Fiat Lingua

Title: Free Genitive and Construct State in Eḥeiθymme

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MS Date: 05-31-2020

FL Date: 09-01-2020

FL Number: FL-00006C-00

Citation: Quigley, Daniel. 2020. "Free Genitive and Construct State in Eḥeiθymme." FL-00006C-00, *Fiat Lingua*, <http://fiatlingua.org>. Web. 01 September 2020.

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Free Genitive and Construct State in *Eḥeiθymme*

Daniel Quigley

Abstract

This paper is an overview of the Free Genitive and Construct State in the constructed language *Eḥeiθymme im Ajjad Eḥðeirymme Amran*. This is done with frequent reference to the Semitic languages, which exhibit these methods for genitival relationships. This presentation follows: an overview of the construction; adjacency, prosody, and definiteness of the Construct State; a syntactic treatment of the Free Genitive and the Construct State relative to the Semitic; semantic relationships of the elements of the Construct State; a brief historical outline of the Construct State.

Keywords— constructed language, syntax, free genitive, construct state

Contents

1 Free Genitive and Construct State

Eḥeiθymme handles genitive phrases by either of two methods: the Free Genitive phrase (FG) and the Construct State phrase (CS). The FG is a Determiner Phrase (DP) in which the genitive is introduced by the preposition *im-* "of" as a casemarker, and the (in)definite head noun precedes the genitive. The CS is a DP in which the head noun assumes the construct state and is never marked for definiteness, and the most embedded genitive element determines the definiteness of the whole DP. (1) shows the construction of the FG and CS in *Eḥeiθymme*.

(1) ***Eḥeiθymme* genitive constructions:**

a. **Free Genitive** – relates the elements of the phrase explicitly with the preposition as casemarker *im-*; adjectives are adjuncts of their respective NPs.

i. Form: $[\mathbf{Adj}]_{\mathbf{(in)def}}$ **+** $[\mathbf{N}]_{\mathbf{(in)def}}$ **+** [**im-**] **+** $[\mathbf{Adj}]_{\mathbf{gen}}$ **+** $[\mathbf{N}]_{\mathbf{gen}}$

b. **Construct State** – relates the elements of the phrase by passing one element in the construct state and the other element in the non-obligatorily marked genitive; adjectives are adjuncts of their respective NPs.

i. Form: $[\mathbf{Adj}]^{\mathbf{constr}}_{\mathbf{(in)def}}$ **+** $[\mathbf{N}]^{\mathbf{constr}}$ **+** $[\mathbf{Adj}]_{\mathbf{gen}}$ **+** $[\mathbf{N}]_{\mathbf{gen}}$

ii. Form: $[\mathbf{Adj}]^{\mathbf{constr}}_{\mathbf{(in)def}}$ **+** $[\mathbf{N}]^{\mathbf{constr}}$ **+** $[\mathbf{Adj}]_{\mathbf{(in)def}}$ **+** $[\mathbf{N}]_{\mathbf{(in)def}}$

This presentation is arranged as follows: section 2 describes the salient features of the CS, its composition, and how to control its status as definite or indefinite; section 3 compares and contrasts the structures of the CS and FG as they are used in the Semitic languages and *Eḥeiθymme*; section 4 describes the use of the CS in *Eḥeiθymme*, noting the various semantic interpretations depending on what the elements of the CS are; section 5 gives a brief outline of the historical derivation of the CS in *Eḥeiθymme*, tracking both its construction and phonological history.

2 Salient Features of the Construct State

The FG and CS strategies for establishing a genitive relationship between elements are hallmarks of the Semitic languages[1]. Of particular interest to general syntacticians studying the Semitic languages is the CS. The CS contains an overtly casemarked genitive phrase following the head noun, which may be of any case required by the context. The properties and behavior of the CS have been the subject of much investigation, and for a detailed discussion, see Borer (1996). It is comparable to a genitive or attributive relationship, where the first noun (or adjective) is the head constituent and the second noun is the attribute (Abu Shaqra 2007).

1. The CS is also used in Persian, where it is known as *ezafe*; see, among others, Parsafar (2010). The CS is found as well in Berber (El Hankari 2014). See Creissels (2009) for an investigation into CS-like strategies in various African languages.

The salient properties of the Arabic CS nominal concerning morphosyntactic features may be found discussed in Borer (1996, 1999), Benmamoun (2000), Almansour (2012), and Versteegh (2014). The properties as they are relevant to the CS in *Eḥeiθymme* are listed in (2):

(2) 1. **The elements of the CS tend to be adjacent one to the other.**
2. **The CS constitutes a single prosodic unit.**
3. **The last element of the CS carries (in)definite marking.**

Morphologically, a noun in the construct state is marked by *-n* for words ending in a vowel, and by *-'n* for words ending in a consonant. The apostrophe is an orthographic convention, and itself carries no phonological value.

(3) **Typical genitive relationships in *Eḥeiθymme*:**

a. **kēn'n feði**
rock.constr girl
'*A rock of a girl*'

b. **kēn'n le-feði**
rock.constr the.girl
'*The rock of the girl*'

c. **kēn'n i-feði**
rock.constr gen.girl
'*A/the rock of a/the girl*'

d. **la-kān im i-feði**
the.rock of gen.girl
'*The rock of a/the girl*'

The CS in (3a), (3b), and (3c) is a phonological word, and the first element *kān'n* is affected by the vowel harmony rules triggered by the indefinite noun *feði*, the definite noun *le-feði*, and the genitive-marked *i-feði*. In (3d), the trigger for vowel harmony is blocked at the word boundary. Additionally, while the first element may be inflected for any of the nominative, accusative, or genitive cases in Arabic, the second element is inflected only for the genitive case (Borer 1996; Almansour 2012); the genitive case is never obligatorily marked in the second element in *Eḥeiθymme*, as in (3a) and (3b); a genitive relationship is implied by the initial element being in the construct state.

2.1 Adjacency

As noted above, a feature of the CS is that its elements tend to be adjacent one to the other.

(4) a. ***nānumman ajjad i-ðeyr adwan**
elk.constr is.imp.3 gen.child sleep.imp.3
'*The child's elk is sleeping*'

b. **nēnymmen i-ðeyr ajjad adwan**
elk.constr gen.child is.imp.3 sleep.imp.3
'*The child's elk is sleeping*'

The ungrammaticality of (4a) is due to the copula interrupting the CS. Because the CS forms an entire nominal unit, the insertion of the copula breaks that unit, and is ungrammatical.

As opposed to the modification rules found in the Semitic CS, the modification of the CS by adjectives and modifiers in *Eḥeiθymme* remain intact with the noun they are modifying. The ungrammaticality of (5a) is due to the element's modifier being dislocated from its position prior to the noun it is modifying.

(5) a. ***deir'n** **i-ḥ̣īθ** **deylyn**
land.constr gen.ghost marsh.adj.constr
'*The ghost's marshy land*'

b. **deylyn** **deir'n** **i-ḥ̣īθ**
marsh.adj.constr land.constr gen.ghost
'*The ghost's marshy land*'

The examples in (5) also illustrate a detail of the CS in *Eḥeiθymme* that is absent in the Semitic languages: adjectives modifying the first element of the CS are also inflected for the construct state.

The CS is strictly right-branching and head first. This leads to a linear nesting of the appropriate elements, yielding a CS nominal of several elements marked in the construct state.

(6) a. **kēn'n** [**menyn** [**eið'n** **le-feði**]]
rock.constr river.constr father.constr the.girl
'*The rock of the river of the father of the girl*'

b. [**erjeð'n** [**dein'n** **le-enjel**]] **le-meny**
king.constr friend.constr the.writer the.river
'*The friend of the writer's king of the river, The writer's friend's king of the river*'

2.2 Prosody

The elements of the CS form a nominal unit, and are phonologically considered a word. Borer showed that, via data from Modern Hebrew, the vowel of the first element is reduced, and the main stress falls on the rightmost element of the CS (Borer 1988, 1996). In those same papers, he showed that word-level phonological processes take place within the CS nominal, as in (7).

(7) **Phonological influence of the CS** Modern Hebrew (Borer 1988, 1996)

a. **beit** **mora**
house teacher
'*a teacher's house*'

b. **bayit ʃel mora**
house of teacher
'*a teacher's house*'

In *Eḥeiθymme*, a similar phonological influence occurs. The elements of the CS are a phonological word, and are subject to the vowel harmony morphophonology, which in turn may trigger consonantal change. There exists three general rules of sound change in *Eḥeiθymme*, shown in (8) with corresponding examples, one of which involves a harmonization of the vowels in a word, one of which involves the mutation of consonants, and one that turns semi-vowels into vowels.

(8) 1. **If a close, front, unrounded vowel exists anywhere in the word, then the close, back vowel becomes the close, front, rounded vowel, and the open, back vowel becomes the mid, front, unrounded vowel.**

(8) $\begin{bmatrix} \text{u} \\ \text{a (ɑ)} \end{bmatrix} \rightarrow \begin{bmatrix} \text{y} \\ \text{ɛ} \end{bmatrix} / \text{[...i...]}$

a. ***la-lani**
the.mouse
'*the mouse*'

b. **le-leni**
the.mouse
'*the mouse*'

c. ***i-nalu**
gen.moss
'*of moss*'

d. **i-nely**
gen.moss
'*of moss*'

2. **The consonant moves to a fricative counterpart in the environment that it follows a front vowel or a voiceless palatal fricative.**

(9) $\begin{bmatrix} \text{p} \\ \text{b} \\ \text{t} \\ \text{d} \\ \text{k} \\ \text{g} \\ \text{h} \end{bmatrix} \rightarrow \begin{bmatrix} \text{f} \\ \text{v} \\ \text{θ} \\ \text{ð} \\ \text{x} \\ \text{ɣ} \\ \text{ç} \end{bmatrix} / \left\{ \begin{bmatrix} \text{V}_{\text{front}} \end{bmatrix} \atop \begin{bmatrix} \text{j} \end{bmatrix} \right\} \_$

a. ***ihlit**
gift
'*given; gifted; gift*'

b. **iḥli**θ
gift
'*given; gifted; gift*'

c. ***i-gāl**
gen.joy
'*of joy*'

d. **i-ɣēl**
gen.joy
'*of joy*'

3. **A semi-vowel becomes its vowel counterpart in the environment that it preceeds immediately a non-semi-vowel consonant.**

(10) $\begin{bmatrix} j \\ w \end{bmatrix} \rightarrow \begin{bmatrix} i \\ u \end{bmatrix} / \_ [\ C\ ]$

a. ***la-majs**
the.leader
'*the leader*'

b. **le-meis**
the.leader
'*the leader*'

c. ***la-tawr**
the.boy
'*the boy*'

d. **la-taur**
the.boy
'*the boy*'

The ungrammatical items in (8), and the ungrammaticality of (11a) and (11c), are due to the elements of those respective CS nominals ignoring the morphophonological triggers from another element. If there is a trigger for sound change in any appropriate place, then that sound must change.

(11) a. ***kān'n le-feði**
rock.constr the.girl
'*The rock of the girl*'

b. **kēn'n le-feði**
rock.constr the.girl
'*The rock of the girl*'

c. ***erjeð'n dein'n la-anjal la-manu**
king.constr friend.constr the.writer the.river
'*The friend of the writer's king of the river, The writer's friend's king of the river*'

d. **erjeð'n dein'n le-enjel le-meny**
king.constr friend.constr the.writer the.river
'*The friend of the writer's king of the river, The writer's friend's king of the river*'

2.3 (In)definiteness

The CS is a DP itself, and its definiteness (indicated by an article, the presence of a genitive, or the element being a proper noun) or indefiniteness (typically indicated by the lack of an article, or the presence of a genitive) are determined by the second element. This determination of the (in)definiteness by the genitive element of the CS is referred to as "Definite Spreading" (Borer 1999). Because only the second element can carry the (in)definiteness, as seen in (12a), (12b), and (12e), the CS nominal has its (in)definiteness determined, and (12c) and (12d) are ungrammatical.

(12) a. **ūlhāk'n la-abrad**
spear.constr the.warrior
'*The spear of the warrior*'

b. **ūlhāk'n abrad**
spear.constr warrior
'*A spear of a warrior*'

c. ***la-ūlhāk'n la-abrad**
the.spear.constr the.warrior
'*The spear of the warrior*'

d. ***la-ūlhāk'n abrad**
the.spear.constr warrior
'*The spear of a warrior*'

e. **ūlhāk'n Dān**
spear.constr Dān
'*The spear of Dān*'

To make examples (12c) and (12d) grammatical, then a periphrasis by a preposition, i.e., the FG, is required, as in (13). Because it is not explicit, a greater context is required to determine the (in)definiteness of the noun in the genitive; the form of the genitive is identical for the indefinite and the definite state.

(13) **la-ūlhāk im i-evre**ð
the.spear of gen.warrior
'*The spear of a/the warrior*'

(In)definiteness is respected by adjectives modifying the CS nominal. If the first element is (in)definite, then the adjective modifying it is likewise (in)definite as determined by the second element, and it will show marking for being in the CS; if the second element is (in)definite, then the adjective modifying it is likewise (in)definite.

An adjective modifying the first element appears in the NP of that element, before the noun, and agrees with the (in)definiteness determined by the second element.

(14) **Modifying the first element:**

a. **kēn'n fe**ð**i**
rock.constr girl
'*A rock of a girl*'

b. **ēlsyn kēn'n fe**ð**i**
water.adj.constr rock.constr girl
'*A watery rock of a girl*'

c. **kēn'n le-fe**ð**i**
rock.constr the.girl
'*the rock of the girl*'

d. **le-ēlsyn kēn'n le-fe**ð**i**
the.water.adj.constr rock.constr the.girl
'*The watery rock of the girl*'

An adjective modifying the last element appears before the CS nominal, and agrees with the (in)definiteness determined by the second element.

(15) **Modifying the second element:**

a. **kēn'n** **feðī**
rock.constr girl
'*A rock of a girl*'

b. **kēn'n** **eljē feðī**
rock.constr sad girl
'*A rock of a sad girl*'

c. **kēn'n** **le-feðī**
rock.constr the.girl
'*the rock of the girl*'

d. **kēn'n** **le-eljē le-feðī**
rock.constr the.sad the.girl
'*The rock of the sad girl*'

For an adjective modifying the second element, if that second element respects the presence of an overtly marked genitive, then the adjective will as well.

(16) a. **kēn'n** **i-feðī**
rock.constr gen.girl
'*The rock of the girl*'

b. **kēn'n** **i-eljē** **i-feðī**
rock.constr gen.sad gen.girl
'*The rock of the sad girl*'

3 Structures of the Free Genitive and Construct State

The theory of syntax adopted here for presenting the structure of the FG and CS is x-bar theory, in which inflection is a consequence of movement in the syntax tree of its various constituents. For a reference to this framework, see Carnie (2012).

An alternative syntactic investigation might be in the framework of head-driven phrase structure grammar, or HPSG; for such an analysis of the CS within such a framework, see AlQurashi (2015). A presentation of the FG and CS of *Eḥeiθymme* by the author within the framework of HPSG is forthcoming.

To have a full picture of the structures of the FG and the CS, this presentation follows two parts. First, an examination is given of the FG and CS in Modern Hebrew and Syrain Arabic, as investigated and presented by Cowell (1964), Ritter (1991), Benmamoun (2000), and Hagstrom (2001). This is followed up by a presentation of those structures as it applies to *Eḥeiθymme*.

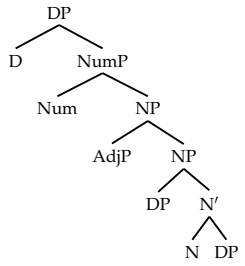
3.1 Semitic FG and CS

Benmamoun (2000) agrees with the structures of the CS as described in the analysis by Ritter (1991), who also supplied the structure of the FG: the complement of D is,

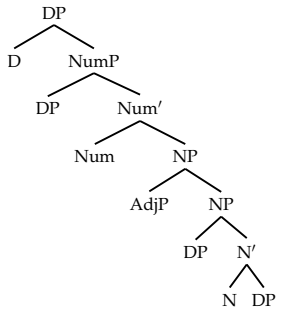
instead of NP, a second non-lexical category, Num, whose head is responsible for the number specification (singular and plural) of the noun phrase. The assigning of case is accounted for by either the specifier of DP or by an inserted casemarker. (17) shows the tree structures prior to movement for the FG in (17a) and CS in (17b).

(17) D-structure for FG and CS (Ritter 1991; Benmamoun 2000)

a.



b.



The process of the Modern Hebrew FG is given in (18a) and (18b). N cannot move to D, as it is occupied by the definite article *ha-*, so it must move to something lower, call it Num. There are three assumptions in this framework: first, assume that adjectives are NP-adjuncts (similar to adverbs as VP-adjuncts); second, assume that the genitive starts off in the SpecNP (subject of NP); third, assume that the presence of the overt case marker *ʃel* "of" is inserted where it is needed and not a preposition, since there is no D_{gen} as in the CS to give the genitive relation, and it does not affect the c-command relationship between the subject and object.

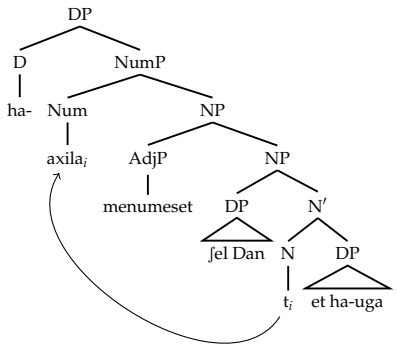
The derivation of the CS in Modern Hebrew is given in (18c) and (18d). The definite article *ha-* is forbidden, so there is something else occupying the head position of DP, call it D_{gen}. This head is responsible for assigning the genitive to the subject rightward to the adjacent DP. Since the subject appears before the adjective, it must have moved there. Similarly, the head noun appears before the subject, so it must have moved to D.

(18) FG and CS Structure and Derivation Modern Hebrew (Ritter 1991)

a. **ha-axila ha-menumeset ʃel Dan**
the.eating the.polite of Dan
et ha-uga
acc the.cake

'Dan's polite eating of the cake'

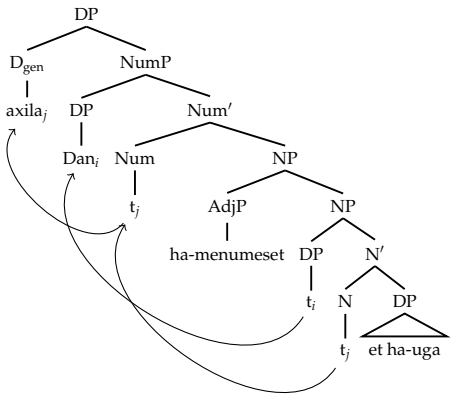
b.



c. **axilat** **Dan** **ha-menumeset**
eating.constr Dan the.polite
et **ha-uga**
acc the.cake

'*Dan's polite eating of the cake*'

d.



Summarily, if D_{gen} is used, then N moves through Num to D, and the subject DP moves to the spec position of NumP where it receives case from the D_{gen}. Conversely, if a dissimilar D is used, then N moves only as far as Num, and the subject DP get case from the inserted case marker *ʃel*. To preserve the surface form, the AdjP remains in situ. D_{gen}, however, is not inherently definite. To account for this, Ritter (1991) argues that the definite feature is acquired via Spec-head agreement with the DP at the derivational level.

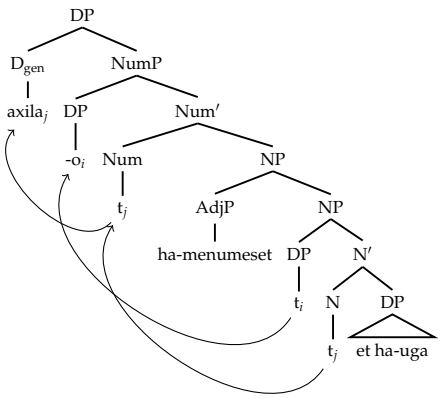
It should be pointed out that pronominal subjects of simple CSs are realized as clitics on the head noun. The pronominal subjects, like any such full noun phrase subjects, appear in the spec position of the NumP at the s-structure. Ritter suggests, then, that cliticization occurs here.

(19) Pronominal CS Structure and Derivation Modern Hebrew (Ritter 1991)

a. **axilat-o** **ha-menumeset**
eating.constr.his the.polite
et **ha-uga**
acc the.cake

'*His polite eating of the cake*'

b.



The FG does not necessarily preclude the CS, and vice versa; there exists a third genitive method in the language which simultaneously employs both FG and CS. Ritter

demonstrates "clitic doubled construct states" (doubled CS) arise when both methods are employed in the same noun phrase: it has the subject of a FG and the head of a CS (Ritter 1991). The doubled CSs never contain an initial determiner, as in the regular CS, but they have the inserted casemarker before the subject as in the FG. Furthermore, there exists a pronominal clitic suffixed to the head noun, which agrees with the subject.

The derivation of the doubled CS in Modern Hebrew is the following: the full noun phrase subject receives genitive case in its d-structure position from the inserted case marker, as in the FG, and N + Num moves to D_{gen} as in the CS. Assume that the D_{gen} has case which it must assign, and the pronominal element, which is realized as a clitic on the head of the DP, serves this purpose.

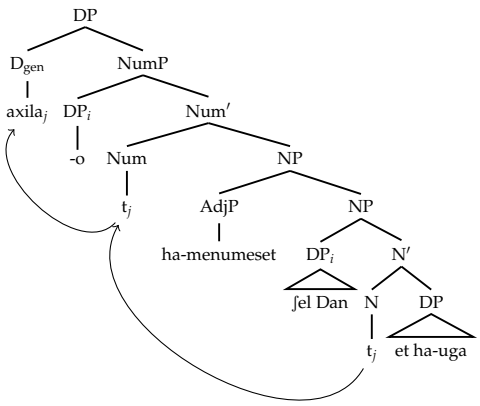
The pronominal clitic in the doubled CS is assumed to be generated as a pronominal element in the spec position of NumP. Here, as opposed to (19), the clitic is a pleonastic pronoun which acquires its definiteness from the element in the spec position of NP, with which it is co-indexed. The full noun phrase subject moves to the spec position of NumP. The derivation of the doubled CS in Modern Hebrew is given in (20).

(20) Doubled CS Structure and Derivation Modern Hebrew (Ritter 1991)

a. **axilat-o ha-menumeset**
eating.constr.his the.polite
ʃel Dan et ha-uga
of Dan acc the.cake

'*Dan's polite eating of the cake*'

b.



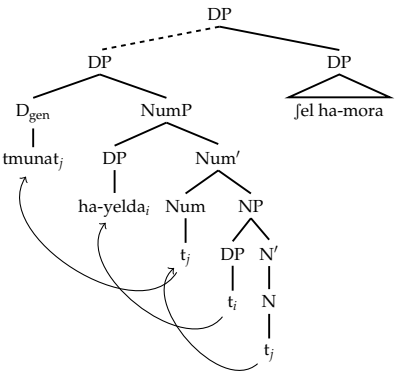
As opposed to being formed simultaneously, as in the doubled CS, the FG and CS may freely combine, one after the other. This is seen in (21), where the dashed line indicates the completed tree structure derivation from (18b).

(21) Combined FG and CS Structure and Derivation Modern Hebrew (Hagstrom 2001)

a. **tmunat ha-yalda ʃel ha-mora**
picture.constr the.girl of the.teacher

'*the teacher's picture of the girl*'

b.



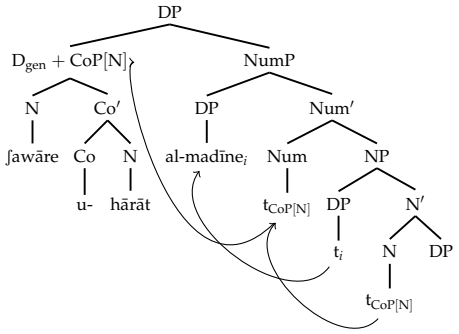
Cowell (1964) describes coordination of leading elements of the CS in Syrian Arabic. Assuming the structure of a Conjunction Phrase CoP (Johannessen 1998), such a CS has the following structure and derivation:

(22) **CS with Leading Element Coordination** Syrian Arabic (Cowell 1964)

a. **ʃawāre u-hārāt al-madīne**
streets and.quarters the.city

'*the streets and quarters of the city*'

b.



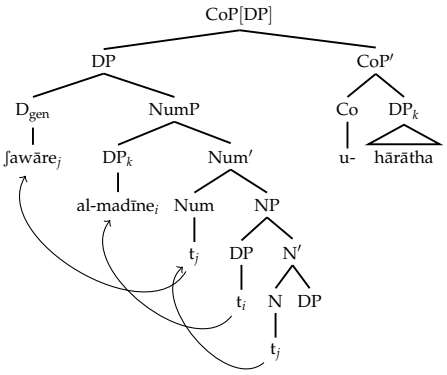
Often, however, such coordinations are avoided. Instead, the use of an anaphoric pronoun is preferred, where the CS DP is in the spec position of the CoP[DP], and the complement of C is a simple CS co-indexed with the subject:

(23) **CS with Anaphoric Pronoun** Syrian Arabic (Cowell 1964)

a. **ʃawāre al-madīne u-hārātha**
streets the.city and.quarters.its

'*the streets of the city and its quarters*'

b.



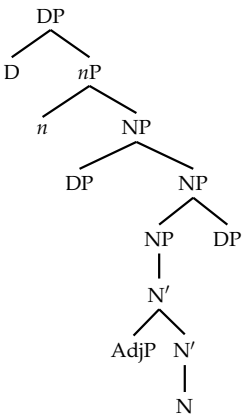
3.2 *Eḥeiθymme* FG and CS

The FG and CS in *Eḥeiθymme* are derived slightly differently than in the Semitic counterparts. Because nouns in *Eḥeiθymme* are not marked for number, but rely on context and other modifiers to indicate such granularity, it is not wholly accurate to describe the intermediate non-lexical category as a Number Phrase; number distinction in *Eḥeiθymme* is typically non-explicit. As such, in the context of *Eḥeiθymme*, the NumP is relabeled as *n*P.

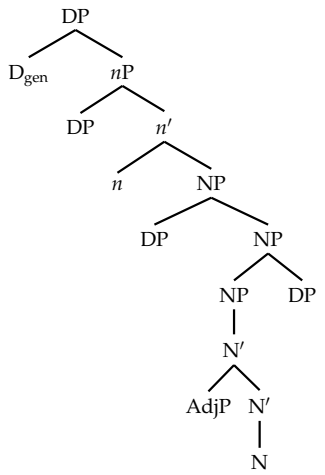
Additionally, the location of the AdjP in *Eḥeiθymme* is relocated to a different adjunct position, and the movement is phrasal instead of head. This respects the order of constituents in the surface forms of the FG and CS, and is a result of the observation that modifiers tend to remain adjacent to the nominal they are modifying, and carry the (in)definite information and state information as well. (24) shows the tree structures prior to movement for the FG in (24a) and CS in (24b).

(24) D-structure for FG and CS *Eḥeiθymme*

a.



b.



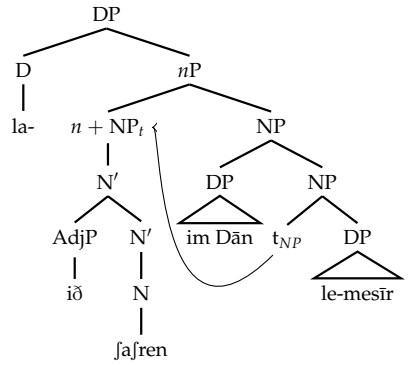
The derivations proceed analagously. If D_{gen} is used, then the NP moves through *n* to D and receives marking for the construct state, and the subject DP moves to the spec position of *n*P where it receives case from the D_{gen}. If a different D is used, then the NP moves only as far as *n*, and the subject DP is assigned case from the inserted case marker *im-*. As in the Semitic description, D_{gen} is not inherently definite; the definite feature is acquired via Spec-head agreement with the DP at the derivational level (Ritter 1991).

Therefore, the structures and derivations in *Eḥeiθymme* are given in (25), where the FG is given by (25a) and (25b), and the CS is given by (25c) and (25d).

(25) FG and CS Structure and Derivation *Eḥeiθymme*

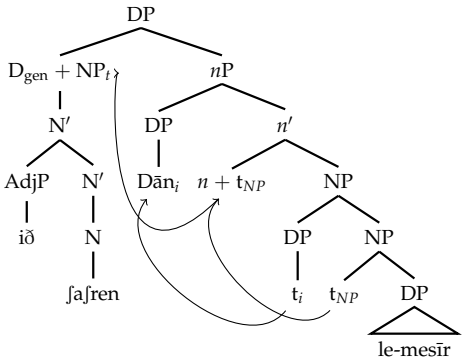
a. **le-ið la-ʃaʃren im dān**
the.polite the.eating of Dan
le-mesīr
the.cake
'*Dan's polite eating of the cake*'

b.



c. **le-iðʼn ʃeʃrenʼn**
the.polite.constr the.eating.constr
dēn le-mesīr
Dan the.cake
'*Dan's polite eating of the cake*'

d.

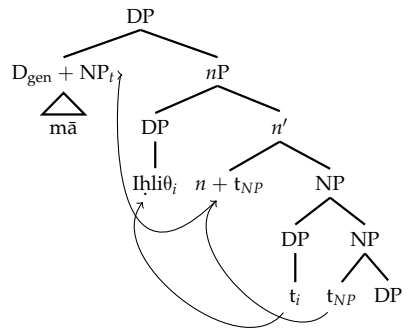


For simple CSs, pronominal subjects may be cliticized to the head noun as in the Modern Hebrew. Full pronouns may be elements of the CS as well.

(26) FG and CS Structure and Derivation *Eḥeiθymme*

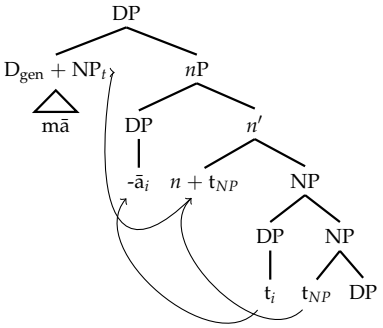
a. **mēn iḥliθ**
house.constr gen.Iḥliθ
'*the house of Iḥliθ, Iḥliθ's house*'

b.



c. **mān-ā**
house.constr.3
'*her house*'

d.



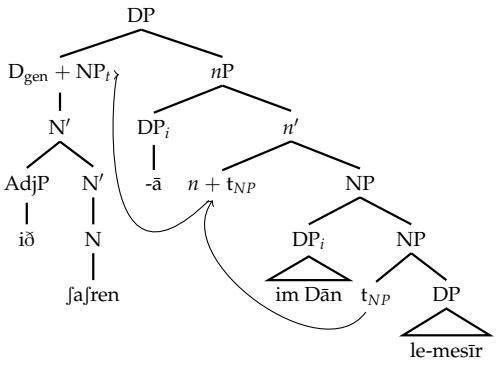
The mechanism of the doubled CS in *Eḥeiθymme* is similar to the Modern Hebrew. The inserted case marker *im-* gives the genitive case to the subject, and the n + DP moves to D_{gen}. The pleonastic pronominal element is generated in the spec position of nP, which receives its case from D_{gen}, which realizes as a clitic on the head of DP. The clitic may level to the entire phrase, including any modifiers, for the effect of emphasis or idiosyncrasy.

(27) Doubled CS Structure and Derivation *Eḥeiθymme*

a. **iðʼn ʃeʃrenʼn-ā im**
polite.constr eating.constr.3 of
dān le-mesīr
Dan the.cake

'*Dan's polite eating of the cake*'

b.



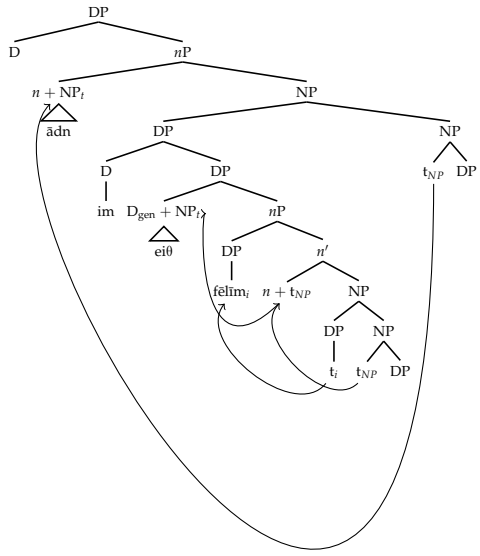
Eḥeiθymme may combine a FG and CS. The resulting DP is always a FG, whereas a combination which would result in a DP that is a CS is deliberately avoided. That is, when a FG and a CS is combined, the nominal elements of the FG may be DPs that are each a CS, but a CS whose either element is a FG is unnatural.

(28) Combined FG and CS Structure and Derivation *Eḥeiθymme*

a. **ādn im eiθʼn**
grammar of language.constr
i-fēlīm
gen.art

'*a grammar of a constructed language*'

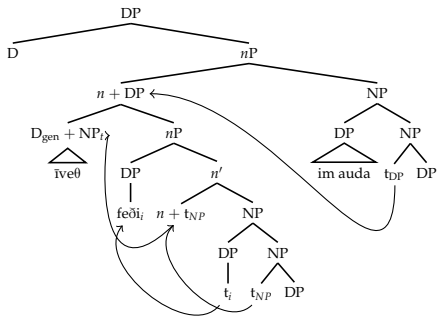
b.



c. **īveθ'n i-feði im**
painting.constr gen.girl of
i-eyðe
gen.teacher

'the teacher's painting of the girl'

d.

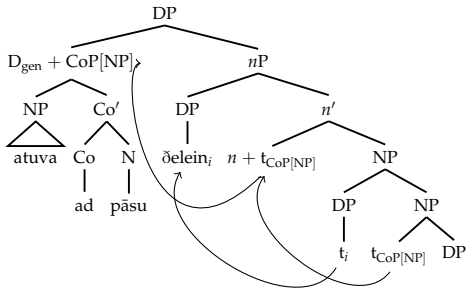


Coordinating the leading element in the CS with a conjunction is similar to the situation in Syrian Arabic. Additionally, there is no preference for the coordinated leading element or for an anaphoric pronominal in *Eḥeiθymme*.

(29) **CS with Coordination** *Eḥeiθymme*

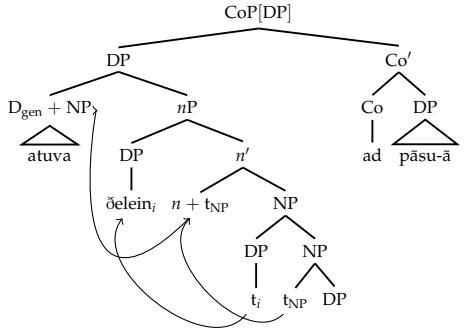
a. **eθyven eð pēsyn i-ðelein**
streets and sections gen.city
'the streets and sections, divisions, quarters of the city'

b.



c. **eθyven i-ðelein ad pāsu-ā**
streets gen.city and sections.3
'the streets of the city and its sections'

d.



4 Semantic Relationships of the Construct State

Cowell (1964) and Watson (1993) describe two ways in which the following element may qualify the leading element in the CS: Identificatory and Classificatory, described in (30):

(30) a. **Identificatory**
   i. If definite, the following element of the CS generally answers the question "which?" or "whose?" applied to the leading element. For example, *la-taur* and *i-θeyr* in (30a-ii) and (30a-iii), respectively, show which or whose cat is referred to.
   ii. **murʃ'n la-taur**
   cat.constr the.boy

'*the boy's cat*'

iii. **myrʃ'n i-θeyr**
cat.constr gen.boy
'*the boy's cat*'

b. **Classificatory**

i. Whether definite or indefinite, the following element of the CS generally answers the question "what kind of...?" applied to the leading element. In (30b-ii) and (30b-iii), *le-ēls* and *i-ēls* indicate what kind of bird is meant (that it is lexicalized as "heron" notwithstanding).

ii. **ferin le-ēls**
bird.constr the.water
'*the water bird, heron*'

iii. **ferin i-ēls**
bird.constr gen.water
'*the water bird, heron*'

Identification is fundamentally a function of defintieness, and classification is fundamentally a function of indefintieness; but since the definiteness of the following element is not always clear (especially if the element is in the explicitly marked genitive), it is not possible to simply equate identificatory terms with definitizable ones. Many CS phrases, when taken out of context, can be understood either as identificatory or classificatory, an ambiguity of which may be seen in (31) and (32).

(31) **Identificatory**

a. **leyl'n le-ðemeið**
child.constr the.school
'*the child(ren) of the school*'

b. **leyl'n i-ðemeið**
child.constr gen.school
'*the child(ren) of the school*'

(32) **Classificatory**

a. **leyl'n le-ðemeið**
child.constr the.school
'*the schoolchild(ren)*'

b. **leyl'n i-ðemeið**
child.constr gen.school
'*the schoolchild(ren)*'

Crucially, the grammatical difference that separates the identificatory CS and the classificatory CS is that, in identificatory constructs, the genitive element, if it is definite, can be pronominalized; whatever the following element refers to may subsequently or alternatively be referred to by a pronoun, either affixed to the leading element or otherwise. This may be seen in (33). Classificatory CSs are not able to be pronominalized in this manner.

(33) **Pronominalization**

a. **myrʃ′n i-θeyr**
cat.constr gen.boy
'the boy's cat'

b. **myrʃ′n īme**
cat.constr his
'his cat'

c. **murʃ′n-ā**
cat.constr.3
'his cat'

The semantic relationships between the elements of the CS are variable, and have been studied and catalogued by various authors (Thackston 1994; Holes 2004; Ryding 2005; Abu Shaqra 2007). Likewise, there are various kinds of semantic relationships[2] determined by the CS in *Eḥeiθymme*, which depend on the element in the construct state: substantive, adjective, partitive, and numerical (cardinal and ordinal). Some prepositional phrases are rendered in the CS as well.

The CS and FG are more or less isomophormic one with the other. Some genitive relationships that can be related by the CS and FG may be represented by some periphrastic construction with a preposition; such will be noted, following the example of Cowell (1964). The CS semantics in *Eḥeiθymme* are in many places dissimilar to their equivalents in the Semitic languages.

4.1 Substantive

Ordinary noun constructs are used to express widely varied relationships of meaning between leading and following elements.

(34) Item from Collective (generally classificatory; periphrasis with *ev-* "of, part/piece of")

a. **irseθ′n i-mesi**
piece.constr gen.bread
'a piece of bread'

b. **irseθ ev i-mesi**
piece of gen.bread
'a piece of bread'

c. **ȳnmēj i-eðð emywwe**
map.constr gen.(world's)people
'a map of the world's people'

d. **ūnmāj ev i-eðð emywwe**
map of gen.(world's)people
'a map of the world's people'

(35) Kind Differentiation (classificatory; periphrasis with various prepositions)

2. As Cowell (1964) disclaims, "The categories of relationship given here are intended to suggest the semantic scope of this construction, and are not meant to constitute a definitive classification or kind of classification."

a. **weryn i-veir**
meat.constr gen.cattle
'*beef*'

b. **waru ev i-veir**
meat of gen.cattle
'*beef*'

c. **beḥr'n i-meðyim**
flower.constr gen.apple
'*apple blossoms*'

d. **bahr ev i-meðyim**
flower of gen.apple
'*apple blossoms*'

(36) Kind and Specific Name (classificatory; no periphrasis)

a. **ferin deir'n esse**
bird.constr land.constr Essa
'*a cormorant, bird of the land of Essa*'

b. **ʃeirymmen i-xēn**
raptor gen.rock
'*a roc, raptor of the rocks*'

c. **warm'n deir'n emmej**
berry.constr land.constr Emmej
'*a grape, berry of the land of Emmej*'

d. **seiθ'n deir'n nēn**
tree.constr land.constr Nān
'*a beech tree, tree of the land of Nān*'

(37) Kind and Individual Name (identificatory; no periphrasis)

a. **tenīr'n imer**
lake.constr Imer
'*Imer's Lake, Sea of Imer, The Sunken Sea*'

b. **deir'n emren**
land.constr Amran
'*The Land of Amran*'

c. **ēnd'n eḥðeneilymme**
wisdom.constr Eḥðeneilymme
'*The Morality, the Wisdom of Eḥðeneilymme, the Wisdom of the (Spirit) of the City*'

d. **teyl'n i-θenīr**
word.constr gen.lake
'*the word "lake"*'

There are some cases in which the individual name is originally composed of an adjective modifying the noun. The adjective then became less strictly descriptive, and more a name, and so assumed the CS formation, and losing the article in the process.

(38) a. **la-lalmenu le-θenīr**
the.harmful the.lake
'*the harmful lake, the wounding lake*"

b. **lelmenyn i-θenīr**
harmful.constr gen.lake
'*The Lalmenu Sea*"

c. **la-āmu le-ðeir**
the.airy the.land
'*the airy lands, the open lands*'

d. **ēmyn i-ðeir**
airy.constr gen.land
'*The Airy Lands, the Wide Lands*'

(39) Relation and Related Object (generally classificatory; periphrasis with *u-* "for")

a. **līw'n i-θeyr**
name.constr boy
'*the boy's name*'

b. **le-līw u i-θeyr**
the.name of gen.boy
'*the boy's name*'

c. **erjeð'n i-ðereið**
ruler.constr gen.kingdom
'*the ruler of the kingdom*'

d. **la-arjad u i-ðereið**
the.ruler of gen.kingdom
'*the ruler of the kingdom*'

(40) Associated Object and its Association (generally identificatory; periphrasis with *u-* "for")

a. **mēn i-eneð**
house.constr scholar
'*a scholar's house*'

b. **mā u i-eneð**
house for gen.scholar
'*a scholar's house*'

c. ð**elein'n i-eive**
city.constr gen.sage
'*the city of the sage*'

d. **le-ðelein u i-eive**
the.city for gen.sage
'*the city of the sage*'

4.2 Adjective

An adjective may form with nouns as CS nominals; such constructions are classificatory. Additionally, unlike substantive constructions, leading term adjectives may be marked for definiteness.

(41) Adjective (classificatory; no periphrasis)

a. With indefinite first element:

i. e**ðrew'n i-ēn**
dull.constr gen.eyes
'*unintelligent, an intelligent person*'

ii. ð**eʃemlyn i-ēn**
bright.constr gen.eyes
'*intelligent, an intelligent person*'

iii. **inril'n i-sēθ**
lacking.constr gen.health
'*sickly, a sickly person*'

iv. **inril'n i-xextem**
lacking.constr gen.manners
'*rude, a rude person*'

v. **erwen'n i-ēm**
light.constr gen.breath
'*likeable, pleasant, a likeable person*'

vi. **esdix'n i-ēm**
heavy.constr gen.breath
'*unlikeable, unpleasant, an unlikeable person*'

b. With definite first element:

i. **le-eðrew'n i-ēn**
the.dull.constr gen.eyes
'*unintelligent, the intelligent person*'

ii. **le-ðeʃemlyn i-ēn**
the.bright.constr gen.eyes
'*intelligent, the intelligent person*'

iii. **le-inril'n i-sēθ**
the.lacking.constr gen.health
'*sickly, the sickly person*'

iv. **le-inril'n i-xextem**
the.lacking.constr gen.manners
'*rude, a rude person*'

v. **le-erwen'n i-ēm**
the.light.constr gen.breath
'*likeable, pleasant, the likeable person*'

vi. **le-esdix'n i-ēm**
the.heavy.constr gen.breath
'unlikeable, unpleasant, the unlikeable person'

4.3 Partitive

In a CS where the first element is a partitive, then that partitive tends to be subordinate to the element with which it is in construction in the CS. Typically, these include nouns designating indefinite proportions and quantities.

Of the available items denoting partitivity, some are used as identificatory constructions, of which are generally definite, some are used as classificatory constructions, which tend to generally be indefinite, and some that may be used as either.

(42) a. **Partitive; identificatory; generally definite**
   i. *ifrej* "most"
   ii. *iɣrem* "rest, remainder"
   iii. *fal* "whole"
   b. **Partitive; classificatory; generally indefinite**
   i. *gān* "some, a"
   ii. *wānu* "a few, a little"
   c. **Partitive; identificatory or classificatory; definite or indefinite**
   i. *ʃem* "a pair"
   ii. *bāl* "a single"
   iii. *kēj* "a part"
   iv. *mēl* "all"

(43) a. **Partitive; identificatory; generally definite**

   i. **ifrej'n i-θelm**
   most.constr gen.tree
   'most of the trees'
   ii. **iɣrem'n i-ðeleinywwe**
   rest.constr gen.inhabitants
   'rest of the inhabitants (of the city)'
   iii. **fel'n i-veil**
   whole.constr gen.day
   'whole day'

   b. **Partitive; classificatory; generally indefinite**

   i. **gēn'n i-vevreð**
   some.constr gen.songs
   'some songs'
   ii. **wēnyn i-veil**
   few.constr gen.day
   'a few days'

c. **Partitive; identificatory or classificatory; definite or indefinite**

i. **ʃem'n i-membel**
pair.constr gen.shoe
'*a pair of shoes*'

ii. **bēl'n i-veḥr**
single.constr gen.flower
'*a single flower*'

iii. **kēj'n i-eðyxen**
part.constr gen.box
'*part of the box*'

iv. **mēl'n i-jens**
all.constr gen.river
'*all the rivers*'

4.4 Numerical

Both cardinal and ordinal numbers may be built in the CS, and each may be either definite or indefinite. As in the adjective CS, the cardinal and ordinal may be explicitly marked for definiteness.

(44) Numerical CS (identificatory; no periphrasis)

a. With indefinite first element:

i. **myn'n i-ðeln**
one.constr gen.mountain
'*one mountain*'

ii. **leyr'n i-neyn**
seven.constr gen.fish
'*seven fish*'

iii. **mynyn i-veḥn**
first.constr gen.dog
'*first dog*'

iv. **leyryn i-ineθ**
seventh.constr gen.gift
'*seventh gift*'

b. With definite first element:

i. **le-myn'n i-ēn**
the.one.constr gen.mountain
'*the one mountain*'

ii. **le-leyr'n i-neyn**
the.seven.constr gen.fish
'*the seven fish*'

iii. **le-mynyn i-veḥn**
the.first.constr gen.dog
'*the first dog*'

iv. **le-leyryn i-ineθ**
the.seventh.constr gen.gift
'*the seventh gift*'

4.5 Prepositional Phrase

In the framework treated by Svenonius (2007, 2010), Asbury (2008), and Saeed (2014), it is argued that phrases and clauses, in particular, Adpositional Phrases, have complex rich internal structures. Such structures can be magnified, or broken down, into several functional elements. The prepostions that occur in the CS in *Eḥeiθymme* are specific internal constituents of the PP. Because leading elements are derived from nominals, a specific subset of spatial prepositions are put into the construct state.

(45) Prepositional Phrase CS (identificatory or classificatory)

a. **n weðin i-mē**
in middle.constr gen.house
'*in the middle of house*'

b. **al ʃen'n i-ðeðīm**
at bottom.constr gen.well
'*at bottom of well*'

c. **niw desin i-xeis**
under outside.constr gen.arch
'*under outside of arch*'

d. **bat weðin i-ðelein**
through middle gen.city
'*through middle of city*'

e. **deis'n i-ðeleinywwe**
among.constr gen.inhabitants
'*among the people of the city*'

If the object of the preposition is not phonologically explicit, then the preposition which is not in the construct state may be inflected for person, apropriately agreeing with that object of the preposition. This phenomena of inflection of prepositions is a hallmark of the Celtic languages; see Hickey (1985), Roberts (2005), Borsley, Tallerman, and Willis (2007), and Brennan (2008, 2009)

(46) Prepositional Phrase CS with inflected preposition (identificatory or classificatory)

a. **n-ā weðin**
in.3 middle.constr
'*in the middle of it*'

b. **al-ā ʃen'n**
at.3 bottom.constr
'*at bottom of it*'

c. **niw-ē desin**
under.3 outside.constr
'*under outside of it*'

d. **bat-ā weðin**
through.3 middle
'*through middle of it*'

e. **im-ē deis'n**
of.3 among.constr
'*among it*'

(46e) shows the insertion of the dummy preposition *im-*, which is needed when there is no overt object of the preposition, and the preposition in the construct state

cannot take that agreement marker. This is because agreement of prepositions is an upward movement of the outermost preposition, to collect person information; the inflection of the construct state stops that nominal from further movement, so something must collect personal information of the phonologically unrealized object of the preposition. This agreement is realized with a dummy insertion of the prepostion *im-*. A more detailed presentation of this process is forthcoming by the author.

5 Historical Development of the Construct State

A diachronic investigation into the CS in the Semitic languages is not readily available to the author. Hasselbach (2013) provides an overview of the case system in the Semitic languages, with particular attention to the historicity and derivation; she does not, however, venture into the historical derivation of the CS itself.

The derivation presented here for the *Eḥeiθymme* CS follows a direct lineage from the proto-language through a single branch of the language family to the language as is presented in this paper. Both the formulation of the CS and the derivation of the words represented themselves therein will be given. This derivation tracks one thousand eight-hundred years of developmental history.

The reconstructed proto-language did not have explicit marking for (in)definiteness, and nor did it have an explicit case marking for adnominal relationships. The marking for the genitive, either definite or indefinite, was a later development born of concatenating preposition-like particles and deictic markers. The proto-language marked a reletionship between nouns via an adnominal particle, **EN**, which linked two nominal elements, and formed general relationships of possession, quality, or description. It is from this particle that the construct state marking is derived. This marking survives only in the construct state explicitly, and few traces of it remain elsewhere.

(47) **KARANĀ EN FADAJA**
rock adnominal girl
'*rock of girl*' Proto-language

From the proto-language, for any derivation, a vowel loss occurred, dependant on the presence and kind of affixation. For (48), the presence of the nominal suffixes **Ā** and **A** from (47) caused the loss of the second syllable.

(48) **KARNĀ EN FADJA**
rock adnominal girl
'*rock of girl*' Loss of vowel

If the word had a final long vowel, then that vowel length shifted from its initial place to the preceding vowel sound.

(49) **KĀRNA EN FADJA**
rock adnominal girl
'rock of girl' Shift of vowel length

The final short vowel **A** is lost in an open ultimate syllable.

(50) **KĀRN EN FADJ**
rock adnominal girl
'rock of girl' Loss of final short vowel **A**

In all places, if the rhotic followed a long vowel, then that rhotic was deleted. This loss of rhoticity, both in the diachronic context and in the synchronic context, is inconsistent across even closely related branches of the language family. Rhoticity, presence or lack thereof, is a shibboleth.

(51) **KĀN EN FADJ**
rock adnominal girl
'rock of girl' Deletion of rhotic following a long vowel

The changing of the semi-vowel into a vowel in word-final contexts is widespread diachronically and synchronically.

(52) **KĀN EN FADI**
rock adnominal girl
'rock of girl' Final semi-vowel goes to vowel

In all phonological contexts, the **E** (a schwa, for the sake of diachronic derivation; whether the sound was a schwa at all is unknown) was lost. In languages which kept this sound, it became any of /ɛ, e, a, ɑ/, always unstressed; in the family branch to which *Eḥeiθymme* belongs, the **E** sound was lost entirely. The adnominal particle then affixed to the leading element.

(53) **KĀN'N FADI**
rock.constr girl
'rock of girl' Loss of schwa vowel

At this stage, the productive formation of genitival relationships was accomplished via periphrasis. There were two options available to formulate this relationship: the adnominal particles **IM** or **I**, the former of which was bare if its complement was an explicit nominal or inflected for person if the complement was a pronoun (which then dropped), the latter of which was used with the distal deictic marker **ĪH**. The explicit use of a particle with the distal deictic marker simplified to **I**, which grammaticalized as the (in)definite genitive. This became highly productive, and began to be used with all adnominal constructions, such as prepositions, the FG, and the CS.

(54) **KĀN'N I FADI**
rock.constr of girl
'rock of girl' Introduction of explicit genitive

This new genitive marker, identical for both the definite and indefinite, attached to the word in the same way that the definite article does, which encodes case information.

(55) **KĀN'N I-FADI**
rock.constr gen.girl
'rock of girl' Affixation of genitive

Finally, vowel harmony and consonant mutations occured, yielding the form of the CS in *Eḥeiθymme*.

(56) **KĒN'N I-FEðI**
rock.constr gen.girl
'rock of girl' Appropriate sound change

The optional marking of an explicit genitive is not represented in the historical derivation; it is an innovation or idiosyncratism of the latest stage in the language's evolution.

(57) a. **kēn'n i-feði**
rock.constr gen.girl
'the/a rock of the/a girl'

b. **kēn'n le-feði**
rock.constr the.girl
'the rock of the girl'

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