The Enlhet Revelative

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Abstract: This paper describes the Enlhet revelative nooka and proposes a unified semantic analysis for it. Prima facie, nooka has evidential, mirative, and temporal nuances in its meaning. Against this, we establish that the core meaning of nooka is a change in epistemic state, and that the particle is not associated to specific sources of evidence nor to contradicting a previous expectation. The evidential properties of the particle arise from interactions between the time of the event and evidence acquisition time, while any mirative properties of nooka are occasional concomitants, but are not necessarily associated with the particle. We show how the evidence acquisition time implicit in nooka differs from the main narrative time. Our analysis characterizes nooka as a revelative, a category that has been identified in various other languages, but which is still poorly understood.

Keywords: Enlhet; evidential; mirative; revelative; modal

1. Introduction

In this paper, we examine the various uses of the particle nooka of Enlhet, an Enlhet–Enenlhet language of western Paraguay spoken by approximately 8000 individuals, and attempt to establish its core meaning.¹ To begin understanding the contribution of this particle, take the following representative examples.²

1. The speaker steps outside and sees that the ground is wet:

   Maamek’aa rain nooke NOOKA’ la’a
   ‘It rained [it turns out].’

2. The speaker hears that a child got hurt, but later sees that s/he is healthy:

   ¡Sas good nooke la ayetka!
   ‘Your child is well [after all]’

Example (1) suggests that nooka may function as a deductive evidential, marking that the prejacent proposition is asserted on the basis of a deduction from the observation of the effects of the rain. Alternatively, example (2) hints that the contribution of nooka is to indicate the speaker’s surprise or unprepared mind, that is, nooka could be considered to be a mirative. Cross-linguistically, such readings often go together in what in the recent literature is called mirative evidential (see, e.g., Rett and Murray 2013; Salanova and Carol 2017).

In this paper, we argue that the semantics of nooka is less constrained than what these examples suggest: though nooka can be associated with both mirative and evidential meanings, closer analysis of nooka reveals that it does not presuppose a specific type of evidence or necessarily convey any sort of surprise or counterexpectation, as is claimed for miratives. Very broadly speaking, we will claim that the core meaning of nooka is
acquisition of knowledge (“realization”, “coming to believe”) at a specific evaluation time. Any evidential meaning associated with *nooka’* arises from the interaction of the time of the realization and the situation time. Mirativity in the sense of contradiction, unexpectedness, or surprise may be associated with *nooka’*, but is not actually conveyed by it.

The idea that a functional element may encode coming to believe is inscribed within a recent trend in the literature to recognize an evidence acquisition situation as being a component of evidentials (cf. Fleck 2007; Lee 2013; Smirnova 2013; Koев 2017; Johnson 2022, among others). In most formal analyses of evidentiality (e.g., Matthewson et al. 2007; Kalsang et al. 2013; Faller 2002, a.o.), evidentiality is understood as a belief state (“I know from [hearsay, visual evidence, etc.] that…”). Talking about evidence acquisition presents us with the possibility that the change in belief state is a relevant linguistic category, connected with but distinct from evidentiality in a strict sense; the time of this change of belief (i.e., evidence acquisition time or EAT) might furthermore be linguistically relevant, and distinct from other times that are referenced by the semantics, Klein (1994)’s topic time in particular.

Though in this paper we make no explicit claim regarding mirative evidentials in other languages, the striking convergence in the description of these elements across languages suggests that we are in front of a well-defined cross-linguistic category. We use the term *revelative*, taken from Adelaar (2013), for it, and suggest that what we say about *nooka’* transfers in whole or in part to many of the other examples discussed in the literature.

The structure of this paper is as follows. Section 2 discusses some basic facts of Enlhet grammar that are relevant for the interpretation of the examples. Section 3 provides the framework for the meaning of *nooka’*, and shows that it does not encode a specific evidential value. Section 4 discusses evidence acquisition time and argues that it is distinct from topic time. Section 5 discusses illocutionary properties of *nooka’*. Section 6 discusses the mirative meanings associated with *nooka’*. Section 7 summarizes and concludes the paper.

2. Basic Facts about Enlhet

Enlhet is a predicate-initial language in which the order of participants is determined by information structure rather than grammatical function (for details, see Kalisch 2019). A predicate by itself constitutes a complete sentence, and if dependents are expressed at all, it will normally be at most one of them in any given clause. The response (3b) in the following dialogue, adapted from Kalisch (2010), illustrates these points:

3. a. ¿Apva’aktia nilo ptoom taata?
   look for INTERR food father
   ‘Did father come get his food?’

b. Aksaklhaaskek lhaak. Aptavke’.
   take HOD eat
   ‘I took it to him. He ate it.’

Words from all classes can be the main predicate of a clause. Verbs have morphology that is much more complex than that of other word classes, but predicates from all classes can cooccur with the particles, of which *nooka’* is one, that indicate categories such as (graded) tense and evidentiality. Some of these particles may in fact appear within expressions that refer to participants. In the following sentences, the temporal particle *alhta* (general past) appears, respectively, on an independent verbal predicate, a dependent verbal predicate, an independent nominal predicate, and a participant expression headed by a noun:

4. a. Aplhengke’ alhta taata.
   travel PAST father
   ‘Father travelled [before today].’

b. ¿Angleng’aa nlho meeme aplhenga alhta taata?
   hear INTERR mother travel PAST father
   ‘Did mother hear that father travelled [before today]?’
c. *Seta’* alhta *tengma pak lha.*
   grandfather PAST house POSS DEM
   ‘This house was my grandfather’s.’

d. *Apoangkapaklhee nooke la enlhet alhta.*
   return NOOKA’ LA’A person PAST
   ‘[I learned that] the person [that was here before today] returned.’

Particles occupy a clear syntactic position in the clause and in participant-denoting expressions, immediately after the predicate that heads the clause or the participant expression, and come in a fixed order that partially reflects distinct functions. Table 1 summarizes their relative order and, in very broad strokes, some of the relations of mutual exclusion among them.3

<table>
<thead>
<tr>
<th>Illocution</th>
<th>Hearsay</th>
<th>Tense</th>
<th>Cognitive</th>
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<td>halha’</td>
<td>nooke la’a</td>
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The first of these positions contains particles that express the speaker’s relation to the proposition expressed by the sentence in which they occur, without changing its truth conditions. These, and *nooke’* in particular, do not occur in subordinate contexts or in participant expressions. The second position contains a particle that contributes hearsay evidential meaning, the third position is for temporal particles, while the fourth position contains what we call cognitive operators, elements that convey that the speaker is engaged in a mental process. The positions up to the last two are harder to characterize with traditional labels for functional categories, but, together with the last two, are irrelevant for the discussion of *nooke’* and will not be discussed further.

3. *Nooka’* as an Indirect Evidential

We begin our description of *nooke’* by discussing its evidential uses. Evidentiality is the grammatical coding of the source of information (Chafe and Nichols 1986) by which the attitude holder knows about the state of affairs expressed in the prejacent. A number of often subtly different evidential categories have been discussed in the literature, beginning with Willet (1988). For our purposes, we need at most four notional evidential categories: direct sensory perception and three types of indirect evidential, namely, deduction from directly perceptible traces, conjecture based on previous knowledge, and a report from someone else.

Three evidentials in a strict sense exist in Enlhet: a direct evidential *nak*, a reportative evidential *nek*, and a general indirect evidential *lha’a*. The following sentences illustrate their use.

   rain DIR HOD Naok Amyep
   ‘[I saw] It just rained in Naok Amyep.’

   b. *Maamek’uak nek lhaak Naok Amyep.*
   rain REP HOD Naok Amyep
   ‘[I heard] It just rained in Naok Amyep.’
c. *Meeme naak lha’a tengma ak ma’a.*
   mother REM CONJ house POSS DEM
   ‘[I figure] That’s where mom’s village would have been.’

The direct evidential *nak* indicates explicitly that the speaker has direct sensory evidence for the claim made in the prejacent proposition. The reportative *nek* indicates that the source of the proposition is someone else’s account. The evidential *lha’a* is compatible with several types of evidence—deduction from observed hints, conjecture from previous knowledge, and a hearsay report—as well as with epistemic modal readings where it indicates that the speaker is less certain about the truth of the prejacent proposition. It is possible to combine *lha’a* with *nek* to convey that a claim is based on a report from a non-specific source; this can be seen in (6b). Other combinations of evidentials are disallowed.

   ripen HOD CONJ watermelon POSS
   ‘Her/his watermelons must have already ripened.’

   b. *Makhetmeek nek lhaak lha’a samanya pak.*
   ripen REP HOD CONJ watermelon POSS
   ‘I hear that her/his watermelons must have already ripened.’

Evidentiality does not need to be coded in every sentence: like with the temporal particles, it need only be set at the beginning of an episode or paragraph. Where discourse context does not indicate otherwise, unmarked clauses are normally interpreted as making claims based on direct evidence. Given this, one might wonder what the role of an overt direct evidential is. We return to this briefly below, when discussing examples (32) and (38b).

Marking of evidentiality in a clause with one of these particles is generally incompatible with the presence of *nooka’*, suggesting that *nooka’* should be considered to belong semantically with the evidentials. Further support for the idea that *nooka’* is an evidential comes from the fact that it is incompatible with direct evidence in certain circumstances. Take the following, repeated from example (1):

7. The speaker steps outside and sees that the ground is wet:

   *Maamek’aa nooke la’a*
   rain NOOKA’ L A’
   ‘It rained [it turns out].’

   If in sentence (7) one is talking about a past event, the conditions for felicitous use of *nooka’* are those of a deductive evidential: hints are available and directly perceptible, but the event itself could not have been perceived. Examples such as this one are quite common.

   We should not be too quick in reaching conclusions about the evidential value of *nooka’*, however. There are circumstances where *nooka’* can be used even if the event is directly perceived. This can be seen in (8):

8. *Keleyvee nooke la taalha.*
   burn NOOKA’ L A’ fire
   ‘The fire is lit [it turns out].’

   A sentence like (8) could be used, for instance, if I am getting ready to light the fire in the morning, and when I step out into the patio I find that it has already been lit. In much of the literature on evidentials, such readings are taken to be different or unusual enough—they are considered ‘mirative’ uses, since the situation is in some sense contrary to an expectation—to be set aside. See for instance (Koev 2017, pp. 4–5) on Bulgarian.

   Instead of considering the occurrence of *nooka’* with direct evidence in (8) atypical, we take such clauses to exemplify a core use of the particle. We draw one important conclusion
from this example: indirect evidentiality, though frequently associated with nooka’, is not hard-wired as part of its meaning. Rather, the requirement that evidence be indirect in sentences like (7) arises from the interplay between the time of the event and the time the speaker takes note of it, the evidence acquisition time of recent studies (Johnson 2022; Koev 2017; Lee 2013; Smirnova 2013). In some cases, evidence acquisition occurs after an event that is completely contained in the past. In such cases the event can only be described by a clause with nooka’ if it was not directly observed. On the other hand, events that extend into the present (or possibly another evaluation time) can be described with nooka’ if they are observed as they unfold, but only if the speaker’s realization happens at the time of evaluation.

3.1. Evidentiality and Evidence Acquisition Time

The emergence of indirect evidentiality from the ordering of the acquisition of evidence relative to the event itself is in our view most clearly articulated by Lee (2013), discussing the morpheme -te in Korean. Consider the following examples:

9. Korean (Lee 2013)

   a. Pi-ka o-∅-te-la.
     rain-NOM fall-PRES-TE-DECL
     “[I observed that] it was raining.”

   b. Pi-ka o-ass-te-la.
     rain-NOM fall-PAST-TE-DECL
     “[I deduced that] it had rained.”

Like in the two Enlhet sentences that open this paper, in the examples in (9) direct evidence and deduction, respectively, are possible readings of the same evidential morpheme, and the distribution of the two types of evidence is parallel to what we saw in the Enlhet examples: evidence is direct if the evidence acquisition is simultaneous with the event, but is a deduction from observable results if the evidence acquisition is after the event. Lee (2013) analyzes -te as a past tense that requires direct evidence, as is directly illustrated by its use in (9a). The deductive reading in (9b) is derived. The event is set at an anterior time by virtue of the relative past -ass, and the speaker learns of the event after the event occurs; the evidence that is acquired in that case, through direct observation, consists of consequences of the situation having occurred.

We can represent the meaning of the two examples schematically:

10. a. For (9a):

    ![Diagram](image.png)

    b. For (9b):

    ![Diagram](image.png)
In other words, the deductive meaning in (9b) emerges from the combination of a direct evidential and a relative past which conveys that the event was complete previous to observation, and hence what is observed directly is the post-state of that event. Hence, in cases like these, indirect evidentiality is not a primitive. The claim about the event has to be a deduction when there is no simultaneity between the event and the observation. In Korean, specific morphology (e.g., -ass) directly encodes this absence of simultaneity.

We claim that this basic mechanism is what is responsible for all uses of nooka' where the evidence is required to be indirect. If nooka’ marks evidence acquisition in the present and the event is in the past, it stands to reason that the evidence for it has to be indirect. This is what happens in (1). No such constraint bears on (2): since that situation overlaps with the present, the evidence for it can be a direct observation.

However, contrary to what happens in Korean, in Enlhet there is no overt coding for precedence or simultaneity of the event relative to the observation. Are we not incurring in circularity if we say that past and present imply indirect and direct evidence, respectively? Not if we can demonstrate that the time of the events is set in a principled way, independently of nooka’, even if there are not any overt temporal operators to do it. Though we leave some details for later, we briefly sketch how the time of the event and the time of observation are established relative to each other.

We begin by pointing out that the fact that a bounded event like that in (1) cannot be interpreted in the present follows from a well-known cross-linguistic generalization called the present perfective constraint (see Malchukov 2009) that applies even to the English translations: in order to put the event of raining in the present, we would need to make it durative by means of the progressive aspect. This principle is not only about nooka’, but governs the temporal interpretation of nonfuture predicates more generally in the language: bounded events are normally interpreted in the past, while durative or unbounded events may be interpreted in the present. We are deliberately vague about what it means to be “bounded” here. What matters for our argument regarding the evidential value of clauses with nooka’ is whether the event is being interpreted as past or present relative to an evaluation time, and that an event in a clause with the same predicate but without nooka’ is interpreted as past or present in similar circumstances. The exact principles of temporal interpretation need not concern us.

There is a complication, however. The evidence acquisition situation introduced by nooka’ is not restricted to being in the present. Displacements in both time and point of view of the evidence acquisition situation are common in narrative. Take for instance (11), where the time of evidence acquisition coincides or immediately follows the time of the previous event: making fire reveals the woodpecker to be a father of fire.

11. a. Taa’ aptepkeskama taalha m’a, then happen fire DEM ‘Then, he caused a fire,’

b. taalha nguap nooke la m’a so’ok na pvesey’. fire father NOOKA’ LA’A DEM woodpecker DIR name ‘it turned out that the woodpecker was a father of fire.’

If such cases work like those where evidence acquisition is in the present, we should expect indirect evidence to be the only option for events that are previous to the evidence acquisition situation. Furthermore, we would expect that situations that can be apprehended through direct observation are necessarily unbounded, because otherwise they cannot be simultaneous with the evidence acquisition situation. As far as we can tell, this is what happens. In this example in particular, the narrator realizes in the past, through the direct evidence of him causing a fire, that the woodpecker has the lasting (i.e., unbounded) attribute of being father of fire. This is parallel to realizing through direct evidence that some unbounded situation holds at present. Example (27b), on the other hand, is a case of a bounded event that is necessarily previous to a realization in the past, and hence the evidence for it is indirect.
Why the evidence acquisition situation behaves like the present for the purposes of the present perfective constraint is a question that we cannot address directly here, but the discussion in the remainder of this section offers some hints. More is said about realizations in the past in Section 4.

3.2. Nooka’ Is Not Strictly Deductive but Has Trouble with Hearsay

Beyond the fact that the time of evidence acquisition and that of the event are not overtly specified, there is another important difference between nooka’ and the Korean evidentials discussed above: nooka’ can in fact be used with several kinds of evidence for the occurrence of an event, not only those that are directly observable results of a previous event. In the following example, for instance, there is a deduction, but it is not based on consequences of a previous event, but on a simultaneous state of affairs.

12. Apnee nooke la’a taata, kelayve taalha pak.
   COP nooka’ LA’A father burn fire POSS
   ‘Dad is home [it turns out]. [I see] his fire is burning.’

   In the following sentences, likewise, dreaming of a certain person is seen as evidence from which to deduce that that person has shamanic powers.

   dream I grandfahter DIR PAST say
   ‘I dreamt of your grandfather’, he said.’

   b. “Movaan nooke la ngna ngyaama’.”
   power nooka’ LA’A sit grandfather
   ‘[It turns out that] he has shamanic powers.’”

In other examples, the existence of a deduction is not clear. In (14), for example, the speaker reports being suddenly confronted by the fact that his father had already been baptized, something which is likely based on a report rather than a deduction.

14. The narrator talks about the Nanaava’a mission from the 1920s, then talks about the arrival of the Mennonite mission in the 1960s and concludes

   a. Peenesemke nook la ya’pakeskamaa yengmen a taata,
   finished nooka’ LA’A bathe water DEM father
   ‘[It turned out that] dad had already been baptized,’

   b. teemakla ptkok naat lha’a; krestyaano nooke la pteemak.
   COP young REM CONJ Christian nooka’ LA’A COP
   ‘when he was young. [It turned out that] he had already become Christian.’

Though it is apparent that various sources of evidence are compatible with nooka’, we have no examples where it is unambiguously used with claims based on oral reports. One suggestive case is that of (15), where the announcer on the community radio says something in reply to a text message sent by a listener.

   thanks say Campo Bajo listen nooka’ LA’A they
   ‘I say thanks to [those in] Campo Bajo. [It turns out that] they are [also] listening.’

   However, and though it might seem like hair splitting, in this sentence the information comes in written form rather than orally. Salanova and Carol (2017) encounter a similar situation with the morpheme r’e of Guaraní: a book or a text message is acceptable as a source; an oral report is only acceptable if it is the basis for a deduction that the speaker makes about another state of affairs.”
16. Guaraní (adapted from Salanova and Carol 2017)

a. Cháko Ñorairõ o-pa 1935-pe ra’e.
   Chaco war 3A-end 1935-in RA’E
   ‘The Chaco War ended in 1935.’ [Works if the speaker just learned this fact from a
   book that is sitting in front of him/her.]

b. Juan o-i ra’e h-óga-pe.
   Juan 3A-be RA’E 3I-home-in.
   ‘Juan is at home.’ [I just got a text message saying so.]

In the following example, there is a verbal report. However, the proposition that the
speaker marks with ra’e is not the content of the report itself, but something that he has
concluded by putting together the report with his own knowledge. It would be infelicitous
to exclaim (or simply assert) “John left!” with ra’e as a reaction to this report.

17. Guaraní (Salanova and Carol 2017)

Context: the phone rings for John, and I, believing him not to be around, do not call
him to take the call. I’m later told by a co-worker that John just left. I exclaim:

¡Oi-méngo 3A-be CONTR ko’á-pe upé-rõguare ra’e!
3A-be CONTR here-in that-when RA’E
‘Ah, so [now it turns out that] he was here then [when they called him]!

What happens in (15) is perhaps similar to this example: the text message is evidence
from which a fairly trivial deduction is made, but is does not report directly the assertion
that the speaker makes.

3.3. Nooka’ Is about Learning

The solution that we suggest for this puzzling exclusion of verbal reports as evidence
requires that we think of nooka’ (and ra’e) as something other than markers of source of
evidence: their essence is to mark learning about the event described (see Salanova and
Carol 2017).

How does this explain the facts about the use of nooka’ with hearsay? We contend that
a felicity condition for the use of nooka’ is that the acquisition of information should appear
to be simultaneous with the time of evaluation; in the context of the present discussion,
we should understand this to mean that the realization is simultaneous with the utterance.
A verbal report is an external event. All those present when the report is uttered learn
about its content simultaneously, and they are moreover aware that the others learned it
as well. Under such circumstances, it is infelicitous for the speaker to flag the prejacent as
information that is new to her or him. The utterance time is already too late for that. Other
sources of information, including the written word, are perceived in private, and so the
speaker may flag them as being learned concurrently with the evaluation situation even if
the speaker has already finished putting the information together well before the assertion.

We summarize the relationship between evidence acquisition and evidentiality as
follows. The particle nooka’ indicates that the prejacent proposition enters the speaker’s
beliefs at the time the proposition is evaluated. If the event that the proposition describes is
ongoing and suddenly the speaker becomes aware of it, this awareness can, but does not
have to, come through direct perception. If, on the other hand, the event is entirely in the
past relative to the evidence acquisition time, learning about it is incompatible with direct
evidence, which requires an overlap between the event and evidence acquisition.

Learning is different from a simple evidential not only in that it is a change of state
rather than a steady state, but also in having the property that things are normally only
learned once, while they can be observed many times. This point was first raised by
Martínez Vera (2022) regarding the indirect evidentials of Quechua and Aymara. In the
following exchange, one participant visited Sweden two weeks ago, and the other asks her
about the trip.
18. Quechua (Faller 2004, p. 54, apud Martínez Vera 2022)
   a. Imayna Suecia ka-sqa?
      how Sweden be-REV
      ‘How was Sweden?’
   b. Munaycha-n ka-sqa.
      beautiful-DIR be-REV
      ‘It was beautiful.’

Martínez Vera (2022) notes that the reply is not felicitous if the speaker has been to
Sweden twice recently, and the question is asked after the second trip. The reason this is so
is because Sweden will have already been perceived to be beautiful the first time around.
This shows that -sqa, rather than marking some sort of evidence source, means something
like “learning (for the first time) that...”, making it incompatible with an assertion in the
second context, even if the same evidence for Sweden’s beauty is there.

Nooka’ is subject to the same constraint. To see this, we can return to (15), which was
uttered by the announcer at the community radio station after receiving an SMS from one
of his listeners. This sentence is only felicitous once. It would be infelicitous to report a
second SMS from Campo Bajo in the same program using nooka’.

More evidence for a learning analysis will come from the discussion of so-called late
realization readings below.

The simplicity of this description hides complexity in other domains. Among things
that we need to address are how evidence acquisition time is set, what is the nature of the
epistemic predicate contained in nooka’, and to what extent the mirative overtones that
often occur in sentences with nooka’ are part of the particle’s meaning. We will deal with
each of these complications in the next three sections.

4. The Time of Evidence Acquisition

In the previous section we mentioned that evidence acquisition time is typically in the
present but can also be in the past. In this section we wish to explore further how this time
is set.

In the description of tense and aspect, three times are generally used; since Klein
(1994), these are normally called utterance time, topic time, and event time. Event time and
utterance time as used here are unproblematically related to Klein’s definitions. It would
be reasonable to ask whether evidence acquisition time is homologous to Klein’s topic time.
Topic time is the time that structures a narrative, the time about which claims are made. It
is related to utterance time by tense, and to event time through viewpoint aspect. (Klein
1994, p. 4) introduces it by means of the following example:

19. A judge asks a witness at court:
   a. What did you notice when you looked into the room?
   b. There was a book on the table. It was in Russian.

The topic time here coincides with the moment the witness looked into the room. The
situations described are durative and likely extend into a much later time, but the claim
that they hold is made exclusively about that specific time.

If we were to ask what the evidence acquisition time is in this example, we would
answer without hesitation that it is identical with topic time. It helps us here that the
predicate that sets the topic time (“look into the room”) contains a verb of perception. Even
in the absence of such hints, evidence acquisition time appears to be identical to topic time
in most of the Enlhet sentences with nooka’ that we have seen so far.

Take example (14), for instance. This example remits both to an event (being baptized)
and to the moment when someone learns about it. The topic time is the time in the 1960s
when the mission was established. It is at that time that the fact that father had already
been baptized is presented as learned by the narrator.⁹ We could represent this by the following diagram:

20. Father is baptized  Mennonite mission arrives  Utterance time

We therefore ask ourselves whether evidence acquisition time in sentences with *nooka* should generally be equated with *topic time*, as it seems to be in this example. This broader query unfolds into at least the following questions:

1. Can the evidence acquisition time be set explicitly, i.e., in the way that topic time is set by tense or by temporal adjuncts in better-known languages?
2. Does the evidence acquisition time have the same role in narrative as the topic time? Is it ever distinct from topic time?

We address each of these questions in turn.

4.1. Setting the Evidence Acquisition Time

In discussing source of evidence, we concluded that, in clauses without overt temporal operators, the temporal interpretation of the prejacent proposition follows from the same principles in a sentence with *nooka* as it would in a sentence without it. We begin by extending this claim with the further point that temporal operators directly affect the time of the event, and so can alter it relative to the evidence acquisition time. The evidence acquisition time, on the other hand, is transparent to such operators.

This is put into focus most clearly in sentences with the prospective: in them, *nooka* marks a realization (present or past) regarding an event that is yet to happen. The following is an example:¹⁰

21. *Taa* alyaataykanka’a apoa’lhok ma’a enhet: “Paa nooke la k’o amaatong,” later spoke inwardly DEM Enlhet PROSP NOOKA’ LA’A I die ‘Then the Enlhet man thought: “[I see that] I’m about to be murdered.”’

This makes *nooka* different from the other evidentials of Enlhet. The reportative evidential *nek*, for instance, can have its time of evidence acquisition explicitly set by temporal particles, much in the way that the time of evidence acquisition is set in the Korean evidentials discussed above. In example (22), such a reading exists side-by-side with a reading where tense straightforwardly modifies the situation time. In (23), the previous time of the event is a consequence of the indefinite past form of the verb.

22. *Makhetmeek nek lhaak samanya pak taata.* I heard that father’s watermelons recently ripened.’ or ‘I heard recently that father’s watermelons ripened.’

23. *Ketsepmeek nek lhaak Juan apyaap.* Juan’s father died [previously], I learnt recently.’

With *nooka*, no such explicit setting of the time of evidence acquisition is possible. Temporal particles rarely appear in conjunction with this particle, and when they do, as in the following example, they are understood as modifying the time of the situation:

24. *Juan nooke la apheenakpo alhta maata’ apka’heem nek napoolheng.* Juan NOOKA’ LA’A say PAST always kill REP tapir ‘Juan, it turns out, is the one about whom it was always said that he had killed a tapir.’
In the following constructed example, the past tense marker *alhta* can constrain the time at which Juan acted as a thief, or that of the occasion in which we discussed a thief, but not the evidence acquisition time.

25. **Juan nooke la ladróń alhta.**
   Juan NOOKA’ LA’A thief PAST
   ‘[It turns out that] Juan was the thief on that occasion.’

Even if evidence acquisition time cannot be set by the particles, we did assert in the previous section that it could be in the past, however. In an example such as the following, the realization could be simultaneous with the event, or it could come at a later time.

26. Apta’haeklhee’ [elle], apkelaay’aak valay, **Nooka’ angkook apmoktay’a**
   return Englishman fear paraguayan NOOKA’ reach shooting
   pook ma’a tengma pak naat lha’a m’a elle.
   other DEM house POSS REM CONJ DEM Englishman
   ‘The Englishman fled, he feared the Paraguayan [soldiers]. It turns/turned out that the war reached the Englishman’s house.’

The proper interpretation of such examples will come into perspective in the following subsection, when we discuss delayed realization. For now, we simply summarize with the claim that temporal particles do not interact directly with the evidence acquisition time implied by *nooka*. Instead, they modify the time of the event, either directly or through a topic time distinct from evidence acquisition. Evidence can be acquired simultaneously with the event or at a later time, but this time is not set explicitly.

4.2. Time of Evidence Acquisition Can Be Distinct from Topic Time

In example (14), evidence acquisition time appeared to coincide with topic time, while in example (24) it coincides with utterance time. The following example, which is far from unusual, seems to illustrate a third possibility: realization at a time after topic time but before utterance time.

27. a. Paej e’aktak maata’a, ya’, naate v’aktak nengna’tenakiha;
   not arrive always INTERJ REM arrive sleep
   ‘He never returned, or rather, he didn’t come back to our sleeping place.’

   b. taan, apketsepke nooke nhan.
   later die NOOKA’ NAHAN
   ‘[It was later known that] he died.’

   c. Nayseksa pya’yahyam’ naat lha’ apketsapak.
   while run REM CONJ die
   ‘He [must have] died while he was running [through the bush].’

Sentence (27b) provides background, but with facts that will only be established after the topic time. In this case, it is clear that *nooka* does not ride on topic time but introduces a time of evidence acquisition that is distinct from it and from the situation time. The clause with *nooka* is a flash-forward of sorts.

Something similar occurs in the following example:

28. a. Apvaekmek naat sekhook [valay] ma’a [Na’tee-Ptelhila-Maaset],
   arrive REM previously Paraguayan DEM Saavedra
   ‘The Paraguayans had arrived in Saavedra’

   b. sekloor pkenyahaykamo. Temeemke nooke la
   previously run COP NOOKA’ LA’A
   ‘immediately after [the Bolivians] fled. In fact, [it later turned out that]’
c. pangkoo pkenyahyamkmo seklhook ma'a yaamvalay naat.
properly run previously DEM Bolivian REM
'the Bolivians had just feigned flight.'

While topic time is the time around which events are set, the realization can jump forward beyond the episode narrated: it is not clear in this excerpt whether the Paraguayans realized within the narrative sequence that the Bolivians had feigned flight, or whether this is something that the narrator can say with the benefit of hindsight. Both readings of the excerpt are possible. The second reading is what has been called *late realization* by (Koev 2017, p. 4). Koev offers the following example from Bulgarian:

29. One of Nixon’s aides vividly recalls walking into the Oval Office and seeing the President erase some tapes. She later learns about the Watergate scandal from the media and makes sense of what she had seen. When asked what happened on that day, she says:

\[
\text{Kogato vľjazo-x, Niksin trie-še njakav-i zapis-i. Toj zaličava-I ulik-i-te.}
\]

When enter-PAST Nixon erase-PAST some-PL tape-PL he remove-EV clue-PL-DEF

‘When I walked in, I saw Nixon erase some tapes. He was covering up the clues [as I learned later].’

Like in the Enlhet examples, here the understanding of the situation as described in the second sentence comes only after the facts themselves are witnessed by the speaker. We claim that late realization is a rather typical reading of *nooka*. Realizations that happen simultaneously with the event or with topic time, as in most of the examples in this paper, are just special cases of this. In the general case, topic time and the evidence acquisition time are distinct. The examples in this subsection show that this is possible.

5. Perspective and the Illocutionary Dimension of *nooka*

Despite having shown that *nooka* is not an evidential in the usual sense, it remains that *nooka* introduces some sort of epistemic predicate, perhaps *realize* or *learn*. We therefore need to ask ourselves what the nature of that predicate is more precisely. Some parts of this have already been established: above we defined *nooka* as encoding the incorporation of novel information into the speaker’s beliefs. In this section, we address the following additional questions: (a) whose perspective is involved in the evidence acquisition situation introduced by *nooka*, (b) whether and how that perspective can be shifted, (c) whether the evidence acquisition is at-issue, in other words, whether it changes the truth conditions of the prejacent proposition, and (d) whether *nooka* is factive, that is, whether the prejacent proposition is taken to be true by the speaker. We leave one part of the discussion to Section 6, where we specifically address the “mirative” uses of *nooka*, and argue that contradiction and surprise are not part of the meaning of the particle.

5.1. Perspective

The baseline characterization of the evidence acquisition introduced by *nooka* is that it always points to a change in the belief state of the speaker. Such unshifted interpretation is evident in most of the examples above. It would be infelicitous to use a sentence like (8) with the intent of indicating that the situation is novel to my interlocutor if, for instance, I am sitting by the fire that I lit, and my interlocutor comes in. However, one finds abundant evidence that the perspective can be shifted to the perspective of a character in a narrative.

In example (21), for instance, the shift is made explicitly in a direct (internal) speech report. Shifts may occur in other contexts. Take the following excerpt:

30. a. Vet’aa pkenengkakmo enlhet a nataan,
see raise man DEM after
‘She realized that the man rose up [to run] after her.’
b. neptaana nooke nha’ aptamhakhuk enhet nak hay’.
* jaguar NOOKA’ NAHAN become man DIR here
  ‘[It turned out that] the man had turned into a jaguar.’

The narrator is clearly not present in the episode described in (30), which is extracted from a mythical narrative; it is the female character in the narrative that realizes that the man has transformed into a jaguar. The shift in perspective to a character in the narrative could also be said to happen in example (11): here, the realization of the woodpecker’s power is not the narrator’s, but that of one of the characters in the story.

Such shift is not normally found in genres other than narrative. In narrative, the speaker knows the facts that are being revealed as they narrate, but puts self in the position of lack of knowledge of the character of the narrative, or, as a special case, of self at a past moment in time. They then reveal the facts to the hearer with nooka’, either as a stylistic device (say, to delay revealing the facts to a hearer that is also unaware of them) or to indicate that the facts only became known to the narrator later. The “stylistic” use of nooka’ could be at play in (30): in addition to the discovery by the character, it could be said that nooka’ is used here to invoke the novelty to the hearer of this unexpected occurrence, but always riding on the novelty that this represents to the character.

In cases where only temporal shift is involved, the narrator shifts the perspective to a moment when she or he is still ignorant of the actual state of affairs. An example of this would be (31), where the discovery is made by the speaker almost concurrently with the episode that is being narrated.

   full DIR car big later say
   ‘The truck is full’, he said.’

b. Taa’ nengetsekha’voo’, moo na’ allantepsa ta’paok, kuaratyा nooke la’a.
   later look other DIR go_out things Guarayo NOOKA’ LA’A
   ‘We looked that way, their things were removed. It turned out that they were Guarayo.’

Temporal shift is also not very common outside of narrative, and for this reason we claim that the shift in the evidence acquisition time is a special case of the perspective shift that is proper to narrative. Shifting in time is often accompanied by a shift of perspective, and, conversely, evidence acquisition in the present is never shifted to the perspective of someone other than the speaker.

It is interesting in this respect to compare nooka’ with other evidential particles. In the following example, the speaker goes out to the patio, and says the following to himself, seeing the chicks run to him:

32. Maek nooke la’a angkelnaapak tata’a.
   hunger NOOKA’ LA’A kill chick
   ‘The chicks are hungry!’ [lit., hunger kills them]

If the direct evidential nak was used in this situation, the statement would necessarily be directed to an interlocutor, as it puts the evidence in front of her or him and could be used to elicit action from the hearer. With nooka’, on the other hand, it is clear that the statement is directed to self, even if an interlocutor is present. While with nak the speaker is asking the interlocutor to accept their epistemic authority regarding the prejacent proposition, one often finds sentences with nooka’ where the interlocutor is assumed to already know the prejacent, or even where there is no interlocutor. Example (15) is a case in point. The use of nooka’ in that case indicates that the speaker becomes aware of something that had escaped his attention.
5.2. At-Issueness and Factivity

Two further features of clauses with nooka’ need to be mentioned in this section: on the one hand, that the claim of a change in the beliefs of the attitude holder is not-at-issue, and on the other, that the prejacent proposition is assumed to be true, i.e., that nooka’ is factive. We provide some evidence for these two claims. Since elicitation was not used for the examples in this paper, however, we cannot support these claims with precise diagnostics but rather only with the first author’s intuitions.

In example (28), while it is possible to challenge the truth of the prejacent proposition (the Bolivian soldiers could have really fled), it is not possible to challenge that there was a realization in the Paraguayan soldiers’ or in the narrator’s mind. In all other respects that we can verify, the realization behaves like a presupposition: it is not affected by negation or modal operators, for instance, something that is also in line with its unmodifiability by temporal particles.

Likewise, in examples with a shift in perspective, such as example (31), one can see clearly that nooka’ is factive. The sentence in question is infelicitous if the speaker believes the prejacent to be false in the present. If the teller was corrected (the people on the truck turned out to be Ayoreo, not Guarayo), he could not tell the story again in the same way. This is true about sentences with nooka’ more generally, and about the direct and reportative evidentials of Enlhet.

Example (33) is interesting in this regard, as it reflects a pattern found in many stories relating to Enlhet’s capitulation to the colonial system imposed by Mennonites and the state (see Kalisch 2019): changes in taste or in habits are presented as a passage from a stage of limited awareness to that of knowledge of a higher truth.

33. Nenta’navadeek yaampata’ aanek, hack. Sejjj nooke laalha’a nyekhe’ antook. scorn sorghum flour INTERJ tasty NOOKA’ LAALHA’A FRUSR eat
   ‘We scorned sorghum flour, oh well! It turned out it’s very good to eat.’

6. Contradiction and Surprise: Occasional Concomitants to nooka’

Example (2) suggests that nooka’ may be used to convey surprise in the face of an unexpected situation. The following is a further example from narrative where surprise is clearly present:

34. “¡Haa, lleep nooke la’al!” “Ehe, ko’o!” ne ptamhak.
INTERJ you NOOKA’ LA’A yes I REP say
   ‘[He encountered father.] “Oh, it’s you!” “Yes, it’s me”, he said.’

Surprise, or “unprepared mind” was part of the initial characterization of the category of mirativity (e.g., in DeLancey 1997). Actual surprise is not present in most of the examples that we have discussed, however. In some recent literature on mirativity there has been a shift in emphasis to considering mirativity as simply a contradiction of a previously held belief (e.g., Rett and Murray 2013; Torres Bustamante 2012, a.o.). We will argue in this section that even contradiction is not inherent in the meaning of Enlhet nooka’. Still, we should begin by considering the easily encountered examples of sentences with nooka’ that convey contradiction, even if without any hint of surprise. The examples in (35) illustrate this; it also occurs in (33) above.

35. a. Naate nteemak ko’o sekvetay’ alyephaha.
REM COP I see fight
   ‘This is how I experienced the ritual fight.’

b. Ayanemkek ko’o seklhook elloomak enlhet ma’a,
think I previously angry people DEM
   ‘At first I thought people were angry,’
c. teemakha’ angkoo nook la yaamnaan.
   COP precisely NOOKA’ LA’A initiation
   ‘but it turned out it was the initiation ceremony.’

d. Apkennayveeykam’ nooke la nyekhe’.
   play NOOKA’ LA’A FRUSTR
   ‘It turned out they were playing.’

In these examples, the erroneous belief is stated explicitly. It is often possible to claim that a previous belief against which new and contradictory information is presented is implicit in sentences with nooka’. Take for instance (36): the realization that it is useful to have an Enlhet guide might be stated against a previous belief that it is not, attributed to the Paraguayan soldier.

36. a. Metaama a valay, pleklama kyevy’,
    dig DEM Paraguayan pull_out large
    ‘The Paraguayan dug up [the angvet root] and pulled out a large one;

b. pleyemyekhaekhi, pkelamko a apketkek valay.
    cut give DEM children Paraguayan
    ‘he cut it and gave it out to his subordinates [to drink its water].’

c. “¡Aa! Sas nooke la antemhek apveske’ engak enlhet,” ne pteemak
    INTERJ good NOOKA’ LA’A COP leader POSS enlhet REP say
    valay ma’a.
    Paraguayan DEM
    “‘Ah! [It turns out that] it is good to have an Enlhet as a leader [guide]”, said the Paraguays.’

The ‘insult’ associated with some sentences with nooka’ can be attributed to an implicit contradictory belief: (37) can be an offense if said when meeting someone’s child for the first time; the implicit contradictory belief, whence the insult, is of course that the child should not be beautiful (perhaps because the speaker thinks that the parents are not very beautiful).12

37. Sas nooke la pketka.
    good NOOKA’ LA’A child
    ‘Your child is beautiful [it turns out].’

That this reading is associated with nooka’ may be seen in the comparison with similar sentences where other particles are used: (38a) expresses the same proposition, but without implicating an expectation so strongly; eyla’a in (38a) is an illocutionary marker that is normally used to make a suggestion that the interlocutor is asked to confirm, while nak in (38b) is a direct evidential. The latter could be translated as “It is plain to see that...”, with the speaker claiming epistemic authority. Neither of them is insulting.

38. a. Sas eyla pketka.
    good EYLA’A child
    ‘Your child is beautiful, eh?’

b. Sas nak apketka.
    good DIR child
    ‘Your child is beautiful [I see].’

Yet another use of nooka’ where a contradiction is implicit is to convey some sort of reproach, as in (39).
39. Tavke nooke la seyaayemkeskama lhkaa ngyaalho’.
et NOOKA’ L’A’ leave HOD older_sister
‘[I realize that] you didn’t leave any food for your older sister.’

There are perhaps other uses that could be derived from a contradicted belief. If one
takes “it turns out” as an approximation in English of the meaning of the revelative, one
might expect that revelatives could also convey defiance, as in the following example. In
it, I am not only making the at-issue claim that the interlocutor took my seat, but also a
not-at-issue claim that he or she held an erroneous belief.

40. Hey bud, it turns out that you are sitting on my seat.

We are unaware of such use of nooke’ in Enlhet, perhaps for entirely independent
reasons such as the fact that the perspective never shifts to the hearer.

It would seem, then, that though no surprise is part of the meaning of nooke’, some sort
of contradiction with a previously held belief is inherent. However, even this component of
meaning is somewhat elusive. In the following example, the speaker makes it explicit that
what he learns is in contradiction not with a previously held belief of his, but rather with
somebody else’s claim; in this way, he takes distance from the claim, which he may or may
not have taken to be true:

close TOP say DIR mennonite far NOOKA’ LAALHA’ A FRUSR
‘It’s close by’, said the mennonite. It was far [as we discovered].’

In yet other examples, for instance (32), however, no contradiction is implied. Further-
more, sentence (37) is not automatically offensive. Simeonova (2016), discussing examples
like it in Bulgarian and Turkish, offers an interpretation for the lack of offense that is
compatible with the revelative morpheme encoding contradiction: the expectation could be
‘the child is beautiful to a normal degree’, and its contradiction would convey that ‘the
child is beautiful [beyond any expectation]’. However, (37) is not hyperbolic in that manner.
Rather, it simply conveys that the information is new in the speaker’s mind as they speak.

In sum, hard-wiring the contradiction in the semantics cannot be right for nooke’ given
the frequent absence of an erroneous belief that is contradicted. Mexas (2016), noting
that the latter is also the case for a number of elements that are considered miratives
cross-linguistically, offers the suggestion that contradiction of a previous belief arises as an
implicature from miratives’ basic meaning of discovery. This is closer in spirit to what we
need, but it still leads us to expect that contradiction should arise by default with nooke’,
and be absent only when explicitly cancelled. This is not what happens.

Noting this, Salanova and Carol (2017) take the approach that contradiction, like
surprise, is a distinct meaning component conveyed by context or intonation that simply
co-occurs with the encoding of change in epistemic state. The term revelative that we use
in this paper is meant to capture this: neither surprise nor contradiction are part of the
meaning of nooke’, only discovery. In sum, a formula very similar to that proposed in
Salanova and Carol (op. cit.) for Guarani ra’e describes the meaning of the Enlhet revelative
nooke’. We give it as follows:13

42. \[ \text{nooka’} = \lambda t_{EA}. \lambda P. P \cdot \exists t^* < t_{EA}. \neg [\text{DOX}_{Sp,t^*,w} \subseteq P] \land [\text{DOX}_{Sp,t_{EA},w} \subseteq P] \]

In other words, the revelative introduces a not-at-issue assertion about a change in
the speaker’s (Sp) doxastic state in the evaluation world w at the evidence acquisition time
$t_{EA}$. The change is from a state where the speaker was agnostic about P to one where they
consider P to be true. We emphasize that the speaker does not necessarily hold a previous
belief or expectation regarding P, and thus there is no contradiction and less so a surprise.
The type of evidence is also not specified in this formula: evidence can be anything that is compatible with learning about $P$ at the time of evaluation.

Contrary to what is said in Salanova and Carol (op. cit.) about Guaraní râ’e, we consider the time of learning (or evidence acquisition, as we have called it in this paper) to be distinct from topic time, hence a distinct temporal constant that is introduced in the structure as a sister to nooka’. This is necessary, it will be recalled, to account for the fairly frequent cases of late realization. In such cases, topic time remains the main time of events in the narrative, while evidence acquisition time introduces a flash-forward, after which the focus promptly returns to topic time.

There is some redundancy in the formula in (42): on the one hand, the prejacent proposition is passed unchanged, so the speaker’s belief in its truth is derived from the Gricean maxim of quality; on the other hand, the not-at-issue assertion contains the statement that the prejacent has come to be integrated into the speaker’s beliefs at a specific time previous to the evaluation time. Though it is clear to us that nooka’ encodes a positive assertion (“I learned”) rather than a negative one (“I hadn’t known”), it seems that it would be sufficient to say that $\neg[DOX_{Sp,tw} \subseteq P]$ for all $t < t_{EA}$, since the at-issue assertion contains the rest. This redundancy would need to be ironed out in later research.

7. Conclusions

To summarize what we have said so far, though nooka’ can be associated with both mirative and evidential meanings, we conclude that the only possible characterization of its core meaning is acquisition of knowledge at a specific evaluation time. The indirect evidential meaning associated with nooka’ arises from how time of evidence acquisition and situation time are related, in a way reminiscent of how this happens with other evidentials discussed in the literature.

Mirativity in the sense of contradiction, unexpectedness, or surprise may be associated with nooka’, but is not actually conveyed by it. Hence, we argue against pegging nooka’ to several definitions of miratives that appear in the literature, namely surprise, unprepared mind, and counterexpectation. In saying that nooka’ encodes learning, we are close to two other common definitions, namely new information and sudden realization, which some scholars, e.g., AnderBois (2017), consider to be substantively distinct. AnderBois understands the difference as being between information that is absolutely new and information that is newly evoked in a specific circumstance. We tend to believe that the latter is a plausible description of nooka’, but we are unable to contrast the two options in our data at this point.

A fuller discussion of the relationships among the various particles is bound to be illuminating for the meaning of nooka’. It is possible, in particular, that there is an etymological relation between nooka’ and ekâ’, which functions as an adversative conjunction. If such a relationship were confirmed, it might force us to review the idea that no contradiction with a previous belief state is implied by nooka’. These and other questions regarding nooka’ need to be left to later research.

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Informed Consent Statement: Enlhet speakers quoted in the paper consented to being recorded and having their narratives published. These recordings and their subsequent edition and publication were done entirely by Kalisch.
Data Availability Statement: The narrative examples quoted in this paper are extracted from the first author’s database of texts, which is not publicly available in raw form. However, many edited language materials, including audio recordings, may be found at https://enlhet.org/.

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Abbreviations

The glosses are highly simplified, and do not give details of inflectional categories, such as person, gender, or verb “rank”, and a number of derivational morphemes found on verbs and other words. A number of particles discussed in the text, such as nooka’ itself, as well as la’a, laalha’a, eyla’a and nahan, are given uninformative glosses, reflecting that their proper characterization is the question under discussion or is still open.

The following abbreviations are used in the glosses of the examples in this paper.

CONJ conjectural
CONTR contrastive particle (in Guaraní examples)
COP copula verb
DECL declarative (in Korean examples)
DEF definite (in Bulgarian examples)
DEM demonstrative
DIR direct evidential
EV indirect evidential (in Bulgarian examples)
EYLA’Á contrastive eyla’a
FRUSTR frustrative
FUT future
HOD hodiernal or recent past
INTERJ interjection
INTERR interrogative particle
LA’A marker of a cognitive process la’a
LAALHA’Á marker of a cognitive process laalha’a
NEG negative
NAHAN contrastive particle
NOM nominative (in Korean examples)
NOOKA’ revelative nooka’
PAST general past (in Enlhet); past (in Korean and Bulgarian examples)
PL plural (in Bulgarian examples)
POSS possessive
PRES present (in Korean examples)
PROSP prospective
RA’E Guaraní revelative
REM remote past
REP reportative
REV revelative (in Quechua examples)
TE Korean direct evidential past
TOP topic marker
3A third-person active marker (in Guaraní examples)
3I third-person inactive marker (in Guaraní examples)

Notes

1 The results presented in this paper are part of Kalisch’s doctoral research at the University of Buenos Aires, carried out under the joint supervision of the second author and Dr. Javier Carol. Hannes Kalisch passed away on 23 July 2023, the day that reviews and editorial comments on the first draft of the paper were returned. The revised version of the paper was prepared by Salanova, with the support of a number of materials on nooka’ left by Kalisch, though without the benefit of Kalisch’s native-like intuitions about the language. Salanova dedicates this final version to Kalisch, in fond recollection of our conversations.

Enlhet–Enenlhet is a small family of languages spoken exclusively in the Chaco region of modern day Paraguay. The languages...
range in level of endangerment from almost dormant (Guaná) to having full vitality within the communities (Enlhet). Most of the examples used in this paper are spontaneous utterances extracted from texts collected by the first author as part of his documentation of Enlhet history. For an overview of the Enlhet language family, see Unruh and Kalisch (2003); for the texts and further information on the Enlhet, see http://enlhet.org/.

In the Enlhet examples, the sequence lih represents the voiceless lateral fricative /ɬ/, ‘the glottal stop /ɬ/, y the palatal approximant /ɨ/’, and the sequence ng the velar nasal /ŋ/, while all other letters have their habitual IPA values. The raised dot in lih is used to indicate separate phonemes (i.e., a sequence of /ɬ/ and /ɬ/ rather than /ɬ/). The raised dot is also used in the writing system to separate words that undergo enchâinement, but in this paper we have converted those dots to spaces between words. Many particles, and in particular nooka’ and la’a, have various contextually distinct allomorphs. For ease of identification, we gloss these two particles as NOOKA’ and LA’A, and avoid any ambiguity by boldfacing nooka’ in the example sentences.

Many of the spontaneous examples quoted in this article are from Enlhet narratives about the Chaco War between Bolivia and Paraguay in the 1930s, when the Enlhet territory was disputed by the two nation-states at war. Kalisch and Unruh (2022) offers a selection of these narratives in English translation, with historical commentary.

In these and in many of the examples that follow, nooka’ is followed by an additional particle: la’a. This particle has become practically obligatory with nooka’ in contemporary Enlhet, though it is often absent in the speech of elders. We will treat the two as stylistic variants, identical in meaning unless otherwise noted. Example (43) shows one such case of nooka’ without la’a.

43. a. Apenaasook naata apkela-haliŋavusa kooko ni’a ayetkook alhta’a,
begin REM take_out uncle DEM PAST
‘At night, my uncle took advantage to take out some parts [from the gun, to prevent it from being used].’

b. ta’i maska’ apoa’aktamo, apketsepke nooka’.
later NEG return die NOOKA’
‘but he didn’t return; [it turned out that] he had died.’

The qualification is important here: not all relations of mutual exclusion are captured by this paradigmatic arrangement. As we will see below, nooka’ is in complementary distribution with a number of particles in other positions.

In this table, we treat first position particles modified by la’a as variants of the bare particles.

As we will see below, many example sentences are ambiguous between describing past situations and describing present ongoing situations. For this reason, we need to supplement the sentences with an indication of the time that is intended in each case.

Lee (2013) also considers the interplay of -te with a morpheme indicating relative future, but examining the relative past is sufficient for our purposes. We follow Lee in citing the Korean examples in the Yale transliteration.

Another case where the deductive evidential could be analyzed as arising from the interplay of direct observation and a relative past is the double evidential construction of Matsés, a Panoan language of Peru, as described in detail in Fleck (2007). For reasons of space, we cannot include our analysis of this very interesting construction, though a brief sketch is provided in Salanova et al. (2017). Salanova and Carol (2017) apply a similar approach to derive the evidential meaning of Paraguayan Guaraní ni’e, though in other analyses (Carol and Avellana 2019; Pancheva and Zubizarreta 2019) the question is dealt with somewhat differently.

María Luisa Zubizarreta (p.c.) points out that one can report verbal hearsay with ra’e if it is very recent, v.g., if one just came off the phone, as opposed to receiving a text message as in (16b). This agrees with our intuitions, but the felicity conditions are somewhat different in this case: the hearer cannot have direct access to the verbal report. In an example like (16a) such a constraint does not hold: the hearer could even be the person that is showing me the book. In the latter case, the information is novel for the speaker, even if the hearer is already aware of it, whereas in the telephone example the speaker can still present the information as novel to the hearer or perhaps even to self, since the hearer does not know exactly what was reported over the phone. Both of those can be marked with a revelative.

Strictly speaking, what this diagnoses is an irreversible change in epistemic state. This is stronger than a change in epistemic state, so it serves our needs. See Section 7 for a brief discussion.

Incidentally, this example illustrates very succinctly both learning about an event completed in the past (being baptized) and an ongoing state of affairs (being Christian).

Admittedly, the prospective is usually regarded as an aspectual marker rather than as a tense, and it might therefore seem unsurprising that it cannot modify the evidence acquisition time. Further examples in this section should reassure the reader that such modification is impossible with other temporal particles.

Here it might be relevant to distinguish the time of naïve observation (seeing Nixon erase some tapes) from the time of realization (understanding that he was destroying evidence). In cases of delayed realization, the time that the revelative refers to is invariably the second one: the moment at which the naïvely acquired information is integrated with other facts to substantiate the prejacent proposition. For convenience, we maintain the term evidence acquisition time for this.

Note the similarity with (2). The predicate sas means both “beautiful” and “in good health”, among other meanings.
We thank an anonymous reviewer for this more precise formulation to replace our semi-formal characterization with learn in the metalanguage. Since we wish to describe a change of state at $t_{EA}$, we take $DOX_{Sp_{EA},w} \subseteq P$ to be a shorthand for $\forall t : t > t_{EA}.DOX_{Sp_{EA},w} \subseteq P$, without being overly insistent on the irreversibility of the change.

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