

Evidential Determiners: Best (Sensory) Evidence *

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1. Overview

The goal of this paper is to argue that determiners in two different languages – Nivacle (Matacoan-Mataguayan) and St’át’imcets (Lillooet Salish) – encode evidential distinctions. For Nivacle, we largely follow Gutiérrez (2010), who has shown that determiners in this language encode whether or not the speaker has had, at some point in the relevant individual’s lifespan, the ‘best’ type of sensory evidence for the existence of that individual. In most, but crucially not all, cases this involves having had visual evidence of the individual. We then show that although the distinction encoded by Nivacle determiners differs from the primary distinction encoded by St’át’imcets ones (namely whether or not the speaker is willing to assert the existence of the individual; Matthewson 1998), the St’át’imcets ‘assertion of existence’ determiners can be re-analyzed as also encoding an evidential distinction. However, the St’át’imcets evidential determiners rely on a distinction more parallel to that encoded by the Quechua ‘best possible grounds’ evidential *=mi* (Faller 2002), which encodes not *type* of evidence source, but *reliability* of evidence. We thus see that two different types of evidential which are well-established in the non-determiner domain can both be found also in the determiner domain.

The paper is structured as follows. In section 2, we give background on the Nivacle determiner system, and show that contrary to first impressions, the system encodes neither definiteness nor specificity. In section 3 we argue that Nivacle determiners encode whether or not the speaker has had the best sensory evidence for the existence of an individual, at some point in that individual’s lifespan. In section 4 we highlight the parallels between the Nivacle determiner system and evidential systems which are familiar from the literature. Section 5 turns to St’át’imcets, arguing that here also we see determiners which encode distinctions familiar from the evidentiality literature. Section 6 concludes.

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2. The Nivacle Determiner System

2.1 Introduction to Nivacle

Nivacle is a Matacoan-Mataguayan language spoken in the Argentinean and Paraguayan Chaco. Very few linguistic works are available for this language. The Nivacle data discussed here come from Gutiérrez's fieldwork with two native speakers, Félix Ramírez and Sara Rojas Nuñez, and Stell's (1989) thesis.

Briefly, the determiner system consists of four morphemes. Stell (1989:363) provides the following classification:

Table 1. Nivacle determiner system (based on Stell 1989)

na	known by the speaker and spatially present
xa	known by the speaker and spatially absent
ka	known by the speaker and non-existent (deceased, broken, disappeared)
pa	unknown by the speaker or 'known by reference'

According to Table 1, *na*, *xa* and *ka* introduce entities and individuals that are 'known' by the speaker. However, they display some differences. First, *na* is used with entities that are spatially present (at the utterance time):

- (1) k'uj-akfi **na**=xpojif
 cold-LOC **DET**=house
 'The house is cold.'

Second, *xa* is used when the relevant entities are spatially absent (at the utterance time). In (2) the speaker is not in Formosa, but has seen both León and Formosa before:

- (2) **xa**=León ji-?e **xa**=Formosa
DET=León live/be-LOC **DET**=Formosa
 'León lives in Formosa.'

Third, *ka* introduces entities and individuals that are no longer existent (i.e., are deceased, broken or destroyed).

- (3) l-**ka**=mimi niβatax-?e l-an xa=*Utsichat*
 F-**DET**=mother born-LOC REP **DET**=Utsichat
 'My (late) mother was born in Utsichat.'

Finally, *pa* is used with entities and individuals that are 'unknown' by the speaker or 'known by reference'.

- (4) l-**xa**=*Celestina* xaja-?ef **pa**=*Juan*
 F-**DET**=Celestina marry-COM **DET**=Juan
 'Celestina (known) married Juan (unknown).'

- b. xetʃ kaʔax **pa**=*galleta*
 yes have **DET**=cookie
 ‘Yes, there are / I have some cookies.’

Even though the data so far seem to support a non-specific analysis for *pa*, the consultant’s comment in (8b) suggests that something additional comes into play about visual evidence. We will return to this in section 3.

(8) *Context: Yesterday, I was walking to my house and I saw a yica on the ground. Today, I tell you “I found a yica.”*

- a. xa-βan **la**=βataʔaj²
 1S.SG-find F.**DET**=bag
 ‘I found a *yica*.’

- b. * xa-βan **l-pa**=βataʔaj
 1S.SG -find F-**DET**=bag
 ‘I found a *yica*.’ (SR: ‘If I found something, I must have seen it.’)

The potential non-specific analysis for *pa* is further shown to be problematic by the data in (9), involving a proper name which refers to an individual ‘known’ by the speaker. In this example FR was trying to explain the use of *pa* and its relation to non-visibility and future.

- (9) **pa**=*Jesus* nam xaju
 DET=Jesus come PROSP
 ‘Jesus will come.’

The consultant considers himself to know that Jesus exists; in other words, he believes in Jesus. However *pa* is used, because “I did not see Jesus” (FR, p.c.). In this regard, it is worth mentioning that evidentials can be paraphrased and reinforced with lexical items corresponding to the information source (Aikhenvald 2004:340). The lexical reinforcement “(because) I did not see *x*” is commonly used by the consultants when explaining their choice for *pa*. In contrast, the use of *na* is usually rephrased as “I see *x*.”

In sum, example (9) shows that whether or not the speaker has had visual evidence of an individual overrides the issue of specificity. The notion of non-specificity is not adequate to predict the felicitous use of *pa*.

3. **Proposal for Nivacle**

In light of the data presented and discussed here (cf. also Gutiérrez 2010), we propose that the primary distinction in the Nivacle determiner system is an evidential one. Evidentiality is defined as a grammatical category that encodes source of information as its primary contribution (Aikhenvald (2004:1); Faller (2002:4)). In the literature, evidentiality has been discussed primarily as being manifested in the non-nominal

² *la* is the feminine form of *na*.

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domain (for example, as second-position clitics, verbal agreement morphemes, etc.).³ We will however argue that in Nivacle, the determiners encode an evidential distinction: whether or not the speaker has had the best kind of sensory evidence for the existence of the relevant individual, at some time in that individual's lifespan. For most contexts, this will entail that the speaker has (had) visual evidence of that entity/individual.

Within the best-sensory-evidence determiner set (*na/xa/ka*), further distinctions are made, namely deictic distinctions based on whether the entity / individual is present at the time of utterance. As such, the deictic realm helps tease apart *na* and *xa*, respectively. While *ka* also encodes individuals that may not be present at the utterance time, it signals the termination of existence of these individuals. Given the lack of direct experience for a DP headed by *pa*, the deictic information is vacuous. In other words, *pa* does not have deictic features at all.

It is important to understand that the deictic distinctions encoded by *na*, *xa* and *ka* are entirely separate from the evidential contribution of the determiners. All the best-sensory-evidence determiners share the same evidential requirement: having had the best sensory evidence for the individual's existence *at some time in the individual's lifespan* (regardless of where the individual is located at the utterance time). The deictic distinctions between the best-sensory-evidence determiners *na*, *xa* and *ka*, on the other hand, encode the individual's location *at the utterance time*.

Table 2 presents our revised analysis of the Nivacle determiner system based on the above distinctions. The Nivacle determiners divide into two major groups according to the source of the speaker's information.

Table 2. Nivacle determiner system (Gutiérrez 2010)

	+ best evidence (mostly visual)	- best evidence
present	<i>na</i>	<i>pa</i>
absent	<i>xa</i>	
ceased to exist/disappeared	<i>ka</i>	

In the following subsections, several examples and situations will be discussed in order to argue for these claims.

3.1 Best Sensory Evidence Determiners Require Personal Witness

The following examples show that when the best evidence source – visual witness – is not available for the existence of the relevant individual, *pa* has to be used. In (10), *xa* cannot be used because I “should have seen León before” (FR, p.c.)

³ See however Chung (2007), who shows that the determiner domain in Kwak'wala nominals contains visual evidential content.

- (10) *Context: I tell you that I talked on the phone with your brother (about whom I heard many things from you and a friend that works with him).*

xa-jiasnaji-eł pa=León
 1S.SG-talk.to-COM NOT.BEST.SENS.DET=León
 ‘I talked to León.’

Talking on the phone or hearing about somebody does not qualify for knowing⁴ that person or having the best sensory evidence for referring to her/him, so *pa*, not *na/xa*, has to be used.

Similarly, the pair in (11) highlights the decisive factor that personal witness plays in determiner choice.

- (11) a. kaʔax ł-xa=beʔła ʃiʔaʔ
 have F-BEST.SENS.DET=one elder.sister
 ‘I have one elder sister.’
- b. kaʔax łan ł-pa=beʔła ʃiʔaʔ
 have REP F-NOT.BEST.SENS.DET=one elder.sister
 ‘I have one elder sister.’

In (11a) the speaker has seen his sister before, whereas in (11b) the speaker never met her sister because “she fled from the family, got kidnapped, etc.” (SR, p.c.). Even if the speaker knows that the individual exists, she never had the chance to see her. This hypothetical situation, created by SR, actually turned out to be a life experience of the other consultant, FR. In his brief narration in (12), *pa* must be used because there has been no personal witness of the elder sister:

- (12) pa-pi qafokił-aj ji-ʃaʔax łan
 NOT.BEST.SENS.DET-PL military-PL 3S.SG-take REP
 ł-pa=ʃiʔaʔ
 F-NOT.BEST.SENS.DET=elder.sister
 ‘The militaries took my sister.’
- ł-pa=ʃiʔaʔ *once años* łan ti ʃi-ʃaʔax
 F-NOT.BEST.SENS.DET=elder.sister eleven years REP SUB INDEF.S-take
 ‘My sister was eleven years old when she was taken.’
- x-en-tax ka xa-βan ł-pa=ʃiʔaʔ
 1S.SG-want-IPFV SUB 1S.SG-see/find F-NOT.BEST.SENS.DET=elder.sister
 ‘I wanted to find my sister.’

3.2 Best Sensory Evidence Determiners Require Best Evidence

The data so far have shown that a best sensory evidence determiner may not be used unless the speaker has witnessed the individual themselves, using their senses, at

⁴ FR was specifically asked what ‘knowing’ a person meant. He said that hearing about him, or talking to him on the phone “was not enough, you need to see him in order to know him” (FR, p.c).

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some point in the individual's lifespan. We believe that this is an evidential requirement. However, merely having some kind of sensory evidence is not enough. The best sensory determiners also impose a requirement of 'bestness', or reliability of the evidence. The speaker must have had the best possible type of sensory evidence of the existence of the individual (a notion which is context-dependent and predicate-dependent.)

Example (13) shows that *pa* can be used when visual evidence is not available as a source of information, and touch gives the clue. *Pa* is used in (13a,b) because the speaker does not claim to have the best (visual) evidence for the tickling being caused by a spider.

(13) *Context: You wake up in the middle of the night because your leg tickles. It is dark and you cannot see what is going on. You panic and say: "There is a spider (walking on my leg)!"*

a. letʃ l-pa=siboklok
 ADV F-NOT.BEST.SENS.DET=spider
 'Indeed, there is a spider.'

b. kaʔax l-pa=siboklok
 there.is F-NOT.BEST.SENS.DET=spider
 'There is a spider.'

Interestingly, though, one of the consultants says she could also use *na* if she feels the 'rounded legs' of a particular kind of spider. Example (14) thus shows that if the speaker claims to have a more reliable source than the vague touch experience in (13) for it being a spider, *na* can be used.

(14) kaʔax t'e na=ʔojeqtsin⁵
 there.is DUB BEST.SENS.DET=red.spider
 'There is a red spider.'

Note that even though feeling the rounded legs of a red spider counts as very good evidence for the existence of such a spider – hence the licensing of *na* – surely having *seen* the spider would still count as the very *best* evidence. We therefore claim that the 'best-sensory-evidence' determiners actually require only that the evidence meet some very high standard of reliability (although for ease of presentation we often continue to talk about 'best evidence').⁶

The spider case also makes clear that the requirement for *na*, *xa* and *ka* is not merely that the speaker have the best sensory evidence that an individual exists, but rather that they have the best sensory evidence that the individual fits the description given by the nominal predicate. Already in (13), the speaker had the best sensory

⁵ Patrick Littell points out (p.c.) that the dubitative morpheme in (14) reduces the force of our argument here. Perhaps (14) means something like 'I have the best sensory evidence for it *potentially* being a spider.' Unfortunately we have not yet been able to elicit (14) without the dubitative morpheme, so this must be left to future research.

⁶ Thanks to Sarah Murray (p.c.) for discussion of this point.

evidence that *something* was crawling on them. They just did not have good evidence about whether it was a spider.⁷

Other situations were tested in order to determine whether *pa* could be used in situations where touch and/or taste are the best available type of evidence. One such case involves drinks and comestibles; for these, taste may count as a better type of sensory evidence than visual evidence does. For instance, if only visual evidence is available, a glass of vodka could pass as a glass of water. We see in (15) that in cases involving the detection of food or drink, the determiner *na* (or its feminine variant *la*) is chosen instead of *pa*.

(15) *Context: You are blindfolded. You need to guess what fruit/liquid you are being given: “Now I am tasting...”*

- a. k’a-joxi **na**=jinoʔot
1S.SG-drink **BEST.SENS.DET**=water
‘I am drinking water (I can feel it).’
- b. nokef xa-k’aftana **la**=laʔ
now 1S.SG-try **F.BEST.SENS.DET**=fruit
‘Now I am tasting a fruit.’
- c. nokef xa-k’aftana **la**=jukuβe
now 1S.SG-try **F.BEST.SENS.DET**=bread
‘Now I am tasting bread.’

Importantly, even if a blind person were trying the fruit “she would still use *na* because she has it in her hands, as if she could *see* the fruit” (FR, p.c.). The Nivacle evidential determiners may thus challenge the existence of ‘fixed’ evidential hierarchies (de Haan 2001, Faller 2002), suggesting that in different contexts types of evidence may have different strengths (Littell 2010). What counts as ‘best’ sensory evidence can depend on the specific context, that is, on what the speaker judges to be the most reliable way to know about or experience the entity being referred to.

As noted above, it is important to bear in mind that the evidential choice between best-sensory determiners and not-best-sensory determiners is based on lifespan evidence, *not* merely utterance time evidence. This is shown in (16-18). In (16), the speaker can only hear an animal coming. This is not the best sensory evidence for an animal, so *pa* is used:

- (16) **pa**=jakisit natf
 NOT.BEST.SENS.DET=animal come
 ‘An animal is coming.’

Similarly in (17), the speaker has never seen the baby before, and is only hearing it through a door now, so *pa* must be used:⁸

⁷ Thanks to Amy Rose Deal (p.c.) for raising this question.

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- (17) *jip-ʔin* *pa=taklax*
cry-IMPV NOT.BEST.SENS.DET=baby
'A baby is crying.'

However, in (18) the speaker has seen the baby before. Even though at the utterance time, she only has auditory evidence of the baby, *xa* is used, indicating best sensory evidence at some (earlier) point in the individual's lifespan.

- (18) *xa=toʔos* *ʔ-xa=Patricia* *jip-ʔin*
BEST.SENS.DET=child F-BEST.SENS.DET=Patricia cry-IMPV
'Patricia's child is crying.'

In sum, determiner choice in Nivacle is based on whether the speaker has had the best kind of sensory evidence of the existence of the individual at some point in the individual's lifespan. Notice that the 'lifespan' of an individual corresponds to the 'lifespan' of an event (i.e., its run-time) for standard evidentials. For example, a typical reportative evidential is used when the speaker only has reported evidence of an event, with no more direct evidence of the event at any point up to and including the utterance time.

In the next section we expand further on the parallels between Nivacle determiners and standard, non-determiner evidentials.

4. Nivacle Determiners Parallel Other Evidentials

We have seen so far that the Nivacle determiners encode information about both the *type* of evidence (for *na/xa/ka*, the evidence must be sensory) and the *reliability* of the evidence (for *na/xa/ka*, the evidence must be the best possible, or at least very good). In this section, we argue that the distinctions encoded by Nivacle determiners parallel the distinctions encoded within non-determiner evidential systems.

The first dimension of meaning encoded by the Nivacle determiners – whether the speaker has sensory evidence for the proposition advanced – is a typical restriction on information source, well-attested in the evidentials literature. For example, Aikhenvald (2004:367) states that a direct evidential is 'either visual or covering any sensory information.' Murray (2010:1) defines evidentiality as 'the encoding of information source, which can be direct (e.g., visual, auditory) or indirect (e.g., based on reports, inference, conjecture).' The sensory-evidence restriction we have proposed for Nivacle *na/xa/ka* fits right into these traditional definitions of evidentiality.

The second dimension of meaning encoded by the Nivacle determiners – whether the speaker has the best possible evidence for the proposition advanced – is also encoded within non-determiner evidential systems. For example, Faller (2002) analyzes the Cuzco Quechua 'best possible grounds' evidential *=mi* as requiring that 'the speaker has the best possible source of information required for the type of event described' (Faller 2002:18). Importantly, the restriction on *=mi* is not fundamentally a

⁸ *Pa* is required if the speaker has not personally seen the baby before, even in cases where a very reliable person informed you of the baby's existence. This accords with our predictions. (Thanks to Sarah Murray (p.c.) for suggesting that this be elicited.)

restriction on the *type* of evidence the speaker has, but rather on the *quality* of the evidence. This is shown by the fact that =*mi* is licensed by any of the following three kinds of evidence (Faller 2010):

- (19) i. Direct evidence, in cases where the described event is directly observable or otherwise directly accessible
 ii. The “next best thing”, in cases where the event is not observable (this includes reliable reports)
 iii. Undisputed common and learnt knowledge

The use of =*mi* when the evidence is the ‘next best thing’ is illustrated in (20), and cases of undisputed common and learnt knowledge are shown in (21). (‘Ev’ indicates the source of the speaker’s information.)

- (20) paqarin Inés Qusuq-ta=**n** ri-nqa
 tomorrow Inés Cuzco-ACC=**BPG** go-3FUT
 ‘Inés will go to Cuzco tomorrow.’
 Ev: Inés told the speaker that she will go to Cuzco tomorrow (Faller 2011)

- (21) a. 1945 wata-pi=**n** segunda guerra mundial=**qa** tuku-rqa-n.
 1945 year-LOC=**BPG** second war world=**TOP** end-PST-3
 ‘World War II ended in 1945.’
 Ev: learnt in school (Faller 2011; cf. also Aikhenvald 2004:162)

- b. yunka-pi=**n** k’usillu-kuna-qa ka-n
 rainforest-LOC=**BPG** monkey-PL-**TOP** be-3
 ‘In the rainforest, there are monkeys.’
 Ev: speaker knows it as part of Quechua culture (Faller 2002:133)

These examples make clear that the Quechua =*mi* cannot require *direct* evidence (in the sense of e.g., personal witness), but instead encodes something like the reliability or quality of the evidence. This is supported by Aikhenvald’s (2004:161) claim that ‘The direct evidential [in Quechua] expresses the speaker’s firm belief that what they are talking about is true.’ Aikhenvald specifically notes about the sentence in (22) that ‘[b]y saying [22] the speaker does not mean to say that he has seen his parents fail to do a particular job. This example implies that the speaker is quite sure that his parents are unable to do it’ (Aikhenvald 2004:161).

- (22) papaa-kaa-si mana=**m** atipa-n-cu lula-y-ta
 father-DEF-also not-**DIR.EV** be.able-3P-NEG do-IMPF-ACC
 ‘Our parents can’t do it either.’ (Wanka Quechua; Aikhenvald 2004:162)

According to our analysis, the Nivacle determiners convey both the type of evidence (whether it is sensory or not) and the reliability of the evidence (whether it is of the best possible kind or not). We therefore conclude that these determiners are evidential in nature and parallel non-determiner evidentials quite closely in their semantics.⁹

⁹ See Matthewson (2011) for examples of other, non-determiner evidentials which encode more than one meaning dimension, in a similar way to the Nivacle determiner evidentials.

In the next section we expand the empirical focus to another language family.

5. Evidential Determiners in St'át'imcets

In the previous section we saw that there are two ways in which evidentials can restrict the speaker's evidence for the proposition advanced. First, they can restrict the type of evidence; second, they can restrict the reliability of the evidence. Nivacle determiners do both of these. The question we pose in this section is whether there are determiner correlates of the Quechua =*mi* type of evidential: evidentials which encode only reliability of evidence. We argue that such a determiner system exists, in St'át'imcets (Lillooet Salish).

St'át'imcets possesses a complex system of determiners, which have been analyzed in various ways in previous work (van Eijk 1997, Matthewson 1998, 1999, 2009, Davis and Matthewson 2008). Here we concentrate on the core empirical generalizations. Matthewson (1998) argues that the St'át'imcets determiner system encodes 'assertion of existence': whether the speaker intends to make a widest-scope existential assertion.

Table 3. St'át'imcets determiner system

	assertion of existence			non-assertion of existence
	present	absent	remote	
singular	<i>ti...a</i>	<i>ni...a</i>	<i>ku...a</i>	<i>ku</i>
plural	<i>i...a</i>	<i>nelh...a</i>	<i>kwelh...a</i>	

As a first pass, we can think of the (non-)assertion of existence split as corresponding to the presence vs. absence of an existential quantifier which scopes over all scope-bearing operators. All the determiners which end in an enclitic =*a* contribute such a widest-scope existential; the single non-assertion of existence determiner *ku* necessarily takes narrow scope.¹⁰

(23) cw7aoz kw=en=s=tecwp-mín **ti=púkw=a**
 NEG DET=1SG.POSS=NOM-BUY-RED **A.O.E.DET=book=A.O.E**
 'I didn't buy a/the book.'
 = $\exists x \neg [\text{buy} (I, x)]$ $\neq \neg \exists x [\text{buy} (I, x)]$

(24) cw7aoz kw=en=s=tecwp-mín **ku=púkw**
 NEG DET=1SG.POSS=NOM-buy-RED **NON.A.O.E.DET=book**
 'I didn't buy a book.'
 $\neq \exists x \neg [\text{buy} (I, x)]$ = $\neg \exists x [\text{buy} (I, x)]$

The determiner *ku* must be used whenever the speaker isn't willing to commit to the existence of the relevant individual – for example, when the speaker knows the individual doesn't exist, or isn't sure whether it exists, or when it doesn't exist yet. Some examples are given in (25-27).

¹⁰ This is not Matthewson's (1998) actual analysis, and in fact a simple existential quantifier analysis has never been proposed for St'át'imcets. However, the existential formulas in (23-24) must be entailed by any correct analysis, and they suffice to convey the core of the difference.

- (25) ats'x-en=lhkácw=ha **ku**=míxalh kenáti7?
 see-DIR-2SG.SUB=YNQ **NON.A.O.E.DET**=bear DEIC
 'Have you seen a bear around here?'
- (26) mely'ih-s-as=k'a **ku**=naplít kw=s=Janice
 marry-CAUS-3ERG=INFER **NON.A.O.E.DET**=priest DET=NOM=Janice
 'Janice apparently married a priest.'
- (27) cuz' máys-en-as **ku**=tsípun kw=s=Carl
 going.to make-DIR-3ERG **NON.A.O.E**=root.cellar DET=NOM=Carl
 'Carl is going to build a root cellar.'

The question we want to pose here is whether the assertion of existence distinction argued for by Matthewson can be better understood as an evidential distinction of the 'reliability' type – encoding whether or not the speaker has the best possible grounds to believe in the existence of the individual. Intuitively, any case where the speaker has what they consider to be the best possible grounds for the existence of an entity/individual is also going to be a case where they would be willing to assert existence (and vice versa). According to this idea, St'át'imcets assertion of existence determiners would differ from Nivacle best sensory evidence determiners only in that the former do not, but the latter do, require the speaker to have personally witnessed the entity / individual.

This re-conceptualization of the St'át'imcets determiners seems to make the correct predictions. Recall that if the speaker has never seen his/her sister, the non-best-sensory-evidence *pa* must be used in Nivacle when talking about that sister, even if the evidence source (e.g. one's parents) is viewed as extremely reliable. This is shown again in (28).

- (28) kaʔax l-pa=beʔla ʃita?
 have F-**NOT.BEST.SENS.DET**=one elder.sister
 'I have one elder sister.' (if she was kidnapped)

In St'át'imcets, however, the best possible grounds analysis predicts that in a parallel case of high reliability without personal witness, an assertion of existence determiner will be used:

- (29) *Context: The speaker never met this aunt because she died before the speaker was born.*

nílh=ni7 n-scwákwekw tsítcw-s=k'a
 FOC=DEM 1SG.POSS-heart house-3POSS=INFER
ni=n-stá7=a
A.O.E.DET=1SG.POSS-aunt=**A.O.E**

'I think it was my aunt's house.' (Matthewson 2005:160)

In this respect, the St'át'imcets assertion of existence determiners are very similar to the Quechua best possible grounds evidential, where for example a reliable report is

6. Conclusions

We have argued that there are at least two dimensions of meaning which are encoded in evidential contributions: the type of evidence (e.g., whether sensory or not), and the reliability of the evidence (e.g., whether it is of a very high quality or not). This is true for both non-determiner and determiner evidentials. We exemplified both dimensions of meaning with respect to the Nivacle determiners, and we suggested that the St'át'imcets determiner system could be re-interpreted as an evidential system primarily encoding whether the speaker has the best possible evidence for the existence of an individual.

There is much to be done in future research on this topic. For a start, we have not yet provided any formal analysis of the Nivacle determiners. A full analysis is impossible at this stage for Nivacle because many things are not yet known about the semantic properties of the DPs (their semantic type, scopal properties, etc.). For these reasons we have restricted ourselves only to characterizing the nature of the evidential contribution itself.

Another interesting question for future research involves the behavior of the Nivacle determiners under attitude verbs such as *believe* and *know*. So, in a sentence such as 'Léon believes that the baby is crying', whose evidence is relevant for determiner choice on 'baby', the speaker's, or Léon's?¹³

With respect to St'át'imcets, the outstanding question is whether we really needed to re-analyze the determiners. There are already analyses on the market which capture many of the relevant facts, including the scopal properties of DPs, the lack of familiarity effects, and so on. For example, Matthewson (2009) analyzes the proximal, singular assertion of existence determiner *ti...a* as in (33). This is adapted from Elbourne's (2005) analysis of English *the*, and enforces deixis and uniqueness (via something similar to a presupposition, which nevertheless does not induce familiarity effects; see Matthewson 2009 for details).

$$(33) \quad [[ti...a]]^{g,c} = \lambda f \langle \langle s, e \rangle, \langle s, t \rangle \rangle . \lambda s : \exists! x f((\lambda s.x)(s_0)) = 1 \text{ where } s_0 \text{ is proximal to the speaker in } c . \iota x f(x)(s_0) = 1 \quad (\text{Matthewson 2009})$$

To clarify, we are not suggesting completely abandoning the extant analyses of St'át'imcets determiners. However, it is worth considering whether the existing analyses should be supplemented with a statement of evidential contribution. It is suggestive that the St'át'imcets determiner system is unusual in its properties, for example in the widest-scope requirement of the assertion of existence determiners. It is possible that future research will elucidate a link between the evidential properties of the St'át'imcets determiner system, and other features of the system.

Finally, we hope that future work will uncover more cases of determiner evidentials, which are so far almost completely un-examined. Determiner evidentials have the potential to help clarify the sometimes close connection between

¹³ Thanks to Oliver Bond (p.c.) for raising this question.

evidentiality and deixis (cf. Chung 2005, Speas 2004, 2008).¹⁴

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¹⁴ Jürgen Bohnemeyer informs us (p.c.) that in Yucatec Maya, there are evidential demonstratives. For example, one demonstrative is restricted to when the individual is audible but not visible; see Hanks (1984, 1990) for discussion. Nivacle demonstratives are formed on the basis of the four determiners *na*, *xa*, *ka* and *pa* by means of derivational morphemes that indicate the degree of proximity / distance / movement of the individual in regards to the speaker. Stell (1989: 368) notes the presence of a demonstrative based on *pa* that has a clear evidential meaning; *pe?emxuʔ* is used to indicate that 'something / somebody is coming'. This is illustrated in (i).

- (i) *pe?emxuʔ* *tuxanax*
 DEM deer
 'That deer that is coming'.
 FR: "We can hear the deer and we sign that he is coming from over there."

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