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AUTHOR(S)

Silja-Maija Spets

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Epistemic perspective of temporal deictics: A study on Mari retrospectivizing particles

Silja-Maija Spets

University of Turku

<https://orcid.org/0000-0002-6908-0884>

Deictic items encoding coordinative dimensions of space and time often grammaticalize into markers of epistemic categories. This study examines what kind of epistemic system is formed by the tense-deictic retrospectivizing particles *ələ/ələ* and *ulmaʃ/əlan* in the Mari languages. Based on a corpus study, the paper proposes a new perspective-based approach to the evidentiality of the particle constructions and shows how they also participate in a discourse-interactive custom of Common Ground management. Both functions stem from the internal semantics of the particle constructions which in essence are multiple perspective constructions expressing two observer positions with respect to one state of affairs. Crucially, also spatial deictics express epistemic differences based on observer positions, but they have different communicational properties. Spatial environment allows intersubjective reference to speaker and addressee perspectives, while the Mari temporal particle constructions are fully speaker-anchored. Thus, the epistemic grammaticalization potential of the two types of deictics is shown to be different.

Keywords: Mari languages, retrospective shift, evidentiality, perceptual field, Common Ground management, grammaticalization, deixis, multiple perspective constructions

1 Introduction

Grammatical epistemics such as evidentials or engagement markers often grammaticalize from deictic items encoding coordinative dimensions of space and time (e.g., Willett 1988; Aikhenvald 2004: 275–276; Evans et al. 2017b). This is due to the fact that coordinative deictics typically mark the physical positions of experiencers towards a state of affairs. Access positions towards information, in turn, lie also in the center of epistemic expressions which can be understood as stance markers encoding the speaker’s relative distance to the proposition (Willett 1988; de Haan 2005).

In the current stage of research, however, no categorical distinction is made between spatial and temporal deictics, implying that they have identical potentiality to form epistemic expressions. At the same time, the examples quoted are almost exclusively limited to markers of spatial perspective, such as demonstratives and other locative pointers. When it comes to time and knowledge, the fusional relationship between pastness and evidential marking on the one hand (Aikhenvald 2004: 261–264), and re-interpretation of aspect operators as epistemics on the other hand (Bybee et al. 1994: 95–97; Friedman 2018) are widely recognized tendencies, but little is said about how the deictic component of temporal expressions as such interacts with epistemic issues. This paper provides one answer to the question by investigating the epistemic extensions of tense-deictic elements in Meadow Mari and Hill Mari (commonly referred to as *Mari*), two closely related Uralic languages spoken in the Volga Basin.

The most grammaticalized part of the epistemic system in Mari consists of the particles *əʎe* and *ulmaf* in Meadow Mari, and *əʎə* and *əʎən* in Hill Mari. Morphosemantically these elements are 3rd person singular past tense forms of the copular verbs Meadow Mari *ulaf* and Hill Mari *əlaf* ‘be’. Functionally, they take part in a rarely discussed temporal strategy called **retrospective shift** (also called **retrospectivization** in this paper, see Section 2.2 for a more detailed discussion). In retrospective shift, past expressions are formed from present ones by the aid of special past-marked items that attach after presently conjugated finite forms. This kind of markers are called **retrospective shift markers** (or **retrospectivizing markers**), and they are often past tense forms of copular verbs, as is the case also in Mari (Plungian & van der Auwera 2006: 337, 344–345.). The use of the Mari retrospectivizing particles is exemplified below. In example (1), the particle *əʎe* appears after a simple present tense form *puet*¹ ‘you give’ which expresses imperfective aspect. The particle “shifts” the interpretation of the event into past from the speaker’s temporal location and thus forms a past imperfective expression with habitual meaning ‘you used to give’.

Meadow Mari

- (1) *ket̪ə̃-n man-me semən iktaz p̪ølek-əm nal-ən pu-et əʎe.*
 day-GEN say-VN like some present-ACC buy-CVB give-2SG əʎe
 ‘You used to give me presents almost every day.’ (Uchaev 1985: 49)

¹ Written Mari employs the Cyrillic alphabet. The transcription follows IPA with the exception that the reduced vowels marked with ы and ъ in orthography are rendered by ⟨ə⟩ and ⟨ə̃⟩, respectively.

In example (2), the retrospectivizing particle *ələn* occurs after the simple past tense II form *puen* which here has a present perfect meaning ‘she has given’. Thus, the particle creates an utterance with past perfect value ‘she had given’.

Hill Mari

- (2) *æcæ-m-læn-ʒə* *tʃə̃tʃə̃* *papa-ʒə* *pu-en* *ələn*.
 father-POSS 1SG-DAT-POSS.3SG uncle grandmother-POSS.3SG give-PST2.3SG ələn.
 ‘His maternal grandmother had reputedly given it to my father.’ (Alhoniemi 1985: 122)

In terms of temporality, there is no difference between the particles. Instead, the variation between Meadow Mari *əlɛ* and *ulmaf* and Hill Mari *əlɛ* and *ələn* is conducted by an epistemic division of labor. The most often quoted semantic dimension is **evidentiality**. According to current studies, *əlɛ* and *əlɛ* are used to express that the speaker was an eye-witness or a participant in an event, while *ulmaf* and *ələn* mark that the information is gained indirectly by inference or hearsay. (E.g., Pengitov et al. 1961: 184–189; Alhoniemi 1985: 121–122; Uchaev 1985: 45–53; Skribnik & Kehayov 2018: 536–539.) This is visible also above: example (1) employs *əlɛ* signaling personal presence in the event, while example (2) uses *ələn* to mark that the speaker knows about the event through hearsay information.

In the latest approaches, the notion of **mirativity** completes the epistemic profile of the particles claiming that *əlɛ/əlɛ* presents an event as expected, while *ulmaf/ələn* expresses the mental unpreparedness of the speaker (Skribnik & Kehayov 2018: 536–539; Kashkin et al. 2023: 342–343). Example (3) illustrates the mirative usage.

Meadow Mari

- (3) *ondalalt-ən-am* *ulmaf*.
 be.cheated-PST2-1SG ulmaf
 ‘I was cheated (as it turned out).’ (Skribnik & Kehayov 2018: 539)

However, a corpus study reveals that the retrospectivizing particles also occur in cases where they have no meaning of pastness. This is illustrated in example (4b) where *əlɛ* appears in a present perfect expression. The element here does not cause a past perfect reading; instead, the utterance is interpreted in the same present perfect value as the preceding question in (4a). These kinds of examples have not been addressed in current descriptions.

Hill Mari

- (4) a. *ma liælt-ən?*
what happen-PST2.3SG
'What has happened?'
- b. *Oleg-əm kəmət-ən ær-en-ət ələ.*
Oleg-ACC three-ADV arrest-PST2-3PL ələ
'Oleg has been arrested by three men.' (Petukhov 1984: 29)

Starting from these observations, the paper will examine two topics. For Mari, I will show that the particle constructions have an inbuilt epistemic meaning which explains their extension also to non-temporal contexts. I will demonstrate how the knowledge-related functions originate from the inherent morphosemantics of the retrospectivizing tense constructions which in essence are **multiple perspective constructions** that observe one event from two temporal vantage points (cf. Evans 2005, see Section 3). Ultimately, the perspective-based approach will re-define the evidential opposition between *əle/ələ* and *ulma/ələn* and show how it is not based on different modes of gaining information (such as 'seeing' or 'inferring') but on the inclusion or exclusion of the event in a deictic sphere that Faller (2004) calls the speaker's **perceptual field**. Further, the temporal perspective properties of the particle constructions enable their use also in **Common Ground management**, a discourse-pragmatic epistemic dimension that conveys the accommodation of new information to the shared knowledge base of the interlocutors.

Simultaneously with this Mari-specific investigation, I will also target a more general question concerning the development of epistemics. I will discuss what kind of epistemic functions can arise from temporal perspective constructions and how they differ from those originating in spatial ones. The key finding is that dimensions of space and time are not similar in terms of perspective: space is a multidimensional environment and enables communication between different speech-act participants in different observation points while time as a one-dimensional sphere does not. This affects the epistemic functions where the coordinative deictic constructions may grammaticalize into.

Throughout the paper, I will discuss two Mari languages without making a distinction between them. The main reason is my aim to focus on the internal morphosemantics of the particle constructions and the overlaps between different TAME-categories. The structure of the constructions is identical in both languages and so are the processes of grammaticalization. Overall, the current account is largely explanatory rather than purely descriptive.

The structure of the paper is as follows. Section 2 presents the Mari languages and summarizes the current views on the syntax and semantics of the retrospectivizing particles. Section 3 introduces the notion of multiple perspective constriction as a tool for explaining the semantics of the Mari analytic tenses as well as grammaticalization of different types of epistemic markers. The data and methods used in the study are presented in Section 4. The first research question on the epistemic functions of the Mari retrospectivizing particles is answered in Sections 5 and 6 which present a perspective-based approach to the evidentiality of the Mari particles and show the application of the evidential values in Common Ground management, respectively. The second research question on the grammaticalization of tense-deictic elements as opposed to spatial ones is answered in Section 7. Finally, the major findings and their typological significance are summarized in Section 8.

2 Mari languages and current views on their retrospectivizing particles

2.1 The profile of the Mari languages

The Mari languages are spoken by the Mari people who inhabit the basin of the Volga River, an area that covers the easternmost part of European Russia. Genealogically, Mari forms a subbranch of the Uralic language family and consists of a continuum of four main dialects. The Meadow and Eastern dialects have approximately 388,000 speakers, the Hill dialects number less than 20,000 speakers, and finally, the Northwestern dialects are spoken by only a few hundred people; virtually all Mari speakers are bilingual in Russian. The majority of the Mari lives in Mari Republic, their titular district within the Russian Federation, but large diasporas are found also in the neighboring areas (Saarinen 2022: 432).

On the basis of the dialects, two literary standards have been created: Meadow Mari based on the Meadow and Eastern dialects, and Hill Mari based on the Hill dialects. The standard variants are nowadays commonly considered as two closely related but separate languages. Both of them are official languages of the Mari Republic besides Russian, although the status is formal and both languages are considered endangered (Saarinen 2022: 43).

Typologically, the two Mari languages share the same profile of agglutinative tense languages with head-final syntax and SOV word order. The major differences are found at the levels of phonology and the lexicon. Hence, I will by default talk about *Mari* as a single unit and specify the individual languages only in the examples.

From an areal perspective, Mari is part of the Volga–Kama Sprachbund, the main members of which represent two language families: Turkic and Uralic. The Turkic side of the Sprachbund consists of Chuvash, Tatar and Bashkir, while the Uralic members besides Mari include Udmurt and Komi from the Permic subgroup and, to a lesser extent, Erzya and Moksha from the Mordvinic subgroup. The major direction of influence has been from Turkic to Uralic (Agyagási 2012), and one example of a Turkic code-copy are the epistemic meanings of past tenses (e.g., Bereczki 2002: 88–98). In this sense, Mari belongs to an even broader typological area of “the great Eurasian evidentiality belt” which is characterized by the development of past-fused binary evidential systems with additional modal extensions according to the model of Turkic languages (Plungian 2010: 19–20; Johanson 2018: 521–522; Wiemer 2018: 94).² However, most research on the area has concentrated on the epistemic properties of synthetic past tenses (e.g., Leinonen 2000 on Komi, Greed 2014 on Tatar, Kubitsch 2023 on Udmurt), leaving aside the fact that many of the languages possess also retrospection-based analytic past tense constructions, which are likewise an originally Turkic feature (Bereczki 2002: 93–97). Similarly, the research has largely ignored the pragmatic and interactional side of epistemic marking (with the exception of Saraheimo & Kubitsch 2023 on Udmurt). The current paper fills in these research gaps by focusing on the retrospectivizing tense constructions, which display multiple typologically interesting epistemic features.

2.2 Current views on the syntax and semantics of the retrospectivizing particles

Since retrospectivizing particles primarily operate in the domain of temporality, I will start this section by introducing the Mari tense system. A conventionally presented tense inventory consists of one non-past tense and six past tenses with additional aspectual values. Table 1 shows the affirmative paradigm of the 2nd person singular indicative of verbs Meadow Mari *ə/taf* and Hill Mari *ə/taef* ‘do’ and the central aspecto-temporal values of the forms (according to Spets 2023):

² In contrast, Russian as the currently most influential language of the area does not seem to have a remarkable impact on the Mari TAME-system. The manifoldness of analytic past tenses, for example, shows no reduction under the Russian model of one past tense and no grammatical epistemicity but has well-defined functions (see Spets 2023 on their aspecto-temporal use).

Table 1. Mari tense inventory

Tense name	Meadow Mari	Hill Mari	Aspecto-temporal values
Non-past tense	<i>əftet</i>	<i>äftet</i>	present imperfective future perfective
Simple past tense I	<i>əftəfət̃e</i>	<i>äftäfät̃s</i>	past perfective
Simple past tense II	<i>əftenat</i>	<i>äftenæt</i>	present perfect past imperfective (atelic verbs) past perfect (in narrative genres) ³
Analytic imperfect I	<i>əftet ələ</i>	<i>äftet ələ</i>	past imperfective
Analytic imperfect II	<i>əftet ulmaf</i>	<i>äftet ələn</i>	past imperfective
Analytic pluperfect I	<i>əftenat ələ</i>	<i>äftenæt ələ</i>	past perfect
Analytic pluperfect II	<i>əftenat ulmaf</i>	<i>äftenæt ələn</i>	past perfect

Two of the past tenses are synthetic, while the rest of them are retrospection-based analytic ones combined from the simple tenses and the elements Meadow Mari *ələ* and *ulmaf* and Hill Mari *ələ* and *ələn*. As stated before, the elements are morphosemantically the 3rd person singular past tense forms of the copular verb Meadow Mari *ulaf*, Hill Mari *əlaf* ‘be’, their lexical meaning thus being ‘was’. The epistemic differences emerge from the tense variation of the retrospectivizing particle: *ulmaf* and *ələn* are forms of the simple past tense II, which, as a perfect operator, signals that the speaker has access only to the result of an event. Thus, it causes a reading of indirect information source. Similar tones of evidential indirectivity are not related to *ələ* and *ələ*, which are forms of the non-perfect simple past tense I.⁴ Based on the form of the particles, the analytic tenses are similarly divided into types I and II.

The retrospection-based analytic past tenses are built on two finite forms. The present form is responsible for the lexical and the aspectual content of the utterance, and the retrospectivizing

³ In modern spoken Mari, the simple past tense II has rapidly started to occupy also the territory of the simple past tense I as a perfective past tense (Skribnik & Kehayov 2018: 539). Some forms in my data examples represent this kind of usage.

⁴ This said, the literal meaning of the evidentially indirective *ulmaf/ələn* is ‘has been’. However, as part of the analytic past tenses, the form does not express continuing present relevance of a past event but signals the speaker’s indirect access to the event. Indeed, when occurring as an independent copula, the Meadow Mari *ulmaf* does not have present perfect function at all. Instead, it is an aspectually synonymous but evidentially indirective counterpart of the simple past tense I form *ələ* (Spets 2022). For these reasons, the joint translation ‘was’ is used.

markers shift the interpretation of the event described into its actual temporal location past from the speaker. In Mari, *əʎe/əʎə* and *ulmaf/əʎən* attach to present imperfective and present perfect operators and form aspectually corresponding past expressions. In fact, these ‘was’-elements can be understood as reduced copular clauses of type ‘it **was** like this; this **was** the case’. Spets (2023: 289) presents the mechanism of retrospectivization as in Figure 1 (where S stands for subject):

Figure 1. Semantic structure of the Mari analytic past tenses (Spets 2023, 289)

Analytic imperfects: [S is doing X / usually does X] + [it **was** like this]
 ‘It was like this (at a certain time): S is doing X / usually does X’
 → ‘S was doing X / used to do X’

Analytic pluperfects: [S has done X] + [it **was** like this]
 ‘It was like this (at a certain time): S has done X’
 → ‘S had done X’

Syntactically, no consensus exists on the status of the retrospectivizing markers in Mari studies. The major opposing stances are “auxiliary” and “particle” (for a research historical summary, see Spets 2023: 289). In this division, “auxiliary” traditionally refers a lexically empty finite verb which is syntactically superior to a non-finite verb. This kind of structures are found in Mari. For example, the simple past tense II is originally (and dialectally still) based on a converb form of the lexical verb followed by a person-conjugated auxiliary (as in *əʎten ulat*, literally: do-CVB be-2SG ‘you have done’) (Bereczki 2002: 90–91). The retrospectivization-based past tenses, however, do not represent this kind of hierarchy. Instead, their structure is a juxtaposition based on two syntactically equal predications. In other words, the marker can be omitted from the expression without violating its syntactic structure. I prefer keeping the two kinds of structures apart from each other at the level of terminology which is why I use the label “particle” as a catch-all term that covers any items that are syntactically loosely connected to their lexical heads.⁵

Functionally, the process of retrospectivization is most frequently conducted in cases where it creates operators that are aspectually and temporally different from the simple past tenses. For

⁵ Note that the finite status of Meadow Mari *əʎe* and *ulmaf* is also questionable: the person paradigm of Meadow Mari *ulaf* ‘be’ in the synthetic past tenses is incomplete, being supplemented by forms of the verb *lijaf* ‘be, become’ in other persons than the 3rd person singular (Alhoniemi 1985: 111; Krasnova et al. 2017: 177–178).

example, when a past telic event is to be seen from an imperfective viewpoint (whether progressive or habitual), this must be done by retrospectivizing an event marked as non-past, since there is no suitable simple past tense for this function. As Table 1 shows, the simple past tense I is a perfective operator that presents events as completed, while the past imperfective alloeme of the simple past tense II is very strictly limited to atelic verbs.

Nevertheless, there are also cases where the analytic and synthetic past tenses are not aspecto-temporally distinguishable. As attested in Spets (2023: 287, 306), in the case of imperfectively seen atelic events, there is not always a clear difference between the simple past tense II and the analytic imperfective constructions. This is seen from examples (5) and (6) below. Example (5) uses the simple past tense II *jaraten* ‘he loved’ in the case of an imperfectively seen atelic event. Example (6), in contrast, employs the analytic imperfect I form *jarata ələ* ‘he loved’ in an aspecto-temporally identical context. The speaker’s choice to form a complex particle-based tense can thus be expected to carry also other meanings than purely time-related ones.

Hill Mari

- (5) *tädä Jəl tär buávar mətʃkə kaft-af jarat-en.*
 3SG Volga bank boulevard along walk-INF love-PST2.3SG
 ‘He loved to walk along the boulevard on the Volga bank.’ (KSYT: 109)

Hill Mari

- (6) *tädä marə xalək-əm piʃ kogon jarat-a ələ.*
 3SG Mari people-ACC very much love-3SG ələ
 ‘He loved the Mari people very much.’ (Alhoniemi 1985: 121)

Furthermore, current accounts on the epistemicity of the analytic past tenses contain several shortcomings. Firstly, the descriptions concentrate mostly on the semantic dimension of evidentiality, implying that the items simply mark the speaker’s type of access to the information. Nonetheless, evidentials are typically also used for (dis)claiming **authority** (e.g., Mushin 2001). This means that the speaker might choose linguistic markers that do not coincide with their actual type of access to a state of affairs if they want to communicate about some more personal relation they have with the information. This may include, for instance, the degree of their trust for its credibility. In fact, hints about this kind of issues can already be sporadically spotted in some native-written Mari grammars, which employ labels such as “well-known” and “clearly

remembered” to picture events marked by the analytic tenses of the “directive” type (Pengitov et al. 1961: 191; Uchaev 1985: 49, 53).⁶ These notions have not so much to do with the source of information than with some sort of subjective closeness. The actual nature of these functions is, however, hard to grasp based on the few example sentences given in the grammars. As for the methods of the current descriptions, the research material has mostly consisted of a disorganized combination of single contextless clauses. This makes it difficult to define the communicative profile of the Mari particle constructions.

As said, I claim that the functions as well as the grammatical development of the Mari retrospectivizing particle constructions can be explained by their internal morphosemantics that distinguishes several perspectives towards one state of affairs. The next section will introduce the concept of multiple perspective construction and its relevance for studies on the grammaticalization of epistemics.

3 Multiple perspective constructions

3.1 Mari retrospectivizing past tenses as multiple perspective constructions

As already mentioned, there are cases where the simple and analytic past tenses occur in aspecto-temporally similar contexts. As Table 1 shows, the cases in question include atelic imperfective events that are marked with the analytic imperfect, as well as past perfect events that take analytic pluperfect marking in narrative genres. In both functions, simple past tense II is also possible. However, according to Spets (2023), the two tense types are not synonymous but differ in their perspective structure.

The morphosemantic structure of the analytic past tenses distinguishes two observation times. The tenses with present value (the present imperfective non-past tense and the present perfect simple past tense II) implicate a synchronic observer who views the state of affairs when it prevails, while the retrospectivizing particle introduces a retrospective speaker who is looking backwards to the past event. The two vantage points towards one event are thus the **event time** and the **utterance time**. This differs from the simple past tense II which observes an event only from the speaker’s temporal location. In terms of discourse structure theories like Kamp & Reyle

⁶ The wordings in the original texts are *действие, [...] хорошо известное для говорящего* ‘an event that is well-known by the speaker’ (Pengitov et al. 1961: 191) and *ойлышо еглан сайын палыме, тудын раиш шарныме действуй* ‘an event that is well-known and clearly remembered by the speaker’ (Uchaev 1985: 49).

(1993: 593–601), the Mari analytic past tenses overtly set **perspective time**⁷ apart from the utterance time and locate it at the event time.

The analytic past tenses are often employed in cases where the observation originates from outside of the speaker’s own temporal location. This kind of usage is often found in narrations where the analytic past tenses can separate a story-internal, protagonist-based viewpoint from the story-external, omniscient narrator (Spets 2023: 305–312). The story-internal viewpoint is exemplified in (7) where the analytic imperfect marks an observation of the protagonist, who is located at the scene and sees the state of the wounded person:

Meadow Mari

- (7) *tup-fo* *gət̪e* *razrəvnoj* *puʎa* *lekt-ən.* *esogəl* *kørgyzgar-ʒ=at*
 back-POSS.3SG from explosive bullet go-PST2.3SG even viscera-POSS.3SG=ADD
koj-ef *əʎe.*
 be.visible-3SG əʎe
 ‘[I came to the place.] An explosive bullet had gone through his back. Even the viscera were visible [as I saw].’ (Spets 2023: 307)

The simple past tense II form *kojən* ‘was visible’ would be similarly grammatical. It only lacks reference to the perception process of the experiencer and presents the event as simply temporally overlapping with other events in the narration.

The focalization of events through the protagonist can similarly be carried out with the analytic pluperfect, as in example (8) below. Here the experience of having seen the girl earlier in the day is something Mikale becomes aware of at the point when he meets her again. Perspective time is thus located at the process of bringing up the memory.

Meadow Mari

- (8) *Mikaʎe* *ydər-əm* *ket̪əβal-əm* *kudəβet̪e* *got̪e* *kok-kum* *gana* *ert-en*
 Mikale girl-ACC midday-ACC yard via two-three time pass-CVB
kurʒ-mə-ʒ-əm *uʒ-ən* *əʎe.*
 run-VN-POSS.3SG-ACC see-PST2.3SG əʎe
 ‘Mikale had seen the girl run a few times through the yard at midday [as he remembered].’
 (Spets 2023: 311)

⁷ *Perspective time* is also called *temporal perspective point* in Kamp & Reyle (1993) and *topic time* in Klein (1994).

Again, the simple past tense II form *uʒən* ‘he had seen’ could be similarly grammatical. In that case, the utterance would simply mean that Mikale’s seeing of the girl had taken place before the time he met her again.

Finally, when the analytic past tenses based on *ulmaʃ/ələn* are used, the protagonist-perspective is targeted with an additional tone of indirect information source or unexpectedness, as in the reportative example (9):

Meadow Mari

(9) *pale lij-e: Miklaj ydər taŋ-ʒe Malinina Roza potsef*
 known become-PST1.3SG Miklaj girl friend-POSS.3SG Malinina Roza along
tol-ən ulmaʃ.
 come-PST2.3SG ulmaʃ

‘We got to know: Miklaj had come along with his girlfriend Roza Malinina.’ (Spets 2023: 291)

Because the analytic past tense constructions comment the distribution of experiences among diverse observers, I see them as multiple perspective constructions in the sense of Evans (2005: 99–100), who defines them as “constructions that encode potentially distinct values, on a single semantic dimension, that reflect two or more distinct perspectives or points of reference.” The components of the Mari tense construction can be presented as in Figure 2, following the customs of Evans (2005):

Figure 2. Components of the analytic past tense constructions

<i>Semantic dimension:</i>	temporality
<i>Distinct perspectives:</i>	event time, utterance time
<i>Distinct values:</i>	present, past

The two different perspectives both belong to the semantic dimension of temporality, and the construction is a combination of present and past values. A distinction is thus made between different positions towards the event: the construction includes both an observation made by a synchronic experiencer inside the event as well as an observation made by a retrospective one outside of it. As will be seen, temporal multiple perspective is a special subtype of multiple perspective constructions. The next subsection will present various types of these constructions.

3.2 Types of multiple perspective constructions

Evans (2005: 103–105) classifies multiple perspective constructions into two main subtypes according to the hierarchical relationship between the distinct perspectives: double perspective and metaperspective. In this division, **double perspective** is the simplest organization of perspectives where a state of affairs is observed from two independent points of view so that neither of them scopes over the other. The semantic structure of double perspective constructions is thus “value X with respect to Perspective 1, value Y with respect to Perspective 2” (Evans 2005: 103). One example of a double perspective construction involves spatial demonstratives such as Finnish *tämä* ‘this’, which refers to entities that are near the speaker but (possibly) far away from the addressee. The X and Y here stand for the values ‘near’ and ‘far’ in the semantic dimension of ‘spatial distance’.

A non-hierarchical perspective structure typically refers to the physical coordinates of the interlocutors in a speech-act situation. Evans (2005: 103–104) states that double perspective constructions normally encode “transparent dimensions of experience – space [and] time – that do not require attribution of knowledge source or attention to another mind”.

Nevertheless, I doubt whether expressions of different locations in time really enable similar perspective distribution to those of space. In fact, there seems to be a fundamental difference in the perspective properties of spatial and temporal multiple perspective constructions. While two persons can indeed have interaction when being located in different places in space (e.g., when sitting in different corners of a room), interaction between two temporal strata (e.g., a speaker located in today with an addressee in yesterday or tomorrow) is not possible. In other words, time is a shared dimension only in the present stratum, but vis-à-vis relationships in this sphere do not include any distinct values needed for a multiple perspective construction. This means that constructions like the Mari retrospectivizing past tenses do not represent double perspective but metaperspective.

In **metaperspective** one viewpoint is ranked higher so that “value X is considered from Perspective 2 which is considered from Perspective 1” (Evans 2005: 104). Compared to double perspective, metaperspective is less dependent on the physical settings of the speech situation. While the dominating Perspective 1 always belongs to the speaker given their central role in the composition of the utterance (Evans 2005: 105), the subordinated Perspective 2 does not represent the viewpoint of an addressee. In the Mari retrospectivizing past tense constructions, Perspective 2 equals the event-internal vantage point. This perspective point is not occupied by an independent person different from the retrospectivizing speaker but functions as a kind of mental satellite,

through which the speaker points out cognitive-perceptual processes within a discourse they conduct themselves. This is also the case in the well-known example of SAE-type analytic tense constructions, such as the pluperfect, which are used in narrative organization to clarify the logic between foreground and background and orient the perceptions between external and internal narrators, as discussed above (see also Kamp & Reyle 1993; Klein 1994; Becker & Egetenmeyer 2018). At the level of communication, all this indeed pays very much attention also to the mind of the addressee who is being oriented to follow the discourse in a certain way.

Multiple perspective constructions have been shown to be prone to grammaticalization into epistemic expressions which mark differences in access positions towards information (Bergqvist 2015). However, a topic that has not been raised in the literature is that the type of multiple perspective affects the type of epistemic expressions that may grammaticalize from it. This issue will be targeted in Section 7 after having presented the functions of the Mari particle constructions in Sections 5 and 6. Before that, the data and methods used in the study are presented in Section 4.

4 Data and methods

The main data of this study comes from written sources representing modern fiction. The Meadow Mari material includes 36 numbers of a monthly published cultural journal *Ончыко* (Onchyko) which contains short stories, playscripts, essays and interviews. The numbers come from the years 1996, 1997 and 2008. Additional data is collected from a Mari reader by Alhoniemi (1986) of mostly folk tales. The Hill Mari corpus is considerably smaller, consisting of five collections of short stories. The occurrences of the particles are collected by using search tools. Since my different research questions require different organization of the data, I present below various contrasts made within the data examples.

The first research question concerns cases where the particle constructions do not have a clear aspecto-temporal motivation. One type of this is the marking of past atelic events where both the *əʎe/əʎə*-based analytic imperfect I and the simple past tense II seem to be synonymous. To examine the variation, I have collected all suitable occurrences of the analytic imperfect I in the literary material. In order to contrast the examples to those without a particle, I use in parallel a sample of 250 occurrences of atelic events marked with the simple past tense II. Because of the much higher frequency of the simple past tense II compared to the analytic imperfect I in these contexts, the search of Meadow Mari examples is restricted to Onchyko numbers 4, 5, 6, 7, 9, 10

and 12 of the volume 1996 for not making the parallel sample conspicuously larger than that of the particle constructions. Table 2 presents the data.

Table 2. Marking of past atelic events

Language	Analytic imperfect I	Simple past tense II
Meadow Mari	131	200
Hill Mari	19	50
Total	150	250

The second type of cases where the particles do not have a clear aspecto-temporal function is their appearance in contexts without past reading. The corpus of non-temporal examples includes all non-temporal occurrences of the particles in the literary material. Table 3 presents the data.

Table 3. Mari retrospectivizing particles in non-temporal function

Language	<i>ə́lə/ə́lə</i>	<i>ulmaʃ/ələn</i>
Meadow Mari	25	19
Hill Mari	11	7
Total	36	26

As will be discussed in Section 5, an important factor that distinguishes between aspecto-temporally synonymous expressions with and without *ə́lə/ə́lə* is their occurrence in **the** presence of certain complement-taking cognitive verbs. Table 4 shows the number and percentage of *ə́lə/ə́lə* in these kinds of contexts and contrasts it with the sample of 250 examples of the simple past tense II. The total number of the particle attestations is 156 for Meadow Mari and 30 for Hill Mari, and it includes both the examples of the analytic imperfect I presented in Table 2 as well as the non-temporal particles presented in Table 3.

Table 4. *ə́lə/ə́lə* and simple past tense II in presence of cognitive verbs

Language	<i>ə́lə/ə́lə</i> in presence of cognitive verbs	Percentage of the total (%)	simple past tense II in presence of cognitive verbs	Percentage of the total
Meadow Mari	20	12.8	5	3.2
Hill Mari	8	26.7	2	4.0
Total	28	15.1	7	2.8

When it comes to the variation between *ə́le/ə́lə* and *ulmaf/ələn*, it is associated to their presence of certain complement-taking perception verbs. The percentages presented in Table 5 refer to the total sample of 543 attestations of Meadow Mari *ə́le* and 176 attestations of Hill Mari *ə́lə* as well as 171 attestations of Meadow Mari *ulmaf* and 77 of Hill Mari *ələn* in the data. Since the aim is to investigate only the variation between the two types of particles, these examples are collected without any aspecto-temporal restrictions. For Meadow Mari, I have again restricted the collection of Meadow Mari examples to the above-mentioned seven numbers of volume 1996. Notably, *ə́le/ə́lə* was not attested in presence of perception verbs in my data.

Table 5. *ə́le/ə́lə* and *ulmaf/ələn* in presence of perception verbs

Language	<i>ə́le/ə́lə</i> in presence of perception verbs	Percentage of the total (%)	<i>ulmaf/ələn</i> in presence of perception verbs	Percentage of the total
Meadow Mari	0	0.0	8	4.7
Hill Mari	0	0.0	7	9.1
Total	0	0.0	15	6.0

Finally, in addition to corpus examples, I have consulted one native Hill Mari speaker. He is born in 2000 in the village of Aləktör (Sarateevo in Russian) located in Hill Mari County, Mari Republic, but is currently based in Yoshkar-Ola, the capital of the republic. He is bilingual in Russian with additional proficiency in Meadow Mari and English, and he has an undergraduate degree in language and communication studies from Mari State University. The consultation was conducted during the summer and autumn of 2023 via social media and included showing minimal pairs with and without the particles and asking how the particles change the meaning. The clauses considered included both original Hill Mari examples from the data as well as made-up minimal pairs. However, because of the limited access to native speakers, all my main arguments are based on the analysis of the corpus examples, and the native consultation provides just additional comments on the issues.

5 Perspective-based evidential system of the Mari retrospectivizing particles

5.1 ələ/ələ as a marker of internal observation

This section draws a new perspective-based evidential division between the Mari retrospectivizing particles with the help of Faller’s (2004) notion of perceptual field. The discussion starts from the “directive” ələ/ələ which I will define as a marker for events within the speaker’s perceptual field. The particle-based analytic tenses will be contrasted with the simple tenses which helps to unveil the pragmatic reasons behind the overt marking of observation position.

To begin with, the analysis of the data reveals some noteworthy details that separate the aspecto-temporally synonymous analytic imperfect I and simple past tense II. Namely, the analytic imperfect I is particularly common in complement clauses of cognitive verbs ‘remember’ and ‘know’. As Table 4 shows, 15.1 percent of the constructions with ələ/ələ occur in this kind of environments. In contrast, similar contexts characterize only 2.8 percent of the occurrences of the simple past tense II. Examples (10) and (11) below illustrate the use of the analytic imperfect I along with the verb *farnaf* ‘remember’:

Meadow Mari

- (10) *farn-et* *təaj*, *kuze* *tufto* *jyftəl-əna* *ələ?*
 remember-2SG maybe how there swim- 1PL ələ
 ‘You remember maybe how we used to swim there?’ (Onchyko 6/1996: 23)

Meadow Mari

- (11) *tudo* *zap* *gətə* *mo-m* *en* *təot* *farn-eda?*
 that time from what-ACC SUP really remember-2PL
 ‘What do you remember the best from that time?’

ʃkol-əfto *pef=ak* *poʃelamut-əm* *jərat-em* *ələ.*
 school-INE very=EMPH poem-ACC love-1SG ələ
 ‘[I remember that] In school I loved poems very much.’ (Onchyko 4/1996: 7)

Example (12), in contrast, accommodates the event marked with the analytic imperfect I in a complement clause of the verb *palaf* ‘know’:

Meadow Mari

- (12) *Koła, jotea-na uke lij-mə-lan təlānet o-m øpkele.*
 Kolya child- POSS.1PL EXIST.NEG be-VN-DAT 2SG.DAT NEG-1SG blame.CNG
pal-em, tāj=at ikfəβe nergen fon-et əle.
 know-1SG 2SG=ADD child about think-2SG əle
 ‘Kolya, I am not blaming you that we do not have a child. I know that you also thought about having children.’ (Onchyko 2/2008: 113)

Finally, the clauses do not always need to contain an overt verb of ‘remembering’ or ‘knowing’ in order to be interpreted as recollections or personal evaluations. This is seen in the native-consulted minimal pair in (13) and (14), which both mean that Petya knew everything in school. According to my informant, example (13) with the analytic imperfect I implies that the speaker was in the same class with Petya and is talking about their personal memories about him. In contrast, example (14) with the simple past tense II could be used when talking about some famous Petya who is known by everybody in the village but with whom the speaker does not necessarily have any personal relation. It is possible that they had never even met.

Hill Mari

- (13) *ʃkol-əftə Peca tsilə-m pəl-ə ələ.*
 school-INE Petya all-ACC know-3SG ələ
 ‘Petya knew everything in school (as I remember myself).’ (informant)⁸

Hill Mari

- (14) *ʃkol-əftə Peca tsilə-m pəl-en.*
 school-INE Petya all-ACC know-PST2.3SG
 ‘Petya knew everything in school (as is a widely known fact).’ (informant)

Interestingly, it is exactly the verbs *palaf* ‘know’ and *ʃarnaf* ‘remember’ that are employed in the grammar explanations that label the analytic imperfect I as a marker of events that are ‘well-

⁸ In case of the analytic imperfect I, the informant also mentioned the reading of temporal proximity. Since the tense can very well occur also in clauses that overtly refer to remote past (e.g., in example (11) with the adverb phrase ‘in school [years]’), the interpretation of temporal closeness could be a metaphorical side effect of “re-living the memory”.

known' and 'clearly remembered' by the speaker (Uchaev 1985: 49). The examples above seem to represent these very meanings: the construction marks a personal memory or evaluation that is explicitly recalled at the utterance time.

The function of “remembering” can be explained morphosemantically in the following way: with the present tense, the speaker creates an illusion as if they were synchronically re-living the event at the moment of its course. This experience is then brought explicitly up with the retrospectivizing particle which makes the recollection visible. The distinct values of the multiple perspective constriction are thus event time and utterance time, as shown in Figure 2 above. The event time is occupied by an “earlier version” of the speaker who is situated inside the event. This resembles the narrative use of the analytic past tenses which also mark observations made from inside the story world. It is further relevant to notice that, in its narrative use, the analytic pluperfect I is also often used to mark mental processes of the story-internal protagonist, including recollections of earlier memories (Spets 2023: 309–312), as seen also from example (8) in Section 3.

This kind of access to an event coincides with what Faller (2004: 69–71) calls the speaker’s **perceptual field**. A perceptual field is a set of locations that the speaker has perceptual access to at the perspective time and that they are paying attention to (Faller 2004: 70). Grammatical constructions that refer to a perceptual field highlight a subjective relation between the speaker and the spatiotemporal coordinates of an event. In the Mari analytic past tense constructions, the present tense marks the speaker’s temporal location at the event time, and the two forms of the particle explicate whether they were capable to directly observe the event around them or not. In this dichotomy, *ə̀lə/ə̀lə̀* marks that the event belongs to the perceptual field of the speaker: it took place in the coordinates of the speaker and was noticed by them.

From another point of view, the perspective structure of the particle constructions explicates an extra cognitive step that the speaker takes in the process of recalling the memories. This step is not included in the imperfective readings of the simple past tense II which does not underline the subjective access to the information but only marks the objective temporal relation between the speaker and the past event.

Furthermore, an interesting observation is that the same particle also appears in cases where the speaker overtly states that the spoken-about event is fictive. In example (15), a group of people is holding a competition of who lies the best. The task is to tell a fictional story as if it had really happened to them. One participant comes up with the following hunting story, which is told in the narrative present tense (a common custom in Mari) with the exception that in the two first clauses as well as in the last clause the predicate in non-past tense is followed by the particle *ə̀lə̀*:

Meadow Mari

- (15) *məj ozno meraŋ-əm kid dene kute-em əle. kaj-em əle*
1SG in.old.times hare-ACC hand with catch-1SG əle go-1SG əle
t̄odara-f, meraŋ kost-mo kornə-f turja p̄ot̄əz-əm opt-em. [...]
forest-ILL hare wander-VN way-ILL crane lingonberry-ACC put-1SG
kyt̄ək zap-əft=ak urza mefak t̄it̄e f̄yfk-ən f̄ənd-em əle.
short time-INE=EMPH rye sack full stuff-CVB set-1SG əle.

‘Long ago I caught a hare with bare hands. I went to the forest and put cranberries onto a hare track. [A hare came, and I took a sack out.] In a short time, I stuffed [the hare] into the rye sack.’ (Alhoniemi 1986: 14)

The combinations ‘present + əle’ cannot be read as past imperfectives here, since the subsequent events in a narration cannot be marked as progressive or habitual. Rather, the particle construction establishes a world where the speaker is supposed to be seen as an internal participant who has access to the events and who commits to the information. This explains why the particle is employed only at the beginning and the end of the story: it marks the transitions between the actual world and the fictional one. The function can be explained by the same perspective structure that causes the function of ‘clear remembrance’: the event is not factually present in the utterance world but only exists in the speaker’s mind.⁹

The example of imagined events shows how the perceptual field does not only include the physically perceptible environment but also the mental one, as already suggested by Chung (2007: 203). A similar observation has been made by Mushin (2001: 77), who points out that expressions of personal experience and imagination typically share a form due to their common pragmatic implications. Both present the information as “inaccessible to someone other than the conceptualizer”. The high level of subjectivity is accompanied by a high level of authority. Information marked as an insider observation is hard to challenge, as that would require opposing the speaker’s personal experience (cf. Mushin 2001: 65, 77). The particle-marking may include a tone of assertiveness, as in example (12) above where the speaker tries to convince their interlocutor that their view on the state of affairs is true. In the imaginative example (15), in

⁹ Note that the construction ‘present + əle/ələ’ also carries counterfactual meaning in Mari. The semantic link is obvious: the construction marks an event which does not exist in the actual world but is mentally imaginable for the speaker (see also Spets, forthcoming on modal functions of əle/ələ).

contrast, the claims only apply in a fictive made-up world which means that challenging their truth value is irrelevant.

I have argued above that *ə́le/ə́lə* is a marker of an event that is included in the speaker's perceptual field. The next subsection shows that the best way to treat its counterpart *ulmaf/ələn* is to define it as a marker for events observed from an outsider's position.

5.2 *ulmaf/ələn* as a marker of external observation

The particle *ulmaf/ələn* is traditionally labelled as a marker of information that is inferred, reported or surprising to the speaker. All these readings are present throughout my data, but considering the definition of external observation, of most interest are examples where the use of *ulmaf/ələn* is linked neither to indirect information source nor to clearly mirative stance. In example (16), the event of a dry spruce lying in the forest is visually observed by the speaker, and also mentally familiar, as his mother has just instructed him that this is what he will see. Still, *ulmaf* is chosen over *ə́le*.

Meadow Mari

- (16) *aβa-m* *man-mə-l=ak,* *lif-n=ak* *pef* *tεaple*
 mother-POSS.3SG say-VN-COMP=EMPH near-POSS.1PL=EMPH very fine
kukfo *koʒ* *kij-a* *ulmaf.*
 dry spruce lay-3SG ulmaf

‘As my mother had said, there was a very fine dry spruce lying near our house.’

(Onchyko 4/1996: 82)

Similarly, in (17b), the speaker uses *ulmaf* to verbalize the event of the biologist walking behind him. He sees it with his own eyes and can also be expected to be already aware of the situation, as his interlocutor has reported it to him in (17a).

Meadow Mari

- (17) a. *feŋge-tε-et* *tol-ef.*
 behind-SEP-POSS.2SG come-3SG
 ‘She is coming behind you [he said].’

b. *ont̃eaκ̃a-m* – *t̃eanak*, *lif̃ə-t̃e-em=ak* *biolog-na*
 look.PST1-1SG indeed near-SEP-POSS.1SG=EMPH biologist-POSS.1PL
oʃk̃əl-ef *ulmaf*.
 walk-3SG ulmaf

‘I took a look: indeed, the biologist was walking past me.’ (Onchyko 4/1996: 72)

Following Faller (2004: 69–71), accessing an event externally means that it is located outside the speaker’s perceptual field: it was not physically perceptible to the place where the speaker stood, or the speaker did not notice it. The parameter of ‘physical perceptibility’ explains the “evidential” categories of inference and hearsay. When inferring something, the speaker only observes some trace of an event, while the event itself has taken place outside of their spatiotemporal coordinates. In case of hearsay, the spoken-about event lies behind the original report. Pragmatically, the lack of direct observation is associated with the speaker’s lower responsibility with the information. When taking an indirect stance, the speaker also signals that the information can be challenged, if the challenger has better knowledge or doubts either the speaker’s process of reasoning or the reliability of the original source (Mushin 2001: 66, 73).

When it comes to the mirative stance, the parameter of ‘not noticing an event’ is essential. It means that a hint about a state of affairs has been present in the speaker’s perceptual field, but they ignored it or failed to pay attention to it. This is visible in cases of counter-expectedness, as in example (18) where the speaker has refused to internalize the signs of his father having been right.

Meadow Mari

(18) *at̃ea-m* *il̃əm̃ə-ʒ* *god̃əm* *t̃ean-əm* *oʃl-en* *ulmaf*.
 father-POSS.1SG life-POSS.3SG during truth-ACC speak-PST2.3SG ulmaf

‘It turned out that my father had been right when still living.’ (Onchyko 4/1996: 83)

The outsider position can also explain the unclear examples (16) and (17b) above. The events described are not a part of the perceptual field of the experiencer as such, since without the reports given by others the events would have gone unnoticed for them. Hence, the experiencer is not inside the event but rather just “steps into it” from outside, when a view opens up in front of them. The external marking with *ulmaf/ələn* emphasizes the additional cognitive step it takes for them to

accept the view as evidence about the event they were told about before. This is also seen from the presence of modal particles like *teʔanak* ‘indeed’ in example (17b).

In this perspective-based dichotomy, there is no categorial distinction between domains of evidentiality and mirativity, but both represent detachment from the information by a barrier, whether it be perceptual or cognitive. This coincides with some typological approaches like Lazard (1999) which integrate mirativity in the same domain as evidential indirectivity. More recently, Hill (2012) has proposed that mirativity is actually an evidential category that encodes sensoriness, i.e., information gained by using the senses. Indeed, while in Mari both *ʔʔe/ʔʔə* and *ulmaʔ/ʔʔan* can be used in cases where the speaker has visual or other sensory access to an event, the latter puts more emphasis on the role of perception in reaching a scene outside one’s personal location. As Table 5 shows, *ulmaʔ/ʔʔan* appears in a complement clause of perceptual verbs with the meaning ‘(take a) look’ or ‘see’ in 6.0 percent of all the occurrences, while *ʔʔe/ʔʔə* is non-existent in these environments in my data. Also, in example (17b) above, the particle appears in presence of a complement clause of the verb *ontʔeʔaʔ* ‘take a look’. In other words, *ʔʔe/ʔʔə* marks that the experiencer is “part of the settings” in the described event and knows it without need to examine it by their senses, while one function of the “outsider marker” *ulmaʔ/ʔʔan* is to indicate that the only link between the experiencer and the event is sensory connection.

Having defined the perspective-based evidential values of the Mari retrospectivizing particles, the next section will specify their application in Common Ground management.

6 Mari retrospectivizing particles in Common Ground management

6.1 Common Ground management as an information structural process

Besides evidentiality, I propose that another knowledge-related function of the Mari retrospectivizing particle constructions is commenting on the production of new information in a discourse. In fact, an increasing amount of literature has paid attention to the links between evidentials and information structuring which indicates a shared semantic component between the functions (e.g., Kuram 2023 on Turkish).

A central notion in studies on information structure is **Common Ground** (CG) which means the amount of knowledge that is shared by the interlocutors. CG serves as a base that any new information in the discourse is built on (Clark 1996). As such, it develops constantly through the discussion. To put it very simply, a discourse advances when the speaker introduces a new piece of information to be accommodated to the CG, and their interlocutor either accepts or rejects it

(Stalnaker 2002: 715–716). This is part of **Common Ground management** (Krifka 2007), a process where the accuracy of a piece of knowledge for the discourse is evaluated. “Accurateness” in an information structural sense is not solely a matter of truth value of the claim but also its logical suitability in the discourse structure. The line of any discourse is constructed by explicit or implicit questions which the interlocutors pose in order to satisfy their expectations on what should enter the CG. These are called **Questions under Discussion** (QUD). The QUDs can be explicit interrogative clauses which evoke an answer to be accepted or rejected. However, when a certain topic is established, CG management is usually conducted via implicit questions like ‘What about that?’ or ‘What happened next?’, and information that can answer these questions is accepted to CG (Clifton & Frazier 2012). In classical terms of information structure, the answer is in focus position: it points out a suitable alternative among a group of possibilities and is yet unknown to the addressee (e.g., Krifka & Musan 2012: 6–7).

Linguistic devices used for CG management are multiple and, as noted, they include also evidentials. Markers of epistemic authority can show whether the speaker is in a position to evaluate the suitability of information produced by their interlocutor to enter CG. In cases like this, the expression of epistemic authority turns into an expression of **epistemic primacy**. Although being closely linked, epistemic primacy differs from epistemic authority by its relative nature: primacy is divided in the speech situation, when comparing the capabilities of the interlocutors to update CG. In contrast, epistemic authority evaluates the degree of the speaker’s commitment to their own statement and is not a contrasting notion in this sense (Stivers et al. 2011). Example (19) from Upper Napo Kichwa (Quechuan) illustrates epistemic primacy. The primacy clitic =*mi* occurs in a contrastive statement (19b) which rejects the previous claim in (19a) from entering the CG and presents a better answer to the QUD on whether the person is able to carry out a certain task.

Upper Napo Kichwa

(19) a. *mana usha-ni!*

NEG can-1

‘I cannot [do it]!’

b. *usha-ngui=mi.*

can-2=PRI

‘Yes, you can.’ (Grzech 2020: 50) (glossing modifications **are** my own)

As will be seen below, also in Mari, the evidential particles *əle/ələ* and *ulmaf/ələn* are employed as practices to manifest the speaker’s epistemic primacy or the lack of it. This kind of discourse-interactive use can be attested for the retrospectivization-based past tense constructions, but it is especially characteristic for the non-temporal particle constructions.

6.2 Types of Common Ground management functions of the Mari retrospectivizing particles

6.2.1 Assertive functions of *əle/ələ*

It was stated in Section 1 that the Mari retrospectivizing particles may occur in contexts where they do not form past tense constructions. Let us repeat the introductory example (4) as (20) here. The particle *ələ* does not form a past perfect construction by shifting the interpretation of the preceding present perfect form into a past interval, but there is a tense parallelism between the answer and the question in present perfect.

Hill Mari

- (20) a. *ma liəlt-ən?*
 what happen-PST2.3SG
 ‘What has happened?’
- b. *Oleg-əm kəmət-ən ær-en-ät ələ.*
 Oleg-ACC three-ADV arrest-PST2-3PL ələ
 ‘Oleg has been arrested by three men.’ (Petukhov 1984: 29)

In (20b), the non-temporally used particle *əle/ələ* emphasizes the speaker’s ability to answer the QUD and thus epistemic primacy over their interlocutor. This is revealed by the context where the particle marks an answer to the interlocutor’s overt question. Similar situation prevails in example (21) below. In (21a) a man complains to his wife that they have never visited Rio de Janeiro. The wife hears that he is speaking about going “Raja don Kuzenerəjkä” (‘with Raya to Kuzhener’), meaning visiting a Mari village Kuzhener with a person called Raya. Since this is something her husband has done, she reminds him about this in (21b) and adds *ələ* after her utterance. Note again the presence of cognitive verb *əfəndæræf* ‘remember’.

Hill Mari

(21) a. *kənam?*

when

‘When [do you think I have visited Rio de Janeiro]?’

b. *kənam-kənam...* *a-t* *æfəndærö* *mæ,* *kətse* *imeftä*
 when-when NEG-2SG remember.CNG Q how last.year

Raja *don* *Kuzener-ä/kä* *kaft-ən-da* *ələ?*

Raya with Kuzhener-ILL wander-PST2-2PL ələ

‘When and when... Don’t you remember how you and Raya visited Kuzhener last year?’ (Valka 2007: 75)

According to my informant, omitting the particle does not change the temporal meaning of the answers in (20b) and (21b), but it is rather used for convincing the addressee of the fact or for making the answer more confirmative. I have labeled this kind of use of *əle/ələ* as ‘assertive’. Answers to questions are of course an assertive context by default, but the optional particle marking is a way to emphasize the relevance of the answer. I will refrain from an in-depth pragmatic analysis of the examples, but some evidence for the high informativity of the answers is visible. In the answer in (20b), the particle occurs along with the present perfect expression with a so-called “hot news” value which means that the content is considered highly newsworthy, still actual and possibly surprising for the audience (e.g., McCawley 1971). The example in (21b), in turn, is a reminder that the answer to the QUD should already be part of the CG. In both cases, the speaker has a strong intention to make their interlocutor internalize the information.

The abstract use of the particles is present also in Meadow Mari. In (22), the speaker demonstrates his primacy position by answering a rhetorical question on behalf of his audience, thus possibly trying to make them adopt his opinion about the absurdity of the event they witnessed.

Meadow Mari

(22) *təgaj-əm* *iktaʒ* *gana* *uʒ-ən-da?* *məj* *gən* *kol-ən=at,*
 this.kind.of-ACC some time see- PST2-2PL 1SG EMPH hear-PST2=ADD
uʒ-ən=at *oməl* *əle.*
 see-PST2=ADD NEG.1SG əle

‘Have you ever seen something like this? At least I have not seen or heard (anything of the sort).’ (Onchyko 7/1996: 114)

6.2.2 Contrastive and corrective functions of ələ/ələ

Another function of ələ/ələ is to mark contrastive information. This means that the content thus marked is somehow conflicting to what has been expressed before (cf. Zimmermann 2008: 348). Contrastivity is linked to epistemic primacy in the sense that one's interlocutor cannot predict the information based on the previous context, and it is thus only the speaker who has the ability to update the CG with this kind of content. In example (23), the speaker presents two states of affairs and marks the latter one as contrasting with the former with the non-temporally used particle:

Meadow Mari

- (23) *məj-ən kugəza-m gaj-βlak-fe pensij oksa-m jy-af*
 1SG-GEN uncle-POSS.1SG like-PL-POSS.3SG pension money-ACC drink-INF
kuṭəaktə-mo semən βele uməl-at. məj-ən marij-em gaj-βlak
 give-PTCP.PASS as only understand-3PL 1SG-GEN husband-POSS.1SG like-PL
jandar βuj-an lij-ət da pafa nergen fon-at ələ.
 sober head-ADJ be-3PL and work about think-3PL ələ

‘People like my uncle think that pension money is paid to them only in order to drink it. People like my husband are sober and think about work.’ (Onchyko 2/2008: 31)

Furthermore, the speaker can also update the CG with information that is in contrast with their interlocutor's words. In these cases, ələ/ələ marks a correction. The corrective function is seen in (24) below which also serves as an illustrative example on the variation between the simple past tense II and the analytic imperfect I. In (24a), the first speaker suggests an answer to the QUD concerning whether he recognized his interlocutor the previous day, and uses the simple past tense II. This proposal is rejected by the second speaker in (24b) where she specifies that, in fact, he did not recognize her but only her clothes, and employs the analytic tense construction.

Meadow Mari

- (24) a. *tuge-ze təj-əm tengetə=ak pal-en-am?*
 thus-POSS.3SG 2SG-ACC yesterday=EMPH know-PST2-1SG
 ‘So does that mean that I recognized you yesterday?’
 b. *tengetəe təj jubkə-m βele pal-et ələ.*
 yesterday 2SG skirt-ACC only know-2SG ələ

‘Yesterday you recognized only my skirt.’ (Onchyko 7/2008: 99)

Crucially, the one whose answer to the QUD is discarded does not have to be the interlocutor but the speaker may also argue against their own previous words. In these cases, we are dealing with self-correction. This is the case in (25). Here the speaker meets a German person and first indicates a negative answer to the QUD concerning whether he has a common language with him. After that, he corrects this statement by expressing a memory with contrastive content and integrates this information into the CG instead. The analytic imperfect I form *palem ələ* is used instead of the aspectually similar simple past tense II form *palenam*.

Meadow Mari

(25)	<i>zalke,</i>	<i>mar-la</i>	<i>kutər-en</i>	<i>o-t</i>	<i>mofto.</i>	<i>ənde kuze</i>
	pity	Mari-COMP	speak-CVB	NEG-2SG	can.CNG	now how
	<i>mutlan-ena?</i>	<i>izif=ak</i>	<i>fafist</i>	<i>jəlmə-m</i>	<i>pāl-em</i>	<i>ələ.</i>
	discuss-1PL	a.little=EMPH	fascist	language-ACC	know-1SG	ələ
	<i>teəla-ʒ=ak</i>	<i>mond-en</i>	<i>oməl.</i>			
	all-POSS.3SG=EMPH	forget-PST2	NEG.1SG			

‘It’s a pity that you cannot speak Mari. How will we now have a conversation? I used to know a little bit of the fascist language. I have not forgotten it all.’ (Onchyko 5/1996: 57)

6.2.3 Additive functions of *ələ/ələ*

The last information structural function of *ələ/ələ* in my data is additivity. The function is visible already in the temporal uses of the particles which express memories of the “earlier me”. The particle-based tenses tend to avoid occurring at the beginning of a discourse and prefer discourse-final positions instead. Consider examples (26) and (27) with simple past tense II and analytic imperfect I, respectively.

Meadow Mari

(26)	<i>tudo</i>	<i>imjə-m</i>	<i>pef</i>	<i>jərat-en.</i>	<i>βara</i>	<i>koŋjux-lan=at</i>	<i>əft-en.</i>
	3SG	horse-ACC	very	love-PST2.3SG	later	horse.keeper-DAT=ADD	do-PST2.3SG

‘He loved horses very much. Later, he also worked as a horse keeper.’ (Onchyko 9/1996: 10)

Meadow Mari

(27) *tudo armij-əfte kavalerist lij-ən, imnə-m pef jørat-a ələ.*
3SG army-INE cavalryman be-PST2.3SG horse-ACC very love-3SG ələ

‘He was a cavalryman in the army; he loved horses very much.’ (Onchyko 10/1996: 19)

The only difference between the propositionally identical tense-marked clauses is their place in the discourse. The clause with simple past tense II in (26) begins the topic considering the subject referent’s relationship with horses. In contrast, the clause with the analytic imperfect I in (27) follows another clause that already establishes a similar topic. This illustrates the discourse possibilities of the “memorizing” function of the retrospectivizing tenses. It is logical to produce an extra recollection that is thematically related to an already established topic and thus answers a QUD of type “what about that?”. In contrast, starting a conversation with a disconnected memory (in style “I just remembered that...”) would probably make the addressee wonder how the information is related to anything. A similar information structural phenomenon characterizes the use of the retrospectivizing particles also in the contact languages of Mari. Saraheimo & Kubitsch (2023: 142–143) write how the Udmurt retrospectivizing particle *val*¹⁰ occurs in non-initial clauses of a discourse where it “marks [a] piece of additional information related to something else in a context” and “ties the two topics together and creates cohesion”. To put it another way, memories by default appear in focal contexts updating the CG, since they are personal and thus unknown to the addressee.

The additive function accommodates also examples like (28) where the particle marks an emotional memory that is provoked by the preceding topic. Here the utterance consists of an imperfectively used simple past tense II as well as a non-temporally used particle:

¹⁰ The Udmurt particle *val* is roughly speaking the functional counterpart of Mari *ələ/ələ*. It has traditionally been labelled as a semantically marked encoder of direct observation, but recent studies rather argue for an unmarked status (Kubitsch 2023).

Meadow Mari

- (28) *nu vot, ikan=at o-m mondo. pytəŋ Rossij mut̃eko saltak*
 well so never=ADD 1SG-NEG forget.CNG whole Russia through soldier
vagon-əfto akkorden-əm fokt-en kajə-f-əm. tunar t̃eot
 carriage-INE accordion-ACC play-CVB go- PST1-1SG so.much a.lot
kuan-en-am əle! plen gət̃e iləf-əm utar-en-ət.
 be.happy-PST2-1SG əle prison.camp from life-ACC save-PST2-3PL
 ‘Oh yes, I will never forget it. I travelled through all of Russia in a soldier carriage and played the accordion. I was so happy! I had been saved from a prison camp.’ (Onchyko 4/1996: 87)

Having presented the information structural functions of *əle/əl̃ə*, the next section will contrast them with *ulmaf/ələn*.

6.2.4 Information structural functions of *əle/əl̃ə* and *ulmaf/ələn* contrasted

As the examples above demonstrate, the insider evidential *əle/əl̃ə* marks speaker’s epistemic primacy in a discourse. The outsider evidential *ulmaf/ələn*, in turn, is a symmetric counterpart of *əle/əl̃ə* also at the level of CG management. At the level of discourse, the low degree of epistemic authority is interpreted as a sign that the speaker is not in a position to evaluate the right answer to the QUD and thus update the CG.

Clear evidence of the lack of epistemic primacy is the occurrence of *ulmaf/ələn* in questions instead of answers which are a typical context of *əle/əl̃ə*. In example (29) below, the non-temporally used particle occurs in a polar question where it marks that the speaker is not sure about the truth value of the clause, and the interlocutor should not internalize the information as such. Rather, he should confirm whether the information is true or not and thus suitable to be accommodated to the CG.

Hill Mari

- (29) *əŋæt, tagənam βəf=ət li-n-nə ələn?*
 maybe sometime against=ADD be-PST2-1PL ələn
 ‘Have we maybe met sometime?’ (Literally: ‘been against each other’) (KS 1968: 56)

Nevertheless, the functions of *əle/əl̃ə* and *ulmaf/ələn* cannot be fully captured by stating that they are in complementary distribution according to speech-act type, as *əle/əl̃ə* may also appear in

questions. However, the discourse functions of the differently marked questions are also different. Questions with *ulmaf/ələn* start a new topic about something the speaker becomes aware of at the utterance time. In contrast, questions with *əle/ələ* refer backwards to something that was said earlier in the discourse. This is illustrated in example (30) where the interlocutors have heard that a girl from their village is going to marry a stranger. Surprised by the news, the first person in (30a) speculates that maybe she is in love with him. The second person doubts this scenario in (30b) and reminds the first person that she used to love another person named Vasli. The content of the particle-marked question will thus replace the previous claim, if the first speaker is not able to answer it. Note that here it is not sure whether the state of being in love still holds at the utterance time. Thus, the particle in (30b) can be interpreted either as part of an analytic past tense construction referring to a past interval when the subject person still loved Vasli, or as a non-temporal item occurring after a present expression.

Meadow Mari

- (30) a. *mozət̪e*, *jərat-en* *kaj-a?*
 maybe love-CVB go-3SG
 ‘Maybe she is in love [with this stranger]?’
- b. *Vasli-ʒə-m* *o-k* *jərate* *əle?*
 Vasli-POSS.3SG-ACC NEG-3SG love.CNG əle
 ‘Wasn’t / Isn’t she in love with Vasli?’ (Onchyko 6/1996: 44)

Hence, the main difference between the two particles is their position in a discourse: *əle/ələ* is an anaphoric element that refers to the topical discourse background, as is the case also in its assertive, contrastive, corrective and additive readings. In contrast, *ulmaf/ələn* occurs in discourse-initial positions without a topical background or an existing QUD. Rather, it refers cataphorically onwards in the discourse and may itself serve as the QUD, implicating an answer in the upcoming sequences. The different information structural positions of the two particles have their roots in the observer positions and perceptual field. *əle/ələ* as an insider epistemic indicates that the utterance makes a reference to something inside the current discourse. The outsider form *ulmaf/ələn*, in turn, marks an utterance that points outside the current discourse and introduces a yet unfamiliar topic.

This function has a clear link to the evidential semantics of *ulmaf/ələn*: the marking is employed in cases where the speaker sees, infers or is told about something new and surprising. In other words, the information does not have a relationship with any previously mentioned topic but

is a product of gaining information from outside of one’s current cognitive-perceptual field. In the declarative example (31), non-temporal *ələn* occurs in the complement clause of the verb *anzaf* ‘look’ and indicates that the information cannot be predicted from the speaker’s existing knowledge base but originates from a new sensory experience.

Hill Mari

- (31) *anz=ok,* *äləmæf* *maxaŋ* *surpriz-βlæ-m* *molo*
 look.IMP.2SG=EMPH life what.kind.of surprise-PL-ACC still
äft-en *kerd-ef,* *ələn.*
 do-CVB can-3SG ələn

‘Just look what kinds of surprises life can still bring.’ (Egorkina 2012: 127)

Although no overt QUD is established in (31), the interlocutor in this kind of situation is expected to react to the utterance by verifying the claim or by showing that the previous speaker has succeeded in turning their attention to the state of affairs in question. The reaction shows that all speech-act participants accept the information as part of the CG.

I have presented above how the Mari retrospectivizing particles take part in CG management. In the last section I will explain the grammaticalization of tense-deictic elements into CG management markers and contrast them with epistemic extensions of spatial deictics.

7 Grammaticalization of epistemics from multiple perspective constructions

It was stated in Section 3.2 that spatial and temporal multiple perspective constructions are different in their perspective structure. Spatial double-perspective constructions accommodate the perspective of both speech-act participants and may thus be called **intersubjective**. Temporal metaperspective constructions, in contrast, refer to several perspectives of one speaker and are thus speaker-anchored or **intrasubjective**. This distinction serves as an essential background for a discussion about the origins of epistemics, which can likewise be classified into intersubjective and intrasubjective types based on whose epistemic status is targeted in the expressions (cf. Bergqvist 2017a: 15–18).

A typical case of intersubjective epistemic dimension is **engagement** where reference is made to both the speaker’s and the addressee’s epistemic status for pointing out the (non-)sharedness of information between the speech-act participants. In etymological studies of engagement, Evans et al. (2017a: 124–125; 2017b: 159–162) show how spatial demonstratives develop into a complex

perspective system of engagement marking. An example comes from Abui (Papuan) which possesses both speaker-targeting and addressee-targeting spatial demonstratives. The expressions of spatial distance to physical items are metaphorically re-interpreted as expressions of mental distance to pieces of information. This is illustrated below by the functions of the addressee-proximal demonstrative *to*. In example (32), it occurs as a spatial modifier in a noun phrase. In example (33), it appears in clause-final position scoping over the whole speech situation and indicating that the addressee is mentally close to the information, i.e., familiar with it.¹¹

Abui

- (32) *to* *fala*
 AD.PRX house
 ‘that house [near to you]’ (Evans et al. 2017a: 124)

Abui

- (33) *ni-ya* *ha-rik* *to!*
 1PL.EXC-mother 3PATIENT-hurt AD.PRX
 ‘My mother is sick [as you should already know]!’ (Evans et al. 2017b: 161)

Unlike engagement markers, the Mari retrospectivizing particles are fully intrasubjective and always express the speaker’s view on whether the CG is being updated in an adequate way. Although the particles often occur in contexts where they point out an epistemic imbalance between the speaker and the addressee, there is no actual reference to the addressee’s perspective. As seen, the primacy marker *əle/əle* expresses both information that should be already known for the addressee as well as information that is new to them. Similarly, even though *ulma//ələn* marks

¹¹ Note that it is further stated by Evans et al. (2017b: 164) that spatial demonstratives are likely not the only diachronic path to engagement marking, and possible parallels are drawn to temporal elements. However, the studies on Lakandon Maya (Mayan) (Bergqvist 2017b; 2018: 324–329), which are given as references on the topic, do not represent the kind of temporal perspective that characterizes the Mari retrospectivizing particle constructions. In Lakandon Maya, the expression of knowledge (a)symmetry between speech-act participants involves items that have grammaticalized from markers of temporal proximity in the past stratum. In this division, markers of temporal distance have turned into markers of information that is unknown to the addressee, and, similarly, the markers of temporal proximity mark information that is shared by both participants. The values distinguished here are not different temporal strata between the speaker and the addressee, because the events described are similarly far away from or near to the interlocutors.

that the speaker’s epistemic authority towards the information is low, it does not necessarily implicate any higher status of the addressee. Further, the speaker may also mark their own update of CG as incorrect. This is the case with the self-corrective and additive functions of *axel/axal*.

Hence, CG management constructions constitute a type of epistemic multiple perspective constructions where the two different perspectives towards one piece of information do not belong to the simultaneous speech-act participants of the speaker and the addressee, as with engagement markers. Instead, the two different observer points belong to the “linear” actors of the previous speaker and the subsequent speaker. The distinct values are the speaker’s awareness of an inadequately answered QUD as well as their own suggestion for how the QUD should be answered. The variation between the two particles is in the direction of reference: anaphoric *axel/axal* observes the development of the CG management from the perspective of the subsequent speaker who comments on the preceding discourse, while cataphoric *ulmaf/alən* lays the vantage point onto the previous speaker who is waiting for the yet lacking answer to the QUD.

In order to illustrate the functional links between temporal and epistemic perspectives, Figure 3 presents the semantic structure of CG management in the form of a multiple perspective construction.

Figure 3. Components of Common Ground management

<i>Semantic dimension:</i>	Common Ground management
<i>Distinct perspectives:</i>	previous speaker, subsequent speaker
<i>Distinct values:</i>	previous attempt to update the Common Ground, subsequent attempt to update the Common Ground

As Figure 3 shows, the semantic structure of CG management includes a temporal component which differentiates between previous and later vantage points in a discourse advancing in time. The structure is a re-interpretation of the temporal perspective functions of the retrospectivizing particles (cf. Figure 2 in Section 3.1). In their temporal function, the particles refer to an event that took place earlier and relate it to the speaker’s later location on the time axis. In their epistemic function, the particles refer to information that was said earlier and relate it to comments that will follow later on in the discourse. In line with the general nature of grammaticalization (cf. Haspelmath 1999: 1064), the re-analysis is possible due to utterances like (30b) above which are semantically ambivalent and allow both the original temporal and the new non-temporal (epistemic) reading of the particle structure.

In CG management, the discourse is thus conceptualized as a one-dimensional entity just like the time axis is, which explains why this kind of epistemic dimension is available for temporally deictic items. This contrasts with engagement systems which see the discourse as a multidimensional sphere and typically grammaticalize from spatial markers of multiple perspective that accommodate vantage points of several speech-act participants.¹²

8 Summary and conclusions

In this paper, I have re-examined the Mari epistemic system based on the retrospectivizing particles *ə̀lə/ə̀lə* and *ulmaf/ə̀lən*. I have argued that they form a perspective-based opposition which distinguishes between an observation made from inside an event and an observation made from outside of it. The functions resemble the evidential concepts of ‘direct’ and ‘indirect’ source of information, but instead of making a semantic reference to actual modes of gaining knowledge, the particle constructions express the deictic relation between a state of affairs and the experiencer’s perceptual field. Further, in line with the general nature of evidentials, the use of the Mari particle constructions is often guided by a pragmatic wish to (dis)claim the authoritative position. At the interactional level, epistemic authority is applied as an information structural strategy to manage Common Ground and manifest epistemic primacy status. It is presumably due to the context-pragmatic nature of epistemic authority and primacy that these kinds of issues have been recognized to some extent only in native-written grammars, while Western approaches have concentrated on the “objective”, information-source related content of Mari epistemics.

More generally, the specialties of temporal multiple perspective constructions have been under discussion. Constructions that refer to distinct temporal strata differ noticeably from other coordinative deictics like spatial, and the type of multiple perspective is essential when studying the grammaticalization of epistemics. Unjustified equations of space and time, or ‘here’ and ‘now’, are not rare in literature, even though from the perspective of human communication, the relationship between ‘here’ and ‘there’ is very different from that between ‘now’ and ‘then’. The intrasubjective temporal multiple perspective of the Mari type enables speaker-anchored expressions of information source and epistemic primacy, while complex intersubjective

¹² I do not claim that the generalization works in the other direction, meaning that spatial deictics always grammaticalize into multidimensional engagement markers and not linear CG managers. Components of proximity and perceptual access that characterize many spatial demonstratives can well be applied to encode information structural issues; however, no systematic research is available on this kind of development path.

categories like engagement represent a further step in the grammaticalization path of temporal deictics. However, any attempt to draw universal conclusions about the development of epistemics based on Mari would naturally be premature, and cross-linguistic diachronic data is needed to verify these conjectures on the evolution of the different types of epistemic expressions.

Finally, the current paper is preliminary also in the sense that its data derives from written sources which are stylized to some extent given that they typically do not contain communicative errors or indistinct alternation of turns. Spoken data would shed more light on the behavior of the particles in a discourse where the process of Common Ground management is more conflict-based. As one of the anonymous referees pointed out, the non-primacy particle *ulmaʃ/ələn* can be expected to possess far more numerous and more detailed discourse-pragmatic functions than what is revealed in a written material given for instance the low frequency of interrogative clauses in it. Having defined the general semantic profile of the particle constructions here, the next phase of the work in Mari studies concerns a detailed analysis of their functions in natural conversation.

Abbreviations

ACC	accusative	LOC	locative
AD.PRX	addressee proximal	NEG	negation verb
ADD	additive enclitic	PTCP.PASS	passive participle
ADJ	adjective derivational suffix	PL	plural
ADV	adverb derivational suffix	POSS	possessive suffix
CNG	connegative	PRI	epistemic primacy marker
COMP	comparative (case)	PST1	simple past tense I
CVB	converb	PST2	simple past tense II
DAT	dative	Q	question particle
EMPH	emphatic element	SEP	separative
EXC	exclusive	SG	singular
EXIST	existential copula	SUP	superlative
GEN	genitive	VN	verbal noun
ILL	illative		
IMP	imperative	1	first person
INE	inessive	2	second person
INF	infinitive	3	third person

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Address for correspondence

Silja-Maija Spets

University of Turku

<https://orcid.org/0000-0002-6908-0884>

smespe@utu.fi