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Clause-typing and evidentiality in Ecuadorian Siona

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Chapter 7: Reconstructing Ecuadorian Siona verb morphology

7.1 Introduction

Although Ecuadorian Siona has complex verbal morphology with distinct subject agreement paradigms for assertive, non-assertive and dependent verbs, there are also many regularities in the system as shown in chapter 6. For instance, the second and third person singular feminine form in the present tense is generally expressed by the suffix *-ko* and its past counterpart is *-o* or *-ko*. The same regularity is found in the third person masculine forms: the present suffix *-ki* has *-i* and *-ki* as its past counterparts. Despite these regularities, it is difficult to split up the semantically complex suffixes into a subject agreement suffix, a tense suffix and a clause typing suffix. Synchronically, these suffixes are best analyzed as fused suffixes that express these three grammatical categories simultaneously.

Diachronically, however, it is probably possible to tease the categories apart. By reconstructing an earlier state of the verb morphology, it is possible to distinguish separate tense and subject agreement marking. It is also possible to explain why different clause types, assertive, non-assertive, and dependent clauses, have different subject agreement systems. Furthermore, there is a historical explanation for the fact that questions and reports share the same subject agreement morphology.

In this chapter, I analyze the subject agreement system in the language from a diachronic perspective. In order to understand the issues to the fullest extent I will first address the regularities of the synchronic system in section 7.2. Then, in section 7.3, I present some sound changes that have occurred in Ecuadorian Siona that bring to light even more regularities in the system. In section 7.4, I will describe the different processes of grammaticalization and reanalysis that have led to the emergence of the verbal system as it is now. Finally, in section 7.5, I will provide a summary of this chapter and some conclusions.

7.2 Regularities in the subject agreement morphology

There are many regularities in the Ecuadorian Siona subject agreement morphology system. For instance, the past tense subject agreement paradigms of the non-assertive category and of the dependent verb category are identical except for their organization with respect to

person. Specifically, the dependent verb morphology does not distinguish between different persons, whereas the non-assertive morphology opposes second and third person singular masculine, second and third person singular feminine and all other categories. The tables with all the different subject agreement paradigms that were presented in chapter 5 are repeated below:

Table 7.1: Subject agreement morphology in assertions

Tense	Person / Gender / Number	Assertions		
		Non <i>-i</i> verbs	<i>-i</i> verbs	bound verbs <i>-a</i> and <i>-si</i>
PRESENT	3S.F	-ko	-ko	-o
	3S.M	-hi	-hi	-bi
	OTHER	-jɪ	-jɪ	-'i
PAST	3S.F	-o	-ko'i	
	3S.M	-bi	-hV'i	
	OTHER	-wi	-i'i	

Table 7.2: Subject agreement morphology in non-assertions

Tense	Person / Gender / Number	Questions & Reports			Conjectural
		Non <i>-i</i> verbs	<i>-i</i> verbs	Bound verbs <i>-a</i> and <i>-si</i> ¹⁵²	All verbs
PRS	2/3S.F	-ko	-ko	-o	-a ba-'i-o
	2/3S.M	-ki	-ki	-i	-a ba-'i-i
	OTHER	-je	-je	-je	-a ba-'i-je
PST	2/3S.F	-o	-ko		-a bah-ko
	2/3S.M	-i	-ki		-a bah-ki
	OTHER	-de	-te		-a bah-te

¹⁵² This morphology is only found for questions and not for reportatives.

Table 7.3: The subject agreement morphology in dependent verbs

Tense	Number / gender	Same subject		Different subject	
		Non -i verbs	-i verbs	Non -i verbs	-i verbs
PRS	S.F	-ko	-o	-ko-na	-o-na
	S.M	-ki	-i	-ki-na	-i-na
	PL	-hi	-hi /-bi	-hi-na	-hi /-bi-na
PST	S.F	-ni		-o-na	-ko-na
	S.M			-i-na	-ki-na
	PL			-de-na	-te-na

The vowels in the subject agreement paradigms show the most regularity. For instance, whenever a suffix explicitly refers to a feminine subject, it always ends in *-o*. Many suffixes that refer explicitly to a masculine subject end in *-i*, except for assertive suffixes whose masculine suffixes end in *-i*. In the case of the rest categories, which I refer to as the ‘other’ category in the paradigms, there are also some regularities with respect to the vowel: in the assertive paradigms it is an *-i* and in non-assertive and past dependent paradigms it is an *-e*. These regularities are summarized in the table below:

Table 7.4: The reoccurring vowels with their categories

Morphological material	Function
-o	Feminine: <ul style="list-style-type: none"> • 3rd singular, assertive • 2nd & 3rd person singular, non-assertive • dependent verbs
-i	<ul style="list-style-type: none"> • other: assertive • masculine: 2nd and 3rd person singular non-assertive • plural: present dependent verbs
-e	Other: <ul style="list-style-type: none"> • non-2nd or 3rd person singular non-assertive • plural past dependent verb
-i	Masculine: <ul style="list-style-type: none"> • 3rd person singular masculine assertive

There are also consonantal regularities that occur in the paradigms. For instance, many present suffixes start with a plain *-k*. In

the case of past tense of the *-i* verbs, the stem ends in a glottal fricative and the suffix starts with a voiceless fricative *-k* or *-t*. The absence of a consonant marks past tense in the case of the non *-i* verbs, and present in the case of the conjunctural and dependent *-i* verbs as well as the bound verbs. These regularities are summarized in the table below:

Table 7.5: Regularities in the use of consonants

Morphological material	Function(s)
-k	<ul style="list-style-type: none"> • Present: all non <i>-i</i> verbs and most paradigms with <i>-i</i> verbs.
-h.C	<ul style="list-style-type: none"> • Past: <i>-i</i> verbs
-∅	<ul style="list-style-type: none"> • Present: some paradigms with <i>-i</i> verbs. • Past: non <i>-i</i> verbs

Despite these regularities it is not possible to generalize rules, neither in the case of the vowels nor in the case of the consonants. For example, it is impossible to say that *-o* always marks feminine subjects, because it does not mark all feminine subjects. First and second person feminine are not marked with an *-o* in the assertive paradigm. Neither is it possible to say that *-o* marks third person singular feminine, because in non-assertive verbs it also marks second person feminine, and on dependent verbs it marks all feminine persons. On the whole, it is difficult to make generalizations for any of the vowels or consonants. From a synchronic perspective it is, therefore, more satisfactory to analyze the subject agreement suffixes as portmanteau forms that additionally express tense and the clause type of the sentence.

Nonetheless, all the regularities suggest that these paradigms were historically not strictly fusional. They show that a relation may have existed between specific morphological elements and a grammatical category. More precisely, the use of the vowels in the suffixes seems to be involved in the expression of subject agreement, whereas consonants are more related to the expression of tense. The difference in clause type is often expressed through the use of a different subject agreement morpheme. Especially, the assertive morphology is different from the non-assertive and the dependent verb morphology. The differences between non-assertive and dependent verb morphology are mainly found in the organization of the paradigms. While dependent verbs do not distinguish any person, but just gender and number, non-assertive verbs treat second and third person singular masculine and feminine different from all other categories. All these

patterns do not seem to be coincidental. They seem to have emerged from some historical processes that will be discussed throughout this chapter.

7.3 Phonological changes

One type of historical process that has affected Ecuadorian Siona verb morphology is sound change. Due to phonological changes, some general morphophonological processes have been obscured. Reconstruction of an earlier stage of Ecuadorian Siona verb morphology allows for even more regularities to become visible. It is, then, possible to understand how the different functions were fused into a single morpheme.

In this section I will discuss four of the most relevant sound changes for the historical processes and I will show to which suffixes of the verb morphology they apply. First, I will address the processes that have taken place in the consonantal system: lenition in subsection 7.3.1 and debuccalization of *p in 7.3.2. Then I will discuss important phonological processes in the vowel system: coalescence in subsection 7.3.3 and vowel assimilation, in subsection 7.3.4. Finally, I will provide an overview of the reconstructed system in 7.3.5.

7.3.1 Lenition

One diachronic phonological process that is very likely to have affected the verbal morphology in Ecuadorian Siona is lenition. The lack of a consonant in some of the verbal suffixes is in all likelihood due to this phonological process. The consonantless suffixes, *-o* and *-i*, are found in the past tense paradigms of the non *-i* verb class and in some present tense paradigms of the *-i* verb class. The cognates of these Ecuadorian Siona suffixes in some other Western Tukanoan languages do have a consonant. The cognates of the Ecuadorian Siona past tense non-assertive suffixes *-o* and *-i* in the non *-i* verb paradigms of Colombian Siona (Wheeler, 1987b) and Máíhîki (Velie, 1975; Velie & Velie, 1981) are *-go* and *-gî* respectively.¹⁵³ An overview of the past tense subject

¹⁵³ These forms are in the Colombian Siona orthography used by Wheeler (1987b, p. 155): *-guě* and in the Máíhîki orthography used by Velie (1975, p. 26) and Velie and Velie (1981, p. 125): *-guî*. These orthographies are based on the Spanish orthography in which a voiced dorsal [g] that occurs before [i] or [e] is spelled as <gu>.

agreement morphology from various West-Tukanoan languages is provided in the table below:

Table 7.6: The past tense subject agreement morphology for questions with verbs from the non *-i* class¹⁵⁴ (Cook & Criswell, 1993, pp. 56-57; Velie, 1975, p. 26; Velie & Velie, 1981, p. 125; Wheeler, 1987b, p. 160).

Person/ number/ gender	Ecuadorian Siona	Koreguaje	Colombian Siona	Máíhìkì
2/3s.F	-o	-o	-go	-go
2/3s.M	-i	-i	-gì	-gì
OTHER ¹⁵⁵	-de	-re	-re	-de

In the table above it can be observed that the Colombian Siona and Máíhìkì suffixes for second and third person singular masculine and feminine have a voiced dorsal, while the Ecuadorian Siona and Koreguaje cognates do not contain any consonant.

The past question paradigm is not the only paradigm where these sound correspondences occur. Wherever Ecuadorian Siona subject agreement suffixes consist of a single vowel, the Colombian Siona and Máíhìkì cognates, if they exist, have a dorsal stop /g/ in their onset. For instance, the cognate form for the third person singular feminine copula form *-ao* in Ecuadorian Siona is *ago* in Máíhìkì (Velie & Velie 1981: 125). Another example involves the present tense dependent suffixes that occur with the *-i* verb class. These suffixes are *-o* and *-i* in Ecuadorian Siona while their cognates in Colombian Siona are *-go* and *-gì*:

¹⁵⁴ This verb class is referred to as the regular verbs in Máíhìkì (Velie, 1975; Velie & Velie, 1981) and Koreguaje (Cook & Criswell, 1993) and as the first inflection class in Colombian Siona (Wheeler, 1987b).

¹⁵⁵ The difference in consonant in the suffixes *-de* and *-re* is probably an orthographical one. The choice between <d> or <r> depends on the phonological analysis of the language.

Table 7.7: The non-past tense subject agreement morphology for dependent verbs with verbs from the *-i* class¹⁵⁶ (Cook & Criswell, 1993, pp. 56-57; Velie, 1975, p. 26; Velie & Velie, 1981, p. 125; Wheeler, 1987b, p. 160).

Person/ number/ gender	Ecuadorian Siona	Colombian Siona
S.F	-o	-go
S.M	-i	-gi
PL	-hi	-hi

The sound correspondence between [g] in Colombian Siona and Máihkì and [Ø] in Koreguaje and Ecuadorian Siona suggests that a phonological change has taken place. The situation in Koreguaje and Ecuadorian Siona looks like a typical case of lenition in which the intervocalic dorsal stops first softened and then disappeared. Therefore, the onsetless suffixes *-o* and *-i* can be reconstructed as **-go* and **-gi*. The consonant **g* in these suffixes represents a lenited dorsal consonant.

Interestingly, the reconstruction of the lenis consonant **g* unveils further regularities in the paradigms that contain suffixes with this consonant. The other suffixes in these paradigms mostly start with a lenis consonant as well. For instance, the past tense non-assertive suffixes for non *-i* verbs all start with a lenis consonant: **-go*, **-gi* and *-de*. The dental consonant *d* is lenited and is pronounced as [r]. Another example of a paradigm that is reconstructed as having only lenis consonants is the present tense *-i* verb dependent paradigm. The reconstructed lenis forms are **-go* and **-gi*. The third lenis form, which still used in the Sototsiaya variety, is the form *-bi*. The bilabial consonant is lenited and is pronounced as [β]. The tables below show the paradigms that show lenited consonants:

Table 7.8: Lenited consonant paradigms in assertive clauses

Person / Number / Gender	Past tense non <i>-i</i> verbs	Present tense bound verbs
3S.F	*-go	*-go
3S.M	-bi	-bi
OTHER	(-wi)	(-'i)

¹⁵⁶ Wheeler (1987b) refers to this verb class as the second inflectional class in his description of Colombian Siona.

Table 7.9: Lenited consonant paradigms in non-assertive clauses

Person / Number / Gender	Past tense non <i>-i</i> verbs	Present tense conjectural	Present bound verbs
3S.F	*-go	*-go	*-go
3S.M	*-gi	*-gi	*-gi
OTHER	-de	(-je)	(-je)

Table 7.10: Lenited consonant paradigms in dependent clauses

Person / Number / Gender	Past tense non <i>-i</i> verbs	Present tense <i>-i</i> verbs
S.F	*-go	*-go
S.M	*-gi	*-gi
PLURAL	-de	-bi

The tables above show that lenis consonants are associated to specific past and present tense paradigms. Most of the suffixes in the paradigms start with a lenis consonant or are reconstructed to start with a lenis consonant. Some suffixes from these paradigms do not participate in this pattern. These suffixes, which are placed between brackets in the tables above, are found in the ‘Other’ categories of the assertive clauses and in the present tense non-assertive clauses for the *-i* verbs. The use of some of the suffixes in these positions can be explained by different historical processes. Nevertheless, there is a general tendency that lenis consonants are used in the paradigms presented above.¹⁵⁷

¹⁵⁷ I leave the question of how these lenis consonants used to be pronounced unanswered in this dissertation. Synchronically, the labial and dental lenis consonants are allophones of the laryngealized consonants that are found in word-initial position. It is, however, unclear at this stage of the diachronic analysis of Ecuadorian Siona, whether the word-internal lenis consonants developed from voiced stops or from laryngealized stops. This question goes back further to Proto-Tukanoan. Most Tukanoan languages have two types of stops: some languages have voiceless and voiced stops and others have plain and laryngealized stops. Chacón (to appear) reconstructs the voiced stops and the laryngealized stops as laryngealized stops in Proto-Tukanoan. Waltz and Wheeler (1972) reconstruct the same group as voiced stops in Proto-Tukanoan. More evidence is needed to confirm one of these reconstructions. Because I do not want to take a stance on this topic, I have decided to adopt Wheeler’s

7.3.2 The debuccalization of *p

A second type of sound change that has occurred in Ecuadorian Siona is the debuccalization of *p, as suggested in chapter 3. This is probably an old sound change that happened before the Western Tukanoan languages split up. Its result is found in all of the languages of this branch of the family. When a consonant debuccalizes, it loses its place of articulation and is pronounced as a glottal fricative [h]. There is a considerable amount of evidence that this change occurred in Ecuadorian Siona and in Western Tukanoan languages in general. Many words that have a glottal fricative [h] in Ecuadorian Siona have a bilabial stop in Eastern Tukanoan languages. The table below shows examples of this correspondence:

Table 7.11: Sound correspondence between [p] or [b] in the Eastern Tukanoan languages Desano (DES), Kubeo (KUB), Piratapuyo (TAP), Tukano (TUK) and Wanano (WAN) and [h] in Ecuadorian Siona (SIO) (Data on Eastern Tukanoan languages from Chacón, to appear, Appendix I; N. E. Waltz & Wheeler, 1972)

	DES	KUB	PIR	TUK	WAN	SIO	Meaning
#_V	~pabo	~pabu	~pabo	~pabo	~pabo	hāmū	armadillo
	-	-	pahi	pahi	-	hai	big
	pagi	paki	p ^h iki	paki	p ^h iki	ha'-ki	father
	pea	peka	p ^h icha	peka	p ^h icha	hēhka	firewood
V_(')V	gobe	kobe	kope	kope	kope	gohe	hole
	jeeba	jeba	ja'pa	je'pa	ja'pa	jiha	land
	bupu	ōpō	wipo	bīpo	wīpo	mōhōĩ	thunder
	-	-	~dabo	~dībo	~dabo	dīhō	wife

The first four words in table 7.11, for *armadillo*, *big*, *father* and *firewood*, show that there is a sound correspondence between [p] in most Eastern Tukanoan languages and [h] in Ecuadorian Siona in word initial position. The last four words, for *hole*, *land*, *thunder* and *wife*, show that there is a correspondence between [p] in some Eastern Tukanoan languages, [b] in other Eastern Tukanoan languages and [h] in Ecuadorian Siona. Since it is typologically more common for [p] to debuccalize to [h] than for [h] to become [p], the best reconstruction of [h] in Ecuadorian Siona is *p.

Gómez-Imbert (2004) describes this same process for the Eastern Tukanoan language Barasana in which *p also has become [h]. A similar reconstruction is proposed for the glottal fricative [h] in

description of the consonants (1987b), in which he makes a difference between lenis and fortis consonants: *consonantes suaves y fuertes*.

Colombian Siona by Waltz and Wheeler (1972, p. 125). They argue that the [h] in the language derives from a **p* in Proto-Tukanoan. Chacón (to appear) extends this reconstruction **p* > *h* to all Western Tukanoan languages and to some Eastern Tukanoan languages.

Since the debuccalization of **p* occurs in both word initial and in root internal position in Ecuadorian Siona, it seems to be a generalized sound change in the language, and it probably took place in suffixes as well. One indication that the sound change **p* > *h* also took place within bound morphology is that there are no suffixes containing a bilabial stop [p]. Furthermore, an even better indication can be found in some cognate suffixes. There is a suffix in Ecuadorian Siona that contains [h] that has cognates in Eastern Tukanoan languages that contain a bilabial stop. This is the suffix *-hi* 'third person singular masculine present assertive' in Ecuadorian Siona. Its cognate forms are, for instance, *-bi* in Kubeo and *-~bi* in Desano and Tukano (Chacón, to appear). The glottal fricative [h] in this Ecuadorian Siona suffix corresponds to a bilabial stop in Eastern Tukanoan languages, just as it does in root morphemes.

Because of the correspondence in suffixes between [h] in Ecuadorian Siona and bilabial stops in Eastern Tukanoan languages, I assume that the **p* has debuccalized in suffixes in Ecuadorian Siona as well. Therefore, I reconstruct the third person masculine present assertive suffix *-hi* as **-pi*. I follow Chacón (to appear, Appendix I) in this reconstruction. He reconstructs cognate suffixes of the Siona suffix *-hi* as **-pi* as well. Other suffixes that contain the glottal fricative [h] in Ecuadorian Siona are the third person singular masculine past tense assertive suffix *-hV'i* and the plural present tense suffix for dependent verbs *-hɨ*. I reconstruct these suffixes as **-pV'i* and **-pɨ* at an earlier stage of the language. These reconstructions are summarized in the table below:

Table 7.12: The reconstruction of the subject agreement morphemes that contain a glottal fricative [h]

Function	Suffix	Reconstructed form
3S.M.PRS.ASS	-hi	*-pi
3S.M.PST.ASS (-i verbs)	-hV'i	*-pV'i
PL.PRS.DEP	-hɨ	*-pɨ

7.3.3 Coalescence

A third type of sound change that has blurred some of the regularities in Ecuadorian Siona verb morphology is coalescence. Coalescence is not a

diachronic process in the language; it is a productive process. Examples of this process that make it difficult to recognize specific verbal morphology are the coalescence of /e/ and /i/ and of /i/ and /ɨ/.

This first synchronic coalescence of /e/ and /i/ affects present tense main verb forms of the *-i* class with a root that ends in *-e*. These roots that end in *-e* cannot be recognized as *-i* verbs in present tense main verbs. The reason for this is that the main indicator for class in this verb form, the imperfective suffix *-i*, has fused with the preceding vowel and is not overtly realized. The suffix *-i* is realized as a lengthening of the vowel *-e* in the root. This is illustrated in example (1a):

- (1) a. hueji.
[wee.hi]
we-i-hi.
lie.in.hammock-IMPF-3S.M.PRS.ASS
'He is lying in the hammock.'
- b. saiji.
[sai.hi]
sa-i-hi.
go-IMPF-3S.M.PRS.ASS
'He is going.'

Example (1a) shows that the imperfective suffix *-i* is not pronounced as [i] when it is suffixed to a root that ends in [e]. The vowel /e/ and /i/ fused and form a long /ee/ in those cases. These verbs with a long *-e* in the stem in the present tense behave as *-i* verbs in all other paradigms. The coalescence of /e/ and /i/ obscures the membership of these verbs of the *-i* verb class in the present tense.

The second example of coalescence, of /i/ and /ɨ/, has an impact on the recognition of various subject agreement suffixes. An example of a suffix that assimilates in this way is *-i*. This suffix came into existence when the dorsal lenis stop **g* stop was deleted in intervocalic position, as shown in subsection 7.3.1. The suffix *-i* fuses with /i/ when it is used as a past tense non-assertive suffix and as a past tense different subject dependent verb suffix with the only non *-i* verb of which the root ends in *-i*: *go'ije* 'to return.' This is illustrated in the examples below:

- (2) a. caëña.
[kai.nã]
ka-i-jã.
say-2/3S.M.PST.N.ASS-REP
'He said.' (I am told).
- b. go'iña.
[ko.ʔi.nã]
go'i-i-jã.
return-2/3S.M.PST.N.ASS-REP
'He returned.' (I am told).
- (3) a. caëna...
[kai.nã]
ka-i-na...
say-S.M.PST.-DS
'When he had said...'
- b. go'ina...
[ko.ʔi.nã]
go'i-i-na.
return-S.M.PST-DS
'When he had returned...'

The past tense suffix *-i* is overtly realized when it is used with a non *-i* verb that does not end in *-i*, as shown for the verb *kaje* 'to say' in examples (2a) and (3a). When the morpheme is suffixed to the non *-i* verb *go'ije* 'to return,' the vowels /i/ and /i/ fuse and are realized as [i], as shown in examples (2b) and (3b). This same synchronic process of coalescence occurs with the third person singular present tense assertive suffix *-i* when it used with the bound verb *-si*, as discussed in chapter 5, subsection 5.2.3.2, and with the masculine singular present tense suffix *-i* that is used with dependent *-i* verbs, as discussed in subsection 5.3.1.4.

7.3.4 Vowel assimilation

A final type of sound change that is discussed in this chapter is vowel assimilation. This is a common process in the language that can in some cases be characterized as diachronic and in others as synchronic. The synchronic processes of vowel assimilation were discussed in the phonological sketch of Ecuadorian Siona in chapter 3 and are briefly repeated here. An example of synchronic vowel assimilation is the

assimilation of the vowel /i/ to [i] with the present tense suffix *-i* ‘other assertive’ when it is attached to the bound future verb *-si*. The combination of *-si* and the suffix *-i* is realized as *-si’i*, as shown in the overview of the verb morphology in subsection 5.2.3.2.

Another suffix that has undergone vowel assimilation is the third person singular masculine past tense assertive *-i* verb suffix *-hV’i*. This suffix seems to have undergone a chain of sound changes. This chain is represented in diachronic order in the example below:

$$(4) \quad \begin{array}{ccccccc} *{-}3\text{S.M-PST} & \rightarrow & *p > h & \rightarrow & \text{assim. I} & \rightarrow & \text{assim. II} \\ *{-}pi{-}’i & \rightarrow & *{-}hi{-}’i & \rightarrow & *{-}hi’i & \rightarrow & {-}hV’i \end{array}$$

As illustrated in (4), the suffix *-hV’i* is reconstructed as a combination of a third person singular masculine suffix **-pi* and a past tense suffix **-i*. The combination of the two suffixes was affected by three sound changes that have obscured the regularity in this paradigm. The first change, the debuccalization of **p*, was discussed in subsection 7.3.2. The second two changes are diachronic processes of vowel assimilation. I will address these changes in this subsection.

The final vowel of the suffix *-hV’i*, the high front vowel [i], is probably the vowel that first underwent assimilation while the first vowel *V* subsequently underwent assimilation. These vowels display irregularity with respect to the vowels in the other suffixes of the paradigm and the vowels in the suffixes of other paradigms. The paradigm to which the suffix *-hV’i* belongs is presented here below:

Table 7.13: The subject agreement paradigm for *-i* verb past tense assertions.

Person / number / gender	Suffix
3S.F	<i>-hV’i</i>
3S.M	<i>-ko’i</i>
OTHER	<i>-i’i</i>

As mentioned in the overview of verbal morphology in subsection 5.2.3.1.2, it appears that the suffixes of this assertive past paradigm actually consist of two parts. The first part, *-hV* for 3S.M, *-ko* for 3S.F and *-i* for the OTHER category, seems to mark subject agreement, since these suffixes are similar to the suffixes found in other paradigms. The second part, *-i* for 3S.M and *-i* for both 3S.F and the OTHER category, seems to mark past tense.

The third person singular masculine marker *-hV* can be reconstructed as **-hi*. The vowel in this suffix assimilates to the vowel of the verb root, as in *saha'i* 'he went', *tuhu'i* 'he sat on top of something' and *sēhē'i* 'he asked.' Since this vowel always assimilates to the vowel in the verb root, it is not immediately straightforward that it should be reconstructed as **i*. However, the form *-hi* is still found in other paradigms marking the same subject agreement category, such as in the present tense assertive paradigms of *-i* verbs and non *-i* verbs. Further evidence is found in Colombian Siona (Wheeler, 1987b, p. 156) and Secoya (Johnson & Levinsohn, 1990, p. 66). The third person singular masculine past tense suffix for *-i* verbs is *-hi'i* in these closely related languages. This evidence suggests that the assimilation of the first vowel in the suffix *-hV'i* is an innovation in Ecuadorian Siona and that the first part of the suffix can be reconstructed as **-hi*. If the debuccalization of **p* in Ecuadorian Siona described in subsection 7.3.2 is taken into account, the reconstruction to **-pi* can be completed.

The tense marker was probably *-i*, which can be reconstructed as **-ʔ* in the case of the third person singular masculine. There are two main arguments for this reconstruction. First of all, the assimilation from **i* to [i] is a regular sound change in the language. Therefore it would not be exceptional if this assimilation had happened. Secondly, the reconstruction of **-ʔ* shows one past suffix for the three subject agreement categories. The third person singular feminine and the 'other' both have this tense marker. This is a uniformity that is to be expected for a regular tense marker. If a suffix is a pure past tense marker, one would not expect it to differ for the subject agreement categories. Taking into account the three sound changes that the suffix *-hV'i* underwent, it can be reconstructed as a combination of the subject agreement suffix **-pi* and a tense marker **-ʔ*.

7.3.5 An overview of the reconstruction

Sound changes such as lenition, the debuccalization of **p*, coalescence and vowel assimilation have changed the picture of the verbal morphology. Some of the regularities in the verb paradigms that existed at an earlier stage of the language were blurred completely. These regularities can be brought to light via the reconstruction of various sounds. One of these regularities, as discussed in subsection 7.3.1, is that some paradigms show mainly lenis consonants. The feminine and masculine suffixes always seem to follow this pattern in the lenis paradigms, while the 'other' suffixes participate in some of the

paradigms. For instance, the past tense non-assertive paradigm for non *-i* verbs contains the lenis suffixes *-o* (**-go*), *-i* (**-gɪ*) and *-de*. This regularity may seem to be a coincidence, if only the lenis paradigms are taken into account.

However, the lenis consonant regularity becomes more striking when the paradigms without lenis consonants are taken into consideration. These non-lenis paradigms show further regularity: they mainly display plain voiceless stops, or fortis consonants. It is the feminine and masculine suffixes that show this regularity in all the paradigms and the 'other' suffixes in a part of the paradigms as well. These fortis paradigms often show exactly the same suffixes as the lenis paradigms, but with a fortis consonant. An example of a full fortis paradigm is the past tense non-assertive paradigm for *-i* verbs that consists of the fortis suffixes *-ko*, *-ki* and *-te*. The consonants in the suffixes of this paradigm all have the same place of articulation as the consonants of their non *-i* verbs counterparts, they just differ with respect to their energy of production. There is a contrast between fortis and lenis consonants that seems to mark the distinction between the different verb classes.

Another grammatical category that is marked by this contrast is tense. In many cases the only difference between a past and present tense suffix is the fortis or lenis pronunciation of the consonant. For example, the assertive non *-i* verb paradigms contain suffixes with fortis consonants in the present: *-ko* and *-hi* (**-pi*) and lenis suffixes with lenis consonants in the past: *-o* (**-go*) and *-bi*. Another reconstructed regularity in the tense marking concerns the past tense suffix *-ɨ* that is found in the assertive past tense paradigm for the *-i* verb class. These reconstructed regularities show that the verbal suffixes expressing subject agreement, tense, and clause type were not always portmanteau suffixes, but that the grammatical functions were fused into a single suffix for historical reasons. Tense was, for instance, expressed by the fortis / lenis distinction, and there was a past tense marker that can still be found in one of the paradigms. I will dedicate the rest of this chapter to describing how this complex verbal system evolved. The tables below provide an overview of the reconstructed verbal paradigms as a summary of this section:

Table 7.14: A reconstruction of assertive subject agreement morphology

Tense	Person/ Gender/ Number	Non <i>-i</i> verbs	<i>-i</i> verbs	Bound verbs <i>-a</i> and <i>-si</i>
Present	3S.F	-ko	-i-ko	-go
	3S.M	-pi	-i-pi	-bi
	OTHER	-ji	-i-ji	-'i
Past	3S.F	-go	-ko-'i	
	3S.M	-bi	-pi-'i	
	OTHER	-wi	-i-'i	

Table 7.15: A reconstruction of non-assertive subject agreement morphology

Tense	Person/ Gender/ Number	Non <i>-i</i> verbs	<i>-i</i> verbs	Bound verbs <i>-a</i> and <i>-si</i>
Present	2/3S.F	-ko	-i-ko / -i-go	-go
	2/3S.M	-ki	-i-ki / -i-gi	-gi
	OTHER	-je	-i-je	-je
Past	2/3S.F	-go	-ko	
	2/3S.M	-gi	-ki	
	OTHER	-de	-te	

Table 7.16: A reconstruction of dependent subject agreement morphology

Tense	Gender / Number	Same subject		Different subject	
		Non <i>-i</i> verbs	<i>-i</i> verbs	Non <i>-i</i> verbs	<i>-i</i> verbs
Present	F	-ko	-i-go	-ko-na	-i-go-na
	M	-ki	-i-gi	-ki-na	-i-gi-na
	PL	-pi	-i-bi	-pi-na	-i-bi-na
Past	F	-ni		-go-na	-ko-na
	M			-gi-na	-ki-na
	PL			-de-na	-te-na

7.4 The origin of the Ecuadorian Siona verb morphology system

A peculiarity of the Ecuadorian portmanteau verbal suffixes is that various suffixes are repeated in many paradigms, often with a slight

difference, and occasionally with no difference at all. As mentioned previously, the differences between the paradigms are comprised of the following phenomena:

1. The fortis / lenis distinction
2. The differences in suffixes in the different clause types (assertive, non-assertive and dependent clauses).
3. The differences in organization of the person, number and gender categories.

For instance, the suffix *-ko* / *-o* (**-go*) is found in all paradigms to mark some type of feminine singular subject. The fortis / lenis distinction between these two counterparts is a morphophonological feature that marks tense and verb class contrasts. An example of different suffixes in different clause types are the masculine singular counterparts of the suffix *-ko* / *-o* (**-go*). Its counterparts are *-hi* (**-pi*) / *-bi* in assertive clauses and *-kɨ* / *-ɨ* (**-gɨ*) in non-assertive and dependent clauses. An example of the final difference between the paradigm is that suffix *-ko* / *-o* (**-go*) marks a different but overlapping subject agreement category in every clause type: third person singular feminine in assertive clauses, second and third person singular feminine in non-assertive clauses and singular feminine for any person in dependent clauses.

In this section I will address the historical background of these distinctions and describe how this complex verb system developed in Ecuadorian Siona. In subsection 7.4.1, I will discuss the possible origins of the subject agreement suffixes that exist in the different paradigms. In subsection 7.4.2, I will discuss the development of distinct clause type markings. In subsection 7.4.3, I will present the introduction of finite categories in the non-assertive and dependent subject agreement morphology, such as the marking of tense and person.

7.4.1 Sources for the subject agreement suffixes

The suffixes that are found in the non-assertive paradigms and the dependent paradigms are much more similar to each other than either is to the suffixes in the assertive paradigms. This is probably due to the fact that these suffixes have different origins. The suffixes of the non-assertive and dependent paradigms are reminiscent in function and form of various nominal classifiers. Therefore, I propose that the subject agreement function of these suffixes developed from a verbal use of nominal classifiers.¹⁵⁸ I will discuss the origin of the subject agreement

¹⁵⁸ I am not the first to propose a nominal origin for subject agreement morphology in Tukanoan languages. Malone (1988) reconstructs the subject

in assertive paradigms in subsection 7.4.1.1 and of the subject agreement in the non-assertive and dependent paradigms in subsection 7.4.1.2. In subsection 7.4.1.3, I will provide an overview of the origins of the different suffixes.

7.4.1.1 The origin of the assertive subject agreement suffixes

Most of the subject agreement suffixes in the assertive paradigms do not resemble any nominal classifier. The suffixes *-hi* (*-pi) / *-bi*, *-ji*, *-wi* and *-i* do not have a counterpart in the set of nominal classifiers. Only the third person singular feminine assertive suffix *-ko* / *-o* (*-go) is identical to the nominal classifier *-ko* / *-o* (*-go) that marks animate feminine entities. Because most assertive subject agreement suffixes lack any resemblance to nominal classifiers, I reconstruct this paradigm as consisting of original subject agreement morphemes in the language.

There is comparative evidence to support this reconstruction. For instance, the suffix *-hi* (*-pi) / *-bi* has cognates in Eastern and Western Tukanoan languages, as mentioned above. These cognates only function as verbal suffixes and not as nominal classifiers. The cognates are used for the same subject agreement category as in Ecuadorian Siona: third person singular masculine. Cognate forms consist of a bilabial stop and the vowel *i*. An example of a cognate suffix in Kubeo is the suffix *-bi* (Chacón, 2012). Some languages have two allomorphic versions of this suffix: Carapana, Tatuyo and Barasana (Gomez-Imbert, 2003; Gomez-Imbert & Jones, 2000, p. 340) contain the third person singular masculine suffixes *-~bi* and *-pi*. The choice of the suffix depends on the evidential category.

The past tense suffix *-wi* that is used for non-third person singular suffixes in Ecuadorian Siona has cognates in other Tukanoan languages as well. These cognates can be found amongst the verbal suffixes and they have a very similar function as the Ecuadorian Siona suffix. The suffix *-wi* is found in Carapana (Metzger, 2000, p. 152), Barasana (Gomez-Imbert, 2003, p. 127), Tatuyo (Gomez-Imbert & Jones, 2000, p. 335), Tuyuca (Barnes, 1984, p. 258) and Yurutí (Kinch & Kinch,

agreement morphology in some evidential paradigms and the question morpheme as nominalizers. Michael (2012b, p. 2) and Schwarz (2012) suggest a nominal origin for the non-assertive subject agreement morphemes in respectively Máihìkì and Sekoya as well. Idiatov and Van der Auwera (2004, 2008) propose that the verbal morphology in questions and in indirect evidential paradigms in various Tukanoan languages developed out of nominalizers.

2000) and marks non-third person and past tense. The same suffix marks non-third person and remote past in Tukano (Ramirez, 1997, p. 120) and non-third person animate in Kubeo (Chacón, 2012). There is some variation in the exact person, number and gender categories that are included in the marking of this suffix. In Ecuadorian Siona, for example, third person plural marking is included, while in most Eastern Tukanoan languages this category has its own suffix. Nevertheless, the suffix *-wɨ* marks a non-third person rest category of person, number and gender in all the languages.

The suffix *-wɨ* does not have a counterpart in the set of nominal classifiers, just as in the case of the suffix *-hi* (**-pi*) / *-bi*. There is a nominal classifier *-wɨ* in Ecuadorian Siona that marks containers. However, there are no indications that this specific classifier is related to the subject agreement suffix *-wɨ*. First of all, this classifier is not found throughout the language family. Therefore, it may be an innovation in Ecuadorian Siona. Secondly, the functions of this classifier and the verbal suffix are dissimilar in Ecuadorian Siona. Finally, this specific classifier does not have a wide range of uses. It is only found in the nominal domain. Therefore, I consider the verbal suffix *-wɨ* and the nominal classifier *-wɨ* to be two unrelated homophones.

The other non-third person singular agreement suffixes, *-jɨ* and *-ʔɨ* do not have clear cognates in other Tukanoan languages. One suffix that is functionally and phonologically rather close to the suffix *-ʔɨ* is the suffix *-ʔV* in Tukano (Welch & West, 2000, p. 424). Their functions are similar: the Tukano suffix is used as a non-third person present marker and the Siona suffix is used as a non-third person singular marker for present tense bound verb roots, such as the copula *-a* and the future tense marker *-si*, and for past tense *-i* verbs. The two suffixes are phonologically similar as well: both start with a glottal stop. The vowel of the Tukano suffix *-ʔV* assimilates to the previous vowel in the word. It is not unthinkable that this is a high dorsal vowel [ɨ] underlyingly, since this vowel seems susceptible for vowel assimilation. However, the existence of this one possible cognate suffix is not sufficient evidence for the existence of the suffix *-ʔɨ* in the proto-language.

Although the suffixes *-jɨ* and *-ʔɨ* cannot be reconstructed to Proto-Tukanoan, there is evidence that these suffixes have a verbal and not a nominal origin. Crucially, both suffixes contain the high dorsal vowel [ɨ]. This vowel is found throughout the language family as the subject agreement marker within portmanteau suffixes that also express tense and evidentiality. For instance, Malone (1988) isolates this vowel in the verbal subject agreement morphology in Tuyuka and reconstructs it as a

marker of non-third person subjects. The vowel [i] is not found in the nominal suffixes that function as general classifiers for non-masculine and feminine categories. The vowel [e] is found in this type of suffixes throughout the language family. Therefore, it is more likely that the suffixes *-jĩ* and *-ʔĩ* have a verbal subject agreement origin rather than an origin as a nominal classifier.

The only suffix in the assertive paradigm that does seem to have originated as a nominal classifier is the third person singular feminine suffix *-ko / -o* (**-go*). Cognate classifiers of this assertive suffix in Ecuadorian Siona are found in both the language itself and in most other Tukanoan languages. This suffix generally marks feminine entities. Although the cognate suffixes of *-ko / -o* (**-go*) occur in both the verbal and nominal domains in various Tukanoan languages, it is more likely that they are of nominal origin. One indication for this is that their use as nominal classifiers is more widespread. Furthermore, the Tuyuka cognate **-go* that was found in some evidential paradigms, such as the secondhand paradigm, has been reconstructed as a derivation of a nominalization (Malone, 1988).

7.4.1.2 The origin of the non-assertive and dependent subject agreement suffixes

All the non-assertive and dependent subject agreement suffixes can be reconstructed as nominal classifiers. The suffixes *-ko / -o* (**-go*), as mentioned in the previous subsection, *-kĩ / -i* (**-gĩ*), *-je* and *-hĩ* (**-pĩ*) / *-bĩ* all have counterparts in the set of nominal classifiers in Ecuadorian Siona, and in other Tukanoan languages. The feminine marker *-ko / -o* (**-go*) and the masculine marker *-kĩ / -i* (**-gĩ*) are used as classifiers in Ecuadorian Siona and cognate suffixes deploy these same functions throughout the language family (Gomez-Imbert, 2011, p. 1452). The suffix *-je* functions as a general classifier in Ecuadorian Siona that does not mark any specific class. This suffix is found with the same function in various Tukanoan languages, such as Barasana (Gomez-Imbert, 1997, p. 86), Kubeo (Chacón, 2012), and Tatuyo (Gomez-Imbert, 2007b, p. 407). The function of general classifier does not differ much from the function of the suffix with the same shape in the non-assertive paradigm, in which it is used to mark the agreement of the rest category. The dependent agreement suffix *-hĩ* (**-pĩ*) / *-bĩ* has a classifier as its nominal counterpart in Ecuadorian Siona as well. This classifier marks animate collective nouns in the language, as shown in chapter 4, and has cognates throughout the language family (Gomez-Imbert, 2007b, p. 424).

The function of the collective classifier *-hi* (**-pi*) / *-bi* is similar to the function of the plural subject agreement suffix in the dependent paradigm.

There is one subject agreement suffix in the non-assertive paradigm that does not have a counterpart in the set of nominal classifiers in Ecuadorian Siona, namely the past tense ‘other’ suffix *-de* / *-te*. In other Tukanoan languages, however, there are probable cognates of this suffix. These cognates have functions related to the functions of nominal classifiers. The cognate suffixes with the form *-re* function as a nominalizer in various languages, such as Barasana (Gomez-Imbert, 1997, p. 235), Tuyuka (Malone & Barnes, 2000, p. 445) and Yurutí (Kinch & Kinch, 2000, p. 476). The nominalization of verbs is a function that is regularly carried out by nominal classifiers in Tukanoan languages.¹⁵⁹ Therefore it is not unthinkable that the suffix *-de* / *-te* has developed from a nominal classifier into a nominalizer and then into a subject agreement marker in Ecuadorian Siona.

All these similarities in form and function between most of the subject agreement suffixes and the nominal classifiers suggest that there is a historical relation between these two categories. The non-assertive and dependent subject agreement morphology probably developed from nominal classifiers. An intermediate step between nominal classification and finite subject agreement morphology is nominalization. Other scholars have already suggested that the finite subject agreement morphology used in non-assertive and dependent clauses in other Western Tukanoan languages originates in nominalization (Idiatov & Van der Auwera, 2004, 2008; Michael, 2012b, p. 2; Schwarz, 2012). I propose that all these suffixes originally were nominal classifiers that were used as nominalizers and developed later on into subject agreement morphemes.

7.4.1.3 An overview of the origins of the subject agreement suffixes

As shown in the previous two subsections, the subject agreement suffixes in the assertive paradigms generally seem to have a verbal origin while the suffixes in the non-assertive and dependent paradigms seem to have a nominal origin. The only suffix in the assertive paradigms that seems to have a nominal origin is the suffix *-ko* / *-o*

¹⁵⁹ There is an indication that the suffix *-de* is historically related to the suffix *-je*: the suffixes *-re* and *-je* in Barasana are allomorphs. They are both used to create the infinitival forms of verbs and the use of these two suffixes seems to depend on phonological conditions (Gomez-Imbert, 1997, p. 235).

*(*go)*. It is possible that this suffix was introduced in the assertive paradigms due to analogy with the non-assertive and dependent paradigms. An overview of the origins of the suffixes is presented in the table below:

Table 7.17: An overview of the verbal suffixes, their functions and origin

Suffix	Current function	Origin
-jì	<ul style="list-style-type: none"> Other present assertive for non <i>-i</i> verbs and <i>-i</i> verbs 	Original subject agreement marker
-wì	<ul style="list-style-type: none"> Other past assertive for non <i>-i</i> verbs 	Original subject agreement marker
-’ì	<ul style="list-style-type: none"> Other assertive for past <i>-i</i> verbs¹⁶⁰ and present bound verbs 	Original subject agreement marker
-hi (*-pi) / -bi	<ul style="list-style-type: none"> Third person masculine singular assertive for all verb classes. 	Original subject agreement marker for third person singular masculine suffixes.
-ko / -o (*-go)	<ul style="list-style-type: none"> Third person singular feminine assertive clauses Second and third person singular feminine non-assertive clauses Singular feminine dependent clauses 	Animate feminine classifier
-kì / -ì (*-gì)	<ul style="list-style-type: none"> Second and third person singular masculine non-assertive clauses Singular masculine dependent clauses 	Animate masculine classifier
-je	<ul style="list-style-type: none"> ‘Other’ present tense non-assertive clauses 	General classifier
-de/-te	<ul style="list-style-type: none"> ‘Other’ past tense non-assertive clauses Plural past tense dependent clauses 	General classifier
-hì (*-pì) / -bì	<ul style="list-style-type: none"> Plural present tense dependent clauses 	Animate collective classifier

¹⁶⁰ This suffix is probably reduced from *-’ì* to *-ì* when it is used in its past tense assertive function for *-i* verbs. An indication that *-’ì* in this context is the reduced version of *-’ì* is that speakers often want to write the suffix as *-’ì*. A possible explanation for the deletion of the glottal stop in this context is the difficulty of pronunciation of the suffix in combination with the past tense suffix. The subject agreement *-’ì* is always followed by the past tense suffix *-’ì*. This combination forms the suffix cluster *-’ì’ì*. The deletion of the first glottal stop of this suffix cluster facilitates its pronunciation.

7.4.2 The development of different clause type markings

The question remains as to how nominal classifiers were introduced into the subject agreement paradigms of non-assertive and dependent clauses. An intermediate step between nominal classifiers and finite subject agreement morphology is the use of the nominal classifiers as nominalizers, as mentioned above. Evidence for this step is still attested currently in many Tukanoan languages. The animate feminine and masculine classifiers *-ko* and *-ki* are used as nominalizers in most of the languages and in Máíhìkì all of the classifiers can be used as nominalizers (Michael, pers. com). These nominalizers have developed into finite subject agreement morphemes.

One explanation for this development was provided in two thought-provoking papers by Idiatov and Van der Auwera (2004, 2008). According to the authors, nominalizers were historically used in mirative constructions in Tukanoan languages. The nominalized verbs were used as predicative complements of auxiliary verbs. The authors present as evidence for this mirative use of the nominalizers the inferential / mirative construction in Wanano (Idiatov & Van der Auwera, 2004; 2008, p. 39). This construction is illustrated in the examples below:

Kotiria

- (5) a'yoo tipa-wa'a-ri hi-ra
 Oh! be.flat-become-NLZ COP-2/3VIS.IMPF
 'Oh! This one's (been) flattened.' (Stenzel, 2008a, p. 419).

Mirativity is expressed by a combination of a nominalized verb that contains the nominalizer *-ri* and the inflected copula *hi-* 'to be' in Wanano, as shown in example (5). This construction also expresses inferential evidentiality.

These mirative constructions were the basis of the interrogative verb morphology. The nominalized verbs became main clause verbs due to the deletion of the copula in this type of constructions (Idiatov & Van der Auwera, 2004; 2008, p. 35). The use of these mirative and indirect evidential constructions was then extended to dubitative contexts and from dubitative contexts to interrogative contexts (Idiatov & Van der Auwera, 2004; 2008, pp. 45-46).

I propose a similar reconstruction for the non-assertive subject agreement morphology in Ecuadorian Siona. I analyze the introduction of the nominal classifiers into interrogative subject agreement paradigms as a result of deletion of the auxiliary verb in an auxiliary

construction as well. However, in my analysis, the nominal classifiers were not introduced first in mirative and evidential clauses and then extended into interrogative clauses. I believe that non-assertive morphology in reports and in questions have a similar yet distinct origin in the language. In my view, both types of verb morphology developed from complementation structures that consisted of a nominalized verb and an auxiliary verb. In the reportative constructions, the auxiliary verb was maintained in the form of the reportative suffix *-jã* and in the question constructions, the auxiliary verb was deleted. I will illustrate this reconstruction for questions in subsection 7.4.2.1 and for reportative constructions in 7.4.2.2. In subsection 7.4.2.3, I will propose a similar origin for the dependent verbs.

7.4.2.1 The development of reportative morphology

A cross-linguistically common origin for reportative suffixes is a speech verb (Aikhenvald, 2004, pp. 271-273). An example is the reportative suffix *-ti* in Tsafiki that is identical to the speech verb *ti* ‘to say’ (Dickinson, 2000). The Ecuadorian Siona reportative suffix *-jã* seems to have a similar origin. The language does not at present have a cognate speech verb. The speech verbs are *kaje* ‘to say’ and *kiaje* ‘to tell’ in the language.¹⁶¹

Other Tukanoan languages do seem to have cognate verbs that express an action of speech. Various Tukanoan languages have a speech verb that contain the syllable *ja* or *jã*. The Eastern Tukanoan language Barasana has a copula *ja* that means ‘to do / to say / to think.’ This copula is used with direct speech complements. The language contains another speech verb with a possible cognate syllable: *~jago* ‘to speak’ (Jones & Jones, 1991, p. 28). Kubeo also has a verb for ‘to speak’ that contains the syllable *ja*: *jawa* (Chacón, 2012, p. 55). This language has another possible cognate of the Ecuadorian Siona reportative suffix *-jã*: Kubeo contains a reportative suffix *-ja* (Chacón, 2012; Morse & Maxwell, 1999, p. 36).¹⁶²

¹⁶¹ Ecuadorian Siona has a verb *jãje*, which means ‘to see.’ I assume that this is not a cognate of the reportative suffix *-jã*.

¹⁶² These speech verbs are not necessarily all cognates. It is possible that it was not a speech verb that introduced the indirect speech complement that has led to the Ecuadorian Siona reportative construction. It may have been a copula as well. Barasana possible candidate, as Gomez-Imbert (pers. comm.) suggests, namely the copula *~já(á)*.

These speech verbs are close in form and function, and the Kubeo reportative suffix *-ja* is almost identical to the Ecuadorian Siona reportative suffix *-jã*. The cross-linguistic evidence in combination with evidence from inside the Tukanoan family suggests that this reportative suffix originated as a speech verb. This speech verb grammaticalized, lost its inflection, and became a suffix. The Kubeo reportative suffix probably has a similar origin.

The use of non-assertive verb morphology, which originates from nominalized verbs, can be explained in this reconstruction. The reportative in Ecuadorian Siona probably developed from indirect speech reports. These indirect reports consisted of a speech verb and a nominalized verb that functioned as its complement. This reconstruction is illustrated in example (6):

- (6) *[[VERB.ROOT-NOMINALIZER] say-AGREEMENT.MORPHOLOGY]
 [[je'je-ki] jã-jì.]
 [[study-NML.M] say-OTH.PRS]
 'They say that he studies.'

The speech verb **jã* 'to say' in combination with its inflection formed the verb in the main clause and the nominalized verb was the predicative complement of the speech verb. When the main verb **jã* 'to say' lost its subject agreement inflection and was reanalyzed as a suffix, the nominalizers were reinterpreted as main verb morphology subject agreement morphology.

This reanalysis of two clauses, including the complement clause and the main clause, into a single complex verb phrase was called 'clause union' by Givón (2001b, pp. 78-87; 2009a, pp. 61-63; 2009b). According to this author, there are two main pathways that this process can take. One pathway consists of the union of two equal clauses that are joined in conjunction. This union often leads to a complex verb phrase, but does not frequently cause one of the two clauses to become an affix. The second pathway concerns the union of a complement clause and a main clause. In this grammaticalization chain, the original main verb often becomes an affix. Ecuadorian Siona seems to illustrate a typical example of this second pathway. The complement clause is reanalyzed as a main clause as a result of the clause union, and the original main clause is maintained as the suffix *-jã*.

One problem for this reconstruction could be that nominalizations are no longer used synchronically as predicative complement clauses in Ecuadorian Siona. Nonetheless, it is likely that

nominalizations used to carry out this function in the language. Evidence for this claim can be found in some Tukanoan languages in which it is still possible to use a nominalization as a predicative complement clause. For instance, nominalizations are used as predicative complement in Barasana (Jones & Jones, 1991, pp. 160-161), Desano (Miller, 1999, pp. 142-143) and Kubeo (Morse & Maxwell, 1999, pp. 148-151). This is illustrated in the example below from Desano:

Desano

- (7) [[*ērā* yese-a taribu-re koe-ro]_{COMPL} [*ērā* ba-ri-re
 [[3PL pig-PL room-OBJ wash-NLZ]_{COMPL} [3PL eat-NLZ-OBJ
sā-ro]_{COMPL} buʔe-bi]_{MAIN CLAUSE}
 put.in-NLZ]_{COMPL} study-NON3.PST
 'We studied washing the pig pens and putting in their food.'
 (Miller, 1999, p. 143, brackets added).

Example (7) from Desano shows two complement clauses that function as objects of the verb *buʔebi* 'we studied' in the main clause. This use shows that nominalization used as complement clauses are still found in the Tukanoan language family. Therefore, it is conceivable that the nominalizations in Ecuadorian Siona used to be deployed for this function as well.

In summary, I analyze the reportative construction as a case of historical clause union, in which the non-assertive subject agreement suffixes developed from nominalizers and the suffix *-jā* from a speech verb. This analysis is similar to the analysis of Idiatov and Van der Auwera (2004, 2008), except for the deletion of the auxiliary verb. The main verb for 'to say' was maintained as a suffix in my analysis. The advantage of this analysis is that it can both explain the origin of the nominalizer-like non-assertive subject agreement morphology in reportative clauses and the origin of the suffix *-jā*.

7.4.2.2 The development of the interrogative morphology

The interrogative subject agreement morphology seems to have developed in a way similar to that of the reportative morphology. The verb forms in questions probably originated as nominalizations that were used as complement clauses in a main clause. This reconstructed structure is presented in the example below:

- (8) *[[VERB.ROOT-NOMINALIZER] COPULA-AGREEMENT.MORPHOLOGY]
 [[je'je-ki] a-bi.]
 [[study-NML.M] COP-3S.M.PRS]
 'Is it that he studies?'

As shown in example (8), I propose that questions used to be expressed by a combination of a nominalized verb and an inflected copula.¹⁶³ This combination was probably a type of copula construction, similar to a cleft construction, that had a focus function at some point.

Cleft constructions are not uncommon as the origin of question morphology. The French interrogative construction with the question particle *est-ce que* developed from a cleft construction as well (Foulet, 1921; M. Harris, 1978). Cleft constructions are used in the Bantu language Kihung'an in content questions as well (Givón, 2001b, pp. 308-309). Other languages in which a cleft construction is a common question strategy are Dravidian and Tibeto-Burman languages (Bhattacharya & Devi, 2004) Since cleft-constructions are cross-linguistically widespread in questions, it is not unthinkable that Ecuadorian Siona questions were originally formed with cleft constructions as well.

The reconstructed copula construction for questions in (8) shows a very similar structure to that of the reconstructed 'say' verb construction for the reportative. Both reconstructions contain a nominalized verb that forms the head of a complement clause. This similarity provides a historical explanation of why questions and reportative utterances share the same subject agreement morphology: the morphology developed in both cases out of nominalizing morphology.

The development of the question and reportative constructions is not completely identical. A difference between the reportative and the interrogative is that in the case of the interrogative there is no trace of the main verb anymore. The deletion of a main verb and the promotion of a subordinate structure to main clause structure are not unusual. Evans (2007) describes similar processes for many different languages and labels this process as 'insubordination.' The author defines the term as follows: "the conventionalized main clause use of what, prima facie grounds, appear to be formally subordinate clauses" (Evans, 2007, p. 367).

¹⁶³ Since this copula was deleted at a later stage, it is not clear what its exact form may have been. In example (8), the copula is reconstructed as *a*, because there is a copula *-a* that sometimes tends to disappear in Ecuadorian Siona.

Evans views insubordination both as the main clause use of subordinate clauses and as the historical development of this phenomenon. The historical process of insubordination consists of four stages:

1. Subordination
2. Ellipsis
3. Conventionalized ellipsis
4. Reanalysis as a main clause structure.

The starting point is a regular subordinate clause that occurs with an overt main clause. During the second stage, the main clause can be elided, but it can still be reconstructed by the hearer (Evans, 2007, pp. 370-371). An example of utterances at this stage are the repeated *of* questions in Dutch:

- (9) A: Kom je morgen?
 'Will you come tomorrow?'
 B: Wat zeg je?
 'What did you say?'
 A: (Ik vroeg) of je morgen komt?
 '(I asked) if you will come tomorrow?'

The third sentence in (9) is an example of insubordination. The subordinate clause that starts with the subordinating conjunction *of* and that displays a subordinate word order is used without a main clause. The main clause can easily be reconstructed as 'I asked.' The use of these subordinate *of* clauses is not conventionalized in Dutch.

Conventionalization of the ellipsis is the next stage. During this third stage, the conventionalized ellipsis obtains a specific function. An example of an insubordinate construction in this stage is the use of English *if* clauses in requests. These *if* requests are illustrated below:

- (10) a. (I wonder) if you could give a couple of 39c stamps please
 b. If you could give me a couple of 39c stamps please, (I would be most grateful). (Evans, 2007, p. 380).

These *if* clauses have the function of making a polite request, as illustrated in (10). They are attested in various languages such as English, Dutch and French (Evans, 2007, p. 380).

The last stage of the process of insubordination is conventionalization of the subordinate clause as a main clause. During this stage it is no longer possible for the hearer to reconstruct a main clause. This main clause has completely been deleted and there is no material left from it (Evans, 2007, pp. 384-386). Specifically, the main verb is not maintained as a suffix, as happened in the case of the Ecuadorian Siona reportative. The historical development of the question subject agreement suffixes in the language seems to be a case of insubordination, because in the case of questions, there is no trace of the main clause left. The copula that probably functioned as main verb during a previous stage in the language was deleted completely. The nominalized verbs were reanalyzed as main verbs, and the subject agreement suffixes developed into portmanteau suffixes that expressed more finite features such as person and tense.

This process of insubordination is probably quite old. It may have started in Proto-Tukanoan already, since nominalizers are found throughout the language family instead of regular subject agreement suffixes. Because the subordination process probably occurred a long time ago, the only concrete evidence that the interrogative subject agreement morphology has emerged as a result of this process is the presence of the nominalizers in questions.

Nonetheless, there is evidence that insubordination is a reoccurring process in Ecuadorian Siona and possibly in Tukanoan languages in general. Interestingly, nominalizations can be used as main clauses nowadays as well. Speakers regularly use nominalizations with a main verb such as a copula verb. This is illustrated in example (11):

- (11) ai ba'isicuaō hua'i.
 ai ba-'i-sih-ko-a-o wa'i.
 a.lot be-IMPF-COMPL-CLS:ANIM.F-COP-3S.F.ASS fish
 'There was a lot of fish.' (20103006srocr001.071).

The nominalization *ba'isihko* in example (11) is used in combination with the bound copula *-ao*. The copula is sometimes omitted in these type of contexts, as illustrated in the example below:

- (12) A: sai ñaquëna aïna ja' bota dutaḡani saisiḡë.
 sa-i-ï jã-ki-na ã-i-ï-na
 go-IMPF-S.M.PRS see-S.M.PRS-DS eat-IMPF-S.M.PRS-DS
 hã' bota duhta-ḡã-ni
 DEM.DST boot pull.out-put.down-SS
 sa-i-sih-ki.
 go-IMPF-CMPL-CLS:ANIM.M
 'I went and saw that he (the animal) was eating, so I took
 of my boots and I went (towards him).'
- B: be'o quëḡ?
 be'o kïḡ?
 neg.exis foot
 'Barefoot?' (20120806oolpa001.008).
- A: be'o quëḡ saë'ë.
 be'o kïḡ sa-i'ï.
 NEG.EXIS foot go-OTH.M.PST.ASS
 'I went barefoot.' (20120806oolpa001.009).

In the first sentence in example (12), speaker A uses the nominalization *saisihki* 'I went' as the main verb in the sentence. It can be recognized as a main verb, because it is the last verb in the sentence. In this example the end of the sentence is marked as it regularly is, with a lowering of the intonation. Speaker B takes up on the sentence final intonation and reacts to the utterance. In the third sentence, speaker A uses a regular main verb. The use of nominalizations as main verbs is not uncommon in Ecuadorian Siona. This shows that insubordination is a process that is found in the language at present as well.¹⁶⁴ The fact that the language possesses these nominal suffixes that can mark some type of subject agreement makes the language susceptible to the process of insubordination.

In summary, I reconstruct the question construction of an earlier stage of Ecuadorian Siona as copula constructions consisting of a nominalized verb and a copula. This construction underwent insubordination as a consequence of the deletion of the copula. The deletion of the copula is not exotic to the language, since this still occurs. After the conventionalization of the ellipsis of the copula, the nominalizers were reinterpreted as main verb subject agreement

¹⁶⁴ A function of insubordination seems to be the backgrounding of information. Mithun (2008) describes a similar function for insubordinate clauses in various North-American languages.

suffixes and other finite categories such as tense and person developed as part of the function of the suffix.

7.4.2.3 The development of dependent verb morphology

Another clause type that probably originates from nominalization is the dependent clause. This clause type in Ecuadorian Siona shows almost identical portmanteau suffixes as the suffixes found in the non-assertive main clauses presented above. These portmanteau suffixes express tense in the same way and the subject agreement suffix forms overlap almost entirely. The only difference in form concerns the present tense 'rest' category suffixes: the present tense 'Other' suffix *-je* is found in the non-assertive paradigms and the present tense plural suffix *-hi* (**-pi*) / *-bi* is found in the dependent paradigms. This difference can be attributed to the grammaticalization of two distinct nominalizers in the two different contexts: the general classifier *-je* has been grammaticalized in the non-assertive paradigm as a present tense subject agreement suffix, and the animate collective classifier has been grammaticalized in the dependent verb paradigms as a present tense plural subject agreement suffix. All the subject agreement suffixes in the dependent verb paradigms can be reconstructed as nominalizers, as shown above.

A more substantial difference between the non-assertive and dependent paradigms is the organization of the subject agreement categories that are encoded by the suffixes. The organization of subject agreement in dependent verbs shows that the language has introduced less finite categories than the non-assertive paradigms. Givón (2001b, pp. 24-26) describes finiteness as a cline with non-finite nominalizations on the one hand and fully finite verbs functioning as independent verbs on the other. A lower degree of finiteness can be determined by the reduction of finite categories. This reduction includes the loss of tense-aspect-mood morphology and the reduction of subject agreement categories (Givón, 2001b, p. 68). The dependent verbs in Ecuadorian Siona are less finite than assertive and non-assertive main verbs, but more finite than nominalizations. This is illustrated in the figure in (13):

(13)

Nominalizations	Dependent verbs	Main verbs
Non-finite verbs		Finite verbs

The lower degree of finiteness of dependent verbs in Ecuadorian Siona can be recognized in various ways. First of all, the dependent verbs cannot be used as independent verbs. Secondly, they have reduced tense-aspect-modal categories: dependent verbs only express relative tense, whereas main verbs express absolute tense. Another indication of the reduced tense-aspect-mood marking is that dependent verbs are not marked for assertive or non-assertive sentential force. Finally, dependent verbs mark a more limited number of subject agreement categories. While main verbs mark person, number and gender, dependent verbs only mark number and gender. This marking seems more nominal: these exact categories are marked in the set of general nominal classifiers and in the nominalizations as well. This shows that the dependent verbs are halfway between nominalizations and main verbs in the development of finite features.

The difference in degree of finiteness between the dependent verbs and the non-assertive verbs can be explained by a different historical development. Both verb types probably originated from a nominalization that was used as a complement clause. However, the dependent verbs did not undergo the reduction or deletion of the main verb that the non-assertive verbs underwent. The dependent verbs probably started off as nominalized verbs. These were used as relative clauses that occurred as arguments of the main verb. The feminine, masculine and collective / plural nominalizers *-ko* / *-o* (**-go*), *-ki* / *-i* (**-gi*) and *-hi* (**-pi*) / *-bi* were probably used as agentive nominalizers during the first stage. These nominalizations would refer to the agent of the action rather than to the event itself, similar to the function of the nominalizing classifiers *-ko* and *-ki*. The reconstructed general nominalizer **-de*/**-te* was probably used to refer to an action in general and not to a specific event, similar to the function of the cognate suffix *-re* in Barasana (Gomez-Imbert, 1997, p. 235), Tuyuka (Barnes & Malone, 2000, p. 445) and Yurutí (Kinch & Kinch, 2000)(Kinch & Kinch 2000:476) nowadays. During these first stages, these nominalizations were used as non-predicative complements of the verb.

These non-predicative nominalizations were then reanalyzed as predicative verbs. These verbs were first used to refer to a specific event instead of to an agentive entity or a general action. These nominalizations also underwent another change from relative clause to dependent clause. The dependent verbs are no longer used as complements of the main verbs, but to refer to a chain of events. This change from nominalization used as a relative clause to dependent verb has occurred in other South-American languages as well. For instance,

Epps (2009) describes how a nominalization developed from a headless relative clause into a dependent verb in Hup, a Nadahup language spoken in the Vaupés area. Similar developments have also been observed for Cavineña, a Takanan language (Guillaume, 2011), Aguaruna, a Jivaroan language and Panoan languages (Overall, 2011).

The emergence of the different subject marker *-na* can also be explained in this reconstruction. It is probably derived from the locative case marker *-na* that refers to a goal. The nominalized verbs in combination with the case marker *-na* were probably used in the past as an oblique argument of the main verb. The combination of a nominalized verb and a case marker has developed into a dependent subject agreement marker and a switch reference marker. A similar process seems to have taken place in Aguaruna. Overall (2011) proposes that the different subject marker in Aguaruna derives from a locative case marker, similarly to the origin of the different subject marker in Ecuadorian Siona. The author proposes a similar origin for some of the dependent verb markers in Panoan languages as well. Another case of a language family in which a case marker probably developed into a switch reference marker is the Aymaran language family (Cerrón-Palomino, 2000, pp. 244-245). In view of the cross-linguistic evidence that case markers can develop into dependent verb markers, it seems reasonable to assume that the different subject marker *-na* has a similar origin.

The past same subject marker *-ni* may have originated as a case marker as well. A possible indication is that there is a case marker *-ni* in Ecuadorian Siona. However, this same subject suffix is not preceded by a subject agreement suffix. Therefore, it is not clear whether the same subject verb form can be analyzed historically as a nominalized verb in combination with a case marker.¹⁶⁵

In conclusion, the dependent subject agreement morphology seems to have developed from nominalizers in Ecuadorian Siona, similarly to the almost identical subject agreement morphemes in the non-assertive paradigms. These nominalizers were probably first used to mark relative clauses. These relative clauses were reanalyzed as dependent verbs and the locative case marker was reanalyzed as a different subject marker.

¹⁶⁵ There are various other etymologies possible for the same subject marker *-ni*. One other possible etymology is that it may be a borrowing from the neighboring language Cofán. The Cofán locative case suffix *-ni* is used as a dependent verb marker as well (Fischer & Van Lier, 2011).

7.4.3 The introduction of finite features

The difference between the subject agreement markers in non-assertive and dependent clauses and the nominalizer is that the former express more finite verb categories, as discussed above. The non-assertive suffixes express absolute tense and person and the dependent suffixes express relative tense. If it is accepted that these two sets of clause type suffixes originated as nominalizers, as argued in the previous subsections, an explanation is needed for why these additional finite categories of tense and person are found in the verb paradigms. This is the topic of this subsection, which is organized as follows: in subsection 7.4.3.1, I will address the origin of the expression of tense in non-assertive and dependent clauses, and in subsection 7.4.3.2 I will address how the category 'person' was introduced in the non-assertive paradigm as a result of reanalysis of the reference of the suffixes in the paradigms.

7.4.3.1 The marking of tense

Since the nominalizers do not originally express tense, the question remains as to how these nominalizers developed into portmanteau morphemes that do express tense. An additional complication for the reconstruction of tense in the subject agreement morphology is that there are verb classes that express tense differently.

Let us first discuss the introduction of the expression of tense in the non *-i* verb morphology. The phonological reconstruction of the subject agreement suffixes in section 7.3 has uncovered a morphophonological process that was used in order to express tense. Tense was probably expressed by a fortis/lenis contrast in the past. The non *-i* verb class mostly shows fortis consonants in its present tense suffixes and lenis consonants in its past tense suffixes.

This contrast was generalized throughout the subject agreement paradigms: its reflexes are found in the assertive, the non-assertive and the dependent subject agreement paradigms. One possible explanation for the introduction of tense in the non-assertive and the dependent suffixes is that the morphophonological marking of tense spread from the assertive to the non-assertive and dependent verb forms when the nominalizations were reanalyzed as subject agreement suffixes. Under this analysis the fortis/lenis distinction spread from the assertive paradigms to the non-assertive and dependent paradigms.

However, there are indications that the association of tense with the fortis/lenis distinction is considerably older. Specifically, the fortis/lenis distinction in its function of tense marking is found in some

Eastern Tukanoan languages as well. The distinction is found in nominalizers and question morphemes that are derived from nominalizers. For instance, the Barasana nominalizers with fortis consonants, *-ko*, *-kʉ* and *-to*, are used in the remote past and future. The nominalizers with lenis consonants *-go*, *-gʉ* and *-do/-ro* are used in the present and in the (recent) past. Interestingly, the inanimate suffix has a three-way distinction: *-to/-do/-ro* (Jones & Jones, 1991, p. 42). The languages Karapana and Makuna have a fortis / lenis distinction in the case of the question particle: *-ti/-ri*. The suffix *-ti* is used for present tense questions and *-ri* for past tense questions in the two languages (see Metzger, 2000, p. 147 for Karapana; see Smothermon et al., 1995, p. 61 for Makuna).

According to Gomez-Imbert (2004), the fortis/lenis distinction in Barasana has a phonological explanation. She proposes that the lenis consonants are the default consonants and the fortis consonants occur only under specific conditions. In her view, the fortis consonants only occur when they follow a syllable that has a latent *t* in its coda. This is illustrated in the example from Barasana below:

Barasana

- (14) a. *baá-ri?*
 eat-INT
 ‘Did he eat?’ (Gomez-Imbert, 1997, p. 299 the glosses and translation are mine).
- b. *baá-bet-ri?*
 ↓
 baá-be-ti?
 eat-NEG-INT
 ‘Didn’t he eat?’ (Gomez-Imbert, 1997, p. 300 the glosses and translation are mine).

Example (14a) shows that the root *baá* ‘to eat’ does not have a latent *t* in its coda. For this reason, the dental consonant *r* is realized as such when it follows the stem directly. When the suffix **-ri* (*-ti*) follows the negative suffix *-be(t)*, which contains a latent consonant *t* in its coda, just as in example (14b), it is realized as *-ti*. The effect of the latent voiceless *t* in the coda is that it prevents the voicing of the consonant in the following onset.

The question remains as to whether the prevention of voicing is caused by a latent *t* or by some other phonological condition in the Tukanoan languages. The latent *t* lacks independent evidence in the

language family. There are many languages that show the fortis / lenis distinction, but there are no languages that show a *t* in coda position. It is, therefore, also possible that another phonological condition prevents the voicing of the consonant in the following onset.

However, a phonological condition such as the existence of a latent consonant *t* can at least explain the fortis / lenis distinctions in some Eastern Tukanoan languages, including Barasana and Tatuvo (Gomez-Imbert, 2004, pp. 60-63). When analyzing the fortis / lenis distinction in Ecuadorian Siona from a synchronic perspective, it is more difficult to explain the distinction in this way. To be specific, fortis and lenis consonants are used in combination with the same stem, as illustrated below for the non *-i* verbs:

- (15) a. *caco.*
 ka-ko.
 say-3S.F.PRS.ASS
 ‘She says.’
- b. *cao.*
 ka-o.
 say-3S.F.PST.ASS
 ‘She said.’

The present tense suffix *-ko* that contains a fortis consonant is attached to the verb root *ka* ‘to say’ in example (15a). This is synchronically the exact same root as the one that the suffix *-o*, reconstructed as having a lenis consonant: **-go*, is attached to in example (15b).

It is possible, however, that an analysis such as the latent *t* analysis by Gomez-Imbert (2004) can provide a historical explanation for the existence of the fortis and lenis suffixes. The present tense verb forms, such as *kako* ‘she says’ in example (15a), may have had a present tense suffix in the past that possessed the phonological properties that prevented the fortis consonant *k* from leniting. As a result of these phonological conditions the consonant would have been realized as a fortis consonant. The present tense suffix must have disappeared in Ecuadorian Siona, but only the phonological process of preventing the fortis consonants from voicing that was caused by the suffix would have remained.

There is evidence from Eastern Tukanoan languages that there may have been such a present tense morpheme that prevented the following consonant from voicing. In both Karapana and Makuna, the fortis ‘present tense’ question marker *-ti* is preceded by a present tense

suffix: *-a* in Karapana (Metzger, 2000, p. 147) and *-jã* in Makuna (Smothermon et al., 1995, p. 61). When the present tense suffix is not used in these languages the interrogative marker surfaces as *-ri*. It is possible that a similar type of present tense suffix preceded the non *-i* verb subject agreement suffixes and is now lost in Ecuadorian Siona.

It would not be the only time in Ecuadorian Siona that a tense suffix was lost, leaving some phonological traces behind. That is to say, the remote past in the language is expressed by the nasalization of the vowel of the stem and a glottal stop before the following suffix. This is illustrated in the example below:

- (16) *bã'quẽña*.
ba-~'-ki-jã
 be-REM.PST-2/3S.M.N.ASS-REP
 'He lived (a long time ago).' (They say).

The verb in example (16) shows that the remote past marking is expressed by the morphophonological processes of nasalization and glottalization. These processes seem to be the result of the deletion of the remote past marker **-ã'*. This remote past marker still exists in Ecuadorian Sekoya (Schwarz, 2012). Ecuadorian Siona seem to have lost the vowel of suffix **-ã'*, but it preserved the morphophonological processes. Therefore, it is possible that it has lost a suffix such as the mono-vocalic present tense suffix *a* that had some type of phonological property that caused the following consonant to be pronounced as a fortis consonant.¹⁶⁶ A similar suffix still exists in some Eastern Tukanoan languages. Because of the loss of the present tense suffix, it was no longer the suffix that marked the tense of a verb, but the fortis / lenis distinction became the tense marking device in the case of the non *-i* verbs.

Now that the introduction of the fortis / lenis distinction has been discussed for the non *-i* verbs, I will address the historical development of tense marking in the other verb classes. An important element that is involved in the expression of tense in the *-i* verb class is the imperfective suffix *-i*. It is possible that this suffix is considerably old. Its use is strongly reminiscent of the use of the suffix *-i* in Kubeo (Chacón, 2009; 2012, pp. 261-264). In this Eastern Tukanoan language, a suffix *-i* is used to create an imperfective stem out of an eventive verb root. The language shows a split between stative and eventive verbs.

¹⁶⁶ It is possible that the suffix was followed by a glottal stop that caused the following consonant to be a fortis consonant.

Stative verbs are inherently imperfective and eventive verbs are inherently perfective. Additional morphology is needed when a speaker wants to talk about a past state or a present tense event. This phenomenon in Kubeo is illustrated for both the eventive and the stative verbs in the examples below:

Kubeo

Eventive

- (17) a. da-bi.
 come-3M
 ‘He came.’ (Chacón, 2009, section 1.1)¹⁶⁷.
 b. da-i-bi
 come-ST-3M
 ‘He is coming.’ (Chacón, 2009, section 1.1).

Stative

- (18) apu hedewa-kobe-i ’dũ-bi
 Alfonso outside-hole-LOC stand-3M
 ‘Alfonso is standing by the door.’ (Chacón, 2012, p. 277).

In example (17a), it is shown that when the subject agreement marker *-bi* is suffixed to a bare eventive root the verb is interpreted as a past event. When the suffix *-bi* is attached to a derived eventive verb that carries the stative suffix *-i*, as in example (17b), the verb is interpreted as a present event. A stative verb, such as *’dũ* ‘to stand’ in example (18), does not need the suffix *-i* in order for it to obtain a present interpretation. The subject agreement morphology does not express tense; it is the combination of the lexical semantics of the verb and the additional morphology that expresses the tense relations in the language.

Because the suffix *-i* derives imperfective verbs from eventive roots that are inherently perfective, the suffix is found in the present tense and also in nominalizations, as illustrated in the example below:

- (19) wĩ-i-kakĩ.
 inhale-ST-PST.NLZ.M
 ‘The one who was inhaling (it).’ (Chacón, 2012, p. 122).

¹⁶⁷ The glosses are adapted to mine.

In example (19), the suffix *-i* is used in a nominalization. This is a typical context in which the suffix *-i* is also found in Ecuadorian Siona. The suffix *-i* is used in Kubeo and in Ecuadorian Siona in the present tense. This shows that the use of the suffix *-i* is remarkably similar in the two languages. Another correspondence between the two suffixes is that the form is identical. Therefore, it makes sense to consider these two suffixes as cognates in the two languages. I therefore analyze the suffix *-i* in Ecuadorian Siona as a morpheme that derives imperfective stems as well.

There is, however, a difference between the suffix *-i* in Ecuadorian Siona and the suffix *-i* in Kubeo. That is, in Kubeo the suffix is linked to the eventive verb class and in Ecuadorian Siona it is not. Some eventive stems, such as *ãōjē* 'to feed,' *duhtaje* 'to pull' and *zoaje* 'to wash,' do not belong to the class of verbs in Ecuadorian Siona that obtain the suffix *-i* in present tense and other imperfective contexts. This can be explained from a historical perspective.

The Ecuadorian Siona imperfective suffix *-i* not only has a semantic function; it is also used as a prosodic device, as discussed in chapter 5, subsection 5.4.2. Remember that the *-i* verbs in the language are monomoraic roots that need additional morphology such as subject agreement suffixes in the past tense, the epenthetic suffix *-ti* in counterfactual contexts and the imperfective suffix *-i* in order to fulfill the bimoraic constraint of stems. It means that the imperfective suffix *-i* is used in order to form a bimoraic stem.

It is possible that Ecuadorian Siona had a verbal system with a split between stative and eventive roots, as Kubeo still has. In this reconstructed system for Ecuadorian Siona, the suffix *-i* derived imperfective stems from inherently perfective eventive roots. This split disappeared at some point and the suffix *-i* was only maintained on verbs that consisted of a monomoraic root. Although the semantic motivation for the use of the suffix *-i* was lost, these monomoraic verb roots needed the phonological material of the suffix in order to complete the obligatory bimoraic stem structure.

Because bimoraic verb stems do not need the extra phonological material in order to satisfy the bimoraic stem constraint, the historical perfective marker *-i* was lost in contexts with bimoraic verbs. This reconstruction provides an explanation for the lack of derived transitive or causative verbs in the *-i* verb class: the transitive and causative derived stems contain extra morphological material that completes the bimoraic stem in the form of the transitive suffix *-a* or of the causative suffix *-o*. The lack of derived transitive or causative verbs in the *-i* verb

class, therefore, is not due to a difference in semantics, contrarily to what some authors have assumed (cf. Johnson & Levinsohn, 1990; Wheeler, 1987b). Because the suffix *-i* was no longer necessary for semantic purposes and it lacked any prosodic function, it was lost in the bimoraic derived verb class.

The loss of the split between stative and eventive verbs in Ecuadorian Siona made it possible to introduce stative verbs in the *-i* verb class. Before the loss of the split, only eventive verbs, which had an inherent perfective meaning, needed the imperfective suffix *-i* in order to form a present tense or infinitival form. When the inherent perfective / imperfective distinction between the stative and eventive verbs was lost, the imperfective marker *-i* could be introduced with monomoraic stative verbs as well, such as *ba'ije* 'to be / to live,' *jũ'ĩjẽ* 'to be seated' and *tuije* 'to be on top of something.'

Further evidence for a historical split between stative and eventive verbs in Ecuadorian Siona can be found in the subject agreement morphology of the bound verbs. A feature of the stative / eventive system in Kubeo, as shown in example (17) and (18) above, is that the use of a bare subject agreement suffix, without additional morphology, leads to a past interpretation with an eventive verb and to a present tense interpretation with a stative verb. The subject agreement morphology of the bound verbs in Ecuadorian Siona shows a similar relationship to that of the non *-i* verbs. The non *-i* verbs have lenis consonants in the past tense, while bound verbs have lenis consonants in the present tense, as illustrated in the table below:

Table 7.15: A reconstruction of assertive subject agreement morphology for non *-i* verbs and bound verbs

Tense	Person/ Gender/ Number	Non <i>-i</i> verbs	Bound verbs <i>-a</i> and <i>-si</i>
Present	3S.F	-ko	-go
	3S.M	-pi	-bi
	OTHER	-ji	-i
Past	3S.F	-go	
	3S.M	-bi	
	OTHER	-wi	

The third person present tense singular suffixes for the bound verbs are identical to the third person singular past tense suffixes of the non *-i* verbs. The bound verb class is reminiscent of the stative verb class. The verbs do not show the imperfective marker *-i* in their (present tense)

forms. The fact that these verbs do not need this imperfective derivation suggests that these verbs were inherently imperfective and that they used to belong to the stative verbs in an earlier stage of the language. This stative analysis fits especially well in the case of the copula *-a*, since the copula expresses states.

In summary, tense marking in Ecuadorian Siona can historically be reconstructed as a fortis / lenis distinction, which was obscured due to some sound changes. The non *-i* verbs show a fortis marking in the present and lenis marking in the past. The fortis marking is possibly historically the result of a lost suffix that used to prevent the following consonant from leniting. This suffix was probably used with assertive, non-assertive, and dependent paradigms and this accounts for the similar tense marking in all these paradigms. The differences in tense marking with the different verb classes is probably due to the fact that Ecuadorian Siona used to have an eventive / stative split system in which the eventive verbs were inherently perfective and the stative verbs were inherently imperfective. The non *-i* and the *-i* verbs seem to behave like eventive verbs. The main distinction between these two verb classes is the prosodic structure: the non *-i* verbs are bimoraic and the *-i* verbs are monomoraic. The bound verbs seem to behave like the original stative verbs: they are only used in the present tense. Not all fortis / lenis distinctions can be explained by this reconstruction. For instance, the *-i* verbs show a split in the present tense: the assertive, interrogative, and reportative subject agreement suffixes have a fortis consonant in the present tense and the conjectural and the dependent verbs have a lenis consonant in the present tense. It is possible that historical processes such as analogy have obscured the historical patterns. The *-i* verbs may have developed a fortis contrast in the present tense assertive, interrogative, and reportative under influence of the non *-i* verb morphology, which always shows fortis consonants in the present tense.

7.4.3.2 Reanalysis of the paradigms

A final process that took place in the development of distinct subject agreement suffixes in the various clause types is reanalysis of the subject agreement categories. The nominalizers *-ko*, *-kɨ*, *-je* and *-de/-te* referred to different entities in their nominal use than in their newly developed verbal use. For instance, the historical nominalizer *-de/-te* was probably used as a general nominalizer that referred to a general action. When it was introduced in dependent verb marking, it referred

to plural subjects in the paradigm. The suffixes *-ko*, *-ki* and *-bi* did not undergo this many changes in the dependent paradigm. The feminine and masculine agentive nominalizers *-ko* and *-ki* refer to feminine and masculine subjects in the dependent paradigms. The nominalizers *-ko* and *-ki* are, in their original function, underspecified for number. The two nominalizers can both be used to refer to plural entities in combination with the plural suffix *-wa'i*. In the dependent paradigms, the suffixes *-ko* and *-ki* are specified for number; the suffixes only refer to singular subjects. The collective nominalizer *-bi* came to refer to a plural subject in the present tense in the dependent paradigms. These changes in the paradigms do not involve major reanalysis.

More extensive reanalysis has taken place in the non-assertive paradigms. As in the dependent paradigm, number was introduced in the meaning of the suffixes *-ko* and *-ki*. The subject agreement paradigms introduced another category: the category of person. The feminine and masculine suffixes *-ko* and *-ki* now refer only to second and third person singular subjects. The general nominalizers *-je* in the present tense and *-de/-te* in the past tense came to refer to the 'rest' category: non-second or third person singular. The introduction of person is probably associated with the non-assertive verbs becoming main verbs.¹⁶⁸ As a result of their development into independent finite verbs, the paradigms probably began to introduce more finite features, such as person and absolute tense.

Although the reportative and the interrogative developed from different constructions, the two categories developed identical subject agreement morphology. This may be because the speakers associated the two categories by means of their form or meaning. At some stage, these two categories were grouped together, and the processes of reanalysis in the interrogative and reportative paradigms may have influenced each other. Because reports and questions developed

¹⁶⁸ Interestingly, the non-assertive subject agreement did not develop the same person marking system as the assertive suffixes. Assertions show a third person singular versus non-third person singular pattern and non-assertions show a third and second person singular versus non-second and third singular pattern. Although Schwarz (2012) makes an interesting proposal for the existence of this difference, there is still no clear-cut answer to the question why second person groups with first person in assertive paradigms and with third person in non-assertive paradigms. This organization may be older than Proto-Western Tukanoan. Second person and third person singular are marked by the same suffixes in the apparent present paradigm in Tuyuka (Barnes, 1984, p. 258).

indistinguishable subject agreement morphology, the two categories became mutually exclusive. It is not possible to construe a reported question, because when the reportative suffix is added to a (polar) question, the sentence ceases to be a question. The utterance becomes a report in those cases. Due to the linking of reports and questions with respect to the subject agreement morphology, these two categories have become two mutually exclusive non-assertive clause types. As a consequence of this mutual exclusivity, the reportative category has become part of the clause typing system.

7.5 Conclusions

The different clause type markings in Ecuadorian Siona have distinct origins. Subject agreement morphology plays a crucial role in the marking of a clause type, because most clause types have their own subject agreement morphology. The distinctions are due to different etymologies. The subject agreement suffixes in assertions are most likely the oldest finite verb suffixes in Ecuadorian Siona. Most of the suffixes are found in Eastern Tukanoan as well, and may therefore even go back to Proto-Tukanoan. The origin of the assertive subject agreement marking is represented below:

- (20) Assertive
*ROOT-(TENSE)-AGREEMENT

As shown in (20), the reconstructed assertive construction is very similar to the present one. The only difference probably lies in the fact that there used to be a tense morpheme between the root and the subject agreement morpheme.

The subject agreement morphology in non-assertive clauses probably developed from a nominalizing classifier. The original construction is represented below in (21):

- (21) Non-assertive:
*ROOT-(TENSE)-NOMINALIZER AUXILIARY.VERB-AGREEMENT

Both the reportative and the interrogative morphology seem to originate from a structure as the one represented in (21). The reportative probably developed from an indirect speech report that underwent the historical process of clause union. This indirect speech report contained a nominalized verb that functioned as a complement of a speech verb. The nominalizer probably developed into the present day

subject agreement morphology. The reportative suffix *-jã* is most likely the remainder of the speech verb. Due to the grammaticalization of the speech verb this reported construction underwent clause union: the nominalized complement clause and the main clause with the speech verb became one clause.

The interrogative developed from an auxiliary verb construction as well. However, this construction may have been a copula construction that consisted of a nominalized verb and a copula and marked some type of focus. The copula was deleted and the nominalizer was reanalyzed as main verb morphology. This process of the deletion of the main verb and the promotion of the subordinate verb to main verb was called insubordination by Evans (2007).

Although the reportative and the interrogative have a different origin, the two clause types were most likely associated at some stage in the language. That is why, reports and questions developed identical subject agreement morphology that marks the exact subject agreement categories. This linking of the two categories has led to the mutual exclusivity of the two categories and has caused reports to function as a clause type, just as assertions and questions.

The similarities between the subject agreement morphology of the two non-assertive categories and the dependent verbs are due to a similar origin. The dependent subject agreement suffixes probably originated as nominalizers as well. The dependent verbs may have started off as relative clauses. These relative clauses were reanalyzed as dependent verbs that are now used as a clause chaining device. The different subject suffix *-na* is probably a reanalyzed case marker. The reconstructed origin of the dependent verb morphology is presented in (22):

- (22) Dependent:
 *ROOT-(TENSE)-NOMINALIZER(-CASE) MAIN.VERB-AGREEMENT

As a result of the reanalysis of the nominalizations as dependent verbs, these verbs obtained a more finite character, and the dependent subject agreement morphemes started to express number and relative tense. However, the dependent verbs were half-way to becoming finite.

The verbal system that developed in Ecuadorian Siona is very different from the systems in Eastern Tukanoan languages. Ecuadorian Siona did not develop an extensive evidential system that can be used in various clause types. Instead, Ecuadorian Siona has a single evidential that is part of the clause typing as a result of the linking of reports and questions with respect to their subject agreement morphology.

Although the origin of the systems in Ecuadorian Siona and Eastern Tukanoan languages is similar, the outcomes are very different. Both systems seem to have developed out of auxiliary verb constructions. Traces of the auxiliary verbs are found in the expression of evidentiality in many Eastern Tukanoan languages. These traces now function as evidential suffixes (Malone, 1988). Both Eastern Tukanoan languages and Ecuadorian Siona have incorporated nominalizers in their subject agreement systems. The nominalizers are mostly found in indirect evidential subject agreement paradigms and in questions (Malone, 1988), similarly to the Ecuadorian incorporation of nominalizers.

Another difference between Eastern Tukanoan languages and Ecuadorian Siona is that Eastern Tukanoan languages have introduced a different nominalizer in questions and in the declarative paradigms. In most Eastern Tukanoan languages, questions contain a cognate form of the nominalizer *-ri* and they often do not display any person marking. By contrast, declarative paradigms contain either the original subject agreement morphemes or cognate forms of the nominalizers *-go*, *-gi*, *-ro* and *-ra* (Malone, 1988). The incorporation of different nominalizers in declarative and interrogative utterances has led to a split between the two clause types. Most evidential suffixes are not linked to declarative or interrogative morphology: they can occur in both clause types. Therefore, it is not possible to analyze the different evidential categories as different clause types in Eastern Tukanoan languages. The systematic difference between Ecuadorian Siona and Eastern Tukanoan languages is due to differences in their development. Suffixes with similar etymologies have developed into distinct systems.