Construct State: Modern Hebrew
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Modern Hebrew (MH) nominal morphology preserves the nominal inflectional categories of earlier periods, and accordingly all nouns are inflected for the category of state (as well as other nominal categories such as gender and number). The unmarked state is called the absolute state, and it is distinguished from the construct state (CS) form:

(1a) absolute state: גלימה glima ‘gown’
(1b) construct state (CS): גלימת glimat ‘gown-CS’

The construct state noun heads a construction called סמיכות חבורה smixut xavura ‘construct’, where it is immediately followed by a noun-phrase called סמר somex ‘annex’. The construct encodes a relation, such as the possessive relation in (2) where the construct head is the possessee and the construct annex the possessor:

(2) גלימת המלך
glimat ha-melex
‘the king’s gown’

Nouns in the absolute state must lack an annex, as they do in (3a). In contrast, nouns in the construct state must be followed by an annex, as shown by the ungrammaticality of (3b) which lacks an annex.

(3) המלך התעטף@glima בגלימת ha-melex hitʿaṭef (a) bi-glima / (b) *bi-glimat
the-king wrapped himself (a) in-gown / (b) *in gown-CS
‘The king wrapped himself in a gown’.

The construct in MH preserves some of the properties of the construct in earlier periods of Hebrew, but also exhibits some new tendencies, concerning both form and function. The study of the construct in MH has been carried out within different theoretical frameworks, and has raised a variety of issues related to the properties and characteristics of the construct. These issues include definiteness of the construct, the distinction between phrasal and compound structures, and the interpretation of constructs headed by non-nominal heads. In addition, it has been pointed out that the construct is but one of three constructions which express genitive relations in MH, and the relationship between these constructions has been the subject of many studies.
1. The Form of the Construct

Proscopy and Phonology. As in earlier periods of Hebrew, the construct state head in MH together with the first word of its annex constitute a prosodic word. This word has one primary stress, which falls on the annex. As a result, the head may undergo a variety of phonological operations sensitive to lack of stress, such as vowel deletion (גָּדוֹל gadol ‘big’ > gdol ‘big-CS’), monosyllabization (bayit ‘house’ > bet ‘house-CS’, moc vet ‘death’ > mot ‘death-CS’), and internal stem modification (šmalot ‘dresses’ > šimlot ‘dresses-CS’). The latter operation, however, is less widely spread in MH, and speakers often use either forms in both construct and absolute nouns (Rosén 1957:140). Thus both תרובה x̱evrot ‘companies-CS’ and תרובה x̱avarot ‘companies’ (absolute form) can be found as the head of a construct, as in תרובה x̱evrot/x̱avarot teʿufa ‘airline companies’, and both forms are also attested in non-construct phrases, such as תרובה x̱evrot/x̱avarot ʿisqiyot ‘financial companies’. The phonological form of the head also differs according to the nature of the annex; pronominal annexes and full NP annexes may in some cases trigger different phonological operations on the head, e.g., melaxa melaxet-(CS) vs. melaxt-o ‘his craft’. In some cases only the suffixed construct changes form: שִֹמְלוֹת šimlot vs. seret-s vs. sirt-o ‘his film’ (Glinert 1989).

In addition, the feminine singular suffix -á and the masculine plural suffix -im exhibit a particular form in the construct state: -at and -e respectively (Rosén 1957; Berman 1978; Coffin and Bolozy 2005; Faust 2011; among many others).

The Head. The head of the construct can be a noun, as in שמולת כלה šimlat kala ‘bridal dress’, חלון הבית x̱alon ha-bayit ‘the window of the house’, including abstract nominalization of a verb (yesiʾ at ha-muzmanim ‘the exit of the invitees’, haʃaqat ha-diyun ‘the termination of the discussion’); an adjective (טוּב lev ‘good hearted’, šxor taltalim ‘black-curled’); a numeral or quantifier (kol ha-yeladim ‘all the children’, šivʾat ha-koxavim ‘the seven stars’); a participle, either active (ʿorex ʿiton ‘newspaper editor’, menahel ha-ševra ‘CEO’) or passive (muʃaf mayim ‘flooded with water’, netul kafeyn ‘caffeine free’); and a preposition (lifne ha-ṣohorayim ‘before noon’, axare ha-šomem ‘after the intersection’).

From a normative point of view, the head cannot be coordinate. Yet constructs with coordinate heads are attested, not only in colloquial use but also in more formal registers: מורה תָּלמי more ve-talmide ha-mixlala ‘the teachers and students of the college’, מדינת ועם ישראל medinat ve-ʿam yišraʾel ‘the state and the people of Israel’, тxilat ve-sof ha-šiʿur ‘the beginning and the end of the class’ (Glinert 1989).
In very rare cases, the head of the construct can itself be a construct: \textit{ביה מספנט השולם} \textit{bet mišpaṭ ha-šalom} ‘magistrates court’, \textit{ביה ספר שדה} \textit{bet sefer śade} ‘field school’.

\textit{The Annex.} The annex of the construct in MH must be a noun phrase, including noun phrases which consist of a pronominal affix (ביה ז’ותא \textit{zxut-o} ‘his right’). However, proper names are generally avoided as annexes when referring to a possessor. Speakers judge constructs such as \textit{משיקפתי מוטי} \textit{mišqefe moṭi} ‘Moti’s glasses’ as ungrammatical, and find it difficult to assign possession interpretation to them (Ravid and Bar-On 2012). The annex cannot be an adjective; a compound such as \textit{הנדסה אזרחית} \textit{handasa ʾezrax̱it} ‘civil engineering’ is not a construct, as is evident from the form of the head (ביה \textit{handasat}), which is in the absolute state rather than the construct state (ביה \textit{handasa}). The annex can also itself be a construct, thus creating construct chains which are in principle unbounded: \textit{עקרון חופש הביטוי} \textit{ʿeqron x̱ofeš ha-biṭuy} ‘the principle of freedom of speech’, \textit{tašhir mazkirat dover roš ha-memšala} ‘the declaration of the secretary of the prime minister’.

\textit{Inflection.} Plural and gender inflection is marked on the head: \textit{ראשי ממשלות} \textit{raše memšalot} ‘prime ministers’, \textit{ʿorexet ha-ʿiton} ‘the newspaper editor (f)’. Pluralization of the annex differs for compound and phrasal constructs, and is discussed below. Definiteness marking in the construct has been the topic of investigation of many studies, and is discussed below.

\textit{2. Related Constructions}

The construct involves the surface adjacency of two nominal elements: the construct-state head and the noun-phrase annex. The construction denotes a genitive relation, such as possession, where the construct-state head is the possessee, and the annex noun-phrase is the possessor, though many other semantic relations are also expressed (see, e.g., Azar 1977; Glinert 1989; Schlesinger and Ravid 1998 and references therein; and Coffin and Bolozky 2005). In the construct, the annex is bare, i.e., not case-marked. Genitive relations can also be expressed with a different construction, the \textit{periphrastic possessive} construction, where the possessee is a full noun phrase. In this case the possessor cannot be bare, but must be case-marked as genitive by the genitive preposition \textit{של} \textit{šel}. \textit{ספר של המורה} \textit{sefer šel ha-more} ‘a book of the teacher’s’, \textit{החדש ספרו של המורה} \textit{he-x̱adaš šel ha-more} ‘the teacher’s new book’ (Rosén 1957; Azar 1977; Berman 1978; Borer 1984; Engelhardt 1998; 2000).
The construct and double-construct show structural and functional similarities and differences relative to the periphrastic construction, where the head neither agrees nor is in the construct relation with the possessor. Though some researchers maintain that the three constructions are essentially synonymous (Berman 1978; Landau 1980; Rosenhouse 1989; Glinert 1989; Coffin and Bolotzky 2005 among others), others have pointed out interesting differences in the meaning of the construct (including the double-construct) vs. the periphrastic construction. For example, the construct is only interpreted as relational, unlike the looser contextual association allowed in the periphrastic possessive construction (Rosén 1957):

(4a)

בנותיה של המורה

bnot ha-mora  bnot-eha  šel ha-mora  ha-banot šel ha-mora
girls-CS the-teacher  girls-CS-her of the-teacher  the-girls of the-teacher

both: ‘the daughters of the teacher’

‘the teacher’s girls’ (not necessarily her daughters, maybe her students, or associated in any contextually salient way)

(4b)

האשה של הצייר

ešet ha-ṣayar  išt-o  šel ha-ṣayar  ha-iša  šel ha-ṣayar

woman-CS the-artist  woman-CS-his of the-artist  the-woman of the-artist

both: ‘the wife of the artist’

‘the artist’s woman’ (not necessarily his wife, could be the woman he painted)

(4c)

הצבע של הסתיו

ṣeva ha-stav  šivʿ-o  šel ha-stav  ha-ṣeva šel ha-stav

color-CS the-autumn  color-CS-its of the-autumn  ES-color of the-autumn

both: ‘the color of autumn’ (the prevalent color of nature in that time of year)

‘autumn’s color’ (the color associated with autumn, e.g., the one in vogue in autumn fashion this year)

Nouns which are interpreted only as relational tend to appear in the construct. This conforms with the cross-linguistic tendency for more structural ‘cohesion’ in relational constructions.
than in possessive constructions. The construct state is the idiomatic form of relational nouns which allows them to appear in close association with their argument. The periphrastic construction, on the other hand, where the possessor is not an argument, but is contextually associated with the head, is less suitable for the expression of such relations, as examples (5a)–(5d) show:

(5a)  
endor ha-ʾares  
drom-a šel ha-ʾares  
the-south of the-country  
the-country  
‘the south of the country’

(5b)  
roš ha-migdal  
roš-o šel ha-migdal  
the-head of the-tower  
the-head of the-tower  
‘the top of the tower’

(5c)  
taxilat ha-šiʿur  
taxil-at-o šel ha-šiʿur  
the-start of the-class  
the-start of the-class  
‘the beginning of the class’

(5d)  
ṭovat ha-madaʾ  
ṭovat-o šel ha-madaʾ  
the-sake of the-science  
the-sake of the-science  
‘the sake of science’

The double construct differs from the construct in that it reduces thematic ambiguity in the role of the annex as argument of the relational head. While ʾahavat ʾem can be interpreted as ‘mother’s love’ (mother as the subject) as well as ‘love for mother’ (mother as the object), the corresponding double construct ʾahavata šel ʾem can have only the first interpretation. That is, the annex can be interpreted only as the subject argument of the head, not the object. Where a subject interpretation is not possible, the construction is ungrammatical: *taxazito šel mezeg ha-ʾavir ‘the forecast of the weather’ (vs. taxazito šel ha-xazay ‘the forecast of the meteorologist’, which is grammatical) (Englehardt 1998; 2000). Some nominalizations allow for passivization, as in harigato šel ha-namer ‘the killing of the leopard’, where ha-namer is the subject of the passivized nominalization (Hazout 1991; 1995; Borer 1999).
The relationship between the three genitive constructions has been studied within a functional-pragmatic framework as well. Schlesinger and Ravid (1998) point out that the view that the three varieties are semantically equivalent does not take into consideration the fact that not all expressions are equally possible in the three constructions. Furthermore, when several varieties are available, one is regarded as more basic and less marked than the others. Their studies (1995; 1998) examined the occurrences and functions of the three constructions in a wide corpus (35,000 word tokens) of written and spoken texts. They found that each construction has distinct basic functions.

The main function of the bound construct is that of categorization, that is, creating a hyponym of the head. In 96 percent of the bound construct in spoken corpora the relationship between the head and the annex is that of categorization, as in bubat ʿeš ‘wooden doll’, šulxan qaфе ‘coffee table’, maxałat ruax ‘mental illness’. Two other semantic relations, possession and part-whole relation, are also attested, but the bound construct is the marked construction for expressing them. Rather, the periphrastic construction is the basic structure for expressing these relations in MH. The double construct is the most limited construction, and occurs almost exclusively in written texts. It expresses specific propositional relations: the annex is the subject argument of the head, or its possessor. Proper names and nouns denoting human entities are very common; they appeared in eighty percent of the occurrences in the corpora studied as the annex of double constructs: ʾišto šel dani ‘Danny’s wife’, beto šel ha-mazkir ‘the secretary’s house’, xariṣutam šel tošve ha-ʾi ‘the diligence of the island’s inhabitants’.

3. Phrasal vs. Compound Constructs

Constructs with non-phrasal annexes are one of the productive word formation devices in MH, similarly to compounds in other languages (Berman 1987; 1988; Borer 1988; Ravid and Schlesinger 1995; Ornan 2001). As such, they form part of the lexicon. They are distinguished from constructs with phrasal annexes, which are productive and are generated in the syntax of the language.

Compounds and phrasal constructs exhibit surface similarities yet distinct syntactic and semantic properties, making it challenging to draw the line between them and to account for both the similarities and differences.

Borer (1988; 2009) points out that both types of constructs show the same kind of phonological reduction of the head described above. Syntactically, the definite article is attached only once, to the annex, both in compounds (bet ha-xolim ‘the hospital’) and in phrasal constructs (bet ha-more ‘the teacher’s house’). The head cannot be
directly modified; rather, all modifiers of the head have to follow the annex in constructs, be they compounds (בֵּית מִורְחֵה חוֹלֶים bet yəlīm ḥadəš ‘a new hospital’) or phrasal (בֵּית מִורְחֵה חוֹלֶים bet yəlīm ḥadəš ‘a new house of a teacher’).

One difference between compounds and phrasal constructs is the availability of the double construct for phrasal constructs but never for compounds: הספוק של פסוק sof o šel pasuq can only be the doubling of the phrasal construct ‘the end of a sentence’, but not of the compound sof pasuq ‘full stop’. Another difference between compounds and phrasal constructs is overtly expressed in colloquial Modern Hebrew (Berman 1978; Agmon-Fruchtman 1982; Coffin and Bolozky 2005; Meir and Doron, forthcoming). Colloquial Modern Hebrew allows the definite article to attach to the construct-state head, yet it does so strictly only in the case of compounds, and not in the case of phrasal constructs: המַסָּב sof pasuq ‘the situation report’, המַסָּב ha-masāv ‘the teacher’s picture’.

Borer (1988; 2009) lists a variety of syntactic and semantic operations and properties within Modern Hebrew (not necessarily colloquial) which distinguish between the two structures. Semantically, Borer regards compounds as opaque, in that their meaning is neither compositional nor predictable from their components, as in עורך דין ʿorex din ‘editor-law’ = ‘lawyer’, בית ספר bet sefer ‘house-book’ = ‘school’). Phrasal constructs are regarded by Borer as semantically transparent, as their meaning is entirely predictable from their components: עורך המאמר ʿorex ha-maʾamar ‘editor-the-article’ = ‘the editor of the article’, בית השר bet ha-śar ‘house-the-minister’ = ‘the house of the minister’).

The syntactic differences mentioned by Borer between the two types of constructs have to do mainly with the phrasal nature and with the referentiality of the annex: in compounds the annex is non-referential, as it is not even a phrase, while in phrasal constructs it is phrasal and referential. Hence in compounds, but not in phrasal constructs, the annex cannot be modified (6), cannot be a coordinate phrase (7), may not be referred to pronominally (8), and is not interpreted as definite even when marked by the definite article ha- (9):

(6a) בֵּית הַתְּלוּמִדִים הַחֲדָשִים
bet ha-talmidim ha-xədashiym (phrasal construct)
house the-students the-new
‘the house of the new students’

(6b) בֵּית הָחוֹלֶים הַחֲדָשִים
bet ha-xolim ha-xadašim (compound)
house the-sick (pl) the-new(pl)
‘the new patients’ house; *the new hospital’
(7a) בית תלמידים ותלמידות
great house students (m) and-students (f)
‘a house of male students and female students’

(7b) בית החולים והחולים
house patients (m) and-patients (f)
‘the male and female patients’ house; *hospital’

(7c) גן ילדים וחיות
‘a kindergarten and a zoo’

(8) בית 홀ים וחיות
‘the hospital and their beds’

(9) בן המלך
‘the prince’

In (9) under the compound reading ‘prince’, though the entire construction is definite, the
annex ‘the king’ is not interpreted as a particular king.

Other differences between the two constructions are as follows:

In phrasal constructs, the annex may be pluralized, with the related change in meaning: בית
שר ‘the house of the minister’, בית שרים ‘the house of the ministers’. In
compounds, the annex is either in the singular or in the plural, but it cannot vary in number
inflection: מיץ גזר ‘carrot juice’ (carrot in singular, the plural is ungrammatical), מיץ תפוחים
‘apple juice’ (apple in plural, the singular is ungrammatical).

The stress pattern of the two constructions may also differ. Compounds may exhibit
redistribution of stress so as to create a sequence of alternating stressed and non-stressed
syllables (Bolozky 1982), as in כדורגל ‘football’, מושך ‘mood’, מושך-רוח ‘mood’,
Borer points to a class of constructs which are difficult to classify, since they have a mix of semantic characteristics of the two classes. Like compounds, they have a non-referential annex, but like phrasal constructs, their interpretation is compositional: the annex is interpreted as a modifier of the head, as in בֵית אֶבֶן ‘stone house’, magevet miṭbax ‘kitchen towel’, galgal haṣala ‘life saver, flotation ring’. This class of modificational constructs leads Borer to a tri-partite classification of constructs, whereas Meir and Doron (forthcoming) maintain a bi-partite classification, treating modificational constructs as compounds. Like compounds, the double construct is never available for modificational constructs, though it is found with phrasal constructs:>* בֵית-אֶבֶן של הַחֲוָלִים ‘the hospital’ (which can only be interpreted as phrasal, i.e., ‘the house of the patients’), בֵית הַשָּׁרִים ‘the ministers’ house’. Like compounds, modificational constructs in colloquial MH allow the definite article to be attached to the construct-state head: הַמַּגְבֶּט מִטְבַּח ‘the kitchen towel’, הַשְּׁמִלַת מְשִׁי ‘the silk dress’, הַבֵּית אֶבֶן ‘the stone house’.

4. Adjectival Constructs

An adjective in the construct state exhibits the phonological changes typical of construct nouns and behaves as a construct with respect to the position of the definite article.

There are two types of constructs headed by an adjective. One is the so-called superlative genitive, where the construct expresses the superlative relation, as in הַמַּמָּה נַפֵּלָה ‘the best artists’ (Glinert 1989). This use of the construct is restricted to formal usage, and the adjective must be simplex (derived adjectives as well as participial forms, such as מָצָל ‘successful’ do not occur in this construction).

The second type of adjectival construct, which has received a great deal of attention in the literature, consists of a construct state adjective which forms a complex semantic relation with its annex, on the one hand, and with the noun it modifies, on the other hand, as in יָלָדָה ארוכת צוֹעַר ‘girl with a long neck, long-necked girl’, מִרְפֶּסֶט ‘balcony with rounded corners’, בְּדָרָיִם גָּבוֹהוּ תִּקְרָה ‘rooms with a high ceiling, high-ceilinged rooms’. The adjectival head is restricted to non-suffixed adjectives, i.e., derived adjectives, such as גָּאוֹטָן ‘arrogant’, אָבִּי ‘of-spring, spring (adj), springtime (adj)’, cannot occur in this position (Glinert 1989).
The annexes in adjectival constructs are typically relational nouns (Glinert 1989; Hazout 2000; Siloni 2002), such as body parts, abstract attributes, spatial parts (as is ‘ceiling’ to ‘room’ in the above examples), but not kinship terms (Siloni 2002). The adjectival head in this construction is not directly interpreted as an attribute of the noun it modifies, but only indirectly, through being an attribute of its annex, which itself is a relation taking the modified noun as argument. For example, *long* is not an attribute of the modified noun *girl* in the construct ‘long-necked girl’, but of the noun *neck* in annex position. The relation between *long* and *girl* is mediated by the relational annex *neck*, which takes *long* as its attribute on the one hand, and *girl* as its argument on the other hand (Kim 2002). Though the construct state adjectival functions as the head of the construct, its annex, too, has head-like properties, since it takes the modified noun as argument. Accordingly, the annex is non-recursive in this construction, and disallows further modification and complementation (Hazout 2000):

(10) *ילדה אפורה שמלה קפורה*  

*yalda adumat šimla qṣara*  
girl red-CS dress short  
‘a girl whose short dress is red’

(11) *הילדה אפורה שרוולי חולצה*  

*ha-yalda adumat šarvule x̱ulṣat-a*  
the-girl red-CS sleeves-CS shirt-CS-her  
‘the girl whose shirt’s sleeves are red’

Some accounts (e.g., Kremers 2005) nevertheless analyze construct state adjectives as attributed to the noun they modify. In the above examples, this can be paraphrased as: ‘a girl who is long (of neck)’, ‘a balcony which is round (of corners)’ or ‘rooms which are high (of ceiling)’. Such a paraphrase would be problematic (#‘a boy who is torn of shirt’) for an example like (12):

(12) ילד קרוע חולצה  

*yeled qruaʿ xulṣa*  
boy torn-CS shirt  
‘A boy whose shirt is torn’

Among adjectival constructs, as in the case of other nominal constructs, it is possible to discern between phrasal constructs, which are fully productive and have transparent meaning, such as the examples above (Siloni 2002; Hazout 2000), and adjectival compounds, such as קל רגליים qal raglayim ‘light-legged’ meaning ‘fast’, כבד משקל kvad mišqal ‘heavy-weighted’ meaning ‘serious, important’, and גבה לב gvah lev ‘high hearted’ meaning ‘arrogant’. 
5. **Definiteness of the Construct**

The assignment of definiteness to the construct shows some peculiarities that raise many theoretical challenges. As already mentioned, the canonical way of turning a construct definite is by attaching the definite article to the annex. This raises several theoretical questions:

(a) Why is it impossible to mark a construct state head directly with the definite article and to what extent has this changed in colloquial Modern Hebrew?

(b) Does the annex itself get a definiteness value from the definite article which marks it?

(c) How does the construct get its definiteness value from the definite article marking the annex?

The prevalent view in the literature is that the definiteness marking of the annex determines the definiteness of the construct. In (13) the picture is interpreted as definite because of the definiteness marking of the annex *monk*:

(13) 

\[ \text{תמונה הנזיר} \]

`tmunat ha-nazir`

picture-CS the-monk

‘the picture of the monk’

There is disagreement about whether the annex itself is definite in addition to the construct, or whether an additional translation of (13) could be ‘the picture of a monk’, as suggested by Danon (2008). An indefinite interpretation of the definite annex is found in compounds, e.g., הָלַיְמָה הָנוֹר שֶל глим at ha-nazir šelo ‘his priestly robe’, but Danon suggests this for phrasal constructs as well.

In the view of Heller (2002), the construct is definite independently of the definiteness of its annex, which is determined by the relational (or, rather, functional) interpretation of its head. Heller argues that (14) is definite as well as (13), though the annex in (14) is indefinite:

(14) 

\[ \text{תמונה נזיר אחד} \]

`tmunat nazir exad`

picture-CS monk one

‘the picture of some monk’

Conversely, Danon (2001) argues that constructs may be indefinite even in cases where the annex is definite. In the following examples, the construct is not necessarily interpreted as unique, despite the definiteness marking of the annex:

(15a) 

\[ \text{רגל השולחן} \]

`regel ha-šulxan`

leg-CS the-table
‘the leg of the table’

(15b) חלון המכונית
xalon ha-mexonit
window-CS the-car
‘the window of the car’

(15c) עובדת השגרירות
‘ovedet ha-šagrirut
employee-CS the-embassy
‘the employee of the embassy’

(15d) תושב האזור
tošav haʾezor
inhabitant-CS the-area
‘the/an inhabitant of the area’

(15e) תלמיד החוג
talmid ha-xug
student-CS ES-department
‘the/a student of the department’

(15f) דוד הכלה
dod ha-kala
uncle-CS the-bride
‘the uncle of the bride’

References


