Evidentiality distinctions in Nivacle determiners[1]

Analía Gutiérrez
University of British Columbia

The Nivacle (Matacoan) determiner system consists of four morphemes: *na*, *xa*, *ka,* and *pa*. According to Stell (1989:363), *na, xa* and *ka* introduce entities/individuals that are 'known' by the speaker, whereas *pa* is used with those 'unknown' by the speaker or 'known by reference'. In this paper, I discuss the distinctions proposed in the semantic literature of determiners and examine how they can help delineate a characterization of the Nivacle determiners. Based on my own fieldwork data, I propose that the primary distinction the Nivacle determiners encode is one of evidentiality (Aikhenvald 2004): they indicate whether the speaker has (had) the 'best' evidence source for referring to the entity/individual in question. For Nivacle *na, xa,* and *ka* the 'best' sensory evidence source of information, given a particular entity/individual and context, will mostly involve visual evidence. Conversely, *pa* is used whenever the speaker lacks the 'best' sensory evidence of an entity/individual.

1   Introduction

The goal of this paper is to address the semantic and pragmatic distinctions that are encoded in the Nivacle determiner system. I discuss the parameters proposed in the semantic literature of determiners such as definiteness/familiarity (Heim 1982), specificity (Ludlow and Neale 1991, Ionin et al 2004), and assertion of existence (Matthewson 1998), and examine how they can help delineate a characterization of the Nivacle determiners. In turn, I discuss whether evidentiality (Aikhenvald 2004), defined as the encoding of source of information, may actually explain determiner choice in Nivacle.

Nivacle[2] 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 my own fieldwork with two native speakers FR and SR[3], unless otherwise noted.

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

Table I. **Nivacle determiner system** (based on Stell 1989)

i.	**na**	known by the speaker & spatially present
ii.	**xa**	known by the speaker & spatially absent
iii.	**ka**	known by the speaker & non-existent (deceased, broken, disappeared)
iv.	**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):

[2] The estimated number of speakers is 12,200: 12,000 in Paraguay; 200 in Argentina, (Fabre 2011).
[3] Fieldwork was conducted in *Uje Lhavos*, Filadelfia (Paraguay), in July 2009, and July-August 2010.

(1) k'uj-akfi   **na**=xpojitʃ
     cold-LOC[4]   DET=house
     'The house is cold.'

Second, *xa* is used when they are spatially absent (from the utterance time):

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

Third, *ka* introduces entities and individuals that are no longer existent (deceased, broken/destroyed):

(3) a. ɬ-**ka**=mimi   niβatax-ʔe ɬan   xa=*Utsichat*
        F-DET=mother   born-LOC   REP   DET=Utsichat
        'My (late) mother was born in Utsichat.'

    b. tsafof-xi   ɬ-**ka**=jukuβe
        burned-RES   F-DET-bread
        'The bread is (totally) burned.'

    c. xa-tux   ɬ-**ka**=t'un
        1S.SG-eat   F-DET-cracker
        'I ate a cracker.'

    d. noke   ji-ʔe   ɬapeʃ   **ka**=toβok
        here   be-LOC   a.long.time.ago DET=river
        'A long time ago, there was a river here.'

In turn, *pa* is used with entities and individuals that are 'unknown' by the speaker or 'known by reference':

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

        It is interesting to note the focus on the speaker's knowledge or beliefs, not necessarily shared with the addressee, for the conceptual description of each of the morphemes and the opposition between (visual) presence-absence of the entities they introduce.

(5) a. a-manɬe-ʔe   **pa**=*Buenos Aires*
        2S.SG-stay-LOC   DET=Buenos Aires
        'You stay in Buenos Aires.'
    b. xa-manɬe-ʔe   **na**=*Filadelfia*
        1S.SG-stay-LOC   DET=Filadelfia
        'I stay in Filadelfia.'
    c. oɬumaʃe   xa-kej   **xa**=*Asunción*
        tomorrow   1S.SG-go   DET=Asunción
        'Tomorrow, I go to Asunción.'

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[4] Abbreviations used in this paper include: 1: first person, 2: second person, 3: third person, CAUS: causative, COM: commitative, DET determiner, DIS: distal, F: feminine, FUT: future, IMP: imperative, INTERJ: interjection, INDEF: indefinite, IPFV: imperfective, INS: instrumental, LOC: locative, M: masculine, NEG: negation, O: object PL: plural, POS: possessive, PROSP: prospective, PRX: proximity, REL: relative pronoun, REP: reportative, RES: resultative, S: subject, SG: singular, SUB: subordinate. I provide phonological transcriptions of the sentences following IPA; the Nivacle alphabet is currently under revision.

As we can see in (5), the choice between *pa, na* and *xa* is speaker-oriented. Whereas the consultant has not been in/seen Buenos Aires, the addressee has, yet *pa* is used. The speaker's 'knowledge'/experience 'overrides' the hearer's. Specifically, I will argue it is the speaker's 'best' evidence for the entity/individual being referred to – given a particular context – that is encoded through determiner choice.

Based on my own fieldwork data, then, I propose that the primary distinction the Nivacle determiners encode is one of evidentiality: they indicate whether the speaker has (had) the 'best' evidence source for referring to the entity/individual in question. The 'best' evidence 'source' fits *na, xa* and *ka* (visual evidence) vs. *pa* (non-visual evidence). In addition, deictic information is conveyed; Nivacle determiners encode the spatial presence/absence of the entity in the utterance situation. As such, the deictic notion helps tease apart *na* from *xa.* The difference between *ka* and *xa* is that while *ka* may also encode individuals that are not present at the utterance time, it signals the termination of existence of these individuals. Given the lack of direct experience by a DP headed by *pa*, the deictic information is vacuous. I propose then that both evidentiality and dectic information is encoded in the Nivacle determiner system.

This paper is structured as follows; after presenting some background information on the Nivacle determiners, section 2 discusses the distinctions proposed in the semantic literature of determiners: definiteness/familiarity, specificity, and assertion of existence. Section 3 presents my proposal. Finally, section 4 summarizes the main conclusions of this paper.

1.1   Background

In this section, a basic characterization of the four morphemes is presented. In his bilingual school grammar, Priest Seelwishche (1975:67) characterizes the *na-xa-ka-pa* series as "revealing" articles in the sense that they cluster various meanings: gender/number, human vs. non-human, presence (& known) versus absence (& known), termination of existence, and knowledge by reference (indirect knowledge). Stell (1989) accords with this description.

a) *Gender and Number:* Nivacle DPs exhibit both grammatical gender and number. Grammatical gender is an inherent lexical feature: all nouns are either masculine or feminine. There is number and gender agreement between the determiner and the noun. The feminine morpheme *ł-* is a prefix that attaches to the unmarked masculine forms *na, xa, ka, pa*.

6) a. **ł**-xa=wosok
        F-DET=butterfly
        'The butterfly.'   (Stell 1989:364)

    b. **ł**-xa-βa   βoso͡kl-is[5]
        F-DET-PL   butterfly-PL
        'The butterflies.'

While singular determiner forms distinguish between masculine and feminine gender, plural forms differentiate between 'human' (-*pi*) and 'non-human' nouns (-*wa*):

Table II. **Gender and Number in Nivacle determiners** (after Stell 1989)

Singular		Plural	
Masculine	Feminine	Masculine and Feminine	
Human and Non-human nouns		Human	Non-human
na	ł-a[6]	na-pi	na-wa
xa	ł-xa	xa-pi	xa-wa
ka	ł-ka	ka-pi	ka-wa
pa	ł-pa	pa-pi	pa-wa

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[5] In this paper, I reinterpret the bilabial-velar approximant [w], as cited in Stell (1989), with a voiced bilabial fricative [β]. A change in the pronunciation of this phoneme seems to have occurred; the details need to be studied.

[6] It is not very clear why ł-na does not surface instead of ła. However, it might be related to the constraint on the sonority contact between syllables; increases in sonority (obstruent-sonorant) are penalized. V-C metathesis functions as a repair strategy (Gutiérrez 2010). In this case, though, the first determiner consonant is deleted.

b) *Cliticization*: All the determiners are unstressed. They get cliticized[7] to the noun they modify.

(7)   xa-xut   na=βatok
       1S.SG-give   DET=food
       'I give food.'

In fast speech, these morphemes tend to get their vowel deleted with the first person possessive prefix (b) or with vowel-initial nouns (c):

(8) a. **na**= ji-ʃateʧ   →   [**ni**ʃaˈteʧ]   (Fabre 2010: 9)
       DET=1POS-head
       'My head.'

    b. tɑ   ji-ʔeɫ   **pa**=utex   →   [**pu**ˈtex]
       where be-LOC   DET-stone
       'Where is the stone?'

c) *Extension to demonstratives and relatives*: Demonstratives are formed on the basis of the four basic morphemes by means of derivational suffixes[8] that indicate the degree of proximity/distance of the speaker in regards to the noun being referred to.

(9) a. **na-ke**   nuʔu
       DET-PROX   dog
       'This dog.'

    b. **na-ʔa**   niβa͡kle
       DET-DIS   man
       'That man.'

2   Towards a characterization of the semantic/pragmatic encoding of Nivacle determiners

2.1   Definiteness

One initial hypothesis was that Nivacle determiners might distinguish between definiteness and indefiniteness. The fact that the series *na, xa, ka* were previously described as 'known by the speaker' may suggest these determiners are in line with a notion of definiteness or *familiarity*. On the other hand, the use of *pa* defined as 'unknown by the speaker' may be in line with the idea of indefiniteness/novelty[9].

Nivacle determiners, though, do not encode definiteness.

According to Heim (1982), it is familiarity, rather than uniqueness, that characterizes *definiteness*. The distinction between definite and indefinite determiners is one of familiarity vs. novelty. Definites presuppose existence, which means they require familiarity. The felicitous use of a definite determiner requires the presence of a discourse referent that satisfies the description in the discourse context or common ground.

The concept of common ground is crucial to the understanding of definiteness. Following Chierchia & McConnell-Ginet's (1990:290) definition of the *common ground* – the set of propositions that both the speaker and the addressee believe – only definites are familiar to the common ground of the discourse. Indefinites are novel to the common ground. Example (10) illustrates this case for Spanish:

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[7] In this paper, I mark clitic boundaries with =.
[8] Stell (1989:368) lists the following suffixes that encode the degree of proximity between the speaker and the object/individual: -ke 'proximity', -ʔa 'distant', -ʔana 'more distant'.
[9] Impresionistically speaking, whereas the consultants tended to translate *na, xa,* and *ka* into Spanish as the definite article *el* 'the.M.SING' or *la* 'the.F.SING', they translated *pa* as *un* 'a.M.SING' or *una* 'a.F.SING'.

(10) a. Spasiuk grabó   ***un***   ***disco***   con Bob Telson
　　　Spasiuk recorded a.M.SG   disc.M.SG   with Bob Telson
　　　'Spasiuk recorded a disc with Bob Telson.'
　　b. **El**   **disco**   es muy buen-o
　　　the. M.SG disc.M.SG   is very good-M.SG
　　　'The disc is very good.'
　　c. *****Un**   **disco**   es muy buen-o
　　　 a. M.SG disc.M.SG   is very good- M.SG
　　　 'A disc is very good.'

In (10b) only the definite determiner *el* can felicitously refer back to the entity introduced in (10a) because that entity, corresponding to the DP *un disco,* is now familiar to the common ground of the discourse.

　　While the familiar-novel distinction seems to be one of the most dominant driving forces behind determiner choice in languages like Spanish and English, this does not seem to be extendable to Nivacle.

　　I follow Matthewson's (1998) arguments in her discussion of definiteness in Salish DPs. One way to look for the availability of a familiar-novel distinction in determiners is cross-sentential anaphora in narratives. In the following example, taken from a storyboard[10], both the first and second mention of the protagonist (the boy) in scene 1 and scene 2 respectively involve the use of the same determiner *pa.*

(11) a. **pa**=nekxjɑk   j-itʃ-k'oja   **pa**=ɬa-xpojitʃ
　　　DET=boy   3S.SG-leave- LOC   DET =3POS-house
　　　'The boy leaves the/his house.'

　　b. **pa**=nekxjɑk   j-uj-tʃ'e   ɬ-**pa**=ɬ-k'ujiβuke
　　　DET =boy   3S.SG-get.into-LOC   F-DET =3POS-coat
　　　'The boy puts on his coat.'

Moreover, whenever the boy is reintroduced in the discourse *pa* is used. The distinction between a novel and a familiar context does not seem to involve any change in the selection of the determiners. On the contrary, the same determiner *pa* is used, regardless of the number of times the individual is reintroduced in the discourse situation.

　　Concomitantly, in a novel discourse context different determiners could be used depending on the presence (12a) versus absence (12b) of the entity being referred to in the utterance situation, or whether the entity has ever been seen before (12c).

(12) a. xaj-kaʃaja xaju   **ɬa=***moto*
　　　1S.SG-buy PROSP   F.DET=motorcycle
　　　'I am going to buy a motorcycle.' (It is in front of me)

　　b. xaj-kaʃaja xaju   **ɬ-xa=***moto*
　　　1S.SG-buy PROSP   F.DET =motorcycle
　　　'I am going to buy a motorcycle.' (I saw it at a store)

　　c. xaj-kaʃaja xaju   **ɬ-pa=***moto*
　　　1S.SG-buy PROSP   F.DET =motorcycle
　　　'I am going to buy a motorcycle.' (I have not seen any yet)

　　All in all, the data presented and discussed in this subsection supports the idea that definiteness is not a category encoded in Nivacle determiners.

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[10] A storyboard is a language data collection technique that consists of a series of connected illustrations. The speaker is asked to narrate a story based on the storyboard.

2.2   Specificity

Specificity is another category discussed in the literature on determiners. Hellan (1981) and Ioup (1977) [cited in Enç (1991)] define a DP as specific if the speaker has a specific individual in mind. In their definition of specificity, Ionin et al (2004) highlight the role of the speaker's *intent to refer* to a unique individual in the set denoted by the DP. In turn, Ludlow and Neale (1991) define specificity by means of three concepts: (i) *speaker's grounds*: the proposition that is the object of the most relevant belief furnishing the grounds for an utterance; (ii) *proposition meant*: the proposition(s) a speaker intends to communicate, and (iii) *proposition expressed*: the proposition expressed by the utterance (in Matthewson 1998: 39-40). According to Ludlow and Neale, specificity arises as a mismatch between the speaker's grounds (a singular proposition that refers to a particular individual, i.e. a proper name) and the proposition meant (one containing a general proposition; i.e. definite/indefinite descriptions).

We can observe this mismatch between the *speaker's grounds* and the *proposition meant*, which gives rise to the specificity reading, in the following example:

(13)   Speaker's grounds: I am looking for Ms. Colombi.
Proposition meant: I am looking for an instructor.
Proposition expressed: I am looking for an instructor.

In (13) whereas the speaker has as her grounds for the utterance a singular proposition, all that is expressed to the hearer is a general proposition. This would be the case of a 'specific' use of an indefinite description.

Testing Ludlow and Neale's definition of specificity suggests that mismatches between the *speaker's grounds* and the *proposition meant* induce determiner choice in Nivacle. In (14) the speaker has as his grounds for the utterance a singular proposition, yet a general proposition is meant to be expressed to the hearer. The determiner *xa* is used.

Context: (specific)
The speaker has just heard on the telephone that a teacher he knows named Laura is coming. She reports this information to a colleague.   (Matthewson 1998:42)

Speaker's Grounds: Laura is coming.
Proposition Meant: A teacher is coming.
Proposition Expressed: A teacher is coming.

(14)   naʧ   ɬɑn   **ɬ-xa**=*maestra*
come   REP   F-DET=teacher
'A teacher is coming.'

In (15), both the *speaker's grounds* and the *proposition meant* are general propositions. There is a non-specific DP: an individual being only described as 'a teacher'. This time, though, the determiner *pa* is used, suggesting a correlation between this determiner and non-specificity.

Context: (non-specific)
The speaker has just heard on the telephone that a teacher is coming. She reports this information to a colleague.   (Matthewson 1998:42)

(15)   naʧ   ɬɑn   **ɬ-pa** *maestra*
come   REP   F-DET =teacher
'A teacher is coming.'

Returning to Ionin's definition of specificity, one could also think of *pa* as encoding non-specificity because the speaker does not seem to have any intent to refer to a particular entity when s/he uses this determiner. For instance, *pa* can get a quantificational reading in (as in *some*). The following context was provided: *I want to buy a "yica" (a traditional handmade purse), but I do not have any colour/size in mind. I arrive at a craftswoman's house and say: I would like to buy a yica/ I am looking for a yica. How should I say this?*

(16) xa-βoʔoj   ɬ-**pa**=βataʔaj
      1S.SG-look.for   F-DET-purse
      'I am looking for a(ny) purse'

Another situation: *You have a (non-transparent) bag of cookies, I am not sure what kind of cookies you have. I ask: can you give me some cookies?* (17a) *You reply: "Yes, I can give you some cookies"* (17b)

(17) a. as-xut-ej   **pa**=*galleta*[11]
         IMP-give-3O   DET-cookie
         'Can you give me some cookies?'

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

It is worth comparing alternative requests to (18a) in which *xa* and *pa* contrast. Through the use of *pa* the speaker intends to refer to any potential cookies; with *xa*, instead, the speaker intends to refer to the cookies he has seen/eaten before. In this sense, *xa* seems to encode specificity:

(18) a. kaʔax   **xa**-βa=t'unʃane
         exist   DET-PL = cookies
         'Are there cookies?' ('For example, the leftover ones' (FR, p.c.))

   b. kaʔax   **pa**-βa=t'unʃane
       exist   DET-PL =cookies
       Are there cookies? (Are there any cookies?)

However, the potential non-specific analysis for *pa* becomes problematized with the following examples (19) and (20): *Yesterday, I was walking to my house and I saw a purse on the ground. Today, I tell you "I found a purse."*

(19)a. xa-βan   **ɬa**=βataʔaj
        1S.SG-find   F.DET=bag
        'I found a purse.'

   a'. *xa-βan   **ɬ-pa**=βataʔaj
        1S.SG -find   F.DET =bag
        'I found a purse.' ('If I found something, I must have <u>seen</u> it' (SR, p.c.))

Even though the data seems to be consistent with the predictions of the specificity analysis, the consultant's comment in (19a') seems to suggest something additional comes into play about visual evidence, which I will return in section 3.

Another problematic case concerns proper names. Moreover, proper names that refer to individuals 'known' by the speaker. Specifically, in the following example FR was trying to explain the use of *pa* and its relation with non-visibility and future.

(20) **pa**=Jesus   nɑm   xaju
      DET=Jesus   come   PROSP
      'Jesus will come.'

The consultant considers himself to know Jesus exists, in other words, he believes in Jesus[12]. However *pa* is used because 'I <u>did not see </u>Jesus' (FR, p.c.). In this regard, it is worth mentioning that evidentials

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[11] Spanish loanword for cookie/cracker. FR uses the native word instead: *t'unʃane*.
[12] The following sentence was also tested:

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 (20) shows that whether or not the speaker has had visual evidence of an individual overrides the issue of specificity. In other words, specificity does not provide conclusive information for the felicitous use of *pa*.

2.3 Assertion of existence/referentiality

In this section, I would like to explore the hypothesis that Nivacle determiners encode or can be characterized by means of *assertion of existence,* as defined in Matthewson (1998:55): *Assertion of existence (informal definition* [after Givón (1978: 293-4)]): "the speaker's intent to 'refer to' or 'mean' a nominal expression to have non-empty references – i.e. to 'exist' – within a particular universe of discourse (i.e. not necessarily within the real world)."

Matthewson accounts for a crucial semantic difference between English and Salish determiners through the notion of assertion of existence. For instance, the St'a'timcets (Lilloet Salish) discontinuous determiner *ti…a* can be used to describe both a novel and familiar entity (whereas in English this distinction motivates the selection of *a* vs. *the*).

(21) təxʷp-mín-łkan   [ti   púkʷ-a]   łkúnša
     tecwp-mín-lhkan   [**ti**   pukw-**a**]   lhkúnsha
     buy-APPL-1SG.S   DET book-DET   today
     a. 'I bought [a book] today.'   (novel)
     b. 'I bought [the book] today.'   (familiar)
     c. $\exists$ x, book (x), I bought x today.   (St'át'imcets)   (Matthewson, 54 (57))

Importantly, whatever context *ti…a* is used in (novel vs. familiar), existential force is present: the existence of an entity is being asserted. Determiner choice may be invoked – though – to indicate non-assertion of existence; in this case *ku* has to be used. Only the English indefinite *a* is possible in the translation.

(22) təxʷp-mín-łkan   kł   [kʷ púkʷ]   natxʷ
     tecwp-mín-lhkan   kelh   [**ku** pukw]   natcw
     buy- APPL-1SG.S   might   book- DET   tomorrow
     'I might buy a book tomorrow'.   (Matthewson, 54 (59))

It is worth mentioning that while future licenses *ku*, it does not automatically require it. The crucial difference between (21) and (22) relies on whether the speaker knows the book exists or not. While almost all the Nivacle facts are compatible with an *assertion of existence analysis*, I will argue that assertion of existence does not drive determiner choice in Nivacle, but rather whether the speaker has the best evidence for referring to the individual in question. This best evidence usually equates having vs. not having visually witnessed that individual or entity.

There is a close implicational relationship between having visual evidence of an entity or an individual and knowing it exists. In this vein, the assertion of existence analysis appears to predict the facts. The asymmetric behavior of the St'át'imcets' determiners *ti…a* and *ku* in terms of *assertion of existence* thus seems to be similar to the distinction between Nivacle (i) *na* and *xa* and (ii) *pa*. By the use of DPs headed by *na* and *xa*, a nominal expression may be meant to have a non-empty reference in the context, which in turn could be understood as an assertion of the existence of the entity/individual the noun refers to. In turn, by the use of DPs headed by *pa* the existence of an entity may not be asserted because the speaker has not visually witnessed it. For instance, the use of *pa* can mean that the entity/individual has not 'materialized' or 'come into reality', as in the examples below, in which a verb of creation *snat* (make/draw) is used:

(i)   ni-ji-kaku   **pa**=Jesus
         NEG-1S.SG-distrust   DET=Jesus
         'I believe in Jesus.'

(23) a. ji-snat-e-ʃ   xaju   **pa**=xpojitʃ
     3S.SG-build-3O-INST   PROSP   DET=house
     'He is going to build a house.'

   b. xa-snat-e-ʃ   xaju   **pa**=nuʔu
     1S.SG-make-3O-INST   PROSP   DET=dog
     'I am going to draw a dog.'

Since the entities in (23) do not exist yet, St'át'imcets would use *ku* (Matthewson, p.c.). Also, like St'át'imcets *ku*, Nivacle *pa* seems to occur quite regularly when accompanied by non-factual operators such as yes-no questions (24a), imperative mood (25), the prospective particle *xaju,* which indicates a future event (26), negation (27), or a combination of both prospective/future and negation (28).

(24) a. kaʔax   ł-**pa**=ʧitaʔ
        have   F-DET=elder.sister
        'Do you have an elder sister?'

   b. kaʔax   ł-**xa**=beʔła   ʧitaʔ
        have   F-DET =one   elder.sister
        'I have one elder sister'

   b'. kaʔax   ł-**pa**=beʔła   ʧitaʔ

(25)   a-łam   **pa**=ʔitox
        IMP-light   DET =fire
        'Light the fire!'

(26)   xa-tux   xaju   **pa**=nĩklɑtsiʧ
        1S.SG-eat   PROSP   DET=corn
        'I am going to eat corn.'

(27)   ɑme   ni-βełeʃ   ł-**pa**=itso
        no   NEG-see   F-DET =bad.omen.bird
        'I never saw a bad omen bird.'

(28)   tanka   xa-tux   **pa**=nĩklɑtsiʧ
        NEG.FUT[13]   1S.SG-eat DET =corn
        'I am not going to eat corn.'

Yet, Nivacle does not really make a direct claim about assertion of existence through their determiners; the assertion of existence effect is indirect. As will be explained below, example (24b') undermines the hypothesis that *pa* encodes non-assertion of existence.

In (24) we can observe determiner switch between *pa* and *xa*. In (24b) the speaker uses *xa* and not *na* because the sister is not present at the utterance time. It would be infelicitous to use (24b') *pa* as a response: *kaʔax ł-**pa**-beʔła ʧitaʔ*, unless the speaker never met her sister because 'she fled from the family, got kidnapped, etc' (SR, p.c.). Crucially, this example indicates that rather than non-assertion of existence *pa* encodes the speaker's lack of visual witness, and, more importantly, that *pa* can be used even if the speaker is sure she existed. An assertion of existence analysis predicts *pa* to always be bad if the speaker knows the sister exists; yet *pa* can be good in Nivacle in this context. In this vein, for (24b') the assertion of existence determiner is used in St'át'imcets (Matthewson p.c.). In addition, this example shows another argument against specificity. Talking about your sister constitutes a specific context. Still, *pa* could still be used.

Table 3 summarizes the overlap and main difference between the St'át'imcets and Nivacle determiner systems. The shaded cell represents an impossible combination (if something is not known

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[13] I am not sure how to gloss this element; it deserves a cautious analysis. Stell (1989: 379) defines it as a temporal particle that conveys an idea of future time in negative sentences.

to exist, it cannot have been visually witnessed). In turn, if something is not known to exist it must not have been visually witnessed; St'át'imcets uses *ku* (22) and Nivacle *pa* (23), (24a-28). However, *pa* can be used in cases (20), (24b') where St'át'imcets assertion of existence determiners – the ones containing an enclitic *a...* – would be used. This crucial difference is represented in the cell in bold: something/somebody known to exist and not visually witnessed.

Table III. Comparison between St'át'imcets and Nivacle

not known to exist	known to exist	
	S. *X…a* **N**. *na/xa*	**visually witnessed**
S. *ku* **N**. *pa*	**S**. *X…a* **N**. *pa*	**not visually witnessed**

In sum, even when most of the data can be predicted by an *assertion of existence analysis*, speaker witness seems to constitute the core meaning of these determiners, which I discuss in the following section.

3 Proposal

In light of the data presented and discussed here, I propose that Nivacle determiners encode both (i) **evidential** and (ii) **deictic** information, in the sense that (i) they indicate whether the speaker has the best source of sensory evidence for referring to an entity or individual – which for most of the contexts will involve visual evidence of that entity/individual at some point in the speaker's lifespan – and (ii) they encode the spatial presence vs. absence of that entity in the utterance situation (spatial deixis). As such, the deictic notion 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 by a DP headed by *pa*, the deictic information is vacuous. In other words, *pa* does not have deictic features at all.

Table 4 presents a revised version of the Nivacle determiner system based on the above distinctions. The source of information divides the Nivacle determiners in two major groups.

Table IV. **Nivacle determiner system**

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

Evidentiality is defined as a grammatical category that encodes source of information as its primary source (Aikhenvald (2004:1), Faller (2002:4). In the literature on evidentials, evidentiality has been pointed out as being manifested in verbal rather than nominal morphemes. In this vein, this proposal hopes to contribute to the discussion of evidentiality at the nominal domain. For instance, Chung (2007) showed that the determiner domain in Kwak'wala nominals contains visual evidential content.

I thus posit that for Nivacle *na xa* and *ka* the 'best' sensory evidence source of information, given a particular entity and context, will mostly involve visual evidence, while for *pa* is the lack of the 'best' sensory evidence.

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

3.1 Visual witness, the best evidence

Example (24b), repeated below for convenience, crucially distinguishes an assertion of existence analysis from a visual evidence analysis, reinforcing how close, but nevertheless distinct, the two notions are:

(29) kaʔax ɬan ɬ-**pa**=beʔɬa   ʧitaʔ
     have REP F-DET =one   elder.sister
     'I have an elder sister.'(I have been told).

Even if the speaker knows the existence of the individual, 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, *pa* is consistently used to refer to the elder sister he never met:

(30) **papi**   qafokiɬ-aj   ji-ʧaʔax   ɬan   **ɬ-pa=** ʧita
     DET-PL   military-PL   3S.SG-take   REP   F-DET =elder.sister
     'The militaries took my sister.'

(31) **ɬ-pa**=ʧita   *once años*   ɬan   ti   ʧĩ-ʧaʔax
     F-DET=elder.sister eleven years   REP SUB   INDEF.S-take
     'My sister was eleven years old when she was taken.'

(32) x-en-tax   ka   xa-βan   **ɬ-pa**=ʧita
     1S.SG-want-IPFV   SUB   1S.SG-see/find   F-DET = elder.sister
     'I wanted to find my sister.'

Example (33) further illustrates that when the best evidence source – visual witness – is not available, *pa* has to be used. The following situation was tested: *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).*

(33) xa-jiasnaji-eɬ   **pa**=*León*
     1S.SG-talk.to-COM   DET =*León*
     'I talked to León.'

In this case, *xa* cannot be used because I "should have seen León before" (FR, p.c.) Talking on the phone or hearing about somebody does not qualify for knowing[14] that person or having the best sensory evidence for referring to her/him, so *pa* – but not *na/xa* – has to be used.
     The following examples show the relative independence of determiner choice with regard to non-factual operators (i.e. imperative mood). Visual evidence, again, is the determining factor for choosing *na* over *pa*.
     In a situation where both the speaker and the addressee are next to each other, A tells B to light a fire; *na* cannot be used because "the fire is just about to be started, I cannot see it" (FR, p.c.).

(34) a-ɬam   **pa**=ʔitox
     IMP-light   DET=fire
     'Light a fire!'

If A and B were talking on the phone, the same determiner should be used, confirming that location does not play any role when an entity has not become to existence yet. However, determiners contrast when visibility of the entity becomes a relevant factor.

(35) a-makat-xat   **na**=ʔitox
     IMP-put.out-CAUS   DET=fire
                           *****pa**=ʔitox
     'Put out the fire!'

In (36) *pa* cannot be used if the speaker can see the fire. The only alternative to *na* would be *xa* if and only if "the fire was placed outside of the house" (FR, p.c.), and A had seen the fire before. Nevertheless, if A and B were talking on the phone, and A recommends that B put out the fire before going to sleep, *pa* should be used.

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[14] I specifically asked FR what 'knowing' a person meant. He said that hearing about him, or talking to him on the phone "was not enough, you need to <u>see</u> him in order to know him" (FR, p.c).

(36)   a-makat-xat   **pa**=ʔitox
        IMP -put.out- CAUS   DET =fire
                             ***na/xa**=ʔitox
     'Put out the fire!'

Neither *na* or *xa* can be used because "you (the addressee) are in a different place and I <u>cannot see</u> the fire" (SR, p.c.) The judgments are consistent across the two consultants.

3.1.1 Reportative *ɬan*

There exists a reportative evidential in Nivacle: *ɬan*, which is rephrased as "I heard that *x*". By the use of *ɬan*, the speaker indicates that she obtained the information from someone else, which includes second-hand, third-hand information, and hearsay (i.e. folktales)[15]. It may co-occur with *pa*, as examples (30) and (31) shown above. In (37a) the speaker heard that an unknown/unseen priest will move to the community[16]; in (39b) the speaker heard a man was killed.

(37) a. nɑm xaju   **ɬan**   **pa**=ele
        come PROSP   REP   DET=priest
        'A new priest will come (I heard).'

     b. ʧi-klɑn   **ɬan**   **pa**=niβa͡kle
        INDEF.S-kill   REP   DET =man
        'They killed a man (I heard)'.

Not having had direct experience about an event (only having heard about it) is compatible with not having seen the person – the priest and the man in (37). However, the reportative *ɬan* can also be used with the determiner *xa* in future events (38), for example "if I heard the news that it will be cold in Fischat" (FR p.c.). Importantly, the speaker has been in/seen Fischat[17]. Again, determiner choice is only motivated by the speaker's and not the hearer's assumptions, so *xa* has to be used. In other words, the reportative *ɬan* only encodes the speaker's source of information about the event, and not the entity.

 (38)   k'uj-ʔe   xaju   **ɬan**   **xa**=*Fischat*
        cold-LOC   PROSP   REP   DET =*Fischat*
        'It will be cold in Fischat (I heard)'.

Further, *ɬan* can be used with the determiner *na.* In (39) the speaker has been told that María sells the bags that are visually present at the utterance time.

(39)   ɬ-xa=*María*   tkaʃaj-eʃ   **ɬan**   ɬa=βataʔaj
       F.DET=*María*   sell-INST   REP   F-DET=bag
       'María sells bags (I heard).'

Examples (37-39) suggest the relative independence between the Nivacle determiners and the reportative *ɬan.*
     In the next section I would like to address the role sensory non-visual evidence plays in the Nivacle determiner system.

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[15] The reportative *ɬan* is pervasively used in Nivacle myths.

[16] One interesting question example (37a) hints at is whether it is the referent of the NP that is relevant or whether the future and/or uncertainty of the event could be what drives determiner choice here. However, when I asked FR if he would use *pa* to refer to Father Fritz (someone we both know) coming in the future, he said he would not use *pa* because he knows Father Fritz, *xa* should be used instead.

[17] Fischat is a Nivacle community located close to the Argentinean-Paraguayan border.

3.2 Sensory non-visual evidence

Following, I present some pieces of data that aim to explore and discuss other types of information *pa* can be used with, for instance: touch, hearing and smell.

Example (40) shows that *pa* can be used when visual evidence is not available as a source of information, and touch can give a clue.

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)!'

(40) a. kaʔax   t'ape   ɬ-**pa**=siβokl͡ok
      there.is   DUB   F-DET=spider
      'There is a spider.'

    b. kaʔax   ɬ-**pa**=siβokl͡ok
      there.is   F-DET =spider
      'There is a spider.'

Pa is used in (40) because the speaker does not claim to have the best (visual) evidence for the tickling being a spider. Interestingly, though, one of the consultants says she could also use *na* if she feels the 'rounded legs' of the spider. Example (41) suggests that if the speaker claims to have a more reliable source than the vague touch experience in (40) for it being a spider, *na* could still be used.

(41)   kaʔax   t'e   **na**=ʔojeqt͡sin
       there.is   DUB   DET =red.spider
       'There is a red spider.'

In this regard, other situations were tested in order to determine whether *pa* could be used in situations where only touch and/or taste are the best available type of evidence. The determiner *na* was chosen instead, as (42) and (43) illustrate. *You are blindfolded. I ask you to tell me which of these two cups the stone is in. You feel around and feel the stone.* (Matthewson, to appear)

(42)   **ɬa**=utex   ji-ʔe   ji-t͡ʃaminiʃ
       F-DET=stone   be-LOC   1POS-left.hand
       'The stone is in my left-hand.'

You are blindfolded. You need to guess (i) what fruit/liquid you are being given: "Now I am tasting…"

(43) a. k'a-joxi   **na**=jinoʔot
      1S.SG-drink   DET=water
      'I am drinking water (I can feel it).'

    b. nokeʃ xa-k'aɬtana **ɬa**=laʔ
      now   1S.SG-try   F.DET-fruit
      'Now I am tasting a fruit.'

    c. nokeʃ xa-k'aɬtana **ɬa**=jukuβe
      now   1S.SG-try   F.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 <u>see</u> the fruit" (FR, p.c.). In this vein, taste is a better type of sensory evidence for drinks and comestibles –i.e. water, fruit, and bread – than visual evidence. For instance, if only visual evidence is available, a glass of vodka could pass as a glass of water. This situation may challenge the existence of 'fixed' evidential hierarchies (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.

When the only available source of information involves hearing, *pa* is extensively used. In this regard the following situation was tested: *You wake up in the middle of the night because you heard a loud noise. You immediately realize that there is a big storm outside and say: 'It was just thunder / It was the wind.'*

(44) a. xa-peʔja   **pa**=kuʔuktin
         1S.SG-hear   DET=thunder
         'I heard thunder.'
    b. xa-peʔja   **pa**=łaβiʔim[18]
         1S.SG-hear   DET=wind
         'I heard the wind.'

The same situation applies to hearing some noise in the bushes, and thus 'realizing' that an animal is approaching the house, where the speaker is situated.

(45)   **pa**=jakisit   naʧ
         DET=animal   come
         'An animal is coming.'

Interestingly, though, the pair in (46) shows that previous visual evidence overrides the information source at the utterance time, and thus determiner choice is induced. In other words, if the speaker refers to an individual she has seen at least once during their life span, *na* must be used – if present – *xa* when absent, and *ka* deceased. Whereas in (46a) the speaker hears a crying baby he has not seen before, in (46b) the speaker has seen the baby at least once. Because the baby is situated next door and cannot be seen by the speaker, *xa* and not *na* is used; deictic information thus comes into play.

(46) a. jip-ʔin   **pa**=taɑklax
         cry-IT   DET=baby
         'A baby is crying.'

    b. **xa**=łoʔos   ł-xa=Patricia   jip-ʔin
         DET=child   F-DET=Patricia   cry- IT
         'Patricia's child is crying.'

When the evidence is olfactory, either *pa* or *ka* can be used:

(47) a. xan-sitsa   **ka/pa**=łaxut
         1S.SG-smell   DET=smoke
         'I smell the smoke.'

    b. xan-sitsa   **ka/pa**=k'atsi-niʃ
         1S.SG -smell   DET=skunk-odor
         'It smells like a skunk.'

It is not completely clear why *ka* and *pa* can overlap in use when the primary source of information involves the sense of smell. Recall, though, that *ka* can be used with things that ceased to exist or underwent a change from their original 'state'.

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[18] If the speaker can see the wind from the window, or s/he is outside, *na* could be used instead (i). If the speaker hears a weather report on the radio, *pa* is used. Determiner choice, then, is context dependent.
(i)   ux   **na**=łaβiʔim
         big   DET =wind
         'There is a big wind.'
(ii)   ux   łɑn   **pa**=łaβiʔim
         big REP   DET =wind
         'There is a big wind.'

(48) a. ji-βutun   **ka**=xpojitʃ
         3S.SG-burn   DET=house
         'The house is burned down.'

     b. ji-βutun   **na**=xpojitʃ
         3S.SG-burn   DET =house
         'The house is burning down.'

In that vein, one could think that when the DP 'the smoke' is introduced with *ka* (47a) there is an extra piece of information about the result of a process of destruction, similarly to (3b), where a burned bread, is no longer considered a piece of bread[19]. In regards to (47b), it may well be the case, consistent with the prototypical meaning of *ka*, that *ka* refers to the smell of a dead skunk. More data should be collected for the domain of olfactory evidence.

3.3   On the special uses of *ka*

Besides referring to entities and individuals that are no longer existent – deceased, broken, disappeared (see (3) above) – *ka* can be used to describe individuals in photos, even if they are still alive. Compare the use of *ka* and *na* in (49):

(49) a. is   **ɬ-ka**=a-tʃita
        pretty   F-DEt=2POS-elder.sister
        'Your sister is pretty.' (looking at a photograph)

     b. is   temna   **ɬa**=a-tʃita
        pretty   INTERJ   F.DET=2POS-elder.sister
        'Your sister is pretty.'(in front of the speaker)

In this sense, *ka* seems to encode some sort of mediated visual evidence through pictures (49a) or television (50):

(50)   xa-peʔje   kanʔut   **ka**=taklaʔatʃ   **ɬ-ka**=Madonna
       1S.SG-hear   yesterday   DET=song   F-DET=Madonna
       'Yesterday I heard a song by Madonna on the TV.'

On the one hand, the consultant explains that she cannot use *pa* because she <u>saw</u> Madonna on TV. On the other hand, she cannot use *xa* because she did not meet her in person. Interestingly, (50) illustrates a context in which two alternative evidence sources are available: visual and hearing. By the use of *ka*, the speaker counts as having had the best evidence for referring to that individual.[20]
Also, what examples (49a) and (50) show is that *ka* is still in line with a visual evidential, that is why *pa* is rejected, but it definitely encodes a more oblique or mediated type of visual evidence, and that is why *na/xa* cannot be used, respectively.

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[19] In this regard, compare the minimal pair in (i) and (ii):
(i)   tsafof-xi   **ɬa**=jukuβe
        burned-RES   FEM.DET=bread
        'The bread is burned.' (but I can still eat the bread)
(ii)   tsafof-xi   **ɬ-ka**=jukuβe
        burned-RES   FEM.DET =bread
        'The bread is (totally) burned (I cannot eat it).'

[20] In this vein, it is worth making reference to the following example, in which two sources of evidence may be considered by the speakers to make their claim: visual and hearing. Both consultants describe the context for (i) as one in which a radio or a television is present at the utterance situation and loud music is being heard. Again, if visual evidence is available, it counts as the best evidence, so *na* is used.
(i)   sitsex apeʔe **na**= *musica*
        loud   too   DET =music
        'The music is too loud.'

Another use of *ka* may be in line with Stell's original description of *ka* as introducing disappeared entities/individuals (though no example is included in her thesis). What does 'disappeared' mean? I would argue that it means the entity/individual's disappearance from the speaker's visual field, which is illustrated in (51) below:

(51) a. ji-faʔjɑ   **ka**=ofo
       3S.SG-fly   DET =dove
       'The dove flew away.'

   b. xa-βan-tʃe   **ka**=niβa͡kle
       1S.SG-see-LOC   DET =man
       'I saw a man (pass by).'

   c. pa jitʃ   **ka**=tos
       and leave   DET =snake
       'And the snake left.'

The dove, man and snake were seen from "the distance" (FR, p.c.) while disappearing from the speaker's visual field. It could be posited that *ka* has both distal and andative features; in all the cases (51a-c) a motion verb or a directional locative is used.

3.4   Comparison between best evidence and Faller's direct evidential *-mi*

In essence, the hypothesis I am proposing is that Nivacle determiners encode evidential information: they indicate whether the speaker has the 'best' sensory evidence *na, xa, ka* or not: *pa*. As I tried to show through the data, the 'best' sensory evidence is mostly compatible with visual evidence and the lack of the best sensory evidence is compatible with hearing. However, there may be certain entities for which other sensory evidences such as taste or touch may constitute the 'best' sensory evidence given the lack of visual evidence, in which *na* is used.

Best sensory evidence may be related to the 'direct' Quechua evidential *-mi* (Faller 2002). The Quechua enclitic suffix *-mi* indicates that the speaker bases her statement on direct evidence. Specifically, Faller (p. 18) argues that *-mi* is used to indicate that the speaker has the best possible source of information required for the type of event described, or more generally, the *best possible grounds (Bpg)* for making a speech act (p. 21). However, the 'best' or 'more' direct source of information can be either applied to observable events, in which the most direct access is the perception of the event (52), or non-observable events, in which the most direct access is the report of the actor or experiencer of the event being described (53), or even the speaker's inference:

(52)   Pilar-qa   t'anta-ta-**n**   mikhu-rqa-n
        Pilar-TOP   bread-ACC-**mi**   eat-PST1-3

        p= 'Pilar ate bread.'
        EV=speaker saw that *p*

(53)   Lima-ta-**n**   viaja-n
        Lima-ACC-**mi**   travel-3

        p= 'She travelled to Lima.'
        EV = speaker was told by her (=speaker's sister) that *p*   (Faller 2002:19)

Even though the Quechua and Nivacle evidential systems seem to be similar in regard to examples such as (52), 'best' evidence cannot be equated to Faller's (2002) 'direct evidence' because Nivacle *na xa* or *ka* cannot be used with direct reports, even if the evidence source is reliable. If some information is being reported, the reportative *łan* has to be used.

5 Conclusions

In this paper, I have explored the semantic and pragmatic encoding of Nivacle determiners and argued for the following points. First, Nivacle determiners do not encode definiteness; no determiner choice is induced by a novel/familiar context. Second, determiner choice in Nivacle relies on the speaker's beliefs only, in other words, the Nivacle determiners can only access speaker-oriented distinctions. In this vein, it can be posited that Nivacle determiners cannot access the common ground. Third, although *na* and *xa* usually have a specific interpretation, the requirement for the 'best' evidence source is stronger. Fourth, Nivacle determiners seem to encode *assertion of existence. Na* and *xa* may seem be used to encode assertion of existence of an entity/individual, whereas *pa* could be interpreted as indicating non-assertion of existence. However, the Nicacle data suggest that rather than existence, speaker's 'best' sensory evidence constitutes the core meaning of these determiners.

One of the most important outcomes of this study is the revision of the notion of *speaker knowledge* in evidential terms. I propose that *speaker knowledge* (used in previous literature to characterize *na*, *xa* and *ka*) should be replaced by *best sensory evidence*, which would involve for most of the contexts, visual evidence of the entity/individual at some point in the speaker's lifespan. In turn deictic information helps tease apart the use of *na* (spatially present) from the use of *xa* (spatially absent). In sum, I propose that Nivacle determiners encode both evidential and deictic notions.

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Analía Gutiérrez
gutierra@interchange.ubc.ca