# Hebrew and Typology

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The following is meant as Hebrew (H) typological identity-card. A characterization of its grammatical components is proposed (with some developments on other aspects as well, especially lexicon and iconicity) which spans through its different diachronic stages, schematically Biblical Hebrew (BH), divided into Classical (CBH) and Late (LBH); Mishnaic Hebrew (MH) and Contemporary Hebrew (CH).


## Phonology

CBH attests to the loss of several Proto-Semitic (PS) consonantal phonemes: the PS emphatic interdental D̲ (Arabic ظ, BH > S), its non emphatic counterpart t̲ (Ar. ث, BH > T), the latter's voiced counterpart d̲ (Ar. ذ, BH > z), the voiced fricative lateral ɫ (Ar. ض, BH > S), the unvoiced fricative velar ħ (Ar. خ, BH > ħ) and the voiced fricative uvular γ (Ar. غ, H > ʕ). On the other hand, Hebrew is almost unique within Semitic - the other case is South-Arabian - to preserve the unvoiced fricative lateral /ɬ/ (שׂ, traditionally noted as /ś/, cf. Steiner 1977) until relatively late (it begins to merge with /s/ in LBH, but the process is completed in MH). This is a fact worth mentioning since a conservative language like Arabic has lost it even though it has preserved all the other PS consonants including the voiced counterpart of the phoneme, called /dad/. BH also develops a series of fricative allophones for the non-emphatic stops /b, p, d, t, g, k/. They are realized as plosives in syllable initial position (including word-initial position) after a schwa quiescent that closes the previous syllable, but as fricatives in all other conditions, including after a schwa mobile following the first homo-syllabic consonant.

Gemination is a morphophonemic device which in Hebrew can affect all consonants except laryngeals and pharyngeals (both groups are traditionally called 'gutturals') viz. /h, ħ, ʕ, ʔ/, the very same phonemes that are vacillating in IH and utterly lost in other Semitic languages, e.g. Akkadian - as well as the trill /r/. When applied to $R_2$, gemination concerns the intensive forms of the verb - active $R_1iR_2R_2eR_3$, passive $R_1uR_2R_2aR_3$ and reflexive hit$R_1aR_2R_2eR_3$ as well as the *nomen agentis* $R_1aR_2R_2åR_3$.

PS /i:/ and /u:/ are retained, but stressed /å/ shifts to /o:/ in most contexts: this is the *Canaanite shift*. PS short vowels also developed allophones (in certain cases altogether phonemes) as did the upgliding diphtongs: [å] and [a] from /a/; [o:], [o] and [å] from /u/; [e:], [e] and [ej] from /i/; [o:] from /aw/; [e:] and [a] from /aj/. The resulting system presents a notable departure from that of PS, as it is characterized by distinctions of quality rather than quantity. Thus, CBH has seven phonemic vocalic qualities, while a more conservative system, such as that of classical Arabic, has only three vocalic qualities along with a phoneme of quantity (length), which yields six phonemic vowels. A central ultra-short vowel in CBH is the schwa, which can be either 'quiescent' (H nåħ) or 'mobile' (H nåʕ). In the first case it is a non-vowel, and in the second the allophone of a full vowel in an atone syllable. In the first case it is realized as zero and in the second as an ultra-short vowel, depending on morpho-syntactic conditions. [i:] and [u:] are in complementary distribution with /j/ and /w/ following a morpho-phonemic conditioning.

Syllables can be either stressed or unstressed. CBH stress accent falls on the synchronically last syllable for the patterns which lost their diachronically last one. This

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Here is a list of minimal pairs in CH created following the emergence of tones thus confirming Hombert 1975 (the first row represents BH variants, the second CH ones) :

| Biblical Hebrew | | Contemporary Hebrew |
|---|---|---|
| /ʕ/ = | [ʕ] | [Ø] + [ʔ]  (+ [ʕ]) |
| /ʔ/ = | [ʔ] | [Ø] + [ʔ] |
| /w/ = | [w] | [v] |
| /b/ = | [b] + [β] | [b] (+ [v]) |
| /t/ = | [T]  + [θ] | [t] |
| /T/ = | [T] | [t] |
| /ӡ̌/ = | [ӡ̌]  + [s] | [s] |
| /s/ = | [s] | [s] |
| /K/ = | [K]  + [χ] | [k] + [x] |
| /q/ = | [q] | [k] |
| /å/ = | [å] | [a] |
| /a/ = | [a] | [a] |
| /e/ = | [e] | [e] |
| /ɛ/ = | [ɛ] | [e] |

CH: tone 1: high        tone 2: low            tone 3: middle

bå'ʕal                                      ʻbaʕal      bal
[1]bal 'possess a woman, PF.NOP.SG.M SG.M'    [2]bal 'husband' [3]bal 'not' (prohibitive)

bå'ʕar                                      ʻbaʕar       bar
[1]bar 'burn, PF.NOP.SG.M SG.M'       [2]bar 'ignorant'      [3]bar 'wild'

gå'ʕal                              gal
[1]gal 'deliver, PF.NOP.SG.M'       [3]gal 'wave'

gå'ʕar                              gar
[1]gar    'admonest, PF.NOP.SG.M'    [3]gar 'inhabit, pr. 1,2, NOP.SG.M.'

då'ʕak̲                             dak̲
[1]dax 'lower, PF.NOP.SG.M'          [3]dax 'mortified'

Tå'ʕam           Taʕam           Tam
[1]tam 'taste, PF.NOP.SG.M'    [2]tam 'goût'    [3]tam 'candide'

Tå'ʕan           Tan
[1]tan 'argument, PF.NOP.SG.M'    [3]tan 'chacal'

jå'ʕac           ʿyaʕac
[1]yac 'counsel, PF.NOP.SG.M'    [3]yac 'counsel'

kå'ʔab           qaw ; qab
[1]kav 'cause pain, PF.NOP.SG.M'    [3]kav 'line'; 'béquille'

kå'ʕas           ʿkaʕas
[1]kas 'be vexed, PF.NOP.SG.M'    [3]kas 'wrath'

må'ʕal           maʕal       mal
[1]mal 'fraud, PF.NOP.SG.M'    [2]mal 'fraud'    [3]mal 'cut, circumcise pr. 1,2, NOP.SG.M.'

må'ʔas           ʿmaʕaȥ          mas
[1]mas 'disdain, PF.NOP.SG.M'    [2]mas 'action'    [3]mas 'tax'

nå'ʕal           naʕal       nal
[1]nal 'put on a shoe, PF.NOP.SG.M'    nal 'soe'    [3]nal 'afore mentioned'

nå'ʕar           ʿnaʕar
[1]nar 'bray, PF.NOP.SG.M'    [2]nar 'young man'

på'ʕar           ʿpaʕar       par
[1]par 'open, PF.NOP.SG.M'    [2]par 'gap'    [3]par 'bull'

så'ʕar               ʿsaʕar          sar
[1]sar 'storm, PF.NOP.SG.M' [2]sar 'tempest' [3]sar 'prince / minister ; PART.PR. 1,2, NOP.SG.M.'

ʿcaʕar           car
[2]car ' 'sorrow'    [3]car 'narrow'

så'ʔal           ʿšaʔal       šal
[1]šal 'question, PF.NOP.SG.M'    [2]šal 'step'    [3]šal 'take off a shoe '

ʿšaʕar           šar
[2]šar 'gate'    [3]šar 'sing'

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ʕtaʕar          tar
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[2]tar 'barber's knife'    [3]tar 'turn around; visit'


**Morphology**

In terms of classical morphological typology *à la* Humboldt and Sapir (1921), Hebrew is an inflecting language. Moreover, morphology is probably its most enduring structure, bearing an unequivocal Semitic stamp. Yet a typological difference that distinguishes CH from BH and MH relates to composition and prefixation. BH exhibits practically no example of composition - all nouns are construed by derivation and can be expanded by means of the construct-state. CH, on the other hand, has a number of compound nouns and a score of nominal prefixes, mostly spatio-temporal and quantitative (Kirtchuk 1997). Neither stage has verbal composition, while in IE languages pre-verbs of prepositional and ultimately nominal origin are common (e.g. *ex-, in-, trans-, de-, re-...* -port).

As in all Semitic languages, the core morphology consists of an inventory of lexical morphemes called roots and of grammatical morphemes or patterns called schemata, whereby roots are actualized into word forms. Each root has an overall sense with a concrete meaning and often also an abstract, metaphoric one, sometimes resulting in polysemy. As long as the root is not interwoven into a schema it has no existence in discourse. The original Semitic root is bi-phonemic (Bohas 2007, Kirtchuk 2004, 2011) though for practical reasons it is represented here as being tri-phonemic. This distinction is important, for not taking it in account obliterates the strong iconic (semantic cum formal) stamp that characterizes what I have called root-grapes, namely the three-phoneme groups which gravitate around a single bi-phonemic one, being its expansions.

The schemata constitute frames that include vocalic and often consonantal components with which the roots are interwoven. Most schemata have a grammatical morphemic role, and that is the case mainly in the verbal system, in which they allow to distinguish diathesis and aspect. Thus, in the basic form of the verb, BH has $R_1åR_2aR_3$ and $R_1u{:}R_2aR_3$ (respectively 3p.m.sg.pf active and passive), in the intensive form $R_1iR_2R_2e{:}R_3$ and $R_1uR_2R_2aR_3$, and in the factitive/causative form of the verb it has $hiR_1R_2iR_3$ and $hoR_1R_2aR_3$. The expression of diathesis by vocalic change is a constant feature of Hebrew morphology through the ages, the only caveat being relevant to CBH: the $niR_1R_2aR_3$ pattern serves as a substitute for $R_1u{:}R_2aR_3$ as the passive of the basic or Qal form. The total number of available schemata - verbal, nominal, and in a much smaller measure, of other categories, is of around a hundred.

Demonstrative deictics are composed of the elements /ʔ,h,l,z/ or combinations thereof.

Autonomous personal dialogic deictics are founded on the theme /ʔan-/. The non-person, to use Benveniste's (1966) term, is expressed, like in other languages, by the application of a demonstrative deictic to animates (the result is traditionally called 'third person pronoun'). As in other languages (Kirtchuk 1993), even in Hebrew, a non-compounding language, deictics are capable of composition; thus CBH has /ha(l)-lå-ze/ and /ha(l)-lå-zu/ (sic), two emphatic sg.m./f. demonstratives composed of three distinct deictic elements (for the differences between prototypical deictics and nouns, and thus between monstration and conceptualization, cf. Kirtchuk 2011). Other elements not founded upon lexical roots are indefinites-interrogatives, some conjunctions and some prepositions. As in many languages, many prepositions are of nominal origin.

CBH is a synthetic language with a large number of inflectional processes comprising

morphological marking of the major grammatical categories on both the noun and the verb. The noun inflects for gender and number, and there is a semi-productive inflection for the directive case. The verb inflects for person (including gender and number) and for aspect. The marked gender for both verb and noun is the feminine, as in all languages which exhibit a sex-based gender distinction. The number distinction in the noun is threefold: singular, plural and dual. The only adjectival scheme morphologically marked as such is the one denoting affiliation to a group, derived by suffixation of /-ij/ to proper names of peoples, places and the like. Many concepts usually encoded by adjectives in Indo-European languages are expressed in CBH by stative verbs marked as such by their specific morphology.

BH has a limited number of adverbs formed by a noun and an erstwhile accusative, which we shall more appropriately call an ad-verbal stressed case suffix /-åm#/: /jomåm/ 'at daytime' (< /jo:m/ 'day'), /dumåm/ 'silently' (< /do:m/ 'silence'), /ħinnåm/ 'gratis' (< /ħen(n)/ 'grace'), /rejqåm/ 'vacuously' (< /rejq/ 'empty'), /ʔåmnåm/ 'indeed' (< /ʔåme:n/ 'truth'), /piṯʔo:m/ 'suddenly' (< /pɛtaʕ/ 'sudden'). /šilšo:m/ 'the day before yesterday' does not seem to belong here. In any case, this is a close list whose members function in IH too. The mechanism, however, is obsolete including in BH itself. On the other hand, a mechanism which is productive throughout the history of Hebrew to this day, consists of the so-called he locale which is in fact a directive suffix, an enclitic /-å#/ postposed to the noun, probably akin to adverbal /-åm#/ (though evidence from Ugaritic might plead for a consonantal /h/ origin). Thus, we have in BH, e.g., /negbå/ 'southwards from /nɛgɛḇ/ 'south' and in IH, e.g., /håʕirå/ 'towards the city' from /ha-ʕir/ 'the-city'.

In MH, the impact of analogy is extensively attested: thus, the conjugation of roots with R$_2$= w/j and that of those with R$_3$ = ʔ merge in favour of the former so as to yield, for the root mcʔ - of frequent use as a quotation formula - the first person plural past tense form /måci:nu/ 'we found' instead of the classical one /måcåʔnu/ 'id.'. Modal forms which are rare in CBH disappear altogether. Other important morphological evolutions typical of MH are: the influence of the nipʕal scheme on hiṯpaʕʕe:l yielding the reflexive form nitpaʕʕal, the total disappearance of puʕʕal (save in the participle), the proliferation, again through Aramaic influence, of the Akkadian factitive/causative šapʕe:l (which reflects the sibilant characteristic of this language in correspondance to Semitic grammatical /#h-/) and of the reflexive ʔettapʔal. The nipʕal and piʕʕe:l patterns acquire an aditional inchoative meaning.

Specific and rare forms found in CBH such as those of the imperfect jussive and cohortative as well as the archaic personal suffix /-ki/ for the 2nd person feminine singular disappear altogether, due to simplification of the morphology through analogy and syntactic re-organization of the verbal system.

The autonomous deictic for the first person singular is ʔᵃni, while CBH ʔᵃnoḵi disappears almost completely. The same holds for the plural, in which ʔånu: replaces ʔᵃnaħnu: Under Aramaic influence, ʔatt is used along with ʔattå as the second person singular masculine. As a whole, BH syntax is rather synthetic and paratactic whereas MH is rather analytic and hypotactic (which renders IH closer to the latter in both respects). Surprisingly enough, it is this change, namely the syntactic shift from BH to MH which is

the major shift in the history of Hebrew structure. It is not without resemblance with the shift from Latin to Romance, the difference being that Hebrew had lost nominal declension and adopted prepositions already at its early biblical stage while Latin keeps it until quite late. Yet, if the syntactic colouring of BH is to a certain extent akin to that of Latin, MH has an undoubted Romance coloration. This may be due to the very same reasons: like the Romance languages, descended from vulgar Latin, MH was an eminently oral language, in which considerations of communicative efficiency prevailed over literary standards, let alone archaic forms. Early CH, which in this regard followed BH syntax, exhibits at present a trend similar to the one attested in MH as far as determination is concerned, once again as a result of foreign influence - this time not Aramaic but English. Thus, CH has expressions like /z^eḵujjot ʔadam/ 'human rights', a construct-state where the non-determination of /ʔadam/ 'man' is a calque from English, whilst normative Hebrew syntax commands /z^eḵujjot ha-ʔadam/ 'The rights of Man'. A similar behaviour is observed for many abstract, mass, collective or otherwise non-referential or non-specific nouns.

A question arising from the rapid evolution of CH is whether it can still be considered a Semitic language from a typological viewpoint. The question in itself is ill posed since 'Semitic', 'Indo-European' and the like are, by definition, genealogical terms, and therefore no specific typological interpretation should be attached to them. Still, since Semitic languages do have a common typological core in the realms of phonology, morphology, syntax and vocabulary, just as do other linguistic families, one can reformulate the question in appropriate typological terms and then try to answer it, provided adequate criteria are carefully selected and defined, and a broad variety of languages from the families under analysis is examined. Failing to do so properly may lead to the mistaken conclusion that CH belongs to a supposed Indo-European type, the Standard Average European (S.A.E.) imagined by Benjamin Lee Whorf. Goldenberg (1996) and Kapeliuk (1996) show that CH continues to be a Semitic language not only on a genealogical basis but on typological grounds as well.

**Syntax**

In terms of word order, BH has the verbal predicate in initial position, with the subject marker affixed to it, then a possible explicit and autonomous nominal or deictic subject in second position and, finally, the other verbal complements. This order[2] is preserved in MH and MdH, whereas in Contemporary Hebrew (CH) the order of the first two components is reversed, under the influence of word order in the European languages spoken by those who reactivated Hebrew at the turn of the 20th century: first comes the nominal or deictic subject, then the verbal or nominal predicate. Only if the clause is subordinate or if it begins with a circumstantial complement does the BH order prevail save when pragmatic reasons decide otherwise, e.g. when the object is focalized, cf. Job 14, 19 /ʔ^aḇani:m šaħ^aqu: mayim/ 'Even stone is eroded by water', litt. 'stones erode

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[2] In the terminology popularized by Greenberg it would be VSO. This terminology is inadequate, however, insofar as it (1) mixes a part of speech (*Verb*) with parts of the sentence (*Subject and Object*), and (2) implies the existence of the Verb category in language as such, which is wrong on dynamic – synchronic, diachronic, ontogenetic, phylogenetic, creolistic and diaglottic – grounds, and on grammatical as well as pragmatic evidence (Bopp 1807, Kirtchuk 2007, Parish & al. 2006, Barner & Bale 2000),

waters'. In all cases, the object takes the third position. Nominal sentences begin with the nominal or deictic subject, then comes the nominal or deictic predicate.

While CBH is typologically synthetic, the following stages from LBH through MH to CH become more analytic. For instance, it is in LBH (Cant. and Eccl.) that we note the first signs the process whereby /šɛ-/ (relative) and /lᵉ-/ (dative) merge into /šɛl/ (possessive): In oral IH it is employed, by and large, as the main device to express the relation of determination of one noun by another, regardless of the semantic content of this determination - possession, constitution, quality, &c.

A non-marked sentence in CBH may be either verbal or nominal. The first type has the finite verb in initial position, with the subject indexed to it either as a suffix (in the perfect aspect) or as a prefix (in the imperfect). An explicit noun or deictic can follow the finite verb, then a verbal direct and/or indirect nominal complement, in this order. If the sentence begins with the complement, the predicate precedes the subject, cf. Gn 1,1 /bᵉreːʔsiːt̠ båråʔ ʔᵉloːhiːm ʔɛt̠ hašåmajjiːm wᵉʔɛt̠ håʔårɛc wᵉhåʔårɛc håjt̠å tohu: wab̠ohu: wᵉħošek̠ ʕal pᵉnej t̠ᵉhoːm/, lit. 'at-first restore-3sg.m.pf God-pl. det.foc./acc. def.-skies conj.-det.foc./acc. def.-earth conj.-def.-Universe be-3sg.f.pf chaos conj.-darkness upon face-gen. abyss'. Direct complements may appear as suffixes on the verb, as may possessors on the noun. Of particular interest in BH syntax is the particle /ʔɛt̠/, to which grammars assign the function of marking the verb's second actant when it is determined. Yet, a thorough analysis proves that it was originally a focalizing particle, which, given the affinities between a determined and animate - hence non-prototypical - object and a subject, prototypically determined and animate, started to be used to distinguish the first from the second. It is /ʔɛt̠/ that fulfills that role because of the inherent affinity obtaining between the pragmatic function of focus and the syntactic one of object. The particle's function shifts then from a merely pragmatic use to a mainly syntactic one, without ever ceasing to play its initially pragmatic role. That is why in BH /ʔɛt̠/ introduces not only direct objects but also subjects (!) of passive verbs and is found even in nominal sentences. In such cases, it clearly plays the role of focalizer (Kirtchuk 1993). The nominal sentence, viz. one in which the predicate is a noun, is prototypically composed of two nouns, the former being the subject and the latter the predicate. A copula is not necessary unless the sentence is marked for tense/aspect. If, though not marked for tense/aspect, a sentence has a third person deictic in agreement with the subject's gender and number, there is no copula but a pragmatic marker of focalization. In other words, thanks to the rich concord system of agreement which ultimately takes in charge the marking of syntactic roles, word order is rather free and may therefore be used for pragmatic purposes, namely for focalization and topicalization.

The construct-state is a common semitic morphosyntactic structure which enables a noun to determine a preceding one without a positive autonomous expression other than syntactic juxtaposition and phonological coalescence. Morphophonemic changes may overtly occur on the first noun, the determinatum, if it is a polysyllabic masculine singular, a feminine singular or a masculine plural. In the first case, a syllable is lost or abridged; in the second case its singular feminine suffix /-å#/ assumes its ancient form /-at#/; in the thirs case, the suffix /-i:m#/ of the first noun loses its nasal element and /i:/ is separated into two segments, [-ej]. In all cases, the first noun or determinate loses its accent in favour of the determinant. It is the second that bears the definite article /#ha-/ if

either the phrase as a whole or its second member is defined.

The agreement system is quite developed. The verbal predicate agrees with the subject in gender, number and person, and the attributive noun or deverbative nominal agrees with the kernel-noun in gender, number and determination. The predicative noun or deverbative nominal does not observe agreement in determination with the subject. This corroborates the assumption that the subject function results from the grammaticalization of the topic, while the predicate results from the grammaticalization of the focus, topic and focus being prototypically determined and undetermined respectively. This results from the topic being known information, while the focus is the unknown, new information, that for whose sake the utterance exists in the first place. Arab grammarians understood this who termed the nominal subject /mubtada/ 'initial' and the nominal predicate /habar/ 'information'.

BH syntax abounds in parataxis: clauses and sentences are coordinated, mostly by /w$^e$-/, rather than formally subordinated. This does not mean that logical relations do not exist in BH, but that they are expressed otherwise than by conjunctions. Indeed, subordination is expressed mostly by the *consecutio temporum*, of which, Gn 1,1 quoted above is a fairly good example. The verbal forms and their distribution in the sentence, combined with the scope of uses of the conjunction /w$^e$-/, largely context-dependent, as well as a thorough analysis of the meaning of /brʔ/ (a derivative of b-r; in the piʕʕːel it means 'turn a parcel of bush into an habitable space' and gives also b$^e$riʔuːt 'health'; the root's meaning in Akkadian is indeed 'clarify, find out'[3]), show that the proper translation of that verse is 'At first God restored the sky and the earth, because the Universe had been a chaos with darkness upon the abyss's surface'.

In BH, there is no copula as such in nominal sentences; if a concording deictic (commonly called 3$^{rd}$ person pronoun, but see Kirtchuk 2007, 2011)[4] does occur, it is for in order to focalize the immediately preceding element. CH, on the other hand, again under influence of European tongues, uses the copula as a device to separate the subject from the predicate in nominal sentences, with no pragmatic effect.

BH being a rather synthetic language, all finite verbs take a subject affix, but if the object be determined, the bi- or tri-valent verb (Tesnière 1959) can take, in addition, a direct object suffix. Thus, /råʔiː-ti/ *see, past-1sg.subj* means 'I saw' and / r$^e$ʔiː-ti-hå/ *see, past-1sg.subj.-3sg.f.obj.* means 'I saw her'.

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[3] I am indebted to my colleague and friend Sh. Izre'el for this remark.

[4] What is usually and mistakenly termed '3$^{rd}$ person' is the entity (be it human or not) not taking part in the speech act as such. The features it partakes with the 1$^{st}$ and 2$^{nd}$ are accessory. The only persons in any true linguistic sense and often *in any true grammatical sense* are those which represent speaker and hearer: the 1$^{st}$ & 2$^{nd}$. Benveniste (1966) intuited this but did not go to the heart of the matter. Evidence is found in each and every realm of linguistic analysis. Morpho-phonologically, the non-person deictics are cross-linguistically either identical to or descended from deictic demonstratives which have nothing whatsoever to do with grammatical person as such, and are clearly different from the radical(s) of both the 1$^{st}$ and the 2$^{nd}$ person, which often share one and the same radical, as in Semitic including Hebrew. The non-person can be any noun, nominal or deictic demonstrative, while 1$^{st}$ and 2$^{nd}$ person are prototypically only and precisely that: *I* who speak, and *you* who listen. The essential difference between on one hand the 1$^{st}$ & 2$^{nd}$ persons, on the other hand the non-person is as old as language itself, and like language itself it is still operative. It follows from evolutionary reasons; *i.e.* from the essentially communica*ting* nature of the former as opposed to the communica*ted* nature of the latter. For a full development, cf. Kirtchuk 2011.

Hebrew conforms to Greenberg's Universals; thus, the attribute (including adjectives, subordinate clauses and genitives) follows the noun and the preposition precedes it. In BH possession is also synthetically expressed, by a mark of the possessor suffixed to the possessum. CH, on the other hand, has no object markers on the verb in the colloquial register but does display them, to some extent, in a literary style or high register, and the possessive markers appended to the noun itself in BH are still appended, but to the particle /šɛl/. The exception is a subset of terms denoting body-parts and the extension thereof, namely kinship, which on the grounds of iconicity (see below) readily accept appended possessive marks even in the colloquial registers. Indeed, for those items, suffixation of possessives is the non-marked variant, while the analytical construction denotes an alienable relationship in which the term does not denote a body-part or kinship as such, but is used otherwise - generically, metonymically or metaphorically. Be it as it may, Hebrew never becomes even closely as analytic as French, let alone almost isolating as English.

BH makes a clear-cut distinction between definite and indefinite nouns, correlating mostly with presence or absence of the definite article (of deictic origin) /#ha-/ prefixed to the noun. In MH, there is a drastic diminution in the use of this device, the distinction being neutralized in most contexts and expressed, when necessary, by other devices, mostly a deictic demonstrative or a possessive suffix. This attrition of the classical determination device results from Aramaic influence. This stage of Hebrew lost the determination opposition altogether due to the freezing of the definite article /-(h)a#/ suffixed to the noun (Greenberg 1978). As we pointed out before, MH syntax differs radically from BH's in many respects. MH verbal system does not have a *waw conversivum* anymore, since the system is no longer an aspectual one - there is no need, therefore, for a special device in order to attribute a temporal deictic value to verbal forms which encode merely the state of (in)completion of the action. MH verbal system is indeed one in which the erstwhile imperfect aspectual forms have the value of future tense, the erstwhile perfect aspect forms have the value of past tense, and the participial forms integrate the verbal system with the value of present tense. Along with this change there is another major development affecting the MH verbal system, replacing by a syntactic device the aspectual oppositions expressed in CBH by morphological means: it is the emergence of analytic forms consisting of an auxiliary verb /hwj/ 'be' conjugated for person, including gender and number plus the participial form of the (semantically) main verb at the adequate gender and number. Such constructions mark the durative, iterative or habitual aspects, in all tenses and in the imperative mood, e.g. /håjå po:ʃe:l/ 'he used to do'. Under Aramaic influence too the rection of some bi- and tri-valent verbs in MH changes, and the construction with the preposition /lᵉ/ replaces the one with ʔɛt̲. In other words, the accusative-direct rection retreats before the dative-indirect one. MH makes extensive use of hypotaxis, and many logically hierarchical relations are expressed by syntactic subordination. The subordinating element in MH is not ʔᵃšɛr as in CBH but šɛ as in LBH. Moreover, in MH there is plethora of composite elements including conjunctions such as /keywan šɛ/ 'as, since', interrogatives such as /ʔejze/ 'which', /ʔejmataj/ 'when' (with /ʔej/ playing a role sensibly equivalent to that of Latin /#qu-/ = English /#wh-/, see note 1 above), prepositions such as /ʃal mᵉnat šɛ/ 'for', conditionals such as /ʔilmåleʔ/ 'if not (irrealis)' and lexemes such as /bei̲t̲ midråš/ house of study, pl.

/båtej midrašot/ The morpho-syntactic particularity here, in comparison with BH, is that both elements of the construct-state take the plural suffix.

**Iconicity**

A brief mention will be made now concerning iconicity, namely the correlation between meaning and form which contradicts to a large extent both Saussure's *arbitraire du signe* and the generative logic-inspired views on language. Hebrew displays iconicity at all levels and at all stages (Kirtchuk 2000, 2011).

To give but a few examples: (a) Classical Hebrew, like Semitic in general, uses gemination, a phonetic mechanism, to achieve morphological and ultimately semantic aims. But not any aim: the gemination of $R_2$ in the verbal schemata known as 'heavy' conveys a 'gemination', *i.e.* an intensification, of the action in one of several possible ways: a more determined intention - /šåbar/ 'he broke', /šibber/ 'he broke into pieces'; a greater frequency - /qåpac/ 'he jumped', /qippec/ 'he bounced'; a greater number of actants - /låmad/ 'he learned', /limmed/ 'he taught'; in the nominal domain it is used to convey a consuetudinary or professional activity, cf. /ħuT/ 'string', /ħajjåT/ 'tailor'; /gan/ 'garden', /gannån/ 'gardener'; (b) Iconic, too, is the relationship between roots of the three types $R_1R_2R_1R_2$, $R_1R_2R_2$, and $R_1R_2R_3$ {$R_{1/2/3}$ = w/j/n} which exhibit similarity both at the morphological and at the semantic level, cf. /nzl/ 'flow', /zlzl./ 'despise', /zll/ 'eat without consideration for the food', /zwl/ 'cheapen', all of which convey the concept of motion downwards, or /kll/ 'include', /klkl/ 'provide', /nkl/ 'exploit', /klj/ 'consume', /jkl/ 'be able', /kjl/ 'contain', /'kl/ 'acquire and contain by eating / vanquish' (see note n° 9, see also my article on Onomatopoeia in this volume) ; (c) Of the same nature is the fact that causativity, namely the control exerted by one actant upon another, induced by the former to do the action conveyed by the verb, is expressed by morphology, i.e. by a total merger of both action and causation in the framework of a specific verbal scheme; (d) In CH, the oral register does not express possession by suffixes but by constructions with /šɛl/, with one exception. Nouns denoting close kinship are often used, including in the colloquial register, with suffixed possessive indices. Thus, the close relationship existing in extra-linguistic reality among kith and kin is reflected in the grammatical closeness expressed by affixation (morphology) rather than by analytic constructs (syntax);

| Noun | Unmarked Poss.  1SG | | Marked Poss. 1 SG |
|---|---|---|---|
| [xaber(-a)] 'friend' | [(ha-)xaber(-a) šel-i] | | [xaver(-t)-i] |
| [ʔem] 'mother' | | [ʔim-i] | |
| [ʔima] 'mama' | | [(ha-)ʔima šel-i] | |
| [ʔab] 'father' | | [ʔab-i] | |
| [ʔaba] 'dad' | | [(ha-)ʔaba šel-i] | |
| [ʔax(-ot)] 'sibling' | [ʔax-(ot-)i] | | [(ha-)ʔax(-ot) šel-i] |
| [gis(-a)] 'sibling-in-law' | [gis-(at-)i] | | [(ha-)gis(a) šel-i] |
| [xam(-ot)] 'parent-in-law' | [xam-(ot-)i] | | [(ha-)xam(-ot) šel-i] |
| [ben] 'son' | [ha-ben šel-i] | | [bn-i] |
| [bat] 'daughter' | [ha-bat šel-I] | | [bit-i] |
| [dod(-a)] 'uncle/aunt' | [(ha-)dod-(a) šel-i] | | [(dod-(at-)i] |
| [telefon] 'telephone' | | [ha-telefon šel-i] | |
| [pardes] 'orchard' | [(ha-)pardes šel-i] | | [pardes-i] |

(e) At the syntactic level, adjectives are placed after the noun, but not in an arbitrary order: as in other languages, they obey a gradient of perception, objectivity, concreteness and inherence (Posner 1986), cf.

      1. A new red car = Fr. Une nouvelle voiture rouge = CH [mexonit ʔaduma xadaša]
      2. A red new car = Fr. Une voiture rouge neuve (? Une voiture nouvelle rouge) =
      CH [mexonit xadaša, ʔaduma] or [mexonit xadaša ve-ʔaduma]
      3. She's a tall blonde = Fr. C'est une grande blonde = CH [zot blondinit gvoha]
      4. ? She's a blonde tall =? C'est une blonde grande = ? [zot gvoha blondinit]

The higher an adjective is on that scale, the closer it is to the noun it describes, and if that order be altered on semantic or pragmatic grounds, an intonative pause or an explicit conjunction is needed, see. (2) above ; moreover only the highest in that scale may substantivize, exactly like in other languages (a blond, a Jew, but not *a tall*, *an interesting*). Thus, there is a correlation between semantics and syntax, or between meaning and form; (f) As far as lexicon is concerned, concepts of crucial importance (culturally or otherwise) show a wealth of roots expressing categorial shifts, while for less central concepts, a change of category is obtained by grammatical means or is altogether unmarked. No doubt, contemporary evolution - social, technological and otherwise - has an influence on the meaning of many elements. An example of iconicity in the structure of vocabulary: inasmuch as an entity is more central in the language and the culture it carries, it is lexical morphemes that reflect this functional richness. Concepts of crucial importance (culturally or otherwise) show a wealth of roots expressing categorial shifts, while for less central concepts, a change of category is obtained by grammatical means or is altogether unmarked. No doubt, contemporary evolution - social, technological and otherwise - has an influence on the meaning of many elements. Yet, the lexical and semantic basic structure of Hebrew is founded on that of BH, MH and MdHA, and it is iconic, as one can infer from the names of some animals: donkey is /håmo:r, ʔåto:n, ʕajir/, camel is /gåmål, nåʔqå, bɛkɛr/, goat is /tajiš, ʕe:z, gedi:/, sheep is /ʔajil, kibɮå, Tålɛ/ depending on sex and age - the first term referring to the sex or the male adult, the second referring to the female adult and the third to the young one. Other roots exist as well to express additional distinctions - such as a female about to give birth. Such distinctions are linguistically relevant, to this very day, for species that were of great economic and cultural importance at ancient times, and the same distinctions do not exist for unimportant species: goose is /ʔawwåz/, with only morphological changes to express the feminine and diminutive. In other words, the relative value of grammar and lexicon in establishing functional semantic distinctions remains as it was at previous stages of the language. In other words, the relative value of grammar and lexicon in establishing functional semantic distinctions reflects previous stages of the language.

**Typological Changes induced by External Influence**
Aramaic influence on CBH is restrained to a few borrowings including /jᵉgar ɮahᵃdu:tåʔ/ (Gn 31, 47), lit. 'monument of testimony'. It becomes, however, of great importance on LBH and even more so on MH, at all levels: phonological, morphological, syntactic and lexical. Thus, stress accent, oxyton in CBH, becomes paroxyton in LBH and MH; the

final nasal /-m#/ becomes /-n#/, and the merger of /ɮ/ with /s/ is completed. These changes affect morphology too since the plural masucline suffix /-iːm#/ becomes /-iːn#/. Some verbal schemata proper to Aramaic emerge in MH such as niṯpaʕʕal. As for syntax, LBH and definitely so MH lose the so-called 'waw conversivum' which in CBH gives the aspectual forms of perfect and imperfect - påʕal and yipʕal respectively - a temporal deictic value, so that /#wa- + påʕal/ = future, /#wa- + jipʕal/ = past, the participle being a nominal form unmarked for tense. CBH is the only Semitic language to display such a combined aspecto-temporal system. Indeed, the term 'conversivum' hardly suits this *waw* since it does not convert anything; should we have to choose a more appropriate term, it would be *waw temporis* or *waw ostensivum*, since it gives the sign-value (positive or negative, i.e. prospective or retrospective, future or past) of the state's or action's time relatively to that of the utterance. In LBH and MH, much on account of Aramaic and especially Greek influence (Rosén 1978, 1995), the system is no longer a twofold aspectual one with a tense-marking device, but a threefold temporal verbal system altogether: the erstwhile perfect påʕal marks the past tense, the erstwile imperfect jipʕal the future tense, and the participle poːʕeːl the present tense. At the same time the verbal construction håjå+ participle emerges to encode for the durative/iterative aspect. Three major syntactic influences of Aramaic on the nominal system are exerted on agreement, determination and genitive constructions: (1) the agreement scheme of nouns may change to match the one of their Aramaic equivalents, e. g. /ɮåḏɛ/ 'field', which entails a feminine agreement under the influence of Aramaic /ħaqal/ 'id.', (2) the opposition determined - non-determined is no longer expressed by the presence or absence of the definite article /ha-/, which is scarcely used at all, but by means of syntactic devices, and (3) the synthetic construct-state, so prolific in BH, is replaced by a construction with /sàel/ 'of' which can be amplified by a suffixed index on the possessum which agrees with the possessor if the latter is determined. Thus, CBH /ribboːn håʕolåm/ is in MH /ribboːnoː šɛl ʔoːlåm/. At the lexical level, MH borrows from Aramaic many terms and phrases in the legal field, such as /geːṮ/ 'divorce', /niḵsej dᵉloʔ nåjḏej/ 'real estate' and the like. It is upon Aramaic that Hebrew bestows the part played by Latin in the juridic jargon of the European languages. It is in this respect alone - and by no means at the genealogical level - that one might say that 'Aramaic is Hebrew's Latin'.

Following the attrition of final segments marking case in the noun and mode in the verb, classical BH stress fell on the last syllable, but in MH, under Aramaic influence, it shifted to the penultima. IH having been reactivated with a so-called Sephardic pronounciation (which preserves stress and gutturals as in classical BH, but obliterates pharyngalization of the so-called 'emphatic' as well as the distinction between open and close vowels, e.g. /a/ and /å/) stress is like in BH, on the last syllable. Save for loanwords from Yiddish, German and (American) English, Latin words borrowed in their Russian form or Hebrew words bearing a Russian suffix. Yiddish, the Jewish Creole which evolved in the Valley of the Rhine in the 10th-12th centuries on a Germanic grammatical basis and a high ratio of Hebrew and Aramaic lexical elements (later it integrated Slavic elements as well), influenced Hebrew in several ways. The most striking one consists perhaps of the Hebrew words which Yiddish itself had integrated then adapted to its own phonology (which varies according to the dialect), pronouncing them in the peculiar Yiddish manner

(which to some extent preserves classical Hebrew characteristics: distinction between /a/ and /å/ and between [t] and [t̲] (IPA [θ]). Those words, or rather the Yiddish forms of those erstwhile Hebrew words, were reintegrated by IH so as to create doublets both at the semantic and at the phonological levels with the IH normative form. Thus, the oxyton form /maʃˤasé/ in Hebrew means 'story', whilst the Yiddish paroxyton /májse/ means a long, complicated and often invented tale meant to serve as a pretext for something. Russian has contributed some atone suffixes, of which three are most productive: (1) [-čik] which serves both for diminutives - cf. [baxur] 'lad', [baxurčik] 'young lad' - and for *nomina agentis*, cf. [tikun] 'repair', [tikunčik] 'odd job man'; (2) [-nik] which denotes belonging to a group, a profession, etc., cf. [kibbutznik] 'member of a kibbutz', [garaʒnik] 'owner of a garage', and (3) [-tsia], the Russian equivalent of Latin [-tio(n)], cf. [inflatsia] 'inflation', [koalitsia] 'coalition', etc. (Masson 1987). From Russian also are certain curses. German and French contributed some terms but play no significant role in terms of grammatical influence. As for American influence, in Israel it is deep and far-reaching, and loan-words from American English are not restricted to the domain of high technology in which they are especially numerous. A syntactic construction inspired on that language, with an ante-posed genitive, is often found in commercial advertising, cf. [dani hovalot], lit. 'Danny Transports' where Hebrew syntax requires [hovalot dani] 'id.'. American isolated words or phrases invade IH conversation mainly among people desirous of showing off their education (which often goes only to a certain point) or their supposed belonging to what they perceive as Western culture. This *Weltanschauung* characteristic of the Israeli secular middle-class is not necessarily shared by highly educated people, by observant Jews, by the popular class or by the Arab Hebrew-speaking minority.

**Bibliography**
Barner, D & A. Bale. 2002. 'No nouns, no verbs: psycholinguistic arguments in favor of lexical underspecification'. Lingua 112 : 771-791.
Benveniste, E. 1966. 'Structure des relations de personne dans le verbe. *Problèmes de Linguistique Générale* vol. 1, pp. 225-236. Paris, Payot.
Bohas, G. et M. Dat. 2007. *Une théorie de l'organisation du lexique des langues sémitiques , Matrices et étymons*. Lyon: ENS.
Goldenberg, G. 1996. 'ha'iḇrit kᵉlaʃon ʃemit xaya' ('Hebrew as a Living Semitic Tongue'). *Evolution and Renewal. Trends in the development of the Hebrew Language: 148-190.* Jérusalem: Israel Academy of Sciences and Humanities.
Greenberg, J. H. 1948. 'The classification of African languages'. *American Anthropologist* 50, 24-30.
Greenberg, J. H. 2005. *Genetic Linguistics: Essays on Theory and Method* (Croft W. ed.). Oxford University Press.
Greenberg, J. 1978. *Universals of Human Language* vol. 3 pp. 47-82. Stanford University Press.
Hirst, D. & A Di Crsito. 1998. *Intonation Systems: a Survey of Twenty languages.* Cambridge University Press.
Hombert, J.-M. 1975a. 'Phonetic explanation of the development of tones from prevocalic consonants'. UCLA Working Papers in Phonetics 33: 23-39.
Hombert, J.-M. 1975b. 'Phonetic motivations for the development of tones from

postvocalic [h] and [ʔ]: Evidence from contour tone perception'. *Report of the Phonetics Laboratory,* Vol. 1, University of California at Berkeley, pp. 39-47.

Humboldt, W. 1836. *Über die Verschiedenheit des menschlichen Sprachbaus und seinen Einfluss auf die geistige Entwicklung des Menschengeschlechts.* Bonn: Du̇mmler.

Kapeliuk, O. 1996. 'Is Modern Hebrew the only 'Indo-Europeanized' Semitic Language? And what about Neo-Aramaic?'. *Studies in Modern Semitic Languages.* Izre'el, Sh. & Sh. Raz (eds.): 59-70. Leiden: Brill.

Kirtchuk, P. 1989. 'Classes de verbes en hébreu biblique et contemporain: étude morphosyntaxique et sémantique'. Actances 4 pp. 137-173. Paris, CNRS.

Kirtchuk, P. 1993.' /ʔet/ ou ne pas /ʔet/: l'actant Y en hébreu et au-delà'. Actances 7 pp. 91-113. Paris, CNRS.

Kirtchuk, P. 1997. 'Renouvellement grammatical, renouvellement lexical et renouvellement conceptuel en Sémitique'. *La Denomination*, Cl. Boisson & Ph. Thoiron (dirs.), pp. 37-68, P.U.L.

Kirtchuk, P. 1995. 'Deixis, anaphore, 'pronoms': morphogenèse et fonctionnement', *Les Parties du Discours*, Basset, L.& M. Perennec (dirs.), pp.169-205. Lyon, P.U.L.

Kirtchuk, P¨.ms. 'Hebrew as a Case-Test for the 2-Phoneme Root in Semitic'. Lecture at the 32th annual Meeting of the North American Conference on Afro-Asiatic Linguistics (NACAL), San Diego 2004.

Kirtchuk, P. 2007. 'LUIT: Language - a Unified and Integrative Theory', 11 pp. *Fighting for the World's Languages: Hommage à Claude Hagège*, M.-M. Jocelyne Fernandez-Vest (ed.). Paris, L'Harmattan.

Kirtchuk, P. Forthcoming. *Principia Linguistica* (a 2011 version may be consulted at *http://kirtchuk.wikidot.com*).

Landsberg, M. E. (ed.) 1995. *Syntactic Iconicity and Linguistic Freezes. The Human Dimension.* Amsterdam/Philadelphia, John Benjamins.

Masson, M. 1987. Langue et Idéologie. *Les mots nouveaux en hébreu moderne*. Paris, CNRS.

Parish, J. Hirsh-Pasek, K. and Golinkoff, R. (2006, Jun) 'What Does It Take To Learn A Verb? A Verb Acquisition Meta-Analysis'. Paper presented at the annual meeting of the XVth Biennial International Conference on Infant Studies, Westin Miyako, Kyoto.

Posner, R. 1986. 'Iconicity in Syntax', *Essays on the Nature of Culture, Festschrift for Thomas A. Sebeok:* 119-140. (Tübingen: Günther Narr.

Rosén, H.B. 1977. *Contemporary Hebrew*. The Hague, Mouton.

Rosén, H.B. 1978. *L'He'breu et ses rapports avec le monde classique. Essai d'Evaluation culturelle*. Paris, Geuthner.

Rosén, H.B. 1995. *Hebrew at the Crossroads of Cultures. Orbis Supplementa tome 11*, Leuven-Paris, Peeters.

Sapir, E. 1921. *Language*. New York: Harvest Books.

Steiner, R. 1977. *The Case for Fricative-Laterals in Proto-Semitic.* New Haven, American Oriental Society.

Tesnière, L. 1959. *Eléments de Syntaxe Structurale*. Paris, Klincksieck.

Whorf,B. 1956. *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf (*John B. Carroll ed.). Cambridge Mass.:MIT Press.