

Tel Aviv University
Faculty of Humanities
Department of Linguistics

**The Genetic and Typological
Classification of
Modern Hebrew**

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(M.A.) degree at the University of
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Submitted by Danny Kalev

Supervisor: Prof. Paul Wexler

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Foreword

Three disciplines have attempted to determine the genetic classification of Modern Hebrew (MH). The traditional discipline considers MH a Semitic language that was created by reviving Ancient Hebrew. By contrast, Wexler (1990) regards MH an Indo-European language whose genetic lineage is identical to that of Yiddish, the mother tongue of Ben-Yehuda and his colleagues. Finally, Zuckermann (2003) views MH as a hybrid language that amalgamates Semitic and Yiddish grammars. While Zuckerman and the traditionalists use typological criteria to establish the genetic classification of MH, Wexler clearly distinguishes between typology and genetics, admitting that the typological profile of MH includes Semitic traits in spite of its alleged Indo-European lineage. The thesis presented here regards MH an Indo-European language both typologically and genetically.

In chapter 2 I discuss the typology of MH in detail, presenting lexical, phonological, morphological and syntactic data to corroborate my claim that the typological profile of MH doesn't differ much from that of other Indo-European languages such as Yiddish, German, Ukrainian and English. Next, I contrast the *binyan* (verbal template) system of MH with that of San`ani Arabic. Unlike San`ani Arabic, MH has only three productive binyanim: *pi'el*, *hif'il* and *hitpa'el*. Furthermore, MH often assigns a binyan to a verb according to purely phonological criteria — the chosen binyan is the one that best preserves the stem's segmental and prosodic structure, for example:

hiklid < klid

ʃnorɛr < ʃnor (as opposed to: *ʃinɛr, *ʃnirɛr, *ʃinrɛr)

In some cases, the melodic preservation may have higher precedence than the syntactic and semantic properties of a binyan. For example, *hif'il*, a binyan typically associated with causative-transitive meaning, may be assigned to a verb that is neither causative nor transitive (*hiflik* ' < *flik*) in order to retain the original phonetic structure of the stem.

The data also refutes the widely-accepted assumption that only the heavy binyanim (*pi'el*, *hitpa'el*) can accommodate roots with more than three consonants. *hif'el* is a counter-example. It's tolerated because it fits into the syllabic template [hiC(C).CiC] of *hif'il*. Furthermore, the data suggests that the non-productive binyanim *qal* and *nif'al* may have fallen from grace in MH because they adhere to the disused paradigm of consonant counting, unlike the productive binyanim that count syllables. The syllable-oriented model I propose provides us with an economic and reliable mechanism for predicting which new verbs are allowed, without introducing a special case for every possible number of radical consonants. The conclusion is that MH verbal system doesn't quite correspond to the canonical verbal system of other Semitic languages. The "melodic overwriting" process can be accounted for as a specialized form of ablaut.

An analysis of the nominal derivation processes of MH reveals that affixation, compounding and blending are more productive than template-based (*mishkalim*) derivation. In this respect, MH exhibits a diglossic split between two registers. Whereas the formal register usually adheres to normative Semitic pronunciation and grammar, colloquial Hebrew — a register that reflects native speakers' intuitions more accurately — sometimes prefers grammatical features that are non-Semitic. The conclusion I draw from this analysis is that MH isn't typologically Semitic.

Chapter 3 deals with the issue of genetic classification in general. After challenging the theory of "mixed languages" (Bakker, 1994), I attempt to establish the point in time at which ancient Hebrew ceased to be a spoken language. Finally, I investigate the feasibility of a language revival. Case studies of other failed revival attempts (Manx, Cornish, Sanskrit) along with the scientific knowledge regarding the cognitive differences between first and second language acquisition lead me to conclude that a language revival is impossible. Consequently, MH must be a genetically Indo-European language that was created by means of relexifying Yiddish. In spite of an outwardly Semitic façade that stems mostly from its Semitic lexicon, its typological classification actually corresponds to the proposed Indo-European genetic classification.

2010 Foreword

Six years after the publication of my thesis, my views regarding the genetic and typological classification of MH have changed considerably. My studies of other modern Semitic languages such as Amharic, Maltese and modern dialects of Aramaic reveal that the reduction in canonical Semitic features is not unique to MH. Some of these languages exhibit even fewer Semitic features compared to MH, and yet their genetic classification is not disputed. Today I'm convinced that MH is a Semitic language, albeit a peculiar one. It is Semitic since the psychological reality of roots is well established. Native speakers clearly observe the semantic connection between *nasa* 'he traveled, drove', its causative derivative *hisia* 'he gave somebody a ride' and the noun derived from the latter *hasa'a* 'a ride'. In spite of the unusual goings-on in its binyan system, MH still retains what I consider the defining Semitic feature, namely abstract roots whose basic meaning is diversified by fitting them into prefabricated nominal and verbal templates.

In the past six years I have also learned that some of the data presented in this thesis needs to be updated. For example, I'm now aware that MH's syllable inventory is even richer than I'd realized. Syllables that contain only a single vowel also exist in MH:

- i 'island', also a negation clitic
- o 'or', also an interjection
- u 'and' (before labials and clusters, sometimes found in hyper-corrected speech)

Does that mean that this thesis is irrelevant today? Not quite. I believe that it presents a few novel ideas that warrant more research. Consider the existence of a

diglossic split between formal literary Hebrew and colloquial Hebrew. Many researches have ignored it, focusing almost exclusively on an artificial literary register that doesn't necessarily reflect native speakers' intuitions. The grammatical differences between these two registers are fascinating, as I will shortly demonstrate.

A syllable-oriented analysis of verbs (as opposed to consonant counting) may shed new light on our understanding of the productive inner-workings of MH. It also enables us to predict with a higher level of certainty which verbs are possible. In this respect, I believe that the lack of verbs with seven radical consonants is merely a lexical gap; MH can tolerate such verbs so long as they can be shoehorned into the appropriate syllabic molds (this assumption is implied in 2.1.3).

Little-researched phenomena such as complementizer-free relative clauses (2.4.7) dative constructions (2.4.8), and *habere* constructions (2.4.9), as well as historical questions such as when exactly ancient Hebrew died (3.4) can serve as topics for future research.

Whether MH Hebrew is genetically Semitic or not is yet to be determined. However, there are even more fascinating developments in MH that are hardly reported, let alone explored. The proliferation of new grammatical constructs — most of which occur only in colloquial Hebrew, often superseding formal Hebrew forms — warrants further research. These constructs (which are not discussed in this thesis) include a new imperative form, a new binyan, the accusativization of intransitive verbs, and even a future perfect aspect.

The new imperative form is demonstrated in table 0.1:

Colloquial Hebrew	Formal Hebrew	Gloss
kansu	hikansu	'come in (pl.)'
stemi	sitmi	'shut up (f. sg.)'
titpater	hitpater	'resign (m. sg.)'

Table 0.1 the new imperative of colloquial Hebrew

A new binyan *hitpu'al* was created by merging *hitpa'el* and *pu'al* (the passive allomorph of *pi'el*). It expresses an outwardly volitional act that is actually imposed on the subject:

hitputar 'he was forced to quit while pretending it was on his accord'

hitʔubad 'he was forced to commit suicide'

hitnudav 'he was forced to volunteer'

As an aside, MH's ability to invent a new binyan (even if it's still considered a curiosity)

bears witness that it's a Semitic language, after all.

The accusativization of intransitive verbs is demonstrated in table 0.2:

Formal Hebrew vi original intransitive	Colloquia Hebrew accusativized form	gloss
ixer larakevet	ixer et harakevet	'he missed the train'
ʃikru li	ʃikru oti	'they lied to me'
ganvu mimeni	ganvu oti	'they stole from me'
axaz bamot	axaz et hamot	'he clung to the poll'

Table 0.2 accusativized intransitive verbs in Colloquial Hebrew

A future perfect aspect is expressed by using the preterite:

tox daka xazart 'be back in a minute', literally: 'you returned in a minute'

Hopefully, these grammatical constructs and others will become the topics of future monographs and textbooks.

Dedicated to my mother, Rachel, who taught me to never give up.

First and foremost, I would like to thank my advisor, Professor Paul Wexler, for his invaluable support, encouragement and guidance and most importantly — for teaching me the first rule of historical linguistics: "take nothing for granted".

I would also like to thank Professor Mira Ariel for her immense efforts to "make it happen". Her encouragement and involvement, which were instrumental in completing this work, will always be treasured in my heart.

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1 Introduction

Modern Hebrew is an extraordinary language; not because of its alleged miraculous revival (Tur-Sinai 1951:34), nor is it due to its "tortuous and incomparable history" (Kutscher 1956:28) either. It's extraordinary in its phenomenal ability to baffle linguists and laypersons alike for more than a century with respect to its identity. In this work I will explore the typological profile of Modern Hebrew and determine its genetic classification.

1.1 Contemporary Views Regarding Modern Hebrew's Genetic Classification

Contemporary views are grouped into three major schools. The Semitic school considers Modern Hebrew a genetically Semitic language. The rival school considers it an Indo-European language. Recently, a new school has emerged which considers Modern Hebrew a hybrid language. The following synopsis presents these views and criticizes each of them.

1.1.1 The Traditional View: Modern Hebrew is a Semitic Language

This view is prevalent in Israeli high schools, Hebrew language departments of academic institutes and virtually all grammar books. Members of the Semitic school base their claim on a recurrent motif: Modern Hebrew preserves a direct, or even uninterrupted, link to earlier periods of Hebrew. Rosén argues that Modern Hebrew is genetically Semitic (1977:26) yet he uses typological criteria such as the use of the possessive affixes in the nominal system¹. Chomsky claims that Hebrew "never died, even colloquially; therefore it was never revived either" (1967:235). Likewise, Shaffer proposes that Modern Hebrew is a "later form of Aramaic, which the Jews in Palestine never stopped using as their vernacular" (1972:321). If indeed that were the case, Modern Hebrew would be genetically Semitic, regardless of its current typological profile. However, Bar-Adon

¹ This claim (not unlike a few other claims by Rosén, see Blanc 1956b) doesn't really hold true (see 2.4.1).

refutes the myths about the colloquial status of Hebrew prior to the revival: "these are absurdities, in the vein of other exaggerations...the sources of which include travelogues...of lay tourists lacking proper linguistic training..."(1990:12). Blau considers Modern Hebrew undoubtedly Semitic because the first generation of speakers consisted of people with traditional Jewish education. These speakers, he argues, had the proper linguistic intuitions needed for a genuine revival of Hebrew (1981:132). Ullendorff (1958 [1977:162]) suggests that the relevant criterion for determining the language's assignment is what native speakers think, thereby implying that Modern Hebrew is Semitic. Ullendorff's suggestion is problematic for several reasons. It implies that a language may change its genetic affiliation at will, due to changes in the socio-political climate or for other reasons. This premise could lead to preposterous conclusions. For instance, Persian, unquestionably an Indo-European language, could be classified as Semitic after the Islamic revolution of 1979 in Iran. Likewise, pre-WWI Turkish should be classified as Semitic due to the heavy Arabic influence on its vocabulary and writing system, whereas after the Ata-turk reforms of the early 1920s the tendency would be to regard it an Indo-European language. Worse, such an approach undermines the necessity of historical linguistics.

Doubts concerning the genetic affiliation of Modern Hebrew have been expressed since its early days. Bergsträsser wondered back in the late 1920s whether it wasn't a "European language in transparent Hebrew clothing"(1928:64). Members of the Semitic camp occasionally raise doubts as well. Bendavid (1:1967:253) describes Modern Hebrew as "nothing other than a translation of Eastern European languages." Kutscher (1982:296) asks rhetorically whether the language is still Hebrew or it is best considered "entirely unnatural and artificial like Esperanto".

1.1.2 Critique

Many of the Semitic camp members confuse genetic assignment and typology. For instance, Izre'el relies on typological criteria to support his claim that Modern Hebrew is Semitic (1986:83). He regards as evidence the alleged existence of *mishkalim* and *binyanim* — vocalized templates into which radical consonants are inserted for the purpose of deriving nouns (see 2.2) and verbs (see 2.3), respectively. Ullendorff also uses

the same argument (op. cit., p. 152).

Some of the confusion regarding Modern Hebrew's classification may be attributed to the definition of the term "Semitic". This term is used interchangeably to refer to a language that has evolved from the Semitic branch of the Afro-Asiatic family or to a language that exhibits certain grammatical features e.g., laryngeal consonants, broken plurals and binyanim. It's not always clear whether Semitic camp members regard Modern Hebrew both genetically and typologically Semitic. Unfortunately, many of them rely on questionable data to substantiate their claims. In some cases, their examples are archaic and artificial (see 2.4.1). Similarly, certain scholars aren't aware of productive phonological rules and consequently fail to portray an accurate phoneme inventory of Modern Hebrew (see 2.1.4).

1.1.3 The Rival Theory: Modern Hebrew is Indo-European

The Indo-Europeanist camp considers Modern Hebrew an Indo-European language. This is still a minority view although the claim itself isn't new. Kacnelson was the first to suggest that Modern Hebrew "is nothing more than a branch of Yiddish" (1960:63). He bases his claim on the vast number of loan translations from Yiddish². Wexler (1990, 2002) claims that Modern Hebrew is an entirely Indo-European language that was created by means of relexifying and rephonologizing Yiddish, the mother tongue of Eliezer Ben-Yehuda and his colleagues, to whom I will collectively refer as the "revivers" henceforth. (In this work I intend to show that there is nothing in the history of Modern Hebrew — or any other language — warranting the use of the term "revival". Therefore, I use this term as a convenience, not as an endorsement of its historical veracity). This theory clearly distinguishes between Modern Hebrew's genetic classification and its typology. Furthermore, it concurs with linguistic theories regarding the distinct cognitive statuses of first and second languages. However, this theory doesn't account for the existence of

² Although Kacnelson's argumentation betrays his lack of formal linguistic training and is often marred with Yiddish nostalgia, his observations are still valid. Many of the loan translations from Yiddish manage to "bend" Hebrew grammar. The colloquial phrase (not included in Kacnelson's book) *rakad al [te]j xatunot* 'have the cake and eat it, too' (lit. 'dance at two weddings') uses the preposition *al* 'on' as in Yiddish, instead of *be* 'at' which the Hebrew \sqrt{rkd} governs.

binyanim and mishkalim in Modern Hebrew. It's therefore reasonable to assume that it considers Modern Hebrew an Indo-European language "with a strong tendency to be(come) typologically Semitic" (Wexler 1990:102).

1.1.4 The Hybridization Theory

Zuckermann (2003) presents a new theory that regards Modern Hebrew as a hybrid language that fuses Yiddish and Semitic elements. Although his theory acknowledges the existence of Yiddish features in Modern Hebrew grammar, it doesn't rule out its Semitic assignment either. In fact, it suggests that a language can belong to multiple language families, or that the issue of genetic classification is simply irrelevant. A major weakness of the hybridization theory is that it doesn't predict under which circumstances languages in contact become hybridized. After all, in the majority of cases languages in close contact do retain their unique identities. This theory also obscures the distinction between typological features and genetic classification. If the genetic issue is indeed unimportant as this theory seems to imply, then Zuckermann's model isn't very useful for establishing the genetic assignment of Modern Hebrew in the first place³. Moreover, a hybridization process necessitates that the languages involved should have the same native and colloquial statuses (as in the case of Michif discussed in 3.2). However, the case of Modern Hebrew is radically different: the revivers were native speakers of Yiddish. When and how exactly could an encounter with native norms of Semitic Hebrew have taken place in the absence of native Hebrew speakers?

1.2 Terminological Issues

The use of vague and underspecified terminology has been a fertile source of controversy and misunderstandings in the linguistic literature. It is therefore imperative to define some of the key-terms that are pertinent to the discussion.

1.2.1 What is a Dead Language?

³ In biology, the term *hybridization* refers to a genetic fusion of two species. It is therefore a misnomer for a linguistic theory that downplays the role of genetic assignment.

Researchers don't agree on the exact definition of the term a "dead language". George for instance claims that Cornish is "unquestionably a living language" (1993:645). Wexler also suggests that pre-revival Hebrew wasn't a dead language (1990:14, fn 24). If that is the case, Latin, Ancient Greek and Sanskrit aren't dead either since they have been used liturgically and literarily for millennia. Furthermore, if pre-revival Hebrew was never a dead language, the need to revive it wouldn't have arisen in the first place — as indeed some scholars claim.

My definition of this term is different: **a dead language is one that is no longer being acquired as a mother tongue**. This term may apply to an *extinct language* e.g., Pictish and Etruscan, or it may refer to languages such as Latin or Classical Arabic which are widely used in literature and even colloquially. By contrast, I consider a *living language* as one that is being acquired as a mother tongue.

1.2.2 What Constitutes a Revival?

The definition of a "dead language" entails another crucial observation: a successful revival must culminate in making the revived language a mother tongue. Anything less than that e.g., publishing literature in the target language or forming a speech community in which it is used as a second language can't be considered a revival for the purpose of our discussion. This definition is necessary for filtering out "linguistic noise" that abounds in the literature regarding alleged revival stories.

1.3 Research Questions

The first two research questions that I will address are therefore:

- i. What is the genetic classification of Modern Hebrew?
- ii. What is its typological profile?

The split to genetic and typological classifications will enable us to determine whether

the revivers' attempt to base Modern Hebrew grammar on that of Semitic Hebrew⁴ succeeded. These questions aren't confined to the private case of Modern Hebrew, though. Several attempts to revive dead languages have been carried out in recent centuries. Most linguists agree that these attempts have all failed (Rabin 1999:363). Answering these questions will help us reach universal generalizations about the feasibility of a language revival. If indeed a language revival is possible, what are the prerequisites for its success? If on the other hand, a "language revival is an impossibility" (Wexler 1990:102), can we back this hypothesis with empirical data and theories?

1.4 Goals and Methodology

In chapter 2, I will survey the typological profile of Modern Hebrew and show that it is in many aspects Indo-European. I will address the issue of Modern Hebrew binyanim and show that they are quite different from the prototypical binyan system that exists in Semitic languages whose genetic classification is not in doubt. In a similar vein, I intend to show that the nominal system isn't based on mishkalim but on Indo-European derivational mechanisms. Finally, I will elaborate on the diglossic nature of Modern Hebrew and discuss its implications.

In chapter 3, I will formalize basic presuppositions for a linguistic framework of genetic classification. I will show that Hebrew ceased to be a mother tongue at least a couple of centuries before the accepted date and that it ceased to be spoken, even as second language, before the first century AD. Then I will address the validity of the "mixed language" theory and show that, in opposition to "componentially mixed" languages, genetically mixed languages don't exist. Next I will present the ill-fated revival attempts of Cornish and Manx and suggest that a language revival is impossible. This will lead us to the conclusion that Modern Hebrew is Indo-European.

Chapter 4 synthesizes the conclusions drawn in chapters 2 and 3, suggesting that the Indo-European typological profile of Modern Hebrew is congruent with its genetic

⁴ This term refers collectively to Biblical Hebrew and Mishnaic Hebrew, encompassing a period of ca. 900 years (10th-1st centuries BC) during which Hebrew served as a mother tongue (see also 3.4)

assignment, after all. I will then address the socio-psychological factors that led to the disowning of its Yiddish substratum. Finally, I will propose topics for future research.

1.5 Transcription and Transliteration

I use the SILSophia IPA93 font for phonetic transcriptions of Modern Hebrew glosses. For the sake of typographical simplification, I use the following conventions:

r = [ʁ]

o = [ɔ]

c = [t͡s]

č = [t͡ʃ]

I do not enclose phonetic transcriptions between a pair of [] unless a distinction between the phonetic and phonemic forms is pertinent to the discussion.

1.5.1 Semitic Hebrew

Transcriptions of Biblical and Mishnaic Hebrew rely on the Masoretic vocalization system. Although I have serious reservations about its historical accuracy, a complete reconstruction of Biblical Hebrew phonology is beyond the scope of this paper (see also 4.5.1).

In Semitic Hebrew transcriptions I follow the conventions used by Kuryłowicz (1961) with respect to spirantized consonants and the vowel signs:

Stop/fricative alternation:

b = [b] ḅ = [β]

g = [g] ḡ = [ɣ] etc.

Graphemes:

ḥ = π

ṭ = υ

ṣ = ζ

q = ρ

Vowels:

ɑ = ʔ

ɛ = ʔ

e = ʔ

i = ʔ, ʔ

ǫ = ʔ

o = ʔ, ʔ

u = ʔ, ʔ

Ultra-short vowels are indicated by a ˘ sign on top of the cardinal vowel, e.g., ǫ̘ = ʔ. A schwa mobile is ə.

Vowel length is inferred from syllabic constraints described in 2.1.1. For instance, an open syllable at a non-final position has a long vowel. In this regard, I reject the prevalent (though erroneous) distinction between long and short vocalic signs in the Tiberian system.

2 The Typological Profile of Modern Hebrew

Members of all three camps agree that Modern Hebrew grammar has, at least in part, typologically-Semitic features. If this claim is true, it may indicate that the revivers did succeed, at least partially, in reviving Semitic Hebrew. However, my view is different. I believe that these features are inherently Indo-European, and that they are disguised in "transparent Hebrew clothing", to paraphrase Bergsträsser (1928:64). To base this claim I will present a number of grammatical phenomena and contrast them with other Semitic and Indo-European languages. Then I will address the issues of binyanim and mishkalim, which are considered by many as a clinching proof of Modern Hebrew's Semitic assignment.

2.1 Phonology

Modern Hebrew exhibits unusual flexibility in its syllabic inventory which stands in stark contrast with the rigid syllabic rules of Semitic Hebrew.

2.1.1 Syllable Structure in Semitic Hebrew

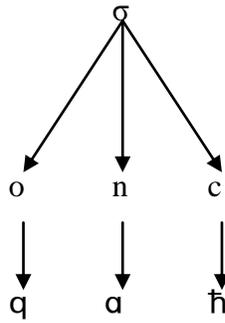
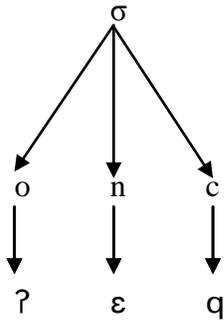
Semitic Hebrew has four syllabic templates (Goshen-Gotshteyn, 1962:868). A minimal syllable (σ) consists of a consonantal onset (o), a vocalic nucleus (n) and a coda (c). Following are examples of CVX syllables:

(1) CVC

תקח

ʔεqqɑħ

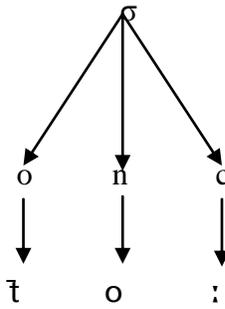
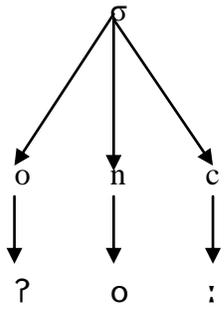
'I shall take'



(2) CV:

תו

ʔo:to: 'him, it (acc)'



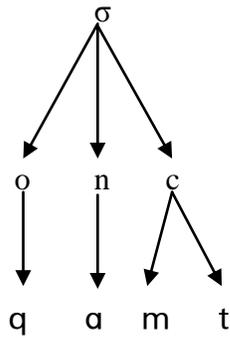
Quadrisegmental syllables are allowed only at a word final position:

(3) CVCC

תקמת

qɑmt

'you (sg f) rose, have risen'

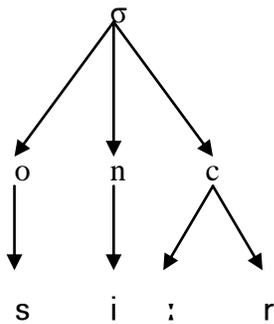


(4) CV:C

סיר

/si:r/

'cooking pot, caldron'



Similar syllabic constraints exist in Classical Arabic, Akkadian and Modern Aramaic (Hoberman 1992:53).

2.1.2 Syllable Structure in Modern Hebrew

Syllabic constraints are more relaxed than in Semitic Hebrew:

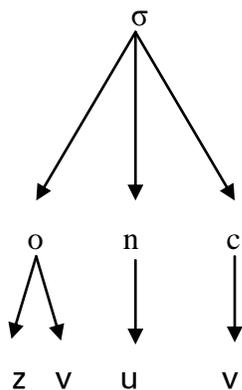
- i. Onsets and codas aren't obligatory. Thus, CV and VC syllables are allowed.
- ii. Complex onsets and codas, each having up to three consonants, are allowed.
- iii. CV:C and CV: templates don't exist since Modern Hebrew has no long vowels.

The syllabic templates that do not exist in Semitic Hebrew are as follows:

(5) CCVC

זבוב

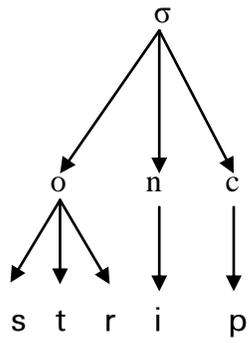
zvuv 'fly (insect)'



(6) CCCVC

סטריפ.טיז

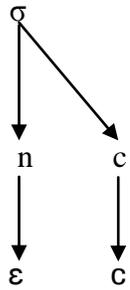
strip.tiz 'striptease'



(7) VC

עץ

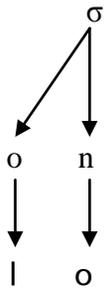
εc 'tree, timber'



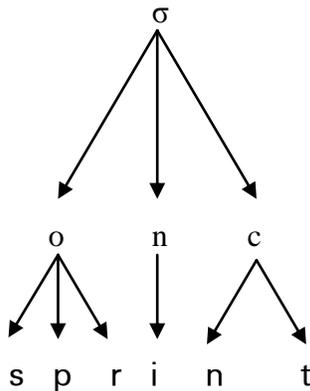
(8) CV

לו

lo 'to him, to it'



(9) CCCVCC טַפְּרִיט sprint 'sprint'



Such syllabic leeway is rare among Semitic languages. Although some of them, e.g., Moroccan Arabic, tolerate large varieties of consonant clusters, I'm not aware of any Semitic language that is that permissive.

2.1.3 Impact on the Verbal System

The flexible syllabic structure permits derivation from stems with 5 and 6 consonants, as long as the resulting verb fits into the disyllabic template (C)Ci(C).C(C)éC(C) known as *pi'el*:

(10)

quinquilateral denominative

til.grəf 'telegraph' < tɛlɛgrəf 'telegraph' < Intl

sin.χrən 'synchronize' < sinχroni 'synchronous' < Intl

flir.tət 'flirt' < flirt 'flirt' < Eng

(11)

hexaliteral denominative

trins.fər 'transfer' < transfər 'transfer' < Intl

However, the crucial factor here is that the lexical representation of Modern Hebrew verbs contains vowels (Horvath & Wexler 1997:28) rather than a pure consonantal skeleton, as Berman (1978), Zuckermann (2003:67) and others believe. I would take this observation even further and suggest that **Modern Hebrew verbs are represented as syllabified stems**. This property facilitates the derivation of denominative verbs and

enables us to predict the result with a high level of accuracy. It also coincides with my view of the binyan system (2.3.3).

2.1.4 Consonants

A comparison between the prevalent pronunciation norms and the norms proposed by *va'ad halashon* in 1904 is revealing:

Grapheme	Recommended value
slender ן	[v]
ו	[w]
ה	[ħ]
ט	[t̥]
ע	[ʕ]
צ	[c]
ק	[q]
slender ת	[θ]

Table 1: recommended phonetic values of the "undecided consonants" (Ben-Hayyim 1992:246-7)

The only two consonants whose pronunciation coincides with these recommendations are [v] and [c], both of which are rather marked in Semitic languages. Of all the consonants listed in **Table 1**, these are the only ones that happen to exist in Yiddish (and in several other Germanic, Slavic and Romance languages). Notably, consonants that do not exist in Yiddish were not accepted. The same is true for geminates (see also 2.1.1), which don't exist in Yiddish either, and therefore were not accepted.

Table 1 doesn't tell the whole story, though. Modern Hebrew's phoneme inventory typifies a phonological profile that is unusual for any Semitic language, though commonplace in many Indo-European ones:

No.	Grapheme	Phonetic value	No.	Grapheme	Phonetic value
1	א	{[ʔ], ø} ¹ _i	14	ל	[l]
2	ב	[b], [v] ² _{ii}	15	מ	[m]
3	ג	[g] ³	16	נ	[n]
4	ג'	[dʒ] ⁴	17	ס	[s] _{vi}
5	ד	[d] ⁵	18	ע	{[ʔ], ø} ⁶ _i
6	ה	[h]	19	פ	{[p], [f]} ⁷
7	ו	[v] ⁸ _{ii}	20	צ	[c] ⁹
8	ז	[z]	21	צ'	[č]
9	ז'	[ʒ]	22	ק	[k] _v
10	ח	[χ] ¹⁰ _{iii}	23	ך	[ɣ] ¹¹
11	ט	[t̪] ¹² _{iv}	24	ש	[s] _{vi} , [ʃ]
12	י	[j]	25	ת	[t̪] ¹³ _{iv}
13	כ	[k] _v , [χ] _{iii}			

Table 2: Modern Hebrew consonants.

Notes for Table 2:

- 1) Graphemes with overlapping phonetic values are co-indexed by a subscript Roman numeral.
- 2) In the Tiberian grammar and probably in Semitic Hebrew as well, /b/ had a spirant allophone [β] that later became [v]. Bergsträsser dates the spirantization rule of /b, g, d, k, p, t/ to Mishnaic Hebrew, whereas Harris dates it back to Biblical Hebrew (Rabin 1999:156-7). Nevertheless, In Modern Hebrew [b] and [v] are distinct phonemes. Cf. *lehitxaber* 'to connect' as opposed to *lehitxaver* 'to befriend'. See also note (7).
- 3) This sound is marked in Semitic languages. However, it is attested among French Jewry in the 13th century (Gumpertz 1953:15). This finding may suggest that Hebrew reading tradition was fixed prior to the rise of Yiddish since *g > h, x, ɣ in Br, Sorbian and Uk. Its spirant counterpart [ɣ] doesn't exist in Modern Hebrew.

- 4) The graphemes 'צ 'ט 'ל usually indicate non-Hebrew words. However, their seamless naturalization in the verbal system, cf. *hičtakmek* 'become tatty' suggests that they aren't really foreign to the phonological system. Indeed, these phonemes exist in Modern Hebrew's substratal languages.
- 5) Modern Hebrew doesn't have the spirant allophone [ð].
- 6) The revivers prescribed the [ʃ] pronunciation, as in Arabic. Their suggestion isn't necessarily justified historically. In Semitic Hebrew it probably was a nasal consonant: [ŋ] or [ɳ] (Segal 1928:19; Wexler 1990:71).
- 7) /p/ and /f/ are distinct phonemes in Modern Hebrew. Cf. *leap̄er* 'put make up' as opposed to *leaf̄er* 'pour ashes'. Such phonemic contrast is marked in Semitic languages.
- 8) A rare sound in Semitic languages, though fairly common in Western European languages. It's documented in Hebrew transcriptions from the 13th century written by French Jews (Gumpertz 1953:8)
- 9) A rare sound in Semitic languages, though common in Slavic languages, German and Yiddish.
- 10) This sound is probably borrowed from Yiddish, as Blanc (1956a:110 fn 6) suggests since the Russian/Belarusian equivalent has a slightly different pronunciation: [x]. In Biblical Hebrew it represents two phonemes: a voiceless laryngeal fricative /ħ/ and a voiceless velar fricative /χ/. However, the two collapsed into /ħ/ at a later stage as can be evinced from the Tiberian pointing system.
- 11) This sound is rather marked phonologically. Modern Hebrew undoubtedly borrowed it from Yiddish because in other substratal languages e.g., Russian,

Ukrainian and Belarusian, it's pronounced as [r]⁵.

12) Unlike most Semitic languages, Modern Hebrew doesn't have a phonetic distinction between emphatic consonants and their non-emphatic counterparts. Interestingly, even among languages whose Semitic classification is often questioned, Amharic for instance (Ullendorff 1977:162), this phonetic distinction still exists. In Maltese, this distinction is manifested only in the pair *k* and *q* which are pronounced as [k] and [ʔ], respectively (Borg, 1997).

13) Semitic Hebrew has a spirant allophone (θ) which changed in Yiddish to [s]. In their attempt to differentiate Modern Hebrew from Yiddish, the revivers prescribed (θ) instead, to no avail.

2.1.5 Vowels

Modern Hebrew has only five phonemic vowels: [a, ε, i, ɔ, u]. Most modern Indo-European languages have a larger number of vowels. The reason for this paucity is often ascribed to the adoption of the Sephardic pronunciation. The major differences between the Sephardic and Yiddish pronunciations of vowels are illustrated in Table 3:

Tiberian Vowel Sign	Sephardic Pronunciation	Yiddish Pronunciation
א	a	a
אָ		o
אֵ	ε	ε
אֵי		ey
אִ, אִי	i	i
אֹ, אֹי	o	oy
אֻ, אֻי	u	u

Table 3: The Sephardic and Yiddish pronunciations of the Tiberian vowel signs

⁵ As pointed out to me by Paul Wexler, certain monolingual speakers of Russian pronounce it as [ʁ]. However, I believe that virtually all Russian speaking revivers pronounced it as [r]. Therefore, Blanc's suggestion that [ʁ] stems from Yiddish seems plausible.

The decision to adopt the Sephardic pronunciation was taken by Ben-Yehuda himself during his visit to Algeria in the winter of 1881. While there, he was beguiled by the indigenous Jews' pronunciation of Hebrew (Ben-Yehuda, 1990:ט"ב). He rationalized this decision on the grounds that this vowel system was purportedly closer to that of Biblical Hebrew (ibid.). However, it appears that historical accuracy wasn't his only concern. He could have well chosen another pronunciation norm⁶. By choosing the Sephardic pronunciation, he intended to impart a more Semitic profile to Modern Hebrew and differentiate it from Yiddish (see also 4.3).

Even a cursory observation of the Modern Hebrew vowel inventory reveals that it's an intersection between the vowel systems of Yiddish and Colloquial Arabic. On the one hand, Modern Hebrew lacks the Yiddish diphthongized vowels [ɔy] [ey] [oy] (Herzog 1999) and the phonetic distinction between *kamac* vs. *patax* and *cere* vs. *segol*⁷. On the other hand, it doesn't have long vowels such as [ɑ:], [i:] and [u:], which exist in all dialects of colloquial and literary Arabic. Thus, **the vowel system of Modern Hebrew is best described as a "Yiddishized" rendition of the Sephardic source**. And yet, certain words in Modern Hebrew still betray the Yiddish pronunciation of the *kamac*:

12)

ozlat jad 'incompetence' <Aram

ocma 'strength'

kol 'all of (construct)'

Since Modern Hebrew has minimal pairs such as:

⁶ The precise vowel system of Biblical Hebrew is still a mystery to us. The widely-accepted interpretation of Tiberian grammar is based on centuries of misunderstanding and distortion. Therefore, there's no guarantee that the Sephardic pronunciation is more historically true to Biblical Hebrew than Yiddish.

⁷ This is a fertile source of criticism against the so-called Sephardic pronunciation norms. See also Zhabotinsky (1930:10, 34).

13)

הַזְמָה a) *jazma* 'she initiated' <BH b) *jozma* 'initiative' <MH⁸

It was necessary to differentiate between the two types of *kamac*. The /a/ sound was consequently renamed *kamac major* and /o/ — *kamac minor*. This ad-hoc differentiation has absolutely no historical grounds (Ben-Asher, 10th century:11-12, Würthwein 1957). In the original Tiberian vocalic system, the *kamac*, whether phonetically short or long, was pronounced as [ɔ]. The superimposition of the Sephardic pronunciation [a] over the revivers' native Yiddish phonology didn't work out smoothly, leaving behind traces of the latter which can still be found in Modern Hebrew (see also 2.1.6).

The Yiddishized Sephardic pronunciation was greeted with scathing reviews. Har-Zahav considers it distorted and mutilated (1930:16). Obviously, the revivers had intended something quite different than the pronunciation which was eventually adopted. Yelin admits that the decision wasn't in the hands of the revivers since the speech community had already made their choice (Zhabotinsky 1930:247). This is in fact a universal phenomenon. Language planners worldwide have never succeeded in forcing pronunciation norms⁹. Blanc (1956a:108) and Rabin (Hebrew Encyclopedia, p. 659) acknowledge the futility of prescribing such norms.

2.1.6 Stress in Modern Hebrew

Stress assignment in Modern Hebrew is not the same as in Yiddish. Wexler ascribes this difference to a deliberate rephonologization process carried out by the revivers (1990; 2003). However, this explanation gives too much credit to the capabilities of non-native speakers, implying that they can switch from their native phonology to another phonological system at will. My explanation is simpler. Languages that have stress can be divided into two categories: fixed stress languages and floating stress languages. French, Polish and Hungarian belong to the first category. In these languages, stress isn't

⁸ Coined by Zalman Shneor probably in the 1940s or the early 1950s (Kna'ani, 6:1965:1804). Shneor, born in Belarus in 1887, was a native speaker of Yiddish and became a famous author of Hebrew and Yiddish literature.

⁹ Haugen reaches the same conclusion regarding the pronunciation prescriptions of Scandinavian language planners (1989:129).

phonemic and its position is fixed. By contrast, in floating stress languages stress is phonemic, as the following British English glosses demonstrate (Hornby, 1982):

(14)

<i>perfect</i>	[ˈpɜːfɪkt] <i>adj</i>	[pəˈfɛkt] <i>v</i>
<i>insert</i>	[ˈɪnsɛːt] <i>n</i>	[ɪnˈsɛːt] <i>v</i>

Stress in Yiddish, Ukrainian and Belarusian plays a similar role (Green, 1969:219). The impetus to "create a new language" on the spot (Horvath 1997:2) forced the revivers to introduce arbitrary, not to say artificial, differences between Yiddish and Hebrew. They were at liberty to play with the stress system of the "new language" because Yiddish is a floating stress language. This decision isn't as radical as it might seem since the neutralization of a phonemic distinction between ultimate and non-ultimate stress was mitigated by the switch to a new lexicon. **Yiddish speakers could have played with the phonology of the "invented" language, but only within the confines of their native phonology.** We saw earlier that a similar phonological neutralization enabled the revivers to remove the diphthongized vowels from Modern Hebrew but not to introduce new vowels. Had the revivers been native speakers of a language other than Yiddish, Modern Hebrew would probably have developed a different stress system. As with the *kamac* (2.1.5), relics of the original Yiddish stress can still be found in Modern Hebrew. The following words have penultimate stress, whereas in Semitic Hebrew they had ultimate stress:

(15)

'emca	'middle'
'ɛcba	'finger'
'arba	'four (f)'
'ʃmone	'eight (f)'
'cɛla	'side, rib'
'kova	'hat'

I believe that these words escaped the stress shifting process, retaining the original

Yiddish stress. Even in words that are not normally used in Yiddish e.g., 'mɛʔa 'hundred' the penultimate stress probably preserves the pronunciation norms of Yiddish speakers. The penultimate stress in Hebrew names such as 'sara, 'rivka, 'ʃlomo and 'josef is also ascribed to Yiddish (Kutscher 1956:38).

2.1.7 Analysis

Some of the phonological properties presented in 2.1 are attested in other Semitic languages. The loss of laryngeal consonants is documented in Babylonian (Rabin 1999:19); certain dialects of Colloquial Arabic have lost one or more emphatic consonants¹⁰; spirantization played an important role in Classical Aramaic; complex onsets and codas exist in Moroccan Arabic. However, I'm not aware of a single Semitic language that exhibits so many non-Semitic phonological properties all at once. Moreover, one cannot overlook the fact that every sound listed in Table 2 exists in Yiddish (and in at least one more European language). **The consonantal inventory of Modern Hebrew, just like its vocalic inventory, is a subset of the Yiddish phonemic inventory.** The phonemic inventory of Modern Hebrew was created by a "phonological reduction" process in which the revivers deliberately neutralized some of the Yiddish phonemic distinctions for the purpose of differentiation between the two languages. A phonological reduction of this kind is fairly easy to accomplish, unlike phonological enrichment. This universal phenomenon can be observed for example when native speakers of English imitate Japanese and Korean speakers. They deliberately neutralize the difference between /r/ and /l/ in English words. Similarly, when imitating a French accent they mispronounce /θ/ and /ð/ and shift stress to a word-final position. However, they perform poorly in the production of sounds that don't exist in their language e.g., the rounded vowel /y/ or the fricative /ʀ/. **It was easier for Ashkenazic Jews to learn the pronunciation norms of Modern Hebrew than it was for Sephardic Jews;** whereas

¹⁰ In the Colloquial Arabic vernacular of Jerusalem /q/ is pronounced as [ʔ]; in certain vernaculars of the Emirates it's pronounced as [d̪ʒ], cf. ʃard̪ʒa 'Sharjah' < /šarqa/. In Yemeni Arabic it's [g] (Qafisheh 1992).

Yiddish speakers had to neutralize certain phonemic distinctions that existed in their mother tongue, Sephardic Jews had to enrich their phonological system with new sounds such as [g], [c] and [ʁ].

2.2 *Mishkalim and Lexical Enrichment*

The Modern Hebrew nominal system is regarded as typologically Semitic because it's outwardly based on *mishkalim*. A *mishkal* is a vocalized template into which the radical consonants are inserted. It serves as a lexical enrichment mechanism for deriving nouns and adjectives from a common root. Some mishkalim convey semantic properties e.g., instruments, crafts, diseases etc., whereas others aren't associated with any special semantic content. A mishkal often governs gender assignment, and in some cases — the plural form as well. For example, the following Hebrew nouns are derived from the root *ktʁ* by inserting it into different mishkalim:

(16)

- kɛtɛʁ 'crown'
- ħaɣtara 'coronation'
- kitur 'encirclement'
- kotɛʁɛt 'title, heading'

Mishkalim are considered unique to Semitic languages. Indo-European, Finno-Ugric and other language families use other means of lexical derivation (Anderson, 1992):

- i. Affixation: cf. Eng (IE) *en+circle+ment*
- ii. Zero-derivation: Eng *bid* (vt) *bid* (n)
- iii. Reduplication: Indonesian (Austronesian) *buku buku* 'books'
- iv. Metathesis: Elmolo (Cushitic) *tikir* 'catfish', *tirk-o* (pl)
- v. Infixation: Bontoc (Austronesian) *fikas* 'strong' *f+um+ikas* 'become strong'
- vi. Ablaut: Eng *sing* ~ *song*
- vii. Phonological alternation: Eng *half* (n) ~ *halve* (v)

Modern Hebrew is very tolerant towards words that violate traditional Semitic restrictions on stress, number of radical consonants, syllable structure and syllable count. Consider

the following sample of Modern Hebrew loan words:

(17)

'kom.pakt.disk 'CD' (ante-penultimate stress)

ˌpa.ra.psi.χo.'log.ja 'parapsychology' (6 syllables)

In Semitic Hebrew borrowed words undergo substantial morphological and phonological modifications in order to comply with its syllabic structure, stress assignment and vocalization rules. Moreover, loan words are usually fitted into a mishkal. The following sample of Biblical Hebrew loan words from Akkadian and Egyptian demonstrates this (Rabin 1999:166-175):

(18)

ħo:ʔām 'signet' <Egyp *xm*

'baħan 'citadel' <Egyp *bxn*

'koʔel 'wall' <Akk *kutallu* 'rear part of a building'

'ʔaʔam 'cause, decree' <Akk *ʔêmu*

Mishnaic Hebrew handles Greek and Latin loan words similarly:

(19)

ʔiʂʔad'jon 'stadium' <Gk *stadion*

wi:'lon 'drape' <Lat *vellum*

ʔaksâ:nij'jâ 'inn' <Gk *kseneia*

bal'dâr 'courier' <Lat *veredarius*

An examination of Modern Hebrew's productive lexical enrichment mechanisms and their underlying morphological processes reveals typological traits that are rare or non-existent in classic Semitic languages (including Semitic Hebrew), though widely common in European languages. In certain cases, Modern Hebrew uses a camouflaging technique (referred to as "phono-semantic matching", or PSM, by Zuckermann 2003) to preserve loan words' original forms by wrapping them in an ostensibly Semitic mishkal (ibid., p. 70 fn 1):

(20)

miv'dok 'dock' < Eng *dock*

ʔek'ran 'screen' (purportedly derived from Heb √ *krm* 'shine, radiate') < Fr *écran*

2.2.1 Evidence from Experimental Linguistics

In an experiment conducted by Berman and Clark (1989), 40 native speakers of Hebrew (most of them students) were asked to invent new words according to definitions. The results show that the most frequent form of derivation was affixation. Here is a small sample of the invented words:

(21)

klafi+ja 'card holder'

ʃatf+an 'dishwasher'

uvdat+an 'fact checker'

58.6% of the made-up words were formed by means of combining a stem and an affix. Complex derivation, i.e., compounds and blends, comes next. Examples of complex derivation include:

(22)

χajdakεtεl 'sterilizer'

ʃεmεngal 'wheel oiling device'

bimkomαχat 'needle substitute'

The use of complex derivation is problematic in Semitic languages for several reasons. A typical Semitic noun or adjective contains 1-3 syllables. When two stems are combined, the result may have 4 or more syllables. Polysyllabism interferes with stress assignment and other prosodic rules. This is why speakers waver about the plural forms of words such as χajdakεtεl.

When two lexical items of different syntactic categories are combined, e.g., verb + noun or noun + preposition, gender assignment is also uncertain. And yet, in spite of the morphophonological complications introduced by such a non-Semitic derivation

mechanism, it is rather productive in Modern Hebrew (Berman 1989).

Classic interleaved derivation, i.e., a mishkal, was the least favorable derivational mechanism among subjects. Only 21.2% of the made-up words were formed in this manner:

(23)

מַאָחְפֵּרָא 'talent academy'

מַאָחְעָא 'dishwasher'

2.2.2 The Diglossic Nature of Modern Hebrew

A random sample of recently-coined words might reveal a slightly skewed picture since Modern Hebrew has two major sources of lexical enrichment:

- i. Institutional enrichment. This class refers to "engineered neologisms" created by language planners such as the Academy of the Hebrew Language, official committees, pedagogical institutes, the Israel Broadcasting Authority and newspaper editors.
- ii. Natural enrichment. This category includes spontaneous, non-doctored (and often undocumented) neologisms created by native speakers.

In most cases, the literary language uses neologisms of type (i) whereas Colloquial Hebrew usually prefers neologisms of type (ii). The differences between the two registers are significant. Whereas language planners adhere to outwardly Semitic formation standards e.g., mishkalim and Semitic roots, Colloquial Hebrew is quite tolerant towards non-Semitic lexical derivation methods (Zukcermann, 2003). As a result, Modern Hebrew has an evident diglossic gap between its colloquial and written norms¹¹. Consider the following doublets:

¹¹ Stylistic differences are attested in almost every literate community. However, my impression is that the differences in Modern Hebrew are more significant than in British English, for example. Furthermore, while geography and historical changes are often the causes of such differences in many languages (e.g., Glasgow English vs. West London English), in Israel these causes are negligible or non-existent.

No.	Colloq. Hebrew	Engineered Hebrew	Gloss
1	ʃadran	ʃadar	'announcer'
2	'bajtim	bat'im	'bytes'
3	sufiks	sofit	'suffix'
4	lib'rɛto	liv'rit	'libretto'
5	metaχnet	toχnitan	'programmer'
6	mɛkarɛr	makrɛr	'refrigerator'
7	mɛrkazija	mirkɛzɛt	'telephone exchange'
8	maspɛra	mispara	'barbershop'
9	'cista	kis'ta	'cyst'
10	kabɛl	kɛvɛl	'cable'

Table 4 Doublets in Colloquial Hebrew and Engineered Hebrew

The major differences between the two registers can be summarized as follows:

- 1) Purism. In Engineered Hebrew, a PSM replaces a loan word with a native root or lexeme having a similar phonetic representation. Items 3, 4, 9 and 10 exemplify this tendency. Other examples include:

(24)

'mɛsɛr 'message' < Eng *message*

'tɛka 'plug' < Yidd ʃtɛkɛr < Ger *Stecker* 'ditto'

nitur 'monitoring' < Eng *monitor*

ʃa'mɛnɛt 'cream' < Russ *smetana*

In Colloquial Hebrew this tendency is more subdued.

- 2) Stress. Engineered Hebrew tends to stress final syllables. Colloquial Hebrew is more lenient in this regard, as item 2 demonstrates.
- 3) Affixation. In Colloquial Hebrew, affixation is a common means for deriving new

nouns; the +an agentive suffix is particularly productive¹². Engineered Hebrew prefers a mishkal.

- 4) Spirantization. Engineered Hebrew meticulously employs the *beqed kephet* rule (see 2.1.4 §7)2), as items 4 and 10 show (Gutman 1970). In Colloquial Hebrew this rule doesn't exist.
- 5) Iconicity. Engineered Hebrew tends to associate a distinct form for every lexical category. Fore instance, it uses the *miCCaCa* mishkal to derive place names (items 7 and 8). Similarly, it differentiates between participial forms and nouns (items 5 and 6). In Colloquial Hebrew there is no such tendency.

We can conclude that while Engineered Hebrew exerts derivational mechanisms that impart an outwardly Semitic appearance to Modern Hebrew, Colloquial Hebrew (which alone, in my opinion, represents native speakers' intuitions faithfully) prefers direct borrowings and concatenative morphology. Unfortunately, many scholars and descriptive grammars fail to distinguish between these two discrete registers, overstating the Semitic profile of Modern Hebrew unduly.

The distinction between Engineered Hebrew and Colloquial Hebrew isn't confined to the lexicon, though. It is also recognizable in its verbal system and syntax, as I am about to show in 2.3 and 2.4.

2.3 *Binyanim and Verbal Derivation*

The alleged presence of binyanim (and mishkalim, in the nominal system) is probably the strongest argument against the Indo-Europeanist theory. However, a contrastive analysis of the Modern Hebrew verbal system with that of other Semitic languages suggests that what looks like binyanim is in fact an entirely different morphological entity.

A binyan is a verbal template (akin to a mishkal in the nominal system) which is associated with abstract semantic properties. These properties, combined with the semantics of the verbal root, define the meaning of the derived verb. Although the combined meaning of a binyan plus a root isn't compositional, it is rather predictable in

¹² Modern Hebrew +an is probably a PSM. Consider pan-European +ent/ant/an: *Dirigent* 'conductor' Ger, *fatigant* 'fatiguing' Fr, *immigrant*, *repellent* Eng.

most cases. Semitic languages have a basic, morphologically unmarked binyan that has no special semantic properties. The rest of the binyanim, known as the *derived binyanim*, generally involve some modification of the basic verbal stem. Each derived binyan is associated with one or more semantic properties such as reflexivity, feigning, reciprocity, inchoativity, causativity, intensity and habituality. In general, it's an idiosyncratic property of each root whether it can appear in a specific binyan. A binyan's semantic properties often entail syntactic and semantic attributes such as transitivity and the number of agents.

To demonstrate the differences between Modern Hebrew and other Semitic languages, I will first present the binyan system of Classical Arabic and the Colloquial Arabic dialect of San`a, Yemen (Qafisheh 1992).

2.3.1 Classical Arabic Binyanim

Classical Arabic has 15 trilateral root binyanim and four more binyanim for quadrilateral roots. Nine of the trilateral binyanim have a corresponding passive allomorph (known as the *internal passive*), as do all of the quadrilateral binyanim. The verb *ktb* for example, reflected in the following uninflected forms of the perfective active, conjugates in 8 binyanim (McCarthy 1981:384-385):

(25)

Binyan		
I	katab	'write'
II	kattab	'cause to write'
III	kaatab	'correspond'
IV	?aktab	'cause to write'
VI	takaatab	'write to each other'
VII	nkatab	'subscribe'
VIII	ktatab	'write, be registered'
X	stakatab	'write, make write'

2.3.2 The Binyan System of San`ani Arabic

San`ani Arabic (SA) has 8 binyanim. Binyan I¹³ serves as the basis from which binyanim II to X are derived. However, some verbs in binyanim II, II, IV and X are derived from nouns and adjectives.

Binyan I conveys the basic meaning of the verb. Binyan II expresses causativity, intensity or a frequent action:

(26)

I	daras	'study'	II	darras	'teach'
I	kasar	'break'	II	kassar	'smash'
I	gatal	'kill'	II	gattal	'massacre'

Binyan III verbs are usually denominative and transitive. Cf. baarak 'bless'. The few III verbs that are derived from binyan I express the meaning of engaging someone in an activity:

(27)

I	liṣib	'play'	III	laaṣab	'engage someone in playing'
I	ḥaka	'talk'	III	ḥaaka	'engage someone in conversation'

Binyan IV is not associated with any special semantic properties. Binyan V verbs are derived from binyan II. They are usually intransitive and express reflexivity or inchoativity:

(28)

II	yassal	'give someone a bath'	V	tyassal	'bath (ref)'
II	gawwa	'make someone strong'	V	tgawwa	'become strong'

Binyan VI verbs are often derived from binyan III and express reciprocity and feigning. However, some binyan VI verbs have idiosyncratic meanings:

¹³ Binyan I has 4 different ablaut classes associated with active, stative and passive forms. A discussion about the phonological properties of each of these forms is beyond the scope of this work. Therefore, my examples include only the regular active form. I also ignored the hollow and defective verb conjugations for the same reason.

(29)

VI tsaawaru 'they consulted each other'

VI tgaabalayn 'they met with each other' < II gaabal 'he met someone'

VI tamayrað 'pretend to be sick'

VI tamaywat 'pretend to be dead'

Binyan VIII (there is no binyan VII in SA) expresses the reflexive and medio-passive variants of binyan I verbs:

(30)

I kasar 'break (vt)' VIII ktasar 'break (vi)'

I ball 'wet st' VIII btall 'wet oneself'

Binyan X (there is no binyan IX in SA) verbs are usually derived from binyan I or III. In some cases the stem is an adjective or a noun. This binyan expresses the general meaning of seeking, asking or demanding for oneself what is expressed by the underlying verb:

(31)

I yafar 'forgive' X stayfar 'seek forgiveness'

I naṭag 'say something' X stanaṭag 'interrogate'

ṣaḥb *adj* 'difficult' X staṣḥab 'find st difficult'

2.3.3 The Binyan Systems of Modern Hebrew and Biblical Hebrew

Biblical Hebrew has 5 productive binyanim¹⁴ that add semantic and aspectual content to the core meaning of the root. For example, the shift from *qal* to *pi'el* in the following minimal pairs expresses intensity:

¹⁴ There are traces of additional binyanim in the Old Testament that didn't survive (Rabin 1999:13). Mishnaic Hebrew introduced additional binyanim: *nitpa'el* with a medio-passive meaning and *šaf'el* with a causative meaning, both of which were borrowed from Aramaic (Hebrew Encyclopedia, p. 646).

(32)

<i>qal</i>	<i>pi'el</i>	
nāʕaq	nifʕeq	'kiss'
ʕābar	ʕibber	'break, smash'
nāgāḥ	niggāḥ	'ram'

Biblical Hebrew *hitpa'el* conveys reflexive and reciprocal meanings:

(33)

<i>hitpa'el</i>	<i>pi'el</i>
ḥiṯḥabbəqu	ḥibbəqu

'they hugged (each other)' 'they hugged (sb else)'.

These forms still exist in Modern Hebrew as lexicalized items. However, they do not reflect productive derivational processes.

A sample of verbs coined in recent years suggests that *qal* and *nif'al* are not productive in Modern Hebrew (Bat-El 1994; Horvath and Wexler 1997:28; Wexler 1990:85-86; Zuckermann 2003:69 fn 6). The majority of verbs that conjugate in these binyanim belong to pre-revival periods of Hebrew:

(34)

aḥal	'eat'
maca	'find'
katav	'write'
jaʕav	'sit'
samar	'keep, guard'
amad	'stand up'
halax	'go, walk'

Wexler ascribes the decline of *qal* to its complex morphology and to the fact that it accommodates only triconsonantal roots (ibid.). However, the morphophonological complexity argument isn't very convincing since *hitpa'el* exhibits similar complexity with respect to geminate and hollow verbs. Cf. *hitmatən* 'mellow down' ~ *hitmotət*

'collapse'. In addition, an initial sibilant triggers metathesis: *hiʃtatef* 'participate'. Therefore, I believe that the decline of *qal* stems from the fact it can only accommodate triconsonantal roots. My generalization is as follows: **the productive binyanim are those that count syllables; by contrast, binyanim that count consonants (*qal* and *nif'al*) are disfavored.**

Since many *qal* verbs are a part of the basic lexicon, linguistically-naïve observers often get the impression that *qal* is still productive¹⁵. However, new verbs rarely conjugate in this binyan; the few that do often belong to Engineered Hebrew (2.2.2):

(35)

saxam 'accumulate' < *sχum* 'sum, amount'

dagam 'sample' < *dugma* 'sample'

The survival of some of these verbs could be ascribed to hidden Slavic PSMs such as:

(36)

nafal 'he fell' Russ *upal* 'ditto'

One might argue that the formal similarity is accidental. However, Zuckermann (2003:63) states that PSMs¹⁶ played a crucial role in the relexification process. The revivers used this tactic to entice native speakers of Slavic languages to migrate to the "new language", implying that it was fairly similar to their native tongue.

Modern Hebrew has lost the medio-passive, reflexive and inchoative meanings of *nif'al*. Native speakers usually regard this binyan as the passive allomorph of *qal*:

(37)

katav 'write' *nixtav* 'was written'

kavaʃ 'conquer' *nixbaʃ* 'was conquered'

dagam 'sample' *nidgam* 'was sampled'

huf'al and *pu'al* are the passive counterparts of *hif'il* and *pi'el*, respectively. As such, they

¹⁵ Naturally, children acquire these verbs early. This is perhaps another contributor to this false impression.

¹⁶ Other Slavic PSMs include: MH *bε* 'at, in' < Russ *v*. I suspect that the MH impersonal e.g., *roc+im* 'one wants' is also formed after Russian 1st pl. *+im* cf. *xotim* 'we want'. This topic still needs further investigation, though.

aren't to be considered independent binyanim. In other Semitic languages such passive allomorphs aren't considered binyanim either¹⁷ (Hoberman 1992; McCarthy 1981; Qafisheh 1992). Therefore, Modern Hebrew has only three productive binyanim: *pi'el*, *hitpa'el* and *hif'il*. However, an examination of verbs that conjugate in these binyanim reveals a peculiar tendency (at least for a Semitic language) **to select a binyan according to pure phonological restrictions, regardless of its semantic properties**. Consider:

(38)

hiflik 'flick, slap' < Yidd flik 'pull, blow'

hif'il is usually associated with a causative meaning. However, the resulting verb in this case isn't causative; it isn't even transitive. *hif'il* was chosen for a single purpose — preserving the original melodic structure of the stem flik. This derivational pattern isn't restricted to Yiddish stems or *hif'il*, as the following examples show:

(39)

hif'il

hiklik	'click'	< klik	'click' < Eng
hiʃpric	'squirt'	< ʃpric	'spurt' < Yid < Ger
hiʃvic	'sweat'	< ʃvic	'sweat' < Yid < Ger
hiklid	'type'	< klid	'key (of a keyboard, piano)' < Heb
hisnif	'sniff'	< Eng	<i>sniff</i>
hikliʃ	'use a cliché'	< kliʃaʔa	'cliché' < Fr

¹⁷ Hebrew grammars, almost without exception, treat *huf'al* and *pu'al* as individual binyanim. I haven't been able to find a plausible explanation for this inconsistency. Although it could be attributed to the revivers' lack of formal linguistic training, most Hebraists nowadays are familiar with Arabic grammars. Therefore, this convention might seem like an attempt to increase the number of binyanim artificially.

<i>pi'el</i>		
jonɛn	'ionize'	< jon 'ion' < Intl
kodɛd	'code'	< kod 'code, cipher' < Intl
χokɛk	'legislate'	< χok 'law' < Heb

hiʃpric is particularly interesting because it contains 4 radical consonants. Most Hebraists believe that only the "heavy binyanim", namely *pi'el*, *pu'al* and *hitpa'el* can accommodate such roots (Goldenberg 1996:163). This counter-example also supports my explanation for the decline of *qal* and *nif'al*. These examples suggest that Modern Hebrew derives verbs from stems rather than triconsonantal roots (Bat-El 1994:592; Horvath & Wexler 1997:28) and that the productive binyanim indeed count syllables, not consonants: *hif'il* takes monosyllabic stems, whereas *pi'el* and *hitpa'el* take disyllabic stems.

The preservation of the stem's original melody overrides any other semantic and syntactic criteria for selecting a binyan. As far as I know, this phenomenon isn't attested in other Semitic languages. The following two examples demonstrate how strong this tendency is:

(40)

laχrop 'to sleep soundly (inf)' < χrop 'sound sleep' < Yidd < Sl

Here, not only is the non-productive *qal* chosen for the sole purpose of preserving the stem's *CCoC* structure, the resulting verb also allegedly violates the *beqed kephet* rule by leaving a final stop. Another instructive example is:

(41)

ʃnorɛr 'collect alms, sponge upon' < ʃnor 'the act of collecting alms' < Yidd < Ger

Seemingly, this form fits neatly into the *CoCeC* variant of the *pi'el*, which serves as a special ablaut pattern for hollow and geminate roots in Semitic Hebrew. However, in Modern Hebrew this form is defunct. Verbs that originally belonged to this pattern are often transformed to the unmarked *CiCeC* pattern. Consequently, there is free variation between two forms of such verbs: the unmarked *CiCeC* which is relatively new and is mostly used in Colloquial Hebrew, and *CoCeC* which typifies a higher register:

In Modern Hebrew, such utterances are expressed periphrastically:

(45)

hu jifmor ota

he FUT+protect her

2.4.1 Possessive Markers

The predilection for periphrasis can also be observed in possessive markers. The compound possessive form is rarely used in Colloquial Hebrew. Even in literary Modern Hebrew it is often considered artificial:

(46)

compound

mexoniti

car+DEF+1st sg poss

periphrastic

ha+mexonit jeli 'my car'

DEF car my

In certain cases, the compound possessive form is even pragmatically unsound¹⁸:

(47)

#itoni 'my newspaper'

#kurso 'his course'

Kutscher (1956:40) and Rosén (1978:26) claim that there is a semantic contrast between the periphrastic and compound forms. However, this claim is groundless. The examples that they cite are contrived and do not occur in natural speech. In Colloquial Hebrew, only the periphrastic possessive form is in use except for a very limited number of lexical items e.g., axi 'my brother', ifti 'my wife'; frozen expressions: ledafati 'in my opinion', micidi 'as far as I'm concerned' and in jocular use. In this regard, Modern Hebrew differs from Colloquial Arabic and Modern Aramaic (Hoberman 1992).

¹⁸ As the famous *Gashashim* quote demonstrates: "zarbuviti, zaruvitxa, zaruvito" 'my spout, your - , his-'. It would be interesting to find out what distinguishes these derisive forms from more pragmatically palatable ones such as dirato 'his apartment'.

2.4.2 The Construct State

In Modern Hebrew, the construct state (CS) occurs less frequently than in Semitic Hebrew. However, it is still productive:

(48)

mēdinat miṣtara	'police state'
ṣitat jicur	'production method'
ʔiṣ ruax	'intellectual'

There is, however, a morphological difference between Biblical Hebrew and Modern Hebrew with respect to inflections. Native speakers generally use the absolute form instead of the construct form, ignoring morphophonological alternations that exist in Semitic Hebrew (Weingreen 1959:46-7):

(49)

<i>absolute</i>	<i>formal/Semitic CS</i>	<i>colloquial CS</i>
χεδεϛ	χadar χοῤεχ	χεδεϛ χοῤεχ 'dark room'
εcbaot	εcbεot zahav	εcbaot zahav 'golden fingers'
μαχον	mεχon κοῤεϛ	μαχon κοῤεϛ 'gym'

This behavior suggests that the construct state in Modern Hebrew imitates compounding in European languages such as German and English rather than being based on the Semitic model:

(50)

Eng	<i>product manager</i>
	<i>bodyguard</i>
Ger	<i>Knacklaut</i> 'glottal stop' (lit. 'crack sound')
	<i>Dienstkleidung</i> 'uniform' (lit. 'service clothing')

Native speakers' tendency to place the definite article **ha** before the head (the first noun) supports this hypothesis. Cf. **ha+ṣomer roṣ** 'the bodyguard' as opposed to the formal/Semitic equivalent: **ṣomer ha+roṣ**. Strangely, Goldenberg ignores these substantial differences between Modern Hebrew and Biblical Hebrew (1996:170-1).

2.4.3 Modality

In Biblical Hebrew, the cohortative mood expresses self exhortation, much like *let's* in English. It is used with 1st person pronouns:

(51)

<i>imperfect indicative</i>	<i>cohortative</i>
ʔe:lək 'I shall go'	ʔe:ləkā 'let me go, that I may go'
ne:dāʕ 'we shall know'	ne:dəʕā 'let us know, that we may know'

The jussive mood is akin to the subjunctive in Indo-European languages. It is used with 3rd person pronouns:

(52)

<i>imperfect indicative</i>	<i>jussive</i>
jihje 'it/he will live'	jəhi 'long live'
jaʕā'le 'he/it will rise'	'jaʕal 'may it/he rise'

The cohortative and jussive moods don't exist in Modern Hebrew except for a small number of fossilized expressions occurring only in formal writing e.g., *hava* 'let us', *jəxi* 'long live'. The following causes can account for their extinction:

1. The jussive and cohortative are already defunct in Mishnaic Hebrew, which uses the future indicative to express modality (Hebrew Encyclopedia, p. 647).
2. Yiddish and other substratal languages don't have such moods. Consequently, the revivers weren't perturbed by their absence nor were they urged to restore them.
3. These moods are morphologically complex. From my experience, native Hebrew speakers aren't familiar with their conjugations nor do they conceive them as semantically distinct. Rather, they usually observe these moods as mere "embellished future forms".

2.4.4 The Indicative

The indicative in Semitic languages usually expresses the perfect and imperfect aspects. Non-Semitic members of the Afro-Asiatic family, e.g., Hausa also follow this model (Rabin 1999:13). However, in Modern Hebrew, the indicative expresses tense rather than

aspect. Indeed, a similar shift is already attested in Mishnaic Hebrew — as well as in modern Aramaic dialects (Hopkins 1989). However, I suspect that Modern Hebrew's indicative actually reflects Slavic substrata because it exhibits certain parallels with the latter. Admittedly, this topic still needs further investigation (see also 4.5.2).

2.4.5 Word Order

Although word order in Modern Hebrew is relatively flexible, the canonical order is SVO:

(53)

hajɛləd higiʔa 'the child arrived'

A reverse word order is allowed only with unaccuative verbs and when the subject is a lexical phrase:

(54)

SV	VS
hajɛləd higiʔa	higiʔa hajɛləd
hu higiʔa 'he got there'	*higiʔa hu

VS order also expresses indefiniteness:

(55)

higiʔa jɛləd 'a child arrived'

In Biblical Hebrew (and several other Semitic languages), the canonical word order is VSO. Rosén attributes this change to "German influence" on Modern Hebrew (1977:230).

2.4.6 Copular Sentences

Nominal clauses in Modern Hebrew often contain a copula:

(56)

hadavar haχaʃuv li bɛljotɛr hu briut haʔiʃa (*Ma'ariv*, 7.6.1994, p. 12)

'the most important thing for me is women's health'

The copula is optional in some cases:

(57)

hakala beherajon 'the bride is pregnant' (lit. 'the bride [is] in pregnancy')

Goldenberg considers this as evidence for the Semitic nature of Modern Hebrew (1996:166). Rabin however ascribes it to Modern Hebrew's Slavic substrata (Hebrew Encyclopedia, p. 664)

The diglossic gap presented in 2.2.2 is manifested by the type of the copula used. In colloquial Hebrew, the demonstrative pronoun זε ('this, it') functions as a copula, whereas in formal registers 3rd person pronouns are used instead:

(58)

jeladim זε /hem braxa 'children are a blessing'
children dem/3rd m pl blessing

In some cases, the copula is obligatory:

(59)

haχajim זε/hem lo piknik ~ *haχajim lo piknik

2.4.7 Complementizer-free Relative Clauses

Relative clauses are marked by the complementizer]ε:

(60)

haχeder]ε[_{REL} bo ja]avti haja mu?ar] 'the room in which I was sitting was lit'

The complementizer omission is a recent development. It is probably a result of English influence. In English such clauses occur frequently:

(61)

Look at the chart [_{REL} we've included].

Every person [_{REL} I interviewed] refused to take this job.

Ironically, this feature is more prevalent in formal Hebrew:

(62)

reuven [_{REL} oto lo ra?iti harbe]anim] ba elaj hajom

'Reuven, whom I hadn't seen for years, came to me today' (Ben-Hayyim, 1992:26)

2.4.8 Dative Construction

Dative constructions of the following type are common in Modern Hebrew:

(63)

koʔɛv li haroʃ 'my head aches'
aches M DAT 1st SG DEF+head

This is most likely a loan translation from Yiddish. Cf. Yidd *es tut mir vej* 'it causes me pain'. The dative construction often supersedes the equivalent non-dative form:

(64)

haroʃ ʃeli koʔɛv 'my head aches'
DEF+head my aches

Dative constructions are very productive. Children and adults use them creatively:

(65)

<i>dative</i>	<i>non-dative</i>	
noʔaχ lo	hu margiʃ noʔaχ	'he is comfortable'
mɛʃaʔamɛm la	hi miʃtaʔamɛmɛt	'she is bored'
nimʔas li mimɛnu	hu nimʔas alaj	'I've had it with him'

In some cases, subject-verb agreement isn't obligatory. Although the -agr form is considered substandard, I can confirm that native speakers use it:

(66)

<i>-SV agr</i>	<i>+SV agr</i>	
koʔɛv li habɛtɛn	koʔɛvɛt li habɛtɛn	'my stomach aches'

I believe that the lack of agreement betrays the Yiddish source. Yiddish doesn't have null subjects. It inserts a dummy subject in the form of *es* or *'s* into subjectless clauses. In Modern Hebrew, the dummy subject has no surface actualization — it's conceptually embodied in the verb phrase (Modern Hebrew is a pro-drop language). Therefore, there's no agreement with the surface NP. Speakers who produce such utterances analyze them as having the following underlying structure:

(67)

(zɛ) koʔɛv li habɛtɛn

Here, the NP functions as an apposition or as a locative phrase.

2.4.9 *habere* Construction

Grammaticality speaking, Modern Hebrew is a *habere* language, as is Yiddish. However, its Semitic lexicon doesn't have a corresponding verb. This collision results in a special type of clauses in which the alleged subject NP is morphologically marked as a direct object¹⁹:

(68)

[_{PRED} jɛ] lo] [[_{ACC} ɛt] haʔɛmcaʔim] 'he has the means'

The insertion of the direct object marker suggests that the existential phrase *jɛs lo* 'he has' (lit. 'there is with him') is construed as a *habere* verb although morphologically, it doesn't look like a Hebrew verb. Purists prescribe the following form instead:

(69)

[_{PRED} jɛ] lo] [_{SUBJ} haʔɛmcaʔim]

This form, though syntactically less anomalous, sounds unnatural in all registers of Modern Hebrew. It would be instructive to compare *habere* constructions in Modern Hebrew with quirky subjects in other Slavic languages.

2.5 Summary

The grammatical properties that I have depicted define a representative typological profile of Modern Hebrew.

The combination of all the phonological properties described in 2.12.1 is unattested in other Semitic languages, as far as I know. Typologically speaking, the phonological system of Modern Hebrew isn't Semitic.

Many scholars consider *mishkalim* and *binyanim* as the last fortress that relates Modern Hebrew to the Semitic family. However, the evidence presented here suggests that they are radically different from their counterparts in other Semitic languages. The minimal morphophonological alternations (if any) that loan words undergo and the

¹⁹ Quirky Subjects exist in Icelandic. A subject NP in a passivized sentence may have dative or accusative case markers (Anderson 1992: 120-2).

productive mechanisms of neologization show that **the mishkalim system in Modern Hebrew isn't just optional; it's collapsing**. Similarly, the verbal system is only superficially Semitic. When we scratch the surface we discover that something rather unusual for a Semitic language is at work. Unlike Classical Arabic and SA, Modern Hebrew selects a binyan that preserves the original syllabic structure of the stem most accurately, regardless of any semantic and syntactic properties of that binyan. As I have shown in 2.3.3, the verbal system leans over backwards to maintain the stem's original melodic structure, even at the cost of using an unproductive binyan or an obsolescent ablaut pattern. In other Semitic languages, a binyan is primarily a means of diversifying the root's core meaning in a rather consistent fashion; in Modern Hebrew, phonological considerations override semantic and syntactic considerations.

It is possible to rate verbal derivation strategies according to speakers' preferences:

- i. Pure stem transfer. The most favorable derivation strategy is to retain the stem intact, e.g. *hiflik*, *ʃnorer*.
- ii. Ablaut. The stem undergoes melodic overwriting while the syllabic structure remains intact e.g., *trins.fər* < *trans.fər*.
- iii. Consonantal extraction. The least favorable derivation strategy involves consonantal extraction, resyllabification and melodic overwriting, e.g., *hik.χil* 'become blue' < *ka.χol* 'blue'. Many of the verbs derived in this manner belong to the engineered register of Modern Hebrew or to earlier periods thereof: *χijεg* 'to dial' > *χuga* 'dial', *hit.ka.rεc* 'leech on to sb' < *kar.ci.ja* 'dog tick '. The latter is often superseded by *hit.kar.cεc*, which is closer in its syllabic structure to the stem and is therefore preferable.

Remarkably, the classic derivation strategy in Semitic languages is (iii), which is the main motive for proposing consonantal roots in Semitic languages in the first place. This strategy is the least favorable in Modern Hebrew, though.

The paucity of productive binyanim (3 as opposed to ~10 in Classical Arabic and 8 in SA) suggests that the binyan system, even as a pure morphophonological device devoid

of semantic content, is also disintegrating. Indeed, Semitic languages with a small number of binyanim do exist. In the Amadiya dialect of Modern Aramaic, there are only 2 binyanim (Hoberman 1992). In other Neo-Aramaic dialects, e.g., Arbel and Hertevin, the binyan system has completely disappeared, being supplanted by new forms that combine participles and enclitic pronouns (Hopkins 1989). And yet, the fact that phonological criteria govern a binyan rather than semantic criteria suggests that this is an entirely different morphological entity. In my opinion, Modern Hebrew binyanim are akin to conjugations in Ancient Greek and Latin. It therefore wouldn't be an exaggeration to view them as "Indo-European ablaut in disguise". This analysis is often dismissed on the grounds that "[a]blaut in modern European languages is far from having the same variability, *regularity, and productivity* of Semitic apophony" (Zuckermann 2003:68, italics mine). This claim may be correct for English. However, in other (probably less explored) modern European languages, ablaut/umlaut is a regular and productive means of verbal conjugation. In Standard German, the past subjunctive (*Konjunktiv*) of strong verbs is formed by an umlaut mutation of the past indicative (Buck 1990:xliv-xlv):

(70)

present indicative	past indicative	past subjunctive ²⁰
<i>ich singe</i> 'I sing'	<i>ich sang</i>	<i>ich sänge</i>
<i>ich grabe</i> 'I dig'	<i>ich grub</i>	<i>ich grübe</i>
<i>ich bin</i> 'I am'	<i>ich war</i>	<i>ich wäre</i>

Similarly, the perfect in Albanian is formed by mutating the present stem vowel (Campbell 1:1991:40). Modern Indo-European languages use ablaut in their nominal system, too. In Icelandic, umlaut marks different cases (Anderson 1992:343-4).

Many Semitic morphological properties that Modern Hebrew acquired through its lexicon are unproductive. The loss of the jussive and cohortative moods, the predilection for periphrasis and the use of the absolute form in the construct state all suggest that its morphology is closer to that of English, French and Yiddish than to any other Semitic language known to me. Even Maltese, which is often cited as an example of a language

²⁰ German also has a present subjunctive form. However, it normally doesn't occur in practice, being replaced by the past subjunctive (ibid.)

that has allegedly lost its Semitic character (Bakker and Mous 1994:3; Drewes 1994), still exhibits typical Semitic traits, including broken plurals, a laryngeal [ħ], compound possessives (cf. *zija* 'aunt' <It *zitu* 'his aunt'), a verbal system based on perfect/imperfect contrast and traces of a binyan system²¹ (Borg 1997; Drewes 1994). **It seems that after nearly 1000 years of heavy Anglo-Romance influence, the typological profile of Maltese is more Semitic than that of Modern Hebrew.**

Modern Hebrew syntax isn't Semitic either. The canonical word order, the increasing use of a copula and the omission of a complementizer characterize modern Indo-European languages. The dative construction (2.4.82.4.8) evidently betrays the Yiddish substratum. Oddly enough, Goldenberg (1996:168) still believes that Modern Hebrew is closer to the "original proto-Semitic state" than any other living Semitic language!

Some of the typological features that I have presented here are often explained as "internal development". Indeed, in a typological survey feature chronology is immaterial since a genetic classification isn't the topic at hand (Comrie 1989). In this context, it doesn't matter either whether Modern Hebrew had a more typologically Semitic profile in the past²². However, the internal development²² argument should be rejected for the following reasons:

- i. Chronology. It's hard to imagine that so many "internal developments" can take place within less than 130 years of existence.
- ii. Documentation. Unlike other languages that date back to pre-historical times, Modern Hebrew has been written since its inception. It is therefore easy to date the first occurrences of at least some of the features listed here and show

²¹ For example: *kiser* 'he broke' *kisser* 'he broke to pieces'. A causative or intensive form of a verb is often derived by the reduplication of the second radical consonant: *mexa* 'he walked' *mexxa* 'he led'. The passive/reflexive form is derived by prefixing *t-* to the secondary form: *tkisser* 'it was broken' (see 2.3.2). However, verbs derived from foreign stems (mostly Italian and English) often remain intact. Cf. *ammira* 'to admire' <Ital. The 3rd SG F inflections of the indicative:
ammira+t 'she admired' *t+ammira* 'she admires, will admire'.

²² In fact, many scholars claim that it's the other way around. Bolozky (as cited in Horvath and Wexler 1997:34) argues that Modern Hebrew "...is today more Semitic than it was in the past." He also agrees that the revivers (and early speakers in general) "were dependent more on substratal languages for models." (ibid.)

they aren't recent developments.

- iii. Substratum. There is no doubt that the revivers' mother tongue was Yiddish (Ben-Yehuda, 1990:ת"כ). It's therefore more likely that isoglosses occurring both in Yiddish and Modern Hebrew (and which aren't attested in any other Semitic language) originate in Yiddish. That said, there are examples of internal development such as the new imperative form (which is not discussed in this work).

Any descriptive grammar of contemporary Hebrew cannot overlook its diglossic nature. Written documents usually portray a skewed picture of its grammar as they represent the engineered, normative language. Colloquial Hebrew is a more faithful representative of native speakers' linguistic intuitions. In this chapter I have attempted to present both registers, though. The data provided here and my analysis thereof suggest that typologically speaking, Modern Hebrew isn't Semitic; it's much closer to modern European languages such as English, Yiddish, German and Russian than to any Semitic language I know of.

3 The Genetic Classification of Modern Hebrew and the Feasibility of a Language Revival

Unlike a typological survey, which is based on data collection and analysis, genetic assignment relies on certain stipulations and axioms that affect the final results. Monogenesis is such an axiom. Ever since Sir William Jones proposed in 1786 that Sanskrit and Persian were genetically related to Greek and Latin, comparative linguistics has taken for granted that a language evolves from a single parent, which in turn descends from another proto-language, and so on. Yet a laboratory model of a clear-cut family tree reconstructed according to consistent sound shifts, Swadesh's 100 word list and other well-known methods cannot always explain every aspect in a language's evolution path.

3.1 *The Role of Relexification in Historical Linguistic*

French is unique among modern Romance languages in its vigesimal numeral system:

(71)

soixant-dix '70' (lit 'sixty ten'),
quatre-vingt '80' ('four [times] twenty')
quatre-vingt dix '90' ('four [times] twenty ten')

This formation cannot be accounted for by a family tree model (Lehmann 1993:253) because the equivalent Latin numerals are decimal (Kidd, 1992):

(72)

septuaginta '70'
octoginta '80'
nonaginta '90'

Other Indo-European substratal languages that were spoken in the historical province of Gallia also used a decimal system²³. We therefore have to assume that French retains relics of a prehistoric (Iberian?) vigesimal language that was spoken at that region. Such

²³ These were Celtic and Germanic languages. The reconstructed Proto-Celtic and all living Celtic language use a decimal system. Cf. Irish *seacht* '7', *ocht* '8', *naoi* '9', *deich* '10', *seachtó* '70', *ochtó* '80', *nócha* '90' (MacMathúna and Ó Corráin 1997). Gothic also used a decimal system (Lehmann, *ibid.*).

"oddities" led historical linguists to propose the wave theory as a complementary model to the family tree. The wave theory accounts for isoglosses that are not the result of genetic affiliation among languages in contact.

The family tree and wave theory have been used successfully for almost two centuries in comparative linguistics. However, today we begin to realize the significance of relexification. Originally considered exceptionally rare, relexification is becoming an increasingly important factor in our perception of historical changes.

A complete relexification could stymie the traditional reconstruction methods previously mentioned (Horvath and Wexler 1994:262). In this respect, Modern Hebrew may be a unique case study because of its short history and the fact that it epitomizes a full-scale relexification cycle. It may well be the case that our view of the genetic classification of many languages and language families will undergo a major reanalysis in the coming years. In fact, the role of relexification in linguistics may become similar to that of black holes in astrophysics²⁴.

3.2 The Theory of Mixed Languages

While the emergence of new theories may affect the genetic (re)classification of languages, it doesn't change the fundamental aspects of this concept. Whether the current classification of a given language may turn out to be wrong due to inherent limitations of contemporary reconstruction techniques and theories, the axiom that a language is descended from a single parent language is supported by endless examples. However, researchers of mixed languages defy this axiom, claiming that languages such as Michif, Shelta and Maltese are counter-examples. Yet even if we accept this claim, the overwhelming majority of languages do stem from one proto language. More importantly, the descriptive grammars of mixed languages often confuse typology and genetic classification. Maltese for instance is undoubtedly a Semitic language regardless of its current typological profile because we can ascertain that it evolved from Arabic. The impact of Indo-European adstratal languages on its grammar and lexicon doesn't

²⁴ Only 10 years ago black holes were considered rare and highly exceptional. Today astrophysicists realize that every galaxy has a black hole at its center. Moreover, they begin to recognize the indispensable role that black holes play in the forming of new galaxies and their survival.

change this fact. Thus, the crucial factor for determining a language's genetic classification isn't which grammatical and lexical properties it currently has but whether it was indeed created by a fusion of two grammars, or "language intertwining" (Bakker and Mous 1994:4). To my knowledge, such a language hasn't been found yet. Consider Mitchif. Although its grammar exhibits conspicuous French elements (especially in the verbal system) we can easily see that its grammar is definitely Cree, not Romance. Bakker admits that the word order in Mitchif "is much closer to that of Cree than to that of French" (1994:19). Moreover, Mitchif exhibits grammatical properties such as:

- i. Obviative noun marker
- ii. Distinction between animate and inanimate nouns (as opposed to masculine/feminine as in French)
- iii. Classification of verbs into 4 classes to mark subject and object agreement
- iv. Cree aspect and tense markers
- v. Cree question words
- vi. Cree demonstratives
- vii. Exclusive and inclusive 1st plural pronouns
- viii. Lack of adjectives (a telltale property of Cree)

These properties suggest that the core grammar of Mitchif is by and large Cree. The following example illustrates some of these properties:

(73)

ni-nitawêyiht-ânân une batterie *kâ-le-charg-er-t*
 1-need-1PL.EXCL a battery REL-the-charge-INF-3SG.AN
 'we need a battery charger'

The influence of French is mostly observable in the lexicon. Perhaps the cause of the illusion that Mitchif is a mixed language lies in Bakker and Mous's questionable definition: "a mixed language has its lexicon and grammar from different sources." (op. cit., p. 5). According to this definition, it suffices to tamper with a language's lexicon in order to create a mixed language. This line of reasoning is inadequate. It may suggest for instance that Hindustani and English aren't genetically related because they have different grammars and lexicons. By contrast, English and French should be siblings because they share a large portion of their lexicon. It appears that Bakker and Mous have fallen into the

old trap of using pure typological criteria to determine genetic lineage.

The mixed language theory has another noticeable weakness. According to Bakker and Mous, Mitchif and similar languages are created by people of dual ancestry, where all fathers speak one language, whereas the mothers speak a different language. The bilingual children of such couples are allegedly responsible for the creation of the mixed language. This etiology is questionable, though. It's unlikely that the parents couldn't converse with each other. Therefore, we must assume that the fathers were bilingual, speaking Cree as their first language and French as a second language. The mothers were monolingual Cree speakers. Thus, the quantity and quality of Cree input to which children were exposed outweighed the French input. In other similar cases of asymmetric input sources, the main contribution of the secondary language is reflected in the lexicon and much less in the grammar. Bakker and Mous don't report French-Cree intermarriage and even if such couples had existed, their number must have been negligible. The secondary, not to say marginal, role of French is evinced from the fact that the language is "no longer transmitted to children...all of its speakers are now older than 60, and the extinction of the language is probably not avoidable..." (Bakker, 1994:14). In fact, my definition of a dead language (1.2.1) suggests that Mitchif is *already* dead. I'm therefore not sure whether Mitchif isn't more than a linguistic curiosity upon which a sound linguistic theory cannot be based.

3.3 A Theoretical Framework of Genetic Classification

The role of genetic classification may have been overstated during the past 200 years because certain scholars have expected it be what it isn't — a typological characteristic. We know that non-genetic factors can radically change a language's lexicon and grammar. However, genetic classification and typological characterization should be kept independent of one another. While typology provides a transient (yet detailed) description of a language at a certain timeframe, genetic classification documents a language's history, regardless of its present typological profile. Admittedly, in some cases typology is the only means of establishing a genetic connection between languages. However, history should always be the final arbitrator. **When a decisive historical proof isn't available, our conclusions about genetic relationships are merely reasonable**

postulations. Consequently, we have to be prepared to discover one day that the Anatolian branch of the Indo-European family is actually an independent language family²⁵, or that the Hamitic branches (e.g., Chadic, Cushitic etc.) of the Afro-Asiatic family are genetically-independent families that were in contact with Semitic languages in prehistoric times (Rabin, 1999:47).

To conclude, genetic classification should be based on the following presuppositions:

- i. Genetic invariance. A language's genetic assignment is fixed, regardless of the changes it may undergo during its lifetime; by contrast, a language's typological profile may change frequently during its lifetime.
- ii. Monogenesis. After ruling out the feasibility of genetically-mixed languages, we have to assume that a language has only one parent.
- iii. Recursive assignment. A language's genetic classification is derived from its ancestor's genetic classification, recursively. The recursion terminates at the earliest proto language presently known e.g., PIE.²⁶

With this theoretical framework in mind, it is time to investigate the genetic classification of Modern Hebrew.

3.4 The Death of Semitic Hebrew

It is agreed that Hebrew was no longer spoken after the 2nd century AD. The last Hebrew records are the Bar-Kochba epistles written during the Revolt (132-5). Yet it is likely that Hebrew had ceased to be spoken much earlier, and that the use of Hebrew in the said epistles is an act of demonstrating Jewish sovereignty²⁷. Their style and additional extra-linguistic factors suggest that the authors weren't native speakers of Hebrew. Virtually all epigraphic findings dated between the 3rd century BC and the Bar-Kochba revolt indicate that Aramaic was the main language in Palestine, in addition to Greek (which

²⁵ There is in fact a linguistic school that regards Anatolian as a sister of the Indo-European family rather than a branch thereof. However, with the death of Cowgill (1985), this theory lost its major supporter.

²⁶ Thus, if linguists prove one day that the Indo-European and the Afro-Asiatic families branched from the same macro-family (Bomhard, 1994; Levin 1971,1995, 2002), our genetic assignment would have to be adjusted accordingly.

²⁷ Coins minted during the Revolt contain scriptures in the Paleo-Hebrew alphabet e.g., *larcy* 'Israel'. This alphabet had been supplanted by the square Assyrian alphabet about 600 years earlier. Apparently, the rebels used an obsolete writing system as a symbolic act. Did they use a dead language for a similar reason?

was used mainly by the aristocracy) and to some extent, Latin which served as the official language of the Roman administration. The New Testament contains dozens of Aramaic glosses transcribed in Greek but not a single Hebrew gloss²⁸. Examples of such glosses include: *rabboni* 'master' (John 20:16), *abba* 'father' (Mark 14:36) and a Greek transcription of the Aramaic translation of Psalms 22:1 uttered by Jesus just before giving up the ghost:

(74)

ελωι ελωι λαμμα σαβαχθανι

Eloi Eloi lama sabachthani (Mark 15:24)

In his last moments, Jesus, a pious and literate²⁹ Jew, is reciting his last prayer in his mother tongue, Aramaic. This shows that he and other Jews of his time didn't use Hebrew even as a liturgical language. They were familiar only with the Aramaic translation of the Old Testament. The large number of Aramaic blessings and prayers composed at that time also substantiates this conclusion. **The claim that Jews still learned Hebrew as a second language for reading the Old Testament is therefore groundless³⁰**. Private names and toponyms also indicate that Aramaic, not Hebrew, was the predominant language then. Researchers agree that Aramaic was the main tongue in Galilee. However, Kutscher (*Hebrew Encyclopedia*, p. 645) and others believe that in Judea, Hebrew was still in use at that time. The evidence suggests otherwise, though. The fact that Jesus can speak with local Jerusalemites in parables (Mark 12:1) and engage the High Priests at the Temple in philosophical debates (Mark 12:13) indicates that he and the local population *from all walks of life and social statuses* spoke the same language — Aramaic³¹. Obviously, there were slight dialectal differences between the vernaculars of Galilee and Jerusalem (cf. Matthew 26:73). However, these were marginal and didn't hinder mutual

²⁸ Except for *Corban* (Mark 7:11). It may well be a fossilized religious term, though.

²⁹ Cf. "He went to Nazareth...and on the Sabbath day he went into the synagogue.... And he *stood up to read*." (Luke 4:16, italics mine)

³⁰ This tradition of learning Hebrew must have developed much later (see also fn 29). Furthermore, non-educated Jews could read Hebrew letters but they didn't understand the Hebrew text (Biletzky 1989:94)

³¹ Ben-Yehuda admits that the High Priests spoke Aramaic (1919:102-7). However, he insists that Hebrew survived as a spoken language until the Temple's destruction. Unfortunately, he completely ignores the unequivocal evidence from the New Testament (although he is probably aware of it as he implies in p. 5).

intelligibility. The large number of Aramaic toponyms in Jerusalem e.g., *Golgotha* 'skull' (Mark 15:22) and *Gabbatha* 'court yard(?)' (John 19:13) also confirms this. One could argue that these toponyms might be anachronisms since those places could have been named *ex post facto*. However, we have at least one example of a toponym being named right after the crucifixion: *Akel-dama*³² (Acts 1:19).

Kutscher and others who believe that Hebrew was still alive in the 1st century AD may have received that false impression because the term "Hebrew" in the New Testament actually refers to Aramaic:

(75)

"Now there is in Jerusalem by the Sheep Gate a pool, which is called *in Hebrew, Bethesda*³³..." (John 5:2, italics mine)

"...he [Pilate] brought Jesus out and sat down in the judgment seat in a place that is called The Pavement, *but in Hebrew, Gabbatha*" (John 19:13, italics mine)

This ambiguity has misled quite a few researchers into thinking that Hebrew was still spoken at that time. Chomsky suggests that the confusion stems from the similarities between the two Semitic languages (1957:210). However, this explanation probably refers to gentiles whose mother tongue was Greek or Latin; Jews were well aware of the differences (Hebrew Encyclopedia, p. 645).

The inevitable conclusion is that **Hebrew was already dead at the end of the 1st century BC**³⁴; it was neither spoken nor understood and it certainly wasn't acquired as a mother tongue any longer. Therefore, the myth about seeds of Hebrew-speaking Jews settling in the Diaspora after the Temple's destruction, retaining their mother tongue for centuries, is completely baseless.

Having shown that the Northwest Semitic language called Hebrew was all but dead some time before the end of the 1st century BC, what are the odds that 2000 years afterwards it would have been revived? To assess the feasibility of such an event, an

³²Aram: אַקֵּל דַּמָּא 'field of blood'

³³Aram: בֵּית חַן 'house of grace'.

³⁴Historians unanimously agree that Jesus was actually born several years before the Common Era, some time between the years -7 and -4. Had Hebrew been acquired as a mother tongue at that time, he certainly would have been conversant with the Hebrew version of the Old Testament.

examination of recent revival attempts and their consequences could be enlightening.

3.5 A Tale of Two Revivals

Manx and Cornish belong to the Goidelic and Brythonic branches of Celtic, respectively. In the late 19th century and the early 20th, enthusiasts in the Isle of Man and Cornwall tried to revive them, unsuccessfully. The two revival attempts described below were independent of one another and were carried out by different people. The linguistic information and the historical background are taken from George (1993) and Lockwood (1972:71) for Cornish, and Broderick (1993) and Lockwood (1972:79) for Manx.

3.5.1 Cornish

Cornwall ceased to be an independent kingdom at the 10th century. The Celtic population wasn't dispersed and retained their native Celtic language for several centuries later. Throughout the Middle Ages, the linguistics boundaries between English and Cornish moved slowly but surely westward until they reached Truro by 1600. As a result, Cornish was confined to an area too small for survival. The remaining Cornish speakers now became bilingual and rapidly switched to English. After 1700, the language was no longer being passed on to children, although there is a report from 1776 about four or five people in Mousehole (near Penzance) who could still use the language. It's likely that the last native speaker had died by the end of the century.

The revival is considered to date from 1904, when Henry Jenner (1848-1934) published his *Handbook of the Cornish Language*. For the next sixty years, Revived Cornish was only a written medium, used by a few dozens of enthusiasts. Only in the 1970s did revivalists begin to use it colloquially, albeit rarely, e.g., during the Cornish Language Weekend that is held once a year (!) in the spring. George reports that "a few parents have been inspired to teach their children to speak Cornish from birth" (p. 645). However, he elegantly avoids the inevitable questions:

- 1) What was the outcome of this teaching?
- 2) How exactly could these parents teach their children to speak a language that they couldn't speak?

The main problem that Cornish revivalists face is the lack of native Cornish speakers. As

a result, "new speakers... reach a plateau of fluency above which it is difficult to rise"(ibid.). Furthermore, Cornish was never used as a formal language even while it was still alive. The paucity of Cornish corpuses urges revivalists to use dubious hacks such as hypothetic reconstructions³⁵.

In the grammatical frontier, the situation is even more acute. Nance and Smith reconstructed the Cornish grammar between 1920 and 1940. Decades later, revivalists began to realize that this reconstruction was "not as good it could be", particularly the phonology. It appears that Nance first devised the orthography, and then subsequently, thought out a phonological system to fit it! Similar faults in the syntax and morphology were also discovered later.

The Cornish revival was nothing but a trifle. It doesn't come even close to my definition of a revival in 1.2.2. Not only did the revived language fail to gain a mother tongue status, it didn't even become a second language. It isn't taught in schools or used in any official documents either. The revival accomplished nothing but a renewed interest in a dead language by a handful of hobbyists.

3.5.2 Manx

Until about 1700, Manx was spoken by all the native inhabitants of the Isle of Man, most of whom had no English. From the beginning of the 19th century, the decline of Manx was rapid and hastened by the exclusive use of English in schools. Children born after 1870 didn't acquire the language. A careful inquiry after WWII showed that less than 20 native speakers were left. Language enthusiasts and nationalists began to record the last dozen or so native speakers between 1951-3. The revivalists believed they had a sufficient corpus of material to revive the language.

One could argue that at that point that the language wasn't technically dead due to presence of native speakers; therefore, it had better prospects than Cornish. However, according to 1.2.1, Manx had been dead for nearly 80 years, in spite of the existence of native speakers. The revival attempt never really soared; apart from sporadic bursts of interest in Manx philology and literature, the language didn't regain a colloquial status.

³⁵Everyday words such as *rath* 'rat' had to be reconstructed by comparison with Welsh and Breton.

3.6 Conclusions

Cornish and Manx are only two out of many instances of revival attempts. In the Middle Ages, Latin was a popular candidate for a revival (Meillet as cited in Wexler 1990:13 fn 23). There were sporadic attempts to revive Sanskrit in India during the 1920s, too. Needless to say, they all have failed. How likely is it then that Modern Hebrew revivers succeeded where all others have failed? How linguistically plausible is the claim that Hebrew was indeed revived when its existing corpuses contain only 25% of its estimated lexicon (Rabin, 1991:149; Zuckermann 2003:65) and its grammar is in many aspects still a riddle³⁶? In the absence of native speakers of the target language, a complete language switch seems impossible. Therefore, and in accordance with the Genetic Invariance criterion proposed in 3.3, **the genetic classification of Modern Hebrew is the same as that of Yiddish — the revivers' mother tongue.**

³⁶ In Kutscher's words: "...the entire system of Biblical Hebrew with its seemingly hazy notions of time, so difficult to handle, was almost entirely abandoned. Instead, the clear-cut system of Mishnaic Hebrew with its three tenses — past, present and future — was adopted. Gone the cohortatives and the jussives." (1956:31). Jussive and cohortative notwithstanding, the real enigma is still Biblical Hebrew phonology (see also 4.5.1).

4 Conclusions and Further Research Topics

For nearly 150 years, linguists have been trying to explain and formalize the elusive nature of grammar. Philosophers have been aiming at the same target for more than 2500 years. Although we still don't know how exactly a native speaker's grammatical knowledge is represented and stored mentally, or how this knowledge is actually used, we know how different it is from other types of acquired knowledge and skills. We know as well that a native tongue and a second language have different cognitive statuses. Psycholinguistic experiments of the last 50 years have demonstrated repeatedly and consistently the stark differences between the two. Without acoustic laboratories, grammar books, dictionaries and other formal aids, a five year old child gains linguistic competence that surpasses an erudite philologist with years of formal training and practicing. State of the art brain scanning and imaging techniques show clearly that first and second languages involve different cognitive activities, in different cerebral regions. There are reports of Israeli aphasic patients who fell back to their mother tongue even after 50 years of disuse, while losing the ability to communicate in Hebrew, the only language they had been using since their immigration. Wild children such as Genie (Curtiss, 1977) also demonstrate the differences between a language acquired from birth and one that is learned after the critical period. Today we know that the acquisition of a mother tongue is concomitant with the lateralization process (Zurif, 1980), whereby specific mental faculties are directed to specialized lobes in the brain. It seems that once the lateralization process has been completed, the ability to acquire a mother tongue is lost. Languages learned subsequently are dealt with by the right hemisphere of the brain, which isn't evolutionally fitting for this task as is the left hemisphere.

4.1 Preconditions for a Complete Language Shift

People who believe that a second language can reach the status of a mother tongue cite exceptionally rare cases of a non-native speaker who has become a well-versed writer or

orator³⁷. That person may be able to converse fluently in the target language or even be considered a "master of phrasing". Yet even then, he or she cannot compete with a native speaker in grammatical judgments, spontaneous creativity (e.g., inventing new words), phonological intuitions (including the most salient giveaway — accent) and governed prepositions. I am therefore convinced that once a language has ceased to be acquired as a mother tongue, it can at best gain the status of a second language, and even then, the presence of native speakers who can provide the norms is mandatory.

In the revival of Modern Hebrew, not only weren't there any native speakers who could provide such norms, but the allegedly-revived language had been dead for two millennia. As a result, the revivers couldn't even reconstruct its grammar properly. This is a recurrent pattern in revival attempts (see also 3.5.1). Therefore, Wexler's conclusion that "a language revival is an impossibility" (1990:102) seems tenable and Modern Hebrew is no exception.

The presence of native speakers alone is not sufficient for a complete language shift, though. Adult speakers learning a new language cannot reach the competence of a native speaker in spite of continuous exposure to native speakers' input. **A complete language switch can only take place one or two generations afterward**, when children at the critical period are exposed to native speakers' input that competes with their parents' input. Immigration societies have illustrated this process many times throughout history. The massive exodus from Ireland during the Great Famine of 1845-50 brought hundreds of thousands of Irish Gaelic speakers to the United States³⁸. Adult Irish immigrants learned to speak English little by little. However, their US-born children and subsequently, their grandchildren, acquired English as a mother tongue. In spite of the tendency to preserve their ethnic identity e.g., adhering to the Catholic faith and observing St. Patrick's Day, Irish Gaelic didn't survive more than one generation outside Ireland.

Surges of immigration from Russia and Italy into the United States in the first half of the 20th century also illustrate this pattern of a complete language shift within one

³⁷ Henry Kissinger, who fled Germany in 1938 when he was 16, is often brought as an example.

³⁸ In the first half of the 19th century Irish Gaelic was still predominant in Ireland (Ó Murchú 1993:472)

generation. Therefore, **the failures of the aforementioned revival attempts weren't due to bad luck, insufficient data or lack of resources — they were unavoidable.**

4.2 Genetic Classification and Typology

Although I have separated between typology and genetic assignment systematically, one cannot overlook the fact that the typological profile of Modern Hebrew portrayed in chapter 2 coincides with the genetic classification it was assigned in chapter 3. I believe that this congruence isn't coincidental. In spite of tremendous camouflaging and regulation efforts by the revivers and language planners, native speakers' intuitions disclose the language's true nature. The same can be said about many other languages. Whereas a superficial inspection may reveal incompatibilities between the genetic assignment and the typology of a certain language, a more profound examination of the underlying grammatical processes at work may show that the language's typological character matches, at least in certain aspects, its genetic assignment. English is often brought as an example of a Germanic language that has lost its Germanic nature, turning into a quasi-Romance language. And yet it still retains many Germanic traits, particularly in its morphology and the basic lexicon. The *-ed* past tense suffix is Germanic, as are the modals *must*, *may*, *would* etc. Words such *hand*, *rat*, *son*, *and*, *water* date back to PIE (Lehmann 1993) and haven't changes much for thousands of years. Therefore, it isn't surprising that Modern Hebrew's typology matches its Indo-European genetic classification.

4.3 Disowned Yiddish

Certain linguists refer to the Yiddish substratum as "influence", implying that it is a foreign, unnatural element in Modern Hebrew. This is incorrect. The dative construction (2.4.8) for instance, is used frequently in every register. If it were a foreign element, it would only be observable in frozen expressions. The *habere* construction (2.4.9) also reveals non-Semitic grammatical properties that the Semitic lexicon tries to suppress — to no avail. The antipathy towards Yiddish has been a major contributor to a denial campaign (Kutscher 1956:28; Wexler 1990:34), the consequences of which are linguistically-naïve authors and perplexed native speakers wondering for instance at the

"strange usage" (Blanc, 1956b:795) which inserts the negation *lo* into phrases like *ma şelo taʔase* 'whatever you do' (lit. 'whatever you wouldn't do'). There are many other examples of hidden Yiddish standards in Modern Hebrew that still need to be uncovered.

Biographers and scholars have tried to downplay — or completely deny — the predominance of Yiddish among the revivers. Thus, Goldenberg (1996:181) states that "it is unclear which grammatical constructs Modern Hebrew allegedly [sic] inherited from Yiddish." The motives for this denial are obvious: acknowledging the crucial role of Yiddish in the creation of Modern Hebrew would undermine the Semitic classification of the latter. Yet this cause alone doesn't explain the tremendous denial efforts specifically aimed at Yiddish. The fact that the revivers spoke an Indo-European language is usually shrugged upon as long as that language happens to be German, French, Russian or any other "cultural languages" — except Yiddish.

To explain the antipathy towards Yiddish, we have to understand what it symbolized to the revivers. To Eliezer Ben-Yehuda, and many other erudite secular Jews of his time, Yiddish epitomized the stereotypical, submissive Diaspora Jew. The contempt towards Yiddish was also backed by anti-Semitic incidents of that time, such as the riots in Kiev (1881), the Dreyfus affair in France (1894-1906), the pogrom in Kishinev (1903) and the publication of the infamous Protocols of the Learned Elders of Zion (1905). These incidents demonstrated the helplessness of the Jewish people in the Diaspora. By contrast, the thriving nationalist movements in Europe must have inspired Ben-Yehuda and other Zionist leaders. In his famous manifesto *şεʔela niʔbada* "a noteworthy question" (1879), Ben-Yehuda calls for Jewish repatriation. The linguistic issue arises only later, when his ideas are greeted with enthusiasm and he starts to publicize additional manifestos. He realizes then that Yiddish is unsuitable for his vision of the new, repatriated Jew. Oddly enough, the spitefulness towards Yiddish and the "miserable Jewish fate" was a catalyst for other movements with completely opposite ideologies. The Kna'anim of the early 1950s renounced their Judaism, trying to "cut themselves loose from nearly the whole Jewish past" (Kutscher 1956:43). In a similar vein, Theodor Herzl, dismayed by the trials and tribulations of Jews all over Europe,

proposed that all Jews should assimilate and convert to Christianity. However, The Deyfus affair was a wakeup call for him. In his *Der Judenstaat* (1896), he already expresses ideas that are similar to Ben-Yehuda's.

The Zionist vision needed new icons that would symbolize the Jewish emancipation and repatriation (not for the first time, see 3.4). Hebrew was one of these symbols. Ben-Yehuda's lack of formal linguistic training lulled him into believing that reviving Semitic Hebrew was a feasible task. Otherwise, German or Russian would have been chosen even though the majority of Jewish immigrants in Palestine spoke Yiddish³⁹. He assumed that the Hebrew corpuses of the Old Testament and Mishnah would suffice for this purpose (much like Manx revivers 3.5.2).

4.4 Further Evidence for the Relexification Hypothesis

For linguists, a language is primarily a set of grammatical rules; laypersons however, regard the lexicon as the linguistic prime. The stark differences between the normative approaches seen in Hebrew textbooks as opposed to normative English textbooks illustrate this contrast vividly. Normative English textbooks never address the issue of "foreign" (i.e., non-Germanic) lexemes; in fact, the use of Greco-Romance roots often indicates a higher register. The prescribed norms focus almost exclusively on grammatical issues (Emery and Kierzek 1964; Gunning 1952):

(76)

<i>colloquial</i>	<i>prescribed norm</i>
If I was a sailor	If I were a sailor (subjunctive mood)
He don't care	He doesn't care (agreement)
If he wouldn't have told her	If he hadn't told her (conditional)
He can read good	He can read well (adverb)
It was me	It was I (case)

Normative Hebrew textbooks focus mostly on lexical purism, prescribing a Semitic root for every non-Semitic lexeme. In some cases, entire volumes are dedicated to lexical

³⁹ During the "Language War" of 1913, German and Hebrew were the only candidates for serving as the official instruction language. However, the majority of immigrants of the Second Aliya (1904-1914) came from czarist Russia.

categories such as names of trees, apparel, kitchenware etc. (Klozner, 1923). By contrast, grammatical issues such as word order, verbal inflections, agreement, gender assignment, binyan, moods and governed prepositions are addressed less frequently, if at all. This contrast supports the relexification hypothesis: Modern Hebrew revivers, either due to linguistic naïveté or because they were aware of the infeasibility of a genuine language revival, focused their efforts on the *E-language*, i.e., the linguistic component that speakers can consciously manipulate (Horvath 1997:2), while leaving the intuitive grammar that is inaccessible to conscious manipulation (the *I-language*) intact. Ben-Yehuda's own words confirm this: "...to my chagrin, this very facet [=neologization] of this board's duty is very slack. During the last couple of years...we have coined no more than 20 words. And I am ashamed of it." (Ben-Yehuda 1914:5)

4.5 Topics for Future Research

In many aspects, the typological profile of Modern Hebrew coincides with that of Yiddish. Yet there are a number of unexplained disparities between the two that suggest themselves as research projects.

4.5.1 Phonological Issues

Unlike Yiddish, Modern Hebrew doesn't permit syllabic consonants. In addition, two consecutive sonorants are disfavored in coda and onset positions. Loan words that violate these restrictions undergo epenthesis:

(77)

knejdɛl 'matzo ball' < Yidd knejd|

pop korɛn < Eng *pop corn*

Considering its flexible syllabic structure of Modern Hebrew, the cause of this phonological constraint still needs to be uncovered.

Those who are interested in Semitic Hebrew may want to reconstruct its genuine phonological system first. Admittedly, the consonantal orthography of Hebrew texts of that time makes this task immensely difficult. However, Greek and Latin translations of the Old Testament provide useful clues to its phonology, as do the cuneiform transcripts of El-Amarna (Kossman, 1994). There is no doubt in my mind that the unanimously

accepted Tiberian vocalic system is an unreliable source for such a reconstruction. In this regard, it plays the same role of Sanskrit in Indo-European studies until not long ago; in both cases, a relatively later stage of development was considered to be representing faithfully the phonological system of a reconstructed language, in spite of plenty of counter-evidence. Notably, a proper reconstruction of Proto-Indo-European vocalic system was possible only once Indo-Europeanists had become disillusioned with Sanskrit (Lehmann 1993:61).

4.5.2 The Verbal System

In Yiddish, German and certain Slavic languages, the verbal system expresses aspect, either exclusively, or in addition to tense. The verbal system of Modern Hebrew hasn't developed a perfect aspect marker, not even periphrastically. As I have shown in 2.4.9, the lack of lexical markers in the Semitic lexicon doesn't thwart the surfacing of Yiddish constructs. An account of this asymmetry between Modern Hebrew and its substratal languages would therefore be instructive.

4.5.3 A Contrastive Analysis with Modern Aramaic and Amharic

In 2.5 I contrast Maltese with Modern Hebrew. A detailed comparison between Modern Hebrew and Semitic languages that exhibit non-Semitic typology, e.g., Modern Aramaic and Amharic could also shed more light on the typological profile of Modern Hebrew.

4.5.4 Relative Chronology

I believe that many of the phenomena presented in chapter 2 date back to the early stages of Modern Hebrew. However, certain features such as complementizer-free relative clauses (2.4.72.4.7) may have emerged later due to adstratal influence. It would be interesting to date the typological features described here and thus extrapolate future development trends from them. Is Modern Hebrew becoming more typologically-Semitic, as Bolozky claims (Horvath and Wexler 1997:34), or is it heading towards complete de-Semiticization as the author of this work suggests?

5 Abbreviations

Abbreviations of Toponyms:

Am—Amsterdam
Be—Berlin
Gl—Glasgow
Je—Jerusalem
Lo—London
NY—New York
Ox—Oxford
Pa—Paris
Phi—Philadelphia
TA—Tel Aviv
Wi—Wiesbaden

Abbreviations of Collective Volumes and Frequently Cited Encyclopedias:

CL—*The Celtic Languages*, ed. Ball, M. J. Lo 1993
FY —*The Field of Yiddish*. 3, eds. M. I. Herzog, W. Ravid and U. Weinreich. Lo-The Hague-Pa 1969
HE—*Hebrew Encyclopedia*. Je.
ML—*Mixed Languages: 15 Case Studies in Language Intertwining*, eds. P. Bakker, and M. Mous. Am1994
RCNL—*Relexification in Creole and Non-Creole Languages*, eds. J. Horvath and P. Wexler. Wi 1997
SLO—*Studia Linguistica et Orientalia Memoriae Haim Blanc Dedicata*, eds. P. Wexler, A. Borg, and S. Somekh. Wi 1989
ZVL—*zixronot va'ad halashon*. Je

Abbreviations of Terms and Languages Names:

Acc-accusative, adj-adjective, agr-agreement, Akk-Akkadian, AN-animate, Aram-Aramaic, Br-Belarusian, BH-Biblical Hebrew, c-coda, C-consonant, ca-circa, cf-confer, COP-copula, DAT-dative, def-definite, dem-demonstrative, ed-edition, editor, Egyp-Egyptian, Eng-English, EXCL-exclusive, f-feminine, fn-footnote, Fr-French, fut-future, Gk-Greek, gen-genitive, Ger-German, Heb-Hebrew, It-Italian, Intl-International, Lat-Latin, lit-literally, m-masculine, MH-Modern Hebrew, INF-infinitive, n-noun, nucleus, NEG-negation, NP-noun phrase, o-onset, OBJ-object, p-page, PIE-Proto-Indo-European, pl-plural, poss-possessive, PRED-predicate, ref-reflexive, REL-relative, Russ-Russian, sb-somebody, sg-singular, Sl-Slavic, st-something, SUBJ-subject, Uk-Ukrainian, v-verb, V-vowel, vi-verb intransitive, vt-verb transitive, X-either V or C, Yidd-Yiddish

6 References

- Anderson, S. R. (1992). *A-Morphous Morphology*. Cambridge.
- Bakker, P. (1994). Mitchif, the Cree-French mixed language of the Métis buffalo hunters in Canada. *ML*, 13-33.
- and M. Mous (1994). Introduction. *ML*, 1-11.
- Bar-Adon, A. (1990). 'ha'imahot hameyasdot' umenat xelkan batxiya ha'ivrit behithavuta (1882-1914). *lashon ve'ivrit* 3:5-19.
- Bat-El, O. (1994). Stem Modification and Cluster Transfer in Modern Hebrew. *Natural Language and Linguistic Theory* 12:571-596.
- Ben-Asher, A. (10th century). *sefer dikdukey hate'amim*. Je. (printed in 1970)
- Bendavid, A. (1967-71). *leshon mikra ulshon xaxamim* 1-2. TA
- Ben-Hayyim, Z. (1992). *bemilxamta shel lashon*. Je.
- Ben-Yehuda, E. (1914). mekorot lemale hexaser bilshonenu. *ZVL*, 4:3-14.
- (1919). *ad ematay dibru ivrit?* NY.
- Ben-Yehuda, H. (1990). *ben yehuda, hayav umif'alo*. Je.
- Bergsträsser, G. (1928). *Introduction to the Semitic Languages* (3rd printing 1977). Munich.
- Berman, R. A. (1978). *Modern Hebrew Structure*. TA.
- (1989). The Role of Blends in Modern Hebrew Word Formation. *SLO*, 56-61.
- and E. Clark [1989]. Hebrew Speakers' Perception of Form-Meaning Relations in the Hebrew Nominal System. Unpublished working-paper.
- Biletzky, I. H. (1989). *ocrot yidish*. TA.
- Blanc, H. (1956a). A note on Israeli Hebrew "psycho-phonetics". *Word* 12:106-113.
- (1956b). Our Hebrew as seen by the methods of linguistics by Haiim Rosén. *Language* 32:794-802.
- Blau, J. (1981). *The renaissance of modern Hebrew and modern standard Arabic, parallels and differences in the revival of two Semitic languages*. California.
- ivrit: leshon hamikra. *HE*, 639:644
- Bomhard, A. R. (1994). *The Nostratic macrofamily: a study in distant linguistic relationship*. Be.
- Borg, A. (1997). Maltese Phonology. *Phonologies of Asia and Africa* (vol. 1), ed. A. S. Kaye, 245-282. Indiana.
- Buck, T. (1990) *The Penguin German-English dictionary with a guide to German grammar*. St. Ives.
- Campbell, G. L. (1991). *Compendium of the world's languages* (vol. 1-2). Lo.
- Chomsky, W. (1957). *Hebrew: the eternal language*. Phi.
- [Z.] (1967). *halashon ha'ivrit*. Je.
- Comrie, B. (1989). *Language universals and linguistic typology: syntax and morphology*. Ox. 2nd ed.
- Curtiss, S. (1977). *Genie: a psycholinguistic study of a modern-day "wild child"*. NY.
- Drewes, A. J. (1994). Borrowing in Maltese. *ML*, 83-111. Am.

- Emery, D. W., and Kierzek, J. M. (1964). *English Fundamentals*. NY-Lo. 4th ed.
- George, K., and Broderick, G. (1993). The Revived Languages: Modern Cornish and Modern Manx. *CL*, 644-665.
- Goldenberg, G. (1996). ha'ivrit kelahson shemit xaya. *halashon ha'ivrit behitpatxuta uvehithadshuta*, 148-190. Je.
- Goshen-Gotshteyn, M. (1962). safot shemiyot. *leksikon mikra'i*, vol 2:865-875.
- Gutman, D. (1970). *The Morphophonemics of Biblical Hebrew (and a Brief Comparison with Israeli Hebrew)*. Unpublished doctoral dissertation, University of Texas.
- Gumpertz, J. (1953). *mivta'ey sfatenu*. Je.
- Gunning, R. (1952). *The technique of clear writing*. NY-Lo-Toronto.
- Har-Zahav, C. (1930). *leshon dorenu*. TA.
- Haugen, E. (1989). Is there a Scandinavian Language? *SLO*, 125-132.
- Herzog, M. I. (1969). Yiddish in the Ukraine: Isoglosses and historical inferences. *FY*, 58-81.
- Hopkins, S. (1989). Neo-Aramaic Dialects and the Formation of the Preterite. *Journal of Semitic Studies* 37: 74-90.
- Hornby, A. S. (1982). *Oxford Advanced Dictionary of Current English*. Ox.
- Horvath, J. (1997). Introduction, Relexification and linguistic theory. *RCNL*, 1-10.
- and P. Wexler (1994). Unspoken Languages and the Issue of Genetic Classification: the Case of Hebrew. *Linguistics*, 32:241-269.
- and P. Wexler (1997). Relexification: Prolegomena to a research program. *RCNL*, 11-71.
- Hoberman, D. R. (1992). Formal properties of the conjugation in Modern Aramaic. *Yearbook of Morphology 1991*, eds. G. Booij and J. Van Marle, 49-64.
- Izre'el, SH. (1986). hehayta txiyat ha'ivrit nes? al tahalixim shel pijinizacya ukre'olizacya bicirat ha'ivrit haxadasha. *Proceedings of the World Congress of Jewish Studies* 9, sect 4, 1:77-84.
- Kacnelson, K. (1960). *mashber ha'ivrit hamodernit*. TA.
- Kidd, D. A. (1992) *Latin Dictionary*. Gl.
- Klozner, Y. (1923). *sfatenu, kovec mukdash lish'elat harxavata utxiyata shel halashon ha'ivrit*. (2nd ed.). Be.
- Kna'ani, Y. (1965). *ocar halashon ha'ivrit litkufoteha hashonot*. (vol. 6). Je-TA.
- Kossmann, M. (1994). Amarana-Akkadian as a mixed language. *ML*, 169-173.
- Kutscher, E. G. (1956). Modern Hebrew and 'Israeli' Hebrew. *Conservative Judaism*, 10 (3):28-45.
- ivrit, lashon: megilot midbar yehuda; xazal. *HE*, 645-8.
- Kuryłowicz, J. (1961). *L'apophonie en sémitique*. Wrocław-Warsaw-Kraków.
- Lehmann, W. P. (1962). *Historical Linguistics: an Introduction*. NY.
- (1993). *Theoretical Bases of Indo-European Linguistics*. Lo-NY.
- Levin, S. (1971). *The Indo-European and Semitic languages*. NY.

- (1995). *Semitic and Indo-European: The Principal Etymologies*. Am-Phi.
- (2002). *Semitic and Indo-European II: Comparative morphology, syntax and phonetics*. Am-Phi.
- Lockwood, W. B. (1972). *Panorama of the Indo-European Languages*. Lo.
- MacMathúna, S., and Ó Corráin, A. (1997). *Pocket Irish Dictionary*, Gl.
- McCarthy, J. J. (1981). A Prosodic Theory of Nonconcatenative Morphology. *Linguistic Inquiry* 12:373-417.
- Ó Murchú, M. (1993). Aspects of the societal status of Modern Irish. *CL*, 471-91.
- Qafisheh, H.A. (1992). *Yemeni Arabic Reference Grammar*. Maryland.
- Rabin. H. (1999). xikrey lashon. Je.
 —safot shemiyot. *HE*, 337-386.
 —ivrit: halashon ha'ivrit bat yameynu. *HE*, 660-4.
- Richarson, M. (1864). *sefer halukat hanikud*. Vilnius.
- Rosén, H. B. (1977). *Contemporary Hebrew*. Pa.
- Segal, M. C. (1928). *yesodey hafonetika ha'ivrit*. Je.
- Shaffer, D. (1972). The Hebrew Revival Myth. *Orbis* 21:315-26.
- Tur-Sinai, N. H. (1951). mitxiyat halashon ha'vrit uveayoteha. *leshonenu* 17:29-36.
- Ullendorff, E. (1977). What is a Semitic Language? *Is Biblical Hebrew a Language? Studies in Semitic Languages and Civilizations, 156-164*, Wi. Originally in *Orientalia* 27(1958):66-75.
- Weingreen, J. (1959). *A Practical Grammar for Classical Hebrew*. Ox. 2nd ed.
- Webster's Encyclopedic Unabridged Dictionary of the English Language*. (1989). NY.
- Wexler, P. (1990). *The Schizoid Nature of Modern Hebrew: an Indo-European Language in Search of a Semitic Past*. Wi.
- (2002). *Two-Tiered Relexification in Yiddish: Jews, Sorbs, Khazars, and the Kiev-Polessian Dialect*. Be.
- Würthwein, E. (1957). *The Text of the Old Testament* (translated from German by Ackroyd, P. R.). Ox.
- Zhabotinsky, Z. (1930). *hamivta ha'ivri*. TA.
- Zigelman, Y. (1950). *yesodot torat hahege ha'ivri*. TA.
- Zuckermann. G. (2003). *Language Contact and Lexical Enrichment in Israeli Hebrew*. Hampshire.
- Zurif, E. B. (1980). Language Mechanisms: a neuro-psychological perspective. *American Scientist* 68:305-11.