
Documenting evidentiality in Ecuadorian Siona: is inferentiality evidential, modal or both?

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Documenting evidentiality in Ecuadorian Siona: is inferentiality evidential, modal or both?

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1. INTRODUCTION¹

Ecuadorian Siona is a Western Tucanoan language spoken by less than 200 people in the tropical north-eastern lowlands. As a member of the Tucanoan family, known for its complex evidential systems (cf. Barnes 1984 on Tuyuca; Gomez-Imbert 2006 on Tatuyo; Stenzel 2008 on Wanano), it is not surprising that the language possesses a system that expresses the source of information. Consider the following examples from Ecuadorian Siona²:

- | | | |
|-----|---|--------------------------|
| (1) | Ojko-ji.
rain-3MSC.PRS
'It is raining.' (I vouch for it) | (Unmarked) |
| (2) | Ojko-kě-ña.
rain-2/3MSC.PRS-REP
'It is raining.' (Someone told me) | (Reported evidentiality) |
| (3) | Ojko-a ba'i.
rain-INF be.2/3MSC.PRS-INF
'It is raining.' (I infer, because I hear wind and thunder) | (Inferentiality) |

Examples (1-3) show forms of three different subject agreement paradigms that are mutually exclusive. Two of these three subject agreement paradigms express evidentiality. Specifically, the choice of either one of these paradigms is based on the source of information. This means that Ecuadorian Siona uses grammatical and not lexical means to express evidentiality. Only example (1) can be used when the

¹ I would like to express my warmest thanks to Ligia Criollo, Alicia Suale, Evelina Piaguaje and Miguel Piaguaje for teaching me about their beautiful language. I am also very grateful to Tyler Peterson, Willem Adelaar and Simeon Floyd for commenting on previous versions of this paper. Finally, I want to thank the Hans Rausing Endangered Languages Project, the Foundation for Endangered Languages and the NWO project 'The Nature of Evidentiality' for enabling me to conduct this research.

² The abbreviations used in this paper are 1 = first person, 2 = second person, 3 = third person, ACC = accusative, CEXP = counter-expectation, CMPL = completive CNJ = conjectural, COP = copula, , DEM = demonstrative, DIST = distal, DS = different subject, FEM = feminine, GOAL = goal, INF = inferential, INFIN = infinitive, INT = interrogative, MSC = masculine, , NEG = negation, NGEXIS = negative existential, NOM = nominalizer OBJ = object, OTH = other, PL = plural, PROX = proximate, PRP = purpose, PRS = present, PST = past, REP = reportative, SBJ = subject, SG = singular, SS = same subject.

speaker sees it is raining. Examples (2) and (3) can only be used when the speaker has indirect information, reported evidence in example (2) and sensory based evidence or general knowledge in example (3).

Although this system does not have as many evidential choices as some other Tucanoan languages it is still quite complex. The reason that makes this system complex is that not all of the paradigms seem to express (only) evidentiality. The declarative paradigm that is illustrated in example (1) is used when a speaker knows the proposition is true, it is not just used when a speaker has direct information. Furthermore, the inferential does not only seem to express evidentiality, but also some type of epistemic modality, the degree of commitment of the speaker towards the truth of the proposition.

The use of these paradigms is discussed in this paper. In section 2, I show how the paradigms appear in the documented genres. In section 3, I discuss why the declarative paradigm does not express evidentiality. In section 4, I show that the inferential and the reportative are similar, but that there are also differences in their behaviour. Final remarks and conclusions are made in section 5.

2. THE SUBJECT AGREEMENT PARADIGMS

Before analyzing the evidential meanings in Ecuadorian Siona, I will introduce how the subject agreement paradigms appear in documentation. Since the better documented Tucanoan languages have evidentiality systems that are fused with person, number, gender and tense/aspect, the expectation was that during the documentation of Ecuadorian Siona different types of subject agreement would show up in different genres. This expectation came partially true: although there were less different subject agreement paradigms in Ecuadorian Siona than in some other Tucanoan languages, in personal experiences such as life stories speakers would use one paradigm to mark finite verbs and in traditional stories another:

(4) Personal experience

Ba-q-na	kojka	ka-ni	yure-ta'a	ba'i-kē-bi
not.do-FEM.PST-DS	word	say-SS	now-CEXP	live-MSA.NOM-SBJ

yureta'a	yē'-re	ña-bi	i-je.
now-CEXP	1SG-ACC	see-3MSA.PST	DEM.PROX-too

'I didn't do anything, he just talked, but after some time he saw me too.'

(5) Traditional story

Sa-ni	dai-sij-kē-bi	guya-kē	si'a
go-SS	come-CMPL-MSA.NOM-SBJ	bathe-MSA.NOM	all

jaērē	gaje-ni	guya-ē-ña.
hammock	go.down-SS	bathe-MSA.PST-REP

'He came and went from bathing, with the hammock (on his back) he went down (to the river) and bathed.'

Example (4) is from the life story of a woman in which she tells what happened when she first met her husband. There are various verbs in this example (*baona* ‘I didn’t do anything’, *kani* ‘he said’ and the nominalized verb *ba’ikēbi* ‘the one who lived’), but these are all marked as dependent verbs. Only the final verb *ñabi* ‘he saw’ is a finite verb. The same goes for example (5) from a traditional story about a young man who has a hammock stuck to his back because he lay down too much in it and he has to carry it around everywhere; only the last verb *guyaēña* ‘he bathed’ is a finite verb, the others are all marked as dependent verbs. Only finite verbs are differently marked in the different genres. Although both examples (4) and (5) have a finite verb with a third person singular masculine subject and both events occur in the past, different forms are used.

In many languages different evidentials are used in these different genres (Aikhenvald 2006:310-315), so the use of different verbal paradigms in different genres was the first indication that these were two different evidential paradigms. This was confirmed when the consultants were presented with a minimal pair, such as in the raining examples in (1) and (2). The consultants explained that sentences ending in *-ña* are used when the speaker has obtained the information from someone else.

Sporadically, consultants used a different subject agreement paradigm always in combination with a verbal periphrasis as a finite verb. An example from a conversation is presented below:

- | | | | |
|-----|----------------------|------------------------------|----------------|
| (6) | <i>jā-ē-wa’i-bi</i> | <i>dai-ya</i> | <i>ba-jte.</i> |
| | DEM.DIST-MS-C-PL-SBJ | come-INF | be-OTH.PST-INF |
| | ‘They came.’ | (I infer this from evidence) | |

Example (6) is from a conversation about a meeting between different Siona communities. The speaker was talking about two Siona from Colombia coming to the meeting. She did not know them, so she did not have first-hand information that they were there, but she concluded that they were there based on what someone else had said. As it is often used in contexts in which the speaker draws a conclusion, this verbal periphrasis expresses inferentiality.

When looking at the complete paradigm of these three possible evidential paradigms, it becomes clear that these three paradigms have different forms, although there is some overlap. There is yet another subject agreement paradigm, however this paradigm does not express evidentiality, because it is used only in questions. These four different paradigms are presented in the two tables below:

Table 1

The person, number, gender and tense paradigms for declaratives.

Tense	Person & Gender & Number	Declarative		
		Non -i verbs	-i verbs	Copula a-
Present	3MSC.SG	-ji	-ji	-bi
	3FEM.SG	-ko	-ko	-o
	Other	-yë	-yë	-’ë
Past	3MSC.SG	-bi	-jV’i	
	3FEM.SG	-o	-jko’ë	
	Other	-wë	-ë’ë	

Table 2

The person, number, gender and tense paradigms for reportative evidentiality, inferentiality and questions.

Tense	Person & Gender & Number	Reportative		Inferential	Questions	
		Non -i verbs	-i verbs	All verbs	Non -i verbs	-i verbs
Present	2/3MSC.SG	-kë-ña	-kë-ña	-a ba’i	-kë	-kë
	2/3FEM.SG	-ko-ña	-ko-ña	-a ba’iyo	-ko	-ko
	Other	-ye-ña	-ye-ña	-a ba’iye	-ye	-ye
Past	2/3MSC.SG	-ë-ña	-jkë-ña	-a bajkë	-ë	-jkë
	2/3FEM.SG	-o-ña	-jko-ña	-a bajko	-o	-jko
	Other	-re-ña	-jte-ña	-a bajte	-re	-jte

In Tables 1 and 2, it can be seen that Siona has two types of verbs when it comes to subject agreement: verb stems ending in *-i* and verb stems that end in other vowels.³ It can be observed in the tables that in the case of the question and reportative paradigms the subject agreement paradigms in bold are the same. In the case of the inferential and the two other paradigms there is also considerable similarity. There is some overlap with the declarative paradigm, such as the third person feminine present suffix *-ko*. Nevertheless, there are many differences, such as the distinct forms and the different organization. In the case of the declarative paradigm, second person belongs to the big ‘other’ category and in the other paradigms it forms a group with the third person singular subjects. Therefore, it is possible that there is some semantic relation between questions, reportatives and inferentiality in Ecuadorian Siona.

³ This distribution is not random, as this *-i* seems to express the middle voice, as Johnson & Levinson (1990) observe for Ecuadorian Secoya, a language which is closely related or even another variety of the same language. This final *-i* is in some cases replaced by pre-aspiration of *-t* or *-k* and sounds sometimes like a velar voiceless fricative written here as *-j*.

3. WHY DECLARATIVE AND NOT DIRECT EVIDENTIALITY?

One may ask why the declarative is not analyzed as a direct evidential, because such an analysis would give a neat set of evidential opposition. Also, when the speaker uses a declarative, he/she has often experienced the event him/herself. Nevertheless, other examples show that this is not always the case. For instance, it is possible to use declarative morphology for future contexts, which is illustrated by the following example from elicitation:

- (7) Lago-na sai-ja'-kë-a-bi.
 Lago-GOAL go-PRP-MSC.NOM-COP-3MSC.PRS
 'He will go to Lago (Agrio).'

Since the speaker cannot have experienced a future event, he cannot have any first-hand information. However, the construction that expresses future in Ecuadorian Siona, as shown in example (7), always occurs with the declarative morphology. This is an indication that the paradigm does not express direct evidentiality.

Another indication is that it is possible to express in the same sentence that the speaker was not present during the event, which is shown in example (8):

- (8) Yë'ë be'o-ko-na, Jairo tojto ne-jëyo-bi.
 1SG NEG.EXIS-FEM.PRS-DS Jairo board do-break-3MSC.PST
 'While I wasn't there, Jairo broke the board.'

Because of the reasons presented above, 'I vouch for' is a better paraphrase of this paradigm than 'I have seen'. In other words this paradigm is best analyzed as a declarative and not as a direct evidential.

Another factor that also supports the analysis of this paradigm as a declarative paradigm is the fact that this paradigm cannot be used in questions:

- (9) (a) *Kei-bi dai-ji?
 who-SBJ come-3MSC.PRS
 (b) Kei-bi dai-kë?
 who-SBJ come-3MSC.PRS.INT
 'Who is coming?'

When a question with a declarative verb form is shown to the consultants, like in example (9a), the verb form is corrected with a different verb form like in example (9b). It is possible to use a question word and a declarative verb form within one clause:

- (10) Jero-sa'-re ba'i-ji?
 where-CNJ-ACC be-3MSC.PRS
 'Where would he be?'

However, this is not a regular question anymore. Sentences with a question word, the conjectural suffix *-sa* ' and a declarative verb form are conjectural questions. This is a different sentence type, because conjectural questions do not request an answer. Despite the fact that it is not clear whether these conjectural questions are declarative sentences, it is clear that this paradigm does not have an evidential meaning.

4. INDIRECT EVIDENTIAL PARADIGMS

In contrast to the declarative paradigm, the reportative and the inferential paradigm are evidential paradigms. The two paradigms behave the same in some ways. For instance, the two paradigms are organized the same, with the second and third person being expressed by the same suffix, as mentioned in section 2. Another similarity is that both paradigms are used in traditional stories by some speakers, which is shown in the examples below:

(11) Reportative

Ka-ni ma de'o-ni yure-ta'a ioj-te
say-ss macaw transform-ss now-CEXP here-ACC

më-jkë-ña.

go.up-2/3MSC.PST-REP

'After he had said that he turned himself into a macaw and he went up there (in a tree).'

(12) Inferential

Ja-o-ni si'a jubë banë ku-ni tēa ba-jkë.
DEM.DIST-FEM-OBJ all bunch hanging bite-SS cut-INF be-2/3MSC.PST-INF
'He cut the hanging bunch off biting.'

Examples (11) and (12) are from the same story about how the pewa palm was spread over the world. There is no obvious difference between the meaning nor context in the examples. In other languages, it is also observed that the inferential can be used in reported contexts (cf. Peterson 2010 on Gitksan).

However, there are also differences between the reportative and the inferential paradigm. Although the two paradigms are sometimes used in the same contexts, the inferential is often used when a speaker draws a conclusion, as shown in example (6) above. Below is another example from a traditional story that shows how the inferential is used to express that the speaker bases the statement on sensory evidence and knowledge from previous experience. In example (13) a woman finds a fly in the pan with pewa juice:

- (13) Ēne goṇo ju'i-a ba-jkë.
pewa cooked.juice die-INF be-2/3MSC.PST-INF
'He must be dying in the pewa juice.'

When the woman sees the fly in the pewa juice, she infers that the fly must have died, because she has general knowledge that flies normally die when they fall into the juice pan. Semantically therefore, the reportative and the inferential paradigm are different, because when a speaker uses a reportative form the speaker is providing information that he/she has obtained through someone else. When he/she uses an inferential construction, he/she expresses that he/she bases this statement on direct or reported evidence or on general knowledge.

Another difference between these two paradigms is that the reportative is mainly evidential, whereas the inferential seems to have both an epistemic modal and an evidential meaning. First of all, the inferential is often translated into Spanish using a modal construction: *creo* ‘I believe’, *me imagino* ‘I imagine’ or *ha de ser así* ‘it is probably like that’. The translation almost always expresses doubt, which suggests that the speaker is not committing to the fact that the proposition is true, but only to the necessity or possibility that the proposition is true.

The inferential in Ecuadorian Siona also has certain features which in formal semantics would be described as epistemic modal features. In formal semantics, various scholars (Faller 2002; Ivorsky 1997; Matthews et al. 2007; Peterson 2009) have analyzed some evidentials as epistemic modals. According to these scholars, an evidential can be analyzed as an epistemic modal when it adds an epistemic modal meaning to the proposition. In other words, when a speaker uses an epistemic modal, he/she is not claiming that *p* is true, but he/she is saying that *p* is necessarily or possibly true, depending on the modal force of the modal. When a speaker uses an epistemic modal, he/she commits to the possibility that *p* is true. Therefore, if an evidential has a modal component to its meaning, it should not be felicitous to use the evidential when the speaker knows that the proposition is false. This is exactly what happens in the case of the inferential, which is shown in example (14):

- (14) #Yë’ë ïsi-a ba-jte, yë’ë ïsi-ye ba-wë.
 1SG give-INF be-2/3OTH.PST-INF 1SG give-INFIN not.do-OTH.PST
 #‘I must have given it, but I did not give it.’

In example (14) it is shown that the inferential cannot be used when the speaker knows that *p* is false. This means that the speaker is committed to the possibility that *p* is true. Although the outcome of this test does not say anything about the modal force of the inferential in Ecuadorian Siona, it does show that this inferential is most likely an epistemic modal.

This is not the case for the reportative, which can be used when the speaker knows that *p* is false, as shown in example (15) from elicitation:

- (15) Jairo tojto ne-jëyo-ë-ña, ka-ë-na tojto
 Jairo board do-break-2/3MSC.PST-REP say-MSC.PST-DS board
 jëyë-ma’-ko ba-ja’i.
 be.broken-NEG-FEM.NOM be-3MSC.PST
 ‘Jairo, supposedly, broke the board, (but although) someone said that, the board was not broken.’

A remark from the consultant about example (15) was that the person who reported that Jairo broke the board was just saying that, i.e. he/she was lying. Generally, sentences with the reportative person agreement are believed to be true. However, as (15) shows, it is possible to use a reportative sentence when a speaker knows that the proposition is false. This means that when a speaker uses a reportative, he/she does not vouch for the truth of the proposition. He/she does not even commit to the possibility that the proposition is true. Consequently, probably in opposition to the inferential paradigm, the reportative paradigm does not express epistemic modality.

There is another possible indication that the inferential in Ecuadorian Siona is a modal. In contrast to the declarative, the reportative and the question paradigm, the inferential is formed by verbal periphrasis. Other types of modals in Ecuadorian Siona, such as the deontic modal in example (16) from a conversation, are also all expressed by means of verbal periphrases:

- (16) J̄a-re ñamina kojka ka-ye ba'i-ji.
 DEM.DIST-ACC tomorrow word say-INFIN be-3MSC.PRS
 'We should talk about that tomorrow.'

Therefore, it also seems to be reflected in its structure that the inferential is both an epistemic modal and an evidential. Particularly, the inferential is formed by verbal periphrasis, just like other modals in Ecuadorian Siona. Yet, it has a differing subject agreement paradigm just like the reportative evidential.

Note that the verbal periphrasis can be used without the inferential subject agreement. However, when different agreement morphology is used, the meaning of the verbal periphrasis is different, as shown in the examples below:

- (17) B̄onē ña-ma'-bē sa-ni tajte-ni b̄onē ña ba'i-ni.
 turn look-NEG-PL.PRS go-SS sow-SS turn see.NEG be-SS
 'You should not look back, don't look back while you go sowing!'

- (18) Tēi-ya ba-jkē-ña.
 get.off-NEG be-2/3MSC.PST-REP
 'It did not get loose.'

- (19) Me yo'-ko i-q-wa'i-re da ba-jko?
 how do-FEM.PRS.INT DEM.PROX-FEM-PL-ACC bring.NEG be-2/3FEM.PST.INT
 'Why didn't you bring them?'

In examples (17-19) the periphrasis is not used in combination with the inferential subject agreement and therefore gives a negation reading. Speakers characterize some constructions as ambiguous between negation and inferentiality, because the subject agreement of the inferential construction for past tense is the same as the subject agreement in past tense questions. Therefore, the following reported utterance, from a traditional story about a father who eats two of his children, could be interpreted as both an inferential or as a negative question:

- (20) Ware ja'ko, mē'ē ña ba-jko tsidowē-re?
 child mother, 2SG see.NEG be-2/3FEM.PST.NEG children-ACC
 'Mother of my children, haven't you seen the children?'

However, because of the context, that the father pretends not to know that the mother has not seen the children, the hearer knows that this is a question. It is possible that this relation between inferentiality and negation in Ecuadorian Siona is just a historical coincidence. These two constructions may have developed through different pathways of grammaticalization. However, there is additional information that suggests that this relation between negation and inferentiality is not a coincidence. In the closely related language, Colombian Siona, a different type of negation, namely the negation suffix *-ma*, is also described by Wheeler (1987:153-154) to be used as an inferential. Therefore, the possibility should not be excluded that there is a (diachronic) relation between negation and inferentiality in these languages.

5. CONCLUSIONS

Ecuadorian Siona does not have a typical evidential system, as described by Aikhenvald (2006); she claims that an evidential system should have, as its main function, the expression of the source of information. The declarative, reportative, inferential and question paradigms seem to express various categories: source of information, epistemic modality and illocutionary force, but not all at the same time. The declarative and the interrogative do not seem to express evidentiality or epistemic modality and the reportative does not seem express epistemic modality. Only the inferential verbal periphrasis seems to express both evidentiality and epistemic modality.

The question remains whether these different categories in Ecuadorian Siona express different types of illocutionary force. The declarative and the interrogative surely seem to be two different types of illocutionary force and the fact that the reportative only 'presents' information and that it does not assert it, may be another indication that there is something happening on the illocutionary force level. However, if we can analyze these different subject agreement paradigms in Ecuadorian Siona as a system that expresses illocutionary force, should we consider reportatives and interrogatives to be of the same type since they have identical subject agreement marking? What would be the relation between the two paradigms?

Synchronically, this relation may be more difficult to imagine, but diachronically, Idiatov & Van der Auwera (2004) provide a possible explanation for similarities between interrogative subject agreement and indirect evidential subject agreement marking in Tucanoan languages. According to the authors, both the interrogative markers and the indirect evidential markers are historically related to the set of nominalizers. The set of nominalizers in Ecuadorian Siona are, in fact, very similar in form to the interrogative and reportative subject agreement suffixes. Idiatov & Van der Auwera (2004) suggest that these nominalizers were used to just 'present' and not to assert a proposition. This possible diachronic relation suggests that there are some semantic commonalities between the reportative and the interrogative.

Another problem with the analysis of these paradigms as marking illocutionary force is that there does not seem to be any reason why one would analyze the inferential paradigm as a different type of illocutionary force. The inferential construction, despite its different subject agreement paradigm, seems to assert the necessity or possibility of a proposition being true, which is still generally analyzed as a declarative. As observed above, the inferential paradigm does have various peculiarities that complicate the analysis of this system. It remains to be seen whether this is a semantic paradigm that possibly expresses illocutionary force. Another possibility is that these subject agreement systems are not in semantic opposition and they mainly form a structural paradigm that developed due to historical coincidence.

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