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LAKI VERBAL MORPHOSYNTAX

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LAKI VERBAL MORPHOSYNTAX

THESIS

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ABSTRACT OF THESIS

LAKI VERBAL MORPHOSYNTAX

Most western Iranian languages, despite their broad differences, show a common quality when it comes to the verbal agreement of past transitive verbs. Dabir-moghaddam (2013) and Haig (2008) discuss it as a grammaticalized split-agreement to encode S, A, and P, which is sensitive to tense and transitivity, and uses split-ergative constructions for its past transitive verbs. Laki shows vestiges of the same kind of verb-agreement ergativity (Comrie 1978) by using a mixture of affixes and clitics for subject and object marking.

In this thesis, I investigate how the different classes of verbs show agreement using four distinct property classes. Considering the special case of the {3 sg} and using Hopper and Traugott's pattern for the cline of grammaticality (2003), I argue that although Laki has already lost the main part of its ergative constructions, the case of the {3 sg} marking is yet another sign that this language is in the process of absolute de-ergativization and its hybrid alignment system is moving toward morphosyntactic unity. As a formal representation of the Laki data, the final part of the thesis provides a morphosyntactic HPSG analysis of the agreement patterns in Laki, using the grammar of cliticized verb-forms (Miller and Sag 1997).

KEYWORDS: Western Iranian, Laki Language, Inferential-Realizational Morphology, Head-Driven Phrase Structure Grammar, Inflection

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TABLE OF CONTENTS

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LIST OF TABLES

LIST OF FIGURES

Chapter 1

1.1 INTRODUCTION

The Iranian languages are a branch of the Indo-Iranian languages, attested from the time of Old Iranian, and continually spoken in a wide area across Iran, Afghanistan, Pakistan, India, Iraq, Syria, Turkey and Tajikistan with an estimated 150 to 200 million native speakers (Windfuhr 2009). This family is divided into West and East branches according to their descent from two ancestral languages, Old Persian in the west and Avestan in the east, respectively (Haig 2008: 5). Among Western Iranian branch, a further distinction is made between Northwest and Southwest languages which according to Haig (2008) is debatable as these languages involve a continuum of overlapping characteristics.

Laki belongs to the Northwestern branch of the Iranian family of languages and is spoken in western parts of Iran by approximately 150,000 monolinguals according to Gordon (2005), or up to a million people as indicated in Anonby (2005). Some scholars classify Laki as a dialect of Kurdish, while some others consider it as a separate language (Dabir-moghaddam 2013). As Anonby (2005) observes, the southeast edge of the Kurdish cultural complex and the northwest edge of the Lori complex are the boundaries of the Laki area. The concentration is mainly in Lorestan (Luristan) and Ilam provinces and to some extent in Kermanshah province as well (and in adjacent areas in Iraq) (Anonby 2004). By any definition, this language reveals a large number of similarities to Lori and Persian (Gordon 2005). Specific cultural, musical and traditional characteristics make the Lak people an independent tribe with a notable history and status. Aalipour (2005) notes that in addition to Laki speaking tribes, nowadays the term Lak is also used to refer to several villages and regions in Iran, including Ghorveh of Kordestan, Khodabandeh of Sanandaj, a village in Orumieh, Ahar in Ardebil, Qazvin, Aligudarz, Miandoab and Qom (Mirdehghan and Nuri 2010).

Ilam, Kermanshah and Lorestan are the main provinces where Laki is spoken (Anonby 2005):

FIGURE 1. Major Laki-speaking Area according to Anonby (2005)

1.2 THE INTEREST OF THE TOPIC

Most western Iranian languages, despite their broad differences, show a common quality when it comes to the verbal agreement of past transitive verbs. Dabir-moghaddam (2013) and Haig (2008) discuss it as a grammaticalized split-agreement to encode S(ubject), A(gent), and P(atient), which is sensitive to tense and transitivity, and uses split-ergative constructions for its past transitive verbs. As we will see in the following pages, this is also a characteristic of the Laki language.

The point of departure of this study was the realization of the fact that the verbal markers of Laki constitute a complex mixture of affixes and clitics, with possible form-content (morphomic) mismatches.

In this thesis, I investigate how the different classes of verbs show agreement using four distinguished morphomic property classes. The most restricted class includes the {3sg} whose paradigm shows agreement using a verb-final suffix regardless of tense and transitivity. Considering this fact and using Hopper and Traugott's pattern for the

cline of grammaticality (2003), I argue that although Laki has already lost the main part of its ergative constructions, the case of the {3 sg} marking is yet another sign that this language is in the process of absolute de-ergativization and its hybrid alignment system is moving toward morphosyntactic unity. The final part of the thesis attempts to provide a formal representation of Laki verb system using the HPSG framework.

1.3 LITERATURE REVIEW

Although Laki is considered as a single language, the different studies mostly concentrate on the dialects spoken in specific parts of the Laki-speaking area. For the most part, there has been descriptive studies attempting to provide insights into the linguistic and ethnic subgroups of the Lak people (i.e. those of different towns and provinces).

Mohammad-Ebrahimi and Moradkhani (2000) have conducted a study on the verbal suffixes of the Laki dialect spoken in Harsin (of Kermanshah), which is essentially an attempt to provide a classification of the different kinds of suffixes in Harsin Laki in comparison to their equivalent inflections in Persian. They discuss the associated functions of each suffix, and according to that give 8 different classes of suffixes in this dialect of Laki.

In their analysis of pronominal clitics in Laki of Noorabad (of Lorestan), Mirdehghan et al. (2013) argue that in addition to object, oblique and possessive pronominal clitics, Laki does have a group of subject clitics. As they suggest, a wide range of syntactic constituents can act as the host for this last class of clitics, including nouns, adjectives, pronouns, auxiliaries and the stem of the verb. Focusing on this last position, they show the obligatory nature of the clitics whose hosts are verbs and reject the possibility of clitic doubling in this language.

Dabir-moghaddam (2013) focuses mainly on the typological properties of Laki in comparison to other Iranian languages. He gives examples of three possible alignment patterns in Laki (nominative, ergative and tripartite), which I will come back to in my discussion of alignment types in Laki.

Tafakkori and Omidi (2014) try to give an account of the nature of verbal agreement markers in Laki. They discuss three possible scenarios for these markers.

Given their data they hypothesize that these markers are neither ergative nor subject agreement markers, but they are pronouns which can appear in different places.

1.4 DATA AND METHODOLOGY

The data under investigation in this thesis comes from various published and unpublished materials. I tried to keep the transcription of the examples as they have appeared in the original documents, unless they technically could cause some problems. Where the data was in Arabic script, I have transliterated the data using the standard conventions.

The main part of the data has been obtained from native speakers of the language. The two main speakers who helped me with invaluable data were from Aleshtar and Kangaavar. Aleshtar is a city in Lorestan district where Lori is considered as the dominant language (after Persian). Kangaavar is a city in Kermanshah district where the regional dominant languages are Kalhori and Kermashani dialects of Southern Kurdish (Dabir-moghaddam 2013: 724).

I made extensive use of the information contained in various other descriptions of the Laki language, including Dabir-moghaddam (2013), Mirdehghan et al. (2013), Tafakori and Omidi (2014). To a lesser extent, some data has also been extracted from an online (mostly amateur) reference grammar.

Chapter 2

2 AN OVERVIEW OF LAKI CONJUGATION SYSTEM

The purpose of this section is to present a general description of the Laki conjugational system. The first part of this section is devoted to the different ways in which Laki verbs are classified according to their verbal markings. The second part is a paradigm-based approach to identifying the morphosyntactic property sets of Laki verbs. The information and data present here will be the main source of our analysis in the next section.

2.1 LAKI VERBAL MARKERS

The Laki verb system shows mixed paradigms with both synthetic and periphrastic forms; for the purpose of this thesis I call these simple and complex verb forms, respectively. Simple verb forms can generally be classified into two groups: the intransitive past together with all present tense verb forms; and the transitive verb forms of the past tense. The difference between these two groups is the nature of their agreement markers. The first group uses suffixes for showing subject agreement, while the second one uses clitics for showing person and number agreement with the subject. Examples (1) and (2) show the simple indicative past for *veten* 'to say' (transitive) and *cheyen* 'to go' (intransitive), respectively:

(1) vet=et
say.PAST=2SG
(you) said

(2) ch-in
go.PAST-2SG
(you) went

In complex predicates, it is mostly the nonverbal part that is inflected for person and number (by means of pronominal enclitics), while the verbal part invariably exhibits third-person singular morphology, inflecting only with respect to tense and aspect.

(3)	xoash=em	hat	(4)	tasmim=o	gert
	like=1SG	come.PAST.3SG		decision=3PL	take.PAST.3SG
	(I) liked			(They) decided	

(5) Verbal paradigm of simple past of the compound verb *ghach daren* 'bite into sth'

{1 sg simple past}	me qačem da	I bit into it
{2 sg simple past}	to qačet da	You bit into it
{3 sg simple past}	ov qač da	He bit into it
{1 pl simple past}	ima qačmon da	We bit into it
{2 pl simple past}	homa qačton da	You bit into it
{3 pl simple past}	oven qačon da	They bit into it

However, there are clear cases where the non-verbal part of the complex predicate does not inflect for person and number. Consider the following examples:

(6)	o	dowi-e	o	hangtar	zemi
	s/he	ran-3SG	and	fell.3SG	earth
	S/he ran and fell down				

(7)	ima	dowi-men	o	hangt-im-ar	zemi
	we	ran-1PL	and	fell-1PL-ar	earth
	We ran and fell down				

The verb *hagtar zemi* 'fall down (to earth)' is a complex predicate, in which the marker *-im* is attached to the verbal part (7). In this specific case, it is an infix that comes in between the two parts of the stem. The verbal part of *hangtar zemi* is *hangtar*. The {1 pl} marker *-im* appears as an infix, forming the final verb-form *hangtimar*. The sentence in (6) does not follow the same pattern because, as I discuss later in this chapter, {3 sg} of past intransitive Laki verbs are not marked.

Laki also shows instances of endoclitics in the conjugation of simple verbs.

(8) maryam sif-a hezda-y
maryam apple-DEF pick up.PST-3SG
Maryam picked up the apple.

(9) rafik-al=mon sif-al hez=on-da
friend-PL=1PL.POSS apple-PL pick.PST=3PL-up
Our friends picked up the apples.

In (9) the verb takes the {3PL} endoclitic *on*. As we will discuss later, it is not the case for {3SG} marker of the example (8).

The Laki agreement system includes both pronominal enclitics and suffixes. These markers are used in different places in order to mark person and number. Following Mirdehghan et al. (2013), Dabir-moghaddam (2013) and Tafakkori and Omidi (2014), we can classify these agreement markers into three groups, which are distinct with regards to tense, or more specifically their stem (either present or past) and the transitivity of the verb (i.e. whether the verb is transitive or intransitive).[1]

The first group contains a set of markers used in the conjugation of the present stem of the verb (/the present tense):

TABLE 1. Group 1: suffixes for the present tense

1sg	2sg	3sg	1pl	2pl	3pl
em/m	in/n	i/e	im/men	inon/non	en/n

The following paradigm of the verb *froshion* 'to sell' uses the markers of this group to mark the assigned morphosyntactic property sets.

[1] In the following tables, the presented pair of markers are sensitive to the phonological context, so that for example the marker starting with a consonant attaches to a stem ending in a vowel. Regarding the {3 sg},

(10) Verbal paradigm of imperfective (simple) present of the verb *froshion* 'to sell'

{1 sg simple pres}	(me) mafroʃ**em**
{2 sg simple pres}	(to) mafroʃ**in**
{3 sg simple pres}	(ov) mafroʃ**e**
{1 pl simple pres}	(ima) mafroʃ**im**
{2 pl simple pres}	(homa) mafroʃ**inon**
{3 pl simple pres}	(oven) mafroʃ**en**

The markers of the second group are used for the conjugation of the intransitive past tense. The only difference between this group and the previous one is in {3sg} marking, which is not marked here:

TABLE 2. Group 2: suffixes for the intransitive past tense

1sg	2sg	3sg	1pl	2pl	3pl
em/m	in/n	-	im/men	inon/non	en/n

The following paradigm of the verb *haten* 'to come' uses the markers of this group to mark the assigned morphosyntactic property sets.

(11) Verbal paradigm of simple past of the verb *haten* 'to come

{1 sg simple past}	(me) hat**em**
{2 sg simple past}	(to) hat**in**
{3 sg simple past}	(ov) hat
{1 pl simple past}	(ima) hat**imen**
{2 pl simple past}	(homa) hat**inon**
{3 pl simple past}	(oven) hat**en**

And finally, the third group consists of a set of markers used for the conjugation of transitive past tense:

TABLE 3. Group 3: enclitics for the transitive past tense

1sg	2sg	3sg	1pl	2pl	3pl
im/m	it/t	te/e	imon/mon	iton/ton	won/on

The following paradigm of the verb *sazmon* 'to build' uses the markers of this group to mark the assigned morphosyntactic property sets.

(12) Verbal paradigm of simple past of the verb *sazmon* 'to build'

{1 sg simple past}	(me) sazi**m**
{2 sg simple past}	(to) sazi**t**
{3 sg simple past}	(ov) saz**e**
{1 pl simple past}	(ima) sazi**mon**
{2 pl simple past}	(homa) sazi**ton**
{3 pl simple past}	(oven) sazi**on**

This classification is a general description of the possible matches between verb types and verbal markers and it does not include the unexpected cases where there are mismatches between syntacticosemantic and morphological features. For instance the transitive verb *zanesten* 'to know' uses the first group of markers (rather than the third one) for the conjugation of its past tense:

(13) esm a ketov-a ne-ma-zonest-em
name that book-DEF NEG-IMPRF-know.PST-1SG
I didn't know the name of that book.

(14) darbar=e hochi ne-ma-zonest-i
about=3SG nothing NEG-IMPRF-know.PST-3SG
He knew nothing about it.

(15) darbar=e hochi ne-ma-zonest-en
about=3SG nothing NEG-IMPRF-know.PST-3PL
They knew nothing about it.

In other words, it is using the inflectional morphology of the present tense to indicate the semantics of the past. As an instance of deponency, this phenomenon is a kind of morphomic mismatch between form and function, or between morphology and syntax, where the inflectional morphology provides wrong data for the syntax. The following sentence would form the present-tense equivalent of 13, which is different only in verbal stem:

(16) esm a ketov-a ne-ma-zan-em
name that book-DEF NEG-IMPRF-know.PRS-1SG
I don't know the name of that book.

2.2 WHAT ARE THESE MARKERS: CLITICS OR AFFIXES?

Zwicky and Pullum (1983) offer a set of 6 tests for distinguishing clitics from affixes. According to their analysis,

a. Clitics have a low degree of selection with respect to their hosts; affixes a high degree of selection.
b. Affixed words are more likely to have accidental or paradigmatic gaps than host + clitic combinations.
c. Affixed words are more likely to have idiosyncratic shapes than host + clitic combinations.
d. Affixed words are more likely to have idiosyncratic semantics than host + clitic combinations.
e. Syntactic rules can affect affixed words, but not groups of host + clitic(s).
f. Clitics, but not affixes, can be attached to material already containing clitics.

They assume that word-clitic combinability is largely governed by syntactic considerations, while stem-affix combinability is governed by morphological and/or lexical considerations.

Halpern (1998) gives second position clitics a syntactic position preceding the first word, but due to phonological considerations, they metathesize with the first word/constituent; this way he basically treats the second position of certain clitics as a phonological or prosodic phenomenon. For Klavans (1985), clitics are phrasal affixes, and second position clitics are the phrasal equivalent to infixes.

In this part, considering the Zwicky-Pullum (1983) criteria and the discussions presented in Miller and Sag (1997), I examine the degree to which we can consider Laki verb markers as either clitics or affixes. Following Dabir-moghaddam (2013) and Tafakkori and Omidi (2014) and considering the prior discussion on the distribution of these markers, my hypothesis is that the markers of the first and the second group are suffixes, while the members of the third group are clitics. There are 3 criteria I could find relevant to the discussion of Laki markers, as presented below:

i. *Host selectivity: Clitics can exhibit a low degree of selection with respect to their hosts while affixes exhibit a high degree of selection with respect to their stems.*

The markers belonging to the first and second group only attach to the end of the verb. This is expected, as we, following the literature, consider them as suffixes. But markers belonging to the third group have a rather low degree of host selection. Laki past transitive verbs show their markers attached to one of the following components (examples from Dabir-moghaddam 2013):

- direct object

(17) nomæ=mon da æ owen
letter=1PL give.PAST to 3PL
We gave the letter to them

- indirect object

(18) imæ æ-owen=mon nomæ da
3PL to-3PL=1PL letter give.PAST
We gave the letter to them.

- verb (when it starts the sentence)

(19) da=mon æ owen nomæ
give.PAST=1PL to 3PL letter
We gave the letter to them

- nonverbal part of a compound verb

(20) məšuræt=mo kerd-en-a
advise=1PL do.PAST-3PL-PERF
We have advised them

Dabir-moghaddam (2013) claims that the sentences in (17) to (19) all convey one and the same linguistic meaning and their difference lies in their information structure and pragmatic use. That is, the change in clitic position is a result of

rearrangement of the arguments of the sentence for discourse-related purposes, such as adding more emphasis on a specific part of the sentence.

ii. Although the significative absence of the {3 sg} is common in the languages of the world, in the three groups of verb markers presented earlier, the only gap is in the {3 SG} of the second group. And as we saw, the first and the second groups are identical except for this cell. Although this may not be a justifiable measurement, but I consider it as a gap that can let us classify the members of its group as affixes.

iii. Clitic-affix ordering: Clitics can attach to material already containing clitics, but affixes cannot.

As presented in tables 7 and 8 of the next part, clitics are free to attach to suffixes as either subject or object agreement markers, but affixes cannot attach to a verb already containing clitics. This results in having clitics always at the very end of the verb phrase.

There are other measures proposed in the literature for determining the morphological nature of these markers, however they were not as relevant or well-represented in my Laki data. For example, syntactic integrity could have been an interesting case to study; but as far as my data could teach me about the syntactic scope of coordination, for instance, the sentences with both kinds of markers used to behave the same way. As (23) shows, Laki verbal clitics have no wide scope over coordination, which is not exceptional to this language.

(22)

me	ketaw=em	san	o	xown=em
I	book=1SG	buy.PST	and	read.PST=1SG

I bought the book and read it.

2.3 LAKI MORPHOSYNTACTIC PROPERTIES

Focusing on the full inflectional paradigm of seven selected Laki verbs, this chapter provides an introduction to the verbal system of this language.

The verb system of Laki distinguishes three moods (indicative, subjunctive, and imperative) for past and non-past tenses. These characteristics are distributed in singular and plural numbers and over three persons. Moreover, the basis for forming different tense-related distinctions in verb conjugation comes from the presence of two kinds of verbal stems (past and present) which are directly derived from the verb infinitive. Table 4 gives an overall representation of the possible morphosyntactic properties and combinations in Laki.

TABLE 4. The Morphosyntactic Properties of Laki

Moods:	indicative, subjunctive, imperative	
Voices:	active, passive	
Numbers:	singular, plural	
Persons:	1, 2, 3	
Tenses:	past, non-past	
Tense-Aspect combinations in indicative mood:	present-simple, present-progressive	past-simple, past-imperfective, past-progressive, past-perfect, past-precedent

This variety of morphosyntactic properties forms the rather elaborate system of verb conjugation in Laki. The two tables below present the conjugation of one transitive (veten) and one intransitive (cheyen) verb in the simple aspect (Table 5) as well as other possible aspects (Table 6).

TABLE 5. The Conjugation of the Simple Aspect of Veten (to say) and Cheyen (to go)

		VETEN 'to say'	CHEYEN 'to go'
Pst ind	**1 sg**	*vetem*	*cĕm*
	2 sg	*vetet*	*cĭn*
	3 sg	*veti*	*cĕy*
	1 pl	*vetmon*	*cĭmen*
	2 pl	*vetton*	*cĭnon*
	3 pl	*veton*	*cĕn*
Pst subj	**1 sg**	*vetum*	*cŭm*
	2 sg	*vetut*	*cŭn*
	3 sg	*vetute*	*cŭ*
	1 pl	*vetumon*	*cŭmen*
	2 pl	*vetuton*	*cŭnon*
	3 pl	*vetuen*	*cŭn*
Prs ind[2]	**1 sg**	*moʃem*	*macĕm*
	2 sg	*moʃin*	*macĭn*
	3 sg	*moʃi*	*macŭ*
	1 pl	*moʃimen*	*macĭmen*
	2 pl	*moʃinon*	*macĭnon*
	3 pl	*moʃen*	*macĕn*
Prs subj	**1 sg**	*boʃem*	*becĕm*
	2 sg	*boʃin*	*becĭn*
	3 sg	*boʃi*	*becŭ*
	1 pl	*boʃimen*	*becĭmen*
	2 pl	*boʃinon*	*becĭnon*
	3 pl	*boʃen*	*becĕn*
Imp	**sg**	*boʃ*	*becŭ*
	pl	*boʃen*	*becĭnon*
Inf		*veten*	*cĕyen*
Pst stem		*vet*	*cˇ*
Prs stem		*ʃ*	*cˇ*

[2] The simple aspect of the present tense shows a mismatch between its semantics and inflectional morphology. The speakers of Laki consider this set of conjugation as simple present; however, the prefix *mo-* coming before the stem is an imperfective marker (as it is in the past tense).

TABLE 6. The Conjugation of Other Aspects of Veten (to say) and Cheyen (to go)

		VETEN 'to say'	CHEYEN 'to go'
Pst prf ind	**1 sg**	*vetema*	*cĕma*
	2 sg	*veteta*	*cĭna*
	3 sg	*veteyasi*	*cĕya*
	1 pl	*vetemona*	*cĭmona*
	2 pl	*vetetona*	*cĭnoona*
	3 pl	*vetona*	*cĕna*
Pst prec ind	**1 sg**	*veum*	*cŭm*
	2 sg	*vetut*	*cŭn*
	3 sg	*vetu*	*cŭ*
	1 pl	*vetumon*	*cĭmen*
	2 pl	*vetuton*	*cŭnon*
	3 pl	*vetun*	*cŭn*
Pst imp ind	**1 sg**	*mo-otem*	*macў̆am*
	2 sg	*mo-otet*	*macĕyain*
	3 sg	*mo-otei*	*macĕya*
	1 pl	*mo-otmon*	*macў̆aimen*
	2 pl	*mo-ot-ton*	*macў̆ainon*
	3 pl	*mo-oton*	*macў̆an*
Pst prog ind	**1 sg**	*daʃtem mo-otem*	*daʃtem macĕyam*
	2 sg	*daʃtet mo-otet*	*daʃtet macĕyain*
	3 sg	*daʃtei mo-otei*	*daʃtei macĕya*
	1 pl	*daʃtem mo-otem*	*daʃtmon macĕyaimen*
	2 pl	*daʃton mo-ot-ton*	*daʃton macў̆ainon*
	3 pl	*daʃten mo-oton*	*daʃten macĕyan*
Prs prog ind	**1 sg**	*derem moʃem*	*derem macĕm*
	2 sg	*derin moʃin*	*derin macĭn*
	3 sg	*derei moʃee*	*dere macŏo*
	1 pl	*derim moʃimen*	*derimen macĭmen*
	2 pl	*derinon moʃinon*	*derinon macŏnon*
	3 pl	*deren moʃen*	*deren macĕn*
Inf		*veten*	*cĕyen*
Pst stem		*vet*	*cˇ*
Prs stem		*buʃ*	*cˇ*

According to the above paradigms, we can come to a set of patterns as rule blocks for verb marking in Laki. It means that as far as the verb is concerned, and most plausibly in a situation where there is no overt subject in the sentence or where no other argument

is present to take the clitic marker (in the transitive past), the patterns represented in the following tables show different markers on the verb[3]:

TABLE 7. Verbal Markers in Present (Transitive and Intransitive) and Intransitive Past

Mood/Neg	**Aspect**	**Stem**	**Aspect**	**Subj Agr**	**Aspect**	**Obj Agr**
-2	-1	S	1	2	3	4
Neg /Imp /Sub ne(/u) / be(/u)	Imperf ma		Prec -u		Perf -a	"CLITIC"

(23) ma-ʃnas-im=to
IMPERF-know.PRES-1PL=2PL
We know you.

In this example, the suffix *–im* is the subject marker and the enclitic *=to* is the object marker.

TABLE 8. Verbal Markers in Transitive Past Tense

Mood/Neg	**Aspect**	**Stem**	**Aspect**	**Obj Agr**	**Aspect**	**Subj Agr**
-2	-1	S	1	2	3	4
Neg /Imp /Sub ne(/u) / be(/u)	Imperf ma		Prec -u		Perf -a	"CLITIC"

(24) di-m=et
see.PAST-1SG=2SG
You saw me

(25) di-n=em
see.PAST-2SG=1SG
I saw you

In (24) and (25), since the sentences are using a past transitive verb, the clitics are marking the subject of the sentence, while the object is marked by a suffix which is attached to the stem. This is all more interesting if we notice that in Laki verbal constructions, it is not the content of the marker but its morphology which determines where it is situated with respect to its stem.

[3] This pattern is restricted to verb-internal inflections and does not include the periphrastic constructions of progressive past and present.

As I mentioned earlier, however, these rule blocks are effective until there are no other arguments in the sentence. In the present tense example, the presence of an overt object will remove the object marker clitic, as is evident in (26) and (27):

(26) ima homa ma-sn̆as-im
1PL 2PL IMPERF-know.PRES-1PL
We know you.

(27) ali-a ma-sn̆as-em
Ali-DEF IMPERF-know.PRES-1SG
I know Ali

Likewise, in the sentences with a past transitive verb the presence of an argument capable of hosting the clitic, will remove the subject marker clitic from the end of the verb phrase, as is shown in the example 28.

(28) ali=em di
Ali=1SG see.PST
I saw Ali

2.4 THE DOMAIN OF THE LAKI CLITICS

Halpern (1995) introduces special clitics as particles which "occupy positions which we would not expect based on the distribution of other words or phrases with similar function." And Zwicky (1977) suggests that special clitics appear in a position different from their associated full forms. Special clitics can either be second-position (2P) or Wackernagel clitics that must appear as the second element in their domain, or verbal clitics that take the verb as their host. The clitics used as subject and object agreement markers in many Iranian languages are claimed to be second position clitics. This means that they can change their host and rearrange their order as long as the second position of the defined domain is preserved for the clitics. To a great extent, Laki clitics conform to this definition as long as the verb phrase is the desired domain. The Laki sentences

already presented in (17), (18), (19) and (20) show the different arguments that can be the host of these clitics. The only controversial data set is when there is an adverb in the sentence. According to my data the initial adverb is not acting as a potential host for the clitic, as (30) shows it.

(29) azĭn=em persi
from=1SG ask.PST
I asked her.

(30) hera yowos˘ azĭn=em persi
slowly from=1SG ask.PST
I slowly asked her.

2.5 THE CASE OF THIRD PERSON SINGULAR

The patterns discussed so far are not working precisely in the same way for the third person singular conjugation. The {3 sg} of Laki verbs uses the same agreement marker in all tenses and with all verb types. As seen in the tables 9 and 10 (repeated below), the marker for {3 sg} can be considered *-e* which according to its phonological context can take another consonant. In some of my data, there are also cases where the *-e* changes into the longer and higher vowel '*–i*'. Thus, I propose that the underlying form for {3 sg} is a single *–e*. With this in mind, one would wonder, then, what is the morphological nature of this marker? Are there two distinct markers, one of which an enclitic and the other one a suffix? Or is it the case that both of them have the same morphological category?

TABLE 9. Group 1: suffixes for the present tense

1sg	2sg	3sg	1pl	2pl	3pl
em/m	in/n	e	im/men	inon/non	en/n

TABLE 10. Group 3: enclitics for the transitive past tense

1sg	2sg	3sg	1pl	2pl	3pl
im/m	it/t	e	imon/mon	iton/ton	won/on

The remarkable fact about {3 sg} marker is that it always attaches to the end of the verb. Consider the sentences given in 31 and 32:

(31) me ketaw-a=m da maryam
I book-DEF=1SG give.PST Maryam
I gave the book to Maryam. (Dabir-moghaddam 2013: 863)

(32) a peya ketaw-a da=y[4] a maryam
that man book-DEF give.PST=3SG to Maryam
That man gave the book to Maryam. (Dabir-moghaddam 2013: 863)

Although both of these sentences are using the same tense and verb kind, their subject marker clitics are not attaching to the same arguments. As expected, in (31) the clitic is attached to the direct object (book), while in (32) it is the verb which is conjugated for person and number. This pattern is repeated with no exception throughout the paradigm of Laki verbs. Another example is shown in 33:

(33) darbar=e hochi ne-ma-zonest=i[5]
about=3SG nothing NEG-IMPRF-know.PST-3SG
He knew nothing about it.

Even in cases where there are endoclitics for marking subject agreement in other persons and numbers (34), the {3 sg} marker is still attached to the end of the verb (35).

(34) rafik-al=mon sif-al hez=on-da
friend-PL=1PL apple-PL pick.PST=3PL-up
Our friends picked up the apples.

[4] I continue using the same convention we discussed for {3 sg} until proved otherwise.
[5] As stated in footnote 4 above, I continue using the same convention we discussed for {3 sg} until proved otherwise.

(35) maryam sif-a hezda=y[6]
maryam apple-DEF pick up.PST-3SG
Matyam picked up the apple.

Dabir-moghaddam (2013) believes that the *–e* marker of the {3 SG PST TRNS} verbs is a clitic, while the *–e* marker of the {3 SG PRS} is a suffix. This fact is reflected in the glossing he uses in the following examples (from Dabir-moghaddam 2013: 881):

(36) æ peya ketaw-æ mæ-xer-e
that man book-DEF IMP-buy-3SG
That man buys the book.

(37) æ peya ketaw-æ xer-i=te
that man book-DEF buy-PST=3SG
That man bought the book.

Tafakkori and Omidi (2014) consider this marker as a suffix, basically because they do not consider clitics a relevant category in the Laki verb system. According to their analysis, what are considered clitics in the rest of the literature are still pronouns.

Let us consider the same criteria that we have used in the second part for clitic vs. affix distribution of the three groups of verbal markers here to see how does {3 sg} behave in those different situations.

i. *Host selectivity: Clitics can exhibit a low degree of selection with respect to their hosts while affixes exhibit a high degree of selection with respect to their stems.*

{3 sg} marker appears very selective in choosing its host and only attaches to the end of the verb.

ii. *Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.*

[6] As stated in footnote 4 above, I continue using the same convention we discussed for {3 sg} until proved otherwise.

In the three groups of verb markers presented earlier, the only gap is in the {3 sg} of the second group. I have proposed formerly that {3 sg} markers of all three groups are the same, and if it is so, then the only gap among all combinations of person and number properties is seen in {3 sg}.

iii. Clitic-affix ordering: Clitics can attach to material already containing clitics, but affixes cannot.

Clitics are free to attach to suffixes as either subject or object agreement markers, but affixes cannot attach to a verb already containing clitics. This results in having clitics always at the very end of the verb phrase. If we consider the {3 sg} marker as a clitic, then the verb-form of the following example would be impossible (according to this criterion):

(38) næ-h^{w}ard=e-y-æse
NEG-eat.PST=3SG-y-COPULA
(s/he) hasn't eaten. (Dabir-moghaddam 2013: 889)[7]

I use these arguments to claim that the {3 sg} verbal marker is a suffix in the entire verb paradigm of Laki, regardless of the kind of the verb or the tense it is conjugating for. In the next chapter, I will partly discuss the possible consequences of this observation.

[7] I am using the source glossing and IPA format.

Chapter 3

3 ALIGNMENT TYPES IN LAKI

3.1 ALIGNMENT

A significant piece of the literature on alignment in languages of the world has been devoted to the distinction between ergative and accusative languages. As Haig (2008) says, the Iranian languages are unique for this kind of study because of their diachronic and synchronic properties, where alignment shifts from accusative to ergative, and back to accusative (Haig 2008: 2).

Following Harris and Campbell (1995), I use the term alignment to refer to the distribution of syntactic or morphological characteristics as a way to classify languages into ergative, accusative and other distributional patterns (Harris and Campbell 1995: 240). In an accusative system, the subjects of transitive and intransitive verbs are marked the same way and this marking is different from that of the objects of transitive verbs. On the other hand, the term "ergative" is used to describe a case/agreement pattern in which the subject of an intransitive clause is marked similarly to the direct object of a transitive clause, and differently from the transitive subject (Dixon 1994). The first two rows in the table of alignment types presented in Hippisley and Stump (2015) belong to these two most widespread cases of alignment (Table 1).

Table 1. Alignment types (Hippisley and Stump to appear)

	S	A	O	
Type 1	X	X	Y	(accusative)
Type 2	X	Y	X	(ergative)
Type 3	X	Y	Z	
Type 4	X	X	X	
Type 5	X	Y	Y	

Where:

S: subject of an intransitive verb; A: subject of a transitive verb; O: object of a transitive verb.

In an accusative system the S aligns with the A argument and the O argument is distinct; while in an ergative system it is the O argument that S aligns with, and A is distinct.[8]

In west Iranian languages, the ancestral language (Old Persian) was accusative in all tenses (Hippisley and Stump 2015: 17). The different alignment patterns, which are discussed for these languages in the literature, are vestiges of a kind of diachronic reanalysis. According to Karimi (2012), the ergativity in Iranian languages has as its origin a past participle construction with a resultative interpretation. This combination of form (past participle) and content (resultative) renders a passive construction. As a move towards simplicity, this passive past participle is reanalyzed to impart a simple past meaning (because an active construction is simpler than a passive one). This situation reduces the non-accusative interpretation to clauses with the past stem of the transitive verbs (Haig 2008: 9). Unlike their prior shift from accusative to ergative, the shift from ergative to accusative characterizes the present-day languages that belong to the Indo-Iranian family (Hippisley and Stump 2015). This point is the main focus of our discussion in this chapter.

Dixon (1994: 70) proposes four alternative factors that may condition split ergativity:

1. semantic nature of the core nominal arguments ("person split")
2. tense or aspect or mood of the clause ("TAM split")
3. semantic nature of the main verb ("Split-S")
4. grammatical status of the clause (i.e., main or subordinate)

According to our previous discussion, the Iranian languages should be considered as TAM-split languages. However, Haig (2008: 8) expands this criterion to include four defining features of alignment as observed in the Iranian languages:

1. tense-sensitive alignment

As discussed earlier, it is the past stem that triggers the ergative case.

[8] Other alignment types are not relevant to this study.

2. lexical transitivity

   Transitivity of the verb is another defining factor of the alignment in Iranian languages.

3. the polyfunctional Oblique case

   These languages use a general-purpose Oblique case marker which marks both the agent of a past transitive construction and the object of the present tense constructions.

4. the proliferation of hybrid alignment types

   And this means that ergative construction is only one form of the possible alignment tendencies in Iranian languages.

All of the mentioned factors lead Haig to conclude that:

> …it is a basic fact of the syntax of modern Iranian languages that their Past Transitive Constructions (PTCs) display a variety of non-accusative alignments. Outside the PTC, simple clauses are quite uniformly accusative. It is this fact that is central to Iranian, not the presence of ergativity in some of the languages. Ergativity, I contend, is but one of the possible results of partially independent changes in case and agreement patterns, and it is with these that a historical account of alignment changes in Iranian must be primarily concerned. (Haig 2008:15)

As I will discuss shortly, Laki is one of those Iranian languages which shows vestiges of ergativity partially in its transitive past tense. In order to sketch the possible alignment patterns in Laki, we should draw our attention to the agreement types in this language as discussed in the previous chapter. But before that, I present a brief literature review on agreement and its relevance to this discussion.

3.2 AGREEMENT

From the viewpoint of inflectional morphology what raises the most interest in these constructions is the way these diverse systems of alignment show agreement inflectionally. According to Holmberg (2004), in many of the Iranian languages ergativity crucially involves pronominal clitics. On the other hand, non-ergative

languages like Persian have constructions like pronominal complex predicates which are inflected with the help of clitics rather than affixes (Samvelian 2010).

Haig (2008) introduces case, agreement and syntactic processes as the major parameters which define different alignment patterns. His classification aligns with the prior classification which Dixon provides in his discussion on morphological ergative markings (1979: 65): case inflection; separate particles, like postpositions or prepositions; and the verb or a verbal auxiliary.

Case marking is mainly restricted to subject and direct object, but sometimes includes the oblique case as well. Laki is not marked for case, nor does it use the syntactic processes for alignment[9]. Thus our main focus here is on agreement.

Agreement is defined as the cross-referencing of the core arguments of the sentence and it is usually manifested on the verb (Haig 2008: 8). Corbett emphasizes that since there are instances of clitics as obligatory agreement markers, we should consider them as a means of agreement; however, clitics do not always function as canonical agreement affixes (Corbett 2006: 13, 75).

By definition, clitics are neither full words nor bound inflections. They are not full words because they cannot stand alone, neither are they inflections because they can attach to different hosts (Corbett 2006: 75). This rule of thumb applies perfectly to all pronominal clitics in Laki, except in the case of the third person singular conjugation. The previous section discussed the different possible hosts for Laki clitics, and also shows that the only host for the {3sg} marker *-e* is the verb.

3.3 SUBJECT AGREEMENT IN LAKI

Following our discussion on the Laki clitics and affixes, we can divide Laki verbs into two groups with regards to their subject agreement mechanism. Laki uses pronominal clitics in order to form the possible verb-forms of the transitive verbs of the past tense. These clitics are mostly attached to the direct object[10] as in (1), or to the nonverbal part of a compound verb, as in (2):

[9] In fact, according to Haig (2008: 8), no Iranian language exhibits clear evidence of syntactic ergativity.
[10] I have discussed the possible hosts for the Laki pronominal clitics in §2.2.

(1) homa downa a non=ton-a hovard?
2PL yesterday that food=2PL-DEF eat.PST
Did you eat that food yesterday?

(2) ǯen-a ge downa davat=mon kerd ha ira
woman-DEF that yesterday invite=3PL do.PST is here
The woman whom we invited yesterday is here.

But if the sentence is using a {3 sg} subject, then the agreement marker attaches to the end of the verb throughout the verbal paradigm. Following the discussion in §2.3 and §2.5, I believe this marker is a suffix.

(3) o downa a non-a hovard-e?
3SG yesterday that food-DEF eat.PST-3SG
Did s/he eat that food yesterday?

(4) dʒen-a ge downa ali davat kerd-e ha ira
woman-DEF that yesterday Ali invite do.PST-3SG is here
The woman whom Ali invited yesterday is here.

The first and the second group of markers discussed in §2.1 are affixes used for marking the present-tense and the intransitive past-tense constructions. (5), (6) and (7) are examples of these kinds of verbs.

(5) ima homa ma-s̆nas-im
1PL 2PL IMPERF-know.PRES-1PL
We know you.

(6) ali homa ma-s̆nas-e
Ali 2PL IMPERF-know.PRES-3SG

Ali knows you.

(7) ima dowi-men
1PL run.PST-1PL
We ran.

3.4 OBJECT AGREEMENT IN LAKI

Laki uses affixes for object agreement in case there is no overt object in the sentence. When the verb is in the present tense, objects are marked clitically using the set of markers of the third group (§2.1). On the other hand, the objects of the sentences with transitive past tense verbs are marked by suffixes.

(8) te maʃverat=et Kerd-en-æ
2SG advise=2SG do.PST-3PL-COPULA
You have advised them.

In (8), the {2 sg} clitic is marking the subject and the {3 pl} affix is marking the absent object of the sentence.

(9) ma-ʃnas-im=to
IMPERF-know.PRES-1PL=2PL
We know you.

(9) is an example of a preset tense verb with both subject and object markers. The {1 pl} subject is marked affixally and the {2 pl} object is marked clitically. Finally, (10) shows a sentence with a {3 sg} subject, which is marked by the {3 sg} suffix, and whose object is marked clitically (brought them)

(10) α̃word-e-y=on
bring.PST-3SG-y=3PL
(he) brought them.

3.5 THE VESTIGES OF SPLIT-ERGATIVITY IN LAKI

Canonically, in ergative constructions, the subject of intransitive verbs (S) and the object of transitive verbs (P) are marked in the same way, which is different from the subject of transitive verbs (A). Laki shows some vistages of stem and transitivity related split ergativity, that is, constructions of the past transitive verb-stems show a kind of alignment similar to what is called ergativity.

After describing the morphological ergativity of nominal case-marking, Comrie (1978) gives examples of another kind of morphological ergativity, namely ergativity in the verb-agreement system. According to him,

> in some languages with an ergative-absolute case-marking system, the verb-agreement is determined equally on an ergative-absolute basis. … There are even some languages that have verb-agreement on an ergative-absolute basis but have no overt case-marking of noun phrases. (Comrie 1978)

As an example of a language with both case-marking and verb-agreement, Comrie mentions Avar, a northeast Caucasian language, where verbs agree in noun class with S and P, but have no overt agreement with A. But there are also languages, which as a result of diachronic changes have lost their case-marking, but still have ergative verbal agreement. Instances of this type can be found in northwest Caucasian languages and Mayan languages. Here is his example from Quiché, a Mayan language of Guatemala (no change in glossing) (Comrie 1978):

(11) K- ox kam- ik.
Asp.- 1Pl.Abs.- die- Ptc.
We die.

(12) K- at- kam- ik.
Asp.- 2Sg.Abs. die- Ptc.
You die.

(13) K- at- ka- cuku- x.
Asp.- 2Sg.Abs.- 1Pl.Erg.- seek- Act.
'We seek you.'

(14) K- ox- a- cuku- x.
Asp.- 1Pl.Abs.- 2Sg.Erg.- seek- Act.
'You seek us.'

Here, ox- is the absolutive {1 pl} prefix marking S in (11) and P in (14); and *ka-* is the ergative {1 pl} prefix marking A in (13).

For the {2 sg}, *at-* is the absolutive prefix marking S in (12) and P in (13); and *a-* is the ergative prefix marking A in (14).

The vestiges of this kind of ergative verb-agreement can be found in the past constructions of Laki verbs, where S and P are marked by affixes, while A is marked clitically.

(15)

$V_{PST.INT}$-suff.SUBJ S V

$V_{PST.TRS}$-suff.OBJ=clt.SUBJ A P V

This pattern is shown in (16) - (17) and (18)-(19) pair of examples:

(16) ima dowi-men
1PL run.PST-1PL
We ran.

(17) ɑ̃word-en=mon
bring.PST-3PL=1PL
(We) brought them.

(18) owo dowi-n
3PL run.PST-3PL
They ran.

(19) ɑ̃word-en=on
bring.PST-3PL=3PL
(They) brought them.

However, as expected, this is not true for the past constructions of the {3 sg} where the subject is always marked by a suffix attached to the end of the verb.

(20) ɑ̃word-e-y=on
bring.PST-3SG-y=3PL
(he) brought them.

$V_{PST.TRS}$-suff.SUBJ=clt.OBJ

In these examples both subject and object are marked on the verb, due to the lack of any overt arguments in the sentence. But in cases where there is an overt object in the sentence, the subject-agreement clitic marker appears on the object, except in the {3 sg} constructions. This is not absolutely pertinent to ergative verb-agreement, and I have already discussed it in Chapter 2.

Chapter 4

4 AN HPSG ANALYSIS OF LAKI VERBAL MORPHOSYNTAX

4.1 BACKGROUND

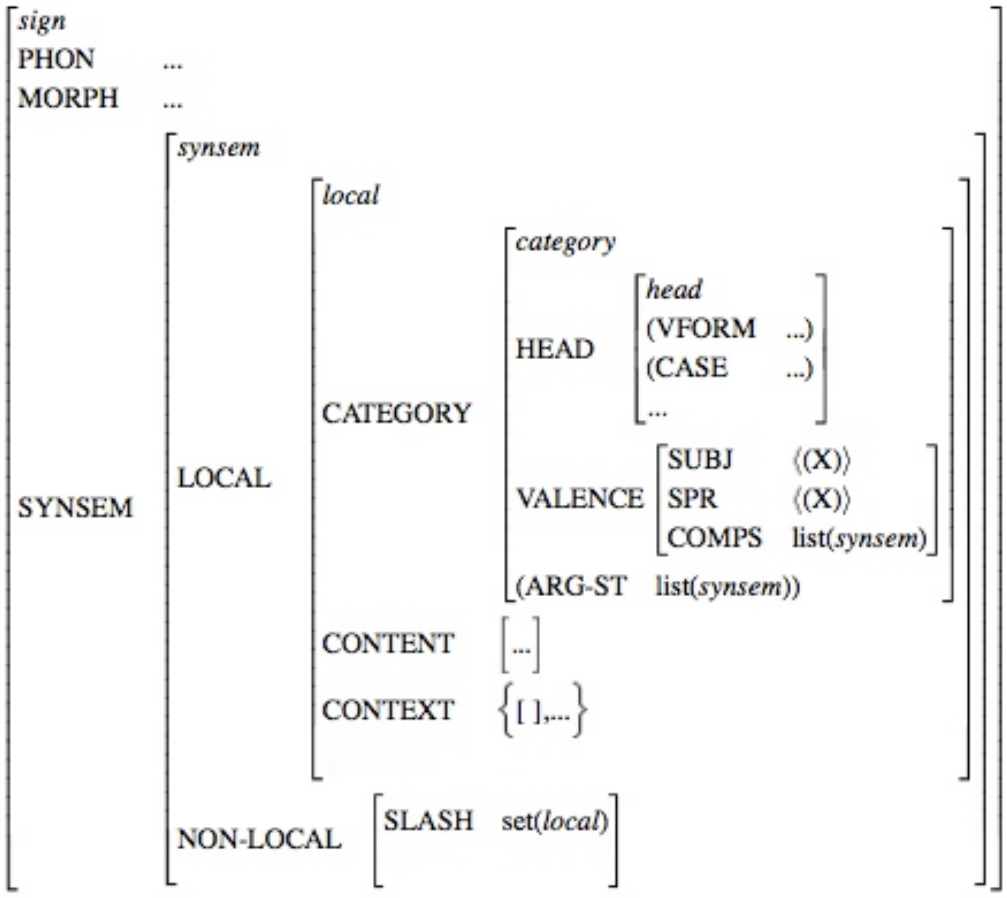
Sag et al. (2012) divide morphosyntacticians into three general camps who do not share overlapping views on linguistic phenomena: Universal Grammarians, Typologists and Formal Grammarians. The first group is essentially in search of a universal theory which has the explanatory capability to include all of the languages of the world given the unique genetic capability of humans for language. Typologists belong to different theoretical backgrounds and, by and large, are interested in descriptive observations of individual languages. Researchers of the third community try to develop mathematically formulated and internally precise systems for linguistic analyses. These are essentially lexicalist frameworks, which use constraints for the purpose of representing different structures.

Head-Driven Phrase Structure Grammar (HPSG) is one of these formal grammars, first developed by Carl Pollard and Ivan Sag (1987 & 1994). It is a unification-based theory of grammar, which means that structures must satisfy specified constraints on their forms simultaneously, rather than via a syntactic derivation or movement (Fleisher 2007). HPSG is a system of Saussurian signs, which are pairings of forms and meanings. In HPSG the majority of linguistic constraints are situated in the descriptions of words or roots (Muller 2015: 261). The modular nature of this formal grammar includes all kinds of linguistic information related to words and phrases as the basic subtypes of signs. This information is introduced via typed feature structures which are consistent throughout the system.

HPSG uses Attribute Value Matrices (AVM) to represent signs. These signs can

be of types *word* and *phrase*, as indicated in the upper leftmost side of the AVM. Within each sign, major linguistic components are represented. Below, I briefly discuss only those features of HPSG relevant to the analysis of Laki verbs.

Figure 1. an Attribute-Value Matrix (AVM)



Sign can be called a super-type whose core features are PHON(ology), MORPH(ology) and SYNSEM.

PHON contains the phonological representation of a linguistic object.

MORPH includes the root and/or its inflectional form. Following the strong version of the lexicalist hypothesis, HPSG preserves the integrity of morphology, where the syntactic transformations cannot rule over derivational or inflectional morphological processes. We will dive into this topic later in this chapter.

SYNSEM is a feature structure which contains syntactic and semantic information

that can be selected by other heads. SYNSEM shows both LOCAL-context information (LOC) as well as NONLOCAL information important for long-distance dependencies (NONLOC).

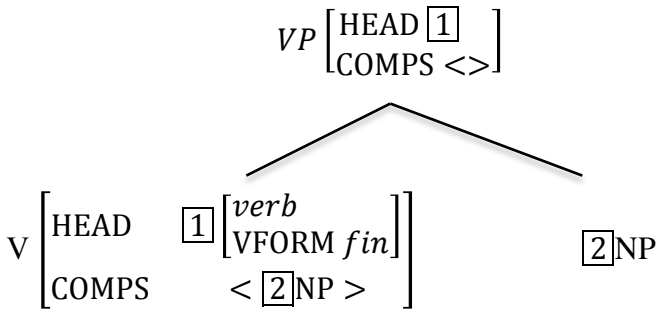
The local SYNSEM is composed of CAT (for category) and CONTENT. Under CAT, syntactic information is represented in three parts (HEAD, VALENCE, ARG-ST). VALENCE includes the values for SUBJ, SPEC, and COMPS. These components help VALENCE to be a representative of different arguments. ARG-ST (argument structure) is a list of required arguments of the head part of speech, and its elements may appear either locally in VALENCE or non-locally in SLASH.

Under CONTENT (CONT), semantic information is represented. *Tags* (little numbered squares) and *indices* indicate *structure sharing*, and that is having two or more features with exactly the same value (identical tokens). Structure sharing is one of the fundamental concepts of HPSG, since it is our way to unification in a network of nodes.

Of the nonlocal features, only slash is given here, as a way to show any missing information.

In formal grammars principles (along with rules and constraints) are strategies used to determine well-formed expressions. One of the most important principles in HPSG is the Valence Principle, according to which the SPR and COMPS values of a head are identical to its daughters, unless the rule cuts them off. Additionally, the Head Feature Principle makes sure that the features of the head are inherited in a structured manner by its upper nodes. In other words, just like the projection of syntactic category of the head in X-bar theory, here the head features of the headword become the head features of the entire phrase. The following AVM shows these two principles (Head Feature and Valence) at work in the verb phrase of "Mary ate an apple":

(1)



A set of Lexical Rules generate new lexical entries from basic entries, and this helps reducing the number of entries we need to store. For example in the passive lexical rule, (PHON F_{pass} (1)) is the passive representation of an active transitive verb (PHON 1). At the same time, active $SUBJ_i$ will be in COMPS of the passive structure. We can show this by a simple AVM:

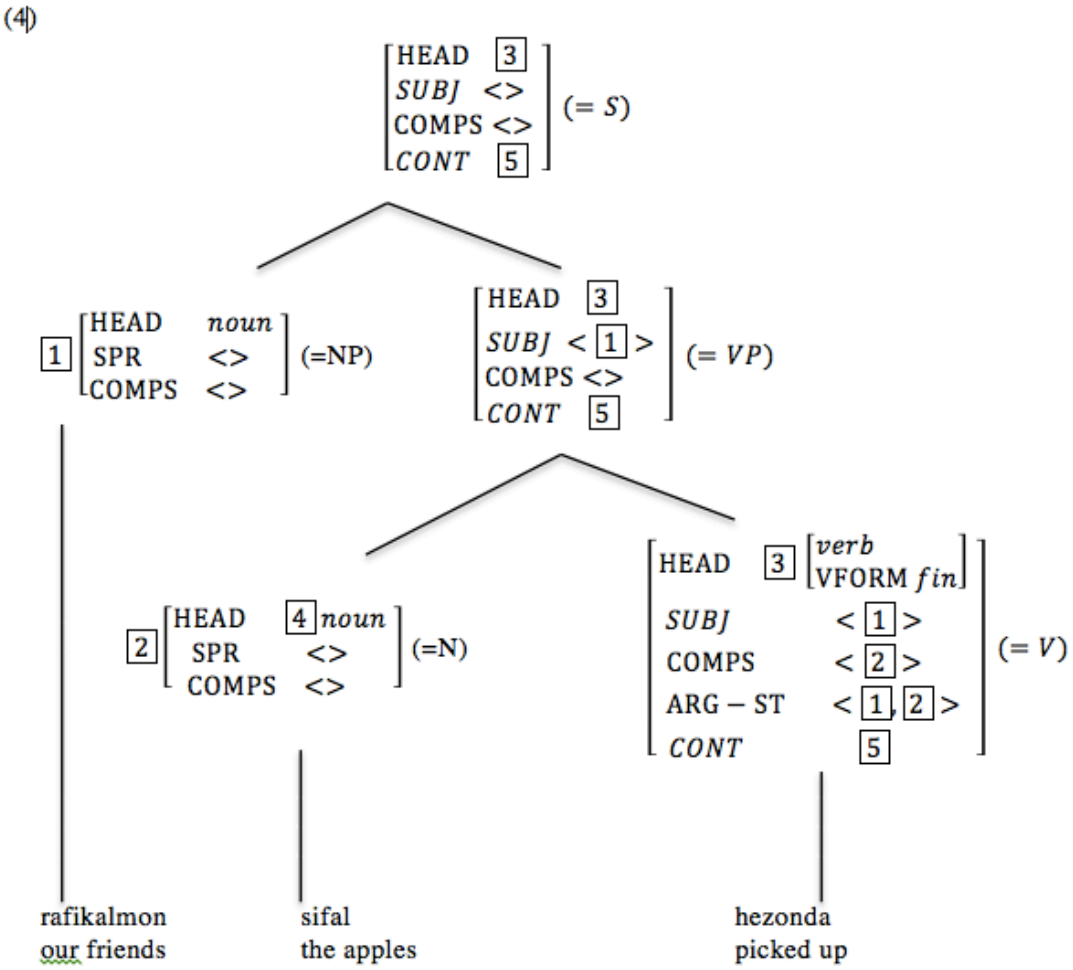
(2)

$$\begin{bmatrix} trans-verb \\ \text{PHON} \quad \boxed{1} \\ \text{SUBJ} < \text{NP}_i > \\ \text{COMPS} < \boxed{2}, \ldots > \end{bmatrix} \dashrightarrow \begin{bmatrix} pasive-verb \\ \text{PHON} \quad F_{pass}\,(\boxed{1}) \\ \text{SUBJ} < \boxed{2} > \\ \text{COMPS} < \cdots, \text{PP}_i > \end{bmatrix}$$

To begin with, let us see how the Head Feature Principle and the Valence Principle can adequately show the hierarchical inheritance between head and its daughters. (4) illustrates the tree belonging to the following sentence:

(3) rafik-al=mon sif-al hez=on-da
friend-PL=1PL apple-PL pick.PST=3PL-up
Our friends picked up the apples.

(4)



The boxed integers indicate the identities that are required by the Head Feature Principle and the Valence Principle. *Verb* 3 is consistently the head value of both S and VP, and its VFORM realization specifies its argument structure: 1, the subject and 2, the object. SPR portrays the specifier of the nouns, and COMPS only includes the object, because the subject of the sentence is shown by SUBJ. The most important point about the semantic content (CONT) is that it should remain the same all through the head-daughter hierarchy (as it is shown consistently by 5).

4.2 DATA ANALYSIS

Drawing on Stump's assumption of stipulated lexicon (2015), which proposes that only those parts of a paradigm are stored in our mental lexicon that are not predictable, and

using the rules of inferential morphology we can make stipulated rules that eventually realize the property sets associated with each inflectional cell of a given paradigm. In the same way, very little of the information in a lexical entry of a *word* sign must be listed in the lexicon. In an HPSG system, lexical types, type inheritance, and the theory of linking allow complex lexical information to be derived. That is, much of this information is inferred via the 'logic of the lexicon' (Ginzburg and Sag 2000: 20).

Using the verbal paradigm of Laki and following the structure of AVMs, we can postulate paradigmatic cells which can predict the specific exponents of each cell given their morphosyntactic properties. I follow Stump (2001, 2015) in assuming an inferential-realizational framework for inflectional morphology. An inferential analysis will computationally rule the ordering of affixes and clitics with their stems, and a realizational approach focuses on a morphological process according to which the association of a property set with its stem will produce a word-form.

The combination of inferential-realizational rules of morphology with the core lexical entries of the lexicon presents the conjugated paradigm-cells of a verb. The paradigmatic cell of an individual verb form's AVM as defined in Stump and Hippisley (2011) is as follows:

(5)
$$\begin{bmatrix} \text{MPS} & \sigma \\ \text{LXM} & \text{L} \\ \text{CAT} & \text{Y} \\ \text{VAL} & \langle\, \text{Z} \,\rangle \end{bmatrix}$$

where MPS= morphosyntactic property set
LXM= Lexeme
CAT= syntactic category
VAL= valence, a list of arguments

The pairing of a verb's stem and the information of a desired AVM will produce the paradigmatic cells of that specific verb. For instance, the conjugation of imperfective present[11] and simple past tenses of the verb *veten* 'to say' is given in (6) and (7), respectively. The present stem of the infinitive *veten* is */*, and its past stem is *vet*.

[11] In Laki, the imperfective present is also used as a simple present verb. mu- in our data in (9) is the imperfective marker.

(6)

a. $<\int, \begin{bmatrix} \text{MPS} & \{1\text{ sg imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

b. $<\int, \begin{bmatrix} \text{MPS} & \{1\text{ pl imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

c. $<\int, \begin{bmatrix} \text{MPS} & \{2\text{ sg imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

d. $<\int, \begin{bmatrix} \text{MPS} & \{2\text{ pl imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

e. $<\int, \begin{bmatrix} \text{MPS} & \{3\text{ sg imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

f. $<\int, \begin{bmatrix} \text{MPS} & \{3\text{ pl imp prs}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

(7)

a. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{1\text{ sg sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

b. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{1\text{ pl sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

c. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{2\text{ sg sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

d. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{2\text{ pl sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

e. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{3\text{ sg sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

f. $<\text{vet}, \begin{bmatrix} \text{MPS} & \{3\text{ pl sim pst}\} \\ \text{LXM} & \text{VETEN} \\ \text{CAT} & \text{V [−aux]} \\ \text{VAL} & \text{< NP, NP >} \end{bmatrix}>$

As discussed in the previous parts, the valence specification of a verb makes an essential change in its inflectional morphology. While the past stem of transitive verbs uses clitics for conjugation, all other morphosyntactic combinations are conjugated suffixally. Additionally, the {3 sg} property set consistently uses the suffix *-e* and its phonological variations all through the paradigm.

(8) Realization of the cells in (6)

a.	mu-ʃ-em	b.	mu-ʃ-im
c.	mu-ʃ-i	d.	mu-ʃ-id
e.	mu-ʃ-i	f.	mu-ʃ-en

(9) Realization of the cells in (7)

a.	vet=em	b.	vet=mo
c.	vet=et	d.	vet=to
e.	vet-i	f.	vet=o

As mentioned before, HPSG follows the principles of strong lexicalism according to which the syntactic operations cannot affect the internal structure of words whose structures are ruled morphologically, that is, with no reference to syntax. This means that words enter the phrasal and sentential analyses as fully-formed units. Meanwhile, much of the information related to a lexeme is provided in the unified markings of ARG-ST and CONTENT. (10) illustrates the Laki infinitive *veten* in its bare form (the lexical entry of the lexicon).

(10)

$$\begin{bmatrix} VETEN \\ \text{MORPH} \begin{bmatrix} \text{STEM} - \text{PST} & vet \\ \text{STEM} - \text{PRS} & \int \end{bmatrix} \\ \text{SYNSEM|LOCAL} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{HEAD} & verb \\ \text{VALENCE} \begin{bmatrix} \text{SUBJ} < (NP_i\ \boxed{1}) > \\ \text{COMPS} < NP_j\ \boxed{2}, PP_k\ \boxed{3} > \end{bmatrix} \\ ARG\_ST < \boxed{1} \oplus \boxed{2} \oplus \boxed{3} > \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \text{TELLER} & i \\ \text{TOLD} - \text{THING} & j \\ \text{LISTENER} & k \\ \text{LOCATION} & present \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

In (10) there are two stems available for the lexeme veten to choose from, one when the semantic content of the verb is in the past tense (STEM-PST) and the other when the verb is going to be in present tense (STEM-PRS). The NP of the subject is in

parentheses because of the pro-drop property and the absence of the subject NP from the sentence. '⊕' in ARG-ST denotes list concatenation, which for this verb it is consisted of NP and PP. (11) associates the morphosyntactic property set {1 pl imp pres} to provide the realization already mentioned in (8b).

(11)
$$\left[\begin{array}{l} VETEN, \{1\ pl\ imp\ pres\} \\ \text{MORPH} \begin{bmatrix} \text{I}-\text{FORM} & mu\int im \\ \text{STEM} & \int \end{bmatrix} \\ \text{SYNSEM|LOCAL} \left[\begin{array}{l} \text{CAT} \begin{bmatrix} \text{HEAD} & \begin{bmatrix} verb \\ VFORM\ \ imp \end{bmatrix} \\ \text{VALENCE} & \begin{bmatrix} \text{SUBJ} < (NP_i\ \boxed{1}) > \\ \text{COMPS} < NP_j\ \boxed{2}, PP_k\ \boxed{3} > \end{bmatrix} \\ ARG\_ST < \boxed{1} \oplus \boxed{2} \oplus \boxed{3} > \end{bmatrix} \\ \text{CONT} \begin{bmatrix} \text{TELLER} & i \\ \text{TOLD}-\text{THING} & j \\ \text{LISTENER} & k \\ \text{LOCATION} & present \end{bmatrix} \end{array}\right] \end{array}\right]$$

Here, I-FORM is the inflectional realization of the given MPS with the appropriate present stem. The form of the verb (VFORM) specifies its imperfective aspect (*imp*). As can be seen, much of the syntacto-semantic information of the lexeme *veten* is given in these AVMs. We can even have holistic view into the module MORPH; but how can we precisely sketch an HPSG representation of suffixation/cliticization of Laki verbs? For the purpose of answering this question, I follow the two types of verbal realizations that Miller and Sag (1997) discuss for their French data. They make a distinction between two types of verbal realizations: "the first type – *plain-word* – requires each element of a verb's ARG-ST list to correspond to an overt phrase that combines with the verb syntactically (i.e. locally in a head complement or head-subject structure), and hence also to be present on the verb's SUBJ or COMPS list. Words of the second type – *cliticized-word* – are verbs that have at least one argument that is realized affixally, rather than syntactically" (Miller & Sag 1997: 13). To the extent that we accept this distinction, the verbal lexemes of Laki are of the second type, cliticized-words; because the constraint over the plain-word type is that it should always have exactly one element, but the Laki as a pro-drop language may violate this constraint.

Assuming that the only information needed for the realization of pronominal clitics/affixes are under HEAD and ARG-ST, Miller and Sag (1997: 21) give the following AVM for the cliticized-word type:

(15)

$$\textit{cl-wd} \Rightarrow \begin{bmatrix} \text{MORPH} & \begin{bmatrix} \text{FORM} & F_{PRAF}(\boxed{0},\boxed{1},\boxed{2}) \\ \text{I-FORM} & \boxed{0} \end{bmatrix} \\ \text{SYNSEM} & \begin{bmatrix} \text{LOC|CAT} & \begin{bmatrix} \text{HEAD} & \boxed{1} \\ \text{ARG-ST} & \boxed{2}\textit{aff-list} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

The main function they introduce is a function for pronominal affixes in French (F_{PRAF}) which includes three arguments. The argument $\boxed{1}$ is the verb's head and it has the same marking in SYNSEM. The first argument, $\boxed{0}$, is the inflectional form, while the third argument, $\boxed{2}$, is the word's argument structure selected from the list of the affixes, as indicated here. They give the possible values of IFORM and ARG-ST types in a separate feature structure table. Following this framework, I give an account of Laki verb inflection.

4.3 LAKI VERBAL INFLECTION

I concluded chapter 2 with a classification of the possible combinations of conjugational subject agreement suffixes and clitics in Laki. Following Tafakkori and Omidi (2014), I represent that classification briefly as in (15):

(15) a. Intransitive verbs of past and present:

$$\text{S (SUBJ} \quad + V_{\text{int}} [\{^{\text{stem} - \text{prs} \quad + \text{A}}_{\text{stem} - \text{PST} \quad + \text{B}}])$$

b. Present verbs:

S (SUBJ + OBJ + V_{trn} [stem-prs + A])

c. Past transitive verbs

S (SUBJ + OBJ + C + V_{trn} [stem-pst])

d. Third person singular

S (SUBJ + OBJ + V [stem-prs + D])

(16) A:

1sg	2sg	3sg	1pl	2pl	3pl
em/m	in/n		im/men	inon/non	en/n

B:

1sg	2sg	3sg	1pl	2pl	3pl
em/m	in/n	-	im/men	inon/non	en/n

C:

1sg	2sg	3sg	1pl	2pl	3pl
im/m	it/t		imon/mon	iton/ton	won/on

D:

3sg
e/i

I consider these four tables as verb marker morphomic property sets in Laki verbal inflection. If I single out {3 sg} from Tables A, B and C, then Tables A and B will become identical. Additionally, according to Panini's principle, when two rules are competing to affect the expression of one and the same morphological category, the more precise rule operates first. So here, the morphological specification in (15C) trumps other rules. (15D) is in a sense the most general rule, since it includes all tenses and transitivities.

For our Laki data, I use the function F_{PRACL} and that is a constraint on the form value of the pronominal affixation/cliticization in Laki. Since the presence of the subject pronoun is not obligatory, I single out the $\boxed{0}$ in parentheses in the FORM function. Thus in what follows, $\boxed{0}$ is responsible for the final inflectional form of the conjugated verb.

(17)

$$cl-wd \Rightarrow \left[\begin{array}{l} \text{MORPH} \left[\begin{array}{ll} \text{FORM} & F_{PRACL}((\boxed{0}),\boxed{1},\boxed{2}) \\ \text{I}-\text{FORM} & \boxed{0} \end{array} \right] \\ \text{SYNSEM|LOC} \left[\text{CAT} \left[\begin{array}{ll} \text{HEAD} & \boxed{1} \\ ARG-ST & \boxed{2}\, conj-list \end{array} \right] \right] \end{array} \right]$$

The boxed integer $\boxed{2}$ in the ARG-ST refers back to the four morphomic property sets that we already discussed in (15) and (16). (18) presents the same data in an AVM of the type *cl-fm*. The value of BASE is an inflected form (I-FORM), and the aforementioned four morphomic property sets are presented in MPs a. to d, a being the infinitive form not presented below.

(18)
$$\begin{bmatrix} cl-fm & \\ \text{BASE} & infl-form \\ \text{MP}-\text{b} & \{\text{em/m, in/n, , im/men, inon/non, en/n}\} \\ \text{MP}-\text{c} & \{\text{im/m, it/t, te/e, imon/mon, iton/ton, won/on}\} \\ \text{MP}-\text{d} & \{e/i\} \end{bmatrix}$$

Now, if we take X as a HEAD value and Y as an ARG-ST list (or *conj-list* as in (17)), The function F_{PRACL} may be defined as follows:

(19) F_{PRACL} (X,Y) = W, where W

a. = X, if Y= [V-FORM *inf*]

b. = $\begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{b} \end{bmatrix}$, if Y= [V-FORM *int*]

c. = $\begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{b} \end{bmatrix}$, if Y= [V-FORM *pres*]

d. = $\begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{c} \end{bmatrix}$, if Y= [V-FORM *past* $_{trns}$]

e. = $\begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{d} \end{bmatrix}$, if Y= [V-FORM *3sg*]

(19 b and c) can be collapsed as a single default value, however here for the sake of clarity I keep them in separate groups. The AVM in (20) shows the subject-agreement of {3 sg} of *veten* 'to say' in imperfective present:

(20)

$$\left[\begin{array}{l} VETEN, \{3\ sg\ impr\ pres\} \\ \text{MORPH} \begin{bmatrix} \text{FORM} & (o)\ mu\int i \\ \text{I}-\text{FORM} & mu\int i \end{bmatrix} \\ \text{SYNSEM|LOC} \left[\text{CAT} \begin{bmatrix} \text{HEAD} & \begin{bmatrix} verb & \square \\ \text{VFORM} & impr \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SUBJ} & <> \\ \text{COMPS} & <> \end{bmatrix} \\ \text{ARG}-\text{ST} & <(\text{NP}[3sg]), \boxed{2}> \end{bmatrix}\right] \end{array}\right]$$

In order to assure the accuracy of the outcome string, the AVM will follow the set of constraints in (21).[12] W's value of rule block RB is μ, if α is a subset of Y (ARG-ST list) and W satisfies ω:

TABLE 1. Constraints on Morphomic Property Classes

MP	**μ**	**α**	**ω**
MP -b	em/m	[aff, 1sg, subj]	{Pres} ∪ {Int}
MP -b	in/n	[aff, 2sg, subj]	{Pres} ∪ {Int}
MP -b	im/men	[aff, 1pl, subj]	{Pres} ∪ {Int}
MP -b	inon/non	[aff, 2pl, subj]	{Pres} ∪ {Int}
MP -b	en/n	[aff, 3pl, subj]	{Pres} ∪ {Int}
MP -c	im/m	[clt, 1sg, subj]	{Pst} ∩ {Trns}
MP -c	it/t	[clt, 2sg, subj]	{Pst} ∩ {Trns}
MP -c	imon/mon	[clt, 1pl, subj]	{Pst} ∩ {Trns}
MP -c	iton/ton	[clt, 2pl, subj]	{Pst} ∩ {Trns}
MP -c	won/on	[clt, 3pl, subj]	{Pst} ∩ {Trns}
MP -d	e/i	[clt, 3sg, subj]	tensed

As far as subject agreement is concerned, this is how Laki conjugation works. For the purpose of specifying the object agreement markers, we may either add a set of new rules or redefine the existing rules so that the context, and most importantly the properties

[12] Further contextual and phonological constraints are needed to specify the exact form of the realized marker, which is not relevant to the present discussion.

of the HEAD determine the appropriate subject and object agreements. Basically, in cases where there are no overt objects in a sentence, only the markers in (19c) and (19d) are used for objects. When the HEAD verb is in the present tense, objects are marked clitically using the set of markers presented in MP-d. On the other hand, the objects of the sentences with transitive past tense verbs as their HEAD feature are marked by (19c) suffixes. If W´ be the variable for the object agreement marker, and if we take X as a HEAD value and Y as an ARG-ST list (or *conj-list* as in (17)), The function F'_{PRACL} may be defined as follows:

(20) F'_{PRACL} (X,Y) = W´, where W´

a. $= \begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{c} \end{bmatrix}$, if Y= [V-FORM *pres*]

b. $= \begin{bmatrix} \text{BASE} & \text{X} \\ \text{MP} & \text{b} \end{bmatrix}$, if Y= [V-FORM $past_{trns}$]

Clearly, the process of marker selection is sensitive to the properties of the HEAD feature, i.e. the main verb of the sentence. Given the HEAD's morphosyntactic properties, the morphological rules of exponence first select the appropriate subject agreement marker and then, given the ARG-ST info, it chooses the suitable object agreement marker.

Chapter 5

5 CONCLUSION

The main aim of this research project was to document and analyze the linguistic data of one of the understudied western Iranian languages, Laki. In order to discuss the patterns of verbal agreement in this language from a lixicalist point of view, I used HPSG which is a strong lexicalist framework and whose modular nature preserves the autonomy of morphological processes.

Clitics and affixes are the main means of agreement marking in Laki. As the huge amount of data in this thesis and my analysis show, clitics are used to a) mark the subjects of the past transitive constructions (except {3 sg}), and b) mark the objects of the present-tense constructions. On the other hand, affixes are the subject-agreement markers of all verbs, except the past transitive constructions whose objects, instead, are marked affixally. These patterns of agreement are showing the vestiges of a verb-agreement ergativity as discussed by Comrie (1978). The following table summarizes the agreement patterns in Laki.

TABLE 1. Agreement patterns in Laki

		Present	Past	
			intransitive	transitive
Subject agreement	Default	Suffixation of A	Suffixation of A	Cliticization of C
	3 sg	Suffixation of A	No marking	Suffixation of A
Object agreement	default	Cliticization of C		Suffixation of A
	In the presence of 3sg subject agreement	Cliticization of C		Cliticization of C

The deviation observable in the {3 sg} constructions of the past transitive Laki verbal agreement led me conclude that this marker is a suffix, and is consistently used all through the Laki verbal paradigm. Since the expected clitic-form and the affix-form of the {3 sg} is identical, it is not far from reality to hypothesize that the past transitive clitic has changed or has grammaticalized into an inflectional affix. Hopper and Traugott's cline of grammaticality (2003) follows the same unidirectional pattern:

Content word → grammatical word → clitic →inflectional affix

If this is what happening in Laki, then perhaps we should expect the same kind of change for other clitic agreement markers of the past transitive constructions to become affixes. Clitics would be used specifically for object agreement and the vestiges of split-ergative system would be replaced by a nominative-accusative or neutral system.

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