

Micro-Variation in Aspect Split in Nominative-accusative system

Zahra Mirrazi

1 Introduction

This paper provides an analysis of micro-variation in the agreement systems of four closely related North-Eastern Neo-Aramaic (NENA) languages. All of these languages show aspect splits, but unlike familiar cases of aspect splits in ergative languages, the North-Eastern Neo-Aramaic languages are all nominative-accusative as subjects of all intransitive and transitive verbs behave the same and differently from objects of transitive verbs. Instead of ergativity, the split in these languages involves a reversal in the function of agreement markers between aspects. There are two sets of agreement markers whose functions reverse across the perfective and imperfective aspects. Some Neo-Aramaic languages also show a person restriction on objects such that only third person definite objects are marked on the verb.

The main goal of this paper is to provide a unified analysis of the split agreement pattern in these four languages. Following Kalin & van-Urk, 2014, I argue the imperfective aspect head carries a ϕ -probe, but the perfective doesn't. Unlike their proposal, however, I argue that v in the perfective can host a ϕ -probe. I propose that the split in NENA languages arises because the position of the agreement probe in the perfective is lower than the agreement probe in the imperfective, so these probes agree with different arguments, i.e. objects in the perfective and subjects in the imperfective. Both of these agreement, however, are expressed by an S.Suffix. Further, I propose that what makes these NENA languages similar is that the imperfective aspect head always carries a person(π) probe in all of these languages, while such a probe is absent in the perfective aspect head. The variation among these language is the result of different featural content of agreement probes on T and v .

These heads can carry a person or number probe or no probes. Adopting a ϕ -feature geometry similar to the proposal of Harley and Ritter (2002), I also develop an account in which the person restriction on objects arises due to agreement with a number probe as in Preminger (2014).

The paper is structured as follows. Section 2 presents different agreement patterns in four groups of North-Eastern Neo-Aramaic languages. In Section 3, I provide an account of agreement patterns in these languages. Section 4 looks at previous analyses of the agreement in NENA languages and section 5 concludes.

2 Agreement in Neo-Aramaic

North-Eastern Neo-Aramaic (or NENA), is the largest group of Neo-Aramaic languages which include more than a hundred dialects. It is spoken by Christian and Jewish communities native to an area spread across northern Iraq, south-eastern Turkey, north-western Iran, and north-eastern Syria. (Khan 2007 and Coghill 2016, among others) Neo-Aramaic, like other Semitic languages, has a root and template system in the verbal morphology but it also uses affixes. Most verbs have a root, consisting of three consonants which are slotted into a different template based on Tense, Aspect and Mood. The verbal systems of all known NENA dialects are based primarily on two stems, known as the Past and Present Bases. The Present Base (PRES) takes the form $C_1aC_2C_3-$ and the Past Base (PAST) takes the form $C_1C_2eC_3-$ or, before a vowel, $C_1C_2iC_3-$. There is also another base which will be important to us i.e. Infinitive Base (INF) which takes the form $C_1C_2aC_3-$. The table below presents the different bases of actual verbs.

Root	Present Base	Past Base	Infinitive Base
šql (take)	šaql-	šqel-	šqal-
pθx (open)	paθx-	pθex-	pθax-
xzy (see)	xazy-	xziy-	xzay-

There are two sets of suffixes which mark person, number, and sometimes gender features of arguments on the verb: these are known as S.suffixes and L.suffixes (Khan 2002, 2008). Each can

be found on both present and past bases. The order of these suffixes is always fixed, S.suffixes are closer to the verbal stem than L.suffixes.

(1) **Verbal Template in NENA:** Verb Stem- S.Suffixes-L.suffixes.

Subjects obligatory trigger agreement and are marked by S-suffixes on the Present Base and L-suffixes on the Past Base. Some direct and indirect objects also trigger agreement on the verb under certain conditions, which vary from dialect to dialect but which usually involve person and definiteness. The objects that trigger agreement are marked by L-suffixes on the Present Base and S-suffixes on the Past Base.

The group of northeastern Neo-Aramaic languages which will be discussed in this paper, show aspect-based agreement splits but do not involve ergative case as the subjects of transitive and all intransitive verbs are marked in the same way. Instead, I argue that there is an inversion of the functions of two sets of agreement markers on the verb, such that one set marks subjects in present/future/imperfective verb forms but objects in the perfective forms, while the other set marks objects in the present/future/ imperfective and subjects in the perfective.

The focus of this paper is on four different groups of dialects which have slightly different properties.

Dialects	Non-Perfective	Perfective	3 rd Person Restriction on Objects
SENAYA - PESHABUR	V-S _S -O _L	V-S _L	No Person Restriction
JEW. AMADIYA	V-S _S -O _L	V-O _S -S _L	No Person Restriction
CHR. BARWAR - ALQOSH - ZAKHO	V-S _S -O _L	V-O _S -S	Only in Perfective
SHAPUTNAYA	<u>FUT:V-S_S-O_L</u> PRES: V-O-S _S	V-O _S -S _L	Perfective & Non-Perfective

S_S = Subject marked by S-suffix; S_L = Subject marked by L-suffix; O_S = Object marked by S-suffix; O_L = Object marked by L-suffix; O = Object marked by a special morpheme -o

In the first group, a system found in Senaya and Peshabur, the object marker of the imperfective switches functions as the subject marker of the perfective. As there is no object agreement in the perfective, the subject marker of the imperfective doesn't appear in the perfective at all. In the

second system found in Jewish Amadyia, all subject and object mark agreement on the verb in both perfective and imperfective, but agreement markers reverse their functions in two aspects. The marker of subjects in imperfective becomes the marker of objects in perfective and the object marker of imperfective become the subject marker of perfective. The third system found in Christian Barwar, Alqosh, and Zakho, among others, is like Jewish Amadyia's system and the only difference is that only third person definite objects trigger agreement on the verb in perfective. (Khan 2002, 2008; Coghill 2003). In the fourth system found in Shaputnaya, the subject marker of future and present becomes the object marker of perfective. The object marker of future becomes the subject marker of perfective. The object marker of present is a unique morpheme which is not a member of either S.suffixes or L.suffixes. In this system, only third person definite objects trigger agreements. The table below shows the summary of these four groups of dialects.

2.1 No Person Restriction on Objects & No Object Agreement in Perfective

The first group of dialects we are going to discuss is those that have object agreement only in Non-perfective aspect. This system is referred to as partial agreement reversal by Kalin & Van-Urk(2014). Senaya which is native to people originated from the city of Sanandaj in Iran who are now spread in the United States, Australia, Europe, and Iran, is a dialect that has partial agreement reversal. Like most of Neo-Aramaic languages, there are two sets of agreement morphemes, known as a S-suffixes and L-suffixes, that mark subjects or objects depending on the aspect of the verb. The tables below present S-suffixes and L-suffixes in Senaya.

	S-suffixes	L-suffixes
1st Singular	-en(m.)/-an(f.)	-lii
2nd Singular	-et(m.)/-at(f.)	-lox(m.)/-lax(f.)
3rd Singular	-∅(m.)/-aa(f.)	-lee(m.)/-laa(f.)
1st Plural	-ox	-lan
2nd Plural	-iiton	-looxon
3rd Plural	-ii	-luu/-lun

All subjects and objects trigger agreement in the imperfective. Subjects are marked by S-suffixes and objects by L-suffix, as shown in the examples (2) and (3).

(2) **Intransitive Imperfective in Senaya:**

axnii damx-ox.

we sleep.IMPf-S.1PL

'We sleep.'

(3) **Transitive Imperfective in Senaya:**

ooya molp-a-lan.

she teach.IMPf-S.3FS-L.1PL

'She teaches us.'

In the perfective, on the other hand, all subjects are marked by L-suffixes, as shown in (4) and (5).

There is no object marking in this aspect.

(4) **Intransitive Perfective in Senaya:**

axnii dmex-lan.

we sleep.PERF-L.1PL

'We slept.'

(5) **Transitive Perfective in Senaya:**

axnii xa ksuuta ksuu-lan.

we one book write.PERF-L.1PL

'We wrote a book.'

The data (6) shows that the presence of definite and pronominal objects in the perfective leads to ungrammaticality.

(6) **No definite or pronominal object with the perfective base:**

*axnii oo ksuuta ksuu(-laa/-a)-lan(-laa/-a).

we that book write.PERF(-L/S.3FS)-L.1PL(-L/S.3FS)

'We wrote that book.'

The table below shows the summary of the agreement paradigms in Senaya.

Senaya	Intransitive	Transitive
Imperfective	V-S _S	V-S _S -O _L
Perfective	V-S _L	V-S _L

2.2 No Person Restriction on Objects & Object Agreement in both Aspects

The second group of dialects we are going to discuss is those in which all objects irrespective of their person feature trigger agreement on the verb in both perfective and non-perfective aspects. Jewish Amadiya which shows this pattern, is spoken in Dahuk located in the northern tip of Iraq.

	S-suffixes	L-suffixes
1st Singular	-ən(a)(m.)/-an(a)(f.)	-li
2nd Singular	-ət(m.)/-at (f.)	-lux(m.)/-lax(f.)
3rd Singular	-∅(m.)/-a(f.)	-le(h)(m.)/-la(h)(f.)
1st Plural	-ax/-axni	-lan/-lent
2nd Plural	-etun	-loxun
3rd Plural	-i	-lu/-lohun

All subjects and objects trigger agreement in both aspects. Subjects are marked by S-suffixes and objects by L-suffix in the imperfective aspect, as shown in (7) and (8).

(7) Transitive Imperfective in Jewish Amadiya:

k-šaqł-i-lux.

IMPF-take-S.3PL-L.2SG.MSC

'they take you.'

(8) Intransitive Imperfective in Jewish Amadiya:

gdamx-in.

IMPF-sleep-S.1SG

'I sleep.'

In the perfective aspect, the function of the agreement suffixes reverses. Subjects are marked by L-suffixes and objects by S-suffixes, as shown in (9) and (10).

(9) **Intransitive Perfective in Jewish Amadiya:**

dmex- la.

sleep.PERF-L.3SG.FEM

'She slept.'

(10) **Transitive Perfective in Jewish Amadiya:**

š qil-i-lux.

took-S.3PL-L.2SG.MSC

'You took them.'

The table below shows the summary of the agreement paradigms in Jewish Amadiya. As the example (11) indicates, there is no person restriction on the objects.

(11) **No Person Restriction on Objects in Jewish Amadiya:**

š qil-ət-ta

took-S.2SG-L.3SG.FEM

'she took you.'

Jewish Amdiya	Intransitive	Transitive
Imperfective	V-S _S	V-S _S -O _L
Perfective	V-S _L	V-O _S -S _L

2.3 Person Restriction on Objects Only in Perfective & Object Agreement in both Aspects

The third group of dialects we are going to discuss is those in which all objects trigger agreement on the verb in the imperfective aspect but in the perfective aspect only definite third person objects trigger agreement. Christian Barwar which is also spoken in Dahuk province in the northern Iraq shows such a system. The S-suffixes and L-suffixes in this dialect are given below.

	S-suffixes	L-suffixes
1st Singular	-ən	-li
2nd Singular	-ət	-lux(m.)/-lax(f.)
3rd Singular	-∅(m.)/-a(f.)	-le(m.)/-la(f.)
1st Plural	-əx	-lən
2nd Plural	-itu	-léxun
3rd Plural	-i	-le/-la

Like Senaya and Jewish Amdya, all subjects and objects trigger agreement in the imperfective aspect. Subjects of all transitive and intransitive verbs are marked by S-suffixes, and objects by L-suffix in the imperfective aspect, as shown in (12) and (13).

(12) **Intransitive Imperfective in Christian Barwar:**

mεθ-i

die.IMPF-S.3PL

'They die.'

(13) **Transitive Imperfective in Christian Barwar:**

mey-nó -na 'ay-báxta.¹

bring.IMPF-S.1SG-L.3FS DEM-woman.

¹In other NENA dialects, consonant gemination occurs when the initial consonant of a verbal suffix assimilates to the final consonant of a verbal root or when the initial consonant of the suffix /l/ is identical to the final consonant (Khan, 2009).

mey-nó -la → mey-nó -na

'I shall bring that woman.'

In the perfective aspect, the function of the agreement suffixes reverse. Subjects are marked by L-suffixes and third person definite objects by S-suffixes, as shown in (14) and (15).

(14) **Intransitive Perfective in Christian Barwar:**

mît-**la**.

die.PERF-**L**.3PL.

'They died.'

(15) **Transitive Perfective in Christian Barwar:**

xawr-äwaθ-i brat-i griš-**a-la**.

friend-PL-1SG.GEN daughter-1SG pull.PERF-**S**.3FS-**L**.3PL

'My friends pulled my daughter.'

There is a restriction on the kind of objects which can trigger agreement on the verb in the perfective aspect. As the data in (16) shows, only third person definite objects can be marked on the verb.

(16) **Object has to be 3rd person in the Perfective**

*griš-**an-le**.

pull.PERF-**S**.1FS-**L**.3MS

'He pulled me.' The table below shows the summary of the agreement paradigms in Christian Barwar.

Christian Barwar	Intransitive	Transitive
Imperfective	V- S_S	V- S_S-O_L
Perfective	V- S_L	V- O_S-S_L

2.4 Object Agreement & Person Restriction on Objects Everywhere

Shaputnaya which is a variety of Urmi dialect of Neo-Aramaic spoken by the Assyrian community in Urmia, Iran represents the fourth group of agreement system in Neo-Aramaic languages. It is an SOV language which like other dialects have two sets of agreement marker, called S-suffixes and

L-suffixes. The paradigms for these suffixes in Shaputnaya are given below.

	S-suffixes	L-suffixes
1st Singular	-en(m.)/-an(f.)	-li
2nd Singular	-et	-lux(m.)/-lax(f.)
3rd Singular	-le/-∅(m.)/-(l)a(f.)	-le(m.)/-la(f.)
1st Plural	-ax	-lan
2nd Plural	-etun	-loxun
3rd Plural	-ena	-lun

In Shaputnaya, all subjects trigger agreement on the verb. Subjects are marked by L-suffixes in the perfective aspect. Only third person definite object trigger agreement and they are marked by S-suffixes on the verb as shown in (17) and (18).

(17) **Intransitive Perfective in Shaputnaya**

ana xeš-**li**

I went-**L.1SG**

'I went.'

(18) **Transitive Perfective in Shaputnaya: Ana Zahra xezy-a-**li**.**

Ana Zahra fsaw-**S.3FS-L.1SG**

'I saw Zahra.'

Shaputnaya differs from other Neo-Aramaic dialects in its imperfective aspect. Unlike other dialects that use the present base to make an imperfective form, it uses infinitive base. All subject trigger agreement on the verb and are marked by S-suffixes. Like the perfective aspect, only the definite third person objects trigger agreement but they are marked with a single morpheme "-o" which attaches before subject agreement marker.

(19) **Intransitive Imperfective in Shaputnaya:**

ana brexš-**en**

I go-**S.1SG.MSC**

'I go.'

(20) **Transitive Imperfective in Shaputnaya:**

ani ourzey b-xzay-on.

I those.men IMPF-see.INF-3O.S.1SG.

'I see those men.'

The future form in Shaputnaya is like the imperfective aspect in other dialects in that it uses the present base of the verb and S-suffixes to mark subjects. It also uses L-suffixes to mark objects on the verb.

(21) **Intransitive Future in Shaputnaya:**

ana brexš-en

I go-S.1SG.MSC

'I go.'

(22) **Transitive Future in Shaputnaya:**

ani ourzey xaz-en-non.

I those.men see-S.1SG-L.3PL.

'I will see those men.'

Like in perfective and imperfective in this language, only third person definite objects are marked on the verb .

(23) Ana qatox xaz-en-*(nax).

I you see-S.1SG-L.2SG.

'I will see you.'

The table below shows the summary of the agreement paradigms in Shaputnaya.

Shaputnaya	Intransitive	Transitive
Imperfective	V-S _S	V-O-S _S
Future	V-S _S	V-S _S -O _L
Perfective	V-S _L	V-O _S -S _L

3 Analysis

In this section, I provide a unified analysis of the micro-variation in agreement system of North-Eastern Neo-Aramaic languages. In particular, the goal is to provide answer to the following questions.

- (i) Why is the order of *S.suffixes* and *L.suffixes* fixed and how can their different function in different aspects be accounted for?
- (ii) Why, in some NENA languages, do only 3rd person definite objects trigger agreement on the verb?

I first want to emphasize that I support the existing literature that treats these languages as nominative-accusative. All of these languages treat the single argument of all intransitive verbs (both unaccusatives and unergatives) and the agent of transitive verbs alike and different from the object of transitive verbs.²

Then, I argue that the potential locations of probes in NENA are ν , Asp and T. Agreement with ν and Asp heads is morphologically realized with *S.suffixes* and agreement with T is always realized with *L.suffixes*. The featural content of these probes, however, can vary across different languages. The split arises because the head that carries the probe in the perfective aspect is ν which is lower than the probe in the imperfective which is located on Asp head. So, they agree with different arguments in each aspect.

Following Anagnostopoulou (2003), Bèjar (2003), Preminger (2014) and Sigurðsson & Holmberg (2008) among others, I assume that person and number probes are separate entities occupying different syntactic positions. I argue that the person restriction on objects arises when a person probe is not available and the agreement head only carries a number (#) probe (Bèjar & Rezac, 2003). I will show that the presence of a # probe together with the language-specific hierarchical structure of features inside DPs will explain why only third person objects can trigger agreement on the verb while 1st and second person objects do not make the derivation crash, in contrast to

²In section 5, I will present arguments against the ergative analysis of these languages proposed by Doron and Khan (2012)

the familiar cases of PCC (Bèjar & Rezac, 2003, Rezac 2011 and Anagnostopoulou 2003, 2005 among others).

In this section, I first present my analysis of the split and the person restriction on objects, then I will apply this analysis on the four dialects described above.

3.1 Driving the Agreement Pattern

In this section I provide a unified analysis of the agreement patterns in the four NENA languages we saw in the previous section. Following Kalin & van-Urk, 2014, I argue the imperfective aspect head carries a ϕ -probe, but the perfective doesn't. Unlike their proposal, however, I argue that v in the perfective can host a ϕ -probe. Crucially, only one of the Aspect head and v head can carry a probe in each aspect. I propose that the split in NENA languages arises because the position of the agreement probe in the perfective is on v which is lower than the agreement probe in the imperfective which is located on the aspect head, so these probes agree with different arguments, i.e. objects in the perfective and subjects in the imperfective. Both of these agreement, however, are expressed by S.Suffix.

Further, I propose that what makes these NENA languages similar is that the imperfective aspect head always carries a person(π) probe in all of these languages, while such a probe is absent in the perfective aspect head. The variation among these language is the result of different featural content of agreement probes on T and v . These heads can carry a person or number probe or no probes. The structure of the imperfective and perfective are shown in (24) and (25).

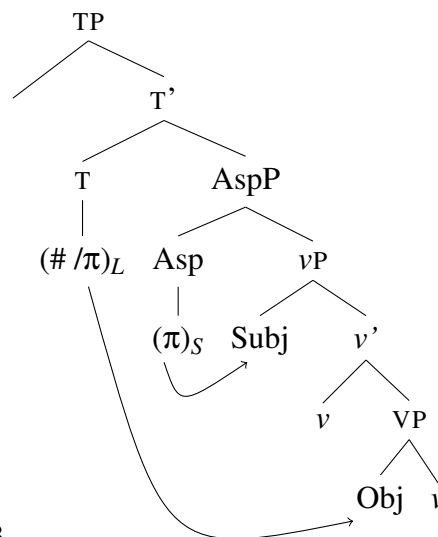
(24) **Imperfective**

k-šaqł-i-lux.

IMPF-take-S.3PL-L.2SG.MSC

'they take you.'

Jewish Amadiya

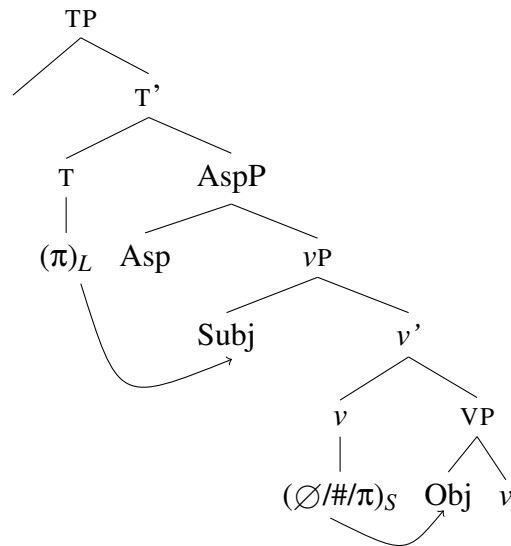


(25) **Perfective**

š qil-i-lux.

took-S.3PL-L.2SG.MSC

'You took them.' Jewish Amadiya



I assume that there is at least one obligatory person probe in each aspect. The T head in perfective and Aspect head in the imperfective obligatorily carry a person probe in all NENA languages. Following Borer (1984) and Adger & Smith (2009), I consider the language variation to be a matter of the feature properties of functional categories. The feature variation in the probes on v in the perfective and on T in the imperfectives responsible for the micro-variation among NENA languages. Furthermore, I propose that the agreement with T is always expressed with L.suffixes and the agreement with lower heads (Asp and v) is marked with S.suffixes. This explains why the order of suffixes on the verb is fixed across NENA languages.

In the imperfective, v doesn't carry a probe but Asp head comes to the derivation with a person probe and agrees with the subject which is the closest goal. This agreement is marked with S.suffixes. Then, T enters the derivation, but as the ϕ -features of the subject have been agreed with, it becomes inactive and is no longer an intervener for Agree relation (Kalin & van-Urk, 2014). So, T in the imperfective agrees with the object. This agreement is marked with L.suffixes. Following the Mirror Principle of Baker (1985), I take the fact that the S.suffixes always attach closer to the verbal root than L.suffixes as the reflection of the order in which the agreement relations associated with these suffixes.

In the perfective, v can carry a probe and agrees with the object as it is the closest goal. This

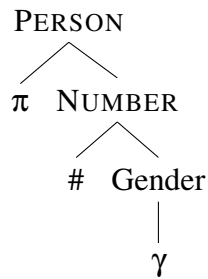
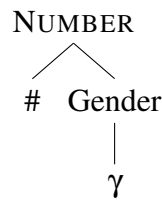
agreement is marked with S.suffixes. Asp head in the perfective doesn't carry a probe. So, the subject will be active to agree with the probe on T. Like all cases of T-agreement in NENA, this agreement is marked with L.suffixes.

As illustrated above, the split arises because the locus of the agreement probe which is marked by S.suffix differs in the perfective and the imperfective. The position of these probes determine which argument they agree with. As it is v which carries a probe in the perfective, the probe associated with S.suffix agrees with the closer goal which is the object in this aspect. Whereas in the imperfective, the probe associated with S.suffix is on Asp and it agrees with the closest argument which is the subject. When T merges to the structure, it agrees with the argument whose ϕ -features have not already been agreed with (i.e. the subject in the perfective and the object in the imperfective).

3.2 Deriving the Person Restriction on Objects

As already shown in data in (16) and (23), some of the NENA languages show a person restriction on the object agreement such that only third person definite objects can trigger agreement on the verb. However, this person restriction differs from the familiar cases of PCC which are typically confined to verb phrases with two internal arguments, rather than one (e.g., Anagnostopoulou 2003; Bèjar and Rezac 2003; Nevins 2007; Rezac 2011). At least in some of NENA languages, the person restriction on object agreement can be seen even when there is only one internal argument.

I argue that the person restriction on object arises whenever a person probe is not available and the agreement head only carries a number (#) probe (Bèjar & Rezac, 2003). following Kalin(2014) and others, it's been assumed that only the first and the second person DPs are specified for π and 3^{rd} person forms encode the absence of valued person features and they spell out only number and gender features. I also propose that the featural content of DPs is structured in a way that only the specification of dominant feature head in feature geometry tree is visible to the probe. The number probe does not have access to number feature of 1/2 person because it is further specified for the person. # only agrees with 3^{rd} person objects.

DP (1/2 Person)**DP (3 person)**

In the rest of this section, I'll apply this analysis on the four languages of NENA.

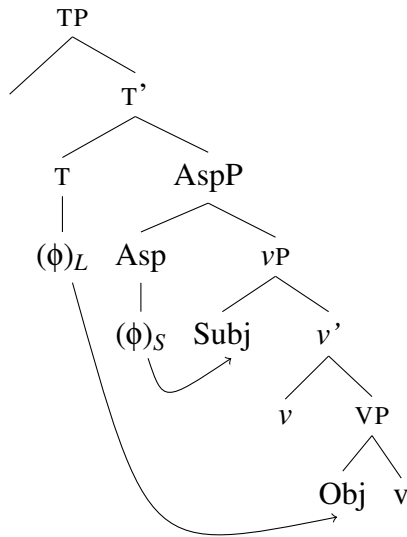
3.3 Jewish Amadiya

All subjects and objects trigger agreement on the verb in both aspects. The function of agreement suffixes reverses across aspects. Subjects are marked by S-suffixes in the imperfective and by L-suffix in the perfective. Objects are marked by L-suffixes in the imperfective and by S-suffix in the perfective. The order of suffixes, however, is always fixed (Verb-S.suffix-L.suffix)

I proposed that the split arises because there is an aspect headz in the imperfective that carries the carries a ϕ -probe (Kalin & van-Urk, 2014), whereas such a predicate is absent in the perfective but v in the perfective hosts a ϕ -probe. Further, I propose that while the imperfective always carries a person(π) probe in all of these languages, the featural content of agreement probes on T and v can vary across different NENA languages.

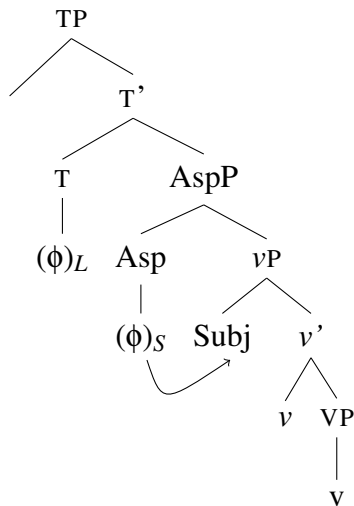
The imperfective aspect carries a person probe and it always selects for a v which doesn't carry a probe. The person probe on Asp agrees with the subject because it is the closer argument. This agreement is marked by S.suffixes. After the ϕ features of the subject has been agreed with, they become inactive. So, when T enters the derivation with a person probe, it can agree with the object which now is the only argument whose features are available for the probe. This agreement is marked by L.suffixes.

(26) **Imperfective Transitive**



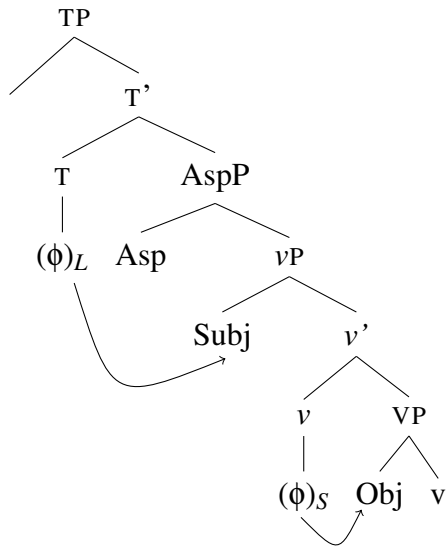
When the verb is intransitive, the person probe on Asp agrees with the subject because it is the closer argument. This agreement is marked by S.suffixes. There is no other argument that T can agree with, so it simply doesn't. I follow Preminger (2014) who argues that a probe must attempt to agree, but that the derivation does not crash if agreement is impossible.

(27) **Imperfective Intransitive**



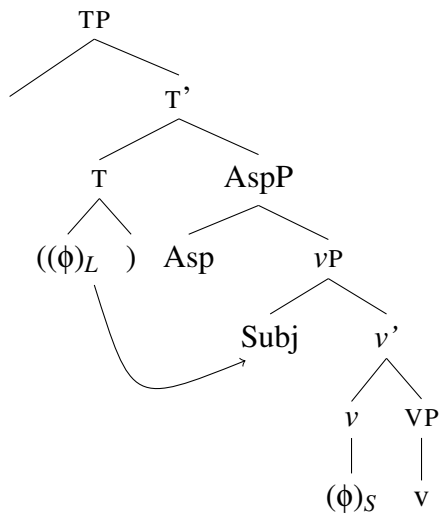
The Aspect head in the perfective doesn't carry a person probe but it selects for a v which carries a person probe. The person probe on v agrees with the object because it is the only argument. This agreement is marked by S.suffixes. Then, T enters the derivation with a person probe, it probes and agrees with the closer argument i.e. the subject. This agreement is marked by L.suffixes.

(28) **Perfective Transitive**



When the verb is intransitive, there is no internal argument that *v* can agree with and it simply doesn't. As mentioned above, Asp doesn't carry a person probe, so it doesn't do anything. When T merges to the tree, it probes for the features of closer argument i.e. subject and agrees with it. This agreement like all cases of T-agreement is marked by L.suffixes.

(29) **Perfective Intransitive**

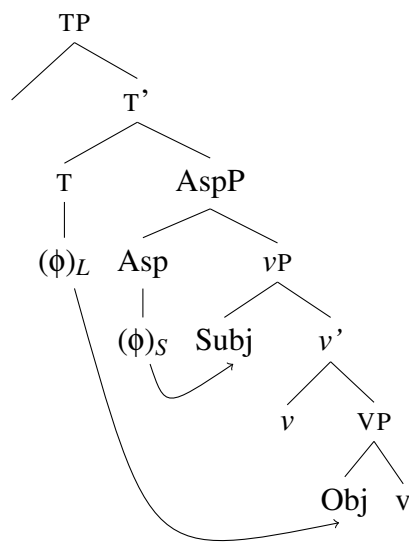


3.4 Senaya

All subjects and objects trigger agreement on the verb in the imperfective aspect. The function of agreement suffixes reverses across aspects. Subjects are marked by S-suffixes in the imperfective and by L-suffix in the perfective. Objects are marked by L-suffixes in the imperfective. However, as there is no object agreement in the perfective aspect, S-suffixes disappear in this aspect. As always, the order of suffixes is fixed (Verb-S.suffix-L.suffix)

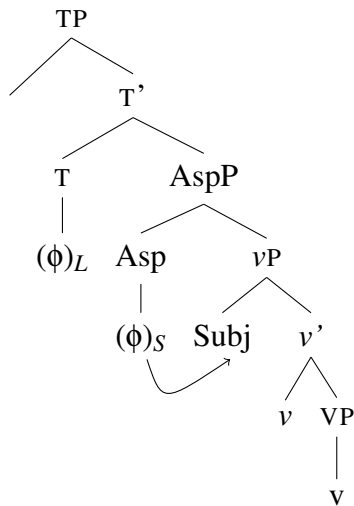
The agreement in the imperfective is exactly like Jewish Amadiya. The imperfective aspect carries a person probe and it always selects for a v which doesn't carry a probe. The person probe on Asp agrees with the subject because it is the closer argument. This agreement is marked by S.suffixes. After the ϕ features of the subject has been agreed with, they become inactive. So, when T enters the derivation with a person probe, it can agree with the object which now is the only argument whose features are available for the probe. This agreement is marked by L.suffixes.

(30) Imperfective Transitive



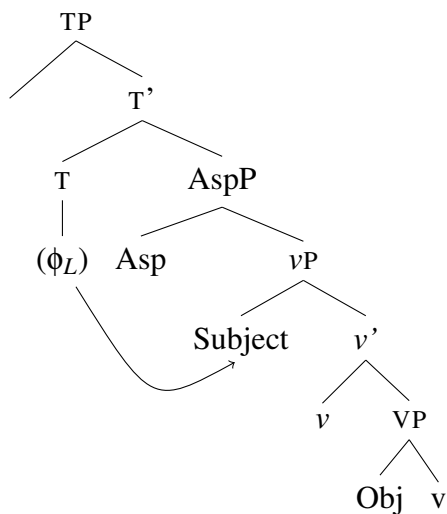
When the verb is intransitive, there is no argument that T can agree with, so it simply doesn't. The only agreement relationship is between the person probe on the Asp head and the subject which is realized by S.suffix.

(31) **Imperfective Intransitive**



I mentioned in my analysis that languages can vary in the lexical properties of functional head. The difference between Jewish Amadiya and Senaya is in the properties of *v*. While in Jewish Amadiya, *v* comes with a person probe in the perfective aspect, *v* in Senaya never carries a probe. Also, following Kalin & van-Urk (2014) I assumed that Asp only carries a probe in the imperfective. So, in the perfective in Senaya, there is only one probe on T which always agree with the subject. This agreement is marked with L.suffixes on the verb.

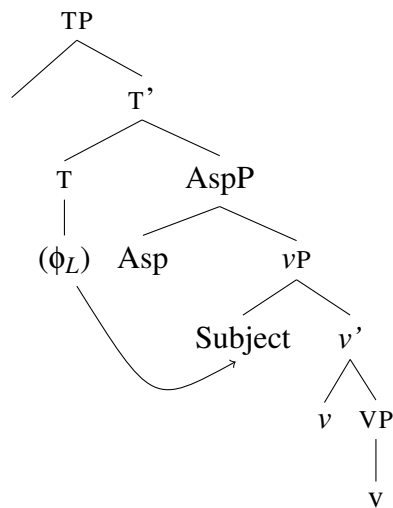
(32) **Perfective Transitive**



As *v* in Senaya doesn't carry a probe, the absence of an internal argument doesn't affect the agree-

ment pattern. Therefore, there is no difference between the transitive and intransitive verbs. As mentioned above, Asp doesn't carry a person probe, so it doesn't do anything. When T merges to the tree, it probes for the features of closer argument i.e. subject and agrees with it. This agreement like all cases of T-agreement is marked by L.suffixes.

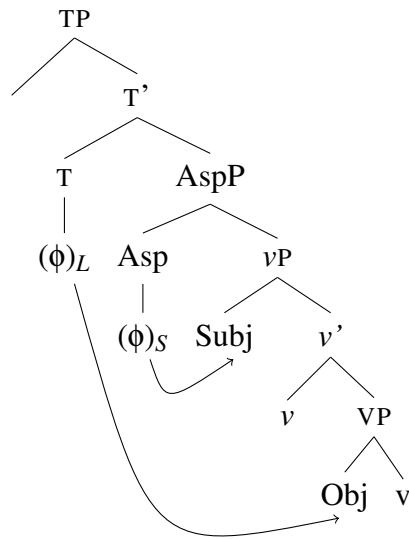
(33) **Perfective Intransitive**



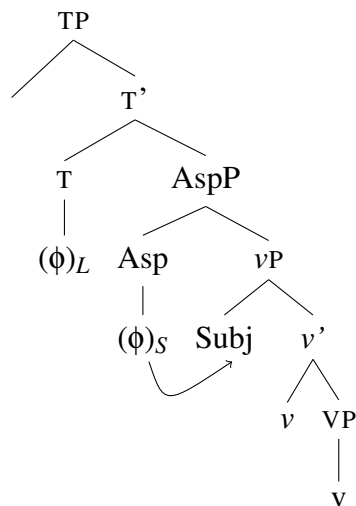
3.5 Christian Barwar

All subjects and objects trigger agreement on the verb in the imperfective aspect. The function of agreement suffixes reverses across aspects. Subjects are marked by S-suffixes in the imperfective and by L-suffix in the perfective. Objects are marked by L-suffixes in the imperfective and by S-suffix in the perfective. However, only third person definite objects trigger agreement in the perfective aspect. The order of suffixes, however, is always fixed (Verb-S.suffix-L.suffix)

The agreement in the imperfective is exactly like Jewish Amadiya and Senaya. The imperfective aspect carries a person probe and it always selects for a *v* which doesn't carry a probe. The person probe on Asp agrees with the subject because it is the closer argument. This agreement is marked by S.suffixes. After the ϕ features of the subject has been agreed with, they become inactive. So, when T enters the derivation with a person probe, it can agree with the object which now is the only argument whose features are available for the probe. This agreement is marked by L.suffixes.

(34) **Imperfective Transitive**

When the verb is intransitive, the person probe on Asp still agrees with the subject and is marked by S.suffixes. As there is no argument that T can agree with, so it simply doesn't.

(35) **Imperfective Intransitive**

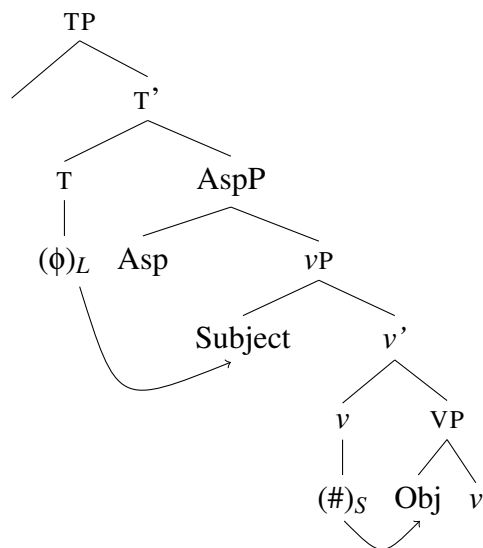
Christian Barwar differs from Jewish Amadiya and Senaya in that it shows person restriction on the object marking in the perfective. As already mentioned, only third person definite objects trigger agreement. This can be explained by the properties of the vhead which is responsible for the object agreement in the perfective. Inspired by Bèjar & Rezac (2003), I take the person restriction to be

the result of agreeing with a probe which lacks person features and only carries a number probe. So, I assume v in Christian Barwar comes only with a number probe.

The Aspect head in the perfective doesn't carry a person probe but it selects for a v which carries a number probe. The number probe on v does not have access to number feature of 1/2 person because it is further specified for the person. If it finds a third person object, it agrees with that object. This agreement is marked by S.suffixes. It should be emphasized that the derivation does not crash if there is no appropriate goal. So, the presence of 1/2 person objects do not result in ungrammaticality. They simply are not agreed with.

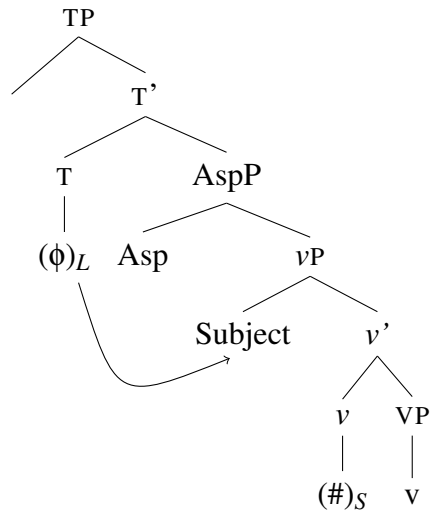
Then, T enters the derivation with a person probe, it probes and agrees with the closer argument i.e. the subject. This agreement is marked by L.suffixes.

(36) **Perfective Transitive**



When the verb is intransitive, there is no internal argument that v can agree with and it simply doesn't. When T merges to the tree, it probes for the features of closer argument which is still the subject and agrees with it. This agreement like all cases of T-agreement is marked by L.suffixes.

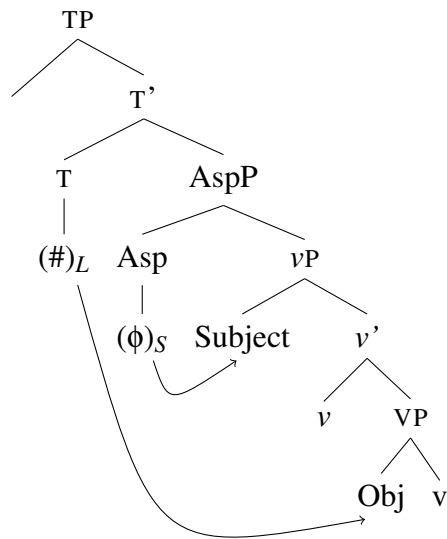
(37) **Perfective Intransitive**



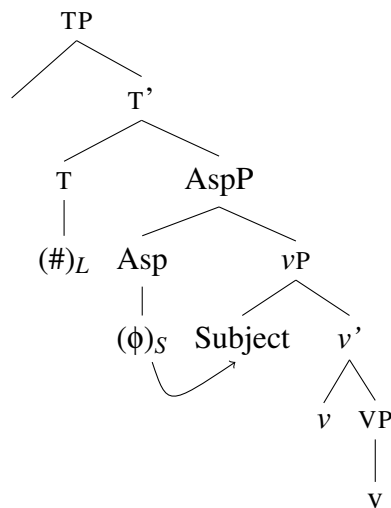
3.6 Shaputnaya

Shaputnaya shows some interesting differences with other NENA languages that we looked at. Firstly, it shows person restriction in the object agreement everywhere. Secondly, it uses the imperfective structure to refer to future events. Like other NENA languages, subjects are marked by S.suffixes and objects by L. suffixes. The function of the agreement suffixes reverses across aspects. Subjects are marked by L-suffixes and objects by S.suffixes in the perfective aspect. Lastly, it uses a special structure formed from the infinitival verb stem for imperfectives. Subjects in this form are marked by S.suffixes but all third person definite objects are marked with a single morpheme which comes before the S.suffix.

The agreement in future structure of Shaputnaya is like like the imperfective aspect in other NENA languages. The Aspect head carries a person probe and it selects for a v which doesn't carry a probe. The person probe on Asp agrees with the subject because it is the closer argument. This agreement is marked by S.suffixes. After the ϕ features of the subject has been agreed with, they become inactive. However, T head in the future enters the derivation with just a number probe. The number probe on T does not have access to number feature of 1/2 person because it is further specified for the person. If it finds a third person object, it agrees with that object. This agreement is marked by L.suffixes.

(38) **Future Transitive**

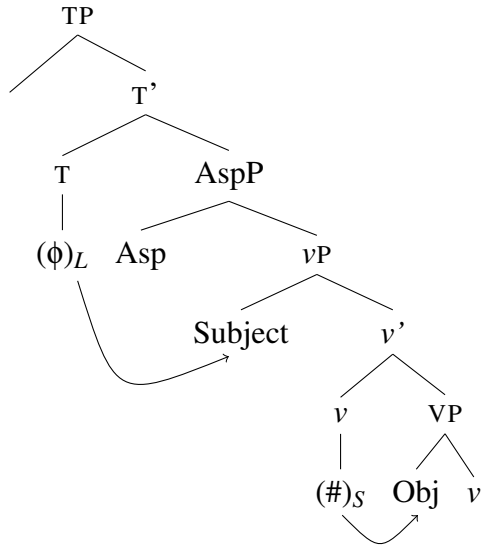
When the verb is intransitive, Asp still agrees with the subject. However, there is no argument that T can agree with, so it simply doesn't agree.

(39) **Future Intransitive**

In Shaputnaya, the agreement in the perfective is exactly like that of Christian Barwar. Aspect head in the perfective doesn't carry a person probe but it selects for a *v* which carries a number probe. If the number probe on *v* finds a third person object, it agrees with that object. This agreement is marked by S.suffixes. Then, T enters the derivation with a person probe, it probes and agrees with

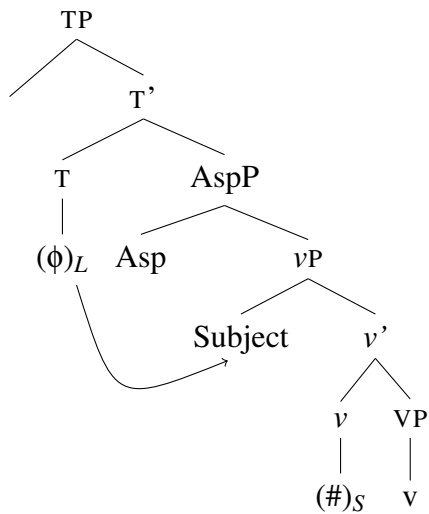
the closer argument i.e. the subject. This agreement is marked by L.suffixes.

(40) **Perfective Transitive**



When the verb is intransitive, there is no internal argument that *v* can agree with and it simply doesn't. When T merges to the tree, it probes for the features of closer argument which is still the subject and agrees with it. This agreement like all cases of T-agreement is marked by L.suffixes.

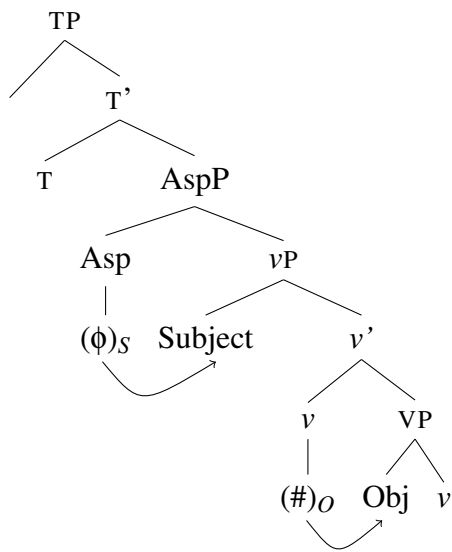
(41) **Perfective Intransitive**



In the special form of the imperfective in Shaputnaya, Asp head carries a person probe like other

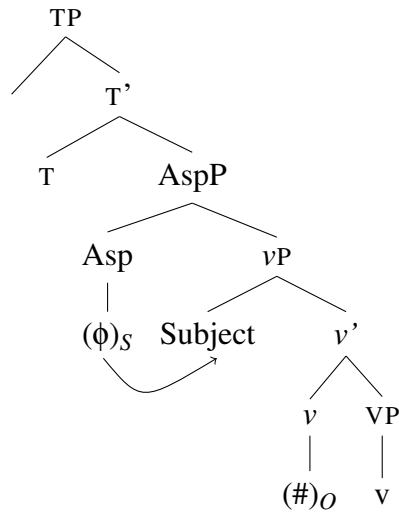
imperfective Asp heads but unlike them, it selects for a v which carries a number probe. If the number probe on v finds a third person object, it agrees with that object. The agreement with v should be normally realized as S.suffixes. Then, the person probe on Asp agrees with the closer argument i.e. the subject. This agreement is marked by S.suffixes. As it's been generally proposed, infinitival T doesn't carry a probe and doesn't participate in agreement. I assume that there is a restriction against having two sets of same suffixes in the spell-out. So, the agreement morpheme will be spelled out as a portmanteau which combines features from Asp and v .

(42) **Imperfective Transitive**



When the verb is intransitive, the number probe on v cannot find any argument to agree with, so it doesn't. Then, the person probe on Asp agrees with the closer argument i.e. the subject. This agreement is marked by S.suffixes.

(43) **Imperfective Intransitive**



3.7 Summary

I showed that v , Asp and T can carry a probe in NENA Agreement with T always spells out as L.suffixes. Agreement with v and Asp spell out as S.suffixes. I propose that The featural content of these probe can vary across different languages. While the imperfective always carries a person(π) probe in all of these languages, the featural content of agreement probes on T and v can vary across different NENA languages. They can carry a person, number or no probes. The split arises because the locus of the probe in the perfective aspect is v which is lower than the probe in the imperfective which is located on Asp. Following Kalin & van-Urk (2014), I assumed that there is an aspectual predicate in the imperfective that carries the carries a ϕ -probe, whereas such a predicate is absent in the perfective but v in the perfective hosts a ϕ -probe.

I also argued that the person restriction on object arises when there is a defective number (#) probe. Moreover, the featural content of the goal is structured in a way that only the specification of dominant feature head in feature geometry tree is visible to the probe. So, the number probe does not have access to number feature of 1/2 person because they are specified for the person.

4 Previous Analyses

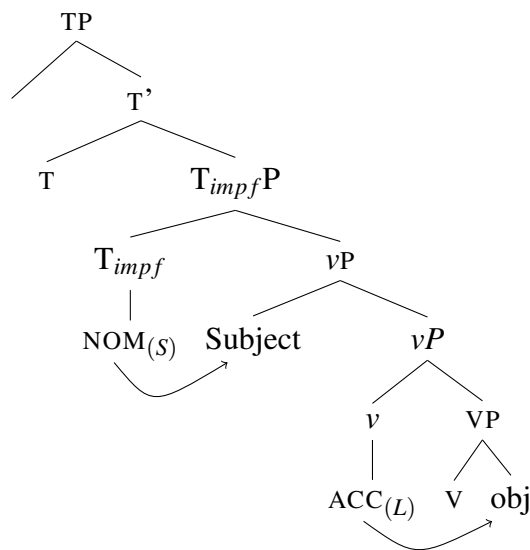
To finish my discussion of the aspect split in NENA languages, I discuss two previous accounts of this phenomenon. I first discuss an analysis of this split as a case of split ergativity proposed by Doron & Khan (2012). Then I review Kalin & van-Urk (2014)'s nominative-accusative treatment of these languages.

4.1 Doron & Khan (2012)

In the four NENA languages we focus on in this paper, subjects of all transitive and intransitive verbs (unaccusative or unergative) agree with the same form within an aspect. Admitting this fact, however, Doron & Khan (2012) claim that they consider them as a case of *Extended-Ergativity* (terminology of Dixon (1979)) in which the ergative suffix has been extended to unaccusative verbs as well.

Doron & Khan (2012) propose that the agreement in the imperfective aspect is nominative-accusative in all NENA languages. T agrees with the subject. This agreement is marked by an S.suffix. v agrees with the object and cause it to be clitic-doubled which is expressed by an L.suffix. Their proposed structure for the imperfective aspect is given in (44).

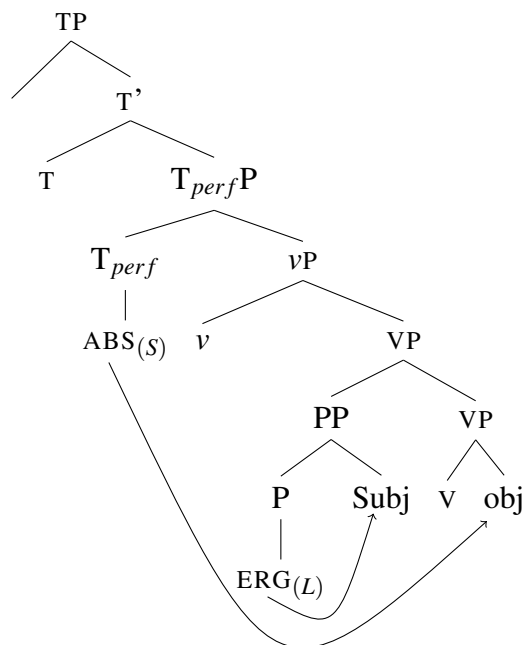
(44) Imperfective



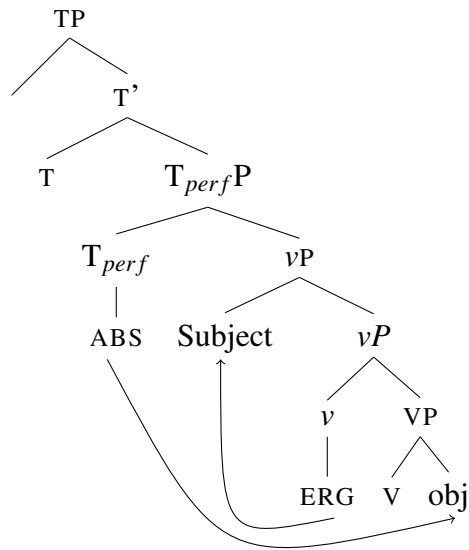
They make a distinction between NENA languages that show a person restriction on objects in the perfective and those in which objects irrespective of their person features trigger agreement on the verb. They call the first group the PCC-abiding and the latter PCC-obviating dialects.

For PCC-abiding dialects, they propose that subjects in the perfective aspect are expressed as a propositional phrase adjunct to VP. The P that introduces the subject assigns ergative case to it and causes the subject to be clitic-doubled and expressed by an L-suffix. T agrees with the object which is now the only argument available. This agreement is expressed with an S-suffix. Their proposed structure for the perfective aspect of PCC-abiding dialects is given in (45).

(45) **perfective (PCC-abiding dialects)**



For the PCC-obviating dialects, they propose that *v* assigns ergative case to *v* assigns ergative Case to its external argument if it has one, or to the internal argument otherwise. Therefore unaccusative subjects are also marked as ergative. The subject is clitic-doubled and expressed by an L-suffix. Then, T agrees with the object which is now the only argument available. This agreement is expressed with an S-suffix. Doron & Khan's proposed structure for the perfective aspect of PCC-obviating dialects is given in (46).

(46) **perfective (PCC-obviating)**

As NOM and ABS Case are both assigned by T, they are morphologically realized by S.suffixes. The morphological identity of Acc and Erg, however, cannot be accounted for in the same way in the PCC-abiding languages in which Acc is assigned by v whereas Erg is assigned by P. They propose that this identity is due to the syncretism of accusative and dative Case.

- (47) a. $V_{IMPF} - S_{NOM}.suffix - L_{ACC}.suffix$
 b. $V_{PERF} - S_{ABS}.suffix - L_{ERG}.suffix$

Kalin & van Urk (2104) point out a number of problems with this account. They find their account of the perfective aspect in PCC-obviating languages problematic. They rightly argue that the idea that a case assigner can alternate between assigning ergative case to its external argument and case to an internal argument is not supported independently. Moreover, such a mechanism over-generates because it is not clear what prevents v to assign ergative case to objects in transitives. They also argue that Doron and Khan's treatment of perfective subjects in PCC-abiding languages as an adjunct to VP cannot derive the PCC effect. Adjuncts do not count as interveners for A-movement in canonical PCC environments (Rezac 2011). Therefore, subjects that are adjuncts are

not expected to block full agreement between the object of the perfective and the ϕ -probe on T.

My account shares Doron and Khan's proposal that v is active at least in some NENA languages. However, I think the analysis put forth in this paper better fits the micro-variation among NENA languages, as it is able to capture data from more NENA languages without having to resort to unconventional assumptions.

4.2 Kalin & van-Urk (2014)

Looking at Senaya and Christian Barwar, Kalin & van-Urk (2014) argue that the aspect split in these nominative-accusative languages arise for the same reason they arise in ergative languages. Aspect splits are the result of an additional predicate in nonperfective aspects (Laka 2006; Coon 2010; Coon and Preminger 2012). The Neo-Aramaic aspect split arises because there is an additional ϕ probe in the imperfective, on Asp head itself. Kalin & van-Urk (2014) also take the person restriction on objects to be an instance of Strong PCC which Bèjar and Rezac's (2003) argue to arise when two arguments compete for the attention of one ϕ -probe.

My proposal follows Kalin & van-Urk's (2014) treatment of Senaya and Christian Barwar in many ways. I also assume imperfective aspect introduce a ϕ probe by Asp itself. The crucial difference, however, is that they take v to be always inactive across NENA languages. So, the difference between the perfective and imperfective in their account is the number of the probes in their structure. For them, the imperfective head always carries one additional probe which the perfective head lacks. In contrast, I propose that v can also carry a probe in some NENA languages. Given that, I also assume that v in Senaya never carries a probe, my analysis of Senaya is exactly like Kalin & van-Urk (2014). The only difference is that they take S-suffixes to be the product of agreement and L-suffixes to represent a clitic series. I didn't take a stand on the nature of these morphemes as agreement or clitics but my analysis is consistent with L-suffixes being a clitic series as well. However, my analysis is crucially different for Christian Barwar. Unlike Kalin & van-Urk (2014), I assumed that v carries a probe in the perfective and is responsible for the object agreement. Moreover, I presented a different account of the person restriction on objects which is not dependent on

the competition of two arguments.

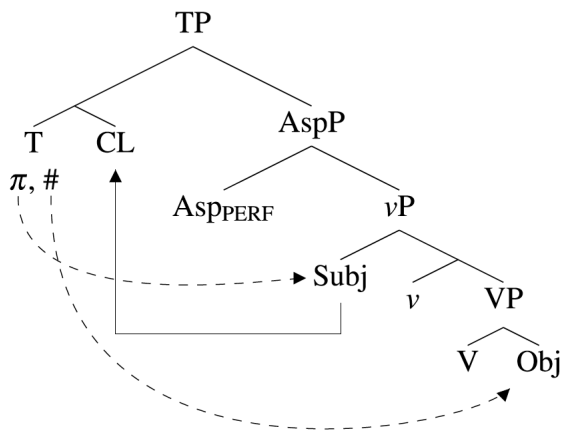
In what follows, I present the analysis proposed by Kalin & van-Urk (2014) for Christian Barwar and then I explain why their account cannot be extended to other NENA languages.

4.2.1 Christian Barwar

Kalin & van-Urk (2014) propose that the imperfective involves an additional ϕ -probe, introduced by imperfective Asp. ϕ -probe on Asp registers true agreement with the subject and is not a clitic-doubler like T. Like in Senaya, they assume v does not assign case or host agreement. So, the job of licensing objects falls to T. However, T in Christian Barwar has different lexical properties than in Senaya. Unlike Senaya which the person and number probe together, in Christian Barwar, the person and number probe on T probe separately and it is only the person probe on T that triggers clitic-doubling. Moreover, they take L.Suffix to be realized whenever there is clitic-doubling and S.suffixes to be realized whenever a head with unvalued ϕ -features forms a complex head with V. As a result, both agreement that is triggered by imperfective Asp and agreement triggered by number on T is spelled out as an S-suffix. Imperfective subjects and perfective objects are thus marked with the same suffix not because they agree with the same head, but because both are the target of true agreement and not clitic-doubling.

Their account of imperfective is identical to us, so I'm not go over it. In the perfective, only T carries a ϕ -probe. The person probe on T probes first, agrees with the subject, and triggers clitic-doubling. This clitic-doubling spells out as an L.suffix. Then, number on T probes. It ignores the subject because the subject is clitic-doubled, and agrees with the object instead. This agreement with the object is spelled out as an S-suffix. Because the object of the perfective only agrees for number, this structure will crash due to the PLC if the object is 1st or 2nd person.

(48)



Although Kalin & van-Urk (2014) give a successful account of Senaya and Christian Barwar, their account runs into problem accounting for Jewish Amadiya and Shaputnaya. One critical part of their account is that there is only one head which carries a probe in the perfective. So, it is not clear how it can account for the perfective in Jewish Amadiya where there is no person restriction on the object agreement. Moreover, the existence of two ϕ -probes in the imperfective predicts that there should never be a person restriction in this aspect. However, Shaputnaya shows person restriction in the imperfective.

5 Conclusion

This paper has shown that the split in NENA languages can be explained by positing that the position of the agreement probe in the perfective is lower than the agreement probe in the imperfective, so these probes agree with different arguments, i.e. objects in the perfective and subjects in the imperfective. Adopting the Mirror Principle of Baker (1985), my analysis accounts for the morphological identity of these agreements by the order in which the agreement relations associated with the agreement suffixes. Therefore, the agreement with subjects in the imperfective and object in the perfective are marked by the S.suffix because they are the first agreement relation in the derivation.

This paper has also provided an account for the micro-variation among NENA languages. I have

argued that the variation is the result of different featural content of agreement probes on T and v . These heads can carry a person or number probe or no probes. What makes these NENA languages similar is that the imperfective aspect head always carries a person(π) probe in all of these languages, while such a probe is absent in the perfective aspect head. Providing data from Shaputnaya, I have show that the agreement pattern in the imperfective aspect of these languages can also vary cross-linguistically which is not expected under the previous accounts.

References

- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. The Hague: Mouton de Gruyter.
- Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: A feature checking analysis. In *Clitic and affix combinations: Theoretical perspectives*, eds. Lorie Heggie and Francisco Ordonez. Vol. 74 of *Linguistics today*, 199-235. Amsterdam: John Benjamins.
- Bèjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, eds. Ana Teresa Pèrez-Leroux and Yves Roberge, 49-62. Amsterdam: John Benjamins.
- Coghill, Eleanor. 2003. The Neo-Aramaic dialect of Alqosh. PhD diss., University of Cambridge.
- Coon, Jessica. 2010. Complementation in Chol (Mayan): A theory of split ergativity. PhD diss., MIT.
- Coon, Jessica, and Omer Preminger. 2012. Taking ‘ergativity’ out of split ergativity: A structural account of aspect and person splits. *lingBuzz/001556*.
- Dixon, R.M.W., 1979. Ergativity. *Language* 55.1, 59-138.
- Hoberman, Robert. 1989. The syntax and semantics of verb morphology in Modern Aramaic: A Jewish dialect of Iraqi Kurdistan. New Haven: American Oriental Society.
- Holmberg, Anders, and Thorbjörg Hróarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113: 997-1019.

