Is Modern Hebrew Standard Average European?
The View from European[*]

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Abstract

In contrast with previous work emphasizing European influences on Modern Hebrew as compared to the Biblical Hebrew model adopted by the Hebrew revival movement, this article sets out to examine relevant typological features of Modern Hebrew in its own right. Taking the typological literature on Standard Average European as a starting point, it is argued that Modern Hebrew is in fact quite far from the European type in the majority of pertinent features defined independently of the literature on Hebrew. Notwithstanding the many European influences present in Modern Hebrew, especially in phonology and semantics, and considerable differences compared to Biblical Hebrew, it will be shown that key structural similarities with European languages are remarkably few, and in most cases not due to the revival process at all.

1. Introduction

The typological nature of Modern Hebrew has been the focus of much debate since its infancy. Already in the 1920s, when the first generation of native Modern Hebrew speakers was negotiating what would become the normalized grammar of the new language,[1] views from contemporary Semitists were expressed to the effect that the language spoken by Jewish settlers in British Palestine was in some way inauthentic, 'un-Semitic', and in particular European:

> *The attempt to solve that task* [=the modernization of Hebrew] *without preparation had to lead to a feigned solution: to a Hebrew, that in reality was **a European language in transparent Hebrew disguise**, with outwardly general European traits and individual language peculiarities, but with only totally superficial Hebrew character.* [Bergsträßer (1928: 47), my emphasis][2]

> *However, the will for Hebraization overcame all obstacles; and the result was a language in which Europeanisms and grievous transgressions against grammar became the order of the day.* [Plessner (1925: 684)][3]

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[1] Normalcy of the grammar is meant in the sense of Kuzar (2001:137-196). In the early days of the language, even systematic deviations from Biblical Hebrew conventions were simply seen as corruptions or imperfect learning on the part of speakers. Only beginning in the 1950s did the realization grow in linguistic and other scholarly circles that Modern Hebrew had negotiated a *de facto* normative grammar of its own (see ibid. for discussion). The view that Modern Hebrew is corrupt Biblical Hebrew is from a contemporary perspective obsolete, and systematic intuitions of native speakers of Modern Hebrew are now routinely used in studies of its grammar.

[2] The German reads: "*Der Versuch, jene Aufgabe ohne diese Vorbereitung zu lösen, mußte zu einer Scheinlösung führen: zu einem Hebräisch, das in Wirklichkeit eine europäische Sprache in durchsichtiger hebräischer Verkleidung ist, mit äußerlich gemeineuropäischen Zügen und einzelsprachlichen Besonderheiten, aber nur mit ganz äußerlich hebräischem Charakter.*"

[3] In the original German: "*Indes, der Wille zur Hebraisierung schritt über alle Hindernisse hinweg; und das Ergebnis war eine Sprache, in der Europäismen und schwere Verstöße gegen die Grammatik gang und gäbe wurden.*"

Clearly these authors had reason to assume interference from European languages in the emerging Hebrew of Palestine, all the more so since their starting point was a comparison with Biblical Hebrew, which Modern Hebrew was and is distinct from in many ways. In particular, it was clear that the need to find words and expressions for a variety of modern concepts, situations and registers dictated that structures were carried over (often using Hebrew lexemes or lexical roots) in a more or less conscious way from the native languages of first generation revivalists and later generations of multilingual speakers. This state of affairs can be demonstrated at multiple linguistic levels, including in transfixal root word formation (1),[4] compounding (2), phraseology (3) and syntactic constructions (4), on both the scholarly/deliberate and the colloquial/spontaneous planes:

(1) *ḥamtsan*[5] 'oxygen' < root ḥ.m.ts 'sour', cf. German *Sauerstoff* 'oxygen', lit. 'sour substance', and likewise for most chemical element names in the transfix pattern *CaCCan* (where *C* stands for one of usually three lexical root consonants).

(2) *beit-ḥolim* 'hospital', lit. 'house-sick.PL', cf. the same senses in the lexemes forming German *Krankenhaus* 'hospital', lit. 'sick-house'

(3) *'im kvar 'az kvar* 'might as well', lit. 'if already then already', cf. German *wenn schon, denn schon* 'id.'

(4) Tautological infinitive with *le-/li-*, e.g.: *lifgosh lo pagashti 'oto*, lit. 'to meet, I didn't meet him', i.e. 'meet him, I didn't', cf. Russian *vstrečat'sja – my ne vstrečalis'*, lit. '[to] meet each other, we didn't meet each other', and similarly in Yiddish (cf. Zuckermann 2008: 112)

More generally, it has been observed that, Modern Hebrew words (especially nouns) tend to cover similar semantic fields compared with European counterparts, e.g. *sherut* 'service' means: 'service (at a restaurant)', '(a government) service', 'service (in the military)', … etc. (see Rosén 1969).[6] According to Rosén (1977: 24–25), Modern Hebrew is genetically or genealogically Semitic, but 'categorially' European:

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[4] Transfixation is one of many terms used for (esp. Semitic) word formation by combination of a discontinuous consonantal lexical root with a pattern comprised of vowels and possibly affixes giving a more general grammatical and/or semantic category.

[5] Throughout this article I have opted to Romanize Modern Hebrew rather than use strict IPA transcription, except where phonetic issues are discussed. This is both more readable and allows more transparent comparisons with Biblical Hebrew and Arabic, which will become relevant below. The Romanization preserves Sephardic pronunciation differences between pharyngeal <ḥ> [ħ] and uvular <x> [x], as well as between the pharyngeal and glottal stops <'> [ʕ] and <'> [ʔ]. These distinctions are not retained in the predominant Ashkenazi pronunciation of Hebrew in Israel. The digraph <sh> is used for [ʃ], and <ts> represents the affricate [ts]. In Biblical Hebrew, reconstructed pronunciation is uncertain and the Romanization is extended with Semitist notation in transcribing emphatics as <q> (pronounced [k] in all varieties of Modern Hebrew), <ṣ> (modern [ts]) and <ṭ> (modern [t]). Spirantization of postvocalic stops is given by underlines, e.g. <b̲> for postvocalic <b> (modern [v] etc.). The Tiberian vowel diacritics for Biblical Hebrew are distinguished by using a circumflex for Segol <ê> and the long a-vowel Qamatz <â> as well as spellings using *matres lectiones* (<î>, <ô>, <û>). Schwa mobile is given by <ə> and reduced vowels (Hataf) are given in superscript.

[6] Rosén (1969) attributed this property specifically to the so-called fatal question of Modern Hebrew: 'how do you say X in Hebrew?', which, in structuralist terms, ensured first generation speakers would merely associate a new *signifiant* with the same *signifié* they already had in their native tongue.

> *To recall that the question of the Semitic identity of Israeli Hebrew is one concerning its genealogical, and not its typological relationship is to solve the problem. Israeli Hebrew is a language in which inherited (Hebrew, Semitic) means of expression have been assigned to the materialization of a given (European, primarily Slavo-Teutonic) categorial system* [Rosén (1977: 24)]

The question therefore involves historical (language change), genetic and areal (language contact) aspects of language typology, which are difficult to tease apart.

The unquestionably European semantics found across many areas of the Modern Hebrew lexicon have led some to postulate that the emergence of Modern Hebrew involved a process of re-lexification (cf. Mühlhäusler 1997: 102-108), by which a new language uses lexemes from one source with the underlying grammar of another language (in this case one or more European languages). One of the most extreme analyses of Modern Hebrew in these terms can be found in Wexler (1990), who sees Modern Hebrew as a Slavic language, in that it is a re-lexified form of Yiddish, itself a Germanically re-lexified form of a Slavic dialect (this particular analysis will be revisited briefly toward the end of this article). A more moderate view is proposed by Zuckermann (2003, 2006), who classifies Modern Hebrew as a hybrid language integrating elements from both Biblical Hebrew and European languages, in particular Yiddish.

On the other hand, some scholars have pointed out that Modern Hebrew is not unique in adopting semantics and expressions found all over the Western world. Blau (1981) offers an extensive comparative study of European influences on the semantics of Modern Hebrew and Modern Standard Arabic, showing that very many Hebrew Europeanisms are also found in Arabic and for the same reasons: the need to modernize the language or adapt to new situations in which European languages were dominant at the time (in the case of Arabic, particularly French, but also English). Again we find Europeanisms at all linguistic levels:

(5) Meaning of root nouns: Arabic *tayyār* 'current' but also '(electrical) current', '(philosophical) current', etc. mirrored in Hebrew *zerem* 'current' and also '(electrical/philosophical) current' (ibid.:63), cf. German *Strom/Strömung*, French *courant*

(6) Derivation: the denominal adjective from 'surface' means 'superficial', Arabic *saṭḥi*, Hebrew *shitḥi* 'superficial', cf. German *oberflächlich* 'id.' etc.

(7) Compounding: e.g. a compound meaning 'question mark', Arabic *ʿalāmatu-stifhāmin*, Hebrew *siman-she'ela*, cf. English *question mark*, German *Fragezeichen* etc., among countless examples

(8) Phraseology: Arabic *'anqaða l-mawqifa* 'saved the situation', Hebrew *hitsil 'et ha-matsav* 'id.', cf. French *sauver la situation* 'save the situation'

(9) Syntax: proliferation of passive agent marking with a PP (extremely rare in Classical Arabic/Biblical Hebrew), clefts, new forms of temporal and circumstantial hypotaxis, and many more (ibid.:124-128)

The possibility of similar influences in a language that is nevertheless not considered to be European, but rather the hallmark example of a Semitic language, leads to the question what properties a language should have in order to be considered European.

From a typological point of view, especially the presence of semantic loan translations seems less interesting in determining the type of language Modern Hebrew represents. Within Israeli linguistic circles, it seems the debate has concentrated on the deviations from Biblical Hebrew observed in Modern Hebrew grammar, and whether such deviations mean the language is not a Semitic one (see Goldenberg 1994 and more below). In the following sections I would like to suggest that the question should be approached from the opposite direction: we must first establish what the relevant properties for a European Language are, and then see if they apply to Modern Hebrew. Luckily, the former task has already been achieved to a great extent by typological advances in the description of 'Standard Average European' (SAE), the European linguistic area, which will be described in detail below.

The remainder of this article is structured to follow this program. The next section introduces a brief outline of Standard Average European, focusing on features deemed to be pertinent in previous typological work on the subject. The following section runs through these features as they apply to Modern Hebrew, with additional references to differences compared to Biblical Hebrew that have played a role in the discussion and some comparisons to Arabic to give a comparative Semitic perspective. Section 4 discusses the results of the comparison and adds some additional features not unequivocally accepted within the SAE literature which have nevertheless been taken to classify Hebrew as European. Subsequently some suggestions are given for bundles of features whose presence or absence in Modern Hebrew may have universal/implicational reasons. Section 5 concludes the discussion, with some tentative suggestions for the (unreserved) classification of Modern Hebrew as a typologically non-European language, regardless of the circumstances of its genesis, as well as some points for future research.

2. Criteria for Standard Average European

The notion of an areal cluster or *Sprachbund* called Standard Average European is generally attributed to Benjamin Lee Whorf (1956: 138–159). As an American structuralist who had studied Native American languages extensively, Whorf was very aware of the diversity of languages found around the world. This was a prerequisite to the clear realization that European languages were not only strikingly similar in some ways (especially in semantics, ways of verbalizing experience which were central to Whorf), but also that they are not necessarily 'normal', in the sense that their common features are often not found in most languages elsewhere. However, the typological formalization of SAE in current terms is owing to Haspelmath (1998, 2001) and van der Auwera (1998), along with subsequent work in projects such as EUROTYP (see van der Auwera 2011), which established lists of criteria, as well as some useful distinctions between the most typical, or 'core' features of European languages, and more marginal ones.

Van der Auwera (1998) and Haspelmath (1998) both distinguish at least three main areas of more or less prototypical SAE languages, though I will adhere to Haspelmath's terms here.[7] At the center, the *nucleus* is found, containing Dutch, German, French and northern varieties of Italian. Around this area, the *core* comprises most continental European languages (Romance, Germanic) as well as English, but to the exclusion of Maltese, Basque, and Celtic and Finno-Ugric languages. West Slavic

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[7] Van der Auwera discusses various isogloss areas depending on the feature sets chosen, but most importantly the 'Charlemagne' Sprachbund corresponding to the 'nucleus' area below, with some extensions in some features. For the present purpose a simplification delineating one subdivision of European space is more beneficial in order to concentrate the discussion on the status of Hebrew.

languages (Polish, Czech) and Balkan languages (Greek, Bulgarian, Albanian, Romanian) are included. Finally the *periphery* includes Hungarian and Finnish, the Baltic and East Slavic languages, as well as to some extent Georgian, Armenian and Maltese.

This division suggests that 'nuclear' European influence in Modern Hebrew can mainly come from German or French, whereas Slavic influences may be core or periphery based. Nevertheless, since the most important features are shared by a majority of languages in all areas, we should begin by listing the features that result in the widest classification, possibly assigning more importance later to those features that distinguish more central areas. At the same time the focus is on features that are *distinctively* European, i.e. not otherwise common in the languages of the world and therefore less likely to correspond by chance (cf. Haspelmath 2001: 1493); see also Section 4.2 for further discussion of feature relevance).

2.1 Features encompassing nucleus, core and periphery

Of the list of main features in Haspelmath (2001), the following are characteristic for European languages of all regions (see ibid. for details and for the frequency information among languages outlined below):

1. **Relative clauses with (inflecting) relative pronouns.** Relative pronouns that are postnominal, agree with their antecedent and represent its grammatical function within the clause are very specifically European and found in Romance, Slavic, Germanic, Greek, Albanian, Georgian and as far as Armenian. They are hardly found in this form elsewhere.
2. **Participial passive** (i.e. the lexical passive form is non-finite, though no distinction is made as to whether an auxiliary must be used as opposed to a nominal sentence with the participle as a predicate). These are found all across Europe, notably in Romance, Germanic and Slavic. This strategy means that actional (and not only stative) passives are formed via an auxiliary or nominal clause combined with a non-finite lexical verb form: a (predicative) participle. Typologically speaking, the construction is not very common, with affixation on the verb stem being the most common alternative (see Haspelmath 1990: 29).
3. **Preference for anti-causative derivation** (i.e. unmarked verbs are more likely to be causative, anti-causatives are often derived e.g. with reflexive pronouns). Anti-causative default derivation, i.e. deriving a complex inchoative verb from a morphologically simpler causative verb (e.g. causative *lose*, inchoative *get lost*), is found all across Europe as far as Russian, Georgian and Armenian, with Finno-Ugric forming the exception.
4. **Particles in the comparative construction** (*bigger than*, not *from* or other strategies). Comparison using particles is widespread, e.g. English *than*, French *que* etc., encompassing Balto-Slavic, Greek and Finno-Ugric in the east, and even Basque and Gaelic in the west, but not in Breton or Italian, which have locational prepositions (e.g. Italian *di* 'of, from').
5. **Relative based equative construction** (forms like *as X as Y* are derived like relatives, cf. German *so X wie Y*, where *wie* 'as' can introduce a relative clause). Such equatives are found all over the continent, with notable exceptions in Scandinavian, Celtic and Basque, as well as Georgian and Armenian in the east (see Haspelmath and Buchholz 1998 for details).

2.2 Features encompassing nucleus and core

The following features are spread across the nucleus and core languages, but not in most of the periphery:

6. **Definite and indefinite articles** (but not null-indefinites only). A binary set of explicit articles (e.g. *a* and *the*) is well attested in the SAE core (Germanic and Romance, Greek and Albanian), but missing in the Slavic languages, most of which have no article at all. Among the Germanic languages, only Icelandic shows an opposition (zero) : definite article, as do the Celtic languages.
7. **'Have'-perfect** (periphrastic, based on a possession verb). 'Have' perfects are well attested in those languages in the core that have a verb of possession. Its absence in the periphery is in part owing to the comparatively low use of verbs of this type in Slavic (though verbal possession is more used in West Slavic, e.g. Polish *mieć* 'have' than in Russian, which generally uses *u menja jest'* lit. 'at me exists', etc.).
8. **Preference for nominative, not oblique experiencers**. The preference for nominative experiencers (*I like it*) over obliques (*it pleases me*) is not absolute, but predominant in the core languages. Accordings to data from Bossong (1998), the ratio of oblique experiencer verbs becomes higher in eastern Europe, with most Balto-Slavic languages (except Czech) and most Finno-Ugric languages (except Hungarian) classifying as preferring obliques ('inverting', in his terminology; see Section 3.8 for details).
9. **Dative external possessors** (i.e. possession via oblique possessor). These hardly occur in English (exceptions are *look me in the eye(s)* or *kiss me on the lips*), but are very frequent and not limited to fixed expressions on the continent, including Balto-Slavic, Romance and Germanic languages, as well as Hungarian, Greek and Albanian, but not the Scandinavian languages (including Finno-Ugric Finnish and Estonian).
10. **Negative pronouns** and not verbal negation / double negative. Negatives of the sort *I saw nothing* and negative polarity items (NPIs) of the sort *I didn't see anything* are characteristic of nucleus and core, including insular English and Icelandic as well as Albanian and Georgian, but not in Balto-Slavic, Finno-Ugric or Greek and Armenian. Most of the latter languages use a verbal negation on top of negative pronouns, e.g. Polish *nikt nie przyszedł*, lit. 'nobody not came'.
11. **Intensifier-reflexive distinction**, e.g. in German *selbst* 'self' is used as an intensifier, but *sich* is the reflexive: *er wäscht sich* 'he's washing himself' vs. *er selbst* 'he himself'. English uses *(my/your/...)self* for both purposes. The intensifier/reflexive distinction is found in Germanic (except Dutch and Engilsh), Romance, Slavic and the Balkan languages, but is missing in Finno-Ugric, Celtic, Georgian and Armenian.

A further feature addressed in Haspelmath (1998: 280–281) and taken in Haspelmath (2001: 1501) to be the most distinctive candidate for a further SAE feature is:

12. **Verb fronting in polar questions**, e.g. in English with auxiliaries/modals as in *you can* : *can you?* and in most Germanic, Romance and Slavic languages for polar questions (German *sie geht* 'she's going' : *geht sie?* 'is she going?'). In Europe this construction is not used e.g. in Lithuanian, Basque and Gaelic and it is generally quite rare typologically (see Ultan 1969).

2.3 Features of the nucleus

In Haspelmath's work the nucleus seems to be characterized above and beyond the core by the following feature:

13. **Lack of pro-drop** (pronominal subjects are mandatory, even if inferable and marked by verbal inflection). Lack of pro-drop is found mainly in Germanic (German, Dutch and English) and French, though Welsh and Icelandic also exhibit it. The other Romance languages are pro-drop, as is Greek. Russian has a mixed form, in that subject pronouns are mandatory in the past tense, where verbal forms do not contain person information (*ja/ty/on napisal* 'I/you/he wrote') but also frequent in non-past forms (more details below in the discussion of this feature in Hebrew).

However the main feature of the nucleus is of course that most features are not missing. Even if many other languages are missing only a few features more, say three or four, they may not be missing the same three or four features. Therefore the nucleus is mainly remarkable for its homogeneity with respect to most features.

Geographically the picture of commonalities and more or less central languages explored so far can be summarized very clearly in a cluster map with the amount of shared features noted in each area (a map of 'isopleths', as opposed to individual isoglosses, in the terminology of van der Auwera 2011: 293). The following map from Haspelmath (2001: 1505) offers an overview with nine features (leaving out nominative experiencers, anti-causativity and comparative particles).
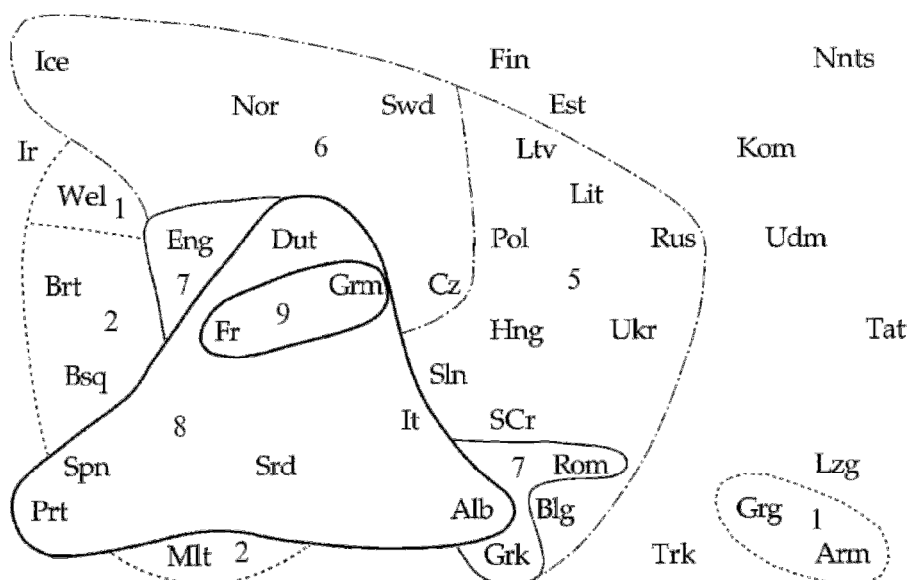
Figure 1. Map grouping the languages Europe by number of shared SAE features. (reproduced from Haspelmath 2001 with permission from the author)

Haspelmath points out especially the drop from five shared features to two or less around East Slavic to the East and towards Celtic and Basque to the West. But notwithstanding geographical proximity, which isopleth could Modern Hebrew be grouped together with in terms of common features? And where would Biblical Hebrew have stood? We now turn to these questions by surveying the Hebrew values for the SAE features.

3. The features of Modern Hebrew

With the main overview of SAE features laid out, we can now search for typical structural Europeanisms in Modern Hebrew from the European perspective, rather than just comparing Modern and Biblical Hebrew for discrepancies. We may begin with the most Pan-European features, common in all areas.

3.1 Relative clauses

Modern Hebrew relative clauses are introduced by the particle *she* (or in more formal registers *'asher*). The particle does not inflect. There is additionally an optional resumptive pronoun which can mark the grammatical role of the referent in the relative clause and can be placed at different points within it:

(10) *ra'iti   'et   ha-yeled   'etmol*   'I saw the boy yesterday'
     saw.1SG   ACC the-boy   yesterday

(11) *ha-yeled she-ra'iti   'etmol*   'the boy that I saw yesterday'
     the-boy that-saw.1SG   yesterday

(12) *ha-yeled she-ra'iti   'oto   'etmol*   'the boy that I saw yesterday'[8]
     the-boy that-saw.1SG   him   yesterday

(13) *ha-yeled she-'oto   ra'iti   'etmol*   'the boy that I saw yesterday'
     the-boy   that-him   saw.1SG   yesterday

This is not the SAE type, as the clause is introduced by an uninflected particle, not a pronoun. Resumptive pronouns are also not typical of European languages, with Romanian and, importantly, Yiddish being exceptions. Resumptive pronouns are however well known in Semitic, particularly in Biblical Hebrew and Arabic (with somewhat different distributions).[9]

3.2 Participial passive formation

Modern Hebrew, like Biblical Hebrew, can form passive participles. However, these are generally used for stative predication or attribution, and may thus be seen syntactically as adjectives. Actional passives are expressed via morphologically derived verb forms with vowel alternations, possibly combined with affixation:

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[8] An anonymous reviewer found a version of (12) without the adverb 'yesterday' ungrammatical, perhaps because of the final position or short distance to the referent. It is however not hard to find corpus examples with the resumptive following the verb, e.g. the following from the Haaretz newspaper (Feb. 15, 1991), found using hebrewCorpus at http://hebrewcorpus.nmelrc.org/:

seret mesugnan, sxaltani   ve-yefefe   she-ra'iti   'oto raq pa'am 'aħat
film   stylish   intellectual and-beautiful that-saw.1SG him only time   one
'a stylish, intellectual and beautiful film that I only saw once'

[9] Another anonymous reviewer has commented on other types of relative clauses being common in dialectal varieties of the SAE languages, and these certainly include particle-based relatives more similar to Hebrew, though unlike in Hebrew usually deriving from the pronoun 'what' (e.g. English *The man what I saw*, see Herrmann 2005, and similarly in German with *was* 'what', Yiddish *vos* 'what', Polish *co* 'what' and others). This is a valid point, but the important issue for Modern Hebrew in the SAE context is that the characteristically European and typologically distinctive type with inflecting relative pronouns has no trace in Modern Hebrew. The relativizing strategy is of the same type found in Biblical Hebrew, i.e. natively Semitic.

(14) *ha-gezer*   *mevushal*   'The carrot is cooked'
      the-carrot   cook.PTCP.PASS

(15) *ha-gezer*   *ha-mevushal*   'The cooked carrot'
      the-carrot   the-cook.PTCP.PASS

(16) *bishalti*   *'et*   *ha-gezer*   'I cooked the carrot'
      cook.PST.1SG   ACC   the-carrot

(17) *ha-gezer*   *bushal*   'The carrot was cooked (by someone)'
      the-carrot   cook.PST.3SG.PASS

This is not the European type, which predicates actional passives with a passive participle and usually also an auxiliary, but not a synthetic finite passive verb form.

3.3 Anti-causative derivation

This category is particularly difficult to evaluate, since Hebrew verbs are generally derived via a root and pattern system involving not only affixation but also vowel mutation (see Amir-Coffin and Bolozky 2005: 56–124). The main patterns (called 'binyanim') using the example root q.ṭ.l 'slay' are active: *qaṭal*, *qiṭṭel* (transitive/intensive), *hiqṭil* (causative); corresponding passives: *niqṭal*, *quṭṭal*, *huqṭal*; and the reflexive pattern *hitqaṭṭel*. The forms with two middle *ṭṭ* represent patterns that involved gemination in Biblical Hebrew, which leaves only some morphophonological traces in Modern Hebrew, but not a geminate pronunciation. The senses of the patterns for any given root are not entirely predictable (cf. Schwarzwald 2001: 33 and references there).

   In trying to order the patterns in a hierarchy of derivedness for the present purpose, I propose the following order: *qaṭal* is the simplest pattern, as it has a simple morphological form (only the same vowel twice, no trace of 'gemination' and no affixes) and houses some of the most basic intransitive verbs (e.g. verbs of motion). The pattern *qiṭṭel* adds the morphological complication of 'gemination' (meaning only a different morphophonological behavior, not phonetic gemination at present) and is usually transitive, and causative *hiqṭil* is more complex in adding an affix as well as an additional argument. The passive patterns are seen as more complex than their active counterparts, in addition to having the same features (*niqṭal* also adds an affix). Finally the reflexive *hitqaṭṭel* has an affix (partially realized as an infix with some roots) and 'gemination', so it is more morphologically complex than the active and passive patterns (since none have both affixation and gemination), and has no passive counterpart. I therefore order it last. It could arguably be sorted between the active patterns and the passive patterns, too, but since there is no alternation between it and any one of the passive patterns in the relevant data, this would play no role in causative/anti-causative derivation: the important decision is the order *qaṭal* (unmarked) < 'gemination' < affixation < both.

        Using the same sample of 31 basic verbs used by Haspelmath (1993) and the hierarchy suggested here, we get the following results for Modern Hebrew:[10]

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[10] Haspelmath's survey contains some summary information for Hebrew, but since the data is not detailed and there is no description of the complexity hierarchy, I have decided to replicate the study, with very similar results (see below).

Table 1. Causative and anti-causative derivation patterns in Modern Hebrew.

pattern (inch.-caus.)	pairs	direction	example[11]
hitqaṭṭel-qiṭṭel	10	anti-causative	*hityabesh : yibesh* 'dry'
niqṭal-qaṭal	9	anti-causative	*niftaħ : pataħ* 'open'
niqṭal-qiṭṭel	1	anti-causative	*ne'ebad : 'ibed* 'get lost/lose'
niqṭal-hiqṭil	1	anti-causative	*nifsak : hifsik* 'stop'
hitqaṭṭel-hiqṭil	1	anti-causative	*hit'orer : he'ir* 'wake up'
qaṭal-hiqṭil	6	causative	*rataħ : hirtiaħ* 'boil'
qaṭal-qiṭṭel	2	causative	*lamad : limed* 'learn/teach'
hiqṭil-hiqṭil	1	NA	*hitħil : hitħil* 'begin'
Total	31		

Table 2. Totals for causative and anti-causative derivation directions.

direction	pairs
anti-causative	22
causative	8
none	1

Though in a few cases another verb or pattern may also be possible (the selection here represents the author's attempt to choose introspectively the most unmarked option for each sense), the results clearly show that, at least based on the hierarchy suggested here, Hebrew belongs to the anti-causative type, which is also the SAE type. Haspelmath (1993: 101) reaches almost the same result for Hebrew, with 20.5 anti-causative pairs, 7.5 causative ones and 3 in other patterns (the half marks presumably correspond to a case with two options). His results for Slavic (Russian, 23 anti-causative to 0 causative pairs) and Germanic (German, 14.5 to 0) suggest that Modern Hebrew fits nicely in the middle of the European languages that the revivalist generation was most in contact with. For Yiddish (using Weinreich 1977) I have found 23 anti-causative pairs (almost all using reflexivization with *zix* 'oneself') versus just two causatives and six in other patterns. After seeing that Modern Hebrew conforms with SAE in this feature, it is interesting to ask whether this is actually the result of language contact or European substrates in the revivalists' language. This requires a comparison with Biblical Hebrew.

For the situation in the language of the Bible it is difficult to be certain, since no native speakers are available to confirm the most ordinary way of expressing some of the required meanings. For the most part, pairs attested in Modern Hebrew are also attested in the Biblical language, though some alternative patterns are clearly more frequent than the modern forms for specific meanings. For example we find an additional causative derivation for inchoatives in *qaṭal* next to causatives in *qiṭṭel*: unmarked inchoative *ħabar* 'connect, join' next to causative *ħibber*, instead of *hitħabber*, though all three verbs are possible in both languages with some differences in meaning. A numerical summary is not possible with all 31 verbs since some meanings are difficult to map (I am uncertain which Biblical verb best corresponds to 'develop' or 'rock' in Haspelmath's survey), but from the remaining 29 cases where Modern and Biblical pairs run parallel we receive a ratio of 20 anti-causative pairs to 8 causative ones (and one in a different pattern). It therefore appears uncontroversial that Biblical Hebrew was predominantly anti-causative as well, making anti-

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[11] Morpho-phonological processes lead some examples to appear different from the associated pattern, but the form is predictable for a given root.

causativity no innovation of Modern Hebrew (even if a different vowel pattern was the unmarked one in a few cases).

3.4 Comparison marker

The compared noun is marked in Hebrew using a locational preposition *me-/mi-* 'from' (similar to Italian *di* 'of, from'), and not a particle (e.g. *than*), which is the SAE type:

(18) *Yo'av   yoter gadol   mi-Dani*   'Yoav is bigger than Dani'
     Yoav   more big   from-Dani

This is also the Biblical Hebrew strategy (though the optional *yoter* 'more' is much less common there; its omission connotes a high register in Modern Hebrew). Modern Hebrew therefore does not conform to SAE in this feature.

3.5 Equative construction

Modern Hebrew uses a preposition before the equated noun, either *ke-* 'like' or *kmo* 'id.' (the form *ke* connotes a higher register):

(19) *Dani   gadol   (kmo   'anaq / ke-'anaq)*
     Dani   big   like   giant / like-giant
     'Dani is as big as a giant'

This is also the Biblical strategy:

(20) *tiḇ'ar*   *kmô   'esh   ħᵃmâṯ-êḵâ*
     burn.IMPRF.3SG.F   like   fire   rage-your.2SG.M
     'your rage will burn like fire' (Psalms 89:37)

A relative equative clause requires the relative subordinator *she* 'that' in Modern Hebrew:

(21) *Dani   hitnaheg kmo she-Moshe   hitnaheg*
     Dani   behaved like   that-Moshe   behaved
     'Dani behaved like Moshe behaved'

The construction is not attested in the Bible, but already in the Mishnah, no later than the 2nd century CE:

(22) *hᵃrei*   *'elu   kmô shê-hâyû*
     after-all   these   like   that-be.PRF.3PL
     'After all, these are as they were' (Nega'im 8:7)

Modern Hebrew thus does not follow SAE behavior in this respect, and in any case the construction is not a modern innovation but comparable with Mishnaic and even Biblical Hebrew.

3.6 Article system

Modern Hebrew, much like Biblical Hebrew and Arabic, has an opposition (zero) : definite article. The definite article, *ha-*, does not inflect for number or gender and is repeated in agreement with every adjective attribute, just as in Biblical Hebrew and Arabic:

(23) *yeled*   '(a) boy'
      boy

(24) *ha-yeled*   'the boy'
      the-boy

(25) *ha-yeled ha-gadol*   'the big boy'
      the-boy the-big

This does not fit the SAE type (*a/the*), matching instead the atypical case found e.g. in Icelandic (see Dryer 2011c), notwithstanding the article repetition with adjectives.

3.7 'Have' perfect

Hebrew does not have a verb of possession, but uses a special non-verbal predicate *yesh* 'there is, exists' together with a prepositional possessor, similarly to Russian:

(26) *yesh   le-Dani sefer*   'Dani has a book'
      exists to-Dani book

Though of Biblical origin, the modern construction exhibits a peculiarity in colloquial use (viewed as substandard by purists), taking an accusative object instead of a nominative subject (see Amir-Coffin and Bolozky 2005: 327). This is marked in definite objects by the preposition *'et*, likely a result of influence from European languages:

(27) *yesh   le-Dani 'et   ha-sefer*   'Dani has the book'
      exists to-Dani ACC   the-book

However, this pattern does not form any temporal or aspectual construction (i.e. the equivalent of 'Dani has the book read' is not a periphrastic tense in Hebrew). The Hebrew past tense is formed synthetically as part of the verbal inflection system, without auxiliaries, and does not correspond to the SAE 'have' perfect.

3.8 Nominative experiencers

Haspelmath (2001) bases his classification of SAE as preferring nominative experiencers on a study by Bossong (1998), which compares a variety of languages by assigning a single score between 0 and 5, ranging from predominant nominativity (0, assigned e.g. to English) and predominant obliqueness or 'inversion' (5, assigned e.g. to the Caucasian language Lezgian). Bossong assigns the scores based on a sample of constructions used to express the meanings in the first column of Table 3. Every possible construction is given a maximum of 5 points, with 1 point deductions if they deviate from the archtype of the nominative or oblique construction: a deduction for

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prepositional object rather than (case marked) direct or oblique objects, another for non-verbal or indirect realization (adjective predicate, periphrastic strategy), another for reflexive verbs, etc. If multiple options exist for a single type, the average score is taken. Finally, the ratio of the total oblique score to the total nominative score is used as the overall score for the language. The procedure used by Bossong is reproduced for Modern Hebrew in Table 3 with literal translations for each construction.

Table 3. Modern Hebrew scores for experiencer constructions according to Bossong's (1998) method.

meaning	oblique		nominative	
'I'm cold'	*kar li* 'cold to me'	3	—	0
'I'm hungry'	—	0	*'ani ra'ev* 'I hungry'	4
'I'm thirsty'	—	0	*'ani tsame* 'I thirsty'	4
'I have a headache'	*ko'ev li ha-rosh* 'hurts to me the head'/ *yesh li ke'ev rosh* 'exists to me headache'	3.5	—	0
'I'm happy'	—	0	*'ani sameax* 'I happy'	4
'I'm sorry'	*tsar li* 'narrow to me'	4	*'ani mitsta'er* 'I sorrow myself'	4
'I like X'	*X motse ħen be'einai* 'X finds grace in my eyes'	4	—	0
'I remember X'	*zaxur li* 'remembered to me'	4	*'ani zoxer ('et) X* 'I remember X'	5
'I forget X'	—	0	*'ani shoxeaħ ('et) X* 'I forget X'	5
'I see X'	—	0	*'ani ro'e ('et) X* 'I see X'	5
Totals		18.5		31
			Final score	0.597

Most meanings show a clear choice between nominative and oblique experiencer, though both possibilities exist e.g. for 'I'm sorry' and 'I remember'. In the latter two cases the oblique variant is less colloquial and belongs to a higher register.[12] The sense 'have a headache' has two competing constructions, both oblique, with 'hurts to me the head' receiving 4 points (deduction for the preposition 'to') and 'is/exists to me headache' receiving 3 points (deductions for 'to' and periphrasis or non-verbal realization of 'hurt') for an average 3.5 points. In total, the nominative strategy prevails (attested in 7 vs. 5 meanings), and receives substantially more points (31 vs. 18.5) for a ratio of 0.597. Haspelmath (2001) puts the SAE type at scores between 0 and 0.8, placing Modern Hebrew well within the range (most similar to Dutch with 0.64, but much more oblique than English with 0 and somewhat less than German at 0.74).

At the same time it is worth mentioning that this linguistic type is not new in Modern Hebrew. The same procedure applied to Biblical Hebrew produces a score of 0.454, i.e. even more 'nominative centric'. Key differences with Modern Hebrew are the use of verbs rather than adjectives for 'be hungry/thirsty' (earning 5 points each instead of 4) and use of a possessive + verb for pain, yielding a score of 4 ('his head hurt' is not attested in the Bible, but 'his flesh hurt' etc. is). Modern Hebrew is thus just a little more oblique than Biblical Hebrew according Bossong's method, i.e. it is (negligibly) moving away from the SAE type if at all. Similarly, Bossong's (1998: 284) own measurements for Arabic give a score of 0.56, squarely within the SAE type

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[12] Another common colloquial option for apologizing, *sliħa* 'forgiveness' corresponds to neither strategy and was left out of consideration.

(between Dutch at 0.64 and Italian at 0.48), though Arabic is not generally labeled as belonging to the European type.

3.9 External possessors

This point, which is also related to obliqueness, is one of the few cases among the features discussed in this paper, in which Modern Hebrew differs substantially from Biblical Hebrew. External dative possessors, which are not unusual in the spoken language, are realized using prepositional phrases with *le-* 'to' (the preposition is the only possible 'dative marking' since directly case marking nouns is not an available strategy). Thus we get the typical examples with inalienable body parts discussed for SAE, but also quite productive extensions such as (29).

(28) *nishbera*   *l-i* *ha-yad*   'I broke my arm'
   break.PST.3SG.F to-me the-arm

(29) *daraxti* *l-o* *'al* *ha-me'il* 'I stepped on his coat'
   step.PST.1SG to-him on the-coat

Equivalent external possessives in European languages are readily available:

(30) German: *Ich* *habe mir*   *den* *Arm* *gebrochen* 'I broke my arm'
      I have me.DAT the arm broken

(31) Polish: *Nadepnąłeś*   *mi*   *na płaszcz* 'You've stepped on my coat'
      step.PFV.PST.2SG.M me.DAT on coat

Biblical Hebrew, by contrast, did not have dative external possessors, much like the other Semitic languages (cf. Haspelmath 1999: 119). This change, doubtless under European influence, is paralleled in Maltese, which unlike Standard Arabic also exhibits the external dative possessor (cf. Nikolaeva 2002: 281; Sadler and Camilleri 2012). In this feature Modern Hebrew, much like Maltese, thus clusters with the SAE type and not with Semitic.

3.10 Negative pronouns

Modern Hebrew does not rely on negative pronouns alone to express 'nothing', 'no one' etc., but uses a negative concord (cf. Giannakidou 2000) or double negative strategy (see Rosén 1977: 227–229 and Tonciulescu 2007 for an overview of the facts):

(32) *'af 'eħad lo ba*   'nobody came'
   not one no come.PST.3SG.M

(33) *lo ra'iti*   *klum*   'I didn't see anything'
   no see.PST.1SG nothing

Both examples contain the usual sentential negation *lo* despite the presence of a negative or negated pronoun. In this respect Modern Hebrew deviates from the

prevalent SAE strategy.[13] It agrees instead with the less typical Slavic pattern found e.g. in Polish or Russian:

(34) Polish: *nikt   nie   przyszedł*   'nobody came'
              nobody not   come.PFV.PST.3SG.M

Interestingly, Biblical Hebrew was actually a negative polarity language with NPIs (see Keren 2011) and therefore did belong to the SAE type. Negative concord in Modern Hebrew may therefore be seen as a move away from SAE, quite possibly under Slavic and Yiddish influence (see Rosén 1977: 227–229).[14] It should however be noted that modern varieties of Arabic also exhibit negative concord whereas Standard Arabic does not (e.g. Egyptian, Palestinian and Levantine to different degrees, see Haspelmath 2011; Hoyt 2006, 2010; Lucas 2009). Modern Hebrew is therefore by no means exceptional among the Semitic languages with regard to this type of change.

3.11   Intensifier-reflexive distinction

Modern Hebrew does not distinguish intensifiers from reflexives in the relevant contexts, though it is possible to add the preposition *be-* 'in' to the intensifier, and the reflexive naturally takes the object marker *'et* in object position. The lexeme used for both purposes is derived from *'etsem*, originally 'bone' and also by extension 'object'. A possessed form is used as a reflexive/intensifier, e.g. *'atsmo* 'himself', literally 'his bone' (this will become relevant below for Biblical Hebrew).

(35) *Uri   ra'a   'et   'atsm-o*   'Uri saw himself'
     Uri   saw   ACC self-his

(36) *Uri   'atsm-o ra'a   'et   Dani*   'Uri himself saw Dani'
     Uri   self-his saw   ACC Dani

The presence of *'et* in the reflexive object construction is predictable in context, since *'et* is combined with all definite accusatives as an object marker (as in (36)), and it alternates with other prepositions for appropriate PP objects (*le-'atsmo* 'to himself' etc.). The presence of *'et* should therefore not be seen as forming an intensifier/reflexive distinction. Hebrew thus agrees with the English pattern, but not with the SAE pattern found in German (*sich* : *selbst*) or French (*se* : *même*).[15]

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[13] An anonymous reviewer has mentioned variation within each European language in non-standard use as a difficulty in establishing the SAE type, for example in French where the written negation *ne* is hardly ever used in spoken language. This problem goes beyond the bounds of this article and must be deferred to the literature focused on SAE itself. In Haspelmath's (2001: 1498) work, French has been included in the SAE type, i.e. *ne* is ignored. But even without French, the main type recurring at least in the standard varieties is the predominantly NPI type.

[14] Yiddish may itself have been influenced by Slavic in this respect, since Standard German is not a negative concord language, see van der Auwera and Gybels (to appear). However some German dialects, e.g. Bavarian, do exhibit negative concord that is not attributed to Slavic influence, so an independent development is not out of the question.

[15] The same word can also be combined with the preposition *be-* 'in', as in *Dani be-'atsmo* to mean 'Dani by himself', lit. 'Dani in himself'. In colloquial usage this is sometimes used interchangeably with *'atsmo* as an intensifier ('Dani by himself did this' > 'Dani himself did this'), so that a distinction could be claimed in registers that accept this usage. However even in such cases, the possible distinction is hardly similar to the SAE type, which uses different lexemes and never allows the same form in both contexts, which Modern Hebrew certainly does. This analysis is also supported by König

It is difficult to say whether Biblical Hebrew made an intensifier/reflexive distinction, since the language generally seems to have avoided reflexive objects by using morphologically reflexive verbs (Joüon and Muraoka 2006: 158-159). Some reflexive cases may be found with the possessed form of the noun *nefesh* 'soul', and in later ancient texts with the above *'etsem* as well (see (38) below), but a literal reading is usually possible:

(37) *nusû   mi-ttox   Babel   u-malləṭû   'îsh   napsh-ô*
     flee.IMP.PL from-in Babylon and-save.IMP.PL man   soul/self-his
     'Flee from Babylon and let each man save his soul/himself' (Jer 51:6)

An item corresponding to *nefesh* 'soul' is also found in Standard Arabic in both functions (*nafs*, see König et al. 2011), meaning identity is not unusual as a Semitic strategy. Both uses of the modern *'etsem* are found already in Mishnaic and Talmudic Hebrew (redacted as late as the 3rd Century CE but reflecting older traditions), so that the modern situation cannot be considered an innovation in any event:

(38) *'âḏâm qârôḇ 'eṣêl 'aṣm-ô*
     man close   at self-his
     'every man is close to himself' (Sanhedrin 9:72)

(39) *mirpêsêt 'aṣm-â   yeš   l-âh   'arba' 'ammôṯ*
     terrace   self-her exists to-her   four   cubits
     'the terrace itself has four cubits' (Tosefta Baba Metzia 11:8)

3.12   Verb fronting in polar questions

Modern Hebrew does not front verbs in questions, but uses intonation and optionally an initial interrogative particle (in formal registers), similarly to Polish:

(40) *(ha'im) hi   yoda'at 'et   ze?*   'does she know this?'
     Q   she   knows   ACC   this?

(41) Polish: *(czy) wie   to?*   'does she/he know this?'
             Q   knows   this?

This is again not the SAE strategy. Biblical Hebrew, though primarily a VSO language in any case, did not require an initial verb in polar questions in particular, and particle strategies were also available there. Non VSO sentences are rare, as are polar questions, but it is possible to find non-VSO polar questions, e.g. below also illustrating marking with an interrogative particle (Q in the gloss below):

(42) *ha-'attâ   tiḇnê   l-î   bayiṯ?*
     Q-you   build.IMPRF.2SG.M to-me   house?
     'Will YOU build a house for me?' (2 Samuel 7:5)

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et al. (2011), who classify Modern Hebrew as an identical reflexive-intensifier language, referring back to the description in Glinert (1989: 67–68), who also cites forms with and without *be-*.

3.13 Lack of pro-drop

Modern Hebrew, unlike Biblical Hebrew, is not a complete pro-drop language. This is doubtless connected to the use of the post-Biblical predicative participle as a present tense: *holex* originally 'goer' > Modern Hebrew 'goes'. Since participles only mark number and gender, but not person, a personal pronoun is effectively mandatory in the present tense (43), similarly to the Russian past tense system. Exceptions are found in impersonal statements as in (44), as well as in some forms of generic statements.

(43) *(Hu)* *holex* *le-seret*   'He's going to a film'
        he   goes   to-film

(44) *(*Hem)* *'omrim* *she-hu* *holex*   'They say he's going'
        they   say   that-he goes

In the latter example, the word 'they' should not be construed to refer to a previously identified entity: this is the normal way of saying 'someone says he's going' or 'apparently he's going', and the presence of a pronoun disrupts this reading. The same forms can be used in generic or gnomic statements of the sort 'one wears a coat in winter' (again with a plural verb and ruled out subject pronoun).[16]

However outside of the present tense, Modern Hebrew allows pro-drop, which is unmarked in the first and second persons at least in the past tense,[17] and rather marked or literary in the third person.

(45) *('Ani)* *halaxti* *le-seret*   'I went to a film'
        I   went   to-film

(46) *#(hu)* *halax* *le-seret*   'He went to a film'
        he   went   to-film

The last example is more acceptable as an answer to a question or in a sequence of events about the same person, in the latter case more often in literary registers.

Notwithstanding some differences to a complete pro-drop language such as Italian, Modern Hebrew does not comply with the strict lack-of-pro-drop type of SAE either. Pro-drop is very much the normal pattern for the interlocutive first or second persons in the past tense and a possible alternative in the future, unlike in the SAE non-pro-drop languages such as English, German or French.

4. Does Modern Hebrew belong to the SAE type?

4.1 Overview of main results

The table below gives an overview of the agreement between Hebrew and SAE in the individual features discussed in Section 3, as well as feature values for comparison for Biblical Hebrew and Standard Arabic, two Semitic languages not generally considered to be European in any way. In addition, some values for Slavic are suggested for comparison based on Polish and Russian, since these are the two Slavic languages which have exerted the greatest influence on Modern Hebrew, and German and Yiddish are tabulated together, with two values where the languages differ. As an

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[16] I thank an anonymous reviewer for pointing this out.

[17] For the future tense in colloquial speech there is a strong preference to use pronouns even in given, topical subject contexts despite unambiguous inflectional person marking on the verb (see Ariel 2000; I thank another anonymous reviewer for commenting on this point). However pro-drop is nevertheless licensed in a way that European languages such as English or French do not endorse, especially in the first and second persons and more often in formal language (cf. the corpus example in footnote 8).

exposition of these features in every language goes beyond the scope of this article, the reader is referred to relevant reference grammars for most features, and particularly to Haspelmath (1993, 1998) and Bossong (1998) for anticausative prominence and nominative experiencers.

Table 4. Overview of SAE feature compliance in Modern and Biblical Hebrew, Standard Arabic, Slavic (based on Polish and Russian) as well as German (and Yiddish behind the slash where distinct)

feature	SAE	Modern Hebrew	Biblical Hebrew	Standard Arabic	German/ Yiddish	Slavic (Russian/Polish)
Relatives	infl. pro	particle	particle	infl. pro[18]	infl. pro/ particle	infl. pro
Participial passive	stative + actional	stative only	stative only	stative only	stative + actional	stative + actional
Anti-causative	yes	yes	yes	yes	yes	yes
Comparison	particle	preposition	preposition	preposition	particle[19]	particle
Equative	comple-mentizer	preposition	preposition	noun-based	comple-mentizer	comple-mentizer
Articles	def:indef	def:zero	def:zero	def:zero	def:indef	none
Have perfect	yes	no	no	no	yes	no
Nominative experiencers	yes	yes	yes	yes	yes	yes
External possessor	yes	yes	no	no	yes	yes
Neg. concord	no	yes	no	no[20]	no/yes	yes
Intensifier/refl	different	same	same[21]	same	different	different
Interr. V fronting	yes	no	no	no	yes	no
Lack of pro-drop	yes	no (except present)	no	no	yes	no[22]
total SAE features	13/13	3/13	3/13	4/13	13/13 / 11/13	8/13

As the table shows, of the 13 key typological features reviewed in this article, Modern Hebrew agrees in only three features, putting it on a par e.g. with Georgian, a language on the very margin of the SAE group. On Haspelmath's map in Figure 1, which disregarded anti-causativity, nominative experiencers and comparison strategies, Modern Hebrew would be lumped together with Welsh, Georgian and Armenian, the three least SAE typical languages sharing any of the map's features. Conversely, the comparison with Biblical Hebrew reveals that Biblical Hebrew had

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[18] The pronoun inflects for gender and number only in Arabic, not for case, and resumptive pronouns are also available. In modern spoken varieties, the relative pronoun no longer inflects. For further details on features for Standard Arabic, the interested reader is referred to Ryding (2005).

[19] In Yiddish, comparison is also possible with a preposition, e.g. with *fun* 'from' or a conjunction like *vi* 'as' (cf. Jacobs 2005: 183).

[20] However some spoken varieties exhibit negative concord, see Section 3.10 above.

[21] At least in Mishnaic/Talmudic Hebrew; the situation in the language of the Bible is not entirely clear, see Section 3.11 above.

[22] Russian has been classified as non-pro-drop (Dryer 2011b), though the restriction is only binding in the past tense. In non-past tense pronouns are often realized, but leaving them out is not ungrammatical as it is in English, German or French (see Franks 1995: 287–323 for details on Russian as non-pro drop in comparison to other Slavic languages). Taken together with Polish a feature assignment of pro-drop seems more appropriate than non-pro-drop, if we are forced to choose one or the other. For the remaining Slavic features see Timberlake (2004) for Russian and Swan (2002) for Polish.

exactly as many SAE features as the modern language (though not the same ones: European external dative possessors offset the switch from negative polarity to a negative concord language). Arabic, by contrast, has even more SAE features than Modern Hebrew (four instead of three). Slavic is somewhat closer to SAE with 8/13 features, whereas German scores a perfect 13 and Yiddish, perhaps the most important 'substrate' language of the revival movement (cf. Zuckermann 2006) gets 11/13 on account of negative concord and indeclinable relatives,[23] very close to SAE and quite far from Modern Hebrew. The high score for Yiddish is also important against claims that revivalists, who often came from Eastern Europe, did not come from the heart of the SAE area anyway. In fact, their native Yiddish would have been substantially more typically European than surrounding languages like Polish or Russian.

Another intuitive way of visualizing the data in Table 4 is to treat the feature values of each language as a sequence of numbers, turning each language into a vector. This allows us to measure the relative distances between all language pairs based on shared features and apply standard clustering procedures. The clustering algorithm can then recursively group the languages with the nearest feature vectors into sister branches in a tree (for more information see Gries 2009: 306–319). Figure 2 provides the result of such a cluster analysis (based on Euclidean distance between vectors using the complete linkage method; dendron length is proportional to the distance between languages).[24]
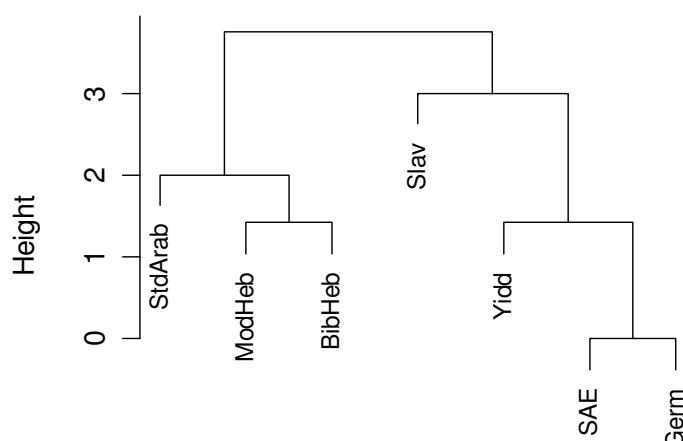

Figure 2. Cluster dendrogram for SAE, Slavic, Standard Arabic and Modern and Biblical Hebrew. Vertical distances in the tree are proportional to differences between the feature vectors representing each language.

The dendrogram clearly shows that Modern and Biblical Hebrew are maximally different from SAE (separated by the most junctions), and closest to each other in

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[23] Yiddish actually has declinable pronouns in *velx-* 'which' (cf. German *welch-*) and indeclinable *vos* 'what' (German *was*), but the latter is the unmarked relativizing strategy in most environments, cf. Jacobs (2005: 234-238).

[24] Most of the features are binary, allowing for a simple numeric representation. For the other features, a numeric order of values was interpreted. For the article feature the number of articles was taken: 0 articles (Slavic) < 1 article (Semitic) < 2 articles (SAE). For equative constructions the hierarchy complementizer < preposition < nominal was selected; this decision may be contested, though it is based on the idea that prepositions are more often historically connected to nouns and are generally closer to adnominal syntax than conjunctions. As an alternative, binarizing the feature into two dummy decisions ('is a complementizer': yes/no; 'is a preposition': yes/no) does not alter the tree substantially.

terms of the features explored in this article (the first junction separates Semitic from the European languages), all of which come from literature on SAE – not on Hebrew. The Semitic languages in general cluster tightly together using these features and are considerably farther away from SAE than Slavic and Yiddish. Though Slavic is more similar to Modern Hebrew than SAE is, Standard Arabic remains surprisingly in the middle between Hebrew and Slavic. This means that taking the typological criteria above as decisive for belonging to the SAE type, Standard Arabic (and likewise Classical Arabic, which shares the same features) is more European than Modern Hebrew is. Classical Arabic, and even more so Biblical Hebrew, predates the rise of the SAE language type, making it clear that this level of similarity in typological features can be coincidental.

But if this is so, why has the idea that Modern Hebrew belongs to the European type persisted for so long? Are the claims about the Europeanism of Hebrew completely unfounded? Here I would like to suggest that some features that are not particularly pertinent to the SAE type have clouded the discussion. In particular I would like to concentrate on the two most frequently mentioned European properties of Modern Hebrew: its phonology and basic word order.

4.2 Other arguments for a European classification of Modern Hebrew

4.2.1 Phonology

There is no question that Modern Hebrew has a very different phonology from Biblical Hebrew. In the predominant Ashkenazi pronunciation, all pharyngeal emphatics have been replaced by non-pharyngeal counterparts, specifically /ħ/ > [x], /ʕ/ > [ʔ] or zero, leaving behind only some morphophonological influences as reflexes (primarily the quality of adjacent vowels). Other emphatic consonants were lost already in medieval times, e.g. /q/ > [k], as well as some other sounds that have been postulated for older language stages for which the Biblical script gives no clear evidence (e.g. /ɣ/ and other phonemes for which there is some evidence in foreign transcriptions of proper names; see Morag 1959 and Rendsburg 1997 for details).

In the vowel system, Biblical Hebrew had some 10 vowel phonemes, including vowel length and openness oppositions, all of which were reduced already in medieval times to several systems of 5–6 vowels. The most common system of 5 vowels (/a/,/e/,/i/,/o/,/u/) is the system found in all standard varieties of Modern Hebrew (diphthongs notwithstanding, see Blanc 1964). Additionally, Biblical Hebrew had very limited tolerance for consonant clusters, with almost all syllables adhering to the scheme CV(C) (in some environments also CVCC, see Krause 2008: 46–53); Modern Hebrew allows syllables of the type (C)(C)(C)V(C)(C)(C), common in several European languages (e.g. German, Polish). However Modern Hebrew syllables also exhibit some distinctly non-European features, such as the possibility of following voiced consonants by unvoiced ones in the onset. This creates syllables of the form GCV, where G is voiced and C is not, which are impossible for German or Polish, e.g. in the minimal pair *gsharim* [gʃaˈʁim] 'bridges' vs. *ksharim* [kʃaˈʁim] 'knots, connections'. In Biblical Hebrew, such initial clusters were broken up by the schwa mobile.

Seen from the perspective of Biblical phonology, Modern Hebrew is a very drastically different language, and from a Semitic perspective, especially the lack of emphatic consonants is unusual (though see Rosén 1977: 26 for the view that there is no one clear cut Semitic phonology, and that phonology is secondary for the classification problem, a view reiterated more recently in Hever and Adiel 2009). On

this count it should however be noted that Hebrew is by no means unique, as Neo-Aramaic varieties, genetically the closest languages to Hebrew still spoken, have also lost the same distinctions (Goldenberg 1994: 156). There is little question that the nature of the phonology in Modern Hebrew has been influenced by European languages (perhaps most obviously in the presence of the uvular [ʁ]), but ultimately the question is whether these features should be classified *typologically* as being European. On the subject of SAE phonology, Haspelmath (2001: 1493), tentatively cites large vowel systems and consonant clusters as frequent in Europe. The former criterion is not prominent in Modern Hebrew (on the contrary, Biblical Hebrew has a much larger inventory) and the latter, though in evidence in Modern Hebrew, is not particularly uncommon in the world. In fact, Haspelmath (ibid.) sees European languages in both these domains as "*not average, but* […] *by no means extreme either*", meaning that a European classification of Modern Hebrew based on these facts would be rather weak.

4.2.2 Basic word order

A further prominent change cited very often is the transition from dominant VSO to SVO word order. Although all word orders occur with some frequency in both Biblical and Modern Hebrew, there is no question that the basic word order behavior of the two languages is distinct. Although unmarked SVO is already attested in Mishnaic Hebrew, the dominance of SVO developing in Medieval, non-native speaker Hebrew is thought to have taken place under influence from European languages (cf. Schwarzwald 2011: 531; it is therefore not a recent innovation of the revival movement). At the same time, here too Modern Hebrew is not alone: many Arabic dialects prefer SVO as the unmarked word order, and even in standard texts, the proportion of SVO is on the rise in the modern language (see Agius 1991). This in itself has not led researchers to classify modern varieties of Arabic as European, even if an influence from European languages can be suspected.

But more importantly, we should ask whether SVO is really all that typical of European languages, and if it is, how distinctive is it? As Haspelmath (2011: 1504) notes, SVO is the most common word order in Europe, and stands out nicely against the borders of the SAE area, delimited by Celtic VSO on the West and the SOV of the Uralic languages on the East. However several SAE languages are not SVO languages, most prominently at the core the V2 languages German and Dutch (often seen as SOV in transformational accounts). And at the same time, Haspelmath acknowledges the non-distinctive nature of the SVO feature. According to Dryer (2011a), SVO is the second most prevalent word order in the world, based on a sample of 1,377 languages. With 488 cases, it comes a close second to SOV, which has 565 languages in the sample. Modern Hebrew SVO is likely influenced by European, but SVO is also found in the vast majority of the languages of Africa, and very many languages in East Asia. As evidence for a classification of Modern Hebrew as part of the SAE type it is thus circumstantial at best.

4.3 Some implicational considerations for borrowed and rejected features

Even though the majority of SAE features is absent from Modern Hebrew, we have seen that the interpretation of European features in the language is not uniform: external possession is likely a borrowing from European, while predominant nominative experiencers need not be historically related to European influence. At the same time, a change compared to Biblical Hebrew such as the switch to negative concord is not SAE, but likely motivated by Yiddish and/or Slavic languages. With

the information about the feature distribution at hand, it is worth considering why these particular changes have been adopted in Modern Hebrew, while others have not. Is there a relationship between some of the adopted and rejected features?

Among the most obvious implicational connections is probably the coincidence of verb fronting in polar questions and the lack of pro-drop. These features are core SAE features, not found everywhere in Europe. Crucially, they are both characteristic of the same Germanic languages and French, and not often found elsewhere in Europe. Intuitively, the two features fit well together since without an obligatory subject pronoun, verb fronting can only be recognized when the subject is nominal or if a focalized pronoun is expressed especially. Thus failure to adopt one of these features may well have prevented the adoption of the other.

Two features that may be surprising to find together are external possessors and a dispreference for oblique experiencers, since both types of phrases link a kind of experiencer to an oblique case.[25] Indeed, in English, where external possessors are almost completely ruled out, we also get the most extreme score of 0 in Bossong's treatment, favoring nominative experiencers (cf. Section 3.8). However in the European languages that do allow some measure of oblique experiencers, dative possessors are, perhaps surprisingly, also found. Modern Hebrew follows exactly this pattern as well, so that it seems possible that the existence of oblique experiencers (already found in Biblical Hebrew) 'opens the door' for the feature of dative possessors (though the Hebrew construction deviates in some places in its semantic possibilities from those of some other European languages, cf. Landau 1999 and Hole 2005).

Finally it is worth mentioning that while the SAE core languages have increasingly moved towards periphrastic strategies, Hebrew remains by and large a strongly synthetic language (which is unsurprising, as the establishment of consistent Biblical morphology played a central role in the program of the revivalists). This fundamental contrast may explain the rejection of a periphrastic perfect (even though Hebrew does not use a 'have' verb for possession, a possession based perfect is not unimaginable in the language using the verboid *yesh* 'there is, exists', cf. Section 3.7). Similarly, the formation of a periphrastic passive did not come about (though again imaginable even using Semitic lexemes). Anti-causatives, though prevalent when using the ranking hierarchy of transfixation patterns ('binyanim') suggested in Section 3.3, are not formed in the analytic way found in core SAE languages (usually with a reflexive pronoun), but by synthetic means. The rejection of these features may therefore be seen as a 'conspiracy' against analytic forms, despite the fact that other analytic forms are found in the language (e.g. progressive forms with participles since Mishnaic Hebrew, and the novel Modern external possession). If the above correspondences between features are not coincidental, it seems possible that assimilation and rejection of European constructions may not be a case-by-case phenomenon, but, at least for some feature bundles, the expression of more general trends

5. Conclusion and outlook

The additional European features of Modern Hebrew in Section 4.2 (phonological similarities and SVO word order), though quite likely historically influenced by European languages, have not generally been used as part of the bundle of properties characterizing SAE. If we accept them as marginal on account of their low distinctiveness, we are left with very few truly striking synchronic typological

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[25] I thank Daniel Hole for pointing out and commenting on this issue.

properties of Modern Hebrew that seem European. Perhaps most striking is the appearance of external 'dative' possession (actually prepositional), a result of syntactic borrowing that can be attributed to multiple European languages. The other two shared properties, predominant anti-causativity and a preference for nominative experiencers, are less striking, and as we have seen, the values for these features remain unchanged from Biblical Hebrew, so that no European influence needs to be assumed to account for them. Finally some features due to influence from European languages have happened to take Modern Hebrew away from the SAE type, such as negative concord under the influence of Yiddish and/or Slavic. At the same time we should note that congruence with Slavic is not apparent in the large majority of features either, so that Wexler's (1990) classification of Hebrew as a Slavic language on account of shared semantics or 're-lexification' is not corroborated, at least not on the typological level.

These results indicate that a typological classification of Modern Hebrew as a European language should be rejected. I would like to suggest that the classification problem largely stems from differing points of view. For Hebrew philologers, and specifically prescriptivists preoccupied with language purity, but also for reactionaries emphasizing such impurities, any deviation from Biblical grammar is of paramount importance: if there is a Biblical way of saying something and it is rejected in favor of a (historically usually European) loan translation, then it is a sign of the European nature of Modern Hebrew. Examples of such wholesale transfer of expressions and semantics are abundant, and this article is not meant to survey or contest findings to that effect (for comprehensive overviews see Rosén 1977, Blau 1981 and more recently Zuckermann 2003). But as already pointed out by Blau (1981), this condition is by no means unique to Modern Hebrew: as a result of colonialism and subsequent globalization, very many languages have absorbed international ways of phrasing things, most especially in areas relevant to commerce, politics, popular culture and more. But despite criticism from prescriptivist quarters that their language is being e.g. Anglicized, there is little serious discussion in scholarly linguistics to suggest each and every affected language should be reclassified as European.

The situation for Modern Hebrew is different both because of the history of its genesis and because the normative comparison being used is of necessity a very different language: Modern Hebrew never was exactly Biblical Hebrew, and in many ways it has been a very different language for as long as it has existed. At the same time, not being identical to a particular Semitic language (Biblical Hebrew) does not mean that Modern Hebrew is typologically not another Semitic language, and most certainly not that it is European. In the wake of work by the EUROTYP project and progress in the description of Standard Average European, we are now finally in a position to answer the question from a European viewpoint, rather than focusing on whether or not Modern Hebrew is a form of Biblical Hebrew. The importance of this perspective has been neglected so far because in many of the SAE features Modern and Biblical Hebrew behave alike, and places where the two languages are similar and no European influence is at play have naturally drawn little attention. As it stands, Modern Hebrew is, at least from a European typological perspective, a very poor example of a European language, sharing even less of the generally accepted SAE features than Arabic, a language whose Semitic identity has not been questioned. Another question which exceeds the scope of the present discussion is whether or not Modern Hebrew is typologically Semitic (as promoted e.g. by Goldenberg 1994). This question too would best be answered by assembling a typological profile for Standard Average Semitic first, taking into account the prevalence but also the distinctiveness

of features found in that family, and then teasing apart the Semitic and non-Semitic features found synchronically in Modern Hebrew. In this context too it will be interesting to ask which feature bundles remain together across languages and which are more susceptible to variation.

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