prototypical model in model, see Halevy 2004: 144–151).

From a rather different perspective, Hopper and Thompson (1980) propose that transitivity is ranged on a continuum specified in terms of a series of semantic and syntactic criterial properties that define different degrees of transitivity. In their analysis (1980: 252), “the canonical transitive clause has two participants, reports a kinetic event, is punctual and perfective, has a definite referential, individuated, and a wholly affected P and a volitional A which ranks high on the animacy hierarchy, and is affirmative and realis”. Along similar lines, Tsunoda (1985) suggests that the verbs highest in the hierarchy are most likely to be transitive across languages, and are also most likely to have passive, antipassive, reflexive, and reciprocal counterparts. Creissels (2014), in contrast, argues against the idea of a straightforward relationship between semantic argumenthood and its possible morpho-syntactic correlates, claiming that the notion should be defined in semantic terms as a comparative concept independent of its possible correlates in the structural realization of individual languages. Along these lines, a *transitive construction* in the present context refers to one characterized by formal *transitive encoding* of at least two arguments A (Agent/Actor) and O (Patient/Undergoer), the latter frequently though not exclusively being an affected argument (Haspelmath 2015; Lazard 2002).³

Transitivity can also be viewed as a discourse phenomenon. According to Hopper and Thompson (1980: 294), high transitivity correlates with foregrounding,

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2. Core argument refers here to the transitive subject (A), object (O), or intransitive subject (S).
 3. The notion of ‘patient’ can be extended to include themes of mental, emotional, or perceptual processes, not actually modified by these processes. This means an extension of the definition of ‘agent’ to the beings that experience such cognitive processes.

and low transitivity with backgrounding. ‘Foregrounding’ refers basically to cases in which the A is focused on, while ‘backgrounding’ is the opposite of this. The spectrum of transitivity is closely bound up with discourse grounding of the argument normally encoded as direct O that can be elided when it is de-emphasized in the discourse in relation to the action, particularly in language-specific contexts (Berman & Uziel-Karl 2000). Thompson and Hopper (2001) question the very concept of argument structure since, for one thing, clauses with an elided argument might be unacceptable in isolation but perfectly acceptable in context. This yields a view of transitivity as interacting with various functional and cognitive factors, with each component of a transitive event involving not only a different facet of the effectiveness or intensity with which the action is transferred from one participant to another, but also a distinct *perspectival structure* (Borschev & Partee 2002). This in turn yields distinct conceptualizations of a given event, as manifested in a range of transitivity alternations involving a change of case and valence frames (Kulikov, Malchukov, & Swart 2006).⁴ Besides, the ability of a verb to be used both transitively and intransitively is often a matter of lexical idiosyncrasy.

By and large, difficulties in establishing criteria for argumenthood and for the valence-frame or “subcategorization values” (i.e., semantic and syntactic) of individual verbs ultimately stem from the tension between generalized, highly typical patterns of linguistic structure to unique events in a given language or a specific context. As a result, by taking *events* as starting points, current research tends to be less concerned with establishing testable criteria for argumenthood.

On the other hand, while transitivity as a semantic notion is scalar, *syntactic* transitivity reflects a binary division between transitive and intransitive constructions, where transitive constructions include verbs with direct O’s, while intransitive clauses do not. Yet constructions consisting of two or more obligatory arguments may be non-resultative and hence noncausal, since they do not involve any perceptible effect exerted on O.⁵ Besides, causative verbs are not necessarily agentive (i) Their subject may be an instrument or a natural force; (ii) transitive

4. Borschev and Partee (2002) propose that the choice reflects not Theme-Rheme structure but what they call “perspectival structure”: structuring of a situation described in a sentence so that one participant (the “perspectival center”) is picked out and the rest is in effect predicated on or said about it (Borschev & Partee 2002).

5. The semantically motivated terms *causal* and *noncausal* are used here in preference to causative and anticausative, since not all noncausals in Hebrew are anticausative in the sense that they lack an implicit Causer argument. A causal verb is a verb that includes a “cause-meaning” component, while a noncausal verb has the same basic meaning as a causal verb but lacks the “cause” component (Haspelmath et al. 2014), even though a causative event (an event leading to the resultant state of the theme) usually occurs against the background of a noncausal construction.

constructions may include direct O's that do not represent a "maximally differentiated participant" (Næss 2007), (iii) they are not what Hopper and Thompson characterize as "distinct from their background"; and/or (iv) they may contain an extra or dummy O recapitulating the inherent lexical content of the verb. According to Hopper and Thompson (1980), such constructions are located on the "low" end of the transitivity spectrum.

MH sometimes involves transitive constructions that are intransitive in their morpho-syntactic encoding, so challenging the structural criteria defined above. As shown in what follows, the transitivity of individual verbs or even of verbs inflected in a specific manner or that occur in particular discourse environments is intimately related to the form-meaning of the construction in the language. Besides, there are lexicalized expressions with an idiosyncratic meaning that are transitive in form but do not allow alternation of diathesis (verb-argument relations), notably with regard to voice – as noted, too, in Chapter 10 on Voice Alternations.

The view taken here is that a distinction needs to be drawn between *transitivity* as a morpho-syntactic phenomenon and as a semantic notion concerned with the effectiveness (not necessarily affectedness) of an event, and that each construction needs to be examined separately as it occurs in a given piece of discourse (e.g., Lapolla, Kratochvíl, & Coupe 2011). In line with Construction Grammar, transitivity is analyzed in the present study as a property of *constructions*. That is, transitivity is assigned by a construction as a pairing of form-meaning rather than deriving its value from the verb alone, or else the meaning of the construction and of the verb converge to create the overall sense of a given occurrence. Along these lines, as demonstrated below (§4), the construction may impose particular interpretations on expressions containing verbs that in themselves do not lexically entail a transitive meaning. In Hebrew, both types, transitive and intransitive, may be morphologically derived: With some verbs, the derivation is from a simplex intransitive verb to a transitive verb, while with others, the process seems to be the other way round. Besides, it is not always the case that one is the simplex or basic construction and the other the derived. Here, too, syntactic and discourse/pragmatic factors may interact with a particular derivational process.

Below, transitive constructions in MH are analyzed in a usage-based approach, from a discursive perspective, based on data taken from online resources representing different genres of written and spoken language as well as examples from spontaneous speech output. To address the issue of labile (ambitransitive) alternations of transitive verbs in current usage both qualitatively and quantitatively, counts were also compiled from Stern's (1994) dictionary of Hebrew verbs and from Rosenthal's (2005) dictionary of Hebrew slang.

The chapter is organized as follows. It starts by describing the nature and morpho-syntactic properties of arguments that typically participate in MH transitive

constructions (§2), followed by consideration of: morpho-syntactic manifestations of reduced and increased transitivity (§3), pseudo-transitive constructions with inactive predicates displaying O-like encoding of the single core argument (§4), periphrastic and lexicalized expressions of inherently transitive force (§5), labile alternation where both members of the transitivity pair may take the same morphological form (§6), and transitive constructions exhibiting case-frame alternation or variation in the alignment of arguments (§7). The study concludes by noting transitive constructions in natural discourse (§8), followed by a summary of findings and general discussion (§9).

2. Transitive constructions in MH

2.1 Micro-roles

As in other languages, transitive constructions in MH express a wide range of thematic roles that can be realized in different case- and valence-frames. The number and nature of argument roles is intimately linked to the lexical structure of the verb, and verbs also determine the way argument roles are marked or behave. The valence-frame of predicates in transitive constructions may be bivalent or trivalent in *ditransitives* ('extended transitives' in Dixon 1994). The definition of ditransitives applied here to MH is based largely on use of the dative preposition *l-* and locative *el/l-*, both roughly equivalent to English *to*, and applies to constructions with verbs such as *natan* 'give', *maxar* 'sell', *zarak* 'throw', *hicia* 'advise', (see, for example, Francez 2006, and for Hebrew, Berman 1982a).

Different types of transitive constructions in MH that require either two or three core arguments are illustrated in (1) to (6), where *Agents* are salient arguments that bring about a state of affairs and are (or are perceived to be) conscious or sentient, in a way that *Instruments* and other types of *inanimate Causers* are not. And the *binyan* value of the verb is indicated by Bn (B1 – *pa'al*, B2 – *nif'al*, B3 – *hif'il*, B4 – *pi'el*, B5 – *hitpa'al*).

- (1) [CAUSER_i agentive; CAUSEE_j totally affected; Verb – causative]
ha-yéled šavar et ha-kos ~ Middle: ha-kos
 DEF-boy break:B1 PST.3SG.M ACC DEF-glass:F ~ DEF-glass:F
nišbera
 break:B2 PST.3SG.F
 'The boy broke the glass ~ the glass broke'
 [from spoken intercourse]

- (2) [CAUSER_i non-agentive; CAUSEE_j partially affected; Verb – noncausal stative]
kol^ ha-yamin ha-ze hirkiv lanu
 entire:CS DEF-right DEF-this:SG.M cause.decay:B4.PST.3SG.M to.us
et ha-medina
 ACC DEF-country:F
 ‘All this rightwing has blighted our country’
 <https://twitter.com/Orly_levy/status/>
- (3) [EXPERIENCER/PERCEIVER_i; O-ARGUMENT_j non-affected; Verb – non-causal stative]
ani ohev yoter et sirtey^ ha-peula ha-carfatiyim
 I love more ACC movie:CS.PL.M DEF-action DEF-French:PL.M
 ‘I like French action movies better’
 [from spoken intercourse]
- (4) [INSTRUMENT_i; O-ARGUMENT_j; Verb – non-resultative]
ha-misparayim ha-éle lo xotxim et ha-xéve~
 DEF-scissor:DU.PL DEF-this:PL not cut:B1.BEN.PRS.PL.M ACC DEF-rope ~
 Middle: *ha-xéve~ lo nextax*
 DEF-rope:SG.M not cut:B2.BEN.PRS.SG.M
 ‘These scissors don’t cut the rope ~ the rope doesn’t ~ isn’t cut’
- (5) [AGENT_i; RECIPIENT_j; O-ARGUMENT_k; Verb – ditransitive with oblique argument]
ha-mazkira kvar natna la- menahel et kol^
 DEF-secretary:SG.F already give:PST.3SG.F to.DEF- manager:SG.M ACC all:CS
ha-mismaxim
 DEF-document.PL.M
 ‘The secretary has already given the director all the documents’
 [from spoken intercourse]
- (6) AGENT_i; THEME_j; LOCATION_k; Verb – noncausal ditransitive (verb of placing in location)
ha-xašud sam et ha-ekdax al ha-šulxan
 DEF-suspect:SG.M put:PST.3SG.M ACC DEF-gun on DEF-table
 ‘The suspect put the gun on the table’ <www.haaretz.co.il/misc>

In Modern, in contrast to Biblical Hebrew, in the unmarked case of a three-participant construction, the human dative-marked Recipient is often but not obligatorily promoted to a position adjacent to the verb in place of the direct O, as in (5) above.

2.2 Morphosyntactic properties

Brief remarks on the typology of the verb system of Hebrew as a Semitic language are noted here as background. MH has retained the classical Semitic system of constructing verbs from an abstract consonantal root intertwined in a particular verb-template pattern (known as *binyan* ‘construction’/ ‘building’), to yield a meaningful verb pattern (see, too, Chapters 7 to 10 in Part II). MH has seven distinct morpho-phonological verb-templates, with transitivity achieved by using a verb in one of the three canonically active verb-templates: the simple stem *qal/pa'al* (B1) constructed out of the radical elements intertwined in the verbal pattern (without additional affixes), and the so-called ‘intensive’ and ‘causative’ verb-templates, *pi'el* (B4) and *hif'il* (B3) constructed out of the radical elements combined with specific affixes, with the latter two patterns having canonical passive counterparts in *pu'al* and *huf'al* respectively (see Chapter 10).

Traditionally, the verb-template of *hif'il* is regarded as the unmarked paradigm hosting causative verbs, although in current innovations *pi'el* is highly productive in conveying a causative meaning (Berman 1993; Bolozky 1982, 1999). Moreover, both *hif'il* and *pi'el* serve in MH to form denominal verbs – e.g., *hiklik* (*hif'il* template) ‘click’ and *simes* (*pi'el* template) ‘send an *sms* text message’ (Berman 2003; Bolozky 2003; Laks 2011: 43), although more predominantly in *pi'el* (see Chapter 9 on Parts of Speech). The intransitive counterpart of causative verbs are predominantly in *pa'al* (*qal*), e.g., *halax* ‘go’ ~ *holix* ‘make go, conduct’, with some alternating with verbs in *nif'al*, e.g., *nixnas* ‘enter, go in’ ~ *hixnis* ‘cause to enter, put in’. However, *nif'al* (B2) most commonly serves as a middle voice counterpart of *pa'al* – e.g., *patax* ‘open’ ~ *niftax* ‘get, become open’, occasionally having a reciprocal meaning (e.g., *nifgaš* (*im*) ‘meet (with)’). MH speakers sometimes transitivize verbs in *nif'al* by using the verb-template of *hif'il*; for example, in current speech, the internally caused (agentless) verb *ne'elam* in *nif'al* ‘disappear’ alternates with *he'elim* (B4) ‘make somebody or something disappear’ to refer to an externally causal event. The verb-template of *hitpa'el* (B5) typically denotes intransitive middle voice, mainly in the sense of inchoative change-of-state and also lexically restricted reflexive or reciprocal forms (see Chapter 10 on Voice Alternations, §4).

Despite these broad trends, the exact meaning of a verb cannot be unequivocally predicted independently from the core lexical meaning and grammatical features of its verb-template. Moreover, there is no one-to-one correlation between the semantic and syntactic properties of verbs and their morphological form (i.e., verb-template). For example, as noted, causative may appear not only in *hif'il* but also in *pa'al* and *pi'el* templates. In addition, as shown further below (§7), there is a growing tendency towards labile verb formation, especially in colloquial MH

where, contrary to traditional formation, a change in verb-argument structure does not necessarily entail a change in verb-morphology.

Importantly, while English generally favors transitive verbs with direct objects (Bossong 1998: 271), this does not seem to be the case for Hebrew, which often relies on prepositional objects. For example, as shown in (7), common verbs like ‘give’, ‘help’ and others that are encoded transitively (taking a direct O in P argument role) in English, take an oblique or prepositional O, often with a dative *l-* as in (7a) to (7e) or a locative preposition (*l/el* ‘to’, *al* ‘on’) as in (7f).

- (7) a. *hu ana lo miyad* ‘he answered **to-him** = he answered him immediately’;
 b. *hu azar lo lixtov* ‘he helped **to-him** to write = he helped him to write’;
 c. *hu hera lo et ha-dérex* ‘he showed **to-him** = showed him the way’;
 d. *hu hivtíax la matana* ‘he promised **to-her** = promised her a present’;
 e. *hu natan lo késef* ‘he gave **to-him** = gave him money’;
 f. *hitkarávnnu la/el ha-‘ir* ‘we approached **to-the city** = we approached the city’;

Relatedly, MH employs the instrumental preposition *b-* ‘in/at’ marking the P argument with verbs of contact by motion such as ‘kick’ and ‘shoot’, implying a direct effect on the O argument. These are described by Tsunoda (1985) as “non-resultative verbs with a direct effect on patient”, describing an event involving contact with a surface without necessarily entailing any change in it (a person may shoot somebody without him or her being harmed), as in (8) and (9).

- (8) *ha-xayalim yaru bo la-mávet lifney*
 DEF-soldier:PL.M shoot:B1.PST.3PL.M in:3SG.M to.DEF-death before
še-ha- mitan hitpocec
 that-DEF- load exploded
 ‘The soldiers **shot him** to death before the device exploded’
 <<http://www.ynet.co.il/articles>>
- (9) *hen kilelu ve-baatu bo, aval hu lo hegiv*
 they:PL.F curse:PST.3PL and-kick:B1.PST.3PL in.him, but he not react
 ‘They cursed and **kicked him**, but he did not respond react’
 <www.youtube.com/watch>

In such cases, MH does not allow a conative alternation like the one between English ‘he shot him’ ~ ‘he shot at him’. Moreover, diachronically, several MH verbs with a subject-direct O pattern had different form-types in previous stages of the language, an issue beyond the scope of the present study. And, again unlike English, MH is not a highly transitivity-prominent language (in the sense of Haspelmath 2015). For example, it disallows transitive encoding of a property, or where the subject designates a location as in *This room sleeps a couple and a child*.

MH also has *syntactic alternatives* in the form of periphrastic verbal expressions, in addition to morphological encoding of transitivity. For example, speakers make use of light verbs meaning ‘become’, ‘get’, ‘turn’ (into), etc. for expressing inchoativity and ones meaning ‘make’, ‘bring about’, ‘cause’, ‘incur’ for conveying causal meaning (analogously to use of pronouns in the sense of ‘each other’, ‘one another’ for expressing reciprocity and of ‘self’ for reflexivity (see Chapter 10). The periphrastic expression is often the only available option, with no occurrent *binyan* form for conveying inchoativity, as in (10).

- (10) *kol páam še-ába hoci et ha-akordion, ze*
 every time that-father take.out:PST.3SG.M ACC DEF-accordion, this
heela xiyux al panéha
 raise:B3.⁶PST.3SG.M smile on face.her
 ‘Every time dad pulled out his accordion, it brought a smile to her face’⁶
 <<http://zemer.co.il/song/>>

As to encoding of the O argument, when definite, it is mandatorily indicated by the accusative marker *et*, the classical *nota accusativi* in Hebrew (see Chapter 9 on Parts of Speech). The relative freedom with which definite O’s are omitted or extra O’s are added is language-specific, so that transitive constructions in MH take accusative marking not only in the case of NPs, but also in substantivized complement clauses, as in (11).

- (11) *ha-loxamim tearu et še-era*
 DEF-warrior:PL.M describe:B4.PST.3PL.M ACC that-happened
ba-dakot ha-rišonot lifney ha-pigúa
 in.DEF-minute:PL.F DEF-first:PL.F before DEF-terrorist.attack
 ‘The soldiers described what happened in the first minutes before the terrorist attack’
 <www.ch10.co.il>

Unlike in Biblical Hebrew, verbs in a transitive construction in MH cannot govern more than one argument in the role of direct object, ruling out transitive verbs assigning two direct O’s.⁷ This contrasts with non-highly inflected languages like

6. In numbered examples, target verbs are bolded and glossed for *binyan* verb-pattern value, as follows. B1 = *pa'al* (also known as *kal*), B2 = *nif'al*, B3 *hif'il*, B3_{ps} = *huf'al*; B4 = *pi'el*, B4_{ps} = *pu'al*, B5 = *hitpa'el*.

7. For example, in Biblical Hebrew the verb *hilbiš* ‘dress/clothe somebody’ governs two direct O’s, whereas in MH it has only one direct O and a complement introduced by instrumental preposition *b-* ‘in’/‘with’. Compare *wayyalbēs ša'ul 'et dāwīd maddāw* ‘and-clothed Šaul ACC David [ACC] garments.his = Saul clothed David with his own garments’(1 Sam. 17: 38) as against MH: *šaul hilbiš et david ba-madim šelo* ‘Šaul dressed ACC David in-garments.his = Saul dressed David in his uniform = clothes’.

German, Modern English, Mainland Scandinavian, and Dutch, where the change from transitive to intransitive is commonly produced via zero-derivation, with no morpho-phonological distinction between transitive and intransitive versions of a large number of what Jespersen termed “move and change” verbs including verbs like *break*, *close*, *cool*, *dry*, *open* (Smith 1978/2011). As noted earlier, despite numerous deviations from the prototype, differences in transitivity and voice in Hebrew are expressed by changing the *binyan* verb template, reflecting the more general tendency of Hebrew to avoid zero derivation or syntactic conversion (Berman 2017, and see Chapter 9 on Parts of Speech). Examples are given in (12) to (14) below to show that non-causals do not necessarily entail a change in voice. In this, they differ considerably from passives, which contain an implicit A (or other cause component), in contrast to the lack of an implied or explicit A in non-causals. Moreover, the morphology of non-causals is in many respects shared with passives and reflexives (see Chapter 10). Some representative examples of morpho-phonological alternations in MH on the dimension of transitivity are illustrated by typical examples in MH compared with their English counterparts, for causal versus non-causal (*pa'al*.B1 ~ *nif'al*.B2) – in (12), of transitive versus intransitive-reflexive in (*hif'il*.B4 ~ *hitpa'el*.B5) – in (13), and transitive intransitive-reciprocal (*pa'al*.B1 - *nif'al*.B2) – in (14).

- (12) *ha-yéled šavar et ha-kos ~ ha-kos nišbera*
 DEF-boy broke:B1 ACC DEF-cup:SG.F ~ DEF-cup:SG.F got.broken:B2.SG.F
 ‘The child **broke** the cup ~ the cup **broke**’
- (13) *hi hilbiša et ha-tinok ve-az hitlabša*
 she made.dress:B4.SG.F ACC DEF-baby:PL.F and-then got.dressed:B5.SG.F
maher
 quickly
 ‘She **dressed** her baby and then **dressed** (herself) quickly’
- (14) *avišai pagaš et gil ba-kafetéria ~ avišai ve-gil*
 Avishai met:B1.3SG.M ACC Gil in.DEF-cafeteria ~ Avishai and-Gil
nifgešu ba-kafetéria
 met:B2.3PL in.DEF-cafeteria
 ‘Avishai **met** Gil at the cafeteria’ ~ ‘Avishai and-Gil **met** (together) at the cafeteria’

As for the *hif'il* verb-template, while marked as causative, it also has several non-causal verbs such as *hičlax* ‘succeed’ and *hivlig* ‘restrain oneself’ in middle-reflexive, expressing an internally caused “non-incremental degree achievement” (Hay, Kennedy & Levin 1999), and confined to an intransitive construction-frame. Verbs in *hif'il* may also occasionally express both inchoative (in a transitive construction) and stative noncausal (in an intransitive construction), notably with

verbs deriving from stage-level adjectives, which describe a property that might be caused to change like color and temperature (see, e.g., Levin & Rappaport-Hovav 1995: 96–97). This is illustrated in (15) and further discussed in §6 below.

- (15) a. *amru la še-limon yaxol le-halbin et ha-panim*
 told:3PL to.her that-lemon can:B1 to-whiten:B4 ACC DEF-face
 ‘They told her that lemon can bleach your face’
 [https://www.fxp.co.il/showthread.php?]
- b. *ha-še’ela im axrey še-ha-or yalbin hu*
 DEF-question if after that-DEF-skin whiten:B3.FUT.3SG.M he (it)
yaxzor šuv la-céva ha-tivi šelo
 return:FUT.3SG.M again to.DEF-color DEF-natural of.it
 ‘The question is if after the skin gets whiter, whether it will go back to its natural color’

Further, when the grammatical subject is not really an argument responsible for the action, there may be a mismatch between the syntactic structure and the verb’s inherent semantics in a transitive construction. An example where the grammar provides speakers with the means to take different perspectives on truth-conditionally equivalent situations is given by the pair in (16) where (16a) displays a transitive and (16b) an intransitive construction. Although their propositional meaning is similar, they are not identical: In both cases, the denoted event is unintentionally instigated and the human participant does not play an agentive role, yet the transitive construction in (16a) as a form-meaning unit entails that the subject is somehow responsible for the event.

- (16) a. *haya kérax al ha-kviš. hexlákti ve-šavárti et*
 was ice on DEF-road. slip:PST.1SG and-break:B1.PST.1SG ACC
ha-yad
 DEF-hand:SG.F
 ‘There was ice on the road. I slipped and broke my hand’
- b. *haya kérax al ha-kviš. hexlák-ti ve-nišbera li*
 was ice on DEF-road. slip:PST.1SG and-break:B2.PST.SG.F to.me
ha-yad
 DEF-hand:SG.F
 ‘There was ice on the road. I slipped and my hand got-broken = broke’

The following section considers semantic and syntactic properties of constructions that deviate from the prototypical argument marking of transitivity when transitivity is “low” or “increased”.

3. Reduced vs. increased transitivity

A verb valence-frame can be modified either by reducing or increasing the number of arguments.⁸ Under the scalar definition, a transitive construction that does not involve maximally semantically differentiated participant roles is considered to be of “low” transitivity, as in the case of constructions that express a *reflexive activity*, as in (17).

- (17) *et kol ha-bubot hi hilibša yafe, aval et acma hi*
 ACC all DEF-doll:PL.F she dress.up:PST.3SG.F nice, but ACC herself she
lo hilibša ~ hi lo hitlabša
 not dress.up:B3.PST.3SG.F ~ she not dressed:B5.3SG.F
 ‘She dressed up all her dolls nicely, but she didn’t dress herself (up)’
 <<http://www.pnay.co.il/user/articles>>

MH has two strategies for expressing middle-reflexive activities: (i) syntactic, by use of a *detransitivized* construction involving an *internal force* directed toward itself, and (ii) morphological, with the middle-reflexive verb-templates *hitpa’el* (B5) and *nif’al* (B2) (and see, too, Chapter 10)

Hopper and Thompson (1980) propose that clauses with telic aspect and individuated O’s are more transitive than those that are atelic and have non-individuated O’s, so that verbs highest in the transitive hierarchy are also most likely to use passive, antipassive, reflexive, or reciprocal forms. Conversely, “low” transitive constructions do not convey an effective activity transferred from an A to an O argument, and they generally convey atelic and imperfective events. As a corollary, such constructions cannot passivize (Taube 2007) but they can occur in the middle/anticausative/reflexive templates of *hitpa’el* (B5) and *nif’al* (B2), as in (18) and (19) respectively.

- (18) *ha-haclaxa šel ha-breksit be-británia odeda otam*
 DEF-success:SG.F of DEF-brexitee in-Britain encouraged:B3.3SG.F ACC.them
 ~ Middle: *hem hitodedu*
 ~ they were.encouraged:B5.3PL
 ‘The success of the Brexit in Britain encouraged them’ ~ ‘they were encouraged’
 <<http://www.globes.co.il>>

- (19) *ha-kélev šelahem hivhil et ha-yéled ~ -Anticausative:*
 DEF-dog of.them frightened:B4.SG.M ACC DEF-child ~
ha-yéled nivhal
 DEF-boy got.frightened:B2.SG.M
 ‘Their dog frightened the child’ ~ ‘the boy got frightened’
 [from spoken intercourse]

8. Instances of increase in transitivity are familiar among Hebrew-speaking children in production of transitives, as demonstrated by Berman (1993: 659).

On the other hand, passive clauses such as (20) and (21) below describing a situation that does not necessarily imply an A role lack any corresponding active construction (although, clearly an active counterpart is legitimate when adding an overt subject referent that acts on, or affects the P).

(20) *tikvati ki bexax yuac tahalix^ ha-haxlama*
 hope.mine that in.that accelerate:B4_{ps}.FUT.3SG.M process:CS DEF-recovery
 ‘My hope is that by this means, the healing process will be speeded-up’

(21) *ve-haya rac el ima lirot im*
 and-was:3SG.M run:BEN.PTCP.SG.M to mother to.see if
hutav la
 better:B3_{ps}.PST.3SG.M to.her
 ‘And he used to rush to Mom to see if she was better’

[A. Oz, *a Story of Love and Darkness*, 2002: 501]

The requirement that a transitive construction involve an A consciously acting on and affecting a P is not met by experiential constructions (of perception, cognition, sensation), where the Experiencer is construed as more prominent than the Stimulus that triggers the event (Næss 2007: 197). Consequently, experiential predicates lack the causal structure associated with a transitive construction, either because they do not express a prototypical distinction between two argument roles, a volitional A and an affected P, or because there is an asymmetry between the Stimulus as subject, and the Experiencer as O. Such verbs tend to show alternation between transitive and intransitive constructions, as in (22).

(22) *ani lo zozer et šmo ~ lo zaxur*
 I not remember:B1.SG.M ACC name.his ~ not remember:B1_{ps}.BEN.SG.M
li šmo aval hu haya keréax, kcat šmanman...
 to.me name.his but he was bald, a.little chubby...
 ‘I don’t remember his name’ ~ ‘his name is not remembered to (=by) me but he was bald (and) a little bit chubby’ <<https://www.kidum.com/gmat/forum/1>>

The alternation in (22) shows that the dative marker *l-* may serve to introduce the Experiencer role coupled with a change in word order as a means for achieving ‘reduced transitivity’ (see, further, §5.2).

In constructions including contact-by-motion verbs, where the Causer is a non-agentive subject associated with transmission of force towards a human “recipient force”, the latter is realized in a prepositional rather than direct accusative object, as in (23), where the human O argument is preceded by the locative preposition *b-* ‘in/at’.

(23) *ha-gésem hika be-fanav be-ocma mitgabéret*
 DEF-rain strike:B3.PST.3SG.M in-face.his in-strength increasing
 ‘The rain struck at his face with increasing force’ <www.dortome.com>

The Causer argument in MH is always the subject of the clause, as in (24) below, regardless of the semantic properties of the Causee argument, or in Dowty's (1991) terms, irrespective of the Causee's Proto-Agent entailments, as in (24).

- (24) *ha-bdixa šel bānai lo hicxika oti*
 DEF-joke:SG.F of Banai not make.laugh:B3.PST.3SG.F ACC.1SG
 'Banai's joke didn't amuse me' <<http://www.inn.co.il/News/>>

This constraint means that the animate participant, although high on the referential scale, is encoded in a syntactic O role, while the abstract Causer appears in an A role.

The criterion for non-distinctiveness of the place-holder of the P (i.e., O) argument from the A argument also applies to constructions that include cognate O's and 'affected' O's (whether root-related nouns or not), as in (25) – both the verb *hifxid* 'frighten' and the noun *páxad* 'fear' based on the same root *p-ḥ-d* – and (26) below. In (25) the cognate O repeats the root of the lexeme that constitutes the verb *hifxid* 'frighten' to produce an adverbial-like intensifying phrase.

- (25) *nexašim tamid hifxidu oto páxad^ mávet*
 snake:PL.M always frighten:B3.PST.3PL.M ACC.3SG.M fright:CS death
 'Snakes always frightened him to death'
 <<http://www.makorrishon.co.il/nrg/online>>

In (26), the NP *xor* 'hole' represents an 'affected O', that is incurred by the action of the verb.

- (26) *xavera šeli nikva xor rak be-ózen axat*
 friend:SG.F of.me hollow:B4.PST.3SG.F hole only in-ear one
 'A friend of mine pierced only one of her ears' <<https://stips.co.il/ask/>>

The noun *xor* 'hole' in (26) constitutes a non-discrete O that is part of the lexical structure of the verb meaning 'pierce' (compare the noun *nékev* 'pinhole'). This contrasts with the participle use of the same verb in (27), where the 'affected O' is not explicitly realized.

- (27) *talmid culam kše-hu*
 student:SG.M photograph:PASS.PST.3SG.M while-he
menakev et cmigey^ ha-mexonit šel mora-to ~
 puncture:B4.BEN.PRS.SG.M ACC tire:CS.PL.M DEF-car of teacher:F-his ~
menakev xor b-
 hollows hole in-
 'A student was photographed while puncturing the tires of his teacher's car'
 <www.ynet.co.il/articles>

Reduced transitivity is often the result of lexicalization of the VP, as in (28).

- (28) *lifamim hu haya mitachen ve-lifamim lo heziz*
 sometimes he got irritated and-sometimes (it) not move:B3.PST.3SG.M
lo bixlal
 to.him at.all
 ‘Sometimes he would get irritated and sometimes (it) didn’t touch him = he
 couldn’t care less’ <www.inn.co.il/Forum/Forum.aspx>

In the pairing in (29) below, the two variants include the same verb form followed by an accusative NP representing location: (29a) is a causal construction with an agentive subject but a non-patientive O, whereas (29b) is a noncausal construction with a non-agentive subject and non-patientive O.

- (29) a. *ha-mitnadvim milu et ha-xéder be-balonim*
 DEF-volunteer:PL.M fill:B4.PST.3PL.M ACC DEF-room in-balloon:PL.M
civoniim
 colorful:PL.M
 ‘The volunteers filled the room with colorful balloons’
 <<https://www.alehrehovot.org.il/>>
- b. *balonim civoniyim milu et ha-xéder*
 balloon:PL.M colourful:PL.M fill:B3.PST.3PL.M ACC DEF-room
 ‘Colorful balloons filled the room’

According to Hopper and Thompson (1980), although both constructions have accusative marking, only (29a) refers to a prototypical transitive event, whereas the event in (29b) is entirely lacking in transitivity properties.

Detranzitivization may also occur as a result of a shift from an A to a P-oriented perspective in a zero-subject construction, as in (30) below. Such cases violate the ‘Argument Realization Principle’ (e.g., Rappaport-Hovav & Levin 1998), since they lack the active transitive structure associated with transmission of force from an initiator (A argument) to an end point (in P argument). Instead, they exhibit the affected endpoint itself (Croft 2012).

- (30) *meachen oti lišmóa et ha-radikálim ha-smolanim*
 annoy:BEN.PRS.SG.M ACC.1SG to.hear ACC DEF-radical:PL.M DEF-leftist:PL.M
ha-éle
 DEF-these:PL.M
 ‘It irritates me to hear those leftist radicals (lit. 0-irritates me...)’
 <<http://dubikan.com/archives/category>>

Semantic components of transitivity related to an *increase* in transitivity are the number of participants, volitionarity, affectedness of the P argument, and aspect (according to Hopper & Thompson 1980). The following are examples of semantic shift in transitivity associated with these parameters. In (31), from colloquial usage, the increase in transitivity is achieved by re-formulation of the usual argument structure of the verb of cognition *xošav* ‘think’ which is conceived of as acting on a human undergoer in O position.

- (31) *ma hu xošev otánu yeladot?!*
 what he think:B1.BEN.PRS.SG.M ACC.1PL girls
 ‘What? Does he think we’re little girls?’
 <<http://www.tapuz.co.il/forums/viewmsg>>

In (32), however, there is a change in the semantic class of the prototypical arguments of the causal verb *ose* ‘make’ which yields increased transitivity, with a non-agentive argument deployed as acting on, or affecting, a non-patientive argument.

- (32) *yeš yaxasim yoter midai išiyim ba-avoda. ze*
 EXT relation:PL.M too much personal:PL.M in.DEF-work. It
ose li xéšek lehitraxek mi-kulam
 make:BEN.PRS.SG.M to.me desire to.go.far:B5 from-everyone
 ‘There are too many personal relationships at work. It makes me want to get away from everyone’
 <<https://www.askpeople.co.il/question>>

With certain verbs, increased transitivity is achieved by replacing a prepositional by an accusative O, producing an increased transitivity by augmenting the telicity and punctuality of the action, and the affectedness of the O, as in (33) with the contact by motion verb *baat* ‘kick’ and (34) with the resultative verb of achievement *nicéax* ‘win’.

- (33) *hu baat et ha-kadur harxek me-ha-šoftim*
 he kick:B1.PST.3SG.M ACC DEF-ball far from-DEF-referees
 [Prescribed form: *baat be-* ‘kicked at’]
 ‘He kicked the ball far away from the referees’ <www.israsport.co.il>
- (34) *párker niceáx et ha-misxak levad*
 Parker win:B2.PST.3SG.M ACC DEF-game alone
 [Prescribed form: *nicéax b-*]
 ‘Parker won the game on his own’ <<http://www.ynet.co.il/articles>>

Increased transitivity may also be achieved by eliminating a referential O, so generating a shift in the verb’s semantic transitivity, as in (35) illustrating the colloquial usage of the lexicalized expression *sixek ota* ‘played it:F = act as if’.

- (35) *káma yamim lifney ha-réga ha-gadol hu kvar yada,*
 few days before DEF-moment DEF-big he already know:PST.3SG.M
aval sixek ota mufta
 but play:PST.3SG.M ACC.3SG.F surprise:B3PS.PTCP.BEN
 ‘A few days before the big moment he already knew (about it), but he acted as
 if surprised’
 <<https://www.ynet.co.il/articles/>>

The constructions illustrated in this section, of verbs that are clearly stored in the lexicon as transitive, confirm the view that argumenthood should be defined in semantic terms independently of either their possible correlates in discourse or their syntactic configuration in a given language.

4. Pseudo-marking of transitivity

Two main subtypes of intransitive verbs behave like transitives in MH, especially in spoken usage: (i) a limited group of verbs in which S (the single core argument) is configured in the same way as an A in a transitive construction and (ii) intransitive predicates (not only verbs) where the single core argument is configured in the same way as O in a transitive construction.

SUBTYPE I: Sentences with verbs of human motion and posture

Depending on the discourse context, circumstantial modifiers (notably locative and temporal volitional activities)) may occur as Goal-like arguments in O configuration, as in (36) and (37) containing motion verbs, and in (38) with a stative verb.

- (36) *xavera šeli ráca ba-máraton et ha-masul ha-arox*
 friend:SG.F mine run:B1.PST.SG.F in.DEF-marathon ACC DEF-path DEF-long
 ‘A friend of mine ran the long leg of the marathon’
 <<http://www.facebook.com>>

- (37) *amádeti et kol ha-dérex le-beer sheva. af exad lo*
 stand:B1.PST.1SG ACC all DEF-way to-be'er Beersheba. nobody not
kam li.
 got.up for.me)
 ‘I stood the whole way to Beersheba (nobody got up for me)’
 <<https://www.facebook.com>l>

- (38) *bilínu et ha-láyla be-taxanat[^] ha-rakévet šel turíno*
 spend:B4.PST.PL ACC DEF-night in-station:CS DEF-railway of Turino
 ‘We spent the night at the Turino railway station’
 <www.sanedrunk.co.il/baby-take-it-slow>

This subgroup also includes agentless, uncontrolled events *with motion verbs used metaphorically*, in terms of Goldberg's (1995: 33) "constructional polysemy", where different but related meanings take the same form, along with dative marking of the human Experiencer, and O-like encoding of the single core argument. The event in sentences of this type is a function of circumstances impinging on the person(s) involved, making it an impersonal construction (Berman 1980).⁹ For example,

- (42) *nixnas lo et ze la-roš še-*
 enter:B2.PST.3SG.M to.him ACC this to.DEF-head that-
rocin lesalek
 want:BEN.PRS.PL.M (lit. 0-entered to him...) to.throw.away
oto
 ACC.3SG.M
 'He got it into his head that they want to kick him out (lit. 0-entered to him...)'
 <www.yeda.eip.co.il/>

- (43) *gam li kara et ze páam še- halax*
 also to.me happen:PST.3SG.M ACC this once that- 0-go:B1.PST.3SG.M
li et kol ha-xómer ba-maxšev
 to.me ACC all DEF-material in.DEF-computer
 'It happened to me once as well that all the stuff on my computer got erased'
 <<https://www.bizmakebiz.co.il/Discussions/>>

- (44) A: *hištatafta gam be-pizur^ hafganot?*
 A: participate:PST.2SG.M also in-dispersing:CS demonstrations?
 B: *lo, et lo yaca li et ze*
 B: no, personally not go.out:B1.PST.3SG.M to.me ACC it
 A: Did you take part in dispersing demonstrations as well?
 B: No, I personally didn't have a chance to do so'
 <<http://www.shovrimshatika.org/testimonies/database>>

- (45) *yaca li et ze kvar me-haaf*
 go.out:B1.PST.3SG.M to.me ACC it already from-DEF-nose
 'It went out of my nose already = I got sick and tired of it by then'
 [attested in colloquial usage]

Such constructions appear to express a "perspective structure" similar to that underlying assertions of existence and possession (i.e., 'there-is NP', 'there-is NP to-Possessor'), in which the existing entity or the possessee, when definite, take the accusative marker *et*. Such constructions can be viewed as cases of type-shifting, or

9. Berman (1982b: 41) suggests that "the widespread use of the predicate-dative versions in preference to the subject-predicate options can be explained as a means of effectively downgrading the agent, hence taking attention away from any participant as perpetrator of a given action or event".

metaphorical extensions, of an existential construction and its derived possessive (*non-habere*) construction in Hebrew (Kuzar 2002, 2012), and see Chapter 15 on Impersonals).

(ii) Impersonal constructions with an O-like configuration of the single thematic argument are common in everyday usage, notably with *modal-evaluative predicates*, as in (46) to (48) (see also Chapter 15 on Impersonals).

- (46) *lo kol exad mat'im lo et ha-misgêret*
 not everyone suitable.B3.BEN.PRS.SG.M to.him ACC DEF-frame:SG.F
ha-zot
 DEF-this:SG.F
 'That framework isn't right for everyone'
 <<https://www.mako.co.il/.../vgnextchanne>>
- (47) *lo titxaret. ze šave et ha-maamac*
 not regret:FUT.2SG.M it worth:SG.M ACC DEF-effort:SG.M
 'You won't regret it. It's worth the effort' <<https://forum.lametayel.co.il/>>
- (48) *ha-šir haxi yafe ha-šana. magia lo et*
 DEF-song most beautiful DEF-year. deserve:B3.BEN.PRS.SG.M to.it ACC
ha-makom ha-rišon
 DEF-place:SG.M DEF-first
 'It's the best song of the year. It deserves first place' <<https://www.fxp.co.il/>>

(iii) *Impersonal passive* constructions featuring atypical accusative marking are also very common in everyday MH usage, with stative verbs conveying 'transmission of information', as in (49) and (50) (See also Chapter 15 on impersonals).

- (49) *láma lo amru li?! matay huxlat et ze?*
 why not say:PST.3PL.M to.me. when decided:B3PS.PST.3SG.M ACC this
 'Why didn't they tell me?! When was it decided?'
 [attested in spoken intercourse]
- (50) *lo yadúa adáyin et šmot^ ha-marcim*
 not known:B1.BENPASS.SGM yet ACC name:CS.PL.M DEF-speakers
 'The names of the lecturers aren't known yet' [attested in spoken intercourse]

Cross-linguistically, subjects of unaccusatives (e.g., *nafal* 'fall') share syntactic and/or semantic properties of the direct O's of transitive verbs. And, indeed, the vast majority of predicates in the three subgroups of impersonal constructions identified for present purposes are *unaccusative* (that is, change-of-state, patient-experiencer oriented, and intransitive). Moreover, as noted, *motion* verbs occurring in these impersonal constructions denote a fictive or metaphorical activity, and hence the macro-role of the NP is not Actor.

Note, finally, that the speaker's choice of employing atypical coding properties in intransitive constructions, as well encoding atypical transitive constructions like those discussed here, generally depends on discourse considerations including information flow – of the kind unfortunately beyond the scope of the present study – showing that argument encoding by means of case and agreement markers is not invariably a decisive factor in selection of (in)transitivity value.

5. Transitive constructions with periphrastic verbs and lexicalized expressions

This section deals with two types of transitive constructions based on (i) periphrastic and (ii) lexicalized verb phrases. Cross-linguistically, *periphrastic* or analytic predicates of varying degrees of productivity are generally constructed with 'light verbs', which are semantically depleted (although otherwise having independent meanings) and play no role in the thematic structure of the sentence.¹⁰ The lexical burden of such expressions devolves on the dependent (often deverbal) noun complement as in 'take a bath', 'have a swim', where the verb connects the subject to the situational content, often by adding a modal or aspectual perspective, as in (51) with the quasi-depleted verb *natan* 'give'.

- (51) *hu natan et ha-xatira šel ha-xayim šelo*
 he give:B1.PST.3SG.M ACC DEF-crawl.swimming of DEF-life of.him
ve-higía le-amir ~ hu xatar bi-mhirut
 and-arrive:PST.3SG.M to-amir ~ he swim.crawl:PST.3SG.M quickly
 'He gave it his all [in freestyle swimming] and reached Amir rapidly'
 <<https://www.msn.com/he-il/entertainment/celebhub>>

In MH, such expressions often alternate with simple verbs followed by manner adverbials, usually in an N + Adj construction, where the noun repeats the verb incorporated lexeme, e.g., *natan xatira mehira* 'gave swimming fast = made a rapid swimming' ~ 'swam (crawlstyle) fast' (see Chapter 9 on Parts of Speech).

In (52) the transitive verb *xataf* 'snatch' usually meaning 'catch, grab suddenly, by force', is used here in the sense of English 'catch a cold', referring to a spontaneous occurrence, not initiated by a human agent.

10. Use of light verbs is rare in classical Hebrew, and typically frowned on by purists to this day in MH, preferring monolexemic *hitkaléax* 'showered (oneself)' to *asa mikláxat* 'did/made (a) shower', *heerix* 'lengthened' for *lakax zman* 'too took time', etc.

- (52) *ba-malon taanu še-ze vírus še- hem xatfu*
 in.DEF-hotel claim:PST.3PL that-this (is) virus that- they catch:B1.PST.3PL
ba- tisa
 in.DEF- flight
 'At the hotel, they claimed that it was a virus they caught on the flight'
 <<https://www.mako.co.il>>

The second type of predicates that may appear in pseudo-transitive constructions are *multilexemic expressions*, in the sense of typically idiomatic restricted collocations. Relevant examples are given in (53) to (55), with the verb *golel* 'wind, roll:TR' in (53) used in the context of 'talk longwindedly', so denoting durative aspect.

- (53) *hu golel et sipur[^] targumey[^] ha-mikra*
 he wind:B4.PST.3SG.M ACC story:CS translation:CS.PL DEF-bible
li-lšonot axerot ~ hu siper be-arixut
 to-languages:F other:F ~ he tell:PST.3SG.M in-length
 'He unraveled the story of translations of the Bible into other languages'
 [H. Wasserman, *Tarbut Ha-Haskala*, Open University 2005: 58]

In (54) the lexicalized verb *šavar* 'break' is causal-resultative, and in (55) the lexicalized verb *mašax* 'pull (=attract)' is noncausal and non-resultative.

- (54) *ha-saxyan ha-ostráli šavar et ha-si*
 DEF-swimmer DEF-Australian break:B1.PST.3SG.M ACC DEF-record:SG.M
ha-olímpi
 DEF-olympic
 'The Australian swimmer broke the Olympic record' <www.one.co.il/Article>
- (55) *ha-post ha-muzar mašax et tsúmet[^]*
 DEF-post:SG.M DEF-strange attract:B1.PST.3SG.M ACC attention:CS.SG.F
libi
 heart.mine
 'The weird post attracted my attention' <www.zuteydvaram.com>

In such expressions the 'pseudo-direct O' does not have the status of a separate distinct argument, hence, for example, is not accessible to passives or information-questions. Such constructions are thus situated somewhere between syntax and the lexicon, sharing properties of both types of expression (Halevy 1998), demonstrating yet again a mismatch between syntactic and semantic transitivity.

6. Labile (ambitransitive) alternations

This header refers to lexical (in)variability in the form of a verb with shifting transitivity values. In such cases, different thematic realizations of the same concept are expressed by the same basic lexical unit via thematic valence changing-operations such as alternations between causal and noncausal constructions noted earlier for the class of ‘move and change’ verbs in Germanic languages. Such instances of zero-derivation or morphologically invariant alternation, termed ‘ambitransitivity’ (Dixon & Aikhenvald 2000) or ‘anticausative lability’ (Letuchiy 2009) – e.g., English *he broke the vase ~ the vase broke* – run counter to the common requirement in Hebrew for a change in the verb-template *binyan* form with a change in transitivity. In Classical Hebrew, labile verbs occur in inchoative-causative alternation in the *hif'il* (B5) template and occasionally also in *pa'al* (B1). In MH, in contrast, there is a tendency towards increased use of labile morphology in transitive/intransitive pairs, mainly in *hif'il*, and to a certain extent in *pa'al* (B1) and *pi'el* (B3). However, this trend is by no means systematic and has not reached the stage of grammaticalization (or lexicalization) in Hebrew. Significantly, in Modern Standard Arabic, the closest neighboring language of MH, zero-marked alternation is extremely rare, and this seems to be the case for colloquial usage as well, with a few exceptions in verb group 3 *faʿʿal* (Letuchiy 2009 2017).

The list of verbs gathered from online resources and from two contemporary Hebrew dictionaries (see §1 above) yielded the following distributions of labile instances of transitive/intransitive pairs: 61 verbs in *hif'il*, 8 in *pa'al*, and 6 in *pi'el*, some of them recent innovations that have not yet lexicalized in the language in general. Besides, labile verbs do not appear to constitute a homogeneous class: Some are more likely to occur in transitive frames, while others tend to pattern with intransitive constructions. Specifically, the variation found in labile verbs in MH emerges as sensitive to the conceptualization of the event denoted by the verbs in question, whether it is internally or externally caused. Data-analysis revealed that labile morphology is more common in constructions denoting *uncontrolled events* (with low-agentive subjects), with verbs of the type that are sometimes referred to as ‘unaccusative’ or ‘anticausative’. Two types of such situations emerged:

(i) Transitivity-pairing where an external event argument is identified with the internal event argument, so that use of the same verb-form in both constructions can imply the same argument roles as in the basic use of the transitive verb, even though the A argument is not expressed;¹¹ (ii) Cases where a given verb-form is

11. Such cases cannot be considered as instances of subject “pro-drop” since agreement (representing the incorporated S) is incorporated in the finite verb.

used in what appears to be the argument realization scheme of another verb sharing the same consonantal root but in a different *binyan* template, termed here *constructional polysemy*. In the first case, the causative frame represents the prototypical construction and the inchoative the less prototypical, as shown in (56) to (58), where (56a) to (58a) represent the unmarked causative construction, while (56b) to (58b) illustrate the often colloquial, non-prescribed intransitive counterpart.

TYPE I: Transitive-intransitive zero derivation

- (56) a. *ani lo maclax lehatnia et ha-mexonit*
 I not succeed:BEN.PRS.SG.M to.cause.start.motor:B3 ACC DEF-car
 ‘I can’t start the car’ [from spoken intercourse]
- b. *ha-mexonit lo matnia*
 DEF-car:SG.F not start.motor:SG.F
 ‘The car doesn’t start’ [from spoken intercourse]
- (57) a. *ha-sara hifsika et neuma leaxar še-*
 DEF-minister:SG.F stop:B3.PST.SG.F ACC speech.her after that-
katu et dvaréha
 cut:PST.3PL ACC words.her
 ‘The minister discontinued her speech after (they) interrupted her = being interrupted’ [www.actualic.co.il]
- b. *pitom hifsik ha-géšem*
 suddenly stopped:B3.SG.M DEF-rain:SG.M
 [Prescribed form: *pasak ~ nifsak*]
 [B1.SG.M ~ B2.SG.M]
 ‘Suddenly, it stopped raining’ [in spoken discourse]
- (58) a. *láma ata megared et ha-mécax?*
 why you scratch:B4.BEN.PRS.SG.M ACC DEF-forehead
 ‘Why are you scratching your forehead?’ [in spoken discourse]
- b. *megared li ba-mécax*
 scratch:B4.BEN.PRS.SG.M to.me in.DEF-forehead
 ‘My forehead itches’ [in spoken discourse]

The examples in (59) and (60) illustrate a less common phenomenon of labile alternation. In (59) the prototypical semantic-frame of the verb *hivri* ‘get healthy, recover’ (in *hif’il* template) is non-causal, while the causal valence-frame is less prototypical or derived; on the other hand, in (60) the semantic and valence-frame of the verb *acar* ‘stop’ (in *pa’al* template) is indeterminate or uncategorized.

- (59) a. *ha-im šum mavri otánu mi-maxalot?*
 does garlic recover.B3.BENPRS.SG.M ACC.1PL from-diseases
 ‘Does garlic cure us of diseases?’ <<https://www.mako.co.il>>

- b. *hu mavri maher yoter mi-ma*
 he become.healthy:B3.BENPRS.SG.M fast more from-what
še- cipu
 that- expected:3PL
 ‘He’s recovering faster than expected’ <<https://www.mako.co.il>>
- (60) a. *ha-nehag acar et ha-réxev ve-takaf*
 DEF-driver stop:B1.PST.3SG.M ACC DEF-car and-attack:B1.PST.3SG.M
et ha-kašiš
 ACC DEF- old.man
 ‘The driver stopped the car and attacked the old man’
 <mynethodhasharon.co.il/article>
- b. *ha-mexonit lo acra ba-ramzor*
 DEF-car:SG.F not stopped:B1.SG.F in.DEF-traffic.light
 [Prescribed: *ne’ecr-a*]
 [stopped:B2.SG.F]
 ‘The car didn’t stop at the traffic light’ [elicited]

TYPE II lability displaying constructional polysemy is illustrated in (61), where the noncausal dative-marked construction in (61b) is interpreted as corresponding to the construction frame *ko’ev li* NP ‘hurts to-me NP’ as in *koev li ha-roš / ha-béten* ‘hurts to me the-head / the-stomach = I’ve got a headache, a stomach-ache’.

- (61) a. *saráfti li et ha-sear ba-šémeš*
 burn:B1.PST.1SG to.me ACC DEF-hair in.DEF-sun
 [Prescribed: *nisraf li ha-se’ar*]
 [B2.SG.M]
 ‘I burnt my hair in the sun’ [from spoken intercourse]
- b. *hu baxa še-kol ha-guf soref lo*
 he cried that-all DEF-body burn:B1.BEN.PRS.SG.M to.him
 ‘He cried (=wept) that his whole body was burning’
- (62) a. *hu exer, ve-yekabel et ha-toxnit*
 he late:B4.PST.3SG.M, and-receive:FUT.3SG.M ACC DEF-program
ba-meyl
 in.DEF-mail
 ‘He was late, and will receive the program in the mail’
 [from spoken intercourse]
- b. *exárti lexa et ha-tor le-maxar*
 late:B4.PST.1SG to.you ACC DEF-appointment to-tomorrow
 ‘I postponed your appointment to tomorrow’
 <<https://www.facebook.com/Clalit/posts>>

Conversely, (63) below, attested in journalistic register, exhibits idiosyncratic behavior on the part of the intransitive verb *lefatpet* ‘to chatter’ in an idiomatically transitive but semantically intransitive, construction. This is apparently due to the *coercive force* of the analogical idiomatic expression *ibed (et) acmo la-dáat* ‘lost ACC himself to-consciousness = committed suicide’ (Rappaport-Hovav 2015).¹²

- (63) *hu omnám amad al zxuto lefatpet et acmo*
 he indeed stood on right.his to.chatter:B4 ACC himself
ladáat, aval ba-fóal hu lo yaase
 to.DEF.CONSCIOUSNESS, but in.DEF-effect he not make:FUT.3SG.M
ba šimuš
 in:3SG.F use
 ‘He insisted on his right to chatter himself to death, but in effect won’t take
 advantage of it’ <www.israelhayom.co.il/opinion>

Such instances are, however, relatively rare, so that the distinction between labile-alternating verbs can be attributed to lexical semantics. Externally caused labile verbs like *hitnía* ‘move = set into motion (an engine)’ in (56) are typically more common in transitive constructions, whereas internally caused labile verbs like *hivri* ‘become healthy, recover’ in (59) occur more often in intransitive frames.

Many analyses of labile alternation in SAE explain noncausals as semantically derived from causals (e.g., Levin & Rappaport-Hovav 1995). In considering the motivation for stipulating direction of derivation, Haspelmath (1993), along the lines of Croft (1990), advocates an *iconic* explanation, such that the structurally derived (or formally marked) forms are also semantically derived or marked and vice versa. Along similar lines, Laks (2011) argues that while most alternations in Hebrew have either a morphologically simplex transitive and a complex inchoative (reflecting an argument-reducing operation) or two simplex alternates, a few alternations display the unexpected pattern of complex transitive/simplex inchoative, on the face of it looking like causativization. Here it is argued, however, that an iconic explanation of derivational relationships between transitive and intransitive constructions is not necessarily consistent with the morphological facts of Hebrew, a language in which verb-formation is pre-determined by specific (often arbitrary) verb patterns. As a result, not only is it not always clear which is the base and which the derived

12. The *coercive force* of a construction is understood here as a cognitive, interpretive, and creative way of using a linguistic construction inductively (e.g., Goldberg 1995; Lauwers & Willems 2011). The “coercive force” exerted by a given type-construction over its instantiations changes the argument structure of the verb, resulting in a co-composition of the lexical meaning of the verb and the meaning of the construction as a whole. Importantly, the “coerced” exponents do not necessarily inherit all the characteristics of the new category associated with the function of the type-construction.

form in transitivity alternations, but the process is not necessarily unilateral, since it may go in both directions. Taking *valence orientation* as a typological criterion, the analysis of Nichols, Peterson, and Barnes (2004: 149, 163) of the tendency to treat members of causal-noncausal alternations in a particular way yields a division into four types of languages: lexically transitivizing, detransitivizing, neutral, and indeterminate. Hebrew in many respects displays properties of the last of these, as a language in which the direction of transitivity/detransitivity is neutral and indeterminate. No less importantly, contextual and pragmatic factors often override systematic relations between causal and noncausal variants of a given verb, leading to the conclusion that the question of whether transitives or intransitives are basic or derived respectively does not have an unequivocal explanation.

The indeterminacy of its basic ‘valence-orientation’ reflects the variability of MH as a language which, on the one hand, retains much of its Semitic origins but, on the other, is open to considerable change that may in many cases relate to the impact of non-Semitic contact languages.

7. Alternations and variations in case-frame and argument structure

This section highlights the impact of the *perspectival structure* of an event on alternating constructions of transitive verbs.

7.1 Alternation between accusative and ‘b’-prepositional construction

Certain verb-classes in MH employ alternating constructions such that in the unmarked transitive construction, the affected argument occurs in a direct O role, while in the marked construction – which describes contact with a surface without entailing change of state (i.e., denoting non-resultative events) – the affected argument is introduced by the preposition *b-* ‘in, at’. In Hebrew, this highly polysemous item also has a spatial-tangential meaning signifying ‘being in a place’ or ‘being in contact with’, yielding an analysis consistent with Croff’s (2012) notion of “dynamic-force relations”. In such contexts, the affected argument in a construction with surface contact verbs is not a ‘force’ recipient, although it has an obvious affinity with the role of destination in the argument structure of movement verbs. Broadly speaking, transitive verbs that participate in the accusative/ prepositional *et ~ b-* ‘in, at’ alternation show a decrease in affectedness of the non-agentive argument, yielding a situation where the first argument is not a prototypical A and the second argument is not a prototypical P. This analysis is in line with Tsunoda’s (1985) *transitivity hierarchy* in terms of a decrease in “affectedness”

of the second argument, based on the semantic components suggested by Hopper and Thompson (1980).

Verbs that imply physical contact between the two core arguments include ones like English *hit, puncture, poke, cut, push, pull, chew, nibble*, and certain bodily movements such as *hold, seize, support*. Transitive verbs in Hebrew that participate in the alternation in question and imply a mental or another abstract contact belong to the subclasses of *perception* and *volition, causal qualifying verbs* (e.g., ‘shorten’, ‘lengthen’), and verbs of *inception/ duration* (as detailed in Halevy 2005, 2007).

In terms of ‘perspective structure’, in the unmarked construction, the entire scene is in focus, and the O argument (in the accusative) is conceptualized as part of the *ground* (in low profile), whereas in the marked *b*-prepositional construction, the non-agentive argument is in the *foreground* (in high profile), displaying the action as intensive and intentional. This marked construction often contains intensifiers and manner adverbials that augment the meaning assigned by the construction itself, particularly adverbials expressing deliberateness and intensity. Compare the *b*-prepositional construction in (64a) below, denoting a non-random choice, with the accusative construction in (64b), which is unmarked for intention.

- (64) a. *mi-kol ha-xofim ba-árec hem baxaru*
 from-all DEF-beaches in.DEF-country they choose:B1.PST.3PL
dávka ba-ze še-avri nofeš bo
 deliberately in.DEF-this that-Avri rest:BEN.PRS.SG.M in:3SG.M
 ‘Of all the beaches in the country, they deliberately chose the one where
 Avri takes his vacation’ <www.israelhayom.co.il/article>
- b. *baxárnu malon me- ha-internet*
 choose:B1.PST.1PL hotel from- DEF-internet
 ‘We chose a hotel from the internet’ [elicited]

Moreover, constructions in accusative and *b*-prepositional alternation co-vary in the speaker’s perspective choice regarding the aspectual/*Aktionsart* meaning of the situational content. For example, verbs in the accusative construction denoting inception assign an inchoative meaning, while the *b*-prepositional construction with the same verb-form implies that the A argument intends to continue with the action s/he initiated, as in (65).¹³

13. Havers (1931: 168) drawing on Brugmann (1917), describes such a construction as *Streckung* ‘stretching’ of ingressive into durative. In the case in point here, *patax et* ‘opened’ while *patax b-* ‘opened/started with an intention to go on with the activity’.

- (65) a. *ha-sar patax et ha-diyun*
 DEF-minister open:B1.PST.3SG.M ACC DEF-discussion
be-omro ki zman rav lo na'asa šinuy ve-idkun
 in-saying:PRO.3SG.M that time long not done change and-updating
be-xol ha-nogéa le...
 in-all DEF-concern to-...
 'The minister opened the discussion by saying that it was a long time since
 there had been a change and updating regarding ...'
 <<http://m.knesset.gov.il/News/PressReleases>>
- b. *ha-sar patax be-diyun bi-šelat*
 DEF-minister open:B1.PST.3SG.M in-discussion in-question:CS.SG.F
išurey^ ha-knisa la-ovdim ha-zarim
 permission:CS.PL.M DEF-entrance to.DEF-workers DEF-foreigners
 'The minister began with a discussion of the issue of access permits for
 foreign workers'
 <<https://www.inn.co.il/News/>>

It thus emerges that in the accusative construction-frame, the event is viewed from outside, in terms of its completion, with no reference to its internal structure. On the other hand, the *b*-prepositional construction-frame enables viewing the action from within, making explicit reference to the temporal structure of the event. In this respect, the accusative/*b*-prepositional alternation compensates to a certain extent for the lack in Hebrew of grammaticized marking of aspect by verb morphology, analogously to the pervasive use of dative marking by *le*- 'to' in colloquial MH Hebrew, including for conveying of aspectual facets of an event (Halevy 2013).

Verbs participating in the alternation in question are often inherently telic. However, the component of 'contact with surface', which is part of the lexical semantics of such verbs, especially when denoting physical activities, makes them susceptible to being viewed as atelic and imperfective. This is shown in (66), where the temporal modifier *beméšex* 'during' emphasizes the atelic meaning.

- (66) *ha-mityašvim ha-levanim tavxu ba-hem*
 DEF-settler:PL.M DEF-white:PL.M slaughter:B1.PST.3PL in.DEF-them
beméšex dorot ~ tavxu otam
 throughout generation ~ slaughter:B1.PST.3PL ACC.them
 'The white settlers (= the colonizers) massacred them for generations'
 <www.davar1.co.il>

Completion of the action naturally affects the entire O argument, as demonstrated in (67a) below. In contrast, the action in (67b) blocks a perfective interpretation since only part of the non-agentive argument is affected.

- (67) a. *pitom hirgiša še-mišehu mošex la et*
 suddenly felt:3SG.F that-somebody pull:B1.BEN.PRS.SG.M to.her ACC
ha-tik me-ha-yad
 DEF-bag from.DEF-hand
 ‘Suddenly she felt someone pulling her bag from her hand’
 <<https://he.mypen.net/serialized-stories>>
- b. *hu mašax bexozka be-xével[^] paamon[^]*
 he pull:B1.PST.3SG.M strongly in-rope:CS.SG.M bell:CS.SG.M
ha-knesiya, ax ha-paamon lo paal
 DEF-church, but DEF-bell not work:PST.3SG.M
 ‘He pulled strongly on the church’s bell rope, but the bell did not work’
 <www.tapuz.co.il/forums/articles/>

An imperfective or partitive viewpoint tends to imply the instantiation of an individuated, specific event, whereas a perfective, holistic approach gives way to an unspecified, generically portrayed event. The *b-* prepositional construction marks the actualization of contact between the subject argument and the other core argument. Of all instances of the *b-* prepositional construction in the data examined for this chapter, 93% have a definite or highly individuated affected argument – supporting the suggestion of Hopper & Thompson (1980: 259) that “the arguments known to grammar as ‘indirect objects’ should be regarded as *transitive objects* rather than what might be called ‘accusative’ objects, since they tend to be definite and animate”. Moreover, all the clauses in the *b-* prepositional construction in the Hebrew corpus are in indicative mood.

The accusative construction is not viable with some surface contact verbs, including ones whose semantic features class them as “high” on the transitivity scale. Rather, they are confined to the *b-* prepositional construction, for example, with the verbs *yara* ‘shoot’ and *baat* ‘kick’ in examples (9) and (10) above, and also *dafak* ‘knock (on door)’, *halam* ‘strike’, *hiclif* ‘whip’, *naga* ‘touch’, *paga* ‘collide’, and *xavat* ‘swat’ (Halevy 2007: 63, 87). Moreover, in constructions with the hitting verbs *hirbic* ‘hit’ and *satar* ‘slap’, the affected argument is flagged by the dative preposition *l-* ‘to’, and the accusative construction (i.e., for marking the ‘affected object’) is disallowed altogether.

Finally, the *b-* prepositional construction may also play a role in creating a metaphorical reading, as in (68), where the meaning of the verb in the accusative construction is referential, while in the *b-* prepositional construction it is metaphorical.

- (68) a. *en pgiša še-lo siper ex nasa et*
 NEG.EXT meeting that-not told how carry:B1.PST.3SG.M ACC
ha-pacúa al ktefav
 DEF-wounded on shoulders.his
 ‘There wasn’t a single meeting where he didn’t recount how he carried the wounded man on his shoulders’
 <<https://www.israel-heart.org.il>>

- b. *basof* *zo ha-xevra* *še-nasa* *be-*
 in-the-end it DEF-company:F which-carry:B1.PST.3SG.F in-
tocot^ *ha-kišalon*
 consequence:CS.PL.F DEF-failure
 ‘Eventually it was the company that bore the consequences of the failure’
 <<https://www.themarket.com/markets>>

In evaluating the generalizations delineated in this section, account also needs to be taken of the fact that in MH the transitivity alternation at issue is in some cases associated with register and stylistic preference and differences between more formal or officially prescribed and less monitored colloquial usage.

7.2 Transitive verbs in locative alternation

A transitive construction including locative verbs consists of three participants: A (subject), Locatum (the entity or content being transferred) and Location (the container/place that absorbs the transferred entity), so that not only the Locatum but also the Location is regarded as a participant in the event. The locative alternation discussed here is based on a *bi-directional* causal relation between Locatum and Location: In one construction the Locatum is regarded as the affected argument (in O position), and in the other the Location (in O position). As regards information structure, the topic-focus relationship depends on various factors in the discourse, especially when both the Locatum and Location are definite. Below, two types of transitive verb classes relevant to the locative alternation in MH are considered. One type consists of ‘spray/load’ verbs, and the other one of ‘removal/clean’ verbs.

SUBTYPE I *Locative alternation with ‘spray/load’ verbs*: Transitive alternation whose participating verbs relate to the transfer of things in containers (Location) or the application of substances (Locatum) to surfaces is a subtype of what is traditionally referred to as “locative alternation” (Levin 1993). These constructions include verbs of the so-called ‘spray/load’ classes, which involve a systematic alternation between the marked construction with the Location encoded as an O (e.g., truck) and the Locatum (e.g., crates of fruit) introduced by the prepositions *im* ‘with’ or *b-* ‘in, at’ (in the sense of ‘by the means of’), on the one hand, and the unmarked construction, in which the Location is introduced by the spatial prepositions *al* ‘on’ or *b-* ‘in’, and the Locatum when definite marked by accusative particle *et*, on the other (Halevy 2009). It is commonly argued that the construction-frame with the Location in a direct O role implies a ‘holistic’ as against a ‘partitive’ interpretation (in terms of Anderson 1971: 389ff), whereas the construction-frame in which the Location is introduced by a preposition implies a ‘partitive effect’ (Dik 1980: 32; Dowty 1991: 587; Fillmore 1968: 48). Such alternations are illustrated in the pairs in (69).

- (69) a. *mafgin* *be-mexaa xevratit rises* *šoter*
 demonstrator:SG.M in-protest social spray:B4.PST.3SG.M cop
be-gaz^ pilpel
 in-gas:CS pepper
 ‘A demonstrator in a social protest sprayed a cop with pepper gas’
 <<https://www.ynet.co.il/articles>>
- b. *almonim* *risesu* *clave^ keres al minvne šel*
 unknown.person:PL.M spray:B4.PST.3PL swastikas on building of
ha-iriya
 DEF-municipality
 ‘Unknown persons sprayed swastikas on the city hall’
 <www.jdn.co.il/breakingnews>

While (69a) implies a ‘holistic effect’ on the Locatum (‘the demonstrators’), (69b) does not imply that the entire surface of the Location (‘the monument’) was affected (that is, covered with swastikas). The same applies to ‘load’ verbs, as in (70).

- (70) a. *hem heemisu* *et ha-masait be-argazey^* *ha-perot*
 they load:B3.PST.3PL ACC DEF-truck with-box:CS.PL.M DEF-fruits
ve-histalku
 and-go.away:PST.3PL
 ‘They loaded the truck with crates of fruit and left’
 <www.news1.co.il/uploadFiles>
- b. *ha-mitnadvim* *heemisu* *et xavilot^* *ha-bgadim*
 DEF-volunteer:PL.M load:B3.PST.3PL ACC packages:CS.PL.F DEF-clothes
al ha-masait
 on DEF-truck
 ‘The volunteers loaded the bundles of clothes onto the truck’

In (70a), the action appears to imply that the Location (‘the truck’) as a whole has been affected, in contrast to (70b) in relation to the direct O Locatum (‘the bundles of clothes’). Some researchers have suggested modifying the traditional ‘holistic/partitive’ claim by adding the definiteness criterion for the Locatum (e.g., Schwartz-Norman 1976). Along these lines, (70a) does not imply a ‘holistic effect’, since the Locatum (‘crates of fruit’) is indefinite. However, examination of MH naturalistic spoken usage reveals that many other factors in the discourse apart from syntactic position and definiteness of the Locatum may yield an appropriate interpretation, for example, use of lexical items that may favor a particular reading, or by adding another clause. Besides, extra-linguistic factors related to the physical essence of the entities involved may prevent one interpretation or another, as in (71).

- (71) *ha-kadurim še-ha-mitnakšim risesu ba-hem et*
 DEF-bullet:PL.M that-DEF-assassin:PL.M spray:B3.PST.3PL in/with-them ACC
ha-mércedes hargu gam et ha-kómer
 DEF-Mercedes kill:PST.3PL also ACC DEF-priest
 ‘The bullets with which the assassins sprayed the Mercedes also killed the priest’
 <www.maariv.co.il>

Holes caused by gun bullets obviously cannot be spread out along the entire surface of a car, whereas pepper gas can cover the entire area of a Locatum (e.g., demonstrators). Rather, the locative alternation with the transitive verbs at issue also relates to the extra-linguistic interpretation regarding a dispersive or non-dispersive meaning of the action in Hebrew as in other languages. Other verbs that participate in this locative alternation include: *cava* ‘paint’, *marax* ‘smear, spread’, *zara* ‘sow’, *mile* ‘fill’, *hitin* ‘load’. As with the other verbs noted earlier in this subsection, pragmatic factors may render only one alternant construction-frame acceptable.

SUBTYPE II *Locative alternation with ‘removal/clean’ verbs*: Whereas with ‘spray/load’ verbs the locative change is directed into/ onto/toward the Location, with verbs of ‘removal/separation’ the locative change is directed out of/away from the Location (Doron & Dubnov 2017; Dubnov & Doron 2014). Transitive verbs like these include: *pina* ‘evacuate’, *nika* ‘clean’, *tite* ‘sweep’, *nigev* ‘wipe’, *šataf* ‘rinse out’, *roken* ‘empty’, *perek* ‘unload’.¹⁴ In one variant of this alternation, the accusative particle *et* marks the Locatum, while in the other it marks the Location, and the spatial preposition introduces the Locatum in one, and the Location in the other. The symmetry of the preposition in both variants allows two different conceptualizations of the resultant state: In one, the Locatum in direct O role is the perspective center, while in the other it is the “objectivized” Location, as in (72) and (73) below.

- (72) a. *ešsar licbóa. piníti et ha-xéder*
 possible to.paint:B1. empty:B4.PST.1SG ACC DEF-room
mi-kol ha-xafacim
 from-all DEF-objects
 ‘You can paint. I emptied the room of all objects’ [elicited]
- b. *aval lo piníta et ha-mita me-ha-xéder*
 but not empty:B4.PST.2SG.M ACC DEF-bed from-DEF-room
 ‘But you didn’t remove your bed from the room’ [elicited]

14. See Doron & Dubnov (2017) for a discussion of other verbs prevalent in Biblical Hebrew in this construction.

- (73) a. *talmidim niku et ha-xof mi-šeeriyot*[^]
 student:PL.M clean:B4.PST.3PL ACC DEF-beach from-remains:CS
ha-psólet še-hišíru metayl-im
 DEF-garbage that-leave:PST.3PL travelers
 ‘Students picked up the litter on the beach that tourists left behind’
 <www.sviva.gov.il/subjectsEnv/SeaAndShore>
- b. *ha-talmidim niku et ktovot*[^]
 DEF-student:PL.M clean:B4.PST.3PL ACC inscription:CS.PL.F
ha-neaca me-ha-kirot
 DEF-detestation from-DEF-wall:PL.M
 ‘The students removed the invectives off the walls’
 <www.handinhand.org.il>

It thus emerges that in the transitive alternations discussed in this section, the number of core arguments is not changed. In the locative alternation, the number of core arguments is retained but their semantic roles are altered. The accusative vs. prepositional construction-frame represents *constructional polysemy* where the prepositional construction is also a device for denoting a metaphorical meaning. The claim here, then, is that the alternating constructions considered here reflect certain regularities related to verb-argument configurations that are associated with a range of lexico-semantic and pragmatic factors. These include intentionality, affectedness, and animacy; facets of the quality of the action such as intensity and degree of effectiveness; as well as perspective structure (holistic vs. partitive) and discourse organization. Again, such transitive alternations may be due to speaker preferences regarding register and style.

8. Transitivity in discourse

Argument structure is an “objective” or grammatical representation of the relationships among the participants in events, but such representations are not necessarily the case in natural discourse where single-participant clauses are prevalent. Speakers are not always maximally explicit, nor is representing the argument structure of an event always their key concern. Thus, certain sentence structures that appear perfectly acceptable in isolation are nevertheless strongly avoided in spontaneous discourse. As shown by Du Bois (1987, 2003), in natural discourse, even if a transitive verb provides two core argument positions, only one of them is usually exploited. The prevalence in discourse, as opposed to formal written language, of the ‘One Lexical Argument Constraint’ is strongly confirmed in authentic usage in many languages. According to Goldberg’s (2005) principle of ‘Omission under Low

Discourse Prominence', an argument can be omitted when the core O argument is de-emphasized with respect to the action that is in the foreground. Omission of one lexical argument occurs in three cases: (i) when the missing O can be inferred from the textual context; (ii) when the addressee knows it from the communicative context; and (iii) when it is generally known in the cultural environment in which the event takes place (Fillmore 1986). Along these lines, Du Bois' (1987) theory of Preferred Argument Structure has been developed to account for lexicalization patterns in discourse.

MH, like many other languages, has a wide range of activity verbs, notably noncausals, in which the O is non-topical or non-focal and implicit. That is, it is lexicalized and so avoided in discourse, being understood as forming part of the selection restrictions of the verb or of the interpreter's world knowledge. With resultative and change of state verbs, however, omission of the O argument is less frequent, though not completely excluded, as shown in (74).

- (74) *arbaa ktinim* *parcu* *le-bet[^]séfer, harsu,*
 four minor:PL.M break.into:PST.3PL.M to-school, destroy:B1.PST.3PL,
šavru, *ganvu* *ki* *šiamem* *la-hem*
 break:B1.PST.3PL, steal:B1.PST.3PL because bore:PST.3SG.M to-them
 'Four minors broke into school, destroyed [...] broke [...], stole [...] because they were bored'
 <www.megafon-news.co.il/asys/archives>

In most cases, a generic or habitual context naturally yields an interpretation in which the action is characteristic of the subject A argument and the O argument is implicit (or lexically incorporated), so that it is readily omitted, in (75) and (76) with 'eat' and 'drink' verbs.

- (75) *lo péle* *še-hu nire* *kax. hu pašut ohev*
 no wonder that-he look:BEN.PRS.SG.M so. He simply like:BEN.PRS.SG.M
le'exol
 to.eat:B1
 'It's no wonder that he looks like that. He just likes eating'
 [from spoken discourse]
- (76) *im šotim* *lo nohagim*
 if drink:B1.BEN.PRS.PL.M not drive:B1.BEN.PRS.PL.M
 'If you drink (alcohol) you don't drive'
 [popular slogan]

With verbs that participate in the locative alternation, either the Locatum or the Location may be omitted in discourse. For example, in (77) below, the Location (the car) is omitted.

- (77) *heemásnu et ha-yeladim ve-nasánu le-tayélet[^]*
 load:B3.PST.1PL ACC DEF-kid:PL.M and-drive:PST.1PL to-promenade:CS.SG.F
yarden
 Jordan
 ‘We loaded the kids (into the car) and drove to the Jordan promenade’
 <saloon.co.il/freetrojanvirusremoval/activity>

Omission in discourse may even include two arguments of a trivalent verb (i.e., the recipient and the received entity), as in (78).

- (78) *ba-yamim u-ba-leylot rak li do’aget. rak*
 in.DEF-days and-in.DEF-nights only to.me worry:BEN.PRS.SG.F only
noténet ve-noténet
 give:B1.BEN.PRS.SG.F and-give:B1.BEN.PRS.SG.F
 ‘Day and night, it’s only me that she worries about.. She just gives and gives.’
 <<https://shironet.mako.co.il/artist?type>>

The meaning of the expression with a core omitted O is more than the compositional meaning of its components. For example in (78) above, the pragmatic meaning is ‘she contributes as much as she can’. However, the morphosyntactic means in MH discourse for avoiding lexical O argument are not always equivalent to those common in transitive constructions in SAE languages. Specifically, in MH avoidance of a lexical O in natural discourse does not need to be sustained by a pronoun, even with “high” transitive constructions, as in (79) and (80) below.¹⁵

- (79) *patáxnu, ve-lo macánu klum*
 open:B1.PST.1PL, and-not find:PST.1PL anything
 ‘We opened (it) and didn’t find anything’ [in spoken discourse]
- (80) *racíta? kibálta!*
 want:PST.2SG.M get:B4.PST.2SG.M
 ‘You wanted (it)? you got it’ [Advertisement in local media 2018]

The same applies in (81) and (82), both from spontaneous speech interactions.

- (81) *tov, šamáti*
 good. hear:B1.PST.1SG
 ‘Okay. I heard (you = there’s no need to shout)’
- (82) *okay, kibálti*
 okay. receive/get:B4.PST.1SG
 ‘Okay. I got (it = what you meant)’

15. Apparently, with atelic verbs the activity may be viewed as self-sufficient without an O, whereas conversely with telic verbs the meaning of the verb often seems incomplete without a particular O.

In such cases the addressee resolves the unrealized argument based on the inferred context or his/her communicative competence in conversational discourse.

In sum, MH as in many languages worldwide, generally allows omission of a lexical core argument when the action is particularly emphasized (via repetition, strong affective stance, discourse topicality, contrastive focus, etc.). In such cases, the arrangement of the prosodic unit corresponds to the discourse preferred realization of the relevant argument roles.

9. Concluding remarks

Transitivity, as a complex scale combining multiple parameters, interacts with numerous functional factors including information structure and speaker's perspective choice regarding the described event, as well as with collocational preferences for a particular construction. These aspects of the domain are illustrated above for MH in a range of transitive alternations taking into account both case-frame and argument-structure patterns. In MH, the causal meaning-function is essentially conveyed by the syntactic construction as a whole rather than independently by the morpho-phonological verb-template. For example, the analysis proposed above showed that combination of a predictable, indefinite, non-specific argument and a generic event facilitates omission in discourse of a normally obligatory O argument, while alternations in the direction of transitivity may be associated with information flow and speaker's perspective choice rather than relying on strictly structural factors.

As for the unexpected productivity in current usage of MH of labile ambitransitive alternations, the verb-template of *hif'il* (B3) turns out to be the preferred form for denoting internally caused change of state. Zero-derivational morphology was also shown to prevail in a distinct group of verbs in *qal/pa'al* (B1) and *pi'el* (B4), but to a lesser extent. Use of the classical verb-templates was shown to be subject to change in spontaneous spoken discourse, with derivation from intransitive to transitive and vice versa being vibrant, quite innovative processes in contemporary Hebrew.

The fact that, at least in principle, the kind of verbs that a particular verb paradigm can host is predetermined in Hebrew's morphological system casts doubt on the validity of the 'iconic' hypothesis as an explanation for the direction of morphological derivation. In this regard, structurally derived verbs in Hebrew are not necessarily semantically derived while, on the other hand, semantically derived verbs do not necessarily give rise to structurally derived counterparts. The assumption that repeated use of constructions over time shapes grammar is strongly confirmed by processes of change in transitivity and valence alternations

in current Hebrew usage. Thus, certain such constructions have already lexicalized and conventionalized in MH due to the frequency of labile alternations in transitivity pairs and the frequency in discourse of particular constructions with an omitted O argument-role.

Finally, as regards the typological classification of MH as either a transitivity language (characterized by augmentation of intransitives) or detransitivizing language (characterized by reduction of simplex transitives), it is hard to pinpoint an unequivocal patterning as defining the lexical valence orientation of MH. In this connection, it is important to note that the Semitic consonantal root is assumed to be underspecified, so that only when it is inserted in a verbal or nominal pattern and participates in a given construction does it take on a specific meaning. This is also true to a certain extent regarding the *binyan* templates (excluding the prototypically passive verb *pu'al* and *huf'al* templates, as discussed in Chapters 7, 8, and 10), which constitute grammatically regular form-meaning units. The conclusion thus seems to be that active-voice verbs in Hebrew (and in Semitic in general) have no *a-priori* transitive or intransitive meaning.

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Genitive (*smixut*) constructions in Modern Hebrew

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The chapter concerns the morpho-syntactic structure and usage-based properties of MH constructions involving two nominal constituents, an initial head and following modifier. Focus is on the three *smixut* ‘adjacency’ or ‘dependency’ constructions: (i) “construct-state” compounds in the form $N \wedge N(P)$, where a caret indicates the relation between an initial bound head N and its free-form modifier; (ii) free, analytic $N(P) \textit{š}el (N)P$ constructions with the genitive marker *šel* ‘of’; and (iii) doubly marked $N_1\textit{pro}_2 \textit{š}el N_2$ genitives. Usage-based analyses of alternations between these three options for expressing possession and other genitive relations reveal conflicting results, leading to the conclusion that text-type (genre, medium of expression, level of usage, and communicative setting) plays a major role in choice of construction. The chapter also considers two other binominal constructions – construct-state $\textit{Adj} \wedge \textit{Noun}$ and $\textit{Noun} + \textit{Denominal Adjective}$ phrases – and concludes by noting more general properties of Modern Hebrew reflected in current use of these constructions.¹

1. Introduction

The bulk of this chapter concerns the three so-called *smixut* ‘adjacency’ or ‘dependency’ constructions (§2), extended to include related binominal and adjectival constructions (§3). The *smixut* system has been richly researched in Hebrew language and linguistics studies from different perspectives. These include, in Hebrew language studies: Azar (1976), Halevy (2000b); in generative grammar: Borer (1988, 2009); Danon (2008, 2017); Doron & Meir (2013); Hazout (2000); Ritter (1991); Siloni (2001); and in usage-based psycholinguistic studies: Ravid & Assulin Tzabar

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(2017); Ravid & Shlesinger (1987); Ravid & Zilberbuch (2003a, 2003b); Ravid & Shlesinger (1995). The constructions at issue correspond in part to compounding processes (Lieber & Štekauer 2009) and are associated with genitive case, as primarily but not only expressing semantic relations of possession (e.g., Carlier & Verstraete 2013; Hinrichs & Szmrecsanyi 2007; Lander 2008; Lyons 1986), while Goldenberg's (1998: 47) discussion of genitive case in Semitic languages characterizes them as "the syntactical exponent" of the semantic relation of attribution. The starting-point for this discussion is earlier structuralist research of the author (Berman 1978: 231–276), as subsequently re-evaluated in functionally and typologically motivated terms (Berman 1988a), and in cross-linguistic developmental perspective (Berman 2009). Consideration of the three canonical *smixut* constructions (§2) are extended below to include other, related binominal and adjectival constructions (§3).

1.1 Constructions analyzed

When morphologically marked, the genitive relation in Hebrew is registered on the head noun, invariably the *initial* element in the construction, traditionally labeled as "construct state" (analogous to what some typologists term "antigenitive" (e.g., Creissels 2009). The three canonic *smixut* constructions are illustrated in the constructed examples in (1) and (2) as alternative means of expressing a relationship between an initial head noun and its associated modifying noun. These express roughly synonymous relations between the two nouns – in the basic (alienable) possessive sense of 'the dog's leash' in (1) and the product sense of 'Agnon's stories' ~ 'the stories of Agnon', 'stories written by Agnon' in (2). Throughout this chapter, as elsewhere in the volume, this relation is indicated uniquely by the caret mark ^ on the morphologically bound head noun, and glossed by the label CS standing for construct state.

- (1) a. *rcuat-t^ ha-kélev*
 leash-CS.SG.F DEF-dog:SG.M
 'the dog's leash'
- b. *ha-rcua šel ha-kélev*
 DEF-leash:SG.F of DEF-dog:SG.M
 'the leash of the dog'
- c. *rcua-t^-o šel ha-kélev*
 leash-CS.SG.F-POSS.SG.M of DEF-dog:SG.M
 'the dog's leash'

- (2) a. *sipur-ey*[^] *Agnon*
 story-CS.PL.M Agnon
 ‘Agnon’s stories’
- b. *ha-sipur-im* *šel Agnon*
 DEF-story-PL.M of Agnon
 ‘the stories of Agnon’
- c. *sipur-a-v*[^] *šel Agnon*
 story-PL-CS.POSS.3SG.M of Agnon
 ‘Agnon’s stories’

1.2 Sources of data

The chapter relies on several sources of *authentic* data (see Silverman 2006; Speer 2002), including texts elicited in speech and writing from educated native speakers of Hebrew backed up by oral interviews with Hebrew-speaking adults, and structured experiments eliciting relevant data from Hebrew-speakers of different age-schooling levels.

The main data-base is the same as in Chapter 11 on Nominalizations: 80 unedited texts – spoken and written, narrative and expository – elicited from 20 university graduate native speakers of Israeli Hebrew, in the framework of a cross-linguistic study (Berman 2008; Berman & Verhoeven 2002). The Hebrew adult sample yielded a total of 15,308 words and 2,260 clauses (Berman & Nir-Sagiv 2004), with each text line corresponding to a clause, defined as “a unified predicate ... that expresses a single situation – activity, event, or state” (Berman & Slobin 1994: 660–662). This method of dividing texts into clauses provided a reliable basis for comparison across the variables of language (English, French, Hebrew, etc.), medium (written or spoken), genre (personal experience narratives or expository discussions), and age-schooling level (middle childhood, pre-adolescence, adolescence, adulthood).²

Supporting data were provided by (i) interviews conducted by graduate students of linguistics with family members or friends; (ii) oral picture-book based stories of adults compared with children (Berman 1988b; Berman & Neeman 1994);

2. Analysis of the *written corpus* revealed that construct state *smixut* constructions are generally written as two separate words, except for casual representations of some very common compounds like *yom*[^] *hulédet* ‘day:cs birth’ written as YWMWLDT compared with normative YWM HWLDT. This differs from languages like Dutch or German, where long strings of even novel compounds are typically written as a single word, or to alternations in English between two-word, hyphenated, and single-word strings (de Jong et al. 2002).

(iii) Halevy's (1992, 2000a, 2016) analyses of relevant constructions, largely from edited written texts; and (iv) analyses of Ravid and her associates, including elicited spoken data (Ravid & Assulin Tzabar 2017) and written textbooks and newspapers (Ravid & Shlesinger 1987, 1995; Ravid & Zilberbuch 2003a, 2003b; Shlesinger & Ravid 1998).

A third source of data derives from structured experiments: a psycholinguistic judgment study (Berman & Ravid 1986) and elicitations of nominal coinages from educated Hebrew speakers (Berman 1988c; Ravid 1990) and from Hebrew-speaking children and adults (Berman 1999; Bi-Lev 1985; Clark & Berman 1984, 1987).

2. Binominal $N^{\wedge} N(P)$ *smixut* genitive constructions

This section considers the three constructions traditionally grouped together under the label *smixut*, as illustrated in (1a) to (1c) and (2a) to (2c) above, as follows: bound $N^{\wedge} N(P)$ constructions (§ 2.1), free $N(P)$ *šel* $N(P)$ (§ 2.2), N_1 *pro*₂ *šel* N_2 (§ 2.3) between the three (§ 2.4).

2.1 Bound $N^{\wedge} N(P)$ constructions

Traditionally labeled “construct state”, $N^{\wedge} N(P)$ strings represent the canonical morpho-syntactic means of expressing a relationship between two or more nouns in Modern as in Classical Biblical Hebrew. This section considers five facets of these constructions: *morphological* markings on the initial head noun (§ 2.1.1); *syntactic properties* in formation of these constructions (§ 2.1.2); *stylistic and processing* constraints on stringing of more than two or three such constructions (§ 2.1.3); *degree of lexicalization* – contrasting set formulaic expressions with freely derived novel combinations (§ 2.1.4); and *semantic* factors impinging on relations between the two nouns (§ 2.1.5). General typological properties reflected in *smixut* constructions such as the largely “head-first” character of Hebrew noun phrases and processes of language change are considered at the end of the chapter.

2.1.1 *Morphological marking of head noun*

$N^{\wedge} N$ strings constitute a distinct inflectional category (Doron & Meir 2013; and see Chapter 7 on Inflection) in which the head noun in “construct-state” constructions may, depending on morpho-phonological factors, contrast with its free form in “absolute-state” contexts. The initial head noun is a bound form, hence termed *nismax* ‘dependent, supported’ (as detailed in Chapter 7), contrasting with the following *somex* ‘supporter’, a non-inflected “free” modifying noun or noun phrase.

As part of the inflectional system of Modern Hebrew, relevant changes in the head noun are mastered by early school age, except for stem changes of the kind illustrated in Table 1, where the head noun typically retains its non-bound, free form in colloquial usage, including of educated speakers.

Table 1. Normatively prescribed compared with current usage of head-noun stem changes³

Normative form	Gloss	Spoken usage	Change
<i>xadar</i> [^] <i>óxel</i> ,	room:CS food = ‘dining room’	<i>xéder óxel</i>	Non-vowel-lowering with root-initial pharyngeal <i>het</i>
<i>simlot</i> [^] <i>kala</i> ‘	dresses:CS.PL.F bride = ‘bridal gowns’	<i>smalot kala</i>	Non-observation of bound-free plural of CiCCa nouns
<i>nisyon</i> [^] <i>ha-avar</i>	‘experience:CS (of) the-past’	<i>nisayon ha-avar</i>	Non-vowel deletion of final syllable of CiCaCon nouns
<i>məkor</i> [^] <i>máyim</i>	‘source:CS (of) water’	<i>makor máyim</i>	Non-vowel deletion/ reduction before stressed suffix or N
<i>šayéret</i> [^] <i>jípim</i>	‘convoy:CS (of) jeeps’	<i>šayara-t ġípim</i>	Retention of non-bound stem in CaCaCa pattern

The examples in the second column of Table 1, all documented in the conversational usage and oral texts produced by educated speakers of Hebrew, are indicative of ongoing change in morpho-phonological alternations requiring *stem-shifts* in contexts that are no longer phonetically transparent (Boložky 2016; and see, too, Chapter 6 on phonology). In contrast, speakers largely observe required suffixation on construct heads, adding *-t* to feminine nouns ending in *-a* and changing *-im* to *-ey* in masculine plural nouns. Moreover, in experiments where adults and children were required to innovate noun compounds (Bi-Lev 1985; Clark & Berman 1987) as well as in spontaneous usage (Berman 1999; Berman & Sagi 1981), fewest differences occurred in contexts where the head noun involved no change in form (masculine nouns in the singular and feminine nouns ending in the plural suffix *-ot*). Usage varied most in noun classes involving stem-changes like those in Table 1 which, as noted, are by no means confined to juvenile usage in current Hebrew.

3. The term *normative* here refers to forms favored by the Hebrew language establishment, as reflected in the dictates of such bodies as the Hebrew Language Academy and the Israeli school system. This contrasts with the everyday usage of even educated but non-expert speaker-writers of colloquial Hebrew (see Chapter 4 on Sociological Dimensions and Chapter 5 on Prescriptive Activity in MH).

2.1.2 Syntactic constraints on $N^{\wedge} N$ constructions

Three facets of the syntax of $N^{\wedge} N$ constructions are considered below: Constraints on constructions that can serve as head as against modifying constituents of *smixut* (§2.1.2.1), and two types of word order alternations: in definiteness marking and in coordinated constructions (§2.1.2.2).

2.1.2.1 Constituents of $N^{\wedge} N$ construct state: Head nominal and modifying constructions

The *initial, head* constituent in construct-state strings is confined to single nominal elements. The only exception is with recursively iterated heads, in constructions of the form $N^{\wedge} N^{\wedge} (N)^{\wedge} N(P)$, as in the examples in (3) below like *sof[^] šnat[^] ha-limudim* ‘end:CS year:CS DEF-studies = the end of the school year’.⁴ Five morpho-syntactic categories can serve as heads of bound *smixut* constructions, as follows: (i) canonical Nouns, from highly concrete to very abstract, and derived nominals, as illustrated in (3) to (7); (ii) Adjectives (as detailed in §3.1 below); two types of “Verbal Nouns” – (iii) quasi-nominal *benoni* ‘intermediate’ Participles, occurring in frozen expressions like *yošev[^] roš* ‘sit:B1.CS.SG.M head = chairperson’ and common in newspaper usage (Berman 1978: 139–180); and (iv) Gerunds, traditionally *makor xavur* ‘bound infinitive’ (see Chapter 10 on Nominalizations); as well as (v) numerals and quantifiers – as in *arbaa-t[^] ha-xaverim* ‘four-CS the-friends = the four friends’, *alf-ey[^] ha-mikrim* ‘thousand-CS.PL the-cases = the thousands of cases’ (see Chapter 7 on Inflection, and Chapter 11 on Agreement).

Unlike canonical nouns, other quasi-nominal constructions – adjectives, participles, and gerunds – constitute the head constituent *only* in bound construct state form, never in analytic genitives with *šel* ‘of’ (see, further, §2.2). Moreover, verbs – non-finite infinitives as well as tense-marked past and future forms – can never serve as bound heads of *smixut* constructions. In contrast, the *modifier* may be extended by one or more other elements, including: (a) nouns – illustrated in (7), determiners (8), adjectives (9), prepositional phrases (10), and extended phrasal and coordinated constructions (11).

The examples in (3)–(7) are taken from the oral narrative and expository texts in the Hebrew corpus described in §1.2.

4. Though statistical evidence is not available, the default case appears to be compounds with a single head and a single modifying noun. Some purists object to stringing even two, certainly more than two modifiers in such constructions. However, such constructions are common, particularly where a lexicalized compound serves as head, as in *bet[^] séfer[^] sade* ‘house:CS book:CS field = field school’.

- (3) N[^] N[^] N
- i. *páar*[^] *yaxas-ey*[^] *ha-kox-ot*
gap:CS relation-CS.PL DEF-strength-PL
'the disparity in power relations'
 - ii. *sof*[^] *šna-t*[^] *ha-limud-im*
end:CS.SG.M year-CS.SG.F DEF-study-PL.M
'the end of the school year'
- (4) N[^] Det N(P)
- i. *bniya-t*[^] *ha-xevra* *šel-ánu*
building:BI.NMLZ-CS.SG.F DEF-society:SG.F of-1PL
'building our society ~ the construction of our society'
 - ii. *baal-ot*[^] *gvan-im* *rab-im*
owner-CS.PL.F shade-PL.M much-PL.M
'women possessing ~ of many nuances'
- (5) N[^] N Adj
- i. *mahalax*[^] *šerut-i* *ha-cva-i*
course:CS service-POSS.1SG.M DEF-army-ADJ.SG.M
'the course of my military service'
 - ii. *xadr-ey*[^] *ha-šerut-im* *ha-klali-yim*
room-CS.PL.M DEF-service-PL.M DEF-general:ADJ-PL.M
'the public service rooms = toilets'
- (6) N[^] N PP
- i. *hagbara-t*[^] *ha-havana* *ben* *anašim*
intensify:NMZL-CS.SG.F DEF-understanding between people
'intensification of understanding between people'
 - ii. *haknay-a-t*[^] *kelim le-regišut* *klapey* *ha-zulat*
provide:NMZL-CS.SG.F tools to-sensitivity towards DEF-other
'provision of means for sensitivity towards others'
- (7) N[^] N (N) with phrasal and coordinated extensions
- i. *kšay-ey*[^] *tikšoret* *miluli-t* *ve-lo* *miluli-t*
difficulty-CS.PL.M communication:SG.F verbal-SG.F and-not verbal-SG.F
'difficulties of communication verbal and non-verbal'
 - ii. *bniya-t*[^] *xevra* *codék-et* *ve-bri-a* *yoter*
building:BI.NMLZ-CS.SG.F society:SG.F just-SG.F and-healthy-SG.F more
'construction of a more just and healthy society'

These examples illustrate a potential ambiguity in N[^] N modification in Hebrew, since the modifying construction(s) may agree with either the head noun or with one of its modifiers. Thus, in (5ii) the masculine plural adjective *ha-klaliy-im* 'the general' could agree with either the plural head noun *xadr-ey* 'rooms' or the plural

modifying noun *šerut-im* ‘services’, whereas in (7ii), the feminine adjectives *milulit*, *lo-milulit* ‘verbal, non-verbal’ can agree only with the feminine singular modifier noun *tikšóret* of the compound *kša-ey[^] tikšóret* ‘difficulties of communication’ and not with the masculine plural head noun *kša-ey[^]*. That is, there may be an ambiguity in {N[^] N Adj} constructions when both head and modifying noun share the same values for number and gender – as in the well-known example of *moécet[^] ha-medina ha-zmanit* ‘council:CS.F DEF-state:F DEF-temporary:F = the temporary state council’, where it is not clear whether the adjective ‘temporary’ modifies the head noun ‘council = the state council that is temporary’ or the modifying noun ‘state = the council of the temporary state’. Otherwise, the examples in (3) to (7) demonstrate the relative structural freedom in the modifying element of N[^] N constructions, whether in lexicalized (e.g., *šnat[^] limudim* ‘year:CS studies = school year’) or freely generated expressions (e.g., *šnat[^] xalomot* ‘year:CS dreams = year of dreams’) and see § 2.1.4. This contrasts markedly with the head elements which, as noted, are confined to single, non-modified nominal terms.

2.1.2.2 *Word-order constraints*

The requirement of a single noun as bound head of N[^] N constructions has incurred two processes of preposing, in contrast to traditional forms of construct state genitives. The first concerns placement of the *definite marker ha-* ‘the’ – as in (8a) to (8d) below – where the form marked by *cf.* indicates the prescribed form. A second such direction of change concerns the tendency for speakers to coordinate two or more conjuncts *before* a shared head noun, as in Examples (10a) and (10b).

First, with respect to *definiteness marking*, as discussed from various perspectives – structuralist (Berman 1978: 247–253), Hebrew-language (Schwarzwald 2016), and generative (Danon 2008) – N[^] N combinations differ from noun phrases in general. In Hebrew, definiteness marking is typically subject to agreement with the initial head noun, and prefixed to both it and its following modifier(s), for example: demonstrative *makom ze ~ ha-makom ha-ze* ‘= this ~ that place’; adjective *makom raxok ~ ha-makom ha-raxok* ‘= a ~ the distant place’, *ha-makom ha-raxok ve-ha-yafe* ‘DEF-place DEF-far and-DEF-beautiful = the remote, beautiful place’ (see Chapter 12 on Agreement). In contrast, in N[^] N constructions, the definite marker occurs only *once* – traditionally, on the second, modifying noun, thus: *mekom[^] kavod ~ mekom[^] ha-kavod* ‘= a ~ the place of honor’; *simaney[^] šeela ~ simaney[^] ha-šeela* ‘= a ~ the-question marks’. This requirement is, however, often irrelevant in colloquial usage, as in the examples in (8) from a graduate student discussing the problem of interpersonal conflict (8a) and from young men in conversation with a friend or classmate (8b)–(8d).

- (8) a. *ve-zéhu ha-xešbon[^] néfeš še-nišar la-asot*
 and-that's DEF-reckoning:CS mind that-remains to-do
 'and that's the self-examination that remains to be done'
 cf: *xešbon[^] ha-néfeš*
- b. *aval ze lo bišvil-i ha-dérex[^] xayim ha-zot*
 but it not for-me DEF-way:CS.SG.F life:PL.M DEF-that:SG.F
 'but that way of life isn't for me'
 cf: *dérex[^] ha-xayim ha-zot*
- c. *ha-davar ha-madhim ze še- ha-sgani-t[^] menahél-et*
 DEF-thing DEF-amazing it that DEF-deputy-CS.SG.F principal-SG.F
kara li la-misrad šela
 called me to.DEF-office her
 'The amazing thing is that the vice-principal called me to her office'
 cf: *sganit[^] ha-mnahélet*

The examples in (8) show that current usage often departs from traditional marking of definiteness in bound construct state expressions, although prescribed forms are still observed in other types of noun phrases – as in feminine *ha-derec ha-zot* in (8a), masculine *ha-davar ha-madhim* in (8c). This is particularly, although not only, the case with highly lexicalized compounds like *ha-bet[^] séfer* 'the-house:CS (of) books = school' above (see, further, §2.1.3 below). For example, in their oral picture-book based narratives, Hebrew-speaking 9-year-olds quite commonly produced "ungrammatical" *ha-N[^] N* sequences like *ha-nexil[^] dvorim* 'DEF-swarm:CS bees' instead of *nexil[^] ha-dvorim* for 'the swarm of bees', *ha-bul[^] ec* 'DEF-log:CS tree' for *bul[^] ha-ec* 'the tree trunk' (Berman & Neeman 1994).⁵

Interestingly, in her study of acquisition of definiteness in Hebrew, Zur (1983) cites several such examples from the usage of well-known Hebrew authors, including from the early years of the state of Israel.⁶ Taken together, this variation between

5. In fact, in the course of online spoken Hebrew, speakers sometimes mark definiteness on *both* the head and modifying noun, as in the following examples from the oral media, the first highly lexicalized, the second less so: (i) *ha-gan[^] ha-yeladim ba-šxuna šelánu* 'DEF-garden:CS DEF-children in.DEF-neighborhood ours = the kindergarten in our neighborhood'; (ii) *ha-menahel-et[^] ha-proyekt ha-xadaš-a* 'DEF-director-CS.F DEF-project:M DEF-new-F = the new project directress'.

6. Zur cites the following examples: *ha-keev[^] šináyim* 'the-ache:CS teeth', *ha-rofe[^] šináyim* 'the-doctor:CS teeth = the dentist' from Ayin Hillel's (1976) "*ma kara la-krokodil?*" 'What Happened to the Crocodile?'; *ha-yom[^] hulédet* 'the-day:CS birth = the birthday' from Yehuda Atlas (1981) "*ve-rak ani lo*" 'And Only Me Not'; and *ha-imuney[^] sade* 'the-drills:CS field = the field drills', *ha-macav[^] rúax* 'the-state:CS (of) mind = the mood', *ha-óto[^] masa* 'the-car:CS cargo = the truck' from Netiva Ben-Yehuda (1981) *1948 – ben ha-sférot* '1948 – Between the Spheres'.

ha-N[^] *N* ~ *N*[^] *ha-N* point to a direction of change in the language, motivated typologically by the general preference for pre-nominal placement of the definite marker in Hebrew. In terms of processing, there seems to be more of a cognitive memory load involved in having to mark the feature of definiteness in the middle rather than at the beginning of the relevant construction, although experimental evidence is lacking to support this suggestion.

Uncertainty regarding placement of the definite marker may also account for the pauses and hesitations (marked by pauses indicated by ... and the filler syllable *em* in the examples in (9) from online conversational usage of young Israeli men and women.

- (9) a. *ha- ... xóser*[^] *ha-nimus* *ha- ...*
 DEF ... lack:CS DEF-politeness DEF-...
 ‘the ... the lack of manners the ...
še-gam kašur *le-xóser*[^] *kvod*[^] *ha-adam*
 that-also connected to-lack:CS honor:CS DEF-person
 that’s also connected to lack of respect for people’
- b. *ve-ima šel-i osa et ha ... -em ha-hanhalat*[^]
 and-mom of-me does ACC DEF-...er DEF-management:CS
xesbonot ba-xanut
 accounts in.DEF-store
 ‘and my mother does the – er the ... er book-keeping in the store’

A second type of pre-posing applies to a constraint rarely observed in everyday usage, which disallows *coordination* of more than a single noun (phrase) before the modifying constituent. Current usage, both written and even more so spoken, appears largely unaware of this “pseudo” constraint, as in the examples in (10) from the media, advertisements, and our elicited data-base – with the documented occurrence marked (i) and the normatively prescribed form in (ii).

- (10) a. i. *mor-ey*[^] *ve-talmid-ey*[^] *bet*[^] *ha-séfer*
 teacher-CS.PL.M and-student-CS.PL.M house:CS DEF-book
 ‘the teachers and students of the school’
- ii. *mor-ey*[^] *bet*[^] *ha-séfer* *ve-talmid-av*
 teacher-CS.PL.M house:CS DEF-book and-student-POSS.3SG.PL.M
 ‘the school’s teachers and its students’
- b. i. *xokr-ey*[^] *u-mamci-ey*[^] *ha-maxšir*
 researcher-CS.PL.M and-inventor-CS.PL.M DEF-instrument
 ‘the researchers and inventors of the appliance’
- ii. *xokr-ey*[^] *ha-maxšir u-mamci-av*
 researcher-CS.PL.M DEF-future and-inventor:PL-POSS.3SG.M
 ‘the researchers of the appliance and its inventors’

- c. i. *xamišim anš-ey[^] ve-neš-ot[^]*
 fifty person-CS.PL.M and-woman-CS.PL.F
kox-ot[^] ha-bitaxon
 force-CS.PL.M DEF-security
 ‘the fifty men and women of the security forces’
- ii. *xamišim anš-ey[^] kox-ot[^] ha-bitaxon*
 fifty person-CS.PL.M force-CS.PL.M DEF-security
u-neš-ot[^]-ey[^]-hem
 and-woman-CS.PL.F-CS.PL.M-POSS.3PL.M
 ‘the fifty men of the security forces and their [=of the forces] wives’
- d. i. *kol kore le-xol ohad-ot[^] ve-ohad-ey[^] ha-sidr-a*
 voice calling to-all fan-CS.PL.F and-fan-CS.PL.M DEF-series-SG.F
 ‘an appeal to all female fans and male fans of the series’
- ii. *kol kore le-xol ohad-ot[^] ha-sidr-a*
 voice calling to-all lover-CS.PL.F DEF-series-SG.F
ve-ohad-e[^]-ha
 and-fan-CS.PL.M-POSS.3SG.F
 ‘an appeal to all female fans of the series and its male fans’

The $N^{\wedge} ve N^{\wedge} (ve N^{\wedge}) N(P)$ constructions in (10i) can be interpreted as a new “norm” in current Hebrew usage, as in (10a), a formulation common in printed obituary notices. On the other hand, (10c-i) from a notice published by an academic institution in a reputable daily newspaper sounds rather awkward, possibly because *iša* ‘woman’ also means ‘wife’, so that its plural forms – free *našim* and bound *nšot* – might be interpreted as ‘wives’ in this context. Such usages are indicative of incipient directions of language change – where the strict post-posing requirements of Hebrew as a right-branching language conflict with the perception of bound $N^{\wedge} N(P)$ compoundings as unitary constructions, with all modifiers strung together before a shared head noun.

2.1.3 Stylistic and processing constraints

Speaker-writers of MH tend to favor breaking up strings of bound compounds by use of the genitive marker *šel* ‘of’ in cases (i) where one or more of the components are structurally heavy and semantically abstract – as in the head element in *mifgaš kvucati xevrati šel anašim* ‘= a communal social meeting of people’ or in the modifying adjunct in *ha-xanaya šel ha-Subáro ha-nocec šela* ‘= the parking of her shiny Subaru’; and (ii) to break up strings of multiple $N^{\wedge} N$ bound compounds (favored in languages like Dutch and German, as mentioned in fn. 1 above), even when these are not necessarily ambiguous. Compare, say, *menahel-et[^] ha-maxlaka ha-xadaš-a* ‘director-CS.F DEF-department:F DEF-new-F’ which could be interpreted as referring to either the new directress or the new department with unambiguous *menahel[^]*

ha-maxlaka ha-xadaš ‘director:CS.M DEF-department:F DEF-new-F’. A documented example is the string *šlab-im rišon-im šel tahalix[^] xinux* ‘stage-PL first-PL of process:CS.SG education:SG = the initial stages of a process of education’, which could in principle be paraphrased by two bound N[^] N genitives as *šlab-ey[^] tahalix[^] xinux rišon-im* ‘stage-CS.PL process:CS education:SG first-PL’ but this yields an awkward, less transparent sequence, harder to process than one where the genitive relation is analytically expressed by *šel* as an independent, non-bound marker. On the other hand, initial head nouns that are semantically partitive or relational terms which need to be further specified rather than standing alone – like *páar* ‘gap, disparity’, *sof* ‘end’ in (3) above – are good candidates for bound compounding.⁷

2.1.4 Degree of lexicalization

Different terms have been adopted by scholars in specifying the contrast between what are termed here ‘lexicalized’ vs. ‘syntactic’, ‘freely derived’ or ‘novel’ compounds. These include *cmidut* ‘juxtaposition’ versus *smixut* ‘construct state’ (Bliboim & Shatil 2014) or ‘compounds’ vs ‘constructs’ (Borer 1988, 2009). These contrast with the analysis proposed here, since such dichotomous characterizations blur the fact that *both* types of constructions are subject to the same morpho-syntactic alternations and all alike semantically express some kind of ‘genitive’ relationship. N[^] N constructions, rather, are seen as a *continuum* ranging from more or less set lexicalized, often idiomatic multi-lexemic expressions (MLEs, Wulff 2008) to more or less syntactically derived or free, often innovative or “one-time” productions (Downing 1977) or, from the point of view of “schematicity”, lying on a cline from relative autonomy to dependence or formulaity (Halevy 2000a; Langacker 1991; Nir 2015). This view makes it possible to circumvent the issue of whether N[^] N combinations be treated as “words” (entered as unitary elements in the mental lexicon) or as syntactically phrasal entities, and whether Hebrew bound *smixut* constructions constitute lexical or syntactic entities. And it takes into account variability of the mental lexicon of different individuals and at different periods in use of such constructions.

Usage-based studies demonstrate that the contrast between *lexicalized* and syntactic or novel N[^] N compounds is by no means an all-or-nothing, plus or minus issue. For example, Schwarzwald (2016: 261) distinguishes three levels of bound *smixut* constructions in this respect: Lexicalized (of which she lists several dozen from a corpus of spoken Hebrew), partly lexicalized, and free. Importantly, speaker judgments differ considerably on degree of lexicalization of specific combinations,

7. Other examples from our data base include both quantifiers and numerals noted earlier (e.g., *rov* ‘most-of’, *asrot* ‘tens-of’) as well as terms like *xóser* ‘lack-of’, *heeder* ‘absence-of’, *ikar* ‘crux-of’, *sof* ‘end-of’, *sug* ‘type-of’, *min* ‘sort-of’, *mahalax* ‘course = process’, *páar* ‘gap, disparity’, *kvuca* ‘group’).

including among experts.⁸ Such lack of consensus was revealed in an experimental design (Berman & Ravid 1986), which had 120 native speakers of Hebrew in their 20s and 30s rank thirty such combinations on a 5-point scale from “like a single word” via “very familiar and accepted expression” to “a random expression I have not encountered” ending with “an impossible combination in Hebrew”. There was high agreement on fewer than half the items on the list, mainly those ranked as word-like. Since the prospect of conducting speaker-judgment questionnaires across the board is unrealistic, a combination of criteria – usage-based, structural, and semantic – are proposed below to characterize whether and how far a given N[^]N string is a set, lexicalized element or a syntactically free string. Relevant considerations include the following:

- i. Highly lexicalized compounds (e.g., *ben[^] kita* ‘son:CS class = classmate’, *nku-dat[^] al xazor* ‘point:CS not return:GER’ = ‘point of no return’) fail to alternate with the free or double genitive constructions marked by *šel* in the examples in (1) and (2).
- ii. In contrast, non-lexicalized compounds alternate more readily with *šel* constructions (compare Examples 1a–1b and 2a–2b above). Moreover, except for strictly possessive usages, like (1a), they are also more accessible to paraphrase by N Prep N constructions, so that, for example, (2a) *sipurey[^] Agnon* means the same as *sipurim meet Agnon* ‘stories by Agnon’.⁹
- iii. Lexicalized compounds typically reflect a high degree of semantic restrictedness or *idiomaticity* in interpretation of either the head or modifier noun and/or the relation between them. Thus, head nouns common in idiomatic compounds often extend categories inherited from earlier periods in the language; for example: *bet[^]* from *báyit* ‘house’ in set expressions like *bet[^] séfer* ‘house:CS book = school’, *bet[^] xaróšet* ‘house:CS production = factory’; *báal* ‘husband, owner’ as the head of *báal[^] báyit* ‘owner:CS house = landlord’, *báal[^] tšuva* ‘owner[^] return = born-again religious, penitent’ (Halevy 2000a).¹⁰

8. For example, Ravid and Zilberbuch (2003a) describe the following examples from their data-base of encyclopedic type essays as “lexicalized compounds”: *tahalix[^] šalom* ‘peace process’, *oved[^] bank* ‘bank worker’, *tnaey[^] kabala* ‘acceptance requirements’, although these do not necessarily meet all or most of the criteria proposed in the present analysis.

9. Compare, for example, broadly synonymous phrases like: (i) bound *simlat[^] pasim* ‘dress of stripes’, (ii) *simla šel pasim* ‘(a) dress of stripes’, (iii) *simla im pasim* ‘(a) dress with stripes’, and (iv) *simla mi-pasim* ‘(a) dress from stripes’ – all of which can also be paraphrased by N Adj phrases like *simla mefuspés-et* ‘dress striped-F’ where the adjective is in the form of a resultative passive participle relating to the noun *pas* ‘stripe’ (see Berman 1994; Ravid et al. 2016).

10. These are not the only instances of idiomatic interpretations, of course. Compare, for example, transparent *kóva[^] kaš* ‘hat:CS straw = straw hat’ with *kóva[^] yam* ‘hat:CS sea = bathing cap’.

- iv. High-frequency, typically lexicalized $N^{\wedge} N$ strings like *yom^{\wedge}hulédet* ‘day:CS birth = birthday’, *orex^{\wedge}din* ‘arranger:CS law = lawyer’ may be treated as singular units taking a single plural marker, thus: *yomuladt-ot* ‘daybirth-PL.F’ for *yem-ey^{\wedge}hulédet* ‘day-CS.PL.M birth:F = birthdays’, *orexdín-im* ‘arrange. law-PL.M’ for *orx-ey^{\wedge}din* ‘arrange-CS.PL.M law:M = lawyers’ (Berman 1985, 1987a; Ravid & Shlesinger 1995).

2.1.5 *Semantics of head nouns in bound $N^{\wedge} N$ constructions*

Hebrew *smixut* constructions manifest most of the possible inter-nominal relations described for English by Lees (1960) – for example, the Hebrew versions of such expressions as ‘orange trees’, ‘matchbox’, ‘writing table’, ‘baking powder’, ‘John’s driving’, ‘John’s decision’ – as well as the relationship of *possession*, both alienable, as in ‘a farmer’s cow’, and inalienable as in ‘John’s foot’ (Berman 1978: 231). On the other hand, some such constructions, especially those taking apostrophe *š*, hence possessive-like in English, sound odd in Hebrew translation. For example, double *smixut* might be preferred with action nominal heads as in *nehigato šel Dan, haxlatato šel Dan* for ‘Dan’s driving/decision’; and possession, the basic sense of genitives, is typically expressed in MH by an analytic construction (e.g., *ha-régel šel Dan* for ‘Dan’s foot’). Yet all alike reflect the function of *subcategorization*, where the initial head noun specifies a given class of objects and the modifying noun specifies a sub-type of such objects – in a relationship that may be either analytically transparent or idiomatic. Compare, for example, types of shoes – *naaley^{\wedge}báyit* ‘shoes:CS house = slippers’, *naaley^{\wedge}akev* ‘shoes:CS heel = high-heeled shoes’, *naaley^{\wedge}hitamlut* ‘shoes:CS gymnastics = gym shoes’ – as well as sub-types of natural categories and other artefacts like trees, cakes, departments).

In studies where Hebrew speakers were required to innovate noun compounds in five different, randomly ordered semantic classes of possession, purpose, material, containment, location (Bi-Lev 1985; Clark & Berman 1987), the semantics of the head[^] modifier relationship had no significant effect on results from even the youngest participants, certainly not of adults. Nor did the “family size” of the head noun (Berman 2009; de Jong, Schreuder & Baayen 2000; del Prado Martín et al. 2005) – here in the sense of how commonly it occurs as the head of lexicalized or highly familiar compounds – affect the accuracy or amount of novel compounds. Rather, a major factor in amount as well as accuracy of innovation in these experimental elicitations up through school age was morphological simplicity and degree of stem-change occurring in the bound head noun.

This is reflected in the innovation of a six-year old girl before going to the beach who says she doesn’t want only *kóva^{\wedge}yam* but she also wants *kóva^{\wedge}yabaša* ‘hat (for wearing on the) land’, as a contrasting innovative compound expression.

The rest of this section considers the two other genitive constructions illustrated in (1) and (2) above – analytic N *šel* N(P) and double N-Pro *šel* N(P) in §§ 2.2 and 2.3 respectively – and compares current use of the three alternatives (§2.4).

2.2 Free analytical genitives

Expressions with the genitive marker *šel* ‘of’ (like *ha-rcua šel ha-kélev* ‘DEF-leash of the DEF-dog = the dog’s leash’, *ha-sipurim šel Agnon* ‘the stories of Agnon’) are a later, post-Biblical development, attributed by some scholars as evolving from a combination of the earlier possessive form *ašer le-* ‘which (is = belongs) to-’ > *še-le* ‘that (is = belongs) to’ > *šel* (see Blau 2010: 167). Today, these are favored for, though not confined to, the basic sense of *possession*, and syntactically they are a *relatively unconstrained* means of combining any two or more nouns and noun phrases in a range of primarily attributive modifying relations (Beard 1976, 1993; Goldenberg 1998; Halevy 2000b: 63–64).¹¹

The morpheme *šel* is uniquely dedicated to binominal constructions. It is thus not strictly speaking a preposition, since although it is pre-posed before the modifying noun, it never serves to mark Verb-Argument or Adverbial relations between nominals and their associated predicates (see Chapter 9 on Parts of Speech). Rather, it is confined to attributive modifying functions, reflecting its historical origin noted earlier of relativizing *ašer le* > *še-le-* ‘that (is) to’. In this, *šel* differs from genitive markers like English *of*, French *de*, which also serve to mark predicate complements of verbs (e.g., *think of*, *talk of*), or adjectives (*be afraid of*, *be careful of*). Besides, *šel* can also occur apart alone with a personal pronoun indicating possession as in the following example (supplied by Shlomo Izre’el): *anašim še-nigvevu lahem ha-ofanáyim yexolim lehagia u-lenasot lezahot im šelahem nimcaim ...* ‘people whose bicycles were stolen can come and try to identify whether **theirs** are there’ (where *šel-ahem* ‘of-them = theirs’); and they can also serve as predicates of copular constructions (e.g., *ha-ofanáyim hem šelánu* ‘the-bicycle is ours = belongs to us’). Genitive constructions with *šel* also readily alternate with prepositions in N Prep N constructions (see fn. 9).

The distribution of free, analytic N(P) *šel* N(P) constructions compared with bound N[^] N(P) genitives in current usage is a matter of some controversy. Halevy (2000b) suggests that speakers of Modern Hebrew view the free genitive with *šel* as the prototypical means of expressing possession, and that it is also common in some contemporary usage, such as advertising and other, more marked, emotive contexts.

11. Halevy (2000b) provides a detailed set of arguments demonstrating changes over time in the function of analytic *smixut* constructions with *šel* in standard written usage of contemporary Hebrew.

As against this, her examination of edited written Hebrew materials reveals that in these contexts, bound $N^{\wedge} N$ constructions have highest frequency of occurrence, followed by so-called double genitives, while analytic *smixut* with *šel* is relatively rare in standard written Hebrew (Halevy 2000b: 62–66). In contrast, Ravid & Shlesinger (1995) conclude from their analysis of (spontaneous) spoken group discussions and (edited) written newspaper and school texts that, while bound $N^{\wedge} N$ construct-state compounds indeed occur with higher frequency than analytic *šel* constructions, the latter are less marked both in range of meanings and in register. Analysis of a data-base of 80 written and spoken narrative and expository texts and 10 interactive dialogues (§1.2) supports *both* sets of findings, as discussed in §2.4 below.

Analytical $N(P) N^{\wedge} šel N(P)$ constructions are less constrained than their bound counterparts in several respects: *lexically* – they are rarely lexicalized, but are typically generated in the course of online spoken or written output; *morphologically* – they are far commoner with personal pronoun adjuncts than their bound affixed forms (e.g., *maxbéret šeli* is preferred to *maxbar-ti* ‘= my notebook’, *ha-išiyut šelo* rather than *išiyut-o* ‘= his personality’ (Cahana-Amitay & Ravid 2000; Schiff, Ravid & Levy-Shimon 2011); *syntactically* – they are subject to fewer structural constraints than their $N^{\wedge} N(NP)$ counterparts – for example, they can consist of extended noun phrases both as heads and modifiers (e.g., *kol ha-studentim ha-movilim šel šnat[^] ha-limudim šel-i* ‘all DEF-students DEF-leading of year:CS DEF-studies of-me = all the leading students of my school year’); and *pragmatically* – they are more neutral with respect to register and style than the bound $N^{\wedge} N$ constructions preferred in more formal written language. Halevy (2000b: 66–68) gives examples like *xayal šel šokolad* ‘soldier of chocolate = chocolate soldier’, *har šel be’ayot* ‘(a) mountain of problems’, *šigaon šel makom* ‘craziness of place = a really cool place’, to argue that free *smixut* constructions allow a range of ambiguous or metaphoric readings.

Analytical *šel* genitives are, however, subject to two constraints that do not apply to bound $N^{\wedge} N$ construct-state genitives.

1. The head noun of *šel* genitives typically belongs to the lexical category of Noun – so disallowing quasi-nominals like Adjectives, *benoni* participles, and verbal nouns or gerunds (§3 below).
2. Analytical genitives do allow so-called “synthetic” constructions, where the head noun is deverbal and/or the modifier has the role of an argument – as in, say, *bniyat[^] xevra codéket* ‘building:B1.NMZL.CS.SG.F society:SG.F just:SG.F = construction of a just society’; *šomr-ey[^] šabat* ‘keep:B1.PTCP-CS.PL.M Sabbath = observers of the Sabbath’, particularly in the case of relatively lexicalized expressions. Although this claim requires empirical study, it appears that *šel* genitives more readily allow “root” compounds where the head and modifier nouns are both fully noun-like rather than verb-derived (Lieber 2009; Lieber & Štekauer 2009).

These generalizations support the view that current Hebrew manifests a general preference for (non-lexicalized) $N^{\wedge}N$ bound forms in more formal, written usage, as against a preference for *šel* in casual speech, since both action nominals like *bniya* ‘building ~ construction’ and *benoni* verbal nouns like *šomrey* ‘keeping:cs. PL = observers-of’ are high-register typically written forms of expressions (see Chapter 11 on Nominalizations). Analytic $N(P)$ *šel* $N(P)$ constructions would seem to constitute the “default” or least marked class of genitive constructions, in everyday spoken usage for sure. It could be, however, that genre and text-type (speech/writing, conversation/monologic discourse, journalistic/literary prose) rather than register or level of usage alone is what mainly affects the relative distribution of analytic versus bound genitive constructions (and see, further §2.4 below).

2.3 Double-marked complex genitives

The third type of genitive construction, traditionally termed *smixut kfula* ‘double adjacency’, is structurally the most complex of all, combining elements of both bound $N^{\wedge}N$ and free N *šel* constructions, in the form of $N(P)_1$ -Pro₂ *šel* $N(P)_2$. Consider the examples in (1c) and (2c) repeated here as (1c’) and (2c’).

(1c’) *rcua-t-o* *šel ha-kélev*
 leash-CS.SG.F-POSS.SG.M of DEF-dog:SG.M
 ‘the dog’s leash’

(2c’) *sipur-a-v* *šel Agnon*
 story-PL-CS.POSS.3SG.M of Agnon
 ‘Agnon’s stories’

Examples in (11) and (12) are from, respectively, elicited texts and interactive conversational usage of young adults.

(11) a. *mekor-o* *šel ha-elbon*
 source-POSS.3SG.M of DEF-insult
 ‘the source of the insult’
 b. *kri-ot-av* *šel Paul*
 shout-PL.F-POSS.3SG.M of Paul
 ‘Paul’s shouts’

(12) a. *ma daat-xa* *al macav-a* *šel*
 what:Q opinion-POSS.2SG.M on situation-POSS.3SG.F of
ha-safa *ha-ivrit*
 DEF-language DEF-Hebrew
 ‘What’s your opinion of the state of the Hebrew language?’
 b. *kol ha-maavakim al ha... erk-a* *šel ha-safa*
 all DEF-battles on DEF... value-POSS.3SG.F of DEF-language:F
 ‘all the-struggles about the [long pause] language’s value’

Examples (11) and (12) show these to be structurally very marked constructions. They involve double marking of the genitive relation between the initial head noun, which takes a suffixal copy of the following adjunct noun – so involving backward pronominalization or cataphora, a process largely atypical of Hebrew – with the inflected head separated from its adjunct by the genitive morpheme *šel*. Semantically, too, this construction appears highly restricted in ways that differ from the other two types, although the constraints governing doubly marked genitives are not readily definable. Thus, two studies that have addressed the question in semantic terms (Halevy 2000b; Ravid & Shlesinger 1995) differ considerably in their interpretations, suggesting that further research (possibly in the form of judgment studies) is required to resolve the issue.

In *usage*, double genitives are relatively rare in everyday Hebrew (see, particularly, Shlesinger & Ravid 1998), confined largely to formal, written language, with the exception of frozen multilexemic expressions like *be-sof-o šel davar* ‘in-end-its of thing = eventually, at last’, *kicur-o šel inyan* ‘shortness-its of matter = in short, to cut a long story short’. In a large data-base of elicited texts, double genitives were used only by adults, never by adolescents. In a corpus of nearly 6,000 clauses in oral picture-book narratives produced by 16 adults (Berman 1988b), there were only around half a dozen such occurrences in all (e.g., *ap-o šel ha-yeled* ‘nose-his of the-boy = the boy’s nose’, *karn-av ve-roš-o šel ha-cvi* ‘antler-POSS.SG.M and-head-POSS.SG.M of DEF-deer:SG.M = the antlers and head of the deer’) examples which confirm the favoring of inalienable possession in such constructions. Certain kinds of kinship relations are also regularly expressed by such constructions (e.g., *aviv šel David* ‘David’s father’, *bita šel Rivka* ‘Rebecca’s daughter’). Double genitives accounted for under 10% of all *šel* genitives in the oral and written narrative and expository texts produced by 20 educated Hebrew-speaking adults, never by younger participants, and they were rare in the oral interview data of ten lengthy conversational interactions (The examples in (12) above are from an interviewer who used an unusually high-register normative style, echoed in the response of the young man she is talking to).

These constructions nonetheless warrant consideration in the present context, since they remain a genuine, if highly marked and relatively infrequent, means for expressing genitive relations between two nominals in Hebrew.

2.4 Alternation between genitive constructions

While the three genitives may function as stylistic alternates – as in the constructed examples in (1) and (2) – each is constrained by a range of factors that may yield a preference for one rather than the other. *Distributional* evidence regarding alternations between the three requires usage-based analyses beyond the formal structural

principles of generative grammars like those of Berman (1978), Borer (1988, 2009) or of Hebrew-language grammarians (Azar 1976; Glinert 1989) who generally treat the three as largely in free variation. This reservation also applies to the suggestion of scholars such as Rosén (1956: 149–160) and Ornan (1965) that forms with *šel* are preferred when the modifying noun is human. Their observation is evidently a consequence of, first, the pervasive favoring of N *šel* N constructions for expressing the basic genitive relation of *possession* (like English inflected 's) and, second, the conclusion noted earlier, that the N *šel* N is the least constrained or “default” form of genitive in Modern Hebrew.

There are, however, instances when, one or both of the two morphologically *bound* genitives – N[^] N and double – are required or at least preferred. Thus, expanding on earlier comments regarding bound construct-state N[^] N(P) genitives (§2.1), *lexically*, they alone constitute lexicalized compounds, having a uniquely “wordlike” unanalyzable status.¹² *Semantically*, they can take as heads all kinds of canonical nouns, from highly concrete to very abstract, and are particularly favored in the role of specifiers with partitive, quantitative, classifier, or relational types of head nouns. *Syntactically*, bound forms, either N[^] N or double genitives, are preferred by synthetic, verb-related compounds with heads in the form of derived action nominals, gerunds, or participial type *benoni* constructions rather than canonic nouns, where the latter two can never occur in N(P) *šel* N(P) constructions (see §3 below). Relatedly, N[^] N genitives alone can take *adjectives* as heads in adjectival constructs AC) as in *kal-ey[^] ragláyim* ‘light-AC.PL.M feet = light of foot, light-footed’.

Distributionally, out of over 500 genitive expressions appearing in the 80 narrative and expository texts produced by Hebrew-speaking adults, more than half were in the bound N[^] N form, particularly in the more formal, higher-register written texts (Berman 2016a; Berman & Nir 2011). The breakdown in number of tokens across the data-base was as follows: bound N[^] N(P) > analytic *šel* genitives > double genitives, with only around 20 of the latter, many in the formulaic *be-sof-o šel davar* ‘in-end-its of thing = eventually’, reflecting how rare double genitives are in current usage.

In sum, current evidence indicates that the three genitive constructions do not typically demonstrate free variation. Although the three may function as stylistic alternates, each is constrained by structural, semantic, functional, and rhetorical

12. Compare, for example, idiomatic *ben[^] adam* ‘son:cs man = person’, *ben[^] mišpaxa* ‘son:cs family = member of the family’ with literal *ben šel axot-i* ‘son of sister-POSS.1SG = my sister’s son’; idiomatic *bet[^] séfer* ‘house:cs book = school’, *bet[^] xaróšet* ‘house:cs industry = factory’ versus literal *báyit šel axot-i* ‘house of sister-POSS.1SG = my sister’s house, home’; *báal[^] báyit* ‘master:cs house = landlord’, *báal[^] tfila* ‘master:cs prayer = prayer leader’ vs. literal *ha-báal[^] šel axot-i* ‘DEF-husband:cs of sister-POSS.1SG = my sister’s husband’.

factors that often yield a preference for one rather than another. As noted repeatedly, an adequate account of these variations needs to be based on large-scale, representative corpora of Modern Hebrew of the kind as yet unavailable, taking into consideration pragmatic and discursive factors such as: genre (literary, journalistic, narrative, expository, etc.), medium of production (written or spoken), register (elevated, standard, colloquial, familiar), and communicative setting (monologic or interactive, between intimates or strangers, etc.).

3. Other binominal constructions

Adjectives – traditionally treated as belonging in the same class of “nominals” as nouns (see Chapters 7, 8, and Chapter 9 on Morpho-Lexicon) – also function in two “quasi-genitive” relations: in bound Adjective[^] Noun construct-state combinations (§3.1) and in free Noun + Adjective phrases, with denominal adjectives as modifiers (§3.2).

3.1 Construct-state adjective + noun [AC]

In Adjectival Constructs [AC], an adjective functions as the construct-state head of an Adj[^] N construction, as in the following examples from the data-base: *xamum[^] móax* ‘heated:AC.SG.M brain = hot-tempered’, *kcar[^] reiya* ‘short:AC.SG.M sight = short-sighted’, *tov-a-t[^] lev* ‘good-SG.F-AC heart = good of heart, good-hearted (female)’, *aruk-ey[^] tvax* ‘long-AC.PL.M range = long range(d)’, *neim[^] halixot* ‘pleasant:AC.SG.M manners = well-mannered’. In her study of such constructions in MH, Halevy (2016: 380) notes that expressions like ‘swift-of-foot’, ‘short-of-breath’ are common in Standard Average European (SAE), and correspond in many cases to exocentric compound adjectives of the *bahuvrihi* type (e.g., ‘blue-eyed’, ‘hard-headed’). Generative analyses (Hazout 2000; Siloni 2001) interpret such constructions as expressing inalienable possession, elaborated by Rothstein (2014) who suggests that in a construction like *ha-yeled šxor[^] ha-enáyim* ‘the-boy black:cs the-eyes = the black-eyed boy’, the head adjective ‘black’ rather than its nominal complement ‘eyes’ is what expresses the “the crucial relation” between these two constituents and the noun that they modify.

Morphologically, in Hebrew, as in other Semitic languages, construct-state initial adjectives are subject to the same final-syllable alternations as the initial head noun in N[^] N constructions (no change, feminine *-a* to *-at*, masculine plural *-im* to *-ey*, and/or stem-change); they may be both basic or non-derived (e.g., *kxol[^] enáyim* ‘blue-of eye = blue-eyed’, *arukey[^] tvax* ‘long-of range = long-ranged’); and they may take the form of resultative participles in one of the forms – *CaCuC*, *meCuCaC*,

muCCaC (e.g., *xamum*[^] *móax* ‘heated:AC brain = hot-tempered’, *retuv-ey*[^] *sear* ‘wet-AC.PL.M hair = wet-of-hair’), or of habitual present-tense forms like *yefe*[^] *tóar* ‘fine:AC.SG.M appearance = good looking’ (Berman 1994; Ravid, Bar-On, Levie, & Douani 2016); but they hardly ever occur with denominal adjectives (see §2.3 below).¹³ Inflectionally, the morphologically bound initial head adjectives in Adjectival constructs alternates for number and gender like the head noun in N[^] N constructions, but they do *not* have periphrastic alternatives in the form of Adj *šel* N(P). Moreover, although in principle construct-state Adjective + Free Noun Modifier constructions are readily derivable by quite general rules, in usage they tend to be lexically frozen expressions, constituting a relatively closed class of MLEs (e.g., *sva*[^] *racon* ‘full:AC.SG.M wish = satisfied, content’, *xasrey*[^] *toélet* ‘lacking:AC.PL use = useless’). This further indicates the high-register status and infrequent occurrence of such constructions in current MH usage.

3.2 Head noun + denominal adjective (DAJ)

N[^] N(P) construct state genitives may alternate with noun phrases in the form N(P) + Denominal Adjective (DAJ). Compare, for example, the Noun-Adj string *mifgaš-im kvuca-ti-yim* ‘meeting-PL.M group-DAJ-PL.M = collective meetings’ – with the approximately synonymous N[^] N construct state *mifgeš-ey*[^] *kvuc-ot* ‘meeting-CS.PL.M group-PL.F = group meetings’; *ha-safa ha-mekor-it* ‘DEF-language DEF-origin-ADJ.F’ = ‘the original language ~ *sfat*[^] *ha-makor* ‘language:CS DEF-origin = the language of origin’ (Ravid & Shlesinger 1987; Taube 1990).

Both elicited monological texts and conversations recorded between young Israeli adults (§1.2) were liberally sprinkled with Noun + Denominal Adj phrases. The examples in (13a), (b) illustrate the contrast between the same noun modified once by a denominal adjective and another time by an adjunct noun.

- (13) a. *arxitektúra ze mikcóa še- hu al ha-karka gam*
 architecture it profession that- he on DEF-ground also
mi-bxina toxn-it ve-gam mi-bxina-t[^]
 from-aspect:SG.F content-DAJ.SG.F and-also from-aspect-CS.SG.F
parnasa
 income
 ‘architecture is a profession that is down-to-earth both content-wise and from the point of view of income’

13. In the developmental study of Ravid et al. (2016), resultative (mainly in the passive participial forms *CaCuC* and *meCuCaC*) and denominal (–i suffixed) adjectives emerged as two major components of the current adjective lexicon of Hebrew.

- b. *hatama raayon-it o šonut idiológ-it*
 harmony:SG.F **idea-DAJ.SG.F** or difference:SG.F ideology-DAJ.SG.F
tluy-a bi-vesis^ ha-raayonot acmam
 depend-SG.F in-base:CS DEF-ideas themselves
 ‘Conceptual compatibility or ideological difference depends on the core
 of the ideas themselves’

In (13), the same partitive type (feminine) noun *bxina* ‘point of view, perspective’ is modified in a single coordinated construction, once by a (feminine) denominal adjective *toxnit* ‘content-related, substantive’ from the noun *toxen* ‘content, substance’ and once in its bound form *bxinat^* by an adjunct noun *parnasa* ‘livelihood’, which has no corresponding adjectival form *parnasati* ‘living-related’ in the established lexicon. Other examples from the conversational corpus include N DenomAdj phrases like the following: *tekufa mašmautit ba-xayim šeli* ‘a meaningful period in my life’, *mora tipulit* ‘(a) special-ed teacher’, *ha-cava ha-bulgari* ‘the Bulgarian army’, *bet^sefer amerikai* ‘(an) American school’, *beayot xevratyot* ‘social problems’, *maamad merkazi* ‘(a) central status’, *xinux mošavi* ‘village-y education’. Only some of these have N^ N counterparts (e.g., *cva bulgária* ‘the army of Bulgaria’ but not *bet^ sefer amerika* ‘America’s school’, *beayot^ xevra* ‘problems of society’ but not *maamad^ merkaz* ‘status of the center’). A rich set of examples from newspaper usage is provided in the study of Taube (1990).

The question arises as to the degree of semantic synonymy or alternation in usage between N^ N construct state and N + DAdj phrases.¹⁴ In terms of *derivation*, the latter appear unconstrained, since they apply to both native and loan adjectives, to polysyllabic and monosyllabic items (e.g., *kalkala* ~ *kalkali* ‘economy ~ economic’, *klal* ‘rule’ ~ *klali* ‘general’). Besides, as noted, Noun + DAdj constructions are *syntactically* like regular noun phrases, differing from N^ N and also A^ N construct-states in definiteness marking and number and gender agreement. *Semantically*, the modifying relation of denominal adjectives to their head noun is relatively restricted since, unlike adjectives in general which denote an inherent quality of the terms they modify, denominal adjectives tend to specify a “virtual”, sub-categorizing property of the noun they are derived from (Halevy 1992: 11). In other words, Denominal Adjective constructions typically specify a particular attribute of the head noun, generally one of similarity – akin to the English endings *-ish*, *like* – as in *scientific*, *modern*, *universal*, *conservative*, *linguistic*, etc. (see Beard 1993).¹⁵ In contrast, N^ N strings

14. See also Taube (1990) and the different views she cites on this issue in studies from the 1960s and 1970s.

15. This is one of the few instances where English derivational morphology (in words of Graeco-Latinate rather than native Germanic origin) varies considerably, with denominal

typically have a classifying function of sub-categorizing the head N in terms of various possible relations between the two nouns as against the essentially *attributive* function of modification of denominal adjectives. Compare, for example, doublets like: *diyun*[^] *madanim* ‘discussion:CS scientists = a scientists’ discussion ~ *diyun*[^] *mada-i* ‘discussion scien-tific = a scientific discussion’; *sixat*[^] *télefon* ‘conversation:cs telephone = a telephone conversation’ ~ *sixa telefón-it* ‘a telephonic conversation’; *nofey*[^] *midbar* ‘= scenes of the desert’ ~ *nofim midbariyim* ‘= deserty, desertlike scenes’ (Berman 1978: 258).

As for current *usage*, denominal adjectives (like their counterparts in the Latinate lexicon of English) are typical of an elevated, sophisticated register. Thus, in the corpora analyzed here, Noun + Denominal Adjective (DAJ) phrases occurred almost exclusively in the texts of adolescents and adults, suggesting that they represent more literate, advanced vocabulary (Ravid 2004: 73–77). Further, in their comparison of non-expert elicited and expert encyclopedic texts, Ravid and Zilberbuch (2003b) found “both nouns and adjectives participating in the construction belong to a literate, advanced vocabulary: *motxan psixologi* ‘psychological thriller’, *hon enoši* ‘human resources’, *beyt*[^] *gidul tiv’i* ‘natural habitat’, *xófeš akadémi* ‘academic freedom’”. Denominal adjectives are also *lexically* restricted. For example, a relation of time occurs in both construct-state and adjectival constructions in the alternation *tiyul*[^] *láyla* ‘walk:cs night = a night walk’ ~ *tiyul leyl-i* ‘walk night-y = a nightly walk’, but *not* in the corresponding *tiyul bóker* ‘walk:cs morning = a morning walk’, since the related derived adjective *bokri* is structurally possible but lexically non-occurrent. Other examples of occurrent N[^] N but non-occurrent although structurally possible N + DAdj combinations are: *avodat*[^] *cévet* ‘= team-work’ but not *avoda civtit* ‘= team-y work’ (cf. *avodat*[^] *kvuca* ‘= group work’ ~ *avoda kvuca-tit* ‘= group-y work’), *tixnun*[^] *mitbax-im* ‘= planning (of) kitchens’, but not *tixnun mitbax-i* ‘= planning kitchen-y’ (cf. both *tixnun*[^] *ir* ‘city planning’ and *tixnun ironi* ‘urban planning’).

Such incidental lexical rather than structurally-motivated distinctions might explain findings for the comparative favoring in *distribution* of construct-state N[^] N versus N + DAdj constructions. Ravid and Zilberbuch (2003b) found that “the predominant NP construction expressing a relation of modification is the novel N–N compound rather than the N-DAdj construction, and this is true across all age groups, text types, and expertise levels”. Similar findings emerged from their study of elicited spoken and written texts (Ravid & Zilberbuch 2003a), from which they conclude that “denominal adjectives are a secondary subcategorizing device ... more restricted to specific text types than N–N compounding, and characteristic

adjective-formation taking a variety of suffixes, as compared with the uniform stressed *-i* of Hebrew (Berman 2004).

of expository writing”. On the other hand, there is some evidence for a growing tendency in current usage to favor the N + DAdj phrases over their more classical, prescriptively preferred N[^] N counterparts. For example, Halevy (1992) notes the tendency in journalistic writing to provide a “contemporary” flavor to an established bound genitive like *medium[^] ha-cilum* ‘medium:CS DEF-photography = the medium of photography’ by substituting an N Adj construction *medium cilum-i* ‘photograph-ic medium’. Taken together, these observations suggest that restrictions on N[^] N(P) versus N(P) Denominal Adjective alternations are largely a matter of lexical convention rather than semantically or structurally motivated by the nature of the head noun or its relation to the modifying element.

Three alternatives emerge with respect to N[^] N versus N[^] NAdj constructions in MH: (i) relative *synonymy*, with the construct state option preferred in more formal usage (e.g., *tiyul[^] láyla* ‘= (a) night walk’ ~ *tiyul leyli* ‘= night-time walk’); (ii) *semantic differentiation* (e.g., *šürey[^] história* ~ *šürim[^] históriyim* ‘history lessons ~ historical lessons’); and (iii) lexical *accident*, as in the earlier examples of both *tiyul[^] láyla* ‘= (a) night walk’ and *tiyul leyli* ‘= night-time walk’, but only N[^] N *tiyul[^] bóker* ‘= morning walk’ with no adjectival alternant (structurally wellformed *tiyul bokri* ‘= morning-like walk’) in the current Hebrew lexicon.

In sum, N + NAdj phrases reflect the nature of their denominal modifiers rather than of their head nouns in combining morphological and syntactic (yet semantically elusive) features of Modern Hebrew. Like most linear derivation in Hebrew (Ravid 2006; Schwarzwald 2003), they are a relatively recent, but widely used means of word-formation. As such, like derivational processes in general, they do not apply across the lexicon (see Chapter 8 on Derivation).

4. Concluding discussion

In terms of *syntactic structure*, genitive constructions reflect Hebrew noun-phrase typology as very largely “head-first” (Nichols 1986), since the modifying noun follows the initial head noun, as do demonstratives, adjectives, prepositional phrases, and relative clauses. And it epitomizes the close interrelation between morphology and syntax in Hebrew, marking by morphology what might be specified by prosody and/or syntax in other languages.

The specifically Semitic “construct-state” construction touches on the more general question of whether *compounds* are best characterized as lexical or as syntactic entities. The view proposed here is that, rather than representing either a dichotomy or an interface, they are *both*, ranging on a *continuum* from fully lexicalized, typically idiomatic expressions – presumably entered in the mental lexicon

as unitary multilexemic entries – whereas others constitute syntactically more or less freely innovated analyzable expressions.

Alternations between different types of construct-state and genitive constructions in MH reflect the well-known shift to more analytic forms of expression in later stages of many languages, including Hebrew. Other indications of ongoing directions of *language change* are the tendency to ignore phonetically unmotivated vowel reduction or vowel change in morphologically bound head nouns (§2.1.1 and see, too, Bolozky 2016), and word order changes in definiteness marking and co-ordination of genitive constructions (§2.1.2.2 above). On the other hand, speakers never invert the Head Modifier order of genitives, underlining their clear adherence to the basically head-first character of noun phrases in their language.¹⁶

The possibilities and constraints on alternations between the different types of *smixut* relations plus denominal adjective modification considered in this chapter underline two facets of MH: the rich range of *alternative means* of expression deriving from different stages in the history of the language, and the related *variability* incurred by the existence of these options side by side. These options reflect the “mixed” nature of Modern Hebrew as a “fusion” language (Berman 2016b; Halevy 2013), not in the sense of the external impact of languages in contact (see, for example, Doron 2016), but rather from *within* different layers of its history – Biblical $N^{\wedge} N(P)$, later $N(P) \text{ } \check{s}el$ (NP), the two combined in the highly marked double $N(P)^{\wedge} N(P)$ plus *šel* constructions, subsequently extended by NP constructions with linearly derived denominal adjectives. Thus, when in late Biblical and post-Biblical Mishnaic Hebrew, the classically bound $N^{\wedge} N$ constructions were extended to include the two forms with the genitive particle *šel* ‘of’, the classical form was retained alongside of the newer alternatives. As a result, each came to some extent to serve relatively specific functions in actual usage (see §2.4) so adding to the expressive variation and richness of the language, providing Modern Hebrew with alternations analogous to, say, English ‘book cover’, ‘cover of the book’, ‘book’s cover’ (Lyons 1986). These alternating, morphologically bound and syntactically analytic genitive constructions co-exist in current usage, incorporating forms from different historical periods.

References to *usage-based trends* in this chapter highlight both principled and methodological facets of MH. The first is the factor of *variability* and the contrast between high-register, formal, mainly written usage with everyday colloquial speech of educated native speakers, let alone of less literate users of the language (Berman 1987b; Ravid 1995; and see Chapter 4 on Sociolinguistic Variation, Chapter 5 on

16. In fact, native Hebrew speakers quite often (mis)apply head-first order when speaking other languages (e.g., *pool car* for ‘car pool’, *pin hair* for ‘hairpin’).

Prescriptive Activity). For example, some constructions have become relatively *marginalized* in current Hebrew usage, including the doubly-marked and adjectival construct state (§2.3 and 3.1 respectively), and this is true, too, of the highly formal use of *benoni* participles in bound construct state (e.g., *šomr-ey[^] šabat* ‘observe:-BEN.PRTC-CS.PL Sabbath = Sabbath observing people, Sabbath observers’). These are largely non-productive in contemporary Hebrew, where the term “productive” refers not to structural, morpho-syntactic constraints on their formation but to speaker preferences in everyday usage (Berman 1988c).

The methodological issues raised by usage-based analysis of a system such as Hebrew genitives is the challenge it presents to research on MH emerging from the mixed, even conflicting results on the distribution and function of the different genitive constructions surveyed here. Despite the rich research available on the language, unlike the corpus-bound analysis of earlier stages of the language (largely in holy writs and liturgical texts), MH lacks suitably large representative corpora and lexical frequency lists covering contrasting genres, media of expression, and discourse contexts..

Genitive constructions uniquely combine typically Semitic structures and the existence of readily accessible expressive alternatives. As reflected by the large number of studies on the topic noted at the outset of the chapter, this makes them a good test-case for a range of features characteristic of MH structure and usage, first and foremost its variability along such dimensions as communicative setting, register of usage, and historical background.

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Impersonal and pseudo-impersonal constructions

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The domain of impersonal constructions is highly complex and heterogeneous in Hebrew as in other languages. It includes sentences that lack an overt constituent bearing the properties of a referential and identifiable subject or that are altogether lacking in canonical subject properties. The aim of the present chapter is to present an up-to-date classification of the major impersonal and generalized or impersonalized constructions in Modern, primarily spoken, Hebrew. To this end, the coding properties of such constructions are analyzed, based on the typological characterization of Modern Hebrew (MH) as a non-subject-oriented and non-configurational language characterized by synthetic inflectional morphology with marking of person in finite verbs, so not requiring an expletive or ‘dummy’ subject. Functional properties of impersonal and generalized constructions in MH are noted in relation to pragmatic underpinnings of their patterning and use.

1. Introduction

Impersonal constructions have been widely studied in the linguistics literature (see, for example, Creissels 2006, 2008; Lambert 1998; Malchukov & Ogawa 2011; Siewierska 2008; and the recent collection edited by Malchukov & Siewierska 2011). Nonetheless, the notion of ‘impersonal’ or the difference between impersonal and personal readings is not always clear-cut. A range of terms, including “impersonal”, “non-person”, “null-subject”, “zero subject”, “empty subject”, “expletive”, “dummy subject”, are employed in the literature to refer to various phenomena in which the expression of the predicate lacks an overt lexical constituent bearing the grammatical function of a subject, or else to a construction relating to an action or state operating upon an entity lacking in a referential subject (characterized by Izre’el [2018] characterizes as a “unipartite clause” anchored or unanchored in the *hic et*

nunc of the discourse).¹ For example, there is a difference between a proposition like *It's raining* as not anchored in any actual information in the surrounding discourse, compared with the same assertion performed when the speaker is looking out of the window, in which case it is clear from the extra-linguistic context that he or she is asserting this proposition to be true.

Suppression of the agent in impersonal constructions may be due to various reasons: because (i) the speaker is unaware of the identity of the agent; (ii) the speaker knows who or what the agent is but does not wish to reveal his/her identity; (iii) both speaker and hearer are aware of the agent's identity, so that overt expression is redundant; (iv) the speaker is aware of its identity but considers it unimportant; and (v) the proposition is centered on the process in itself, without need for referring to a noun phrase indicating a thematic subject.

The question of possible correlations between the coding of a non-specified subject, the anaphoric use of null-subject constructions, and the presence or absence of a subject indexation has been widely debated in generative linguistics (Borer 1989; Shlonsky 2009, among others). Siewierska (2008), instead, suggested that a distinction be drawn between semantic, syntactic, morphological, and communicative-functional perspectives in characterizing impersonal constructions.

As regards MH, Rosén (1967, 1977) coined the term *xagam* as an acronym of *xasrey guf u-mispar* 'lacking person, and number' for bare impersonal constructions in which the incorporated (3rd person) masculine singular subject morpheme (zero morpheme in Hebrew) is devoid of referential content.² This acronym corresponds to uninflected verbal, adjectival, or nominal constructions that take a verbal complement, most typically an infinitival or finite *še-* 'that' clause, like *efšar* '(it's) possible', *keday* '(it's) worthwhile', *asur* '(it's) forbidden', *mutar* '(it's) allowed', *xaval* '(it's a) pity', *mutav* '(it's) better', etc. Kuzar (1993, 2002, 2012) classifies the "*xagam* pattern" in terms of what he views as its two basic functions – the existential and the modal-evaluative.

In the literature, the term "impersonal" commonly refers to sentences with various types of non-personal or generalized subjects (e.g., French *on*, German and

1. On the basis of their prosodic structure, Izre'el (2018) proposes a classification of *unipartite clauses* beyond the sentence level, depending on their referential status as anchored in the discourse or as unanchored, the latter typically presentational constructions – in Hebrew, for example, ones with the existential particle *yeš* ("there is").

2. The Hebrew *benoni* 'intermediate' participial and also present-tense form does not mark person distinctions, although like nouns and adjectives it is marked for gender and number. Consequently, an overt subject is generally required in the present tense, although this may be omitted depending on its coreferential status in the discourse. See, further, Chapter 8 on Inflection, and Chapter 12 on Agreement Alternations in MH.

Scandinavian *man*, Italian *si/se*) as well as ones that lack a constituent displaying the canonical behavior and coding properties of a subject (Keenan 1976). Different types of non-prototypical subjects include non-agents, non-topics, partially referential subjects, inherently non-referential subjects, and zero-subjects, with some analyses claiming that impersonal constructions have an overt or zero pro-form that takes over the function of a clausal argument (Perlmutter 1983), while Berman's (1980) analysis of MH terms them "strictly subjectless" hence non-referential. Clearly, predications that lack a referential argument fail to say something about an entity, yet, as discussed below, not all instances of a non-overt subject are necessarily impersonal. Besides, impersonal constructions interact with TAM and voice features of the predicate, often being identified with timeless or habitual present tense or hypothetical irrealis mood conveying a generalized impersonal perspective as against use of past perfective forms expressing a more specific and involved discourse stance (Berman 2011).

With respect to *information structure*, "genuine" or totally impersonal constructions such as meteo-environmental sentences, sentences expressing existence of states and eventualities – that is, (dis)appearance/occurrence, or beginning or end of a state involving some referent – are regarded as a special case of a more inclusive category known as *thetic* (Sasse 1987, 2006). The hallmark of thetic sentences is the absence of the basic relation between subject as expressing topic/theme and predicate (comment/rheme). The information structure of such constructions is equal to a *predication block*, with no topical subject, so that all parts of the construction are integrated in as a *wide-focus* sentence-type (Lambrecht 2000). In other words, such constructions contain a *non-topic zero* (in some languages filled by an expletive). In such constructions, agreement mismatches are common, as functional demands conflict with the syntactic default rules (see Chapter 12 on Agreement).

In cognitive linguistics, the perspectival center in "genuine" impersonals (notably, meteo-environmentals and existentials) is perceived as the *ground* (the event as a whole), whereas the *figure* (the notional subject, or the entity responsible for the action) is left implicit or, if overtly expressed, is perceived as part of the predication as an entirely rhematic informational block (Croft & Cruse 2004).

Gast and Haas (2011) distinguish between two types of languages: Type A – "thetic-XV" languages that have an obligatory preverbal slot which must be filled by a "dummy-subject" (e.g., English *it/there*, French *il*, German *es*, Swedish *det*); as against Type B – "thetic-V1" languages including Semitic languages like Hebrew and Arabic that do not require an overt pro-form or expletive. Hence, as a "thetic-V1" language, MH does not need an overt proform/expletive as a subject place-holder. This is illustrated in the existential construction in (1) where the empty-subject slot is marked in the glosses by a bolded zero.

- (1) *be-nása betux-im še-yeš xayim be-maadim*
 in-NASA sure:BEN.PRTC-PL.M that-EXT life:PL.M in-Mars
 ‘At NASA (they) are sure that (there) is life on Mars.’

<<https://www.mako.co.il>>

The impersonalness of an existential construction like (1) derives from the fact that the event is not construed as an interaction between participants but as a kind of abstract setting (Langacker 1991).

Similarly, the meteo-environmental construction in (2) and the deontic modal construction in (3) both illustrate semantic empty-subject constructions.

- (2) *histakál-ti ex maxšix ve- afilu lo hidlák-ti*
 look:PST-1SG how darken:BEN.PRTC.SG.M and even not turn on:PST-1SG
et ha-or
 ACC DEF-light
 ‘I watched how (it) was getting dark and I didn’t even turn on the light.’

<<https://www.cafemedia.co.il>>

- (3) *yaxol lihyot nexmad lagur beyáxad ve-likróa yáxad ta-olam*
 can to-be nice to.live together and-tear together ACC.DEF-world
 ‘(It) could be nice to live together and “rip up” the world together.’

<<http://laaz.co.il>>

In what follows, a distinction is drawn between (i) totally impersonal constructions representing uncontrolled events; (ii) impersonal constructions that represent controlled events, in active or passive voice; and (iii) constructions with an overt generic subject noun. Uncontrolled events are of two kinds, ones that occur independently of individuals (e.g., meteorological and environmental) and those that relate to perceptual, affective, or physiological experiences, or occurrences happening to an individual. Controlled events are divided below between ones where the agent is left unspecified – i.e., generic constructions – and those specifying an agent, in the form of an impersonal construction. Morphologically impersonalized constructions that refer to an external referential and agentive subject that is presupposed but indeterminate (or generalized) are treated here, following the term coined by Bloomfield (1933: 254ff.), as “pseudo-impersonals”, corresponding to what Siewierska (2011) terms “R-impersonals” to refer to lack of or reduced referentiality.

Underlying this study is the assumption in Construction Grammar (CxG) that a *construction* is a unit that combines form-meaning-function (e.g., Croft 2001, 2003; Goldberg 1995, 2003, 2006). The assumption is here that generalizations across constructions are captured by inheritance hierarchies where specific constructions inherit shared properties from more general constructions. Moreover,

following usage-based approaches to language (e.g., Bybee 2006; Bybee & Hopper 2001), impersonal constructions in MH will be shown to represent an instance where repeated usage events over time shape grammar.

The chapter considers six types of impersonal constructions widespread in MH, ranging in degree of impersonality from constructions conveying strictly agentless, uncontrolled events, to ones conveying controlled events with unspecified or depersonalized agent, as follows: (i) *meteo-environmentals* (or atmospheric); (ii) *existential*, including assertion of existence of possession and other impersonals containing verbs of occurrence; (iii) *modal-evaluatives*; (iv) *experientials* denoting uncontrolled events with a non-nominative Experiencer; (v) *impersonal passives*; (vi) *pseudo-impersonals* involving a [+agentive] and [+human] subject or [+animate] presupposed by a non-definite subject, with the latter category subdivided into: (a) constructions lacking an overt subject with a pronoun referring to a generic 3rd masculine plural participant inferable from the extra-linguistic context; (b) constructions with an overt, generic or generalized 2nd person singular or an inclusive pronoun in 1st person plural; and (c) depersonalized mass and countable nouns corresponding to such terms as ‘a person’, ‘people’, ‘one’/‘someone’ in English.

The study is based on attested examples from different genres of MH, both written and spoken. Data were collected mainly from online sources accessed between the years 2016 and 2018 supplemented by examples elicited from authentic oral production of spoken Hebrew.

The chapter starts by explaining why MH impersonals do not need an expletive or dummy subject (§2), proceeds to illustrate the semantic, pragmatic, and coding properties of MH impersonal constructions (§3), followed by analysis of the six subclasses of impersonal constructions listed above (§4), and a concluding discussion (§5).

2. Relevant properties of MH

Hebrew (including MH) is a non-configurational language, in the sense introduced by Hale (1982: 86–87), demonstrating the following properties: (i) flexible word order; (ii) no need for a formal representation of a “dummy subject” (expletive); (iii) extensive null anaphora in use of verbal predicates; (iv) lack of NP-movement for example, raising into subject. (See further, Halevy 2013b).

Hebrew to this day is not a “subject-oriented” language, in the sense that its grammatical subjects are not restricted to arguments bearing a semantic subject “macro-role” (Van Valin 2005). For example, in prototypical transitive constructions, the Causer is the subject regardless of the agentive properties of the Causee or – in Dowty’s (1991) terms – irrespective of the Causee’s Proto-Agent entailments.

As a language with rich inflectional morphology, Hebrew does not require encoding of an overt subject, in this case a “dummy-subject”. Further, Hebrew has only a definite, not an indefinite article, although this typically does not result in ambiguity between an indefinite recognizable entity and a bare indefinite generic noun (Doron 2003). Besides, in cross-linguistic terms, the distinct form of impersonal constructions relates to differences in morphological marking between languages with synthetic verbal formation (including realization of TAM) such as Hebrew, and languages with analytic verbal formation of such categories, like many European languages.

The analysis that follows views a finite verb as a dimorphemic complex incorporating (i) the verbal lexeme and (ii) a person morpheme. A predicative relation holds between these two components – a characterization that also applies to adjectives, where the modified referent is represented by the agreement morphemes of gender, number as well as definite article, which repeat the syntactic information assigned them by the head noun (Goldenberg 1998, 2013; Halevy 1992). This means that a finite verb always incorporates a subject morpheme, even if it is semantically empty, or encoding of an overt (separate) pronoun is redundant.³

The synthetic inflection of Hebrew means that person, number, and gender affixes representing the subject morpheme are always incorporated in finite verb forms, with person marking confined to past and future tense, so that the inflectional affixes of the predicate do not serve merely as agreement markers but rather, denote the grammatical subject;⁴ and absence of an unbounded person pronoun does not in fact signify a process of “PRO-drop”.⁵ In contrast to 1st and 2nd person verbs in past and future, however, 3rd person verbs invariably require an independent pronoun, since the reference of their subject could be anyone or anything other than the speaker or hearer. But this also means that 3rd person subject pronouns

3. As observed by Goldenberg (1998: 169), “It does not really matter, from the point of view of the syntactic structure, whether the third person pronominal marker is considered a “zero-subject” (Jespersen 1937: §34.3), a “non-person” (Benveniste 1966: 229) or a pronoun that has weakened to become an *agreement marker* (Givón 1976: 155).”

4. Person marking does not apply to *benoni* “intermediate” participial form predicates, which even when semantically functioning as present tense retain their nominal properties and so typically require an independent pronoun or explicit noun representing the subject in isolated clauses. On the other hand, like adjectives, they always incorporate an indefinite subject morpheme represented by inflections for number and gender.

5. The notion of “pro-drop” in generative grammar is misleading for a language like Hebrew, since it implies that the Pronoun + Verb is the underlying or original construction, and that this pronoun is “dropped”, whereas the historical facts demonstrate the opposite: development from a “synthetic” to a more “analytic” language type.

may recur as zero-morphemes (in future prefixed by 3rd person morpheme) when bound by a higher subject in interclausal coreferentiality. Compare, for example, *Ran amar še-axare še-hu diber/yedaber ita hu nirga/yeraga* ‘Ran said that after he talked/would talk with her he calmed/would calm down’ where *hu* ‘he’ is ambiguous between Ran or a non-coreferential masculine entity, versus *Ran amar še-axre še-diber/yedaber ita nirgá/yeragá* ‘Ran said that after talked/would talk.3 M.SG with her, calmed/would calm.3 M.SG down’ where the verb-incorporated 3rd person masculine singular in the complement clause is necessarily co-referential to Ran as subject of the matrix clause. In line with the “enunciation theory” of Benveniste (1966: 225–236), the morphologically unmarked (or invariable) 3rd person masculine singular is the natural candidate for marking the *formal, non-referential, person morpheme* (Benveniste 1966: 228–231).⁶

Although Hebrew does not require an overt “dummy-subject” in the form of an expletive pronoun (or adverbial dummy), in colloquial usage a “weak” (non-referential, neutral, or invariable) demonstrative *ze* ‘it, this, that’ pronoun may be inserted in the theoretically subject position, especially though not only in environmental, experiential and evaluative statements, as in (4) to (6).

- (4) *ze meuxar miday le-xanex oti axšav*
it/this late too.much to-educate ACC.1SG now
 ‘It’s too late to start educating me now.’ <<https://www.inn.co.il/Forum>>
- (5) *ze pašut hores oti le-hatxil ha-kol me-xadaš*
it/this simply ruin:BEN.PRTC.SG.M ACC.1SG to-begin DEF-all from-new
 ‘It kills me to begin everything all over again.’ <<https://www.fxp.co.il>>
- (6) *ze lo ragil be-gil-o la-xazor la-bama*
it/this not usual in-age-his to-return to.DEF-stage
 ‘It’s unusual (for someone) of his age to go back to the stage’
 <www.news1.co.il/Archive/>

In more formal-written language, generic nouns like *davar* ‘thing’ and *inyan* ‘matter’ may be inserted next to the impersonal predicate, as in (7).

- (7) *muzar ha-davar še-ciyn-u et ze ke-minhag kadoš*
 strange:SG.M DEF-thing that-mention-PST.3PL ACC this as-custom holy
 ‘It’s strange that they referred to it as a hallowed custom.’
 <<http://forum.otzar.org/viewtopic>>

6. According to Benveniste (1966), an enunciation is an individual act that has its reference in the *hic et nunc* of the speaker, 3rd person singular is regarded as NON-PERSON based on the structural notion that opposes the persons, I and YOU, and non-persons, HE, SHE, IT.

Importantly in the present context, sentences like (4)–(7) are fully grammatical in MH without a semantically empty or generalized noun or pronoun. There are, however, a few instances in colloquial usage where “weak” *ze* is conventionalized as a kind of subject placeholder, typically in the context of verbs that have acquired an additional sense beyond their basic environmental or modal-evaluative meaning. For example, in (8) below, *ze* appears in a construction where use of the verb *margiš* ‘feel’ is concerned with Experiencer defocusing (i.e., downplaying its role as the surface subject, and in this case viewing the feelings as if coming from outside the animate entity).

- (8) *ze margiš šone lihyot ha-mevugar*
 it/this feel:BEN.PRTC.SG.M different to.be DEF-adult
ha-axrai ba-báyit
 DEF-responsible in.DEF-home
 ‘It feels different to be the responsible adult at home.’
 <www.frogi.co.il/bidur-tv/17718.html>

Once this type of impersonal construction becomes entrenched in usage even when containing an explicit dative-marked Experiencer (typically if not necessary in 1st person, relating to the speaker), non-referential *ze* “it” tends not to occur, as in the set dative-marked expression *margiš li* “feel(s) to-me” = I feel” in (9).

- (9) *hayom margiš li naxon yoter lilmod be-xul*
 today feel:BEN.PRTC.SG.M to.me right more to.study in-abroad
 ‘Today (it) feels more right for me to study abroad.’
 <<https://med-study.com>>

However, even if non-referential *ze* or generic nouns like *davar* and *inyan* ‘thing, matter’, as in (4) to (8) above, lack a particular referent or even an explicit antecedent, they still show some type of what Bolinger (1973) terms “ambient meaning” since they make a reference to an entire event or state of affairs. In other words, the “weak” *ze* pronoun in MH seems to function as what Lyons (1977: 677) terms “empathetic deixis”. That is, it appears to be a pragmatic marker of the speaker’s subjective involvement with the entity, situation, or place being referred to, and his or her appeal to the addressee to focus on this piece of information. The view proposed here is that the apparently pragmatic function of invariable *ze* in the impersonal constructions in question coincides to a certain extent with its function in extrapositioning and clefting constructions (Halevy 2006, 2013a). This is illustrated in (10) and (11), where *ze* occurs in a subject postposed extrapositioned construction, and in (12) in a case of clefting.

- (10) *ze margiz ha-škar-im ha-éle kol páam*
 it/this annoy:BEN.PRTC.SG.M DEF-lie-PL.M DEF-these every time
 ‘It’s annoying, these same lies every time.’ <<https://www.askpeople.co.il>>
- (11) *ma yeš ze rak šel ha-cava ha-séret? ze gam šel*
 what EXT it/this only of DEF-army DEF-film? It also of
ha-bat šelahem
 DEF-daughter of.them
 ‘What gives, it’s only the army’s, the movie? It’s their daughter’s as well.’
 [Shimoni 1999: 204]
- (12) *ze ata še-hitkašár-ta axšav?*
 it/this you that-call-2PST.SG.M now
 ‘Was it you that called just now?’

Importantly, these types of constructions, involving non-referential *ze*, are not found in classical Hebrew, as shown in the existential construction in (13) and the experiential in (14). This use of non-referential *ze* as an index of information structure seems to have entered MH under Russian influence around the first decades of the period of the re-emergent of Hebrew as a spoken means of communication (Dubnov 2013).

- (13) *wayeʔor lahem*
 and.lighten:3PST.SG.M to.them
 ‘And day broke upon them.’ [2Sam 2: 32]
- (14) *wayiħar leqáyin meʔod*
 and.anger:3PST.SG.M to-Cain much
 ‘And Cain was very wroth.’ [Gen 4: 5]

In sum, non-referential *ze* functions in MH as a *pro-propositional* constituent rather than a pronominal. Along these lines, it can be interpreted as a discourse marker anchored in the context of a given speaker-hearer interaction.

3. Hebrew empty-subject constructions

The following properties are noted as relevant to empty-subject constructions in MH: (i) Word order, (ii) the neutral, invariable subject morpheme, (iii) negation, (iv) ambiguity of syntactic relations, and (v) instability and inconsistency.

(i) *Word-order*: With the exception of generic or impersonalized 2nd person singular, impersonal constructions in MH are all *predicate-initial* (see Chapter 12 on Agreement Alternation). In languages of the SV type subject inversion occurs in certain constructions with intransitive verbs, signaling “detopicalization” of the

argument is conceived as an internal part of the predicate scope. In spoken language, the notional subject is marked, when definite, by the particle *et*, regularly an accusative or direct-object marker.¹⁰ As a result, all parts of the construction are integrated in the construction as a *wide-focus* sentence-type (Lambrecht 2000; Sasse 2006), as in (21) and (22) below.

(21) *tire éze štar. yaca li oto hayom*
 look:2SG.M what bill. come.out:PST.3SG.M to.me ACC.3SG.M today
me-ha-kaspomat
 from-DEF-ATM

‘Look what a bill! That’s what the ATM spilled out for me today.’

(22) *kše-higá-nu kvar lo nišar et ma*
 as.that-arrive-PST.1PL already not remain:PST.3SG.M ACC what
še-rací ti
 that-want.PST.1SG

‘When we got there, nothing was left of what I wanted.’

<<https://www.lichtenstadt.com/>>

It thus emerges that, apart from discarding agreement, speakers opt for some explicit marker to distinguish the putative notional subject from the empty grammatical subject incorporated in the finite verb form. Nonetheless, the view advanced here implies that in spite of its definite form, the sole thematic argument cannot be analyzed as a subject since it violates the basic morphosyntactic constraints of argument realization. Moreover, its discourse referent is not in a topic position. In other words, it is not foregrounded as the entity that the sentence is about, and in most cases it is not further mentioned in the ongoing discourse.

(v) *Uncertainty, instability and inconsistency*: Regarding the performance of the empty-subject constructions in question, in MH as in other languages, in spontaneous speech production, the behavioral and coding properties of the constructions at hand are unstable and inconsistent.¹¹ Speakers sometimes overtly mark agreement between the putative notional subject and the predicate, at others they disregard it, treating the sole thematic argument as a non-subject constituent by case-marking it by the accusative marker *et*.

Moreover, *inter alia* for reasons relating to the historical and sociolinguistic circumstances of the development of MH (as reviewed in Chapters 1, 2, 4 of this volume), the instability and shifts in encoding of impersonal constructions in

10. Lambrecht (2000) provides a cross-linguistic discussion of the object-like properties of the postposed NP (the sole thematic argument) in what he terms “sentence focus” constructions.

11. See Gast & Haas (2001) regarding variability in parallel impersonal constructions in German and Romance languages.

natural discourse need to be viewed in relation to such factors as register (formal vs. colloquial), as well personal features of the interlocutors such as age, gender, socio-cultural background, let alone expertise in Hebrew language studies. Account also needs to be taken of the role played by the language policy of the Hebrew Language Academy in attempting to direct such developments (see Chapter 5 on prescriptive activity in MH).

4. Classes of impersonals in MH

Impersonal constructions are analyzed below in relation to three types of information: (i) *general or encyclopedic*, (ii) *discourse-pragmatic*, and (iii) *grammatical* – the latter in terms of structural processes such as case-marking, word-order, and agreement.

4.1 Uncontrolled events: Meteorological and environmental assertions

This section considers meteorological and environmental assertions as prototypical empty-subject constructions, in which it is hard to decide what semantic role to assign to the entity involved (for example, is *rain* the Actor or the Undergoer?) Such constructions are exceptions to theories of predication since they do not make a statement or predicate about anything, so that their lack of a referential subject is related to extra-linguistic information rather than to syntax.¹² Such sentences occur in non-referential, invariable (3rd person) masculine singular construction. As noted, as a non-configurational and inflectional language, Hebrew does not require the encoding of an expletive or proform, as seen in (23) and (24).¹³

(23) *haya mamaš kar hayom*
 was really cold:SG.M today
 ‘(It) was really cold today.’

(24) *mitbaher axšav. yexol-im lacet*
 clear:REF.BEN.PTCP.SG.M now. can:BEN.PTCP-PL.M to.go.out
 ‘It’s is clearing up now. We can go out.’

12. Jespersen (1924/1965: 241ff.) defined the “dummy-PRO” widespread in European languages in such statements as “the great neuter of nature”. Bolinger (1973) analyzed English “it” as making reference to the environment/ambient conditions.

13. Compare to Arabic *tlağat*.PST.3F.SG “(it) snowed” (referring to the general noun *dunya* “world.F.SG”).

These kinds of constructions are found in Biblical Hebrew, too, as in (25).

- (25) *weʔor laxem waléxu*
 and.light.PTCP to.you:M.PL and.go:IMP.PL
 ‘When it is light (enough) for you (to go), go’ [I Sam 29: 10]

And also in the invariable 3rd person feminine singular (apparently referring to a general noun such as *haʔárec* ‘the world.F.SG’), as in (26).

- (26) *tašleg becalmon*
 snow:IPFV.3SG.F in-Calmon
 ‘(It) was snowing on (Mount) Tsalmon’ [Ps 68: 15]

Alternatively, meteorological statements referring to events like raining and snowing, may be encoded in existential construction, as in (27).

- (27) *yeš géšem bi-yrušaláyim axšav*
 EXT rain:SG.M in-Jerusalem now
 ‘(It’s) raining now in Jerusalem’

As is well known, languages show considerable variation in how they encode meteorological and environmental events. Statements referring to such events can be encoded and interpreted either as constructions of an empty subject (e.g., Lat. *pluit* ‘rain:3SG’, Fr. *il pleut*, Ger. *es regnet* ‘it rains’; Swed. *det regnar* ‘it rains’), or as plain SV constructions where the subject position is occupied by some general cosmic noun like ‘the weather’, ‘the world/earth’, ‘the sky’, ‘the day’, ‘the time/hour’ or, in ancient times, ‘God’, meant to give some substance to the empty subject (Goldenberg 2013: 160). This is shown in (28a) and (29a) compared with (28b) and (29b).

- (28) a. *matxil lihyot meunan*
 start:BEN.PRS.SG.M to.be cloud:PASS.PTCP.SG.M
 ‘(It) is starting to be cloudy’
 b. *ha-šamáyim meunanim. holex larédet géšem*
 DEF-sky:PL.M cloud:PASS.PTCP.PL.M go:BEN.PTCP.SG.M to.fall rain:SG.M
 ‘The sky is cloudy. It’s going to rain’
- (29) a. *meuxar kvar, carix laxzor habáyta*
 late:BEN.PASS.SG.M already, need:SG.M to.return home
 ‘(It’s) late, we need to get back home’
 b. *ha-šaa meuxeret, higía ha-zman laxzor habáyta*
 DEF-hour:SG.F late:SG.F, arrive:PST.3SG.M DEF-time to.return home
 ‘The hour is late, the time has come to go back home’

In spite of these variations, meteorological and environmental statements often have a “rationalized” counterpart with use of typically change-of-state (“unaccusative”) verbs like ‘arrive’, as in (29b), or like ‘appear’, ‘descend’, ‘become’, ‘fall’ and others expressing the occurrence or emergence of the event, which is thus ‘personalized’. Alternatively, the substance or natural phenomenon (like ‘rain’, ‘morning’) may stand for the theme argument, as in (28), (29b).

In discourse-embedded language use, nominal predications like these tend to behave like restricted collocations, being accessed as unanalyzed information chunks, as in (30) and (31).

- (30) *bóker xadaš hifcía. ha-šémeš kvar kan*
 morning:SG.M new:SG.M burst.out:PST.3SG.M DEF-sun:SG.F already here
 ‘A new morning has dawned. The sun is already here.’
 <www.kaye7.org.il/ace/shiri_bokr_ariale_mrim_boaron>

- (31) *yarad géšem*
 fall:PST.3SG.M rain: M.SG
 ‘It was raining’

In sum, meteo-environmental statements are clearly pure impersonals both semantically and syntactically. In effect, they may be considered as avalent, having no argument at all in the external world. However, as shown above for MH, they in some cases may be encoded as intransitive constructions with both change-of-state (unaccusative) or activity (unergative) verbs.

4.2 Constructions of existence and possession

Existential constructions express a proposition about the existence or presence (in location) of someone or something (McNally 2011: 1830). Hebrew uses the marker *yeš* for asserting the existence of a state or event, termed an existential particle in traditional Hebrew grammars, or a ‘verboid’ by Rosén (1977), and negated by its negative counterpart *en* (see Chapter 16 on Negation). Generally interpreted as ‘there is(n’t) / are(n’t)’, these items are analyzed here as semantically underspecified elements whose content is determined by the context – associated lexical items and/or pragmatic inferences.

Given the language’s rich inflectional morphology (see Chapter 7 on Inflection), Hebrew existentials do not need to realize an overt grammatical subject in the form of an expletive, as in many European languages. In past and future tense, the verb *haya* ‘be’ is employed as a suppletive form, in 3rd person followed by an NP (or pronoun) representing the existing entity. In colloquial Hebrew, the NP representing the existing entity is devoid of the coding characteristics typically associated with

a subject constituent: It follows the clause-initial predicate (as with other types of *thetic* or ‘sentence focus’ constructions); it is not indexed for agreement on the finite verb *haya* ‘be’ but occurs in invariable 3rd person masculine singular; and, particularly when definite, it is preceded by the accusative marking element *et* (Ziv 1976; and see Chapter 12 on Agreement Alternations). In consequence, by pragmatically placing the state or event as a whole at the center of attention, existential propositions create a conflict between their functional role and the accepted syntactic rules of word-order, agreement control, and case marking in MH, as demonstrated in (32) to (33).

- (32) *yeš/haya rak et ha-mazkira šam, ve-hi lo*
 EXT/was:3SG.M only ACC DEF-secretary:SG.F there, and-she not
xotémet
 sign:BEN.PRS.SG.F
 ‘There is/was only the (female) secretary there, and she’s not willing to sign’
- (33) *en/lo haya et ha-któvet šelo be-šum makom*
 NEG.EXT/not was:3SG.M ACC DEF-address:SG.F his in-any place
 ‘There isn’t/wasn’t any (record of) his address anywhere’
 [http://facebook.com]

Such mismatches occur as early as in Biblical Hebrew as well, as in (34).

- (34) *hayeš et levavxa yašar kaʔašer levavi šim levavexa?*
 DEF.EXT ACC heart.yours integrity as.that heart.mine with heart.yours?
 ‘Is there integrity in your heart as my heart is towards your heart?’
 [2 Kgs 10: 15]

These examples show that definite NPs (whether anchored in the discourse or not) may occur in existential construction in Hebrews, so violating the constraint of the “Definiteness Effect” (see, for example, Keenan 2003; Leonetti 2008; Milsark 1974).

Predicative Possession in Hebrew (as in other non-*habere* languages) may be categorized as a subtype of the existential construction, with dative-marking of the possessor, thus: *yeš / en + l-N₁:DAT-POSSESSOR* N₂ (POSSESSEE), literally ‘there is(n’t) to-N₁ N₂’. Like the existential construction, the coding properties of the possessive construction are unexpected and inconsistent. Thus, when the NP possessee is definite, it is typically preceded by the accusative marker *et* while, as in existentials.

The analysis proposed here goes counter to the view of some current studies to the effect that the argument denoting the existing entity or the possessee has become a full-pledged object in MH. Nor is it viewed here as an “inverse S” that has become an object, as commonly argued regarding the existential construction in western European languages that are essentially subject-oriented. Rather, the

view advanced here is that the possessive construction in MH does not represent an instance of transitivization or of what has been termed as ‘*have-drift*’ (Stassen 2009), presumably arising through contact with *habere* languages, as argued for MH, for example, by Ziv (1976).

Rather, the view adopted here is supported by instances of *type-shifting* of existential and possessive constructions in MH. In line with a Construction Grammar view, to the effect that the grammatical class of elements realizing functions in structure, and the selection restrictions that apply to them derive from the constructions that define them (Croft 2001: 85; and see, too, for example, Goldberg 1995; Lauwers & Willems 2011), the existential meaning of a construction is not computable from its component parts, but is a property of the construction *as a whole*. In this framework, the “coercive force” of a construction is viewed as a cognitive, interpretive, and creative way of using a linguistic construction inductively. This force is responsible not only for a shift in meaning, it also changes the argument structure of the predicate, yielding a co-composition of the entire construction.

The superordinate or *type-constructions* of existence and possession are thus taken to impose their form-meaning function on a wide range of constructions that express *occurrence*, (*dis*)*appearance*, (*in*)*sufficiency*, as well as *commencement* (or *termination*) of a state or event. Such constructions, abundantly attested in everyday usage in Hebrew as in other languages, center on the process of the predication itself, so being compatible with the information structure and perspective of assertions of existence or possession. These “type-shifting” instances inherit similar properties, with the predicate in invariable (3rd) masculine singular and the syntactic constituent that spells out the only thematic argument of the predicate showing non-subjectlike behavior and coding properties (further details are given in Halevy 2016), as illustrated in (35a) to (35c) for unaccusative type predicates.

- (35) a. *mofia* *li* *rak et ha-któvet* *be-xul*
 0 appear:BEN.PRS.SG.F DAT.me only ACC DEF-address:SG.F in-abroad
 ‘There appears to-me = I can find only the address from abroad’
 <<https://yaelglazer.co.il/il/amazon-FAQ>>
- b. *kara* *lo* *bediyuk et ma še-xašávti*
 0 happen:PST.3SG.M DAT.him exactly ACC what that-think:PST.1SG
 ‘It happened to him, just what I thought (would)’
 <<https://he-il.facebook.com>>
- c. *nimxak* *li* *ha-xanut* ‘googleplay’
 0 erase:PST.PASS.3SG.M DAT.me DEF-store:SG.F ‘googleplay’
me-ha-nayad šeli
 from-DEF-mobile of.me
 ‘The Google Play store got erased from my mobile’
 <<https://www.fpx.co.il>>

A particularly striking illustration of the “coerced force” of the existence-of-possession construction is given in (36) by neutralization of agreement between the notional subject that denotes a feminine participant and the verb in the impersonal non-referential 3rd person masculine singular form.

- (36) *amru la ben. ba-sof nolad la bat*
 told:3PL to.her boy. in.DEF-end born:3SG.M to-her girl
 ‘They told her it was a boy. Eventually was born to her (=she gave-birth to) a daughter.’
 <<https://www.kipa.co.il/community>>

The proposal here is that existentials like those illustrated in this section, as well as the dative-marked *non-habere* possessive construction, impose their *schematic* meaning of denoting happening, (dis)appearance and their like on impersonal constructions – along the lines demonstrated in the following sections for modal-evaluative and experiential constructions. In all these instances, the accusative-marked NP does not function as the subject of the predication, since they fail to follow the usual patterns of agreement and case-encoding between a predicate and its associated argument(s). However, while the atypical encoding of existential constructions is relatively conventionalized in current MH usage, variability and inconsistency, depending to a large extent on speakers’ intuitions as well as on level of formality or register, are today most common in colloquial speech.

4.3 Internal impersonals in modal and evaluative function

Modal impersonals are a particularly dynamic and heterogeneous group of constructions in MH. Diachronically, constructions with the existential particle *yeš* (or neg. *en*) evolved into corresponding propositions with a modal-deontic sense expressing necessity, possibility, ability, intention, etc. And indeed, the relation between impersonal modal sentences and existential and possessive constructions has been noted for both *habere* and *non-habere* languages (for example, Bybee et al. 1994). However, while assertions of existence or possession are event-oriented, modal-evaluative constructions are speaker-oriented. In MH, some of the latter retain the existential particle with a nominalized term expressing a modal meaning (like ‘ability’, ‘possibility’, ‘necessity’) as in (37a), while in others, *yeš* (or *en*) occur with an infinitive in the sense of obligation, as in (38).

- (37) a. *yeš córex be-morim mikco’iyim*
 EXT necessity in-teacher:PL.M professional:PL.M
 ‘There’s a need for professional teachers’
 b. *yeš ešarut lekabel milga*
 EXT possibility to.receive scholarship
 ‘There’s a possibility = chance of getting a grant’

The expression *yeš córex* ‘there’s a need’ is a more formal version of the zero-subject clause-initial verbal *carix*.M.SG ‘it’s needed (lit. 0-is-need)’, while *yeš ešsarut* ‘there’s a possibility’ in (37b) could be paraphrased by the structurally parallel *ešsar* ‘it’s possible’, ‘one can’ (lit. 0-is-possible). In formal-written MH the construction of *yeš* + INF has a modal-deontic function, as in (38).¹⁴

- (38) *yeš lehamšix ba-nesia lefi ha-simun*
 EXT to.continue in.DEF-deriving according.to DEF-signaling
 It’s required to proceed with the journey following the road signs’
 <<http://www.nehiga.co.il>>

Other predicates take as complement only substantivized clauses, as in (39).

- (39) *yitaxen še-avo maxar*
 likely that-come:FUT.1SG tomorrow
 ‘It’s likely that I’ll come = I may well come tomorrow’

Modal and evaluative empty subject constructions also occur with predicates in an invariable (3rd masculine singular) verb form, as seen in (40). Like in the existential and *non-habere* possessive constructions, in the constructions at stake the atypical ACC marked constituent is actually a syntactic constituent that spells out the NP in question from being the subject of the verb.

- (40) *higia lo et ha-milga ha-zot*
 arrive:PST:3SG.M to.him ACC DEF-scholarship:SG.F DEF-this:SG.F
 ‘Due to him = he deserved this grant’

In addition, constructions in modal-evaluative function may also include predicative adjectives in an empty subject construction. As in (41), or *benoni* forms as in (42).

- (41) a. *ani lo mavtiax klum, aval šave lenasot*
 I not promise.BEN.PRS.SG.M anything, but worth:SG.M to.try
 ‘I’m not promising anything, but it’s worth trying’
 b. *yafe lax madim*
 nice:SG.M to-you:SG.F uniform:PL.M
 ‘A uniform suits you’

14. The construction *yeš lə-NP* (or pronoun) + INF – attested in BH (e.g., Chronicles 25: 9) through medieval times and up to pre-modern Hebrew – is used in modal meanings of possibility, ability, and permission. In MH, probably under the influence of a similar construction prevalent in Yiddish/German, the possessive exponent disappeared from the construction in its deontic meaning, hence the construction grammaticalized in the invariable form of *yeš* (which consequently fossilized to not inflect by the verb *haya* ‘be’ for the past and future tenses).

- (42) a. *lo mešane li ma omrim kulam*
 not differ:BEN.PRS.PL.M to.me what say:BEN.PRS.PL.M everybody
 ‘It makes no difference to me what everyone says’
 <<http://bikurim.kipa.co.il/send>>
- b. *ixpat lahem rak ciyunim. ha-šar lo mezin*
 matter to.them only grade:PL.M. DEF-rest not move:BEN.PRS.SG.M
lahem
 to.them
 ‘Only grades matter = are important to them. They couldn’t give a damn
 about the rest’ <<https://www.askpeople.co.il/question/>>

In such constructions, agreement is ignored even in topicalized sentences, as shown in (43).

- (43) *avoda im mevugarim matim la yoter*
 work:SG.F with adult:PL.M suit:BEN.PTCP.SG.M to.her more
 ‘Working with adults suits her better’ <<https://healthy.walla.co.il/>>

Nominal predicates, including in the form of basic abstract nouns of qualities, also belong to this category, as illustrated in (44).

- (44) a. *šigaon lešalem sxum ka-ze*
 madness:SG.M to.pay sum:SG.M like-this:SG.M
 ‘It’s madness to pay an amount like that’
- b. *buša lehitnaheg kax*
 disgrace:SG.F to.behave so
 ‘It is a disgrace (shame) to behave like that’

MH also has a limited set of single-argument nominal predications with a modal-evaluative function which are syntactically impersonal (Kuzar 2000). In such constructions, the nominal predicate has a suffixed person pronoun representing a Possessor, Benefactive, or Experiencer typically followed by a verb in the infinitive. Unlike finite verb forms these nominals do not incorporate a subject morpheme, but nonetheless can evoke an impersonal predication, as in (45).

- (45) a. *xovato šel ha-šofet lenamek et haxlatato*
 duty.his of DEF-judge to.explain ACC decision.his
 ‘It’s the judge’s duty to explain his decision’ <<http://www.justice.gov.il>>
- b. *ze naxon. aval tafkido šel beyt-ha-sefer lefateax*
 it true. but function.his of school to.develop
xashiya bikortit
 thinking:SG.F critical:SG.F
 ‘It’s true. But it’s the function (duty) of school to develop critical thinking’
 <<http://brancoweiss.org.il/blog/article>>

As in the case of existential and possessive constructions illustrated in the preceding section, in modal-evaluative impersonals, the syntactic constituent that spells out the notional or logical subject in question from being the subject of the verb is atypically assigned the accusative *et* marker, and grammatical agreement is typically neutralized, as seen above, in (40), while in spoken usage, the deictic *ze* may fill the subject position, as in (46).

- (46) *ze lo tafkido šel iš^ ha-mexirot likro et ha-maxšavot*
 it/this not role:3SG.M of man:CS DEF-sales to.read ACC DEF-thoughts
šel ha-lakoax
 of DEF-client
 ‘It’s not the job of the salesman to read the client’s thoughts’
 <www.tfisot.com/Show_article>

It is, however, important to notice that while modal and evaluative constructions are *speaker-oriented*, existential constructions (including, in Hebrew, assertions of existence of possession) are *event-oriented*.

4.4 Experiential impersonals

Experiential constructions express subjective events, mental, emotional, or physical experiences, commonly stative and non-volitional (i.e., their notional subject is non-agentive). Constructions of this type have an indeterminate force, between impersonal and personal: The NP in the Experiencer role is always [+animate], hence affected as a sentient being, while the Stimulus, which triggers the event or is its subject matter (as an overt or covert subject), is prototypically [–animate] and [–agentive]. These semantic properties are reflected at the structural level, by an asymmetry between the Stimulus as subject – in MH in an SV construction – e.g., *ani ‘acuv* ‘I (am) sad in (47a) below – and Experiencer as an object in a non-nominative construction with a prepositional object, most usually dative – e.g., *acuv li* ‘sad to-me’ in (47b) would also be translated as ‘I’m sad’ in an SV language like English, but in fact has the sense of ‘is-being sad to me’. The latter constructions are analyzed here as impersonal constructions (in invariable 3rd person masculine singular) that are, paradoxically, used with reference to an explicit person. What is sensed or experienced is perceived as coming from outside the person. In many cases, the lexical subject in the constructions at issue may actually be analysed as the emotion or mental sensation itself. For example, the paraphrase of *acuv li* ‘sad to-me’ is ‘sadness is being sad (in passive voice) to me’. The proposal here, then, is that the D-EXP be analyzed as an *internal argument* playing the role of some kind of general mental or abstract location, and the non-nominative experiential construction as a whole is to be analyzed as subjectless, like existentials, modal-evaluatives, and

environmental (Berman 1980; Kuzar 1993, 2002, 2012; Halevy 2013c). Depending on pragmatic considerations, including register and style, experience predicates may co-occur with the Experiencer in subject position, or with the Experiencer in non-subject position, as in (47) and (48).

- (47) a. *ani acuv kol ha-zman, ma laasot kedey lo lihyot kaze*
 I sad:SG.M all DEF-time, what to.do in.order not to.be such
 ‘I am sad all the time, what to do in order not being like that?’
 <<https://www.askpeople.co.il>>
- b. *acuv ve-ra li ba-nšama*
 sad:SG.M and-bad:SG.M to.me in.DEF-soul
 ‘I am sad and feel bad to the depth of my soul’ [in a popular Israeli song]
- (48) a. *ani lo nivhal mi-iyumim ka-ele*
 I not frighten:PASS.PRS.SG.M from-threat:PL.M such-PL
 ‘I am not getting frightened by threats like those’
 <<https://www.ynet.co.il/articles/>>
- b. *lo mavhil oti iyumim ka-ele*
 not frighten:BEN.PRS.SG.M ACC.1SG.M threat:PL.M such-PL
 ‘Threats like those doesn’t (*sic*) frighten me’
 <<https://www.ynet.co.il/articles/>>

Nonetheless, there is a large array of experientials restricted to only one alignment (Kidron & Kuzar 2002, Kuzar 2012, Landau 2010).

In terms of *perspectival structure* (Borschev & Partee 2002), the same truth-conditional content may be structured in two distinct ways, according to the perspective taken by the speaker with respect to the event in question. In the constructions in question, the perspective may either be from the Experiencer viewpoint as the referential subject (in the SV construction), or in an ‘*inverse perspective*’ where the Experiencer is displayed as an affected argument, in a kind of patient-victim position, or just as a target of the event without consciously initiating it. That is, although the two constructions are defined as semantically equivalent, each in fact represents a different perspective or cognitive structure of the situation. The SV construction involves a greater degree of control or volition, whereas the corresponding dative marked construction is a means of *downgrading* the agent, so removing attention from a given participant as perpetrator of the event (Berman 1982: 41). The functional distinction is also reflected in the communicative context. For example, (49a) with an inflectionally bound pronoun is confined to the formal-written register (see Chapter 7 on Inflection), while the D-EXP construction in (49b) represents the more common construction pervasive in everyday spoken language.

- (49) a. *dománi binsibot[^] ha-inyan še-en basis*
 imagine:BEN.PRS.I in.circumstances:CS DEF-matter that-EXT.not basis
le-taana zo
 to-claim:SG.F this:SG.F
 ‘It appears to me that under the relevant circumstances there is no basis for such a claim’
 <www.bizchut.org.il/he/wp-content/uploads/>
- b. *nidme li še-en basis*
 seem:PASS.PTCP.SG.M to.me that-NEG.EXT basis
le-taana zo
 to-claim:SG.F this:SG.F
 ‘It seems to me that there’s no basis to the claim = the claim is without foundation’

In some cases the experiential construction may occur without an overt Experiencer, as in (50), where the affectedness of the Experiencer is implied.

- (50) *haxi koev la-daat še-sidru otax*
 most hurt:BEN.PRS.SG.M to-know that-cheat:PST.3PL.M ACC.2SG.F
 ‘What hurts the most is to know that they cheated on you’
 <<http://www.shcenter.co.il/category>>

In coordinate and other clause-combining constructions, Hebrew normally requires pronominal agreement on the finite verb alone, but the non-nominative experiential construction does not allow for conjunction reduction, which proves that the oblique personal pronoun representing the Experiencer is not conceived as the grammatical subject. This is shown in (51).

- (51) *haya acuv la ve-hi lo racta lavo*
 was sad:SG.M to.her and-she not want:PST.3SG.F to.come
 ‘She was sad and didn’t want to come’

Structurally and also cognitively, the D-EXP construction in MH corresponds to the predicative possession construction discussed in §4.2, (see Berman 1981: 45). In this construction, it is a ‘Goal Schema’ construction (in terms of Heine 1997), where the dative marker is not a structural case-marker (or is “non-selected”), but rather constitutes a means of semantic marking of the person as the *goal* or mental *locus*, in this case an external (commonly unspecified) force or desire. It is noteworthy that “non-selected” dative marked pronouns adjacent to the predicate also play in MH the role of attitude holders: as “ethical datives” associated with evidentiality and mirativity of the speaker/hearer (as potential witnesses to the event), and as subject-coreferential (or egophoric) markers, reflecting an attitude of the subject regarding his or her involvement in the event (see Halevy 2013a).

Semantically, the D-EXP construction occurs with a varied range of predicates, from argument-experiencing physical or mental states to being merely a witness to the event. Four classes of such experiential constructions are noted below: (i) *non-physical internal states*; (ii) *physiological experiences*; (iii) *statements of cognition*; and (iv) *phraseological (multi-lexical) expressions*.

The examples in (52) illustrate impersonal constructions expressing (i) *internal feelings and sensations*.

- (52) a. *nóax la še-lo makirim ota*
 comfortable:SG.M to.her that-not know:BEN.PRS.PL.M ACC.3SG.F
ve-hi yexola laasot štuyot
 and-she can:SG.F to.do nonsense:PL.F
 ‘She feels better (at ease) that they don’t know her and that she can do foolish things’
 <<https://www.askpeople.co.il>>
- b. *ze ha-davar še-haxi kef lanu laasot beyáxad*
 this DEF-thing that-most fun to.us to.do together
 ‘This is the thing the most fun for us to do together’
 <<https://www.relationship.co.il/single-post/>>
- c. *ravax li kše-giliti še-hem*
 relief:PST.3SG.M to.me when.that-discover:PST.1SG that-they
yodim et ze
 know:BEN.PRS.PL.M ACC this
 ‘It was a relief to me to find out that they know about it’
 <<http://saloon.co.il/iamkirstie/activity/>>
- d. *(asiti lefi ha-horaot šelxa). ani lo*
 (make:PST.1SG according DEF-instructions yours). I not
yodaat lama šuv lo maclíax li
 know:BEN.PRS.SG.F why again not succeed:BEN.PRS.SG.M to.me
et ze
 ACC this
 ‘(I followed your instructions). I don’t know why I don’t succeed again’
 <<http://lichtenstadt.com/blog-pos-7>>
- e. *hisplik lo et ha-šana ha-zot bli*
 suffice:PST.3SG.M to.him ACC DEF-year:SG.F DEF-this.SG.F without
ha-mišpaxa
 DEF-family:SG.F
 ‘It was enough for him (to spend) that year without his family’
 <<https://www.ynet.co.il/Ext/App/TalkBack/>>

In colloquial usage the D-EXP construction may be encountered also with some manner and accomplishment verbs, as in (53).

- (53) *lo memaher lanu lehitxaten*
 not hurry:BEN.PRS.SG.M to.us to.get.married
 ‘We’re in no hurry to get married’

The examples in (54) demonstrate use of D-EXP constructions with (ii) *physical experience* predicates, as metaphorically extended in (54c).

- (54) a. *covet li ba-lev lirot oto hayom*
 pinch:BEN.PRS.SG.M to.me in.DEF-heart to.see ACC.3SG.M today
be-macav kaze
 in-situation like.this
 ‘It hurts me (in my heart) to see him in such a position today’
- b. *megared lexa be-kol ha-guf? zo*
 scratch:BEN.PRS.SG.M to-you:SG.M in-all DEF-body? this:SG.F
kanire alérgiya
 probably allergy:SG.F
 ‘Does it itch you all over your body? It’s probably an allergy’
- c. (*od lo axalnu, od lo šatinu*), *yaveš lanu ba-garon*
 (still not eat:PST.1PL still not drink:PST.1PL), dry:SG.M to.us in.DEF-throat
 ‘We still haven’t eaten, we still haven’t drunk, our throats are dry’
 [Popular Hebrew song]

Another type of experiential impersonals have predicates relating to *mental states*, often but not necessarily with passive participles like *zaxur* ‘remembered’, *muvan* ‘understood, obvious’, as in (55).

- (55) a. *lo zaxur li mikre bo ha-yoec*
 not remember:PASS.PTCP.SG.M to.me case in:3SG.M DEF-advisor
ha-mišpati moci xavat^ dáat kazo
 DEF-juristic publish:BEN.PRS.SG.M opinion:CS.SG.F like.this:SG.F
 ‘I don’t recall a case in which the attorney general issued a ruling like that’
 <main.knesset.gov.il/Activity/committees/Huka/News/pages/>
- b. *yadúa lahem yoter mi-ma še-atem*
 know:PASS.PTCP.SG.M to.them:M more than-what that-you:PL.M
xošvim
 think:BEN.PRS.PL.M
 ‘They know more than you think’
- c. *lo muvan me-elav še-mišehu*
 not understood:BEN.PTCP.SG.M from-itself:SG.M that-someone
yodéa letapel be-tinok
 know.SG.M to.take.care in-baby
 ‘It is not understood (= taken for granted) that someone knows how to take care of a baby’
 <<https://www.ynet.co.il/articles/>>

A final category of experiential impersonals includes (iv) some idiomatized, metaphorical extensions of motion verbs such as *halax* ‘go’ and *yaca* ‘go out’ and certain other action verbs lacking an agent role such as the verb *lakax* ‘take’ in the sense of time duration, as in (56).

- (56) a. *ma laasot? ha-xaver ha-ze af páam lo holex lo*
 what to.do? DEF-friend DEF-this no time no go:BEN.PRS.SG.M to.him
im banot
 with girl:PL
 ‘What’s to-do? That guy never does well with the girls’
 <<http://cards.asur21.co.il/>>
- b. *af páam lifne xen lo yaca lanu lehipageš šam*
 no time before not sort.out:PST.3SG.M to.us to.meet there
 ‘It’s never worked out before for us to get together there’
 <www.nrg.co.il/online/archive/ART/>
- c. (*kše-neheras li ha-ayfon lakax li beerex*)
 (when-ruined to-me DEF-iphone) take:PST.3SG.M to.me approximately
šloša yamim lacet me-ha-mita
 three days to.get.out from-DEF-bed
 ‘(When my iPhone fell apart) it took me around three days to get out of bed’
 <<http://lichtenstadt.com/blog-pos>>

The D-EXP construction in Hebrew has not undergone a process similar to the old English *methinks* type (German *mir denkt* or *es denkt mir*), nor has it acquired any behavioral and coding properties of a subject. The diachronic evidence of the construction in Hebrew points to a transition from a metaphorical transitive construction that acquires some abstract Stimulus toward what appears to be an impersonal construction. For example, in Biblical Hebrew:

- (57) *šar li ʿalēkā ʾāḥi yəhōnātān*
 narrow:BEN.PTCP.SG.M to.me on.you:SG.M brother.mine Jonathan
 ‘I mourn for you, my brother Jonathan’ [2 Sam 1: 28]

The reconstructed sentence in metaphorical meaning is *ha-maqom šar li* ‘the place (i.e., soul, heart) is narrowing (being narrow) to me’

It is argued that the construction in MH is perceived as a mental locus and target of uncontrolled events. It means that the event is conceptualized as coming from outside (actually or virtually), targeted towards the human participant who is affected by it. In most modern European languages the SV construction with the Experiencer in subject position has become entrenched (Bossong 1998; Haspelmath 2001), and in a small number of Germanic languages, significantly Icelandic, the D-EXP seems to behave like a subject (occurring preverbally and

accessible to raising). This is not the case in MH where the D-EXP follows the experiential predicate and does not show any behavioral or coding properties of a subject. The claim is that the D-EXP construction is an impersonal construction, with an empty or null subject denoting uncontrolled events. That is, it denotes events that are not instigated by an agent, as evidenced, for example, by the fact that regularly it cannot occur with adverbs expressing deliberateness such as *be-xavana* ‘on purpose’, *bi-rcinut* ‘seriously’ (Berman 1980, 1981). In *habere* languages like English, mainland Scandinavian, and French, the subjective Experiencer *does* or *is*, or very typically, *possesses* or *has* the physical, emotional, or cognitive state, like any other possessee. In contrast, in *non-habere* languages like Hebrew things *happen* or *come* or *exist* with reference to the Experiencer as an active participant or merely a witness to the event. For example, in colloquial MH the inference of the expression *ba li* ‘0-comes to-me = I feel like, I want’ (the inferred experiencer subject is the desire), as in (58).

- (58) *ani moda* *še-midey páam* *ba*
 I admit:BEN.PRS.SG.F that-from time (to-time) come:BEN.PRS.SG.M
li *ezo* *ugiya*
 to.me some:SG.F cookie:SG.F
 ‘I admit that from time to time I feel like having some cookie’

The view advanced here is that the D-EXP in MH is in accord with its syntactic typology, as a non-subject-oriented language that favors a ‘Goal Schema’ construal.

To sum up, the impersonals discussed in §4.3 represent constructions that denote uncontrolled events. Apart from meteorological and environmentals, this category of ‘pure’ impersonals includes canonical encodings of existence and possession as well as a range of type-shifting constructions devoid of an agent role, first and foremost modals and evaluatives, experientials and constructions denoting existence, (dis)appearance, occurrence, etc. Syntactically these are all empty subject constructions, widespread in spoken Hebrew with verbs in invariable and non-referential (3rd) masculine singular. Another syntactic strategy for focusing on the event as a whole are impersonal passives, as discussed in §4.5 below.

4.5 Impersonal passives

Passive constructions in general shift the focus away from the agent, or are used when the event is not referable to any specific participant(s), often related to pragmatic considerations such as relevance criteria (Sperber & Wilson 1986). Impersonal passives, too, typically occur when an underlying agent cannot be postulated, or where the agent is suppressed. However, whereas passivization detransitivizes a verb by deleting its logical subject (so that the argument structure of a passive

predicate contains one less argument term than the corresponding active), impersonalization preserves transitivity and merely inhibits the syntactic realization of a surface subject. In other words, personal passives are ‘patient-oriented’, whereas impersonal passives, unmarked for actionality, are ‘event-oriented’, focusing on the event as one undifferentiated whole. It thus emerges that impersonal passives and existential constructions of the kind discussed in the preceding section are two syntactic means for expressing the same discourse stance or perspective, so that the two constructions often co-vary or appear in complementary distribution. This is particularly the case with periphrastic agentless passives, as illustrated by the impersonal passive in (59a) and its constructed existential paraphrase in (59b).

- (59) a. *nocar benehem xibur lamrot*
 create:PST.PASS.3SG.M between.them connection:SG.M despite
gilam ve-lamrot kšaye[^] ha-safa
 age-POSS.3PL.M and-despite difficulties:CS DEF-language
 ‘A rapport developed [=was-created] between them despite their age and language difficulties’
 <<http://www.ravdori.co.il/stories>>
- b. *yeš xibur benehem lamrot gilam ve-lamrot*
 EXT connection between.them despite age:POSS.3PL.M and-despite
kšaye[^] ha-safa
 difficulties:CS DEF-language
 ‘There exists a rapport between them despite their age and despite language difficulties’

As Siewierska (1984: 113) notes, “with impersonal passive any of the verbal arguments may be the topic or in fact the verb itself”, explaining the ability in various languages for passivizing intransitive as well as transitive verbs (as, for example, German: *Es klopf an der Tür* ‘it was knocked = there was a knock on the door’). In MH, the impersonal passive represents high-register, more formal usage, as in (60).

- (60) a. *buca dkira be-ezor[^] ha-xaze,*
 perpetrate:PST.PASS.3SG.F stabbing:SG.F in-area:CS.SG.M DEF-chest,
hayta dkira [...] bucu od šne[^]
 was:SG.F stabbing [...] perpetrate:PST.3PL.F further two:CS
nisyonot[^] dkira
 attempt:CS.PL.M stabbing
 ‘A stabbing was carried out in the area of his chest, two further attempts at stabbing were perpetrated’ [from Taube 2007: ex. 70]
- b. *be-šaloš lifnot bóker hukaš ba-délet*
 in-three before morning 0 knock:PST.PASS.3SG.M in.DEF-door
 ‘At three in the morning was knocked = there was a knock on the door’
 [from Taube 2007: ex. 7]

In Biblical Hebrew, as in Arabic, passive is intrinsically impersonal (in invariable 3rd_{M.SG}), and so employed for vague and empty subjects for no underlying agent can possibly be postulated (Blau 1996; Rabin 1979/1998). This is particularly common with intransitive verbs, as in (61a), while in some cases BH has instances of impersonal passive constructions *governing a direct accusative object* as in (61b) below (Goldenberg 2013: §12.7.4).

- (61) a. *webahavurato nirpa? lanu*
 and.in.wound:SG.F-POSS.3SG.M heal:PRF.MID/PASS.3SG.M to.us
 ‘And with his bruises we were healed’ [Isa 53: 5]
- b. *welo? ye?axel ?et besaro*
 and-not eat:PASS.IPFV.3SG.M ACC meat.his
 ‘And its meat will not be eaten’ [Ex 21: 28]

MH developed a personal passive construction, possibly under the influence of European languages, where the agent may be specified by the adverbial phrase *al-yedey/biydey* ‘at the hands of = by’ (see Chapter 10 on Voice Alternations).¹⁵ In impersonal versions of the passive, the person morpheme incorporated in the finite verb form denotes an ‘affected object’ existing antecedently to the activity and affected by it, as in (62), where the boys who were stabbed represent an ‘affected object’.

- (62) *nidkeru šne nearim bne^ arba esre*
 stab:PASS.PST.3PL.M two boy:PL age:CS fourteen
 ‘Two fourteen-year-old boys were stabbed’

Two marginal occurrences of passivization of intransitive verbs in MH are the lexicalized expressions *lo ye-amen* ‘not FUT.3SG.M-believe:PASS = it’s unbelievable’ and *lo ye-sulax* ‘not FUT.3SG.M-forgive:PASS = it’s unforgivable’, where the entire complement clause stands for the theme, as in (63).

- (63) a. *lo yeamen, mofa al xavalim, ben*
 not believe:FUT.PASS.3SG.M, show on ropes, between
šamáyim va-árec
 heavens and-earth
 ‘Unbelievable, a show on ropes, between heaven and earth’
 <<https://www.msn.com/en-ie/news>>
- b. *lo yesulax lanu im na-pil memšala*
 not forgive:FUT.PASS.3SG.M DAT.1PL if FUT.1PL-fall:CAUS government
 ‘We won’t be forgiven if we cause the government to fall’
 <<https://www.mako.co.il>>

15. Similarly in Modern Standard Arabic, there are cases where not only the patient but also the agent is expressed explicitly, although not as commonly as in MH.

In formal written language, but rare in spoken usage, constructions like those in (64) can be found, where the grammatical subject of the passive verb is an ‘affected object’, that is, the object that comes into being as a result of the action of the predicate or is understood as being part of the meaning of the verb, while the agent is suppressed.

- (64) a. *ba-xódeš ha-ba yesuxak ha-misxak*
 in.DEF-month DEF-next play:FUT.PASS.3SG.M DEF-game
ba-líga ha-amerikáit
 in.DEF-league DEF-american
 ‘Next month the game will be played in the American league.’
 <<https://www.mako.co.il>>
- b. *ki ha-šir lo nigmar/ tamid hu*
 because DEF-song not finish:PST.PASS.3SG.M/ always he
yušar
 sing:FUT.PASS.3SG.M
 ‘Because the song never ends/ it will always be sung’
 [in the Israeli song ‘*Love is a Song of Two*’]

Such constructions are passive in form alone, semantically designating an *impersonal* predication. A few lexically restricted verbs also participate in impersonal passive constructions where the subject morpheme incorporated in the finite verb refers to some all-encompassing state rather than to an actual Causer, as in (65), where the state in question affects a human as Benefactor/Experiencer (marked by the dative clitic).

- (65) a. *axare ha-tipul ecel Yigal hukal li meod*
 after DEF-treatment at Yigal 0 relieve:PST.PASS.3SG.M DAT.me very
 ‘After the treatment at Yigal’s, I was greatly relieved’ = ‘my pain was alleviated’
 <<http://www.mirzai.co.il>>
- b. *ve-haya rac el ima lirot im hutav*
 and-was:3SG.M hastening to mother to.see if improve:PST.PASS.3SG.M
la
 to.her
 ‘And he would hurry to his mother to see if she had improved’
 [Oz 2002: 501]

In casual spoken usage particularly, the alleged subject of the passive construction (that is, the reversed Patient role), is atypically marked as a direct Object taking accusative *et*, and the passive verb occurs in the invariable 3rd masculine singular form. A similar type of impersonal construction is widespread in indirect evidentials, significantly with verbs of transmitting information, in past participle forms like ‘be said’, ‘be written’, ‘be informed’ as in, ‘be accustomed’, and the like, as in (66).

- (66) a. *lo raíti éfo rašum et mispare[^]*
 not saw:1SG where record:PASS.PTCP.SG.M ACC number:CS.PL.M
ha-maakav
 DEF-follow.up
 ‘I didn’t see where the follow-up numbers were listed’
 <<https://www.fxp.co.il>>
- b. *haya katuv ba-atar et šmot[^]*
 was write:PASS.PTCP.SG.M in.DEF-site ACC name:CS.PL.M
ha-saxkanim
 DEF-actor:PL.M
 ‘The names of the actors were written on the website’
 <<http://bigosite.tapuz.co.il/Sites/>>

In sum, impersonal passive constructions are deployed in MH both for presupposed indeterminate human or animate subjects and for denoting an event that lacks any implicit agent. In colloquial usage, there seems to be a tendency to use active (3rd person) masculine plural pseudo-impersonals discussed below in place of the impersonal passive.

4.6 3rd person plural subjectless impersonals

Hebrew lacks a ‘free’ 3rd person pronoun standing for a vague, impersonal or generic subject like French *on* or German *Man*. In MH, the default means for expressing a depersonalized stance usually involves an active verb in (3rd) masculine plural without an overt encoding of the independent 3rd person pronoun *hem* ‘they.M.SG’ (Berman 1979, 1980, 2011; Goldenberg 2013: §12.7.2; Taube 2007). In contrast to the limited occurrences of the impersonal passive construction, the impersonal (3rd) masculine plural construction, found in Biblical Hebrew as well, is pervasive in MH at all levels and styles of usage.

Unlike in the case of finite verbs in Hebrew which, as noted earlier and elsewhere in this volume, incorporate the grammatical subject by person inflections, in 3rd plural impersonals, the incorporated 3rd person masculine plural pronoun is by definition unspecified. As defined by Taube (2007: 280), the lack of coreferentiality in such propositions is “due to the fact that the subject of the impersonal verb form is indeterminate, hence it cannot be referred to by means of a specifying personal pronoun” as in, for example, a sentence like *omrim še-hem meunyanim ba-iska* ‘say BEN.PTCP.M.PL that-they are interested in the deal’ (Taube 2007: ex. 11). In other words, like other non-subject requiring languages, MH utilizes the impersonal 3rdPL construction to denote unspecified, vague, inferred or generic subjects.

Third person plural constructions commonly, although by no means necessarily, occur in timeless or habitual present tense (in *benoni* form) depicting a general truth or customary activities or states. The events in question may or may not include the speaker and/or the hearer, as shown in and sometimes exclude the speaker, the hearer, or both, as in (67a) to (67d).

- (67) a. *xay-im* *rak páam axat*
 live:BEN.PRS-PL.M only time:F one:F
 ‘You only live once’
- b. *im šot-im* *lo nohagim*
 if drink:BEN.PRS-PL.M not drive:BEN.PRS.PL.M
 ‘Don’t drink and drive’ [advertisement 2017]
- c. *lo oxl-im* *bizman ha-šiuur!*
 not eat:BEN.PRS-PL.M in.time DEF-lesson!
 ‘No eating during class!’
- d. *ex kar-u* *lax lifne še-hitxatant?*
 how call:PST-3PL to.you:SG.F before that-marry:PST.2SG.F
 ‘What’s your maiden name?’

As shown in (67b) and (67c), impersonal *benoni* forms ending in masculine plural *im* are regularly negated by *lo* rather than by normative *en*. The impersonal 3rdPL construction may also be employed in other than present tense, as in (67d), and in irrealis modal evidentials referring to ‘someone’ (singular or plural) unidentified by the speaker. These correspond to Cabredo Hofherr’s (2003) ‘*specific existential*’ and Cinque’s (1988) ‘*quasi-existential*’ in European languages, as illustrated from MH is given in (68).

- (68) a. *dafk-u* *ba-délet*
 knock:PST-3PL.M in.DEF-door
 ‘Someone knocked on the door’
- b. *xošv-im* *še-ani mefaxed* *še-yefatr-u*
 think:BEN.PRS-PL.M that-I afraid:BEN.PRS.SG.M that-fire:FUT-3PL.M
oti?!
 ACC.1SG?!
 ‘People ~ they think I’m scared they’ll fire me?’ [www.israblog.co.il]

In her study of the functional distribution of the impersonal 3rdPL construction and impersonal passives, Taube (2007) notes the factors of textual cohesion and stylistic preference when the two verbs derive from the same root. She shows that switching from one impersonal construction to the other may serve to mark different agents: In the 3rdPL construction, the unspecified agent is conceived as an initiator, whereas in impersonal passives, the unspecified subject is unmarked for initiation. The corpus data examined for the present study confirm that, in contrast

to the impersonal passive, the active impersonal 3rdPL construction is the unmarked option when referring to indeterminate human agents. As shown in (69a), the agent in such cases is implicitly human, whereas this is not necessarily the case in impersonal passives as in the constructed paraphrase in (68b), which might imply wild animals as perpetrators.

- (69) a. *al ti-dagi, lo yi-trefu otax šam*
 NEG 2SG.F-worry:B1.IMP, not 0 FUT-devour:3PL ACC.2SG.F there
 ‘Don’t worry, they won’t eat you alive’
 [Said to a girl nervous before her first audition]
- b. *al ti-dagi, lo ti-tarfi šam*
 NEG 2SG.F-worry:B1.IMP, not FUT.2SG.F-devour:PASS there
 ‘Don’t worry, you-won’t be devoured there’

Importantly, the meaning and function of the active impersonal 3rdM.PL construction in MH is not always the same as corresponding constructions in European languages with impersonal subjects like Germanic and Scandinavian *man*, French *on*, or pronominal subject markers like Italian *si*, or *se* in other Romance languages. Corpus data show that, under appropriate circumstances, the unspecified subject in the impersonal 3rdPL construction may apply to non-human animates, as in (70) where the unspecified subject is mosquitoes.¹⁶

- (70) *akc-u oti be-kol^ ha-guf!*
 sting:PST-3PL.M ACC.1SG in-all:CS DEF-body!
 ‘(They) stung me all over my body! = I was stung all over!’

In sum, then, the impersonal 3rdPL construction is *agent-oriented* even though the agent is unspecified or suppressed, implying actualization of the event by some agent. Moreover, documented as far back as Biblical Hebrew, it is common today at all levels of style and usage. In contrast, the impersonal passive construction in MH is *event-oriented* or ‘actional in nature’ (Taube 2007: 282), focusing on the resultative state of the Undergoer as an ‘incremental theme’. And in usage, it is more typical of formal written language than of everyday speech.

16. Berman (1979, 1980) states that the characteristic of the 3rdPL impersonals is that “they always have HUMAN domains, the event in question being imputed to some unspecified group of people [...]. Impersonals like *pitxu et ha-raayon be-angliya* ‘developed:PL ACC the-idea in-England’ clearly impute agency” (1980: 736). Similarly, Taube (2007: 279) argues that the subject in 3rdPL impersonal constructions, in contrast to passive impersonals, is confined to an unspecified human agent, citing an example from formal-written MH: [...] *ve-hišgixa še-lo yeakcu ha-tinokot o yinašxu* “[...] and watched the babies to make sure they **were not stung or bitten**.” The example in (68), taken from current spoken usage, shows that this view is not always correct, given the semantic restriction of the class of beings that can be said *la-akoc* ‘to sting’.

4.7 Impersonals with overt pronouns

Two categories of personal pronouns (see Chapter 7 on Inflection) may be used with impersonal intent in MH: 1st person plural (§4.7.1), and 2nd person singular (§4.7.2).

4.7.1 *Impersonals with 1st person plural subjects*

Depending on context and speaker-writer perspective, an overt 1st person plural pronoun or a verb in 1st plural may be used to produce a mild effect of depersonalization. Unlike subjectless constructions with verbs in 3rd person masculine plural, this implies an incompletely defined collectivity (Kitagawa & Lehrer 1990: 745), frequently allowing an inclusive reading and a sense of identification with the addressee. Thus, in (71a), the speaker presents herself as part of the group, even though she does not have an active role in the event, as well as in (71b) and (71c), a father addressing his little boy.

- (71) a. *anáxnu ovdim* *rak me-ha-béten. lo*
 we work:BEN.PRS.PASS.PTCP.PL.M only from-DEF-belly. not
neezarim ba-yadáyim
 0 help.PASS.PTCP.PL.M in.DEF-hands
 ‘We work only from the stomach, our guts, (we) don’t use our hands’
[Said by a coach in a gym class]
- b. *amárti lexá še-anáxnu medabrim, lo*
 tell:PST.ISG to-you:SG.M that-we talk:BEN.PRS.PL.M, not
boxim
 cry:BEN.PRS.PL.M
 ‘I told you that we talk, we don’t cry’
[Father to his little boy who was badmouthed by other kids]
- c. *zéhu, gamárnu livkot, holxim lišon*
 this.is finish:PST.1PL to.cry, 0 go:BEN.PRS.PL.M to.sleep
 ‘That’s it, we’ve done crying, we’re going to bed’

In (71a) the overt 1st person plural pronoun can be replaced by a 2nd person masculine plural pronoun referring to the identifiable group of referents of people practicing gymnastics exercises, while in (71b) and (71c), a 2nd person masculine singular pronoun could be used to refer to the specific referent (in this case, the little the boy). In terms of discourse perspective, however, such substitutions would yield a neutralized stance, depriving the statement of the intimate tone of empathy and identification of the speaker with the addressee provided by the inclusive 1st plural reference.¹⁷

17. In written Hebrew to this day, particularly in academic writing, the more formal 1st person plural pronoun *ánu* (see Chapter 7 on Inflection) is used, as is a verb inflected for 1st person

4.7.2 2nd person singular impersonal pronouns

In MH as in several other languages, generalized 2nd person singular may serve as a discursive strategy among friends or intimates (Siewierska 2004: 212), characterized by Jespersen & Haislund (1954/2013: 153), as ‘distinctly colloquial in tone’. Berman (2005) describes the use of 2nd person pronoun as one out of several means for expressing a relatively *distanced, depersonalized discourse stance*. As shown in the preceding section for 3rdPL impersonalized constructions, in use of 2nd person singular pronouns (in Hebrew, most generally masculine *ata* but also feminine *at*), these most typically occur in timeless or habitual present tense (cf. English *you never know* versus formal rather archaic *one never knows*), past tense is associated with more specific information. Out of context, such usages may be ambiguous between an addressee-specific and a generalized impersonal reading.

Use of the less specific masculine 2nd person singular *ata* when addressing a woman is widespread in spoken Hebrew (Muchnik 2015: 218; Sa’ar 2007). This is shown in (72a), said in a seminar on teaching mathematics to young children to elucidate that there are only two possibilities in defining a geometric shape – an example which also shows that 2nd person singular may even be used when addressing a group of people – as well as in (72b). In contrast, the more personalized feminine 2nd person singular *at* may even be used when addressing a male interlocutor, as in (72c).

- (72) a. *ze kmo herayon– ata lo yaxol lihyot gam be-herayon*
 it like pregnancy– you:SG.M not can:SG.M to.be also in-pregnancy
ve-gam lo be-herayon
 and-also not in-pregnancy
 ‘It’s like pregnancy – you can’t be both pregnant and not pregnant’
- b. *ha-davar še-rov^ ha-našim xošeš-ot miménu*
 DEF-thing that-most:CS DEF-woman:PL afraid:BEN.PRS-PL.F from:3SG.M
hu ha-leda. ex ata yaxol lehitmoded im
 he DEF-childbirth. how you:SG.M capable to.cope with
leda tiv’it?
 childbirth:SG.F natural:SG.F?
 ‘The thing most women are afraid of is childbirth. How can you deal with natural birth?’
 <<http://www.hadarleyda.co.il>>

plural as a favored means of making impersonal reference, where a language like English would use an agentive subject or passive voice, e.g., *ánu mesikim efo še- ...* ‘We conclude thus that ...’ or *be-maamar ze nadun be....* ‘in this article, we-will-discuss...’.

- c. *at noténet et mispar^ ha-nayad ve-hem*
 you:SG.F give:BEN.PRS.SG.F ACC number:CS DEF-mobile and-they:M
mitkašrim lax be-xol šaa
 call:BEN.PRS.PL.M to.you:SG.F in-every hour
 ‘You give your phone number and they call you at any time’
 <www.fxp.co.il>

The generic use of a 2nd person singular pronoun is very common in colloquial Hebrew in speech acts expressing advice, instructions, and general truths, usually when the speaker wishes to refer directly to an unspecified addressee. In contrast to other impersonal constructions in MH discussed in preceding sections, this type of impersonal construction is not V-initial, but SV in structure, tending to occur with verbs in habitual present tense or with a modal or other irrealis function like conditionals, as in the example in (73), a travel agency advertisement.

- (73) *ata ose hazmana ve-mešalem*
 you make:BEN.PRS.SG.M reservation and-pay:BEN.PRS.SG.M
kše-ata magía
 when-you arrive:BEN.PRS.SG.M
 ‘You make a reservation and pay when you come in’
 <<https://forum.sportenter.co.il>>

In (74), excerpted from an intimate conversation between a soldier and his girlfriend, the speaker switches from 1st person plural into 2nd person masculine singular to invite empathy from the addressee, who was not present at the event he is talking about.

- (74) *anáxnu nixnasim la-báyit šel ha-mevukaš ve-ata*
 we enter:BEN.PRS.PL.M to.DEF-house of DEF-wanted and-you:SG.M
roe et ha-yeladim ha-ktanim mefuxadim
 see:BEN.PRS.SG.M ACC DEF-child:PL.M DEF-little:PL.M frighten:PASS.PTCP.PL.M
 ‘We go-into the house of the wanted man, and you see little kids that are frightened’
 <www.article.yedioth.co.il/default>

The inclusive use of 2nd person singular, in which both the speaker and hearer are indexed by that person pronoun, expresses the speaker’s subjective choice of internal perspective as against the external and exclusive perspective expressed by 3rd person plural impersonalization. There are, however, depersonalized uses of 2nd person singular that do not *prima facie* imply generalization, but instead invite the addressee to engage in what Gast & van der Auwera (2013) term ‘an *episodic simulation*’, where the speaker invites the addressee to imagine that he/she is experiencing the situation in question as illustrated in (75).

- (75) *ata noséa ba-kviš u-pitom*
 you:SG.M drive:BEN.PRS.SG.M on.DEF-road and-suddenly
ba mulxa náar im ofanáyim xašmaliyim
 come:BEN.PRS.SG.M in.front.of.you boy with bicycle:DU.PL.M electric:PL.M
 ‘You’re driving along the road and suddenly out comes in front of you a boy
 on an electric bicycle’ <www.tapuz.co.il/blogs/userblog>

Here, the addressee is invited to imagine herself in a situation, which she might conceivably encounter, hence not a fully generalizing utterance. This is evidenced by the fact that generalizing adverbs like *generally* or *always* cannot be attached to such utterances. Lyons (1995: 44) describes the impersonalized use of 2nd person as ‘the kind of meaning by virtue of which speakers express, rather than describe, their beliefs, attitudes and feelings’. Relatedly, as Grossman (2013) observes, use of 2nd person masculine singular, especially in an intrapersonal mode, is not limited to a ‘procedural discourse’ but rather serves as a means (including in narratives) of relating to inner states, cognitive and emotional, involving responsibility, accountability and guilt. In fact, as shown in (74), the switch from 1st person plural to 2nd person singular is not genuinely impersonal, but rather indicates that the soldier is inviting empathy and solidarity from his girlfriend. This analysis is supported by Bolinger’s (1979: 205) comment regarding English: “The deeper we go into impersonal *you*, the more personal it seems”. The same seems to apply no less to MH use of 2nd person ‘impersonal’ pronouns.

4.8 Impersonals with generic noun subjects

The last category of impersonals in MH considered here concerns generic nouns (both mass and count) that translate as English as *people*, *human beings*, *one*, *someone*’ etc. These represent another means of unspecified reference to human agents, usually referring to the general public which need not include the speaker and/or the hearer, as with the colloquial *anašim* ‘people’ in (76a) and – in more formal style – singular *iš* ‘(a) man’ in (76b) or *adam* ‘a person, human being’.

- (76) a. *anašim lo stam mitlonenim*
 people not just complain:BEN.PRS.PL.M
 ‘People don’t simply complain for no reason’
 b. *iš lo siper li aléha davar*
 person not tell:PST.3SG.M to.me about.her thing
 ‘Not a person told many anything about her’ <<https://eretzacheret.org>>

Other elements for referring to an indeterminate, unspecified participant are *exad* ‘one’ or the indefinite pronouns *mišehu* ‘someone’ as in (77a) or *af exad* ‘nobody’ in double negatives in (77b).

- (77) a. *rak exad/mišehu še-lo mevin*
 only one/someone that-not understand:BEN.PRS.SG.M
medaber kax
 talk:BEN.PRS.SG.M SO
 ‘Only someone / a person who doesn’t understand talks like that’
- b. *af exad lo nixšal ba-bxina*
 no one not fail:PST.3SG.M in.DEF-exam
 ‘Nobody failed in the exam’

In sum, the different classes of constructions surveyed in §4.1 to §4.8 show that MH has at its disposal a variety of constructions for expressing genericity and episodic depersonalization. Depending on the overall context, discourse stance, as well as the interaction of tense, aspect, voice, and gender, speakers can choose between a bare 3rd person plural construction (§4.6) or constructions with an overt grammatical subject in the form of 1st person plural, generalized 2nd person singular masculine or feminine, or generic human nouns like a *person*, *people* or indefinite pronouns (§4.7).

5. Concluding remarks

This study aimed to shed light on structuring and use of distinct impersonal constructions in MH, based on the claim that in cross-linguistic terms these reflect properties typical of non-configurational languages with synthetic inflectional structure (like Hebrew). These do not require overt encoding of a ‘dummy- subject’ or ‘expletive’, in contrast to languages with analytic verb formation that require the overt realization of the subject slot. Regarding what are labeled here ‘internal impersonals’ (in experiential constructions), it was argued that there is a distinction between *habere* languages where the Experiencer ‘does’ or ‘is’ or very typically ‘has’ the physical, emotional or cognitive state, and *non-habere* languages like Hebrew where things that exist or occur with reference to the human person happen by themselves, as uncontrolled events. To this end, dative-marked experiential constructions (D-EXP) are treated above together with ‘genuine’ impersonal constructions.

Six types of impersonal constructions were distinguished, ranging from totally impersonal featuring a semantically empty-subject to least impersonal representing controlled events in which a typically human subject is involved or assumed by the speaker to be part of the addressee’s pragmatic information, even though in the

form of an indeterminate or unspecific and generic entity. In addition to factors of textual cohesion and the stylistic and register preferences of the speaker, choice of a particular impersonal construction in MH depends on functional considerations regarding information structure, kind of information inferable from the discourse, and the speaker's subjective perspective regarding the setting of the event. In addition, factors of tense, aspect, mood, and voice interact with the overall information (for example, past tense and active predicates convey more specific information, habitual present is used for general information, and passive voice for disregarding a referable participant. Speakers' choice of gender in using 2nd person singular in spoken MH was shown to depend basically on the gender of the actual speech participants, although 2nd person masculine and feminine quite commonly alternate within a single speech event. Further, contextual variations were shown to correlate with different degrees of detachment from the self, ranging from self-reference versus reference to others in a generalizable situation, via reference to anyone like oneself or to particular individuals in a situation that the self can relate to.

The postverbal NP standing for the sole thematic argument in 'genuine' impersonal constructions (in invariable 3rd person singular), as in type-shifting instances of existential and possessive constructions, is analyzed here neither as some kind of direct object nor as a subject that has evolved into an object. Instead, such elements form part of a strategy for marking their role in discourse as non-subject constituents in contradistinction to 'empty' grammatical subjects, so serving to facilitate comprehensibility.

As regards functional distribution, predicate-initial constructions like those surveyed in this chapter constitute an active, important, and very common category in MH, constituting the default or speakers' favored option for expressing impersonalization, accounted. This indicates that, in contrast, straightforward SV constructions are a more limited device and a more marked means for speakers to express an impersonal, generalized stance on events.

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Negation in Modern Hebrew

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This chapter examines the expression of negation in spontaneous spoken Modern Hebrew. It provides a quantitative description of syntactic negation in the *Corpus of Spoken Israeli Hebrew* (CoSIH) to address syntactic, pragmatic, and prosodic properties of negation. The study shows that in addition to the prototypical function of rejection and denial, negative utterances are used for mitigating evaluations, implying the desirability of a state/event, and strengthening the speaker's claim by rejecting potential counter-arguments. Moreover, the prosodic prominence of negators may be influenced by cognitive and interactional motivations. Particular attention is paid to phenomena that usually remain unaddressed in descriptions of negation, such as negative sentences with extra-sentential scope, negation-based discourse markers, and non-linguistic negation.

1. Introduction

All languages appear to have some morphosyntactic means to express negation, suggesting that negation is possibly a universal feature of human language (Horn 2010: 1; Miestamo 2007: 553). Linguistic research from a variety of perspectives has long attempted to describe the various aspects of negation – its functional and structural properties, its role in language acquisition, its typological manifestations, and its neurological underpinnings. The present chapter aims to contribute to this body of research by presenting a qualitative and quantitative corpus-based description of negation in spontaneous spoken Modern Hebrew. It addresses grammatical, pragmatic, and prosodic properties of negation, as these are realized in morpho-syntactically negative utterances.

The system of negation in Modern Hebrew has attracted scholarly attention in Hebrew linguistics, reflected in book-length studies (Tzivoni 2015), in typologically-oriented descriptions (Amiraz forthcoming), or in chapters of grammatical descriptions of Modern Hebrew (Berman 1978: 145–147, 220–224; Glinert 2004: 293–308; Rosén 1977: 225–230). These studies mainly concerned the syntactic distribution of particular negative expressions, and were based primarily

on data from formal registers of Modern Hebrew. These data often consisted of constructed decontextualized examples of negative sentences, or examples found in edited texts or elicited from educated speakers. As a result, existing descriptions of negation in Modern Hebrew appear to suffer from a ‘written language bias’ (Linell 2005). They represent patterns of negation that appear in formal, typically written, registers of Modern Hebrew, so unavoidably under-representing issues relating to the use of negation in informal registers, most notably in spontaneous conversation. These include, among others, the following issues: the pragmatic functions of negation in conversation, the prosodic realization of negative utterances, negative discourse markers, and negative gestures. To balance this bias, the present chapter examines the expression of negation in naturally occurring conversations, using data from the Corpus of Spoken Israeli Hebrew (CoSIH) database <<http://cosih.com/english/>>.¹

2. Data and methodology

The syntactic analysis of negative utterances provided below differs in several ways from that of more traditional approaches, so requiring some explanation of the overall approach and relevant terminology adopted in the present context. Its approach can be described as functional, communicational, discursive, and information-oriented, originating in the study of spoken Modern Hebrew, most prominently by Izre’el (2012, 2017, forthcoming). In this view, a *sentence* is not conceived as a mental entity with an independent existence detached from any specific communicative act, but rather as an entity that emerges in the course of its production.² Accordingly, the syntactic components of the sentence (notably, the subject and predicate) derive their conceptual status from a complex contextual analysis, and not from predetermined notions of what these components should be. Under this view, then, any type of linguistic element may, in principle, serve as the predicate or the subject of a sentence.

The sentence in this framework is defined as a unit consisting minimally of a *predicate domain*, which can be *nuclear* (consisting of a single element that serves as the *nucleus*) or *extended* (consisting of a *nucleus* accompanied by complements and modifiers). The predicate domain is the component that carries the informational

1. Note, however, that the use of recorded data is inherently limited in that it only provides access to the linguistic and para-linguistic dimensions of the interaction, but not to other, no less significant aspects of interaction, such as gaze, gesture, and posture.

2. The term *sentence* is used here as the reference unit of syntax, and is therefore equivalent to the term *clause*, as used in other approaches, including in the present context (see, for example, Chapter 18).

load of the sentence within the discourse context. By default, it contains a newly introduced element, carries the modality of the sentence, and includes the focus of the sentence.³ Two main classes of sentences can thus be identified: (1) *unipartite*, consisting only of a predicate domain, and (2) *bipartite*, consisting – in its minimal manifestation – of a predicate and a subject.

Adopting this functionally oriented approach to syntax, the syntactic negator is analyzed as a major component of the predicate domain, typically its nucleus, and not as an adverbial element without any major syntactic function.⁴ This view relies on the pragmatic nature of negation as marked in relation to affirmation: In using negation, speakers target information that is contextually relevant for their interlocutors, either due to an explicit assertion in preceding discourse or to the interlocutors' assumed expectations, intentions, and stances (Givón 1978, 2005: 167; Horn 2001: 203; Miestamo 2009). As a result, the informational load of the negative sentence is typically conveyed by the negator itself, often in combination with adjacent elements (Shor 2018).

Further, discussion of the scope of negation that follows is not to be based on the dichotomy of sentential/constituent negation, even though this dichotomy is commonly evoked in the literature. Sentential negation refers to any instance in which an entire sentence/proposition is negated, whereas constituent negation involves the negation of some constituent or subpart of the proposition (Anderwald 2002: 15; Klima 1964; Willis et al. 2013: 4–5). Such a dichotomy creates several difficulties, suggesting that it may be unwarranted, especially for languages, such as Modern Hebrew, that employ the same negator for both sentential and constituent negation. First, the concept of sentential negation seems to be derived from a logical concept of negation as an operator that reverses the truth value of a proposition, whereas many instances of negative sentences in discourse are better seen as providing new, negative information about the topic of the negative sentence, rather than as reversing the truth value of a proposition (see, for example, Bar-Asher Siegal 2015: 1050–1052). Second, this dichotomy implies that the scope of negation is always found within the negative sentence, whereas in reality, there are sentences in which the scope of negation lies outside the boundaries of the negative sentence. Moreover, this dichotomy disregards the temporal and emergent nature of negative scope in conversation. This is especially evident in

3. Modality here is broadly conceived of as any modification of the proposition, and includes not only the better known types of modality, such as epistemic, evidential, deontic, dynamic and their like, but also assertive (including negative assertion), volitional, exclamative, etc. This view of modality thus also includes traditional types of sentences (see, among others, Frajzyngier & Shay 2016; Martin 2015)

4. Negators are often regarded as some kind of modifying element within the phrase, such as a *subjunct* (Quirk et al. 1985: 605), or an *operator* (Van Valin & LaPolla 1997: 45–46).

cases where negative scope in a particular sentence can be unambiguously determined only after the subsequent sentence has been produced. Instead of employing an aprioristic scope dichotomy of sentential/constituent negation, it seems more useful to view the syntactic negator as projecting negative meaning forward in time, in order to examine what resources recipients use in order to determine how much of the ensuing sentence will be included in the scope of that negator (Ono & Thompson 2017: 547).

In the present context, a broader distinction is drawn between sentences with wide-scope negation, in which the negator has scope over the rest of the predicate domain, and sentences with narrow-scope negation, in which the scope of negation is restricted to a subcomponent of the predicate domain by means of various structural devices. Such a distinction attempts to account for the various negative utterances found in spoken language without reducing them to the logic-based analysis of negated propositions. Such utterances may be structured as unipartite sentences that consist only of a predicate domain, or as sentences in which the predicate domain consists only of the negator, having scope outside of the sentence in which it appears.

The data for this study are taken from the Corpus of Spoken Israeli Hebrew (CoSIH) database (<http://cosih.com>), which consists mainly of face-to-face conversations among friends and family members recorded from 2000 to 2002. The speech it reflects is generally informal, dialogic, and interactive. It includes 32 recordings, each of which consists of a conversation between one core speaker and various interlocutors with whom the speaker interacted at the time of the recording, together coming to roughly five hours of recorded speech.

3. Quantitative results

The standard negator in Modern Hebrew is the particle *lo* spelled לֹא, which may be used in most grammatical contexts for negating verbal sentences other than imperatives, as well as in all kinds of non-verbal sentences. It is cross-linguistically common for a language to employ specialized negators that differ from the standard negator, particularly in the context of negative existentials and prohibitives (Miestamo & van der Auwera 2007; van der Auwera & Lejeune 2013; Veselinova 2013). In line with this tendency, Modern Hebrew makes use of different syntactic negators in connection with different categories. The particle *al* אַל is used to negate imperative verbs conveying prohibition, and is typically followed by a second-person, prefix-inflected verb (e.g., in the constructed instance of *al te-lex* 'no(t) FUT.2SG-go = don't go!); the particle *en* is used in existential constructions, typically as a negative counterpart to the existential particle *yeš* (e.g., *yeš xema aval*

en xalav ‘be butter but not-be milk = there’s butter but no(t) milk’; and in formal register, the particle *en* may replace *lo* in non-verbal sentences (e.g., *hu lo po* ‘he not here’ ~ *hu en-o po* ‘he not.be-3M.SG’ both standing for ‘he isn’t here’. (On the inflected forms of *en*, see, Chapter 7 on Inflection). Table 1 presents the overall frequency of the syntactic negators in CoSIH according to the form and context of the negated element.⁵

Table 1. Total number of syntactic negators in CoSIH, by type and context of negated element

	<i>lo</i>	<i>en</i>	<i>al</i>
Group 1: Intra-sentential scope			
Participle	439	1	–
Verb	255	–	20
Adjective	90	–	–
Noun	58	89	–
Pronoun	50	7	–
Prepositional phrase	43	–	–
Adverb	42	2	–
Idiomatic expressions	32	15	–
Infinitive	18	12	–
Sentence	14	–	–
Numeral	4	1	–
Subtotal	1045	127	20
Group 2: Extra-sentential scope			
Free-standing	351	31	–
Total	1396	158	20

In terms of distribution of the syntactic negators in spoken Hebrew, Table 1 confirms the status of *lo* as a general negator, since it occurs with practically all types of lexical items. The distribution of *en* is more restricted, since it mostly negates nouns, although it may occasionally negate other word types as well. The negator *al* is the most restricted of the three, appearing only with second person prefix-conjugated verbs. Moreover, the data in the Table 1 show that significant proportions of negators – 25% (351/1396) of *lo* tokens, and 20% (31/158) of *en* tokens – appear as free-standing utterances, with the negated element found outside of the boundaries of the sentence, in which case the scope of negation can be regarded as extra-sentential. This suggests that, in order to fully understand the

5. In total, 172 tokens were discarded from the analysis. These included negators in utterances that were suspended or aborted after the negator had been uttered, and repetitions of the negative response particle (e.g. *No, no, no*).

realization of negation in a given language, such free-standing negators warrant dedicated analysis.

Below, each of these negators is detailed, first as part of wide-scope negative structures (Section 4), and then as part of narrow-scope negative structures (Section 5).

4. Wide-scope negation

4.1 The negator ‘lo’

A negative sentence in MH typically consists of an extended predicate domain that includes *lo* followed by at least one additional linguistic element. In this, the language conforms to the overwhelming cross-linguistic tendency of syntactic negators to be positioned immediately before the predicate (Dahl 2010: 23–24). As Table 1 shows, the element that follows *lo* may belong to any part of speech, the most frequent being *benoni* participles, as in Example (1), verbs (2), adjectives (3), nouns (4), prepositional phrases (5), and pronouns (6) – where ‘sp’ identifies the particular speaker.⁶

- (1) sp1 *láma xašávtem še-hi báa le-po bediyuk /*
 why you.thought that-she coming:SG.F to-here exactly /
 ‘Why did you think she came here exactly?’
 sp2 *lo yodéa* ||
 NEG knowing:SG.M ||
 ‘(I) don’t know.’ (C711_2_sp1_085, sp2_083)
- (2) sp2 *ve-hu lo diber* ||
 and-he NEG he.spoke ||
 ‘And he **did not** speak.’
hu lo ciyec ||
 he NEG he.chirped ||
 ‘He **did not** make a sound.’ (OCD_3_sp2_040-041)

6. The transcription follows conventions specified for the *CoSIH* project rather than those specified in the *Transcription and Coding* section in order to take into account interactions between more than one speaker and to allow for prosodic analysis, as summarized below:

- | : minor boundary,
- || : major boundary,
- / : major boundary with “appeal” tone,
- : fragmentary (truncated),
- : truncated word,
- (0.5) : pause (measures in seconds),
- <non-verbal> : non-verbal sounds

- (3) sp2 *hu lo muclax yoter miday* ||
 he NEG successful more too ||
 ‘It is **not** too successful.’ (C711_2_sp2_020)
- (4) sp7 *ze lo nira li beaya | e |*
 this NEG seeming:SG.M to.me problem | uh |
 ‘It doesn’t seem like a problem to me, uh,’
la-amod ba-láyla šaatáyim šmira | bli li-šbor ota ||
 to-stand in.the-night two.hours guard | without to-break her ||
 ‘to stand at night for two hours on guard duty, without breaking it’
 (0.9) *lo e | lo le'exol | ve-lo pelefónim |*
 (0.9) NEG uh | NEG to.eat | and-NEG cellphones |
ve-lo misxakim |
 and-NEG games |
 (0.9) ‘No uh, **no** eating, and **no** cellphones, and **no** games,’
 (P423_1_sp7_082-089)
- (5) sp1 *ben xameš xameš ve-asara hu ba le-kan lehavi*
 between five five and-ten he coming:SG.M to-here to-bring
et-ha-šmot ||
 ACC-the-names ||
 ‘Between five and ten past five he comes here to bring the names.’
kol.pá'am || lo lifney ||
 everytime || NEG before ||
 ‘Every time. **Not** before.’ (P423_1_sp1_104-106)
- (6) sp5 *ze lo anáxnu* ||
 this NEG we ||
 ‘It is **not** us.’
ze ha-banot šelánu ||
 this the-girls our ||
 ‘It is the girls (in our class).’ (C714_sp5_086-087)

Examples (2), (3) and (6) are structured as bipartite negative sentences, in which the predicate domain is prefaced by a (typically pronominal) subject. Representing the norm in formal, carefully edited written language, these are typically taken as the norm in linguistic descriptions of Hebrew to this day. Informal conversation, on the other hand, abounds in utterances with a unipartite structure, which do not include any representation of the subject, such as those in Examples (1), (4), and (5).

From a communicative-pragmatic perspective, it is generally recognized that speakers use negative utterances in order to reject contextually relevant assumptions, made relevant either by explicit assertion in preceding discourse, or by the interlocutors’ assumed expectations, intentions, and stances (Depperman 2014: 22; Givón 2005: 167). In this respect, the prototypical function of negative utterances

is to provide a negative response, to object to prior content, or to refuse to comply with a directive. Example (1) illustrates a case of a negative response to a question, designed as a claim of a lack of knowledge, where the negated element *yodéa* ‘know’ is made relevant not through explicit mention, but by the very act of the first speaker’s question, which reveals the expectation that his or her interlocutor (sp2) knows the answer to the question. Example (6) demonstrates a negative utterance used to reject an aspect of prior talk not explicitly stated but implied in the present context, where the speaker (sp5), a ten-year-old boy, responds to a possible allusion made by his mother regarding his involvement in a school prank. Prior to this negative utterance, the boy’s mother had expressed her amazement that young children were capable of sending a letter to a teacher containing a threat to have her fired. Although the complaint was not directed explicitly at the speaker (sp5), he uses the negative utterance in order to reject a possible interpretation of his mother’s complaint, namely that he and his friends had played the prank.

Often, however, negation targets elements whose contextual relevance originates in the speaker’s own expectations and assumptions. This is particularly evident when a negative utterance is used to describe a particular aspect of reality in which something is lacking, implying that, in the speaker’s opinion, the negated element should have been present. This is the case in Example (2), where the speaker (sp2) complains about her boss not supporting her regarding a dispute with a colleague. The two negative utterances in this Example describe actions that were not taken by her boss, implying that, in her opinion, they should have been. Such an analysis, however, cannot be applied to the negative utterance in Example (3), where the second speaker (sp2) describes a brand of wine as being ‘not too successful’, since there is no evidence that the speaker assumed, or hoped, that it would in fact be successful. This illustrates yet another function of the negative utterance, namely providing a mitigated evaluation of some state of affairs. In such cases, the negation marker can be regarded as an instruction to mitigate rather than to eliminate the representation of the negated concept (Giora et al. 2005). In the present instance, the speaker negates an overstated positive concept *muclax yoter miday* ‘too successful’, in order to indicate the mitigated opposite of the negated concept, roughly paraphrasable as ‘fairly bad’. Evaluating a referent as ‘not too successful’ seems to convey a sarcastic attitude, and retains some of the positive aspects of the negated concept in a way that ‘fairly bad’ does not (Giora et al. 2005: 995–996).⁷

From a rhetorical point of view, speakers may use a negative utterance in order to strengthen their claim by rejecting potential counter-claims, or counter-arguments, on the part of the recipient, as illustrated in Examples (4) and (5). In (4), the speaker

7. Interestingly, such sarcastic negative utterances have been shown to be interpreted nonliterally by default (Giora et al. 2013; Giora et al. 2015).

is an officer in the course of giving a briefing before going on guard duty, where he highlights the need to perform guard duty without taking a break. In order to strengthen his claim, he rejects various activities that could qualify as taking a break – *le'exol* 'eating', *pelefónim* 'cellphones', and *misxakim* 'games'. Example (5) is taken from the same conversation in the commander's briefing, but this time the speaker is a soldier talking to a fellow soldier during the briefing, where the first speaker (sp1) claims that the soldiers' names are usually read out at approximately five o'clock, and then strengthens the validity of his claim twice – first by adding the incremental *kol pá'am* 'every time', and then by rejecting a possible counterclaim with the negating expression *lo lifney* 'not before'.

All the negative utterances in (1) through (6) were structured as sentences with an extended predicate domain consisting of the negator *lo* followed by at least one additional linguistic element. In other words, both *lo* and the negated sequence occur within the boundaries of a single sentence. In contrast to these are instances where the negated element occurs beyond the boundary of the sentence in which *lo* appears. Such instances account for 25% of all of the *lo* tokens in CoSIH, as illustrated by Examples (7) to (9) below.

- (7) sp2 *az me-éfo hem mevi'im* ||
 so from-where they bringing:PL ||
 'So, where do they bring it from?'
 (0.7) *ze rak me-ar-* --
 (0.7) this only from-un- --
 '(0.7) It's only from Uni- --
mi-drom^ amérika ||
 from-South:CS America ||
 'from South America?'
lo /
 NEG /
 'Isn't it?'
 sp1 *lo lo* ||
 NEG NEG ||
 'No, no.'
e | yeš ba-árec ||
 uh | EXT in.the-country ||
 'Uh, there is in Israel.' (C612_2_sp2_035-038, sp1_059-060)
- (8) sp2 (0.6) *mamaš lo* ||
 (0.6) really NEG ||
 '(0.6) Absolutely not.' (Y111_sp2_101)

- (9) sp3 *lo bediyuk* ||
 NEG exactly ||
 ‘Not exactly.’ (P423_1_sp3_031)

Example (7) demonstrates two different uses of the stand-alone *lo*. Prior to the exchange presented here, the speaker (sp1) had said that a particular type of meat could no longer be imported from the Palestinian Authority due to health issues. In response, Sp2 wondered where restaurants would get their meat, providing a candidate solution – South America – followed by a stand-alone *lo* utterance ending with a rising terminal boundary. Syntactically, this utterance can be regarded as a unipartite sentence with *lo* as its predicate, with the negated element ‘from South America’ found in the previous sentence. Pragmatically, such utterances can be regarded as negative tags, the function of which is to indicate the speaker’s lesser degree of commitment to the truthfulness of a statement preceding the tag, while simultaneously drawing the recipient into the conversation in order to confirm the statement (Mithun 2012; Clancy 2015: 89; Shor forthcoming). Sp1 responds with another stand-alone *lo* utterance that consists of a cluster of two *lo* tokens, and ends with a falling terminal boundary.

Stand-alone *lo* utterances ending with a falling terminal boundary are the usual option for providing a negative response to a question, or for expressing objection to prior content. Although the stand-alone *lo* utterance in most cases consists of a single *lo* token, it is sometimes realized as a cluster of several *lo* tokens, as in Example (7). Table 2 presents the distribution of such clusters in the CoSIH corpus

Table 2. Total number of *lo*-clusters in CoSIH, by size of cluster

<i>lo lo</i>	<i>lo lo lo</i>	<i>lo lo lo lo</i>	<i>lo lo lo lo lo lo lo lo</i>	Total
23	9	1	1	34

Repetition of *lo* arguably serves to intensify the negative responses, although more detailed analysis is needed to establish its exact function in such cases. In other cases, the stand-alone *lo* utterance consists of a single *lo* token, accompanied by an adverbial, the function of which is to intensify, as in Example (8) or to mitigate (9) the strength of negation.

Finally, the negator *lo* may negate two modal constructions, conveying various deontic meanings, such as prohibition, lack of necessity, or undesirability of an action. The first construction involves use of the infinitive, the second consists of an independent sentence introduced by the particle *še* ‘that’ followed by a prefix-inflected verb – as in Examples (10) through (12) below (Bar-Adon 1966; Bolozky 2013; Schwarzwald & Shlomo 2015; Inbar 2016: 304).

- (10) sp7 *la'amod be-* | *be-šingímel* | *liftóax et-ha-eynýim* | *lihyot eraniyim* |
 to.stand in- | in-gate | to.open ACC-the-eyes | to.be alert:PL |
 'To stand at the gate (of an army-camp), keep eyes open, be alert,'
 (1.0) *lo lehiša'en* | *lo yodé'a éfo* |
 (1.0) NEG to.lean | NEG knowing:SG.M where |
 '(1.0) not to lean on, I don't know where,' (P423_1_sp7_031-036)
- (11) sp3 *še-lo taki* | *li ba-óto* ||
 that-NEG you.will.throw.up to.me in.the-car ||
 'Don't you dare throw up in my car.' (OCD_1_sp3_060)
- (12) sp3 *še-lo yitnu* | *lánu élef šékel* ||
 that-NEG they.will.give to.us thousand shekel ||
 'I don't expect them to give us a thousand shekels.'
še-yitnu mila tova ||
 that-they.will.give word good ||
 'I expect them to put in a good word.' (OCD_2_sp3_033-034)

Prohibition by means of a negated infinitive is typically used in asymmetrical situations in which the speaker who issues the prohibition has the (legal/social/institutional) right to do so. Due to the mostly informal nature of the conversations in CoSIH, such a use was found only once, as shown in Example (10), which was taken from one of the few asymmetrical interactions in CoSIH, between an officer and his soldiers. Here, the officer lists various actions that the soldiers should and should not perform during guard duty. The modal *še*-construction, on the other hand, is more characteristic of informal registers, probably because it allows speakers to say that, in their opinion, the recipient should refrain from performing an anticipated action in a somewhat polite and subjective manner, often implying that the speaker could somehow be affected by the recipient's potential refusal. In Example (11), for instance, sp3 forbids sp1 from throwing up in her car, not for sp1's sake, but for the sake of her own car. In addition, this construction can be used in relation to third persons, as shown in Example (12), before which sp2 had complained about what she perceived as injustice in her workplace – each of the workers belonging to another department received 1,000 shekels as a performance bonus, whereas the workers in sp3's department did not. After the other interlocutors disagreed with her claim, sp3 used the negative utterance in Example (12) to reject a possible (dispreferred) interpretation of her complaint, namely that the reason for her frustration was money, in favor of a (preferred) interpretation, according to which she was dissatisfied with the lack of gratitude in general.

4.2 The negator ‘al’

The canonical prohibitive construction in MH involves the negative imperative, a construction that consists of the negator *al* followed by a second-person, prefix-inflected verb. In line with the cross-linguistic tendency for a specialized strategy in prohibitives (van der Auwera & Lejeune 2013; Willis et al. 2013: 44–47), this construction employs both a negator that does not occur in (indicative) declarative sentences and a verbal form that is different from the corresponding affirmative imperative.⁸ Interactionally, negative imperatives draw the participants’ attention to a possibly problematic course of action, either one that had already been initiated by one of them, or one that is projectable based on the current trajectory of the on-going interaction. In some contexts, negative imperatives may assume an evaluative character, and become the vehicle for blaming, complaining, and criticizing (Mondada 2017: 93–95).

Examples (13) and (14) demonstrate the anticipatory use of a negative imperative, in which the speaker tells the recipient to refrain from performing some anticipated action that the speaker regards as undesirable:

- (13) sp1 *al toxli* ||
 NEG you.will.eat ||
 ‘Don’t eat.’
xaval le- --
 pity to- --
 ‘It’s a pity to- --’
xaval ||
 pity ||
 ‘It’s a pity.’
ze mašmin ||
 this fattening.SG.M ||
 ‘It is fattening.’ (P311_sp1_283-285)
- (14) *ki al tiškexu* | *še-ha-nexasim ve-ha-hitxayvuyot* |
 because NEG you.will.forget | that-the-assets and-the-obligations |
 ‘Because, don’t forget, that the assets and the obligations ...’ (D932_sp2_341-342)

8. Whether the prohibitive involves a specialized verbal form when compared to the affirmative imperative is a matter of perspective, since the affirmative imperative in Modern Hebrew may be expressed via short imperative forms (both the standard imperatives characteristic of formal registers, and the so-called “new imperatives”, typically used in informal and colloquial registers), as well as by second-person, prefix-inflected verbs. For discussion of the alternation patterns of the various imperative forms, see Bar-Adon (1966), Berman (1985), Bolozky (2013), and Dekel (2014: 26–28, 102–103).

Example (13) is part of an exchange among three speakers, sp1, sp2, and sp4. Prior to the example, sp2 suggested that sp4 should taste something, but sp4 delayed accepting his offer by saying *téxef* || ‘in a moment’. Before sp4 has the opportunity to taste the substance in question, sp1 uses a negative imperative to advise sp4 not to eat it because it could cause her to gain weight. In (14), the negative imperative is employed by a lecturer in an accounting class, who tells his students not to forget some information. In so doing, the lecturer seems to be aiming at the rhetorical goal of marking the importance of the information, and drawing the students’ attention to it.

In other cases, the negative imperative can be used to treat an on-going action as problematic, or inappropriate, with the intention of halting it, with the inappropriateness of the action often being speaker-related. Examples (15) to (17) illustrate cases in which the speaker uses a negative imperative in order to criticize the recipient’s action in an attempt to prevent it.

- (15) sp2 *al texapsi li avodot* ||
 NEG you.will.search to.me tasks ||
 ‘Don’t create work for me.’
bexayáyix ||
 in.life.yours ||
 ‘By your life = Cmon!’ (C711_2_sp2_061-062)

- (16) sp2 *lo al tagid še-ha-mefaked šeli lo makir*
 NEG NEG you.will.say that-the-commander my NEG knowing:SG.M
et-ha-avoda |
 ACC-the-work |
 ‘No, don’t say that my commander doesn’t know the work,’
 (P423_1_sp2_067)

- (17) sp2 *sigáli | al talxici oti* ||
 Sigali | NEG you.will.stress.out me ||
 ‘Sigali, don’t stress me out.’ (OCD_2_sp2_131-132)

The negative imperative in (15) is aimed at sp2’s daughter, who has been trying to convince him to do some kind of repairs in their house, even after sp2 had refused repeatedly. The negative imperative in this case serves as a resource for rejecting the recipient’s attempts to make the speaker perform what he considers as unwanted actions by categorizing her attempts as creating an unnecessary task. In (16), taken from a conversation between two soldiers, the negative imperative is also used in the context of disagreement, this time as a resource for resisting an attempt to make fun of the speaker’s commander. Prior to this example, sp1 humorously mocked sp2’s commander for being inexperienced. Sp2 rejects his mockery, first by using a stand-alone *lo* utterance, followed by a negative imperative that treats sp1’s act of

speech as problematic. Example (17) was uttered during a car ride after one of the passengers remarked that she did not recognize the area in which sp2 was driving. In response, sp2 uses a negative imperative that makes the negative effect of the passenger's remark on sp2 explicit, so manifesting disagreement.

Occasionally, a negative imperative may consist of a stand-alone *al* relating to an action that is not verbalized by the speaker, but is inferred from the context of the interaction, as in Example (18), from Dekel (2014: 170):

- (18) sp1 *ani roca lenasot et-ze* |
 I wanting:F.SG to.try ACC-this |
 'I want to try it,'
 sp2 *al* |
 NEG |
 'Don't (try it)' (Dekel 2014: 170)

Verbalizing only the negator *al* seems to intensify the act of prohibition, although analysis of a larger corpus with more examples would be needed to establish the exact function of the stand-alone *al* utterance.

4.3 The negator 'en'

In line with the cross-linguistic tendency to use a special negation strategy in existential constructions (Veselinova 2013: 116–117), Modern Hebrew employs the particle *en* in order to convey non-existence, or non-possession, typically as a negative counterpart to the existential particle *yeš*.⁹ As shown in Table 1, the negator *en* typically negates nouns, but may also negate words belonging to other parts of speech, such as pronouns, adverbs, and infinitive question-clauses.

A prototypical configuration of a negative existential utterance consists of the negator *en*, followed by the element whose existence it denies. Typically, the existence of a referent is *not* previously asserted with the negative utterance denying it, but rather the negative utterance provides some new information about the non-existence of a referent, contrary to what might have been expected or desired.

- (19) sp1 *en acirot metuxnanot* ||
 NEG.EXT stops planned:F.PL ||
 'There are no planned stops.' (OCh_sp1_150)

9. The particle *yeš* 'there is' is morphologically unique and is not inflected in past and future tenses. In these tenses, *yeš* is supplented by the past and the future forms of the verb *haya* 'to be'. These forms can then be negated using the particle *lo*, resulting in the suppletive pattern *en* 'there is not' / *lo haya* 'there was not' / *lo yihye* 'there will not be'.

- (20) sp1 *v-* | *lifney šavú'a* | (0.4) *test* | *xalak* ||
 and- | before week | (0.4) test | smooth ||
 'And a week ago, (0.4) it easily passed the periodic inspection.'
xalak ||
 smooth ||
 'Easily.'
en tikunim ||
 NEG.EXT repair ||
 'No repairs.' (Y34_sp1_410-415)
- (21) sp2 *réga en šam kviš normáli* /
 moment NEG.EXT there road normal:SG.M /
 'Wait, **are there no** normal roads there?' (OCh_sp2_060)

Prior to Example (19), sp2 was wondering why the bus that sp1 had taken on his trip in Mongolia kept stopping to take on more people. The negative existential in (19) provides the answer to the question by negating the existence of planned stops for a bus, an assumption presumably held by sp2. In Example (20), sp2 evaluates her own car positively by describing the low cost of maintaining it because it rarely needs repairs. She first says that the car had passed the periodic test easily, and then strengthens her point by negating the existence of any repairs. The negative existential in this case functions rhetorically as a resource strengthening a speaker's claim by rejecting potential counter-claims or counter-arguments.¹⁰ Negative existentials, as with negative sentences in general, can be realized as negative yes/no questions that typically embody the expectation of a positive answer (Burstein 1999: 40–41; Sadock 2012: 113). In (21), for example, the negative yes/no question serves as a response to the prior speaker having said that the bus he had taken in Mongolia was 'jumping'. In such a use, sp2 does not negate the existence of the referent *kviš normáli* 'normal road', but rather conveys his preexisting assumption that there should be normal roads in Mongolia, and consequently his surprise at the fact that there are not.

In addition to the negator *en* and the negated element, negative existential utterances often include a dative complement marked by the preposition *le* 'to', in which case the utterance is understood to convey not a lack of existence, but a lack of possession, with the possessor being verbalized by the dative complement (Kuzar 2012: 87–88; Halevy 2013: 660). Pronominal possessors tend to follow the negator *en*, unless they are used contrastively, in which case they appear in the sentence-initial position, as in (22) to (24).

10. This function was also demonstrated in Examples (4) and (5).

- (22) sp1 *hi kol ha-xayim memaménet et-acma* ||
 she all the-life financing:SG.F ACC-herself ||
 ‘All her life she has been supporting herself.’
en la ezra me-ha-horim ||
 NEG.EXT to.her help from-the-parents ||
 ‘She **doesn’t** have help from her parents.’ (Y33_sp1_037-038)
- (23) sp1 *boy en lánu zman* ||
 come:IMP.SG.F NEG.EXT to.us time ||
 ‘Come, we **don’t** have time.’ (C842_sp1_254)
- (24) sp1 *le-yariv haya ma lehafsid* ||
 to-Yariv was what to.lose ||
 ‘Yariv had something to lose.’ (6 prosodic units omitted)
 sp1 *lahem ulay en kolkax ma lehafsid* ||
 to.them maybe NEG.EXT so.much what to.lose ||
 ‘Maybe they **don’t** have so much to lose.’ (Y311_sp1_170)

In (22), sp1 describes the unfortunate financial condition of a friend by reporting that she had been supporting herself her entire life. To make her point more valid, sp1 mentions the non-existence of any parental help that this friend might have received. Similarly, the negative existential in (23) stands in relation to the speaker’s prior utterance. In this case, sp1 urges sp2 to hurry up so that they could leave the house, and justifies his urging by mentioning their lack of time. The dative complements in both of these examples – *la* ‘to her’ and *lánu* ‘to us’ – were realized in their canonical post-negator position. In contrast to these is (24), in which the dative complement *lahem* ‘to them’ is realized sentence-initially as part of a contrastive structure. In this example, sp1 sets a contrast between two instances of affairs that ended differently – a man (Yariv) who did not leave his wife because he had a lot to lose, and a man and a woman (*lahem* ‘to them’) who left their respective spouses because they did not have a lot to lose. Note also that, in (24), the negated element is not a noun, but an infinitival complement *ma lehafsid* ‘what to lose’.

All the negative utterances in (19) to (24) were structured as sentences with an extended predicate domain with the negator *en* followed by at least one additional linguistic element. In other words, both *en* and the negated sequence occur within the boundaries of a single sentence. In contrast, in some instances the negated element is found beyond the boundary of the sentence in which *en* appears, accounting for 20% (= 31/158) of all of the *en* tokens in CoSIH – as illustrated in (25) below.

- (25) sp2 *ve-yeš gam mirpéset* ||
 and-EXT also balcony ||
 ‘And there is also a balcony.’
 sp1 (0.4) *ba-salon en* ||
 (0.4) in.the-living.room NEG.EXT ||
 ‘(0.4) In the living room **there isn’t**.’ (C842_sp2_087, sp1_070)

Prior to the excerpt in (25), the speakers were discussing their friends’ apartment with the intention of renting a room. While attempting to recall the structure of the apartment, sp2 argued that there was a balcony in the living room, to which sp1 objected, using a negative existential utterance *ba-salon en* ‘in the living room (there is) not.’ The negator *en* functions as the predicate in this sentence, with the negated element ‘balcony’ in the previous sentence.

5. Narrow-scope negation

As mentioned earlier (§2), the scope of negation may be focused by employing specific constructions, possibly accompanied by other structural devices that further narrow down the part of the sentence falling under the scope of negation. These constructions are illustrated in §§5.1 to 5.2 below.

5.1 Contrastive negation

Contrastive negation constructions normally involve two components: rejection of an accessible background assumption or an accessible claim in the discourse, and its substitution by an alternative claim (McCawley 1991; Bardenstein in preparation). The scope of negation in the first component is clarified retrospectively by the second component, possibly in conjunction with contrastive prosody on the element under scope, or by positioning the negator before the negated element.

- (26) sp3 *ve-gam lo xanit po* ||
 and-also NEG you.parked here ||
 ‘And you **did not** park here either.’
xanit lemála ||
 you.parked up ||
 ‘You parked up the street.’ (OCD_3_sp1_039-040)
- (27) sp2 *yoce soššavúa lo ha-karov | ha-ba* ||
 going.out:SG.M weekend NEG the-upcoming | the-next ||
 ‘It’ll be **not** the upcoming weekend, but the next.’ (OCD_2_sp2_086-087)

- (28) sp3 *ani lo mecapa še-yavóu ve-yitnu li*
 I NEG expecting:SG.F that-they.will.come and-they.will.give to.me
bet.malon |
 hotel |
 ‘I do not expect them to come and give me (a vacation in) a hotel’
ani mecapa še-yavóu ve-yagídu et-ha-mila
 I expecting:SG.F that-they.will.come and-they.will.say ACC-the-word
toda ||
 thank.you ||
 ‘I expect them to come and say the word thank you.’
 (OCD_2_sp3_046-047)

In (26), for example, the first component includes the negator *lo* in its canonical preverbal position, which theoretically allows several scope readings. However, the element under scope *po* ‘here’ is indicated both by contrastive prosody, as well by the second component that provides an alternative – *lemála* ‘up’ – to the rejected element. In (27), the first component includes the negator *lo* in a non-canonical position, separating the head of the noun phrase *sořsavúa* ‘weekend’ from its modifier *ha-karov* ‘the upcoming’. Such a position for the negator unambiguously defines the latter as the element under scope, in conjunction with giving it prosodic prominence. The ensuing second component that provides the alternative *ha-ba* ‘the next’ further substantiates the fact that *ha-karov* ‘the upcoming’ was indeed under the scope of negation. As in (26), the negator *lo* in (28) is positioned in its canonical preverbal position, which theoretically allows several scope readings, particularly due to the complexity of the sentence. The prosodic prominence of *bet^malon* ‘house:cs residence = hotel’ restricts the possible scope of negation somewhat. However, only on production of the second component is the scope understood to be *yitnu li bet.malon* ‘(they) will give me a hotel (vacation)’, which is understood as a way of displaying gratitude to an employee by material means in this context. This interpretation is further strengthened by the prosodic prominence of *toda* ‘thank you’. These examples show that negative scope can be determined unequivocally only after more talk has been produced. This suggests that in order to interpret negative scope, recipients have to constantly monitor not only the unfolding of the negative sentence, but also the unfolding of ensuing talk (Ono & Thompson 2017: 555).

It would be interesting to explore the ways in which the second component ‘resonates’ (Du Bois 2014) with the first. Examples (26) to (28) demonstrate the potential variability that exists in this regard – from (27) in which the second component minimally resonates with the first simply by replacing *ha-karov* ‘the upcoming’ with *ha-ba* ‘the next’, to (26) that resonates more with the second component

repeating the inflected verb-form *xaníta* ‘you parked’ and replacing the locative *po* ‘here’ by *lemála* ‘up’, and on to (28), which displays even more significant resonance by reproducing large portions of the first component.

5.2 Preposing

A preposing (also called ‘object fronting’) construction is generally defined as a sentence structure in which a phrasal constituent that normally follows the predicate is positioned in a non-canonical position, typically sentence initially. The information conveyed by the preposed constituent constitutes a discourse-old anaphoric link to the preceding discourse through various types of relations (type/subtype, entity/attribute, part/whole, or identity). Two varieties of such a construction are usually identified: *focus preposing*, in which the preposed constituent contains the focus of the utterance and bears the nuclear accent, and *topicalization* that involves a preposed constituent other than the focus (Ward & Birner 2004: 158–160). Preposing in negative sentences re-arranges the material under negative scope, since the preposed constituent remains semantically under the scope of negation, although it is positioned before the negator.

Examples (29) to (31) illustrate negative utterances that manifest focus preposing. Common to these examples is the fact that the initial constituent is the focal element in the utterance, whereas the rest of the utterance conveys information that is accessible from prior discourse:

- (29) sp1 *lo hicláxti lehitrakez | be-klum ||*
 NEG I-succeeded to.concentrate | in-nothing ||
 ‘I wasn’t able to concentrate on anything.’
ke’ílu | lirot séret be-televízya lo hicláxti lehitmaked ||
 like | to.see movie in-television NEG I.succeeded to.focus ||
 ‘Like, watching a movie on TV I wasn’t able to focus.’
 (P931_1_sp1_093-096)

- (30) sp1 *hi kona axšav óto ||*
 she buying:SG.F now car ||
 ‘She’s buying a car now.’ (2 prosodic units omitted)
aval gam esrim élef en la ||
 but also twenty thousand NEG.EXT to.her ||
 ‘But she **doesn’t** even **have** twenty thousand (shekels).’ (Y34_sp1_197-199)

In (29), from a conversation between a soldier and an officer, sp1 (the soldier) describes how his personal problems have affected him to the extent that he could not concentrate on anything, even on activities that do not normally require a

high level of concentration, such as watching television. The negative utterance *lirot séret be-televizya lo hicláxti lehitmaked* || ‘watching a movie on TV I wasn’t able to concentrate’ demonstrates focus preposing in that its initial constituent *lirot seret be-televizya* ‘watching a movie on TV’ conveys the focal information in the utterance (also marked by pitch prominence), whereas the remaining part of the utterance conveys information that was verbalized explicitly in the previous utterance. (30) shows a similar structure, this time in a possessive utterance. Prior to this example, sp1 described the unfortunate financial condition of a friend, and then provides another example by saying that she does not even have enough money to buy a car. The negative utterance *aval gam esrim élef en la* || ‘Even twenty thousand (shekels) she doesn’t have’ demonstrates focus preposing since its initial constituent *esrim élef* ‘twenty thousand (shekels)’ conveys the focal information in the utterance (also marked by prosodic prominence and the focus particle *gam* ‘also, even’), whereas the remaining part of the utterance conveys information that was verbalized explicitly in the previous discourse.

Another type of focus preposing involves the preposing of the negator *lo* within a negative cleft construction in which *lo* and the sentence it negates are separated by the particle *še* ‘that’, as in (31).¹¹

- (31) sp2 zo da'ati ha-išit al t- --
 this my.opinion the-personal NEG- --
 ‘That is my personal opinion, don’t- --’
zot.oméret xivuy.de'a šeli ||
 I.mean judgement my ||
 ‘I mean my judgement.’
lo še-dibárti im mišehu | ve-lo šum.davar ||
 NEG that-I.talked with someone | and-not nothing ||
 ‘It is **not** that I spoke to someone, or anything.’ (P931_3_sp2_187-191)

This construction has the rhetorical/argumentative function of excluding potentially dispreferred understandings of the speaker’s prior words, which may be perceived as face threatening, or simply evoking a possible counterargument to the speaker’s overall argument. For example, in (31), the utterance *lo še-dibárti*

11. In this construction, the negator *lo* is traditionally analyzed as the predicate, and the sentence that follows the particle *še* ‘that’ is seen as a nominalized subject (Bar 2009: 349; Zewi 1998: 45–46). The analysis pursued in this chapter diverges from such an account in that it views the entire construction as constituting an extended predicate domain with *lo* ‘not’ as its nucleus. Furthermore, the negator *lo* may occasionally be preceded by a demonstrative pronoun *ze* ‘this’, which functions as a subject. Although several scholars have suggested functional explanations for the presence of such a demonstrative in the cleft construction (Halevy 2006: 292), more research is needed to establish its exact function.

im míšehu | ‘(It is) not that I spoke to anyone’ is uttered after sp2 told sp1 that he may be released from the army on medical grounds, probably in order to hedge or downgrade it, since such a decision is outside of sp2’s authority.

Examples (32) to (34) demonstrate instances of negative utterances that manifest topicalization. Common to these examples is the fact that the initial constituent conveys the non-focal element information of the utterance, one that is typically recoverable from prior discourse. Separating this information from the rest of the negative predicate gives the remaining focal part of the negative predicate more prominence:

(32) sp2 *sorbe ani lo nogé’a* | *bexayáyix* ||
 sorbet I NEG touching:SG.M | come.on ||
 ‘Sorbet I **don’t** touch, come on.’ (C711_3_sp2_064-065)

(33) sp2 *álef | lo mexó’eret | lo- --*
 first | NEG ugly | NEG- --
 ‘First, not an ugly one, not-’
yafa ani lo roce | *lo mexó’eret* ||
 pretty I NEG wanting:SG.M | NEG ugly ||
 ‘Pretty I **don’t** want, not an ugly one.’ (P423_2_sp2_135-139)

(34) *android N: mahapexa ze lo. az ma ken?*
 android N: revolution this NEG. so what yes?
 ‘Android N: A revolution it **isn’t**. So what is it?’
 (<https://www.haaretz.co.il/captain/gadget/.premium-1.2879096>)

The utterance in (32) was uttered by sp2 in response to his daughter’s suggestion to take him to an ice-cream parlor that has delicious varieties of sorbet. The initial constituent *sorbe* ‘sorbet’ is non-focal since it was mentioned previously by sp2’s daughter, whereas the remaining part of the utterance *ani lo nogé’a* ‘I don’t touch’ conveys the focal information, namely sp2’s aversion to this flavor. In (33), sp2 lists the first criterion that a woman he goes out with on a date should satisfy, namely that she should not be ugly. He then uses the topicalized negative utterance *yafa ani lo roce* ‘Pretty I don’t want’ in order to address a potential misinterpretation of his words, namely that his expectation are too high. Thus, the initial constituent *yafa* ‘pretty’ is non-focal because it is associated with the overall theme of describing external appearance, whereas the remaining part of the utterance *ani lo roce* ‘I don’t want’ conveys the focal information, namely sp2’s denial of the potential misinterpretation of his earlier words. A somewhat more rhetorical instantiation of this construction involves the negative evaluation of a previously mentioned referent with regard to one of its salient attributes. The initially positioned element, which represents a high value on the scale of that attribute, is negated, implying

sarcastically that the referent in fact possesses a very low degree of that attribute (Altman 1999; Birner & Ward 1998: 65–77; Giora et al. 2013: 90). This structure is shown in (34), taken from the title of an on-line newspaper article, which evaluates the new android model negatively with regard to its innovativeness. The initial constituent, *mahapexa* ‘revolution’, represents a high value on the ‘innovativeness’ scale, presumably reflecting an expectation of the new model. This expectation is subsequently denied by the remaining part of the utterance *ze lo* ‘it’s not’, in which the act of denial is compressed to the minimum by using only the negator *lo*.

6. Negative indefinites

Cross-linguistically, negative indefinites are regarded as a subtype of negative polarity items (NPIs) – items that tend to appear only in non-assertive contexts such as negation, interrogatives, the protases of conditionals, and comparative sentences (Ladusaw 1996; Miestamo et al. 2015: 26; Willis et al. 2013: 28). In Modern Hebrew, however, negative indefinites are restricted to negative contexts, whereas a distinct series of indefinites is employed in non-negative contexts. The primary negative indefinites found in CoSIH include the following: *šum* ‘no’/‘any’, *šum davar/klum* ‘no/any-thing’, *afexad* ‘no/any-one’, and *af pá’am/baxayim* ‘no time/ in life = n(ot)ever’.

There is a cross-linguistic tendency for negative indefinites to co-occur with syntactic negators within the limits of a single sentence expressing a single negation (Haspelmath 2013), a phenomenon that is often dubbed ‘negative concord’. Modern Hebrew follows this tendency since its indefinites typically co-occur with syntactic negators. In two contexts, indefinites may be used without accompanying negation, as responses to prior utterances, typically as answers to questions, and in emphatic contexts, typically for *klum* or *šum davar* ‘nothing’ (Keren 2015: 184). This tendency is reflected in the data from CoSIH, as shown in Table 3 below:

Table 3. Co-occurrence of negative indefinites with explicit negation

	‘no’/‘any’	‘no/any-thing’	‘no/any-one’	‘never’
	<i>šum</i>	<i>šum davar/klum</i>	<i>afexad</i>	<i>af pá’am/baxayim</i>
Explicit negation	16	41	16	10
No explicit negation	–	17	–	–
Total	16	58	16	10

As is apparent from Table 3, negative indefinites normally co-occur with explicit markers of negation within the sentence boundaries, illustrated by (35) to (38) below.

- (35) sp1 *ex ata oxel et-ha-glída hazóti* ||
 how you eating:SG.M ACC-the-icecream this ||
 ‘How do you eat this ice-cream?’
en le-ze šum tá’am šel glída bixlal ||
 NEG.EXT to-this no taste of icecream at.all ||
 ‘It **doesn’t** taste like an ice-cream at all.’ (C711_3_sp1_022-023)
- (36) sp1 *haláxti lehadig et-ze páam rišona | šum.davar lo avad* ||
 I.went to.present ACC-this time first | **nothing** NEG he.worked ||
 ‘I went to present it for the first time, **nothing** worked.’
 (C612_4_sp1_018-019)
- (37) sp1 *merov še- | af.exad lo koret otam* |
 because that- | **no.one** NEG cutting:SG.M them |
ve-af.exad lo nimca šam |
 and-**no.one** NEG present:SG.M there |
 ‘Since **no one** cuts them (the trees) down, and there is **no one** there,
ha-ecim | mizdaknim | ve-noflim ||
 the-trees | getting.old:PL | and-falling.down:PL ||
 ‘the trees get old, and fall down.’ (OCh_sp1_393-398)
- (38) sp2 *hu sam xardal | máze ta’im | baxayim lo axálti kaze* ||
 he he.put mustard | so tasty | **never** NEG I.ate like.that ||
 ‘He put some mustard, so tasty, I have **never** eaten like that.’
 (C711_1_sp2_039-041)

In each of the examples in (35) to (38), the negative indefinite co-occurs with a syntactic negator. Pragmatically, negative indefinites are often used by speakers as intensifiers which, in conjunction with other intensifying resources, contribute to the construction of emotivity and involvement in discourse. This is the case in (38), from a short narrative about a delicious mustard that sp2 had encountered during one of his trips. After sp2 rated the mustard as delicious, he further intensified his evaluation via the negative utterance *baxayim lo axálti kaze* ‘in-life no(t) I ate like-that ‘I’ve never eaten (one/some) like that in my life’.

Examples (39) and (40) illustrate two contexts in which negative indefinites do not necessarily co-occur with a negative particle within the sentence boundaries (in everyday colloquial, so-called non-normative) usage :

- (39) sp3 *ma hi amra* /
 what she said /
 ‘What did she say?’
 sp2 *klum* ||
nothing ||
 ‘**Nothing**.’ (C711_4_sp3_042, sp2_084)

- (40) sp2 *šloš meot šlošim dolar* ||
 three hundred thirty dollar ||
 ‘Three hundred and thirty dollars.’
le- | arbaa lelot ||
 to- | four nights ||
 ‘For four nights.’
 sp1 *ze k- -- ze klum* ||
 this n- -- this **nothing** ||
 ‘That’s **nothing**.’ (Y33_sp2_066-068, sp1_103-104)

In (39), the negative indefinite *klum* ‘nothing’ functions as a response to a content question, in which case the presence of a syntactic negator is not required.¹² In addition, the negative indefinite *klum* can be used in a context in which it characterizes a previously described object or situation as possessing the lowest degree of some attribute. In example 40, after sp2 mentions the cost of her upcoming vacation, sp1 responds with the utterance *ze klum* || ‘It’s nothing’, meaning that the price is very low.

7. Negation and prosody

Pertinent to any description of linguistic phenomena in spoken language is their prosodic realization. The prosodic realization of negation, and particularly the prominence of syntactic negators, has attracted scholarly attention. Initially, it was hypothesized that, since negators convey cognitively critical information, they would be prosodically prominent, a hypothesis that was supported by early studies conducted on informative registers or isolated read sentences (Hirschberg 1993; O’Shaughnessy & Allen 1983). However, negatives not only provide crucial cognitive information, but are also implicated in expressing social agreement and disagreement. Based on such an interactional perspective, it has been shown that the prosodic prominence of negation is influenced by the interaction type – in socially supportive interactions (such as friendly face-to-face conversations), negatives tend to be prosodically reduced, whereas in adversarial/confrontational interactions (such as political interviews, courtroom interactions, and political debates), negatives are more likely to be prominent (Hedberg & Yaeger-Dror 2008; Yaeger-Dror 1985, 1996, 2002; Yaeger-Dror et al. 2011; and citations therein).

The only study known to this author that addresses the prosody of negation in spoken Modern Hebrew was conducted by Ozerov (2010: 72–78) as part of his

12. In formal registers, such a response is more typically formulated with a syntactic negator, e.g., as *lo xlum*.

research on accent and information structure in spontaneous Modern Hebrew conversations based on recordings from the Corpus of Spoken Israeli Hebrew (CoSIH). He found that some of the negators were prosodically prominent, whereas others were not. The former occurred mainly found in contexts in which the negation of the predication was in focus, whereas the negated material was discourse-old, such as when the negative utterance served as an answer to the opposite proposition or as an agreement with a previously negated preposition. Prosodically prominent negators were also found in utterances that negated textually non-recoverable propositions, attributable to the interlocutors' set of expectations, intentions, and stances.

Prosodically prominent negators occur in the earlier examples (19), (12), and (6), reproduced below, along with their prosodic charts, presented in Figures 1, 2, and 3, respectively.

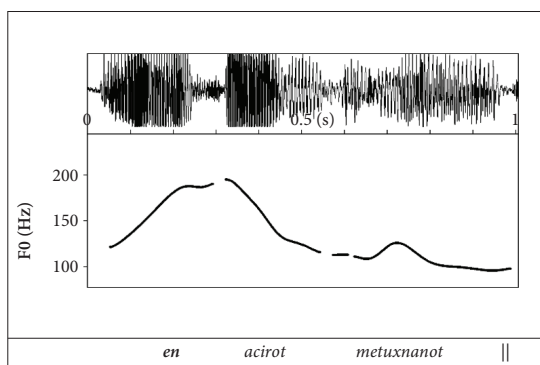


Figure 1. Prosodic diagram of (19)

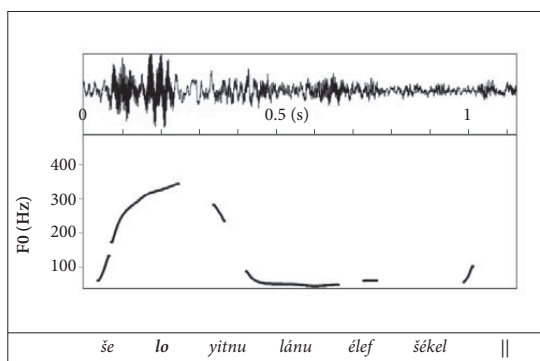


Figure 2. Prosodic diagram of (12)

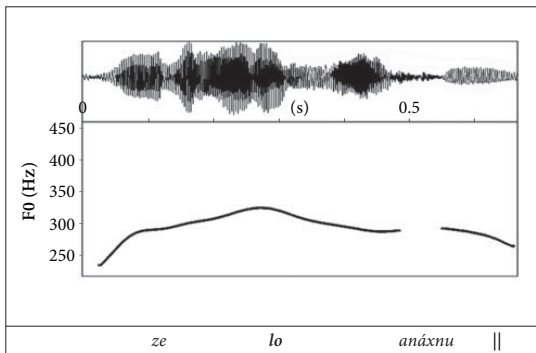


Figure 3. Prosodic diagram of (6)

- (19') sp1 *en acirot metuxnanot* ||
 NEG.EXT stops planned:PL.F ||
 'There are no planned stops.' (OCh_sp1_150)

Prior to (19), sp2 had expressed his surprise at a particularly long bus journey sp1 had taken during his trip in Mongolia, proposing that the bus probably stopped frequently in order to take on more people. In response, sp1 produces the utterance in (19) in order to negate the existence of planned stops for a bus, an assumption that underlies sp2's surprised reaction. As can be seen in Figure 1, the negator *en* is the most prominent element in the utterance, both in pitch and in intensity, pointing to its focal status as the element that conveys the crucial information in the utterance. The negated material, by contrast, is prosodically less prominent, suggesting that it conveys non-focal, or thematic, information. The prosodic prominence of the negator in example 19 does not seem to be influenced by the interaction type, since it was extracted from a conversation between a father and a son about the son's trip to Mongolia, and can thus be characterized as supportive and friendly.

Example 12, by contrast, demonstrates an instance of a prosodically prominent negator within a confrontational interaction:

- (12') sp3 *še-lo yitnu lānu élef šékel* ||
 that-NEG they.will.give to.us thousand shekel ||
 'I don't expect them to give us one thousand shekels.'
še-yitnu mila tova ||
 that-they.will.give word good ||
 'They should put in a good word.' (OCD_2_sp3_033-034)

Prior to Example (12), sp2 had complained about what she perceived as injustice in her workplace – each of the workers belonging to another department received a thousand shekels as a performance bonus, whereas the workers in sp3's department did not. The other interlocutors, however, responded non-supportively by disagreeing with her claim. In response, sp3 uses the negative utterance in (12), which functions on two levels: First, it rejects a possible (dispreferred) interpretation of her complaint, namely that the reason for her frustration is money, in favor of a (preferred) interpretation, according to which she is dissatisfied with the lack of gratitude in general. Second, it conveys a stance that is unaligned with the stance expressed by previous speakers. The prosodic prominence of the negator (as shown in Figure 2) can be motivated by resorting to these levels – informationally, the negator is marked as focal, conveying critical information in the utterance, whereas the negated material is marked as non-focal information that is potentially derivable from sp3's prior words; interactionally, the negator is marked as conveying disagreement in the context of a confrontational interaction.

Example (6') illustrates another instance of a prosodically prominent negator in the context of disagreement:

- (6') sp5 *ze lo anáxnu* ||
 this NEG we ||
 'It's **not** us.'
ze ha-banot šelánu ||
 this the-girls our ||
 'It is the girls (in our class).' (C714_sp5_086-087)

The negative utterance in (6) was produced by sp5, a ten-year-old boy, in order to reject a possible interpretation of his mother's complaint, in which she expressed her amazement that young children were capable of sending a letter to a teacher containing a threat to have her fired. As seen in Figure 3, the negator *lo* is prosodically prominent in terms of intensity and pitch, whereas the negated element *anáxnu* 'we' is prosodically reduced. The prominence of the negator seems to be motivated both by its focal status as conveying the crucial information in the utterance, and by the fact that the utterance is used to convey disagreement with a prior allusion.

Nevertheless, it is not unusual for a negator to be prosodically reduced, as illustrated in (4) and (21) reproduced below along with their prosodic charts, presented in Figures 4 and 5, respectively. This may occur, for instance, when the information conveyed by the negator is not discourse-new, in contrast to information conveyed by the negated element. This situation is illustrated in Example (4).

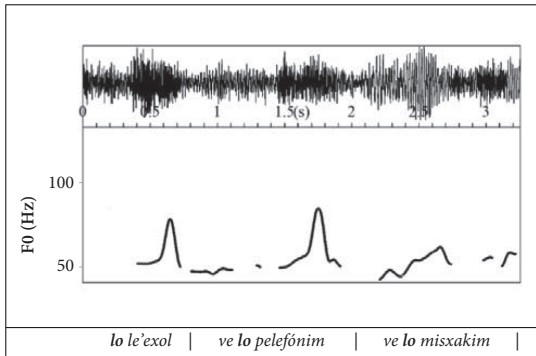


Figure 4. Prosodic diagram of (4)

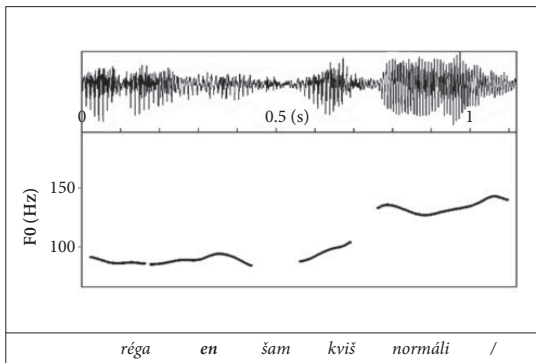


Figure 5. Prosodic diagram of (21)

- (4') sp7 ze lo nira li be'aya | e |
 this NEG seeming:SG.M to.me problem | uh |
 'It doesn't seem like a problem to me, uh,'
 la'amod ba-láyla šaatáyim šmira | bli lišbor ota ||
 to.stand in.the-night two.hours guard | without to.break her ||
 'to stand for two hours at night doing guard duty, without breaking it.'
 (0.9) lo e | lo le'exol | ve-lo pelefónim | ve-lo
 (0.9) NEG uh | NEG to.eat | and-NEG cellphones | and-NEG
 misxakim |
 games |
 (0.9) no uh, no eating, and no cellphones, and no games,'

(P423_1_sp7_082-089)

The negative utterances in (4) were said by an officer to a group of soldiers who were preparing to go on guard duty. Prior to the example, sp7 stressed the significance

of performing guard duty without taking a break, and the ensuing negative utterances serve to strengthen his claim by rejecting various actions that could qualify as taking a break. In contrast to what was shown in Examples (19), (12), and (6), the negator *lo* in each of the utterances in (4) is prosodically reduced, whereas the negated elements are prosodically prominent. The reason for this seems to be informational – the meaning of prohibition, conveyed by the negator *lo*, is not discourse-new at this point, since it had already been conveyed by sp7 in relation to guard duty in general, prior to Example (4). The negated elements, in contrast, are discourse-new at this point, and are prosodically marked as such.

Negators may also be prosodically reduced in utterances that, despite the presence of a syntactic negator, do not, pragmatically, reject anything. This is the case in negative yes/no questions as repeated in (21’):

- (21’) sp2 *réga en šam kviš normáli* /
 moment NEG.EXT there road normal:SG.M /
 ‘Wait, are there no normal roads there?’ (OCh_sp2_060)

The negative yes/no question in (21) serves as a response to the prior speaker saying that the bus he had taken in Mongolia was ‘jumping’. By using a negative yes/no question, sp2 does not, in fact, negate the existence of the referent *kviš normáli* ‘normal road’, but asks for a confirmation of his preexisting assumption that there should be normal roads in Mongolia instead. This may explain the non-prominent prosodic realization of the negator *en*, as seen in Figure 5.

8. Negation-based discourse markers

Negative response particles have been shown to have developed discursive functions labeled ‘discourse markers’ or ‘prefaces’ in several languages, including English (Lee-Goldman 2011; Raclaw 2013), Spanish (Vázquez Carranza 2017), Korean (Kim 2015), Estonian (Keevalik 2012), and Japanese (Hayashi & Kushida 2013; Nishi 2019). In these functions, negative particles do not convey disagreement with, or rejection of, some explicit material in the immediately prior to the turn, but target implicit aspects of that turn, indexing topic transitions, misunderstandings, conflicts in turn-taking, and resistance to presuppositions.

In line with these findings, the negator *lo* can be shown to function, in some of its occurrences, as a discourse marker that indexes resistance to implied aspects of the prior turn on the part of the speaker, or a misunderstanding of the speaker’s prior turn (Shor forthcoming). These two functions are demonstrated in (40) and (41) respectively:

- (40) sp2 *ata moxer rišayon /*
 you selling:SG.M license /
 ‘Do you sell the license?’
 sp1 *lo lo ||*
 NEG NEG ||
 ‘No no.’
káxa ||
 like.this ||
 ‘It’s like this.’ (C612_4_sp2_108, sp1_131-132)
- (41) sp2 *le’umat.zot hayíti be-elgaučo |*
 by.contrast I.was in-El.Gaucho |
 ‘By contrast, I was in El Gaucho (restaurant),’
 sp1 *lo ||*
 NEG ||
 ‘No.’
le-elgaučo lo | asur ||
 to-El.Gaucho NEG | forbidden ||
 ‘To El Gaucho, no, it’s forbidden.’
asur laléxet ||
 forbidden to.go ||
 ‘You mustn’t go there.’
 sp2 *lo ||*
 NEG ||
 ‘No.’
ze xaver | še-oved iti ||
 this friend | that-working:SG.M with.me ||
 ‘It’s a friend who works with me.’ (C612_2_sp2_015-018, sp1_014-017)

In (40), sp1’s utterance *lo lo ||* ‘No no.’ is uttered in response to the question posed by sp2. However, it is not meant to be taken as a negative response to the question, since in the ensuing segment, sp1 says that he does, in fact, sell the license, but that the price varies according to the circumstances. The utterance *lo lo ||* ‘No no.’ then appears to be indexing that the answer to the yes/no question might not be as straightforward as might be expected from the design of the question. Similarly, although sp2’s utterance *lo ||* ‘No.’ in (41) is responsive to sp2’s strong disagreement to dining at El Gaucho restaurant, expressed in the prior turn, it is not meant to object to that disagreement. Instead, judging from the ensuing part of sp2’s turn, sp2 seems to be indexing a possible misunderstanding of his prior turn – namely, that he was the one who went to that restaurant, as is understood from his prior turn, and not someone else, as is shown to be the case in his subsequent correction.

Another, seemingly paradoxical, use of the negators *lo* and *en* involves their use as affirmative intensifiers, particularly in contexts of heightened emotion. Example 42 illustrates one such token of *en*:

- (42) sp1 *hitlabáteti ma laasot* ||
 I.had.doubts what to.do ||
 ‘I wasn’t sure what to do.’
ve-az higía ha-hacaa hazot ||
 and-then she-came the-offer this ||
 ‘And then came this offer.’
ve-az pitom at nosáat ||
 and-then suddenly you going:SG.F ||
 ‘And then suddenly you’re going.’
 (0.5) *ve-ze | bediyuk | e | (0.3) en* ||
 (0.5) and-this | exactly | uh | (0.3) NEG.EXT ||
 ‘(0.5) And this is, exactly, uh, (0.3) No.’
ze ha-kol e | (0.3) lo stam ha-nesi’a hazot nidxeta |
 this the-all uh | (0.3) not just the-trip this she.was.delayed |
 [...] *mi=yúni* ||
 [...] from=June ||
 ‘All of this is, uh, (0.3) It’s not by chance that the trip was postponed from June.’
 (0.4) *ki ze hitim le-mášehu* ||
 (0.4) because this he.suited to-something ||
 ‘(0.4) Because it happened for a reason.’ (Y32_sp1_067-079)

Example (42) is taken from a segment in which the interlocutors are talking excitedly about their upcoming trip to Thailand. Here, sp1 expresses her belief that postponing the trip occurred for a reason, since she was able to find a temporary job by the new date, and her friend (the recipient) could join her then. In the middle of this description, sp1 employs the negator *en* as an intensifier that, in conjunction with other resources, contributes to the display of sp1’s emotive involvement in her belief that everything occurs for a reason. The heightened emotivity is also reflected in the prosodic realization of the discourse marker *en*, which is uttered with an extra-high pitch peak, as seen in Figure 6:

This development of a negator into an intensifier is intriguing: After all, how could a negative morpheme that originally *reversed* some state of affairs come to be used as an intensifier that emphasizes, indeed affirms, the speaker’s strong feelings regarding that same state of affairs? One possible explanation would be that, in order to strengthen and intensify their claims, speakers use stand-alone negators

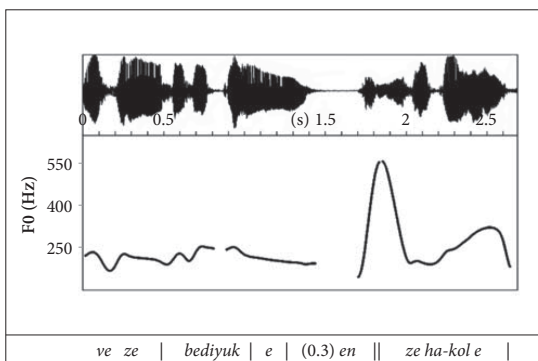


Figure 6. Prosodic diagram of (42)

that, in some cognitive level, reject potential and anticipated objections to those claims on the part of the recipient.

In addition, syntactic negators may also form part of more complex discourse markers, such as ones that have emerged from various clausal constructions. Two examples of such discourse markers are *ani lo mevin/a* ‘I don’t understand M/F’ (Polak-Yitzhaki & Maschler 2016), and *loydeal/loyjdat* ‘I dunno M/F’ (Maschler 2017) – discourse markers that have evolved from a negative subject–predicate construction with a mental verb. As discourse markers, these constructions do not express a lack of understanding or a lack of extralinguistic knowledge, but instead have metalingual interpretations in the contexts in which they occur. The discourse marker *ani lo mevin/a* to ‘I don’t understand M/F’ conveys the speaker’s puzzled or critical stance towards previous or upcoming talk. The discourse marker *loydeal/loyjdat* ‘I dunno M/F’ has several functions – conveying epistemic stance of uncertainty, prefacing repair, changing the course of talk, and avoiding a dispreferred response.

9. Non-linguistic negation

Communication is managed not only through linguistic but also through non-linguistic resources, such as non-verbal sounds and co-speech gestures (Clark 1996). In connection with negation, two issues are worth mentioning: non-verbal sounds that express negation, and negative gestures. One non-verbal sound Modern Hebrew speakers use to convey negation is the dental click, which may be used on its own, as a freestanding element, or in conjunction with verbal negators (Ben-Moshe & Maschler 2019).. The use of a click to express negation is also common in many

Arabic dialects, as well as in several European languages, such as Italian, Bosnian, Bulgarian, Greek, and Turkish (Gil 2013).¹³

Examples (43) and (44) demonstrate two instances of the para-linguistic dental click indicating negation:

- (43) sp3 *ba-pátyo* /
 in.the-Patio /
 ‘In the (Holiday Inn) Patio?’
 sp2 <click> *lo* ||
 NEG NEG ||
 ‘Tsk, no.’
ha-ekspress ||
 the-(Holiday Inn)Express ||
 ‘The (Holiday Inn) Express.’
 sp3 *a* ||
 oh ||
 ‘Oh.’ (OCD_2_sp3_071-072, sp2_067-068)
- (44) sp2 *ve-ze yihye ha-xeder šelánu ba-salon* ||
 and-this he.will.be the-room our in.the-living.room ||
 ‘And this will be our room in the living room.’
 sp1 (1.5) <click> (0.8) *lo roce* ||
 (1.5) NEG (0.8) NEG wanting:SG.M ||
 ‘(1.5) Tsk, (0.8) (I) don’t want.’ (C842_sp2_040, sp1_046-047)

Prior to Example (43), sp2 told the interlocutors about a deal for a vacation at the Holiday Inn in Eilat that she had found. In response, sp3 asks for clarification, suggesting a particular hotel name *ha-ekspress* ‘The (Holiday Inn) Express’, since there are several hotels in Eilat that belong to Holiday Inn chain of hotels. Sp2 provides a negative response employing two freestanding elements – the dental click, and then the negator *lo* followed by the correct hotel name. In example (44), the dental click is produced in response to sp2’s prior suggestion regarding the room she wanted in an apartment that she had seen. By using the dental click, sp1 conveys disagreement with sp2’s suggestion, a disagreement that is subsequently elaborated on by means of the verbal negation *lo roce* ‘(I) don’t want’.

13. Expressions of negation (and affirmation) can be regarded as *logical* uses of the para-linguistic click. In many other languages (such as English), para-linguistic clicks have *affective* but not logical functions. The affective use of such clicks may involve both a negative affect, such as feelings of irritation, impatience, or disappointment, as well as positive, such as amazement, and appreciation (Gil 2013).

Another important resource for expressing negation in spoken conversation involves the use of negative gestures. Functional descriptions of negative gestures and their interaction with verbal negation have recently been proposed for several languages – Italian (Kendon 2004: 248–264), English (Kendon 2004: 248–264; Harrison 2014; Harrison 2018), German (Bressemer & Müller 2014), French (Harrison & Larrivéé 2015), Russian (Grishina 2015), and Savosavo (Bressemer, Stein & Wegener 2017). Since the recordings in CoSIH are not accompanied by video, it was not possible to describe the negative gestures employed in the conversations in CoSIH. For work on negative gestures in Modern Hebrew based on a video corpus, the reader is referred to Inbar and Shor (2019).

10. Concluding comments

This chapter presented a corpus-based description of negation in Modern Hebrew conversation, focusing on its syntactic, discursive, and prosodic properties. The contextual analysis of negation in authentic contexts has hopefully shown that examination of a well-documented linguistic phenomenon in a particular conversational register might result in novel findings. However, the properties of negation, as elaborated in this chapter, should be supplemented by a more fine-grained analysis of the work of negation in context. It has been shown that in English, for example, disaffiliative negative turns are usually followed by some kind of elaboration, that provides an account for the rejection, or a correction of the rejected element. When elaboration is absent, recipients treat the talk as problematic and incomplete, trying to pursue elaboration of the negative turn, whereas when negation is affiliative, no elaboration is anticipated or delivered (Ford 2001, 2002). Examining the recipients' reactions to negative utterances in spoken Hebrew, and especially distinguishing between affiliative and disaffiliative negation, could be a promising direction for future research. What also calls for additional research would be a comprehensive analysis of the prosodic realization of negation. In this regard, it would be particularly advantageous to examine the interface of the information structure of the negative utterance, the pragmatic function of the negative utterance, and the interaction type in which the negative utterance is embedded – all of which may have a bearing on the prosodic realization of negation. Yet another area for future research could be the examination of non-verbal negation, which includes non-verbal sounds and gestures that accompany negation. Taken together, these potential lines of research will undoubtedly lead to a more complete picture of negation in Modern Hebrew.

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List constructions

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The primary concern of this study is to examine *list constructions* in spoken Hebrew, from two perspectives: an intentional perspective setting out the properties that a linguistic expression needs in order to be considered a *list construction* (the concept) and an extensional perspective specifying the objects that fall under this construction (typology). The study reviews the nature of list constructions in general, with the grammatical, lexical, semantic, and prosodic features of such constructions analyzed in relation to their discourse functions in everyday spoken Hebrew. The description of list constructions is based on examples from the CoSIH database of conversational interactions recorded during 2001 and 2002.

1. Introduction

The present study aims to contribute to the understanding of the linguistic phenomenon of *lists* and to provide an overview of the properties of such constructions in spoken Israeli Hebrew. While there is some consensus among linguists when it comes to identifying a construction as a *list*, there is considerable divergence in determining the scope of this notion. This divergence is due to the fact that the term itself is rather poorly defined. The identity of this category is often taken for granted, with some researchers typically focusing on one or some facets of the phenomenon, such as its prosodic, discourse, or semantic characteristics (e.g., Selting 2007), while others illustrate the notion, rather than providing it with an explicit definition (e.g., Schiffrin 1994).

Lists are sometimes defined as a combination of two or more elements occupying the same structural position in a dependency structure (Blanche-Benveniste 1987; Blanche-Benveniste et al. 1990) or, similarly, as a combination of two or more units of the same type that realize one and the same constructional slot

(Bonvino et al. 2009). Example (1) demonstrates a list in Hebrew that fits these definitions.¹

- (1) *ve ani lo xoševet še hi tatxil li-knot |*
 and I not think that she (will) start to-buy |
 → *salon |*
 living.room |
 → *ve gaz |*
 and gas.stove |
 → *ve xadaršena |*
 and bedroom |
en la klum || klum ||
 NEG.EXT to.her nothing || nothing ||
 ‘And I don’t think that she’ll buy [furniture for the] living room and gas-stove
 and [furniture for the] bedroom. She has nothing. Nothing.’
 [Y33_sp1_030–036]²

In (1), the speaker tells the interlocutor about a mutual friend who is going to rent the speaker’s apartment. The speaker doubts that this friend will buy things for the house, because ‘she has nothing’, and if she decides to do so, she would have to buy a lot of furniture and appliances, which she cannot do because of her poor economic situation. The list in (1) contains three elements (listees): *salon* ‘[furniture for the] living room’, *gaz* ‘gas-stove’, and *xadaršena* ‘[furniture for the] bedroom’, all complements of the infinitive verb form *liknot* ‘to buy’. These items realize one

1. The transcription follows conventions specified for the *CoSIH* project rather than those specified in the *Transcription and Coding* Appendix to this volume in order to take into account interactions between more than one speaker and to allow for prosodic analysis, as summarized below:

- |: minor boundary,
- ||: major boundary,
- /: major boundary with “appeal” tone,
- : fragmentary (truncated),
- : truncated word,
- (0.5): pause (measures in seconds),
- <non-verbal>: non-verbal sounds

2. The examples in this study are taken from the Corpus of Spoken Israeli Hebrew (as described further below). Segmental transcription conventions follow those adopted in the volume as a whole (see *Transcription and Coding* section). In addition, the following conventions are observed: | minor prosodic boundary; || major prosodic boundary; / major prosodic boundary carrying an ‘appeal’ tone; – truncated word; elongation; <creak> non-verbal sounds. Since this paper deals mainly with syntactic and pragmatic phenomena, many morphological features are ignored, and some are translated in the gloss rather than represented separately in the textline. List items are indicated by an arrow ‘→’ in the left margin.

and the same constructional slot, that is, the complement of *liknot* is realized in three parallel components.³

In (2), however, the listed elements are non-dependent clauses, nor do they realize one and the same constructional slot.

- (2) *šam ha-iskit ola xamišim ve arba šékel* |
 there the-business [meal] cost:SG.F fifty and four shekel |
 → *ata mekabel antrikot* |
 you:SG.M get:SG.M entrecôte |
 → *ata mekabel mana rišona* |
 you:SG.M get:SG.M course first |
 → *ve ata mekabel mana axrona* ||
 and you:SG.M get:SG.M course last ||
 ‘There, a business lunch (menu) costs fifty-four shekels. You get entrecôte, you
 get a first course, and you get a dessert.’ [C612_2_sp2_041–044]

Example (2) is from a conversation in which the interlocutors are discussing different steakhouses in Israel. The speaker mentions a specific restaurant that serves a business lunch for a reasonable price. Then he details the business lunch menu: ‘You get entrecôte [as a main course], you get a first course, and you get a dessert’.

Even though the listed elements in (2) are non-dependent clauses, it is clear that the examples in (1) and (2) represent linguistic patterns that share several features. In addition to their structural parallelism, the listed items are functionally parallel. In (1) the items are functionally equal in the contribution they make to exemplification of the *ad hoc* category ‘household contents the tenant will need in the rented apartment’ (Barsalou 1983; Ariel & Mauri 2017), while in (2), the listees detail what the business lunch is made up of.

In approaching the phenomenon of lists, the present study focuses on the combined analysis of the syntactic and discursive nature of such constructions and takes into account the communicative intent that underlies them. Such an approach enables us to relate to the phenomenon of lists either within a clause, a sentence, or an entire chunk of discourse. Accordingly, a *list construction* is defined as a pattern consisting of a set of any linguistic elements (listees) that are syntactically and functionally parallel, while the construction as a whole conveys a single communicative intention. Once these two facets of the listees – syntactic and functional parallelism, on the one hand, and a uniform communicative intent, on the other – are established as the main characteristics of such constructions, additional linguistic properties reflecting different types of lists can be identified. To describe the functions of list constructions, this study adopts a Usage-Based

3. The use of coordinators is discussed in Section 8.

approach to language by examining how collaborative and situated interactions influence linguistic patterns in everyday conversation.

The present study is based on ca. 3 hours (8,290 Intonation Units) of spontaneous speech selected from the Corpus of Spoken Israeli Hebrew (CoSIH) database.⁴ The CoSIH database includes recordings of spontaneous conversations that were recorded during 2001 and 2002. The transcriptions are presented in prosodic units. To analyze the acoustic properties of list constructions, Praat software was used.

The discussion that follows provides an overview of the properties of *list constructions* in spoken Israeli Hebrew. Sections 2 and 3 deal with the structural features of the construction. Section 4 discusses inferential processes associated with lists, related discourse functions, and how they are reflected in list constructions. The functions of lists in discourse and their connection to the semantic relations that hold between the listed elements are considered in Section 5, following Section 6 that will discuss the embedding of lists in a broader discourse structure. Section 7 will present correlation between various prosodic structures of lists and their discourse functions. Section 8 will discuss various linguistic elements embedded in list constructions, affecting their interpretation. After examining different features of list constructions and discussing their interplay, I conclude, in Section 9, by showing that the material presented in this paper makes a contribution to the view that “lists are complex structures that are oriented to by speakers and recipients as holistic entities and are made use of as a resource for a variety of purposes in interaction” (Couper-Kuhlen & Selting 2018: 42).

2. Sentence level vs. discourse level

The approach presented in this paper makes it possible to relate to the phenomenon of lists either within a clause, a sentence, or an entire chunk of discourse. At the sentence level, a list construction may contain two or more elements that are functionally equal and they are multiple realizations of one and the same syntactic slot, such as subject, predicate, attribute, complement, or adjunct. In such cases, the listed elements of the construction in question share the same semantic relations with the other surrounding elements (Haspelmath 2004: 34) and also, typically, have the same grammatical structure. Thus, in (1) above, the expressions *salon* ‘[furniture for the] living room’, *gaz* ‘gas-stove’, and *xadaršena* ‘[furniture for the] bedroom’ are all nouns or noun-phrases that serve as complements of the infinitive verb form *liknot* ‘to buy’.

4. Available from <cosih.com/english/indexhtml>.

At the discourse level, list constructions can be taken as a symmetric organization of elements that are pragmatically distinct and make the same contribution to the speaker's communicative goal. In discourse, lists usually comprise of distinct information units, as in example (2), in which three distinct utterances – ‘You get *entrecôte* [as a main course], you get a first course, and you get a dessert’ – are functionally equal in the contribution they make to detailing a business lunch menu.

Moreover, speakers may split a single proposition into listees as a discourse strategy to represent the parts of the proposition as pragmatically distinct. Consider example (3):

- (3) → *kxi* *et-ha-ugiyot* *ha-éle* *mi-méni* ||
 take:IMP.2SG.F ACC-DEF-cookies DEF-these from-me ||
 → *ve* *miyad* ||
 and immediately ||
 ‘Take these cookies from me. And right away.’ [C711_0_sp2_216–217]

Although *miyad* ‘immediately’ may be analyzed as an adjunct of the clause *kxi et-ha-ugiyot ha-éle mi-méni* ‘Take these cookies from me’, these linguistic elements are presented as two listees: the phrasal coordinand *miyad* ‘immediately’ and sentential coordinand *kxi et-ha-ugiyot ha-éle mi-méni* ‘Take these cookies from me’, since they play a parallel inferential role in deriving the cognitive effects of the utterance (Meir 2008). By using this coordinate construction, the speaker emphasizes the pragmatic parallelism, i.e. that is, in the given context, two elements constitute two information units (ibid. 1), even though these coordinands constitute a single request. Such pragmatic parallelism is indicated by prosody – the listees are produced in separate prosodic units – by the use of the particle *ve* ‘and’ which, according to Inbar (2016, 2017), indicates distinction. Thus, the listees are indicated as making the same contribution to the speaker's communicative goal, namely requesting to take the cookies from her and to take them immediately.

Example (4) demonstrates the same phenomenon where several elements that might constitute a single proposition are presented as listees. The example in (4) illustrates a list that is jointly constructed by two speakers: Speaker 1, who works on the CoSIH project, has to collect information regarding the volunteer (Speaker 2) needed for recording their conversation.

- (4) sp1: 1 *az e: liat po hi |*
 so uh: Liat here she |
 2→ *mi-moca iráki |*
 from-origin Iraqi |
 sp2: 3→ *bat šlošim ve štáim |*
 aged thirty and two |
 sp1: 4→ *beherayon |*
 pregnant |
 sp2: 5→ *tóar šeni be-minhal asakim |*
 degree second in-administration business |
 sp1: 6→ *tóar šeni be-minhal asakim || siym-a ||*
 degree second in-administration business || finished-3SG.F ||
 7 *yeš le-cayen |*
 be to-note |
 sp2: 8 *siyem-a || (ken) ||*
 finished-3SG.F || (yes) ||
 sp1: 9→ *siyem-a be-hictaynut /*
 finished-3SG.F in-distinction /

Sp1: 'So, Liat, is of Iraqi origin.'

Sp2: 'Thirty-two years old.'

Sp1: 'Pregnant.'

Sp2: 'Master's degree in Business Administration.'

Sp1: 'She completed her master's degree in Business Administration, it's worth noting.'

Sp2: 'She did. (Yes).'

Sp1: 'Completed with distinction?' [C514_1_sp1_048-054, sp2_024-027]

Speaker 1 provides information regarding the origin of Speaker 2 and her being pregnant, while Speaker 2 adds her age and level of schooling. Speaker 1 then, in line 6, emphasizes that she completed her masters, while the fact that the degree was completed with distinction is added as a question (line 9), because the speaker is not certain about this. Even though lines 5, 6, and 9 may constitute a single proposition, namely 'She completed her master's degree in Business Administration with distinction', the speakers perform it as a list, that is, as distinct chunks of information, thus emphasizing the importance of each. This construction is a list since the listees are functionally equal and the structure as a whole has a single communicative intention of detailing the *ad hoc* category 'information regarding Speaker 2 requested by the member of the CoSIH team'.

List production by multiple speakers has various discourse functions, such as expressing identification, agreement, or disagreement (Jefferson 1990; Grenoble 2013). In (4), joint production of the list indicates high involvement of the speakers with the topic of discussion, since they are close friends.

3. Number of listees

Jefferson (1990: 66) notes a tendency to construct three-part lists, which she describes as ‘programmatically relevant of three-partedness’, with participants being aware of the fact that ‘lists not only can and do occur in three parts, but should so occur’ (ibid.). Overstreet (1999: 27) assumed that this analysis was motivated by an observation that ‘two instances are needed to establish a pattern and expectation, and a third instance is required to confirm the pattern and the expectation’. A quantitative analysis conducted by Overstreet (ibid. 25) revealed numerous list constructions that appear to exceed or be less than a three-part structure. In spoken Hebrew, too, two-part and four-part or more structures, and not only three-part structures, are common.

Overstreet suggested that consideration of the speaker’s purpose in producing a list may lead to an alternative analysis. Consider (5), where Speaker 1 asks her friend (Speaker 2) what her father did during *šiva* ‘seven-day period of mourning’ that caused him back pain:

- (5) sp1: *ma hu asa šam* ||
 what he did there ||
 sp2: → *herim kisaot* |
 picked.up chairs |
 → *ala* |
 went.up |
 → *ala ve yarad be-madregot* |
 went.up and went.down in-stairs |
 → *hiziz šulxanot* |
 moved tables |
 → *ve ze --*
 and this –
 at yodáat ma ze šiva ||
 you:SG.F know:SG.F what this shiva ||

Sp1: ‘What did he do there?’

Sp2: ‘He carried chairs, went up and down the stairs, moved tables and stuff.
 You know what *šiva* is, don’t you?’ [Y33_sp1_147, sp2_173–177]

Speaker 2 responds in a way that might be seen to exhibit iconicity between message content (‘many different activities people can do during *šiva*’) and form (naming several instances of the activities and creating a longer message). This type of iconicity is also reflected in prosody: the listed elements are especially elongated (see Section 7 below).

The list in (6) contains five items, with a noticeably iconic relationship between the physical form of the grammatical structure and the content of the message which this structure is used to communicate (Kirsner 1985: 249). The speaker's goal here is to emphasize that he managed to sell the software created by his company, in many different places, rather than to establish a pattern or expectation.

- (6) *maxár-nu* ||
 sold-1PL ||
 → *maxár-nu be-bolívia* |
 sold-1PL in-Bolivia |
 → *brazil maxár-nu* |
 Brazil sold-1PL |
 → *maxár-nu be-uruguay* |
 sold-1PL in-Uruguay |
 → *kósta ríka* |
 Costa Rica |
 → *maxár-nu méksiko* |
 sold-1PL Mexico |
yaxasit harbe |
 relatively many |
 'We sold, we sold in Bolivia, in Brazil, we sold in Uruguay, in Costa Rica, we
 sold in Mexico, a lot, relatively.' [C612_4_sp1_123–129]

Lerner (1994: 23) suggests that three parts are required to indicate that the speaker or writer is 'doing listing'. However, in spoken Hebrew, other linguistic and paralinguistic means, such as prosody (§7) or list interpreters (§8), are used to indicate the process of listing. Other, no less significant aspects of interaction, such as gaze and gesture, may also be associated with list constructing. However, these paralinguistic dimensions are beyond the scope of the present paper.⁵

4. Cognitive processes, coherence relations, and discourse functions

From a more cognitive perspective, lists may be analyzed as a symmetrical construal of two or more conceptual entities reflecting a particular inferential process, mirrored in discourse by the juxtaposition or explicit connection of chunks that speakers process in combination. Two broad types of inferential processes associated with list constructions can be discerned: ad hoc categorization, on the one hand,

5. For a discussion of gestures coordinated with list constructions in spoken Israeli Hebrew, see Inbar 2018.

or identification of a specific referent or idea, on the other. In both cases, the listees are functionally equal in the contribution they make to these processes. Two basic relations that occur between the listed elements of the constructions underlying the process of categorization are *combination* and *alternativity*, coherence relations which are considered to occur in syntactic coordination. Mauri (2008: 151) defines clausal coordination as a ‘conceptual situation in which two states of affairs are linked and conceived as functionally parallel’. As previously suggested, functional parallelism characterizes a broader pattern, and it may be realized at different levels, not necessarily at clausal one (see example (2) above).

Mauri (2017: 3) draws a distinction between three types of *ad hoc* categorization processes. Depending on the relation between the listees, the inferential process can lead to the construction of a *set*, if the exemplars are elements that co-occur in combination (as in example (1) above), to the construction of a *class*, if the exemplars are equivalent alternatives, as in the following example (7), or to the construction of a *frame*, if the exemplars are actions that occur within a narrative scheme, as in example (8).

- (7) *az hu oxel*
 so he eat:SG.M
 → *marak* |
 soup |
 → *o šnícel* |
 or schnitzel |
 → *o ma še nišar*
 or what that left: 3SG.M
hu oxel gam ||
 he eat:SG.M also ||

‘So, he eats soup, or schnitzel, or whatever is left he also eats.’

[Y111_sp2_119–121]

- (8) *kol exad matay še ba* | *lokéax óxel* ||
 every one when that come:SG.M | take:SG.M food ||
 → *nixnas la-mezave* |
 enters to.the-pantry |
 → *sam caláxat* |
 puts plate |
 → *mexin lo óxel* |
 prepares to.him food |
 → *ve oxel* ||
 and eats ||

‘Everyone takes their food whenever they arrive: goes into the pantry, puts down a plate, makes food for himself, and eats.’

[Y111_sp2_091–096]

In (7), the speaker says that her husband may eat some leftovers prepared by her during the day if he is hungry before going to sleep. The list is composed of both single words – *marak* ‘soup’ and *šnicel* ‘schnitzel’ – and of the construction consisting of the interrogative pronoun *ma* ‘what’ followed by the relative clause *še nišar* ‘that (is) left/that remains’. These three exemplars are equivalent alternatives constructing a class. In (8), the speaker says that her family members eat lunch separately whenever they arrive. She then describes what they usually do. The actions described are exemplars that occur within the same narrative scheme, namely ‘things that happen when the speaker’s family members arrive home’. This description is a list since the elements are equal in their function leading to the construction of a narrative frame.

The discourse functions related to the cognitive process of an ad hoc categorization are *exemplification* and *detailing*. Although these terms have been proposed by a number of scholars, there is some disagreement as to their definitions and thus to what counts as an instance of each. In what follows, these terms will be described from the point of view of the framework assumed in this paper, while taking into account that these constructions may have various pragmatic readings. (For in-depth discussion of the various pragmatic reading of alternative constructions see Ariel & Mauri 2018). In this study, *detailing* is associated with exhaustiveness: the speaker is committed to all explicitly mentioned members which are a complete detailing of a category (as in example 8). *Exemplification*, on the other hand, is associated with non-exhaustiveness: the speaker is committed to explicit and implicit members of the category, or guaranteeing that one or no members are a genuine member of the category (as in example 7).

Another type of such ‘equi-functional constructions’ underlies identification of a specific referent or an idea in discourse, where each of the listees refers to the same concept, typically in cases where the speaker is attempting to express a single idea. The discourse functions related to this cognitive process are discussed here in terms of the two distinct functions of *reformulation* and *correction*, which are mirrored in discourse by the juxtaposition.⁶ In the case of *reformulation*, the speaker intends to produce an utterance whose main relevance lies in the fact that it is a faithful reformulation of the preceding utterance. In the case of *correction*, one of the listees is perceived as inaccurate, and so replaced by a more precise version.

Reformulation is illustrated in (9) and (10), where the two listees are different representations of the speakers intended referent, with additional examples available in Inbar (2016, 2017) and Shor (2017).

6. Unified treatments of reformulation and coordinating structures have been put forward by other authors, such as Blanche-Benveniste 1987; Bonvino et al. 2009; Guenot 2005; Gerdes & Kahane 2008.

- (9) *nagid axoti | kše hi yocet*
 say:FUT.1PL sister:POSS.1SG | when she go.out:SG.F
 → *im anašim |*
 with people |
 → *im baxurim ||*
 with guys ||
hi yo- hi yocet le-matara mesuyémet ||
 she go -- she go.out:SG.F to-purpose specific ||
 ‘Take my sister, when she goes out with people, with guys, she goes out with a particular aim.’ [P423_2_sp1_041–044]
- (10) *pšx od meat yiye*
 pfff more (a) little be:FUT.3SG.M
 → *et-ha-yenot šel ha-šay ||*
 ACC-the-wine of the-present ||
 → *ha-barkan ha-elu ||*
 the-Barkan the-these ||
at yexola le-aif otam ||
 you:SG.F can:SG.F to-throw ACC.they ||
 ‘Ow, soon, we’ll get bottles of wine as a gift, from the Barkan winery. You can throw them away.’ [C711_1_sp1_077–079]

Both structures ‘with people, with guys’ in (9) and ‘wine as a gift, Barkan’s wine’ in (10) have a single communicative intention of representation one and the same concept that the speaker is trying to identify. In such cases, the speaker’s intended discourse referent has a multiple representation, and there is an *interpretive resemblance* between the linguistic elements ‘with people’ and ‘with guys’ in (9) and ‘wine as a gift’ and ‘Barkan’s wine’ in (10).⁷ In other words, there is a sense in which they can be interpreted as sharing the same set of contextual implications. Thus, these linguistic elements are functionally parallel and the constructions as a whole have a single communicative intention, and, therefore, may be considered to be lists.

The same phenomenon may also be reflected at a clausal level where entirely or partly different clause structures may refer to the same idea or ‘thought’ (Inbar 2016). Thus, in (11) an Arab Israeli student is talking about the identity of her nation.

7. The term *interpretive resemblance* was adopted from Sperber and Wilson (1986).

- (11) *ve axšav*
 and now
 → *yeš lānu zehut israelit* ||
 EXT to.us identity Israeli ||
 → *nixpeta aléynu zehut israelit* ||
 forced: 3SG.F on.us identity Israeli ||
 ‘And now we have Israeli identity. An Israeli identity was forced on us.’
 [C1624_sp1_458–459]

In (11), the second utterance is a more accurate or more explicit representation of the first, where the phrase *yeš lānu* ‘we have’ is replaced by *nixpeta aléynu* ‘(it) was forced on us’.

In the case of *correction*, one of the listees is perceived as inaccurate, and so replaced by a more precise version. In (12), the parenthetical expression *slixa* ‘sorry’ explicitly indicates correction:

- (12) *hi yalda be-šavúa*
 she gave-birth in-week
 → *šlošim ve šmóne* |
 thirty and eight |
 → *šlošim ve šéva* || *slixa* ||
 thirty and seven || sorry ||
 ‘She gave birth in week thirty-eight. Thirty-seven, I mean.’
 [C514_1_sp2_070–072]

Table 1 summarizes inferential processes associated with lists and related discourse functions.

Table 1. Inferential processes and discourse functions.

Inferential processes	Discourse functions
Ad hoc categorization	Detailing (exhaustiveness) Exemplification (non- exhaustiveness)
Identification of discourse referent	Reformulation Correction

5. Semantic relations and discourse functions

Bonvino et al. (2009: 6) note that the functions of list constructions in discourse are connected to the semantic relations that hold between the listed elements. In the case of *exemplification*, the listed elements may be co-hyponyms, as illustrated in (1) above, in which *salon*, *gaz*, and *xadaršena* are co-hyponyms of the hyperonym ‘household contents’ representing an ad hoc category of ‘household contents that the tenant will need in the apartment she is renting’.

In the case of *detailing*, the listees are meronyms, since they denote constituent parts of something, as in (2), repeated here, where the listees are parts of a ‘business lunch’.

- (2') *šam ha-iskit ola xamišim ve arba šékel* |
 there the-business [meal] cost:SG.F fifty and four shekel |
 → *ata mekabel antrikot* |
 you:SG.M get:SG.M entrecôte |
 → *ata mekabel mana rišona* |
 you:SG.M get:SG.M course first |
 → *ve ata mekabel mana axrona* ||
 and you:SG.M get:SG.M course last ||

‘There, a business lunch (menu) costs fifty-four shekels. You get a serving entrecôte, you get a first course, and you get a dessert.’

[C612_2_sp2_041–044]

It is worth noting that the example in (2) represents a specific way of constructing an ad hoc category based on the category label and category members: the speaker uses the overt label of the category *ha-iskit* ‘business lunch’ in the introduction *šam ha-iskit ola xamišim ve arba šékel* ‘There, a business lunch (menu) costs fifty-four shekels’, and then goes on to detail the business lunch menu: ‘You get entrecôte [as a main course], you get a first course, and you get a dessert’. In this case, the speaker posits the category borders closer to the relevant exemplars, which help the hearer in restricting the borders of the category on the menu with entrecôte as a main course. The category is thus constructed as *ad hoc* in order to anchor its interpretation to the specific speech situation (e.g., Wilson & Carston 2007; Mauri 2017).

Exemplification may also be expressed by constructions that comprise category member and category label as one of the listees. The relation that holds between such listees is that of hyponymy, as in (13), where the hyponym *nyu york* is coordinated with its hyperonym *xul* ‘abroad’:

- (13) *kol ha |*
 all the |
šehut šel-i
 stay of-my
 → *be-nyu york*
 in-New York
 → *ve be-xul |*
 and in-abroad |
ma ze hitacbánti še lo haya li ka-ze ||
 what this (got) mad:1SG that not was to.me like-this ||
 ‘My whole stay in New York and abroad, I got really irritated that I didn’t have
 something like that.’ [C711_0_sp2_112–114]

The hyponymy relation holds between the components of the list construction *be-nyu york ve be-xul* ‘in New York and abroad’, since the first element represents an example of a city outside ‘the country’ (i.e., outside Israel), and the second element represents a general category of countries outside Israel. This illustrates what Lichtenberk (2000) called an *inclusory construction*, in which one of the constituents has the same reference as the entire construction. In spoken Hebrew, this construction is used when the first coordinand represents a readily accessible and familiar example of the category mentioned in the second element, and the speaker may also refer to additional examples that are not specified but are included in the category (Inbar 2017). In fact, in more formal registers, the category label is often overtly marked by *bixlal* ‘in general’ and the accessible and familiar instance by *bifrat* ‘in particular’. In such cases, again, speakers adjust the linguistically expressed concepts to the specific context, and position the *ad hoc* category borders closer to the relevant exemplar and the category mentioned. This mechanism helps the hearer in restricting the borders of the category ‘abroad’ to cities outside Israel that the speaker has visited, such as New York.

Hyponymy relation may also hold in *alternative* constructions, as illustrated in (7), where *marak* ‘soup’ and *šnícel* ‘schnitzel’ are exemplars coordinated with the category label *ma še nišar* ‘anything that remains’.

- (7') *az hu oxel*
 so he eat:SG.M
 → *marak |*
 soup |
 → *o šnícel |*
 or schnitzel |
 → *o ma še nišar*
 or what that left:3SG.M

hu oxel gam ||
 he eat:SG.M also ||

‘So, he eats soup, or schnitzel, or anything that is left he eats also.’

[Y111_sp2_119–121]

Opposites may create a category that is delineated by two opposite poles, which correspond to the listed elements. In (14), the speaker asks the addressee what is the exact form of window she would like to install. The antonyms *carim* ‘narrow’ and *rexavim* ‘wide’ in (14) create a category of ‘possible window forms’, with the speaker referring to a particular member of that category. The discourse function of such a construction is exemplification.

(14) *aval lo amart li ex at roca lemáta et-éle* ||
 but not said:2SG.F to.me how you:SG.F want:SG.F down ACC-these ||
 → *car-im* |
 narrow-PL |
 → *rexav-im* |
 wide-PL |

‘But you didn’t tell me how you want these down there. Narrow? Wide?’

[C711_2_sp2_041–043]

Lists of synonyms have a very different function. Usually, they are constructed of two components that typically form set collocations. These fixed, irreversible constructions serve for intensification, and may be nominal, adjectival, verbal, or adverbial. In (15), two adjectives *ayom* ‘terrible’ and *nora* ‘horrible’ express the same intensified meaning.

(15) → *ayom*
 terrible
 → *ve nora* ||
 and horrible ||

‘That’s terrible!’

[Y33_sp2_273]

Intensification may also be expressed by *repetitions*, which are considered here as lists of identical elements.⁸ The entire construction serves the speaker’s intention to convey a meaning that is modified through repetition, where the nature of the modification depends on the grammatical category of the listed elements. Thus, identical adverbs or adjectives may be used to express intensification, as in (16) and (17).

8. It should be noted that there are other discourse functions that may be expressed by repetitions (see, inter alia, Bonvino et al. 2009).

- (16) *ve* | *lifne šaviúa* |
 and | before week |
 → *xalak* ||
 smoothly ||
 → *xalak* ||
 smoothly ||
eyn tikunim |
 NEG.EXT repairs |
 ‘And a week ago, [the car overhaul went] absolutely smoothly. No repairs.’
 [Y34_sp1_410–415]
- (17) *avad šam kcat yoter miday kaše* |
 worked:3SG.M there (a) little too much hard |
kam lemaxarat |
 got-up:3SG.M next.day |
 → *akum* ||
 crooked ||
 → *akum* ||
 crooked ||
 ‘He worked too hard. Got up the next day completely crooked.’
 [Y33_sp2_160–163]

In (16), the repeated adverb *xalak* ‘smoothly’ expresses its intensification, giving the sense of ‘really/completely smoothly’. Similarly, in (17), the repeated adjective *akum* ‘crooked’ expresses its intensification, with the sense ‘completely crooked’, ‘all tied up in knots’.

Table 2 summarizes different semantic categories of listees corresponding to particular discourse functions.

Table 2. Semantic categories and discourse functions.

Discourse function	Exemplification	Detailing	Intensification
Semantic category	Co-hyponyms	Meronyms	Synonymous
	Hyponym(s)		Identical linguistic entities
	Hyperonym		
	Opposites		

6. Lists and discourse structure

The present section focuses on the embedding of lists in their sequential context. Selting (2007) notes that lists are usually embedded in a larger three-component structure of which the list is the middle part, and that they are preceded by a projecting element and followed by a post-detailing element, which might be essential in order to interpret the list. Such discourse structures are also common in Hebrew talk-in-interaction. In most cases, because the relationship between the first discourse element and the second (list construction) is created retroactively, the label ‘introduction’ seems preferable for the first element, which generally gives no clue that the following element is a list, so that the relationship between the parts becomes apparent only after the list is added. The list construction is what is related to and elaborates on the first element in such a broad three-component discourse structure, whereas the post-detailing element usually includes a conclusion, evaluation, summary, or comment. This extended discourse structure is represented in (18) and (19).

- (18) *lo oxlim beyáxad gam ||* INTRODUCTION
 not eat:PL together also ||
ki e: |
 because uh |
 → *báali ba be-árba |* LIST
 husband:POSS.1SG come:SG.M in-four |
 → *ani báa be-štáim | e: |*
 I come:SG.F in-two | uh |
 → *ha-yeladim baim be-šaloš |*
 the-kids come:PL in-three |
kol exad matay še ba |
 every one when that come:SG.M |
lokéax óxel || POST-DETAILING ELEMENT
 take:SG.M food ||
 ‘[We] don’t eat together either. Because, uhm, my husband arrives at four o’clock, I arrive at two o’clock, uhm, the kids [arrive] at three o’clock. Everyone takes their food whenever they arrive.’ [Y111_sp2_085–092]

In (18), the speaker says that her family usually doesn’t eat lunch together (introduction). Then she explains why this is the case: the speaker, her husband, and their children have different schedules, and the speaker mentions what time each of the family members gets home (a list), which she finally summarizes and recapitulates by saying ‘Everyone takes their food whenever they get home’ (post-detailing element).

- (19) *z- ki ze kvar kéšer šone* || INTRODUCTION
 err because this already connection different ||
ze lo e: |
 this not uh |
 → *bílti musag* | LIST
 not obtainable |
 → *ha-šamur be-sod* |
 DEF-saved in-secret |
e: lo e --
 uh not uh --
eyn po harpatkanut kvar yoter || POST-DETAILING ELEMENT
 NEG.EXT here adventurism already more ||
 ‘Because it’s not the same relationship anymore. It is not unattainable, kept in
 secret. Not ... there’s no adventure anymore.’ [Y311_sp1_022–027]

In (19), the speaker states that the relationship between lovers is not the same after they divorced their spouses (introduction). She then provides two examples: ‘It’s not unattainable’ and not ‘kept in secret’ (list). The list is followed by the evaluation ‘there’s no adventure anymore’, from which the differences could be derived (post-detailing element).

The introduction may be a general expression (hypernym) that includes the listed items. Such expressions help the hearer to infer additional or alternative members of the category that the speaker has in mind, as in examples (20) and (21) in which the discourse function of the lists is exemplification.

- (20) *ve amárti la* |
 and said:1SG to.her |
še mamaš keday la li-hyot be-mekomot mesuyamim be-hódu |
 that really worth to.her to-be in-places certain in-India |
 → *kmo taj mahal* |
 like | Taj Mahal |
 → *kmo varanási ba-gángas šam* |
 like Varanasi | in-Ganges there |
še ani kvar hayíti šam ||
 that I already was: 1SG there ||
 ‘And I said to her that she should visit certain places in India, like the Taj Mahal,
 like Varanasi there by the Ganges. [Places] which I’ve already been to.’
 [Y32_sp2_168–174]

In (20), the introduction contains the expression ‘certain places in India’, which the speaker illustrates by the list construction that follows. The introduction helps the hearer to infer additional members of the category the speaker is talking about, namely, ‘popular places in India that her friend should visit’.

- (21) kol *ha-rexuš* ze | at *yodaát* || a: |
 every the-property this | you:SG.F know:SG.F || eh: |
 → *rihut* |
 furniture |
 → *mucare xašmal* |
 appliances electricity |
prákti ||
 practical ||
 ‘All that (piece of) property is, you know, eh: furniture, electrical appliances,
 practical [stuff].’ [Y311_sp2_057–062]

The excerpt in (21) is taken from a conversation where the speakers discuss the illicit relationship of their mutual friends. The speaker in (21) comments that one of their friends has nothing to lose from a divorce, because she doesn’t have any valuable property, but only practical things, such as furniture and electrical appliances. The expression ‘all the property’ in the introduction implies the category to which the listees belong, namely, ‘non valuable property’.

In (22), the post-detailing element implies a specific category to which the items in the list belong. The speaker discusses different styles of girls who go out with boys. He complements this list with the phrase *kol mine signonot* ‘all kinds of styles’, which explicitly indicates what the elements in this list construction all share, in the sense that they fall into the category of ‘different styles of girls dating boys’.

- (22) *yeš signon* | *ve yeš rama mesuyémet* ||
 be style | and be level certain ||
 → *yeš -- nagid -- afilu lo la-gáat* |
 be -- say -- even not to-touch |
 → *yeš ka-éle še mitnaškot* ||
 be like-these that kiss:PL.F ||
ve yeš -- gam kol mine signonot ||
 and be -- also all kinds (of) styles ||
 ‘There’s a style, and there’s a certain level. There’s... let’s say... not even touch-
 ing, and there are those that kiss. There are ... also all kinds of styles.’
 [P423_2_sp1_335–342]

The following sections describe two constitutive means used systematically to construct lists and to identify them by the recipient. In section (7), I will discuss the correlation of various prosodic structures and discourse functions of lists. Section (8) will present various linguistic elements that might be embedded in list constructions, affecting their interpretation.

7. Prosody

The prosody of lists reflects the functional parallelism of the listees, which is the main characteristic of such constructions. As was shown by Selting (2007: 488), at least two listees are usually configured with very similar intonation contours, loudness, and length. Moreover, by different prosodic patterns, speakers may differentiate between open and closed lists (*ibid.*, 483). An open list presents only part of a larger number of items that are not mentioned for various reasons, and such constructions may be characterized by repetition of the chosen intonation contour for at least some or even all the items. A closed list includes a finite number of items, while the last element is marked differently, not by a specific contour, but one different than its predecessors.

The schematic representation in (23) is a clear illustration of the difference between intonation contour of the first two elements and the last element in a closed list.

- (23) sp1: *at crixā la-tet li | bevakaša |* <giggle>
 you:SG.F need:SG.F to-give to.me | please | <giggle>
 → *gil |*
 age |
 sp2: <laughter>
 sp1: → *haskala |*
 education |
 → *ve | moca ||*
 and | origin ||
 Sp1: ‘You have to give me, please <giggle> age ...’
 Sp2: <laughter>
 Sp1: ‘education and origin.’ [C514_1_sp1_014–019, C514_1_sp2_012]

Example (23) exhibits a closed list consisting of three elements: *gil* ‘age’, *haskala* ‘education’, and *moca* ‘origin’, in which the first two elements have the same intonation contour with a rising pitch, while the last element in the list has a different contour and a falling pitch. Figure 1 demonstrates the spectrogram of the listed items from (23) – age, education, and origin.



Figure 1. Acoustic analysis of example (23).

Selting also noted (*ibid.*, 486) what she terms the ‘downstep’ intonation of closed lists: the items are formulated on a descending line that clearly falls from the first to the last list item. In Hebrew, however, and in some other languages, the gradual top-down structure of contour is a general characteristic of the *paratone* which may encapsulate either lists or other types of utterances (Izre’el 2016; Izre’el & Mettouchi 2015: 23; Wichmann 2000). In other words, a pitch gradually descending toward the end is not necessarily a prosodic characteristic of closed lists in Hebrew, indicating, rather, that lists can be considered utterances.

Open lists are usually configured with very similar intonation contours, loudness, and length for at least some or even all the listees. In addition to the repetition of these acoustic properties, open lists in Hebrew are characterized by extra length of the listed elements. In (19), repeated here as 19’, the listees highlighted in bold-face are especially elongated – as shown by Figure 2, displaying the spectrogram of the elongated listees.

- (19’) z- ki ze kvar kéšer šone ||
 err- because this already connection different ||
 ze lo e: |
 this not uh- |
 → **bilti musag** |
 not obtained |
 → **ha-šamur be-sod** |
 the-saved in-secret |
 e: lo e --
 uh not uh--
 eyn po harpatkanut kvar yoter ||
 NEG.EXT here adventurism already more ||
 ‘Because it’s not the same relationship anymore. It’s not unattainable, kept secret. Not – there’s no adventure anymore.’ [Y311_sp1_022–027]



Figure 2. Acoustic analysis of example (19).

The elongation of the listees can easily be perceived by listeners. Nonetheless, in the interests of precision, the length of the lexeme *musag* – the passive participle meaning ‘achieved, attainable’ – in the first listee in (19) was compared to the length of the same lexeme in two other prosodic units in the same corpus that were not list constructions. Prosodic unit is characterized, among other perceptual and acoustic

cues, by initial rush and final lengthening (Amir, Silber-Varod & Izre'el 2004). Thus, in order to compare the length of a specific lexeme in discourse, it needs to be extracted from the same structural positions within the prosodic unit. To this end, the length of the lexeme *musag* in (19) was compared to two other occurrences of the same item, in which it occupied the same structural position – the end of the prosodic unit. It turned out that the length of *musag* in the list construction (1.12) was double in relation to the others (0.52 and 0.55).⁹

The prosody of lists coordinated with the reference identification also shows parallelism. In the constructions of reformulations, the listees are usually configured with very similar intonation contours, loudness, and length. Figure 3 displays the spectrogram of the listees in Example (9), in which the second element *im baxurim* ‘with guys’ narrows the meaning of the first one *im anašim* ‘with people’.

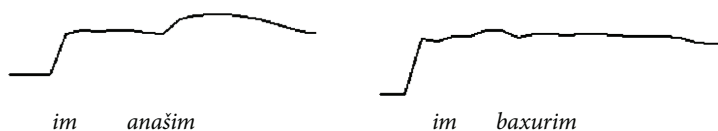


Figure 3. Acoustic analysis of example (9).

Furthermore, Selting (2007) notes that components of open lists are mostly displayed in separate prosodic units (*ibid.*, 491). Closed lists, however, are more likely to be produced within a single prosodic unit. In Hebrew, non-clausal items in closed lists are usually produced in one prosodic unit. These lists mostly consist of two elements, but they may also consist of multiple elements, as in (24) and (25).

- (24) *az tni li*
 so give:IMP.2SG.F to.me
 → *gil*
 age
 → *haskala*
 education
 → *ve moca |*
 and origin |
ve natxil le-daber ||
 and start:FUT.1PL to-talk ||
 ‘So, give me [your] age, education, and origin, and we’ll start to talk.’
 [C514_2_sp1_043]

9. Note that the surface form in (19) is a passive participle *musag* from the *hifil* pattern verb *hisig* ‘achieve, attain’, whereas in the other two instances it is a homophonic and homographic noun meaning ‘concept’, used both times in a colloquial collocation, as *eyn li musag* (0.52) || ‘I don’t have a clue’ [D142_sp3_043], and *eyn li musag* (0.55) || ‘I don’t have a clue’ [C711_0_sp1_269].

- (25) sp2: *tása im š- xaver šel-a le prag* ||
 fly:SG.F with sh- friend of-her to Prague ||
 sp1: *ze e:* |
 this eh: |
 sp2: → *xamiši*
 Thursday
 → *šiši*
 Friday
 → *šabat*
 Saturday
 → *rišon* |
 Sunday |
 sp1: *daka ha-tišim ve téša* ||
 minute the-ninety and nine ||
 Sp2: ‘She’s flying with her boyfriend to Prague.’
 Sp1: ‘This... eh...’
 Sp2: ‘Thursday, Friday, Saturday, Sunday.’
 Sp1: ‘Last minute deal.’ [Y33_sp2_052–053, sp1_097–098]

The question of the conditions governing occurrence of a closed list within separate prosodic units or of an open list within a single prosodic unit requires further research, beyond the boundaries of the present study.

As was shown in this section, the prosodic analysis of list constructions mirrors functional parallelism of the listees, which is the main characteristic of this abstract pattern. Since the listees are functionally parallel in the contribution they make to the cognitive processes involved in listing, via different modality – prosody – the speaker makes this parallelism perceptible. Thus, there is an iconic relationship between the prosody of the listees and their functions.

8. List interpreters

This section considers different linguistic elements – detectable at different levels of structure that are not normally studied together – which all can be embedded in list constructions, affecting their interpretation. Some of them – conjunctions, discourse markers, and parentheticals – indicate different relations that hold between the listees. Other elements – general extenders – may be syntactically integrated in a list construction as one of the listees, but be semantically external to it since they do not have any referent and have only pragmatic functions related to an interpretation of the given list. The present study is an attempt to provide a hypostatization for the linguistic category of *list interpreter*, which refers to such elements.

From the point of view assumed in this study, conjunctions are considered pragmatic markers that may function at both content and interactional levels. At the content level, besides indicating coherence relations, they may refer to the semantic content of the listees. The conjunction *ve* ‘and’, for example, cannot appear between components that have the same referents and can only appear in list constructions in which their listees’ referents differ from each other (Inbar 2017).

At the interactional level, the conjunction *ve* ‘and’ may appear before the last element in exhaustive list constructions, indicating the end of the list. Such an example is provided by the stringing of seven infinitive form verbs in an excerpt from a graduate student talking about ‘problems between people’ in (26):

- (26) *beayot ben bney adam novot mi-sibot šonot*
 ‘problems between human beings come from-reasons varied’
ve mi-écem tivo šel ha-adam
 ‘and from-(the)-very nature of the-man’
 → *la-riv* ‘to-quarrel’
 → *le-hitvakeax* ‘to-argue’
 → *le-hitpalmes* ‘to-dispute’
 → *le-hitxašben* ‘to-keep accounts’
 → *ve lekane* ‘and to-envy.’ [Berman 2018]

When producing a list in interactive conversation, as in (26), speakers usually keep their turn (Jefferson 1990). By marking the last member of the list construction, the speaker might well be indicating to the interlocutors that they can respond.

Moreover, when the conjunction *ve* ‘and’ appears between all the elements in a list construction, the speaker seems to indicate that, in his or her opinion, this construction consists of too many elements. In (27), for example, the speaker enumerates different dishes which are being prepared for her sister. All the elements in the list construction are conjoined with *ve* ‘and’: schnitzel and beans and potatoes. Presumably, there are many dishes for one person, leading Speaker 2 to wonder ‘All that just for her?’

- (27) sp2: *ma atem osim /*
 what you:PL.M do:PL.M /
 sp1: → *bedérexklal šnícel |*
 usually schnitzel |
 → *ve | šuit |*
 and | beans |
 → *ve tapuxéadama |*
 and potatoes |
la-axot šel-i |
 to.the-sister of-my |

sp2: *kol ze rak la /*

all this only for.her /

Sp2: 'What do you make?'

Sp1: 'Usually schnitzel and beans and potatoes, for my sister.'

Sp2: 'All that just for her?' [C711_0_sp2_011-012, sp1_017-021]

In (1), repeated here as (1'), all the listees are conjoined with *ve* 'and' as well. By using the particle *ve* this way, the speaker stressing that in the given context the listed elements are numerous. Moreover, the same speaker concludes the list with the comment that saying *en la klum* 'She has nothing', which is opposed to what the list implies, namely 'buying a lot of appliances'.

(1') *ve ani lo xošévet še hi tatxil li-knot |*

and I not think:SG.F that she start:FUT.3SG.F to-buy |

→ *salon |*

living.room |

→ *ve gaz |*

and gas |

→ *ve xadaršena |*

and bedroom |

en la klum || klum ||

NEG.EXT to.her nothing || nothing ||

'And I don't think that she'll buy [furniture for the] living room and gas and [furniture for the] bedroom. She has nothing. Nothing.' [Y33_sp1_030-036]

Discourse markers and parentheticals can also be embedded in list constructions, affecting their interpretation. For example, discourse markers such *ztoméret* 'that says = that's to say' or, in more formal register, *klomar* 'as-to-say = that is, in other words' may indicate reformulation. Consider (28), in which reformulation is overtly marked by *ztoméret* 'that's to say'.

(28) → *ata lo xayav la-anot al ze ||*

you:SG.M not need:SG.M to-answer about this ||

→ *ztoméret ata lo xayav le-šatef oti ||*

that (is) you:SG.M not need:SG.M to-share ACC.1SG ||

'You don't have to answer about this. I mean, you don't have to include me.'

[P931_2_sp2_256-257]

In (28), the second utterance provides another description of the same idea. The discourse marker *ztoméret* is evidence of the speaker's intention to produce an utterance whose main relevance lies in the fact that it is a faithful reformulation of the preceding utterance.

In (29), the speaker tells her friend that she will be able to find her easily in Khao San Road in Bangkok. She uses the parenthetical expression *le-mašal* ‘for example’ not to indicate the relation between the listees as in a previous example, but to explicate that all the listees serve to exemplify the category ‘small places where people can easily find each other’.

- (29) *axare xaci šaa gag ani mocet otax* ||
 after half hour roof I find:SG.F you:ACC.SG.F ||
 → *ze kmo le-histovev ba-rexov be-dáhab* || *le-mašal* ||
 this like to-walk-around in.the-street in-Dahab || for-example ||
 → *o be-tarabin* ||
 or in-Tarabin ||
 ‘I’ll find you in half an hour max. It’s like walking around the street in Dahab,
 for example, or in Tarabin.’ [Y32_sp2_071–074]¹⁰

Other elements may be syntactically integrated in a list construction as one of the listees, but be semantically external to it since they do not have any referent and have only pragmatic functions. In (6), repeated below as (6’), Speaker 1 asks her friend (Speaker 2) what her father did during the *šiva* week of mourning that caused him back pain:

- (6’) sp1: *ma hu asa šam* ||
 what he did there ||
 sp2: → *herim kisaot* |
 picked.up chairs |
 → *ala* |
 went.up |
 → *ala ve yarad be-madregot* |
 went.up and went.down in-stairs |
 → *hiziz šulxano* |
 moved tables |
 → *ve ze --*
 and this –
at yodáat ma ze šiva ||
 you:SG.F know:SG.F what this shiva ||
 Sp1: ‘What did he do there?’
 Sp2: ‘He picked up chairs, went up, went up and down the stairs, moved tables
 and stuff. You know what *šiva* is, don’t you?’ [Y33_sp1_147, sp2_173–177]

10. Dahab and Tarabin are small coastal villages in the Sinai Peninsula in Egypt that are popular among Israeli backpackers.

The list in (6) contains five items, with each presented in a separate prosodic unit. The last listee *ze* ‘this = all that (stuff)’ is conjoined with the conjunction *ve* ‘and’ to the preceding elements. However, this element does not have any specific referent, its function being to inform the hearer that the list is not complete, suggesting that the speaker expects the listener to expand the list. The speaker uses this construction to evoke a higher-level category, namely ‘different activities people do during shiva’, referring to each of this category’s members including those not explicitly mentioned.

In recent decades, such elements have been discussed extensively in the literature, defined by various terms, especially in the case of those occurring at the end of the list: *general extenders*, *set marking tags*, *discourse particle extensions*, *generalized list completers*, and *vague category identifiers* (Martínez 2011: 2455). The terminology varies significantly and reflects different approaches. Some relate to the form and location within the sentence, while others relate to their function in discourse. In the present paper, the term *general extender* is used for the list interpreters that are syntactically integrated in list constructions as one of the listees. In what follows, the form and function of general extenders in spoken Hebrew are considered.

Overstreet (1999: 16) distinguishes between interpersonal and ideational functions of general extenders, where at the interpersonal level, general extenders reflect the attitude of the speaker to the message conveyed or to the interlocutor (Overstreet 1999: 12). In addition, the use of general extenders is related to inter-subjectivity (see also, Overstreet & Yule 1997). The speaker shows awareness of shared knowledge with the listener, and believes that the interlocutor understands what he or she is talking about. Other studies have shown that the use of different general extenders can reflect differences in gender, age, education, and other factors (e.g., Martínez 2011; Sellberg 2015).

In Hebrew, the choice of specific general extenders may depend on the register. For example, general extenders such as *ve xen hála* ‘and so forth’, *ve xadome* ‘and the like’, and *ve od* ‘and more’ characterize written registers or formal discourse. These general extenders are rare in spontaneous conversations, and do not occur in the CoSIH database of interactive conversation, nor in the Berman corpus of 40 monologic texts of spoken narratives and discussions of interpersonal conflict (Berman 2008).

At the ideational level, such syntactically integrated elements are generally used to expand the list for a specific pragmatic purpose. Such expressions are typically composed of a connecting particle (conjunctive *ve* ‘and’ or disjunctive *o* ‘or’) and a noun phrase or clause, and they occur at the end of the lists. According to the type of connecting particle, Overstreet (1999: 3–4) suggested a distinction between two main types of general extenders – *adjunctives* starting with the conjunction ‘and’ and *disjunctives* starting with the disjunction ‘or’. This division is also justified in Hebrew since the two types of constructions have different functions in discourse.

One function of adjunctives is to signal that the list can be expanded and that the speaker is referring not only to the elements mentioned explicitly but also to other elements that were not explicitly mentioned and can be inferred according to the category that previous members have evoked (as in example (6) = (6') above). However, the Hebrew adjunctive general extender *ve ze* literally 'and this/ that/ it' serves another function: marking the previous element as a category. By using this construction, the speaker refers to the members of this category, presuming that the hearer can expound on the category, based on the linguistic context or extra-linguistic world knowledge. Consider the following example in (30).

- (30) *ze tamid ka-ze* |
 this always like-this |
 → *holxim la-yam kcat* |
 go:PL to.the-sea (a) bit |
 → *ve ze* ||
 and this ||

'It's always like that, we go to the beach a bit and so (on).'

[C711_0_sp1_009-011]

In (30) the general extender *ve ze* 'and this/that/it = and so on' follows the clause *holxim la yam kcat* 'we go to the beach a bit', instructing the addressee to evoke an *ad hoc* category referring to 'the different activities her family performs when they go to the sea on Shabbat'. In this use, *ve ze* does not expand a list, but marks the previous element not as a listee but as a category, implying that the speaker is referring to the details of the mentioned category. In these cases, the speaker believes that, in the given context, the generalization is sufficient and the interlocutor will be able to fill in the details independently. In other words, the adjunctive general extender *ve ze* instructs interlocutors to reconstruct the list from this vague, semantically unspecified generalization, one which typically entails various events or entities, with the speaker merely noting what it might involve. Such usage requires a higher level of inter-subjectivity than when it is more explicitly generalized.

In (31), the speaker uses the general extender *ve ze* in referring to the details of a contract that was signed between two friends:

- (31) *lakáxti ota abáita* | *ve az hi amra li* |
 took:1SG ACC.1SG.F home | and then she said to.me |
 → *axare še kvar sagárnu hakol*
 after that already closed:1PL everything
 → *ve ze* |
 and this |

'I took her home and then she said to me, after we had already completed the deal and so on ...'

[Y34_sp1_009-011]

The speakers understand the meaning of ‘we had already closed everything’, since they had discussed the details of that contract earlier, so that there is no need to detail the contract once again. In other words, the marker *ve ze* indicates that some knowledge which has a bearing on the situation being described – ‘we had already closed everything’ – is accessible to both the addressee and the speaker.

In (32), list construction *yodáat limkor ve ze* ‘know how to sell and stuff’ refers to the qualities required from a good salesperson, some of which were detailed in a previous discourse. The speaker hints that Miri has these qualities and does not list them for the sake of conciseness.

- (32) *az amárti | e: míri beséder |*
 so said:1SG | uh Miri okay |
 → *míri yodáat li-mkor*
 Miri know:SG.F to-sell
 → *ve ze |*
 and this |

‘So, I said eh Miri’s okay, Miri knows how to sell and stuff.’

[Y111_sp2_181–183]

Disjunctive general extenders instruct the hearer to expand the list, but unlike ad-junctive general extenders, they signal that the speaker is referring either to some specific or to any member of the category. In the excerpt in (33), Speaker 1 tells her friend that she has the furniture for the living room only because her parents had divorced. In response, Speaker 2 asks if she could not afford to buy something by herself, a sofa or other furniture.

- (33) sp1: *ze bezxut ze še ha-horim šel-i hitgaršu ||*
 this thanks this that the-parents-of-my divorced:3PL ||
axéret lo haya li salon ||
 otherwise not be:PST.3SG.M to.me living.room ||
 sp2: *ve lo hait yexola li-knot lax*
 and not you:PST.SG.F can:SG.F to-buy to.you:SG.F
 → *éze stam sapa*
 which simply sofa
 → *o mášehu /*
 or something /

Sp1: ‘It’s because my parents divorced [that I have furniture], otherwise I wouldn’t have a [furnished] living room.’

Sp2: ‘And couldn’t you buy yourself just a sofa or something?’

[Y33_sp1_056–057, _sp2_023]

Speaker 2 does not list all possible items that her friend might have bought, but mentions one of them *sapa* ‘sofa’, completing the list with the phrase *o mášehu* ‘or

something'. The general extender *o mášehu* is used to evoke referents similar to that mentioned explicitly (i.e., anything that belongs to the ad hoc category 'basic furniture for a living room'). The speaker does not refer to a specific member but to each member that could in principle be included separately in this list.

A similar function of the disjunctive general extender *o mášehu* is illustrated in (34), from a telephone conversation:

- (34) *ma yeš be-asiri la-tšiyi /*
 what be in-tenth to.the-ninth /
ʔa ʔa || beséder ||
 ah ah || all-right ||
mp- paxádeti še šaxáxti
 wa- afraid:PST.1SG that forgot:PST.1SG
 → *éze yomulédet*
 some birthday
 → *o mášehu ||*
 or something ||
 'What's happening on 10th of September? Ah, ah. Alright. I was afraid I'd forgotten a birthday or something.' [C514_2_sp1_082-085]

In (34), the speaker was afraid that she had forgotten an important event. It could have been someone's birthday, which was explicitly mentioned, but it could have been any other event, such as a wedding, anniversary, or holiday.

While in (33) and (34), the disjunctive general extender *o mášehu* indicates that the speaker refers to *any* element that may be combined with the mentioned items, it is used with rather a different purpose in (35).

- (35) *halxu axare káma zman od pam |*
 went:3PL after how.much time more time |
 → *kiílu | sof šeni*
 like | end second
 → *o mášehu |*
 or something |
ve od pam | oto sipur ||
 and more time | same story ||
 'They went again after a while. Like at the end of the second [trimester of pregnancy] or something. And the same story (all over) again.' [C514_2_sp1_138-142]

In (35), the speaker is talking about a couple that came to the clinic for an ultrasound test on one of the dates on which these tests are performed during pregnancy. The speaker does not remember exactly which one it was, so she mentions one of the possible dates – the end of the second trimester of pregnancy, and she uses the general extender *o mášehu* 'or something' to indicate that she is referring

to this or another specific date. In this case, in addition to evoking a higher-level category ‘regular times in which ultrasound tests are conducted’, the general extender *o mášehu* has the interpersonal function of expressing epistemic modality: the speaker doubts the accuracy of the information she is conveying.

Table 3 shows the distribution of adjunctive and disjunctive general extenders in the CoSIH database.¹¹

Table 3. Distribution of the adjunctive and disjunctive general extenders.

Adjunctives		Disjunctives	
<i>ve ze</i> ‘and this’	63%	<i>o mášehu (ka ze)</i> ‘or something (like this)’	27%
<i>ve ka’ele</i> ‘and like these’	2%	<i>o ani lo yodéa/yodáat (ma)</i> ‘or I don’t know (what)’	6%
<i>ve xúle</i> ‘and so forth’	2%		
Total adjunctives	67%	Total disjunctives	33%

The table shows that adjunctives are twice as frequent as disjunctives and that the most frequent general extender in the CoSIH database is *ve ze*.

In addition to general extenders, particular *constructions* (Construction Grammar, Goldberg 1995) conveying the sense of extending a list are used in spoken Hebrew. The example in (36) illustrates one such construction.

- (36) *(hem adáin) rocim li-tom me-ha-xaim |*
 (they still) want:PL to-taste from-the-life |
hem adáin rocim ze |
 they still want:PL this |
baxurim bne esrim ve štáim | esrim ve šaloš |
 guys sons (of) twenty and two | twenty and three |
ata mevin /
 you:SG.M understand:SG.M /
 → *ze roce li-lmod |*
 this want:SG.M to-study |
 → *ze roce po |*
 this want:SG.M here |
 → *ze roce šam |*
 this want:SG.M there |

‘They still want a taste of life. They still want this. Guys twenty-two years old, twenty-three, you understand? One wants to study, one wants this, one wants that.’

[P423_2_sp1_262–269]

11. There are, of course, other general extenders in spoken Hebrew (for example, *ve od kol miney* ‘and other all kinds = and all kinds of others’, *ve ze lo ha-kol* ‘and that’s not all’, as well as correlatives like *o (še) ... o (še)* ‘either (that) ... or (that)’. In the present study, however, only general extenders occurring in the CoSIH database were noted.

In the excerpt in (36), the speaker describes young men in their early twenties who still want a ‘taste of life’ and are not ready for a serious relationship. The first utterance, *rocim litom me-ha-xaim* ‘they want a taste of life’ presents an ad hoc category ‘things that men in their early twenties do to enjoy life before entering into a serious relationship’. The speaker adds another syntactically parallel sentence: ‘they still want this,’ in which he inserts a vague element ‘this’. After a short clarification about the relevant age-range, the speaker establishes the category by three syntactically parallel sentences. The first listee *ze roce lilmod* ‘this (one) wants to study’ represents one possible member of the category, indicating that studies are among the things that guys of this age want to do. The speaker does not continue to elaborate but completes the list by adding two parallel sentences: In the first, he replaces the word ‘study’ with the word ‘here’ and, in the second, with the word ‘there’. ‘Here’ and ‘there’ are two opposites that indicate deictic locations in space, metaphorically representing the domain of the particular category, namely, ‘what men in their early twenties do to enjoy life before a serious relationship’. By using the entire construction, the speaker can suggest a range of elements that might occur in this domain. Another example of this construction occurs in (37).

- (37) *bo* *nagid* *še* *ata* *ba* *ve* *bemet* |
 come:IMP.2SG.M say:FUT.1PL that you:SG.M come:SG.M and really |
šofex *et-lib-xa* *ve* *omer* |
 spill:SG.M ACC-heart-yours and say |
 → *káma* *xára* *le-xa* |
 how.much shit to-you:SG.M |
 → *ve* *káma* *po*
 and how.much here
 → *ve* *káma* *šam*
 and how.much there
 → *ve* *káma* *ze* ||
 and how.much this ||

‘Let’s say you come along and really spill out your heart [to me] and say how deep you are in shit, and so on.’ [P931_2_sp2_007–010]

In (37), the list construction contains four syntactically parallel utterances. The first *káma xára lexa* ‘how lousy you feel’ refers to the category ‘a bad mental state that the recipient is currently in’. The speaker adds two parallel sentences ‘how much here’ and ‘how much there’ that metaphorically represents the domain of the category. Finally, he adds one more syntactically parallel expression ‘how much this (that/it)’ by means of the vague element *ze*. This coordinate construction contains four coordinands, only one of which has a genuine referent, in the form of *káma xára*

lexa. A construction like this can be seen as exhibiting an iconic relation between the meaning (‘many different matters that bother the listener’) and the form (multiple listees).

9. Conclusion

The present study defined a *list* as a *construction* that comprises two or more functionally parallel elements (listees) that taken together serve a given discourse function. The study showed that it is possible to postulate a linguistic category of *list*, and that a broad, schematic definition of *list* may encompass various linguistic phenomena detectable at different levels of structure that are not normally studied together. However, such a unified approach to the phenomenon of lists may challenge some linguistic traditions that “privilege to polish existing categories rather than identifying and hypostatizing new ones” (Masini, Mauri & Pietrandrea 2018).

In addition to providing a working definition of *list*, list constructions in spoken Hebrew were classified by several criteria, such as the nature of the listees, different relations between them, different kinds of practices of list constructions in discourse, their prosodic features, and their locus in extended discourse. This description provides a fresh look at some well-established grammatical terms and contributes to typological studies of lists in different languages.

Moreover, by examining the correspondence of formal criteria to specific functions on one hand, and how collaborative and situated interactions influence linguistic patterns in everyday conversation on the other, the present study combines two linguistic methods and theoretical approaches: Construction Grammar and Interactional Linguistics. A major tenet of Construction Grammar is that form and meaning (or function) form an integrated whole in grammatical constructions (Fillmore 1989: 19; Fried & Östman 2004: 12). This goes well with an interactional perspective of language, where linguistic forms are seen primarily in the light of what function they have or acquire in interaction (cf. Couper-Kuhlen & Selting 2001: 6–7). It was shown that, in line with previous studies, “lists are complex structures that are oriented to by speakers and recipients as holistic entities and are made use of as a resource for a variety of purposes in interaction” (Couper-Kuhlen & Selting 2018: 42), and are affected by cognitive and social constraints arising from interaction (Ono & Thompson 1995: 217). As such, list constructions should be analyzed and explained in relation to the situated discursive and interpretive activities themselves, and so described as ‘instruments of interaction’ (Fillmore 1989: 32).

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A usage-based typology of Modern Hebrew syntax

How Semitic?

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The chapter considers how findings from Modern Hebrew syntax shed light on the usage-based domain of contemporary linguistic typology, defined as concerned with the synchronic and diachronic interrelations between function and grammar. To do so, it provides illustrations from well-discussed syntactic features marking inter-clausal relations, and compares these features with those found in Biblical Hebrew prose, with special emphasis on bi-clausal constructions. The conclusion is that Hebrew syntax to this day reflects constructions that are attested at earlier periods in the history of the language, including early as well as late Biblical Hebrew, accompanied by functional and frequency distributions that have changed in current usage.

1. Introduction

A major goal of usage-based theory is to shed light on the relationship between function and grammar in language use. The main question in such a perspective is what insights can emerge from the data with respect to function-general and system-specific factors in actual usage. The chapters on morpho-lexicon and syntax in this volume explore topics in MH from varied usage-based perspectives, presenting qualitative and quantitative analyses of data from both spoken and written varieties. As such, their focus is on the synchronic state-of-affairs in the language, and on how use in discourse impacts the way in which MH speakers employ the various constructions available in their grammar.

Another major goal of usage-based theory, and particularly of usage-based typology, is to provide insight with respect to similarities and differences among languages (see Bybee 2009 and references there). In his discussion of the genetic affiliation of Hebrew (see Chapter 3 of this volume), Rubin provides an overview of the domains in which MH is most typically considered Semitic – morphology and

lexicon. The chapters in Section II on morpho-lexicon are by and large consistent with this view, highlighting the impact of Semitic properties on the morphological, and thus obligatory aspects of current Hebrew. But what emerges in this respect from the chapters on syntax?

The findings from the chapters in this section seem to suggest that Modern Hebrew is not unique in either its system of grammatical markings or the functional processes that it reflects. Thus, it is similar to other languages in its marking of *agreement* – from subject to predicate and from head noun to modifiers (Chapter 12) – and of *negation* – primarily by lexical elements rather than by syntactic conversions or re-orderings (Chapter 16). Analysis of *impersonal constructions* (Ch 15) reflect the nature of MH as a non-subject requiring language on a par with European languages like Italian and Spanish, let alone Russian (Malchukov & Siewierska 2011), while the analysis of *transitivity* (Chapter 13) reflects the impact of verb morphology on valence-changing syntactic operations that are increasingly ambitransitive, as is common in European-type languages. *List constructions*, too, while particularly in tune with the favoring of paratactic constructions by MH (see §2.1 below), are not peculiar to MH (Chapter 17). It emerges that of all the topics dealt with in this section of the volume, only construct state *smixut* constructions (as discussed in Chapter 14) clearly depart from what is common in SAE, being typical not only of Hebrew, but of other Semitic languages like Arabic and Syriac. Yet even in this domain, the analytic option for expressing genitive relations between nominals by means of the genitive marker *šel* is not all that different than *of* or *de* constructions in European languages.

This concluding chapter aims to add to the discussion on the typology of Hebrew from a usage-based perspective, focusing on the domain of bi-clausal constructions as reflecting inter-clausal relations. As the following sections show, combining both synchronic and diachronic data in analysis of clause combining (as of other domains) provides fresh insights into questions such as similarities and differences between MH and other languages, as well as the more general issue of language type.

2. Bi-clausal constructions: Clauses and their combination

A ‘bi-clausal construction’ refers to the combination of two clauses, where one is independent (traditionally the main or matrix clause) and the other is related to it at some level of dependency.¹ The basic unit of analysis is thus the *clause*, defined as a linguistic construction that contains “a unified predication ... which expresses

1. Most accounts of coordination and subordination are confined to bi-clausal constructions, with relationships defined between the Main Clause and the clause that is coordinate or subordinate to it. Even current functionally oriented analyses that pay careful attention to cross-linguistic

a single situation (activity, event, state)” (Berman & Slobin 1994: 660; and see, too, Isaksson’s 2015 discussion of Biblical Hebrew).² The clause is widely recognized as a key unit of analysis of both written and spoken language (Biber et al. 1999; Chafe 1994; Halliday 1989), with the predicate as its most characteristic element (Thompson & Couper-Kuhlen 2005).³ The clause has also proved to be a viable unit in a range of cross-linguistic studies on different types of discourse, such as different sub-genres of narratives, both oral and written, in a variety of languages including Hebrew (Berman & Slobin 1994; Berman & Verhoeven 2002). In a functional perspective, clauses are taken to carry thematic, ideational, or propositional content (a “message”) in which one element in the clause, termed ‘the Theme’ by Halliday (2004) is assigned special status.

Bi-clausal constructions involve relations *between* clauses. Thus, in the context of extended discourse, each clause bears some relation to the clauses that surround it, whether or not syntactically marked by a coordinating or subordinating conjunction, and whether or not they are adjacent to one another. Three classes of inter-clausal relations can be distinguished: (i) *independent clauses* that are not syntactically or otherwise dependent on another clause, typically identified with Main Clauses, (ii) *dependent clauses*, the default cases of which are the traditional categories of Complements, Adverbials, and Relatives (Thompson, Longacre & Hwang 2007); and (iii) *coordinated clauses*, as a special class of dependent constructions.⁴ A major difference between Independent, Dependent, and Coordinated clauses is that the latter two are typically marked by an overt lexico-syntactic marker – typically termed subordinating or coordinating conjunctions, respectively.⁵

Traditional structurally oriented approaches to the notions of ‘Coordination’ and ‘Subordination’ raise several issues for analysis. This is the case even for languages like Hebrew and English, which can largely be characterized by the

consistency in characterizing the relations between clauses in complex constructions, typically analyze **pairs** of matrix and dependent clauses (Cristofaro 2003; Croft 2001; Lehmann 1988).

2. Clear-cut cases for division into clauses are instances where an overt subject is followed by a single, finite, verbal element. In the case of so-called “deranked” non-finite forms (Croft 2001) that typically do not take an overt subject, the clause may include only the verb form, as in *to help you out, while working, on his arriving* (for Hebrew, see Berman 2018).

3. For a discussion of problematic aspects of treating the clause as the basic unit of analysis in spoken language, see Brown & Yule (1983).

4. An additional special class of dependent clauses which is not treated here is that of ‘apposition’, Hebrew *tmura* (Livnat & Sela 1995).

5. Some clauses that are traditionally treated as main or independent do not necessarily constitute a complete sentence on their own, as in *He thinks* in *He thinks it’s raining* (Cristofaro 2003), while clauses that are traditionally treated as subordinate or coordinate may in fact stand on their own, as in *it’s raining* in the previous example or in *it’s raining in it’s raining and I am not going out*.

traditional classifications of clause types, with Complement clauses that function as arguments of the main clause verb (Noonan 1985: 42), Adverbial clauses that function as modifiers of the main clause verb (Thompson, Longacre & Hwang 1985: 171), and Relative clauses as modifiers of a main clause noun (Keenan 1985). For example, while both coordinating and subordinating conjunctions are generally treated as signaling a new clause, the absence or presence of a connective is neither a necessary nor a sufficient condition either for establishing a connection between clauses or for specifying the nature of that connection. That is, inter-clausal connection is not dependent on the presence of connectives, nor does the presence of a connective necessarily mean that adjacent clauses are connected. Furthermore, lexical connectives such as *and*, *so* (and their counterparts in other languages, such as French *et*, *donc* or Hebrew *ve-*, *az*) very often do not function as grammatical markers of connectivity but rather as pragmatically motivated ‘utterance-introducers’ (Berman 1996) or as ‘segment-tagging’ discourse markers that mark global discourse structuring (Schiffrin 1987). To complicate things even further, the same connective may flexibly express different types of relations, and so can be associated with more than one construction type (van Lier 2006; Verstraete 2007). Thus, the English subordinator *that* serves to mark both complementation and relativization, while the coordinator *and* (like French *et*) may express both additive and conditional interpretations (e.g., *You drink another beer and I’m leaving*). Moreover, one type of connection may be expressed by different connectives, such as *but* and *although* (Culicover & Jackendoff 1997). The system of conjunctions marking inter-clausal dependency is thus characterized by multi-functionality.

The following two sections review markers of inter-clausal dependency used in bi-clausal constructions in Modern Hebrew (§2.1) and in Classical and Late Biblical Hebrew (§2.2), with the aim of exploring their form, on the one hand, and their functionality, on the other.

2.1 Inter-clausal relations in modern Hebrew

Previous studies, typically on written Hebrew (e.g., Abadi 1988; Glinert 2004) show that inter-clausal dependency in MH is marked by a range of devices, including overt lexical means (coordinating or subordinating conjunctions, the default case), double marking (by correlatives),⁶ non-marking (in asyndetic constructions), and ellipsis of constituents. Muchnik’s (1989) study of journalistic texts shows that the

6. Correlative markers occur where both clauses are marked by co-dependent lexical connectives (the first of which is usually optional), representing different logical or temporal relations, e.g., *im – az* ‘if – then’, *gam – ve-gam* ‘also – and-also = both – and’, *o-(še) ~ o-(še)* ‘or (that) – or (that) = either – or’, *omnam – ulam/aval* ‘even – however / but = (even) though’.

various devices used for linking clauses in written MH correspond in form both to those used in Classical and Late Biblical Hebrew (CBH and LBH), and to those used in Rabbinical Hebrew. Thus, conjunctions such as *ha-*, *ve-*, *gam*, *ulam*, *ax*, *ki*, *ašer*, *kaašer*, *im*, *lu* – as discussed further below and deliberately not translated here due to their functional non-equivalence to apparently corresponding terms in English (and also at different periods in the history of Hebrew) – all appear in canonical Hebrew texts as well as in Modern Hebrew usage. In addition, MH usage involves items such as the temporal *ad še-* ‘until’ *leaxar še-* ‘after’, and purpose and clausal *kdey še-* ‘in order’, *hoil ve-* ‘because’, *heyot ve-* ‘because’, in the complex forms of *function word + še-/ve-*. These analytic options, which occurred in both Biblical and Mishnaic Hebrew (§2.2 see below), represent complex forms including prepositions, quantifiers, comparatives, and question words. These to this day add to the lexical stock of what are Hebrew scholars traditionally term ‘particles’, extending their syntactic range as closed-class and intermediate-class elements (see Chapter 9).

Independent Main Clauses (MCs) are typically not introduced by a clause-initial syntactic coordinating or subordinating conjunction. (They may, however, contain clause-initial “segment-tagging” discourse markers, including ones identical in form to syntactic markers such as *ve-* ‘and’, *az* ‘so, then’). Such clauses can stand alone as an independent proposition (typically in Indicative Mood) not requiring any further syntactic context for interpretation.⁷ In contrast, Complement, Relative, and Adverbial clauses that combine with independent clauses are typically marked by *še-*, while Coordinate Clause constructions are generally marked by a syntactically and semantically motivated clause-combining connector such as *ve-* ‘and’, *o* ‘or’, *aval* ‘but’. Syntactically unmarked (asyndetic) clausal relations take the form of *juxtaposed* clauses that are semantically and/or pragmatically related to a preceding clause.

Complement Clauses provide the content of a complement-taking predicate (typically a lexical or copular verb). These include a variety of sub-types, the default case being those termed ‘content clauses’ in Hebrew grammars (Zewi 2008). These are typically marked by *še-* or *ki* (Nir 2013), except where they take the form of Indirect Questions, both Yes/No and Content questions, Direct Speech quotations, or small-clauses with *benoni* form participials following verbs of perception and detection. As Zewi (2008) shows, these clauses function in various syntactic positions, including constructions with a copular Main Clause (e.g., *ha-deaga šel-i hi še-hu yaazov* ‘the-concern:F of-me she **that-he** leave:FUT = my concern is that he’ll leave’).

7. In contrast, the first clause in the following construction cannot be understood without its complement – *ha-yeled amar] še-hu kafac meal ha-gader* ‘the-boy said] that-he jumped over the-fence’ (where a square bracket indicates clause boundary).

Noun Complement Clauses share features of both complements and relative clauses and, in the oral narratives examined for present purposes, are typically introduced by a generic noun such as *ha-siba* ‘the-reason’, *ha-uvda* ‘the-fact’, *ha-raayon* ‘the-idea’. Like complement clauses in general, these specify the content, and not an attribute, of the head noun.

Adverbial clauses serve to modify the predicate, sometimes the entire clause, and can be subdivided by the semantic relation to the clause they modify, Temporality, Reason, Purpose, concession, Condition, Circumstantial, etc., as shown for the Reason and Temporal clauses in (1) and (2) below respectively.

These different bi-clausal constructions are illustrated below by examples taken from three sets of oral personal-experience narratives in which adolescent and adult native-speakers of Hebrew were asked to tell a story about an incident in which they had been involved in conflict with another person. These included 12 adult texts from a developmental study, the so-called “fight stories” (Berman 1995) and 32 Hebrew-language texts from a study comparing oral and written text-construction (Berman 2003) that formed the background to a large-scale cross-linguistic study on developing literacy, including 40 texts in Hebrew (Berman & Nir-Sagiv 2004). In these examples, a square bracket] indicates clause boundary.

- (1) *ve- axarey ze štey xaverot eh lo dibr-u it-i] biglal-še- ani*
 and- after it two friends er not spoke-PL with-me] **because-that** I
amárti l-a et ze]
 said:1SG to-her ACC it]
 ‘And afterwards the two girlfriends wouldn’t talk to me, because I told her that’
- (2) *ve- yom le-maxarat še- báti la- bet[^] sēfer] eh nixnásti]*
 and- day to-morrow **that-** came:1SG to.the- school] er entered:1SG]
 ‘And the next day when I came to school, er I went in ...’

Except for *ki* in the sense of ‘because’, adverbial subordinators found in the database of oral narratives produced by Hebrew speakers typically take the lexically complex form of Preposition + *še-* ‘that’, as in the case of the temporal *lifney še-* ‘before’, *matay še-* ‘when’, *beod še-* ‘while’ or the causal *biglal še-* ‘because’. Other common complex conjunctions include the locational *efo še-* ‘where that’, the contrastive *lamrot še-* ‘despite that’ and *al-af še-* ‘although that’, as well as the conditional *be-mida še-* ‘to-(the)-degree that’. The pervasiveness of *še-* as a subordinating marker is further shown by the fact that in children’s speech and in colloquial usage in general, the temporal marker *kšer* ‘when’ (itself reduced from *kaašer*) is typically reduced to *še-* without further more specific marking, as in (2) above. On the other hand, the canonic coordinating marker *ve-* ‘and’ often replaces prescriptively required *še-* in certain complex adverbial conjunctions, for example,

required causal *meaxar še-* > *meaxar ve-* ‘since’, *heyot še-* > *heyot ve-* ‘seeing as, seeing that’ (Muchnik 1989).

Note that adverbial subordination is both finite (as in the above examples) and non-finite, although *non-finite dependent clauses* are relatively rare in current Hebrew usage (Berman 2018), and they typically occur with a verb in the infinitive, most often in *purpose* clauses, with or without a subordinating conjunction (e.g., *az ani mesovévet et ze (kdey) li-rot še- ze axen šeli* ‘so I turn-around ACC it (in-order) to-see that-it indeed (is) mine’).

Relative Clauses typically function for modifying or restricting the reference of a (in Hebrew, preceding) head noun, most often also introduced by the conjunction *še-* (Nir 2015), as in (3):

- (3) *lišmor otam be- cincanot] še- ani esapek]*
 keep:INF ACC.3PL.M in- jars] that- I provide:1SG.FUT]
 ‘to keep them in jars that I will provide’

Use of *še-* introducing Relative Clauses may be replaced by one of two more formal alternatives, the CBH conjunction *ašer*, on the one hand, and *ha-* (identical in form to the definite marker meaning ‘the’), serving restrictedly as a conjunction preceding a relative clause that opens with a *benoni* ‘intermediate’ participial or present-tense form of the verb, as in (4), where angled brackets indicate embedded clauses.

- (4) *ha- mikre ha- klási < ha- meyaceg zot > hu elbon amok šel*
 the- case the- classic < the- represent:SG.M this:F > he insult deep of
ben^ mišpaxa]
 son:CS family]
 ‘the classic case < that represents ~ representing this > is a serious insult to a family member’

Unlike *ašer* and *še-*, the form *ha-* occurs, as noted, only immediately preceding a verb in the *benoni* (Berman 1978: 143–145) and only where the relativized noun is understood as the subject of its clause (Glinert 2004). Yet another option is omission of the conjunction with a fronted resumptive pronoun with verbs taking an accusative or prepositional object, as in (5) and (6).

- (5) *ani ba be- maga im yeladim] otam ani melamed*
 I come:SG.M in- contact with children] ACC.3PL.M I teach:SG.M
nosim be- ekológya]
 topics in- ecology]
 ‘I come in contact with children] whom I teach ecology’

- (6) *ve- le-moxorat ba- bóker íma šeli halxa la- xéder]*
 and- to-morrow in.the- morning mother mine went:SG.F to.the- room]
bo raínu televízya]
 in:3SG.M saw:1PL television]
 ‘and the following morning my mother went into the room where we watched TV’

These latter examples, with a fronted prepositionally-marked pronoun in place of *še-*, are favored as representing a higher register by non-expert writers, including university students, although frowned upon by prescriptivists (see Chapter 5 on prescriptive activity).

Example (7) illustrates an embedded Relative Clause relating to a noun phrase whose head ‘thing’ is semantically vague – a feature found to be very common in personal-experience narratives.

- (7) *ve- kol davar ≤ še- ani amárti la > hi halxa] ve-*
 and- all thing ≤ that- I said:1SG to.her > she went:3SG.F] and-
sipra]
 told:3SG.F]
 ‘and everything I told her she went and told (to others)’

Another class of RCs are *headless relatives*, introduced by a function word (e.g., *mi* ‘who’, *ma* ‘what’, *efo* ‘where’, *ze* ‘it, this, that’, *míšu* ‘someone’, *mášu* ‘something’, *af exad* ‘no one’, etc), as in (8).

- (8) *ve- kol ma še- hi amra li] ani šamárti et ze be-*
 and- all what that- she said:3SG.F to.me] I kept:1SG ACC it in-
sod]
 secret]
 ‘and everything she said to me I kept secret’

Coordinated clauses can be subcategorized into three main types: (i) clauses where each conjunct clause has a different subject from the other(s); (ii) clauses where both conjuncts have the same coreferential subject, with the subject of the second clause typically pronominal, so representing a higher degree of referential dependency between the two clauses; and (iii) clauses coordinated with so-called “equi-NP deletion”, where the same-subject of successive conjuncts is elided. These different types of coordinations are illustrated in (9) to (11) respectively, where the prevalent conjunction *ve-* ‘and’ is used.

- (9) *ába šel-i yelid Románya] ve- íma šel-i yelidat ha-*
 father of-me born:SG.M Romania] and- mother of-me born:SG.F the-
árec]
 country]
 ‘My father was born in Romania and my mother was born in Israel’

- (10) *hayom šaron oréxet et mekomon Ramat-Gan] ve- hi gam*
 today Sharon edit:SG.F ACC local Ramat-Gan] and- she also
lomédet xaci matkónet ba- univéršita⁸]
 study:SG.F half program in.the- university]
 ‘Nowadays Sharon edits the local newspaper of Ramat-Gan and she also studies
 half-time at the university’
- (11) *ani gárti be- Tel-Aviv ad sof šišit] ve- az avárti dira*
 I lived:1SG in- Tel-Aviv until end sixth] and- then moved:1SG flat
le- Herceliya]
 to- Herceliya]
 ‘I lived in Tel-Aviv until the end of 12th grade and then moved to Herzliá’

Other cases of coordination, such as predicate coordination in impersonal constructions or in aspectual or modal constructions, as well as contrastive coordination with *aval* ‘but’ and *o* ‘or’ are not illustrated here.

These few examples illustrate the repertoire of bi-clausal constructions in MH, with language-specificity manifested in the morpho-lexical means used in combining the independent and dependent clauses. The major markers are *ve-* ‘and’ in Coordination (Berman 1996) and *še-* in dependent clauses, semantically specified by expressions such as causal *biglal še-* ‘because’ or purpose *kdey še-* ‘in order (that)’, with high-register alternatives to *še-* such as *ki* available for marking Complement clauses and *ašer*, *ha-* for Relative clauses. Glinert (2004: 309) summarizes the functions of the major conjunctions as follows:

- še-*: Complement, Relative, Adverbial (mostly after prepositions)
- ašer*: Relative, Adverbial (after specific prepositions)
- ki*: Complement, Adverbial
- ha-*: Relative (before a participle)
- ve-*: Coordination, and specific cases of Complement and Adverbial meanings

This highlights *še-* as the “all-purpose” marker.⁹ Its pervasiveness across different types of dependent clauses sets MH apart from SAE in both Adverbial and Relative clauses, suited to a language lacking in so-called *WH* or *que*-type categories of closed-class elements. Furthermore, the alternation between the conjunctions is intimately related to register distinctions, with *ašer*, *ki*, and *ha-* representing formal, written registers.

8. Clauses that share the same pronouns are more loosely dependent than bi-clausal constructions where the first clause contains a lexical NP (or proper name) and the second contains a pronoun.

9. *še-* and *ki* also mark Appositions, a dependency not treated here.

The next section considers bi-clausal constructions in varieties of Biblical Hebrew in order to compare these with their counterparts in modern usage.

2.2 Inter-clausal relations: Examples from Biblical Hebrew prose

Studies of the ancient texts that constitute the continuum between Classical and Late Biblical Hebrew (CBH and LBH, respectively) also explore the lexical items that mark inter-clausal relations. The following short review considers mainly findings from Biblical prose, without attempting to cover the numerous examples documented in such well-known studies. Rather, it focuses on the generalizations that these studies suggest.

Similarly to Modern Hebrew, clauses in CBH and LBH have also been characterized as either *independent* or *dependent* (Andersen 1980; Givón 1991; Isaksson 2015; Niccacci 1990). Such studies suggest that determining the status of a clause as independent or dependent is also closely related to its internal structure. In CBH and LBH, the most prevalent conjunction is *wə-*. However, its occurrence at the beginning of a clause does not exclude the independent status of the VS clause. In fact, as shown by Cohen (2017), the so-called “inversive *we-* forms” *wayiqtol* and *wəqatal* in BH do not mark temporal relations but rather indicate distinct propositions that are not syntactically marked. At the same time, the absence of a marker does not entail independency: Dependent clauses, or ‘non-main clauses’ (Isaksson 2015) in CBH and LBH can be both syndetic or asyndetic.

These and other investigations of CBH and LBH provide examples for the same general types of bi-clausal constructions reviewed in §2.1: Complements, Relatives, Adverbials (as well as Appositions), including their various sub-types. As noted earlier, inter-clausal dependency in CBH and LBH is marked by a range of devices, including both overt lexical means and asyndetic constructions. The following four conjunctions are typically found in the Biblical texts as markers of dependency (see Andersen 1980; Isaksson 2015; Niccacci 1990, 1996): *ašer*, *še-*, *im*, *ki*. Importantly, these conjunctions are multifunctional: They can serve both for Relative, Complement, and Adverbial clause-combining. For example, distributions noted in the Even-Shoshan *New Concordance of the Old Testament* (1989) show that *ašer* is used mostly as a relativizer and serves as a conditional or causal marker in only a few instances, and *ki* is used mainly as a causal marker and as a complementizer, in addition to some attested usages as a conditional, temporal, and causal marker. Moreover, *ki* may express several circumstantial relations to the main clause, including *because*, *for*, *that*, *when*, *if*, *although*, *in order to*, so that it can be treated as a general marker of non-main clause linkage (Isaksson 2014).

These (and other) markers also combine with *wə-* or with prepositions to express various adverbial relations: For example, *wə-im* marks condition along with (but not restricted to) *ʔašer*, *ki*, and *lu*, and *ʕal-ki* mark causal relations along with (but not restricted to) *ʔašer* and *ki*; *ki-ʔim* and *bilti-ʔim* mark exceptive clauses; *lemáʕan* and *baʕavur* mark purpose clauses (preceding infinitive forms); *kaʔašer* marks both comparative constructions as well as temporal constructions; the latter can also be marked by a complex form such as *ʕad ʔašer*, *ʕad ki*, *ʕad ʔim*, *be-térem*, *me-ʔaz*, etc.¹⁰ The examples in the Even-Shoshan concordance (1989) show that this is a very productive construction, offering several dozens examples of complex conjunctions.

In fact, *wə-* itself is viewed as multi-functional and neutral, marking not only coordination, but rather marking transition from main clauses to dependent, non-main clauses, with the meaning of the dependent clause inferred from context (Andersen 1980; Isaksson 2015; Steiner 2000). Thus, while narrative prose in Biblical Hebrew is typically viewed as paratactic, based on the overwhelming occurrence of chains of verb forms introduced by *we-* ~ *wa* (*weqatal*, *wayyiqtol*, as well as imperatives), this accepted view of BH can be queried (see, for example, Issakson 2015). Along similar lines, Fernandez' (1997) analysis of Rabbinic Hebrew shows that in post-Biblical periods the conjunction *we-* expressed various inter-clausal, not necessary paratactic, relations, including juxtaposition.

The concluding remarks which follow review the picture which emerges with respect to the marking of inter-clausal relations in CBH and LBH prose as compared with Modern Hebrew usage.

3. Concluding comments

This concluding chapter started out with a question and a comment regarding the characterization of the syntax of Modern Hebrew and its relation to Semitic: The chapters presented in the section on MH syntax seem to suggest that Hebrew is not unique in either its system of grammatical markings or the functional processes that it reflects.

The fact that the constructions illustrated in the preceding chapters are not unique to MH does not go against its classification as a Semitic language. As shown

10. Biblical forms are represented in this section by symbols following the orthography, including the the glide *w*, the gutturals *alef* and *ayin*, and the emphatic *q* – as distinct from the broad phonemic transcription adopted in the rest of the chapter to represent current Hebrew pronunciation (see Chapter 6, Notes on Phonology and Orthography).

by Zeldes (2013), MH differs from SAE in most of the numerous features that he explores, including those syntactic constructions that have been defined as typically European: Relative-clause formation, the structure of equational clauses, experimenter constructions, the article system, verb fronting in polar questions, and lack of pro-drop. Moreover, MH syntactic features are in many ways similar to features characterizing Hamito-Semitic languages, as shown by Gensler's (1993) text-based analysis of 64 reference grammars. Thus, the grammars reviewed (for Berber, Egyptian, Arabic, Akkadian, and Geez) deviate from non-Hamito-Semitic in what Gensler terms 17 "exotic" features, many of which are in fact part of the syntactic system of MH: the use of conjugated prepositions that are (near-)identical to possessive markers (*mim-xa* 'from-you:SG.M', *bet-xa* 'house-your:SG.M'), the order of head and modifier in the noun phrase, including post-posed adjectives, compound modifying nouns, relative clauses (*báyit gadol* 'house big', *bet^ yeladim* 'house:CS children', *báyit še-hu bana* 'house that-he built'), noun phrases post-posed to prepositions (*la-báyit* 'to.DET-house'), article placement in genitives (*bet^ ha-yeladim* 'house:CS DET-children'), various relativization strategies (e.g., invariability of the relativizer, copying instead of gapping as in *ha-báyit še-haláxta el-av* 'DEF-house that-you.went to-it'), and lack of agreement when the verb precedes the noun subject (as shown in Chapters 12 and 15, on Agreement and Impersonal Constructions, respectively).

Against the background of such comparative surveys, two main observations emerge from the brief overviews of Modern and Biblical Hebrew in §2.1 and §2.2 of the present study. First, the forms used for marking inter-clausal relations are largely the same in Modern Hebrew and in Biblical Hebrew prose. Second, Hebrew appears to favor particular conjunctions for a range of clause-combining functions, reflected in the pervasive use of *wa-* or *ʔašer* in Biblical Hebrew prose and of *ve-* and *še-* in MH narratives. What turns out to be the case is that the major difference between BH and MH lies in the *functional scope* of each conjunction, in terms of their multi-functionality, on the one hand, and specificity, on the other. Two main trends can be detected: First, in lexical marking of clause-combining, the same elements occur in BH and MH, but ones that were multi-functional in Biblical usage have a specialized function in MH (*im* 'if, whether', *ki* 'because', *ašer* 'formal relativizing conjunction'); and, second, the unique construction of Preposition + conjunction (e.g., Biblical *ad ašer* and MH *ad še-* 'until that') for marking subordinate clauses occurs in both BH and MH, but (i) is used in MH with rather different prepositional items (e.g., non-normative causal *biglal še-*, *mipney še-*, purposive *kdey še-*, *bišvil še-*), and (ii) with some instances of pruning, e.g., temporal *kaašer* > *kše* 'when' has become neutralized in current usage as *še-* the all-purpose subordinator.

Moreover, and in contrast to the overall systematic similarities of clause-linking conjunctions, a major difference that emerges between Biblical and Modern

Hebrew is the latter's non-reliance on asyndetic dependency. Whereas BH allows asyndetic clause-combining, with no overt marker of the relations between clauses, this is atypical in MH. In fact, studies examining the distribution of conjunctions in the various bi-clausal constructions used in the personal-experience narrative texts mentioned above revealed clear "rhetorical preferences" (Berman & Nir 2009; Nir 2008; Nir & Berman 2010) for the use of these independent and dependent clauses. In such analyses, concern is not with the structural options available to speaker-writers of a given language but rather with the *choices* they make in how much and for what purposes they deploy a given device in usage.¹¹ For example, while *passive constructions* are readily available in the grammar of MH (see Chapter 10 on Voice Alternations), analysis of even written usage of educated but non-expert reader-writers of different languages reveals these to be largely lacking in Hebrew texts compared with those of subject-requiring languages like English or Dutch (Jisa et al. 2002), while structured elicitations reveal command of passive morphology in Hebrew to be marked as a sign of elevated register (Ravid & Vered 2017).¹² In the context of marking inter-clausal relations, these rhetorical options are apparent both in terms of the impact of register on the choice of conjunction (specifically *ki*, *ha-*, and *ašer*) and in the use of asyndesis. Thus, Hebrew speaker-writers made relatively little use of asyndetic clause-combining, mostly in the form of juxtaposed main clauses, in contrast to English speakers who readily relied on asyndesis, for example in complement constructions. In fact, asyndetic dependency in MH occurred only when the clause was part of a dependency chain, and thus under the scope of the first conjunction in the chain of clauses.

Such comparative perspectives on clause-combining in Hebrew are largely consistent with the detailed analysis proposed by Zewi (2008) in tracing the forms and functions of Complement (termed "Content") clauses in Modern compared to Maskilic (literature of the *haskala* 'enlightenment' period in 19th century Europe), Medieval, Rabbinical, and Biblical Hebrew. Zewi's diachronic comparisons highlight two points relevant to the present analysis: First, in classical Biblical Hebrew, use of a particular lexical marker or of an asyndetic construction is closely related

11. In addition, analysis of inter-clausal relations revealed significant differences between the means of clause-combining preferred by speaker-writers of Hebrew than compared with certain European languages (Berman & Nir 2009; Nir & Berman 2010). Hebrew speaker-writers showed statistically significant favoring of Coordination and Relative clause constructions over the English and Spanish preference for Complement and Adverbial constructions.

12. This can be explained, *inter alia*, by the ready availability of both morphological middle voice, on the one hand, and of subjectless impersonal constructions, on the other (see Chapter 15 on Impersonal Constructions), to express a less agentive orientation or a more distanced discourse stance on events, hence demanding less reliance on passive voice in MH (Berman 2011).

to syntactic context (clause position); and second, in Modern Hebrew, this interrelation has been largely neutralized by the prevalence of *še-* as an all-purpose conjunction, as shown in Table 1.

Table 1. Features of complement clause constructions in Hebrew, by period

Period	Lexical markers	Syntactic contexts
Biblical	<i>ki, še-, ašer, asyndetic</i>	Distribution of conjunction depends on the position of the clause: no predicate complement clauses, few subject complement clauses, few noun complement clauses, mostly object complements
Rabbinical	<i>še-, asyndetic;</i>	Rare predicate complement clauses
Maskilic	<i>še-, ki, ašer</i>	Appearing in all four syntactic positions
Modern	mainly <i>še-</i>	Appearing in various syntactic positions (subject, object, noun complement, predicate)

Zewi's analysis does not ascribe the difference in the syntactic contexts available for complement clauses to an internal, chronological development of the language. The difficulty of assuming such a development is also acknowledged in Givón's (1991, 2015) functional and distributional investigations of Biblical Hebrew syntax from a diachronic perspective. However, as Givón shows, the changes in usage of subordinators (specifically *ašer/še-*) in Relative, Complement, and Adverbial clauses in BH prose suggest a highly parallel trend in the distribution of these markers from Early to Late Biblical and Mishnaic Hebrew. For example, these trends characterize the transition from use of *ki-/wə-hine* as a Complementizer to the use of *še-/ašer* (in comparison to the use of the same markers as marking cause/reason adverbial clauses) as well as the transition from nominalized temporal clauses to the use of finite clauses with *ašer/še-*, with the latter conjunction taking over most of the functions of the former. In Givón's analysis, these alternations (that are also correlated with other – functional – changes that took place in the grammatical system of Biblical Hebrew, such as the shift in word order from VS to SV(O) and the changes in the tense-aspect system) clearly indicate a diachronic continuum.

In contrast to the analyses presented by Zewi and Givón, the short overview in the preceding sections of this chapter is not in essence diachronic, nor does it point to general, external or system-internal, developments across the periods of the language. Yet the data reviewed above could be taken to indicate a situation of linguistic *continuity*, in line with Givón's proposals. Clearly, detailed usage-based insights leading to a genetic characterization of MH of the type suggested by Rubin (Chapter 3, this volume) would require far-reaching and detailed analysis of actual developments in different linguistic sub-systems across and within the various periods in the history of Hebrew. Potential directions for analysis of possible diachronic

developments derive from the insight that (narrative) discourse in various historical periods of the language relies on much the same syntactic structures and functional relations, with the differences between them being largely distributional. This approach is well-expressed in the updated version of Ben-Hayyim's (1956/1992) paper on the historical status of the Hebrew languages: "Nothing in it (Modern Hebrew) has died and so there exist – and are in use – different chronological layers side by side, not on top of one another, as in languages with a historic continuity" (Ben-Hayyim 1956/1992: 59, as translated from the Hebrew by Halevy 2013). Along the same lines, a diachronic, distributional analysis of temporal conjunctions in Early Modern English (Rönnerdal 2017) shows considerable variation in comparison with earlier and later periods, as well as across the Early Modern period itself, but at the same time also reveals overall stability in the system. Importantly, stability in English was found in structure (of both simple and complex conjunctions), and variation was found in distribution and function, similarly to what was found here for Hebrew. In fact, the above analysis provides no evidence for global changes that would result in a new gestalt of the language (Kastovsky 2006), justifying its classification as non-Semitic. On the contrary, the comparison between the two systems of MH and BH points towards another question for future typological investigations: Why is it that some constructions or linguistic features stand the test of time and remain "fossilized" – for example, Hebrew verb-formation, hence critically "Semitic" (Goldenberg 1996), while others – such as syntactic constructions and TMA systems – tend to be more susceptible to variation or what Slobin (1977, 1994) terms "vulnerable" to change across time and place?

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The goal of the volume is to shed fresh light on Modern Hebrew from perspectives aimed at readers interested in the domains of general linguistics, typology, and Semitic studies. Starting with chapters that provide background information on the evolution and sociolinguistic setting of the language, the bulk of the book is devoted to usage-based studies of the morphology, lexicon, and syntax of current Hebrew. Based primarily on original analyses of authentic spoken and online materials, these studies reflect varied theoretical frames-of-reference that are largely model-neutral in approach. To this end, the book presents a functionally motivated, dynamic approach to actual usage, rather than providing strictly structuralist or formal characterizations of particular linguistic systems. Such a perspective is particularly important in the case of a language undergoing accelerated processes of change, in which the gap between prescriptive dictates of the Hebrew Language Establishment and the actual usage of educated, literate but non-expert speaker-writers of current Hebrew is constantly on the rise.

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