

# GRAMMAR OF PROTO-LISIAN



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This grammar was made based on the “Conlang Grammar Template” by author J Rain De Jager, released in 2019 under a Creative Commons CC BY 4.0 license, which can be found on <https://www.overleaf.com/latex/templates/conlang-grammar-template/ysvrsjwftmfx>.

# Chapter 1

## Introduction

Proto-Lisian is a conlang serving as the ancestor of a family of languages originating in the midlands of the largest continent in my worldbuilding project with working name of Minglis.

The choice of the name “Proto-Lisian” is admittedly potentially problematic, as the modern-day Lisians are only one of the groups that spawned from the original speakers, and that the most culturally dominant group. Furthermore, Lisians don’t identify by ethnicity but by covenantal religion, and in that framework, there are thousands of Lisians who don’t natively speak any descendant of Proto-Lisian, and thousands of Proto-Lisian-descendant vernacular speakers who are not “Lisians”. However, I make this choice because Proto-Lisian is the ancestor to Classical Lisian, the scriptural, liturgical, and literary language of the Lisians; given this is a worldbuilding project, the choice of name is therefore overtly in service of highlighting the Lisians’ narrative prominence.

I can also be found as u/MinervApollo on Reddit.

### Section 1.1 Introduction to speakers

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore.

Linguistic and anthropological evidence suggests speakers of Proto-Lisian, like some of their modern counterparts, had fishing as a main economic activity and source of food.

### Section 1.2 Theoretical framework

I am heavily indebted to Payne (1997) in the methodology for the layout of the grammar and what aspects of morphosyntax to pay attention to.

I adopt a Lexical Functional approach to morphosyntax, for which I refer to Dalrymple (2023) as a general overview. For the annotated phrase structure rules and phrase structure trees, I use Lowe & Lovestrand (2020)'s Minimal Phrase Structure. I will also be making use of constructions as templates following Asudeh et al. (2013)'s proposal. For these constructions, I assume non-compositional meaning to be distributed among all the lexical entries generated by the lexicon, but for objections to this treatment, see Findlay (2023).

About information structure, I will not go beyond my limits, adopting wholesale both Gundel et al. (1993)'s givenness hierarchy and Dalrymple & Nikolaeva (2011, section 4.3)'s four-way distinction in information structure roles at s-structure and i-structure (through the features GIV and DF, respectively) as sufficient for my description. A synthesis framework for information structure granularity is theoretically appropriate but beyond the scope of my knowledge; I suggest Dalrymple et al. (2019, Ch. 10) for a deeper discussion.

Finally, I adopt Glue semantics account of argument structure, as analyzed in Asudeh & Giorgolo (2012) and reviewed in Findlay et al. (2023, Chapter 6, Section 6.3).

## Section 1.3 Structure of this grammar

Most sections of this document are divided into two parts: a main, descriptive section, which should be relatively accessible to anyone familiar with conlanging or linguistic conventions like the International Phonetic Alphabet (IPA) and the Leipzig Glossing Rules; and a “Theoretical analysis” subsection, where I go in depth into the formal analysis using the theoretical framework given above. This latter subsection is not required or expected to be read by the casual peruser and serves mainly as a playground to test my own theoretical understanding. However, those

interested in the topic are welcome and invited to engage with it, for which I will devote a chapter to introduce the key concepts.

In Section 2, I give an overview of the phonological inventory of Proto-Lisian and the rules of word formation, otherwise known as phonotactics. It also introduces the orthography used throughout the rest of the grammar.

In Section 3, the main section of this grammar, I go not only into word order but explore the main constructions used in the language to express a wide range of meanings.

## Chapter 2

# Phonology

### Section 2.1 Consonants

	labial	alveolar	palatal	velar
Stop	p b	t d	k g	
Nasal	m	n		ŋ
Trill		r		
Fricative	f	s		
Approximant	w		j	(w)
Lateral		l		

Orthographic note: /ŋ/ is romanized as <ng>. As we will see in the phonotactics section, /ŋ/ can never be an onset consonant, so word-medial <ng> is always interpreted as /ŋg/.

### Section 2.2 Vowels

	Front	Near-front	Near-back	Back
High	i			u
Near-high	e	ɪ	ʊ	o
Near-low	ɛ			ɔ
Low	a			ɑ

Orthographic note: the vowels /ɪ ɛ ɑ ɔ ʊ/ are written <ì è à ò ù> respectively.

## Section 2.3 Phonotactics

### 2.3.1 Syllable construction

Proto-Lisian syllables have the structure (C)V(C). Hiatus is allowed. /ŋ/ is disallowed in the onset.

### 2.3.2 Vowel harmony

The vowels are organized in a bijection between +ATR and -ATR vowels, as follows:

+ATR	-ATR
i	ɪ
e	ɛ
a	ɑ
o	ɔ
u	ʊ

A noted constraint involving vowel harmony is that all of a root's vowels must have the same [ATR] value.

Vowel harmony is both progressive and regressive, extending from the root to both prefixes and suffixes. For instance, \**gògja* “didn’t cough” is not valid, but *gògjà* is. Since at least in Proto-Lisian there is a one-to-one correspondence between vowels, I will adopt the notation of using the capital letter in broad transcription to refer to either value. In the case of the previous example, we could say the negative suffix is /jA/.

Compounding represents the main restriction on harmony; if two roots are compounded, their respective [ATR] values are conserved; therefore, if the values are different, prefixes would agree in [ATR] with the root closest to

the start of the word, while suffixes with the root closest to the end. For example, you can see this in the following

- (1) kè-mùg-edi-a  
NPST-eat-fish-REAL  
Eats fish (lit. fish-eats)

In example 1, we see that the nonpast prefix /k(E)-/ matches the [-ATR] of *mùg*, but the mood vowel /A/ matches the [+ATR] of *edi*.



## Chapter 3

# Syntax

### Section 3.1 Introduction

Proto-Lisian is broadly head-initial and has notably little inflectional morphology on non-verbs. Because of this, I describe constructions first and leave descriptions of the morphology, including the verbal paradigm and derivational morphology, to a later section.

### Section 3.2 Basic order

Basic word order is AVP/SV (aka SVO; I am using Payne (1997, p. 75)'s terminology). Thus, a prototypical transitive sentence looks something like:

- (2) Kùng      gugesà      ìf  
woman see.PST.PFV man  
The/a woman saw the/a man.

Similarly, an intransitive sentence can look like

- (3) Lis              gùgògàjà  
Lis (name) cough.PST.PFV.NEG  
Lis didn't cough.

#### 3.2.1 Theoretical analysis

The former examples suggest the following phrase structure rules:

1. 
$$\left[ \begin{array}{cc} N & V \\ (\uparrow \text{SUBJ}) = \downarrow & \uparrow = \downarrow \\ @\text{EXT} & @\text{XHEAD} \\ (\hat{*}_{\lambda} \text{CAT}) = I & \end{array} \right]$$

2. [    V            (N)    ]  
       ↑ = ↓    (↑ OBJ) = ↓  
       @XHEAD   @INT

The annotation ( $\hat{*}_\lambda$  CAT) = I is adopted based on the analysis of topicalization and copulae, see below.

## Section 3.3 Nominal and clausal modifiers

### 3.3.1 Nominal modifiers

(For predicative adjectives, see Section 3.6.5)

Nominal modifiers, which I will call adjectives (ADJ) here, justifying its inclusion as its own category later, follow their antecedents, as in example 4:

(4) tòb        udung  
       house   big  
       (A/the) big house

(5) kung        ibu        kufunga  
       woman   small   breathe.PST.REAL  
       The small woman is breathing.

What in English we would call “adjectives” are hard to distinguish from nouns in Proto-Lisian, given its poor morphology. However, there is one easy test for establishing that adjectives are indeed their own class; namely, the cannot appear in argument positions without the nominalizing particle *te*.

### 3.3.2 Theoretical analysis

This licenses the following phrase structure rules

$$\begin{array}{c} [ \quad N \quad \quad A^* \quad ] \\ \uparrow = \downarrow \quad \downarrow \in (\uparrow \text{ADJ}) \\ @XHEAD \quad @EXT \end{array}$$

## Section 3.4 Ditransitive clauses

For verbs of giving, the indirect object is placed after the verb but before the direct object, similar to English sentences like “I gave Miriam a rope”. An equivalent sentence in Proto-Lisian would look like:

- (6) wa      guolebi      Miriam      ludo  
       1SG   give.PST.PFV   Miriam   rope  
       I gave Miriam a rope.

### 3.4.1 Theoretical analysis

This suggests the existence of a PSR as such:

$$\begin{array}{c} 3. \quad [ \quad V \quad \quad N \quad \quad N \quad ] \\ \uparrow = \downarrow \quad (\uparrow \text{OBJ}_\theta) = \downarrow \quad (\uparrow \text{OBJ}) = \downarrow \\ @XHEAD \quad @INT \quad \quad @INT \end{array}$$

## Section 3.5 Topicalization and focus

Proto-Lisian allows for argument topicalization by fronting, allowing it for subjects, direct and oblique objects, and prepositional phrases, as in the following sentences:

- (7) wa      guolebi      Miriam      ludo  
       1SG   give.PST.PFV   Miriam   rope  
       I gave Miriam a rope. (Unmarked or subject-topic)

(8) ludo wa guolebi Miriam  
 rope 1SG give.PST.PFV Miriam

The rope—I gave it to Miriam (Unmarked or subject-topic.)

(9) ning owu ido làrà edi  
 LOC in lake COP.PRS fish

In the lake, there is a fish.

Notably, the only exception seems to be the indirect object of verbs of giving, which may be a strategy to avoid ambiguity in sentences like:

(10) \*Miriam wa guolebi ludo  
 Miriam 1SG give.PST.PFV rope

Miriam—I gave the rope to her. OR The rope—I gave Miriam to it.

It should be noted Proto-Lisian does not seem to have had any passivization mechanism. Instead, topicalization was used to raise objects and obliques to prominence, since phrase structure helps fix other arguments in place.

### 3.5.1 Theoretical analysis

This suggests the following:

$$\begin{array}{c}
 \{N \mid N \mid PP\} \\
 [ \{(\uparrow \text{SUBJ}) = \downarrow \mid (\uparrow \text{OBJ}) = \downarrow \mid \{\uparrow \text{OBJ}_o \mid \uparrow \text{OBJ}_o\} = \downarrow\} \uparrow = \downarrow ] \\
 \text{@EXT} \qquad \qquad \qquad \text{@XHEAD} \\
 (\downarrow_\sigma \text{DF}) = \text{TOPIC}
 \end{array}$$

## Section 3.6 Predicate nominals

Using Payne (1997, Ch. 6)'s typology of which predicates can be called “predicate nominals”, Proto-Lisian has two words which express the whole range of semantics he describes, namely: equative, proper inclusion, locative, predicate adjective, existential, and predicate possessives, those being *làrà* and *già*.

These words are in complementary distribution. *làrà* exclusively appears in present-tense predicates, in sentences like:

- (11) eko   làrà   wèrà  
     Eko   be.PRS   queen  
     Eko is a queen.

While *già* exclusively appears in past-tense predicates, like:

- (12) già        màl  
     be.PST   person  
     There was a person.

Predicates with *làrà* or *già* are negated with the word *mi* ['mi] placed immediately before, as in

- (13) wa    mi   làrà   ìf  
     1SG   NEG   be.PRS   man  
     I am not a man.

We shall now explore the constructions with these copulae in turn.

### 3.6.1 Existence

Perhaps the simplest predicate is one of existence, admitting only one argument, as in the sentence demonstrated previously, here repeated:

- (14) già        màl  
     be.PST   person  
     There was a person.

We observe also sentences such as

- (15) Ira   làrà  
     Ira   be.PRS  
     Ira exists.

Sentences example 14 and example 15 display a variation in word order. This variation is in fact conditioned by information structure. As the translations suggests, sentences of the structure in sentence example 15 predicate the existence of an entity which is given in the Common Ground, which could be interpreted as the topic. In contrast, sentences like example 14 are interpreted as introducing new information: the existence of an entity not in the Common Ground. In other words, the predicate nominal is focused.

From the topic-elision phenomenon described previously, if the argument in example 15 is in fact the topic, we should expect it to be able to be elided, leaving the bare copula as the only phonemic realized item. This is precisely what we observe. In response to a question like *Nu-Lis làrà?* “Does Lis exist?”, assuming Lis to be some sort of supernatural entity, someone can say: example 16:

- (16) làrà  
be.PRS  
(He does) exist.

example 16 is often interpreted as contrastive focus on the existence predication; in other words, it highlights that one of the alternatives (Lis existing) is true (instead of not existing).

As for example 14, it is telling that the argument and the copula switch places under information focus, similar to how verbs and their subjects switch places under focus. For reasons of deeper syntactic analysis, I propose that these are instances of the same phenomenon. If this is the case, sentences like example 15 are unmarked (rarer though they may be due to the semantics), and sentences like example 14 are marked.

### 3.6.2 Equative and proper inclusion

Payne (1997, p. 114) defines proper inclusion as “when a specific entity is asserted to be among the class of items specified in the nominal

predicate”, and equative clauses as “those which assert that a particular entity (the subject of the clause) is identical to the entity specified in the predicate nominal.”

example 11, repeated in example 17, shows us an example of proper inclusion, while the complementary example 18 shows an equative clause.

(17) eko làrà wèrà  
 Eko be.PRS queen  
 Eko is a queen.

(18) wèrà làrà Eko  
 queen be.PRS Eko  
 The queen is Eko.

### 3.6.2.1 Theoretical analysis

example 17 and example 18 allow us to propose the following phrase structure rules:

$$\begin{bmatrix} N & I \\ (\uparrow \text{SUBJ}) = \downarrow & \uparrow = \downarrow \\ @EXT & @XHEAD \end{bmatrix}$$

$$\begin{bmatrix} I & N \\ \uparrow = \downarrow & \uparrow = \downarrow \\ @XHEAD & @INT \end{bmatrix}$$

These PSRs result in the exact same c-structure and f-structure, which properly reflects the syntactic equivalence between the sentences. However, on the semantics, what allows us to conclude example 17 is proper inclusive, while example 18 is equative, is a close observation of information structure. Payne (1997, p. 114) keenly observes that, in proper inclusion, “Usually the subject [...] is specific, and the nominal predicate is non-specific,” and this observation helps determine the interpretation of proper inclusion vs equative clauses, as they are otherwise syntactically identical.

Given that Proto-Lisian is topic-fronting, speakers interpret the first element in this copular construction as more given than the latter; i.e., higher in the givenness hierarchy. However, if there is reason to conclude the latter element is higher in the givenness hierarchy, then equation is the only reasonable interpretation.

In example 18, *Eko*, being a proper noun, is assumed to be FAMILIAR, while *wèrà*, is, at most, REFERENTIAL. In contrast, in example 17, *Eko* is still assumed to be FAMILIAR however, since *wèrà* is syntactically lower marked for givenness, it is assumed to merely be TYPE IDENTIFIABLE in other words, *wèrà* is a type set which *Eko* is a proper element of.

However, we must also ensure the formalism correctly identifies when both arguments are TYPE IDENTIFIABLE, as in “A rose is a flower”, for which we will propose the following template:<sup>1</sup>

$$\begin{aligned} @eqtyp := ( \\ ((\uparrow \text{subj})_{\sigma} \text{giv}) = \uparrow_{\sigma} \text{giv} \wedge \\ \uparrow_{\sigma} \text{giv} = \text{type identifiable} \\ ) \end{aligned}$$

In terms of Glue semantics, the proper inclusion reading could be modeled as follows:

$$\begin{aligned} @propincl := ((\uparrow \text{subj})_{\sigma} \text{giv}) > (\uparrow_{\sigma} \text{giv}) \wedge (@eqtyp) \\ \Rightarrow \\ \lambda x \lambda y \lambda e. \text{hold-state}(e, x \in y) : (\uparrow \text{subj})_{\sigma} \multimap (\uparrow \text{pred})_{\sigma} \multimap \uparrow_{\sigma} \end{aligned}$$

While the equative reading has the meaning:

$$\begin{aligned} @eqtyp := ((\uparrow \text{subj})_{\sigma} \text{giv}) \leq (\uparrow_{\sigma} \text{giv}) \wedge \neg(@eqtyp) \\ \Rightarrow \\ \lambda x \lambda y \lambda e. \text{hold-state}(e, x = y) : (\uparrow \text{subj})_{\sigma} \multimap (\uparrow \text{pred})_{\sigma} \multimap \uparrow_{\sigma} \end{aligned}$$

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<sup>1</sup>Current limitations in Typst, the software used to prepare this document, make it hard to typeset small capitals in math contexts, so all attributes and values show up as lowercase. Forgive any confusion.



Since we adopt event semantics, we must introduce an event variable that other semantic elements (like tense) can interact with. For this purpose, we represent the relation as “holding” or remaining true during the “event”  $e$  of being.

These meaning constructors will be selected by the lexicon based on the information structure givenness hierarchy relation between the two arguments. example 17 can then be described the following lexical entries:

Eko N ( $\uparrow$  PRED) = ‘Eko’

( $\downarrow_\sigma$  DF) = TOPIC

( $\downarrow_\sigma$  GIV) = FAMILIAR

$[Eko : \uparrow_\sigma] \in (\uparrow_{\sigma_L}(\uparrow_\sigma df)) \wedge (\uparrow_{\sigma_L}(\uparrow_\sigma giv))$

wèrà N ( $\uparrow$  PRED) = ‘queen’

( $\downarrow_\sigma$  DF) = FOCUS

( $\downarrow_\sigma$  GIV) = TYPE IDENTIFIABLE

$[QUEENS : \uparrow_\sigma] \in (\uparrow_{\sigma_L}(\uparrow_\sigma df)) \wedge (\uparrow_{\sigma_L}(\uparrow_\sigma giv))$

làrà I ( $\uparrow$  T) = PRS

{@propincl | @eqtv}

### 3.6.3 Locative

Location & direction through verbs “come/go”, *ning* “sit” (LOC), *uri* “cross” (TRANSL).

(19)

- *owu* “in”
- *nung* “front”
- *atu* “on (top)”
- *gàbù* “bottom”
- *mèk* “behind”
- (*ground*) “below”

- (sky) “above”

Notes: Inspired by Akhvakh

### 3.6.4 Theoretical analysis

We’ll represent the copula by the category I, assuming that the predication is the predicated noun/adjective/locative and the copula only supplies functional information (namely, tense, aspect, mood, and polarity).

This suggests the following phrase structure rules:

$$\left[ \begin{array}{cc} N & I \\ \uparrow \text{SUBJ} = \downarrow & \uparrow = \downarrow \\ @EXT & @XHEAD \end{array} \right]$$

( $\uparrow_{\sigma}$  DF) = TOPIC

$$\left[ \begin{array}{cc} I & N \\ \uparrow = \downarrow & \uparrow = \downarrow \\ @XHEAD & @INT \end{array} \right]$$

$$\left[ \begin{array}{cc} I & \{N \mid A \mid PP\} \\ \uparrow = \downarrow & \uparrow = \downarrow \\ @XHEAD & @INT \end{array} \right]$$

### 3.6.5 Predicate adjectives

## Section 3.7 Noun incorporation

Noun incorporation (NI) is a construction whereby “a N stem is compounded with a V stem to yield a larger, derived V stem” (Mithun, 1984, p. 1). It is similar to compounds such as “babysitting” and “mountain-climbing” in English, although noun incorporation is a much more systematic and productive process. Here I adopt Mithun (1984)’s four-way typology of NI which, in the words of Whimemsz as preserved in Lichen the Fictioneer (2021) “is probably close enough to the truth that it can be extremely useful

to conlangers.” It certainly is enough to explain phenomena in Proto-Lisian (of course, causation is in the opposite direction).

### 3.7.1 Type I Noun Incorporation

Type I NI is simple lexical compounding, where “The compound is more than a description; it is the name of an institutionalized activity or state. The [incorporated noun] loses its individual salience both semantically and syntactically. It no longer refers to a specific entity; instead, it simply narrows the scope of the V” (Mithun, 1984, p. 856).

Proto-Lisian, demonstrating its consistent head initialness, has compounds like the following:

(20) -rum-akep-  
drink-mead

To drink (as in drink alcohol) (lit. “drink mead”)

(21) Eko kù-mùg-edi-a  
Eko NPST-eat-fish-REAL

Eko is eating fish. / Eko eats fish.

To demonstrate the aforementioned distinction between noun incorporation and a straight sentence, compare example 21 with example 22:

(22) Eko kù-mùg-à edi  
Eko NPST-eat-REAL.IPFV fish

Eko is eating a fish.

In example 22, Eko is eating a specific fish, or a whole fish; in example 21, there is no specification as to how many or how much fish she is eating, or indeed if eating fish is instead a regular activity and not an instantiation of such.

Mithun notes “Since [incorporated nouns] do not refer to specific entities, these constructions tend to be used in contexts without specific, individuated patients. They may be generic statements; or descriptions of on-going activities, in which a patient has been incompletely affected; or habitual activities...”

Indeed, Proto-Lisian is very productive with these kinds of meanings; unlike Mithun’s earlier suggestion, the activity doesn’t have to be institutionalized at all.

### 3.7.2 Type II Noun Incorporation

instrumental

- (23) Èbèr wu-wi-ludo-i                      ìf  
Èbèr PFV-tie.PFV-rope-REAL man  
Èbèr tied the/a man with a rope.

### 3.7.3 Theoretical analysis

Noun incorporation, especially type II NI, presents a special challenge to a theory like Lexical Functional Grammar, because a strongly held assumption of the theory is that syntax doesn’t have access to the inside of words, also known as “strong lexicalism.” Mithun, starting her abstract, calls NI “perhaps the most nearly syntactic of all morphological processes,” due to its heavy modifications to verbal valency and semantics. In fact, LFG equipped with only c-structure and f-structure may not be able to capture the phenomenon properly.

This is one area where the strength of Asudeh & Giorgolo (2012)’s proposal shines through. With s-structure concerned with capturing the actual meaning intended to be conveyed, f-structure can be allowed to do its job capturing functional-syntactic information.

Specifically, we can propose that the lexicon, which is generative in its own right, actually composes the meanings of the N and the V into one lexical

entry with the appropriate adjusted valency. This distinguishes, for example, the following (for simplicity, we ignore information structure and assume progressive aspect):

kùmùgà V ( $\uparrow$  PRED) = ‘eat’

@PRESENT

@PROGRESSIVE

$\lambda x \lambda y \lambda e. \text{eat}(e) \wedge \text{agent}(e, x) \wedge \text{patient}(e, y) :$   
 $(\uparrow \text{subj})_\sigma \multimap (\uparrow \text{obj})_\sigma \multimap (\uparrow_\sigma \text{event}) \multimap \uparrow_\sigma$

edi N ( $\uparrow$  PRED) = ‘eat’

$(\uparrow_\sigma \text{GIV}) \geq \text{REFERENTIAL}$

fish :  $\uparrow_\sigma$

And:

kùmùgedia V ( $\uparrow$  PRED) = ‘eat-fish’

@PRESENT

@PROGRESSIVE

$\lambda x \lambda y \lambda e. \text{eat}(e) \wedge \text{agent}(e, x) \wedge \text{patient}(e, \text{fish}) :$   
 $(\uparrow \text{subj})_\sigma \multimap (\uparrow_\sigma \text{event}) \multimap \uparrow_\sigma$

## Section 3.8 Questions

“Within the class of interrogative clauses, languages typically distinguish two subtypes: those for which the information requested is a simple affirmation or disaffirmation (yes or no), and those for which the requested information is a more elaborate locution - a phrase, a proposition, or an entire discourse” (Payne, 1997, p. 295).

### 3.8.1 Polar questions

Polar questions are, in simple terms, “interrogative clauses for which the expected answer is either ‘yes’ or ‘no’” (Payne, 1997, p. 295).

Polar questions are marked by the obligatory clitic *nu-* (glossed as Q for “question”) attached to the first word of the clause, no matter its category. For instance,

- (24) Nu-kurumakepa?  
Q-drink.mead.NPST.REAL  
Do you drink mead?

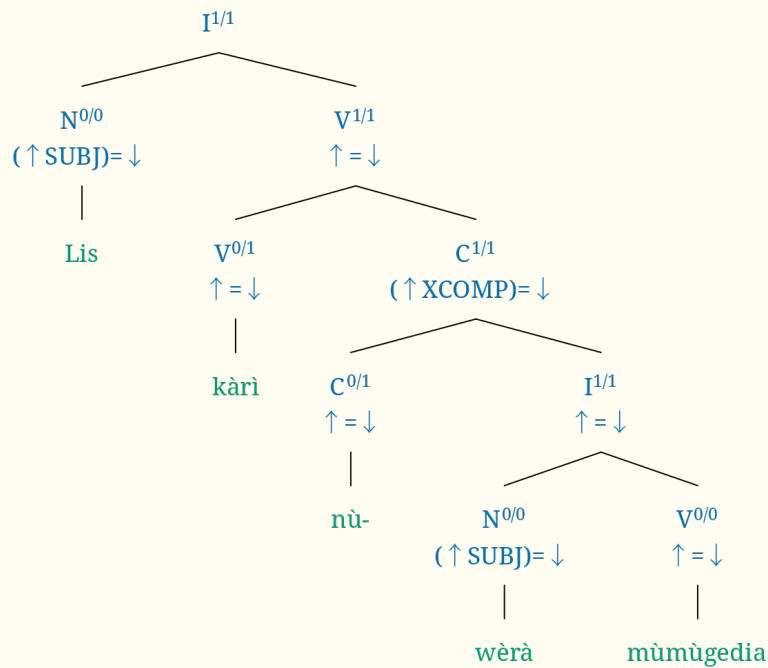
### 3.8.1.1 Indirect polar questions

- (25) Lis kàrì nu=wèrà mùmùgedia  
Lis ask.NPST.REAL Q=queen eat.fish.PFV.PST  
Lis asks if the queen ate fish.

If the syllable after *nu-* has primary or secondary stress, then the clitic must harmonize (eg *nù-kùng*, not *\*nu-kùng*)

### 3.8.1.2 Theoretical analysis

*nu-* being attached as a prefixed clitic to the first word of the sentence conveniently places it in the exact spot we would expect an item of category C; its use as a complementizer for indirect questions only strengthens this idea. example 25 can be easily modeled by the following syntax tree:



Which is licensed by PSRs as follows:

[ C I ]  
 ↑=↓ ↑=↓  
 @XHEAD @INT

[ V C ]  
 ↑=↓ (↑XCOMP)=↓  
 @XHEAD @INT

As we shall see in the section on other complement subordinate clauses, such as indirect quotes, these PSRs are general enough to apply to them as well.

### 3.8.2 Content questions

Payne (1997, p. 299) defines content questions as “Questions that expect a more elaborate response than simply an affirmation or disaffirmation.” In other words, content questions denotationally elicit specific types of information, such as “who” or “what” or “how.” They may often be responded with full sentences.

## Section 3.9 Motion

- Default verb go/come unmarked for direction (cannot stand alone, requires PP or here/there adverb)
- Otherwise, manner in main verb and direction in PP

## Section 3.10 Possession

### 3.10.1 Attributive possession

Assuming that alienable and inalienable possession is in fact “a purely lexical classification of nouns” (Nichols & Bickel, 2013, §3), we can posit the existence of three classes of possessed nouns based on their behavior when serving as objects:

1. Those which behave in the normal attributive possession construction when serving as patients
2. Those which exhibit ditransitive-like behavior
3. Those which participate in types I and II of the noun incorporation system.

### 3.10.2 Predicative possession

## Section 3.11 Subordinate clauses

### 3.11.1 Indirect speech

Complementizer *ro-*



(26) Èbèr kèbèrà ro=kung kèjèbùnà wofu  
Èbèr say.NPST.REAL that=woman gather.NPST.REAL sawdust  
Èbèr says the woman is gathering the sawdust.

## Chapter 4

# Morphology

### Section 4.1 Verbal paradigm

Verbs are marked inflectionally for tense, aspect, mood, and polarity. Additionally, as mentioned previously, verbs may incorporate their objects into their internal structure. Thus, the internal structure of a Proto-Lisian verb may be analyzed with the following slots

[Tense][Aspect][Root][Incorporated Noun][Mood thematic vowel][Polarity]

#### 4.1.1 Tense

- PST is default
- NPST (*k-* with reduplicated vowel, except if starts with vowel in which case )

##### 4.1.1.1 Theoretical analysis

Using intervals, we will assume globally available UT (utterance time) and ET (the time of the relayed event.)

$@PST (P) := \lambda P \exists e. P(e) \wedge \text{before}(ET, UT) : \uparrow_{\sigma} \rightarrow \uparrow_{\sigma}$

#### 4.1.2 Aspect

- PFV (with a slight hint of culminative): Reduplication of first consonant with *-/U/*

#### 4.1.3 Mood

- Thematic vowel */I/* or */A/*, lexically determined. Default is REAL, flipped is IRR.

Proto-Lisian distinguishes two moods: the realis (REAL) and irrealis (IRR). I will refrain from offering any semantic interpretation for these moods here; these are better understood in the syntactic and discourse contexts which trigger them (see above).

The marker for mood is a vowel specified by the root, which can be either /I/ or /A/. These are called the thematic vowels. The vowel a particular root associated with the realis mood is considered unmarked; this vowel can be called the root's thematic vowel. Marking the irrealis case is as simple as substituting the thematic vowel to the opposite; i.e. /I/ to /A/ or /A/ to /I/.

#### 4.1.4 Polarity

- NEG (-jA)

## Chapter 4.1.4

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