

The Estonian partitive evidential

Some notes on the semantic parallels between aspect and evidential categories*

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This article shows that the Estonian partitive evidential marks predicates in sentences that express incomplete evidence. Partitive occurs in the categories of aspect, epistemic modality, and evidentiality, marking objects and present participles. Despite the difference in syntax, the semantics of these categories is based on parallel relationships. More specifically, the aspectual partitive marks objects in sentences describing incomplete events, and the partitive evidential appears in sentences that encode incomplete evidence compared to the expectation of complete evidence.

1. Introduction

The Estonian partitive evidential is a morphological form that encodes incomplete evidence for an event. The article approaches the phenomena from the viewpoint of natural categories developed from partitive case marking in Estonian and links them with cross-linguistically pre-established categories such as evidentiality, epistemic modality, and aspect.

Evidentiality is a grammatical category that contains evidential meanings and, specifically, expresses the source of information. In literature on evidentiality,

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there are two main approaches to evidential meaning that are relevant for the data discussed in this article. On the one hand, there are approaches that argue for clearly separated epistemic modal and evidential categories (Aikhenvald 2004; van der Auwera & Plungian 1998). The partitive evidential marking combines evidential and epistemic modality in terms of these approaches. On the other hand, the two categories are sometimes regarded as overlapping or, more precisely, evidentiality is subsumed under epistemic modality (Palmer 1986; Kiefer 2000; Boye 2006). In terms of such approaches, the partitive evidential encodes evidential meaning as a special type of epistemic meaning. This article shows that, in some occurrences, the partitive evidential encodes the source of the speaker's knowledge about events, but also meanings such as incompleteness of evidence and the degree of strength of evidence. The Estonian partitive evidential has developed in an environment of contact with European languages, which typically combine epistemic and evidential meanings.

Teasing apart evidentiality and epistemic modality and accounting for their overlap has remained a major challenge in the literature on evidentiality. In the analysis of de Haan (2005), evidentiality asserts evidence while epistemic modality evaluates evidence.¹ While some languages encode epistemic and evidential meanings separately, this is not the case with the Estonian partitive evidential, which combines the two categories in one morpheme. However, the separation of the data along the two categories offers insights into the fine details of the borderline areas of these categories. For instance, Faller (2002) discusses the conjectural morpheme *-chá* in Cuzco Quechua, which combines an inferential and epistemic meaning and suggests an area of overlap between the epistemic and evidential categories. Estonian, however, encodes the indirect evidential and epistemic meanings in an identical morpheme.

In order to understand the fine details of the evidential and epistemic semantics of the partitive evidential, another category is indispensable. This category is aspect, the category that deals with events. It is crucial for the analysis since the partitive evidential has its origin as an aspectual marker and recognizably encodes meaning elements similar to those that are observed in the Estonian aspectual category. This article argues for the aspect-related understanding of the partitive evidential along the lines suggested in Tamm (2004a: 97fn.) where it is observed that the semantics of the aspectual partitive resembles that of the

1. De Haan (2005) also argues that evidentiality is a deictic and not modal category. This analysis seems plausible, since there are previous studies pointing at an occasional relationship between the aspectual object case alternation and definiteness-related issues (Hiietam 2003; Rajandi & Metslang 1979; Tamm 2008b).

evidential partitive.² The partitive evidential, as in the form ‘kirjutavat’ in Example (1), has originally developed from the aspectual partitive object marking, examples of which are found in the form ‘raamatut’ in Examples (1) and (2). In Modern Estonian, the indirect evidential sentence with the partitive evidential – the partitive-marked personal present participle in (1) – contrasts with the indicative sentences without any evidential marker in (2) and (3). The aspectually unbounded sentences with the partitive object, as in (1) and (2), contrast with the aspectually bounded sentence with the total object case marking, as in (3).³

- (1) *Mari kirjuta-va-t raamatu-t.*
 M[NOM] write-PERS.PRS.PTCP.PART book-PART
 ‘Reportedly/allegedly, Mary is writing a book.’
- (2) *Mari kirjutas raamatu-t.*
 M[NOM] write-3S.PST book-PART
 ‘Mary was writing a book.’
- (3) *Mari kirjutas raamatu.*
 M[NOM] write-3S.PST book.TOT
 ‘Mary wrote a book.’

Modern Estonian displays clear semantic parallels between the aspectual and evidential partitive. This article argues for a parallel in terms of a comparison between the expectation that the speaker holds about the event and the actual event. An expectation is understood as a belief about or a mental picture of a state of affairs. ‘Expectation’ is a notion that is part of the explanation of other TAM categories as well, such as mirativity (Dahl 2008), or attitudes (Katz 2005). Expectations are epistemic meanings that belong to the presuppositions associated with a proposition. Comparing the event (or the evidence for the event) to the expectation, the forms without partitive marking encode a match between the

2. Tamm (2004c) discusses scalarity based verb classes compared to scalarity in evidentiality, as defined in terms of Palmer (1986). Tamm (forthcoming) discusses the epistemic modal meanings in more detail.

3. The glosses follow the Leipzig glossing rules, available at <<http://www.eva.mpg.de/lingua/files/morpheme.html>>. Additional abbreviations: ADE adessive, ALL allative, COND conditional, DA_INF d-stem non-finite form (the ‘da-infinitive’), ELA elative, ILL illative, IMPERS impersonal, INDIR indirect, INE inessive, MA_INF m-stem illative non-finite form, the supine (the ‘ma-infinitive’), MAS_INF m-stem inessive non-finite form (the ‘mas-infinitive’), MAST_INF – m-stem elative non-finite form (the ‘mast-infinitive’), NUD_PTCP active/personal past participle, PART_EVID – partitive evidential, PART partitive, PERS personal, PRT particle, TOT total (semantic accusative), TRANSL translative (transformative), TUD_PTCP passive/impersonal past participle.

expectation and the event (or the evidence for the event). In the following sections, I refer to this match with the expectations with the terms ‘complete events’ and ‘complete evidence’. The forms with partitive marking encode that the event or the evidence for the event falls short of the expectation; the strength of the evidence provided by the source is not strong enough in case of a mismatch between the available evidence and the expected evidence. In the following sections, I refer to the mismatch with the expectations with the terms ‘incomplete events’ and ‘incomplete evidence’. With respect to evidentiality and epistemic modality, the data in (2) and (1) contrast in type of evidence, representing complete evidence and incomplete evidence, respectively. In (2), the speaker presents the evidence for Mary writing a book as corresponding to the expectation, while in (1), which is a report, the strength of evidence does not live up to the expectation. With respect to aspect, sentences with an object that is non-partitive, as in (3), encode semantically complete events. Sentences with partitive object case marking encode incomplete events, as in (1) and (2).

The parallel between evidential, epistemic modal and aspectual domains is not surprising if the role of case is considered in Estonian. Being part of the Uralic language family, Estonian (or Baltic-Finnic, in general) has a rich morphological case system of 14 cases, most of which have distinct semantics. Estonian also has several non-finite forms. The coexistence of these two phenomena is not accidental: non-finite forms frequently originate from case-marked nominalizations, which are originally complements but develop further into subordinate clauses. The subordinate clause type may have been reinterpreted as a main clause, while the case marker was reinterpreted as a mood marker.⁴ As a result, the meanings associated with the case of a verbal argument transferred to a more abstract domain. Parallels between categories that arise due to the semantic import of a cross-categorial case marker, provide support for more semantic approaches to structural (grammatical) case, as can be found in de Hoop (1996), Butt and King (2005), Butt (2006), Nordlinger (1998), Nordlinger and Sadler (2004), and Kiparsky (1998, 2001, 2005), as opposed to the approach to partitive as the ‘default’ case (Kratzer 2004). The Estonian data will show that this line of research is insightful, since in Estonian, aspect, epistemic modality, and indirect evidentiality are related in an intricate way via the partitive case.

Section 2 gives an overview of aspect and the partitive case in Estonian. Section 3 introduces the partitive form and Section 4 the hypotheses about the evidential-epistemic partitive, followed by the subtypes of the partitive evidential.

4. Case may attach to predicates without any non-finiteness as well, creating similar effects, as in languages such as Kala Lagau Ya (Blake 2001: 180).

Section 5 is on independent partitive evidential uses, where the meaning of indirect evidentiality combines with incomplete evidence. Section 6 is on the so-called ‘quotative’, that is, subordinate clauses with *verba dicendi*. Section 7 deals with mental epistemic verbs, Section 8 with visual evidence and other types of sensory evidence. Section 9 explores the phenomenon of partial access to the relevant course of events. The factors reducing the strength of evidence and the partitive evidential occurring with direct evidence are studied in Section 10, followed by a summary of the data analysis and discussion (Section 11) and a final conclusion.

2. Aspect and the partitive case

The partitive case has developed on the basis of a separative case, originally meaning ‘part-of’. Larjavaara (1991) details the development of the aspectual partitive object on the basis of part-whole relationships and language contacts in Baltic-Finnic. The case marking of the object in Examples (2) and (3) may be understood as reflecting an opposition in terms of part-whole relationships that are isomorphically mapped to the progress of events (Krifka 1992). On the one hand, once the whole book is ready, the total event of ‘writing the book’ is over, which is grammatically marked with the total object case.⁵ On the other hand, when only part of the book is written, one is in the middle of the event of book-writing, which is grammatically encoded by the partitive object case. However, in Modern Estonian, the partitive encodes the properties of the event without any direct reference to the physical parts of the theme argument. In Modern Estonian, the physical parts of a book, such as pages or characters up to the final period at the end of the last sentence, cannot be understood as the created parts that constitute the book at the end of the book-writing event. An idea of the process of writing the book is rather a matter of matching the expectations about the completion of the immaterial properties of the book; the parts that constitute the progress along the writing event cannot be identified as the physical parts of the final result that serve as the basis for the event-object isomorphism. Solutions to this kind of mediated partitivity involve degrees and reference to scales, as in Piñón (2008), Hay et al. (1999), Kennedy and McNally (2005), or Kiparsky (2005).

5. The total object case can also be understood as a semantically conditioned accusative. See Tamm (2004b) for details of the terminology for the Estonian object cases.

The Modern Estonian partitive object case does not encode the semantics of part-whole relationships, it is considered to be related to aspect in most sources.⁶ Metslang (2001) connects partitive objects with imperfectivity. Atelicity and non-boundedness are also found to be suitable terms to cover the semantic content of the partitive. Tamm (2007b) shows that the Estonian object case alternation corresponds closely to the alternations of perfectivity/imperfectivity and telicity/atelicity. However, the correspondence is a loose fit and, therefore, maximal boundedness and non-maximal boundedness are considered as the preferred alternative terms for describing the poles of the opposition of the case alternation. The book-writing event is progressing via successively higher degrees of completion towards the final result that corresponds to the expectations about the book and a completed book-writing event. Tamm (2004a) sketches a scalarity based verb classification, where the range of possible cases for the objects is partly predictable from the scalar properties of the verbs; the case specifies the details about the endpoint or the boundary of the event (Tamm 2004b, 2007a, 2007b).

This approach builds on those sources in considering the partitive object case to reflect the absence of reaching the highest degree of event realization, the maximal boundary of the event. In sentence (3), containing the total object case, the event has an expected endpoint that has been reached, a book that has been written according to the expectation of the writer. Therefore, the realization of the book-writing event is complete; the degree of event realization as presented in (3) defines the maximal point on the scale of event realization. Compared to the same expectation, the partitive object encodes that the reality about event realization falls short. On the scale of event realization, the event has not reached the endpoint, the maximal point. The event related to the book does not live up to the expectation, and the object is encoded as partitive. In sum, events that are realized

6. Some examples of aspectual approaches that deal with either the Finnish or Estonian partitive are Metslang (1994, 2001), Erelt et al. (1993), Kont (1963), Rätsep (1978), Ackerman and Moore (1999, 2001), Heinämäki (1984), Verkuyl (1993), Kiparsky (1998), Tenny (1994), Vainikka and Maling (1996), Tauli (1968, 1983), Klaas (1996, 1999), Tamm (2003a, 2003b, 2004b). However, several NP-related accounts have been proposed by Hiietam (2003), Rajandi and Metslang (1979), cf. also de Hoop (1996), van Hout (2000) and Belletti (1988) on Finnish. Several previous works have discussed additional aspects associated with the Estonian regular object case alternation. The changing of grammatical functions of objects and subjects are dealt with in, for instance, Erelt et al. (1993) and Kont (1963); the partitive of negation is detailed in Erelt et al. (1993), Kont (1963), and Larsson (1983), some relationships between partitive and quantification are found in Larjavaara (1991: 372) for Finnic in general, and in Erelt et al. (1993); definiteness and related terms are the focus in Hiietam (2003), which touches upon the partitive as well, in Rajandi and Metslang (1979) and Lees (2005).

completely do not encode partitive objects and events that are incomplete do have partitive objects, as summarized in Table 1.

Table 1. Event properties and object case

complete event	incomplete event
no partitive	partitive

Neither the partitive that is referred to as aspectual nor the partitive that is referred to as evidential are strictly speaking only markers encoding aspectual, evidential, or epistemic modal semantics. The central meanings of these morphemes do correspond to the semantics of these cross-linguistic comparative categories quite neatly. However, crucially, they retain the semantics inherited from their past as a marker of part-whole relationships. The semantics imposed by the partitive form contributes additional meanings that fall out of the range of the central meanings of aspect and evidentiality. More specifically, a negation test indicates, among others, the existence of a presuppositional expectation, since the expectation of the complete event is retained after negation (4) (the main accent should be on the predicate). Inherently atelic verbs such as *nägema* ‘see’ or *kuulma* ‘hear’ lack this effect.

- (4) *Mari ei kirjutanud raamatut.*
 M[NOM] NEG write-NUD_PTCP book-PART
 ‘Mary did not write the book.’

The grammaticalized opposition between complete and incomplete renders the semantics of the aspectual and evidential (epistemic modality) categories similar in Estonian. It must be pointed out that Estonian demonstrates transparent relationships between evidentiality (epistemic modality) and aspect from a different perspective than generally discussed. Previous work on modeling the aspect-evidentiality relationship has concentrated on the perfect. This paper brings out the relationship of indirect evidentiality, epistemic modality and the imperfective and atelicity. For instance, there are parallel structures in the TAM semantics as demonstrated in the analysis in Izvorski (1997), where the present perfect is given an analysis in terms of epistemic modality. Parallel structures exist also in other Finno-Ugric languages; Nikolaeva (1999) writes about Northern Ostyak but reports of evidentials in Vogul, Zyryen, Cheremis, Votyak, Nenets and also Yukagir. Again, it is not the link with atelicity or imperfectivity that has been detailed for these languages. Previous sources typically capture the semantic parallel between the perfect and its similarities to indirect evidentiality.

3. The evidential partitive form

The fact that previous sources typically capture the link between the perfect and evidentiality and the scarcity of works on the link between atelicity or imperfecty and evidentiality is not surprising if we consider the peculiarities of Estonian that other languages lack. More specifically, I mean the rich case marking of Finnic and the well-developed aspectual partitive. Finnish lacks the evidential partitive development. The Modern Estonian partitive evidential is originally a partitive case-marked participle form.⁷

- (5) *Mari tule-va-t / too-da-va-t koju.*
 M[NOM] come-PERS.PRS.PTCP.PART bring-IMPERS.PRS.PTCP.PART home.ILL
 ‘Reportedly/allegedly, Mary will come home / Mary will be taken home.’

The development of the relationships between the aspectual and evidential categories and case marking in Estonian has been addressed in Tamm (2008a). In Modern Estonian, partitive is the case of the shared argument of the sentence with the verb ‘hear’ and the partitive evidential predicate (*kägu* ‘cuckoo.PART’ in (6)). Partitive is also the argument of the verb ‘hear’ in Modern Estonian (*kägu* ‘cuckoo.PART’ in (7)). These arguments are marked with the partitive, since the sentence with the verb *kuulma* ‘hear’ is not maximally bounded. There is no expectation with respect

7. The corresponding Estonian grammar terms are the ‘*v-kesksõna*’ (for partitive-marked personal present participle) and the ‘*tav-kesksõna*’ (for partitive-marked impersonal present participle); both terms are related to the content of ‘*kaudne kõneviis*’ *modus relativus* or *obliquus*, indirect speech, indirect, or *vat*-infinitive in grammars. Saareste (1940: 352 in Kask 1985: 5) dates the category *kaudne kõneviis* back to 16th–18th century; Kask (1985: 6) writes that the triumph of the *-vat*-form was in the 20ies of the 20th century. An overview of the variation of forms of the *kaudne kõneviis* can be found in Kask (1985: 6–7). Ikola (1953: 41) in Kask (1985: 7) writes about the participial or *accusativus* (or *nominativus*) *cum infinitive* origins. Historical sources are unanimous about the diachronic partitive marking in the morpheme (e.g., Laanest 1975). The partitive evidential, the *vat*-form, has been related to the indirect mode of communication and evidentiality (Rätsep 1971; Aikhenvald 2004; Metslang & Pajusalu 2002; Erelt, Metslang & Pajusalu 2006; Tamm 2004a; Tamm 2008c, Tamm forthcoming; Sepper 2006; Klaas 1997, 2002; Erelt 1984, 2001, 2002a, 2002b). See Kehayov (2008), Sepper (2006), Erelt et al. (1997), Rätsep (1971), Mihkla et al. (1974) and Kask (1985) for more details about the terminology that has been used in the Estonian previous sources for the form (these sources are in Estonian) and Erelt, Metslang and Pajusalu (2006) or Tamm (2008a) for the selected previous accounts (in English). Note that the glosses reflect the historical origin until Example (5) but not further.

to the maximal realization associated with an event of hearing, and, therefore, the total case is impossible and partitive is encoded.⁸

- (6) *Mari kuulis kagu kukku-va-t.*
 M[NOM] hear-3S.PST cuckoo.PART cuckoo-PART_EVID
 ‘Mari heard a/the cuckoo cuckoo.’
- (7) *Mari kuulis kagu.*
 M[NOM] hear-3S.PST cuckoo.PART
 ‘Mari heard a/the cuckoo.’

Sentence (6) has the partitive evidential form *kukkuvat* ‘cuckoo’. Diachronically, this form modified the aspectually partitive-marked object *kagu* ‘cuckoo.PART’, which triggered case agreement on *kukkuvat* ‘cuckooing.PART’. The sentence could be paraphrased as ‘Mary heard a cuckooing cuckoo’. At a later stage, the noun remained to be analyzed as the object of the perception verb (‘Mary heard the *cuckoo*’), but in addition, it became analyzed as the subject of the non-finite form (‘the *cuckoo* cuckooing’). The stage of being analyzed as the subject of a non-finite predicate marks the beginning of the independent development of the partitive marked participle. Competing with other non-finite forms (Habicht 2001), the participle established itself as a kind of *modus obliquus* (subjunctive, conjunctive) marker. However, the embedded form appears only with a restricted set of matrix verbs. Aikhenvald (2004: 282–3), following Campbell (1991: 287), discusses the further development of the independent predicate marking evidential form, which she refers to as ‘the Estonian reported evidential’. She also summarizes the relevant discussions in several Estonian sources. Two existing complementation patterns, as in (8) and (9), were merged in one, as in (10), followed by a process where the matrix verb and the complementizer became optional as in (11) (example of Campbell 1991) or (12) (example of Aikhenvald 2004, all original glosses are retained).

- (8) *sai kuulda, et seal üks mees elab*
 got hear-INF that there one.NOM man.NOM live-3PRES.INDICATIVE
 ‘She came to hear / she heard that a man lives there.’
- (9) *sai kuulda seal ühe mehe elavat*
 got hear-INF there one.GEN man.GEN live-PRES.PARTCP
 ‘He came to hear / he heard of a man’s living there.’

8. See Tamm (2004a, 2007a, b) for more details.

- (10) *sai kuulda, (et) seal üks mees elavat*
 got hear-INF that there one.NOM man.NOM live-MODUS.OBLIQUUS
 ‘He came to hear / he heard that (they say) a man lives there.’
- (11) *ta tegevat tööd*
 he.NOM do-PRES.INDIR work-PARTV
 ‘They say he is working.’ Campbell (1991: 287)
- (12) *seal üks mees elavat*
 there one.NOM man.NOM PREST.PART.PARTVE.SG = REP.EVID
 ‘a man lives there (it is said).’ Aikhenvald (2004: 283)

Understanding the evidential as a form that has evolved from expressing part-whole meanings to expressing scalar meanings helps solve an interesting typological puzzle posed by Estonian and Bulgarian as described by Kehayov (2008). Despite the form-function parallelism – a participial form functions as an evidential in both Bulgarian and Estonian – the semantic parallels between the two languages are missing. Bulgarian is a “one form-diverging semantics” type of language, Estonian is a “clear semantics, many forms” type. This article provides an explanation for Kehayov’s puzzle. The grammaticalization of Estonian has followed a different path altogether, via forms that carried different semantics. In sum, the evidential partitive started off as an instance of aspectual partitive case marking and gradually crystallized as an evidential and an epistemic modal in the Estonian system.

4. Three hypotheses about the Modern Estonian partitive evidential

The peculiar path of grammaticalization of the Estonian partitive evidential offers insight into the relationships between evidentiality, aspect, and epistemic modality since the different stages of the development are still present in Modern Estonian. The following sections concentrate on the occurrences that represent some of these stages and demonstrate how the evidential and epistemic modal domains share semantic structure with aspect. This subsection provides an introduction to the topics that are presented in more detail in the following sections.

In terms of Aikhenvald (2004), most of the examples of the partitive evidential discussed in this article can be categorized as epistemic modality. Following Aikhenvald (2004), there are two types of evidential marking: ‘indirectivity’ marking (“type I”) and ‘evidential’ marking (“type II”). The first type indicates whether evidence exists for a given statement. The second type specifies the kind of evidence (visual, inferential, reportative, etc). Aikhenvald (2004) classifies Estonian as a two-term, type I language, which contrasts ‘reported evidence’ with everything else.

Compared to the Estonian data discussed in Aikhenvald (2004), the following sections address more instances of the partitive evidential (epistemic) form in embedded environments in combination with several verb classes, such as verbs of saying or mental epistemic verbs. On the basis of the data discussed in this article, I will show that in embedded environments it is irrelevant whether the information results from hearsay or perception. In this sense, what I refer to as the partitive evidential comprises a wider range of meanings than an A3 language as in Aikhenvald (2004: 33), where indirect and all other evidence are contrasted. However, 'inference' is set apart as a separate category and is excluded from the set of partitive evidential meanings. In addition, my approach discusses a wider range of speaker-event relationships. In this respect, my goals are close to those of Garrett (2001), Faller (2002), or de Haan (2005).

The proposal here is thus to analyze a wider array of occurrences and see which analysis fares best in each occurrence of the partitive evidential. Some informally worded hypotheses are a good starting point for the investigation of the partitive marked present participle in environments where it is not partitive marked due to agreement with a nominal head.

1. The indirect hypothesis: the occurrences of partitive marked present participle have evidential indirect semantics. The prototypical examples of the category comprise instances that are reportative evidentials, which indicate that the information was reported to the speaker by another person, hearsay evidentials, which indicate reported information that may or may not be accurate, and quotative evidentials, which indicate that the information is accurate and not open to interpretation. The category is tested with continuations that refer to the hearsay or indirect nature of the proposition such as *Nagu mulle räägiti/kuuldavasti* 'as I heard/was told'.
2. The epistemic modality hypothesis: the occurrences of the partitive marked present participle have epistemic modal semantics. This is a category that is concerned with the marking of the speaker's degree of confidence, certainty or belief in the proposition, which I test with variants of sentence continuations that are sensitive to the belief in evidence, such as *mida ma ei tea kindlalt* 'which I do not know for sure'.
3. The partitive hypothesis: the occurrences of the partitive marked present participle have the scalar semantics that is characteristic of the aspectual domain in Estonian and remotely related to part-whole relationships. This meaning bears closest resemblance to epistemic modality but is a category defined language-internally on the basis of the developments of the Estonian partitive and its semantics. According to the partitive hypothesis, there is a semantic category that is sensitive to the degree of completeness. In case of

evidentiality, the morphological encoding is sensitive to the degree of strength of evidence for the event. In case of aspect, the morphological encoding is sensitive to the degree of event realization. In other words, partitive encodes that something is less than what was expected. I test this meaning element with continuations containing completion adjectives and scale-sensitive tests such as *mille jaoks mul ei ole täielikku tõendust* ‘for which I have not got complete evidence’ and tests that are sensitive to the degree of belief.

In addition, I use occasionally other types of tests to check the compatibility with different sources of perception and in order to clarify the type of meaning relations in the example sentences. I expect all hypotheses to be correct for some cases, giving a more complete picture about the data. Importantly, I wish to introduce the concept of epistemic modality into an analysis of a wider range of the occurrences of the partitive evidential and show that the semantics of the category bears similarities to the Estonian aspectual semantics.

5. Independent partitive evidential uses: Reportative with incomplete evidence

The partitive evidential appears in embedded environments and has an independent use, which comes closest to Aikhenvald’s definition of evidentiality. This subsection confirms Aikhenvald’s classification of the morpheme as a reportative. However, it provides evidence that the evidential is not a pure reportative, since the report necessarily combines with the meaning of incomplete evidence (or the speaker’s decision to present the evidence as such). An instance of independent use of the partitive evidential is presented in (13), which forms a minimal pair with the unmarked indicative form in (14). The modification of the unmarked (indicative) sentence by ‘as I was told/they say/ (inferential) probably’ in (14), shows that while the morphological form has its distinct semantics, it is not the case that the elements of this particular kind of semantics necessarily trigger the use of the morpheme. The indicative form may be underspecified for the semantics under investigation; the semantic content can be expressed by lexical as well as morpho-syntactic means. In addition, the impossibility of an inferential adverb *nähtavasti/ilmselt* ‘probably (‘as can be inferred on the basis of what we see’)’ in (13) as opposed to (14) proves that the partitive evidential is not a vague indirectivity marker and it certainly is not an inferential marker.⁹

9. It is the indicative Example (14) and not (13) that is used in inferential contexts as hearing a doorbell, in the knowledge of the fact that Mary should be arriving.

- (13) (*Nagu mulle räägiti / kuuldavasti / #nähtavasti*)
 As I.ADE tell-PAST-IMPERS as heard probably-inferential
Mari tulevat koju.
 M.[NOM] come-PART_EVID home
 ‘Allegedly, Mary is coming home.’
- (14) (*Nagu mulle räägiti / kuuldavasti / nähtavasti*)
 As I.ADE tell-PAST-IMPERS as heard probably-inferential
Mari tuli koju.
 M.[NOM] come-3.S.PST home
 ‘As I was told/they say/probably, Mary came home.’

The evidence available to the Speaker does not correspond to the expectation about the required evidence for the event in a sentence with the partitive evidential used independently. This can be ‘entailment’ in (13); the combination of sentences is anomalous if extended by a phrase that conveys strong evidence for the event, as in Example (15) with past reference and the extension ‘which I’ve seen myself and I know for sure.’ The semantics of report can also be an entailment, as witnessed by the non-cancelable nature of mediation by the phrase ‘which I have not learned from anyone else.’

- (15) # *Mari olevat tulnud, mida nägin ise pealt*
 M.[NOM] be-PART_EVID come-NUD_PTCP, which I’ve seen myself
ja tean kindlalt.
 and I know for sure.
 (‘Allegedly, Mary has come, which I’ve seen myself and I know for sure.’)
- (16) # *Mari olevat tulnud, mida ma pole kelleltki*
 M.[NOM] be-PART_EVID come-NUD_PTCP, which I’ve not learned
teada saanud.
 from anyone else
 (‘Allegedly, Mary has come, which I’ve not learned from anyone else.’)

In addition, the indicative Example (14) and not the partitive evidential one (13) can be used for reporting information from other sources, such as letters, signs, newspapers, books, radio, TV, or other speakers. It is not a quote, but rather closer to hearsay. Faller (2006: 4) describes a situation of improvised testing of the reportative in Cuzco Quechua, where the reported evidential is used by a mediator to render her question to a hard-hearing mother-in-law in a louder voice. This situation does not lead to the use of the Estonian partitive evidential; instead, an indicative is used.

On the other hand, testing maximal evidence splits markedly in indicative sentences, showing that strictly evidential meaning is cancelable (17) while the

judgment about full evidence is not (18). The lack of report and vision are cancelable as shown in (17) and (19); therefore, they are implicatures in the corresponding indicative sentences.

- (17) *Mari tuli koju, mida ma ise pealt ei näinud.*
 M.[NOM] come-3.PAST.SG home which I have not seen myself
 ‘Mary came home, which I have not seen myself.’
- (18) # *Mari tuli koju, mida ma ei tea*
 M.[NOM] come-3.PAST.SG home which I do not know for
kindlalt/mille jaoks mul ei ole täielikku tõendust.
 sure/for which I have not got complete evidence.
 ‘Mary came home, which I do not know for sure/for which I have not got complete evidence.’
- (19) *Mari tuli koju, mida ma pole kelleltki teada saanud.*
 M.[NOM] come-3.PAST.SG home, which I’ve not learned from anyone else
 ‘Mary is coming home, which I’ve not learned from anyone else.’

In the indicative sentence, the data in (17)–(19) show that the evidence available to the speaker corresponds to the expectation about the evidence, and the source of the message does not have to be another speaker. If the sentence is negated, the sentence containing the independent use of partitive evidential retains the presupposition of another speaker (allegedly...) as the source of the message of the event in (20).

- (20) *Mari ei olevat tulnud koju.*
 M[NOM] NEG be-PART_EVID come-NUD_PTCL home
 ‘Allegedly, Mary is not coming home.’

Applying a test in Faller (2002: 100), the propositional content can be questioned with adverbs such as ‘really’ (21). The test shows that the propositional content pertains to the epistemic modal part of the meaning and not the reportative part. Faller (2002: 110) studies the claim that epistemic modals are not propositional-level operators, and applies a test that she refers to as ‘challengability test’. If the meaning of the morpheme can be questioned, doubted, rejected or (dis)agreed with, then it contributes to the truth conditions of the proposition expressed, otherwise, it does not. Example (21), applied to (20), shows that the test can be understood as yielding either a pass or a failure; what can be questioned is the epistemic part of the meaning but not the indirect part.

- (21) *Kas tõesti (sa ei tea seda / #kas tõesti keegi seda sulle ei öelnud)?*
 Q_PTCL really you do not know / Q_PTCL really nobody told you
 ‘Really?’ (Understood as: you really do not know? And not: really, nobody told you?)

Although many issues around this test are still unclear, it brings out a difference in the interpretation of the partitive evidential. According to the test, the partitive evidential contributes to the truth conditions of the proposition expressed as an epistemic modal and does not contribute to the truth conditions as an indirect evidential.

These data confirm the three hypotheses worded in the previous subsection. The form encodes pure evidentiality, epistemic modality and, being sensitive to completion adverbs or adjectives, it confirms the partitivity hypothesis with respect to aspect. The independent use of the partitive evidential is an epistemic modality-conditioned reportative evidential, which encodes the lack of complete evidence.

6. The quotative: *Verba dicendi*

The prototypical examples of the partitive evidential that are discussed in grammars and several previous sources encode indirect evidentiality and are referred to as the the quotative category, illustrated in (22). Combinations of an embedded partitive evidential verb and matrix *verba dicendi* are the basis for the meaning extension to indirect evidentiality in independent, non-embedded contexts as in sentence (1).¹⁰ The tests in (23) and (24) aim at detecting the meaning elements that are sensitive to evidence in example (22) that contains the partitive evidential.

(22) *Mari ütles, et ta olevat koju tulnud.*
 M[NOM] say-3S.PST that s/he be-PART_EVID home.ILL come-NUD_PTCP
 ‘Mary said that s/he had come home.’

(23) *??Selleks on mul täielik tõendusmaterjal.*
 This-TRANSL be.3S I-ADE complete[NOM] evidence[NOM]
 ‘I have full evidence for it.’

(24) *Selleks ei ole mul täielikku tõendusmaterjali.*
 this-TRANSL NEG be I-ADE complete.PART evidence.PART
 ‘I do not have full evidence for it.’

The continuation ‘I have full evidence for it’ (23) also stands for any other phrase with a content that reflects an expectation in the given context, or the general set of expressions of full evidence, for instance, the ones discussed in the previous section, *ma nägin seda ise pealt* ‘I saw it myself’, or *tean/kuulsin seda kindlast allikast*

10. The patterns with *verba dicendi* are as follows: [x said that y V-evid], [x said that y V-fin], [x said y V-evid].

'I know/ I've heard it from a reliable source.' These phrases are felicitous as continuations if understood to be uttered about the saying event (expressed by the matrix predicate) and infelicitous if uttered about the coming home event (base predicate). On the contrary, the continuation 'I do not have full evidence for it' (24) is felicitously interpreted to pertain to the event described in the embedded base predicate. The test in (24) stands for the opposite of the test in (23), for instance, *ma ei näinud seda ise pealt* 'I did not see it myself', *ma ei tea/ei ole seda kuulnud kindlast allikast* 'I know/ I've heard it from a reliable source', but it is also possible as a test involving no negation, such as in the case of less reliable media of perception for the given event, *ma kuulsin seda kaugelt* 'I could hear it from far away'.

The existence of the unmarked sentence (25) containing a verb of saying in the matrix suggests that it is not the presence of *verba dicendi* and quote or report that determine the encoding of the embedded verb in (22) and (25) – both contain a saying verb in the matrix predicate.

- (25) *Mari ütles, et ta tuli koju.*
 M[NOM] say-3S.PST that s/he come-3S.PST home.ILL
 'Mary said that s/he had come home.'

- (26) *Selleks mul on täielik tõendusmaterjal/*
 this-TRANSL I-ADE be-3S complete[NOM] evidence[NOM]
ei ole täielikku tõendusmaterjali.
 NEG be complete.PART evidence.PART
 'I have/ do not have full evidence for it.'

Differently from Example (22), the continuations of the sentence without an embedded partitive evidential verb in (25) are felicitous with the equivalents of: 'I have full evidence for it' and 'I do not have full evidence for it'. It is not the report that matters for the encoding. Instead, in (22), the speaker believes that Mary's evidence does not live up to the expectations of full evidence, or that Mary is generally a medium that classifies as providing insufficient evidence (she is blind, has a conflict of interests, or is a liar). In Example (25) without the partitive evidential, the speaker conveys nothing about his or her judgment about the completeness of the evidence.

It is possible to explain the minimal pair in modal terms. An acceptable extension to sentence (22) with the partitive evidential is 'in fact, I don't fully believe that she came', while 'in fact, I fully believe that she came' is contradictory, as in (28).

- (27) *Mari ütles, et ta olevat koju tulnud.*
 M[NOM] say-3S.PST that s/he be-PART_EVID home.ILL come-NUD_PTCP
 'Mary said that s/he had come home.'

- (28) *Tegelikult, ma ??arvan / ei arva täielikult, et ta tuli.*
 really I[NOM] think-3S NEG think completely that s/he come.3.S.PAST
 ‘In fact, I do/I don’t fully believe that she came.’

The application of a more direct test that is constructed to address beliefs, combined with adverbs that express completeness – such as *täielikult* ‘completely, fully’ – show that the use of the partitive evidential excludes complete belief.

The fact that it concerns a report does not seem to decrease the degree of evidence in the environment of *verba dicendi*, but for lack of a good test it cannot be claimed with certainty. In (25), the speaker believes that Mary’s evidence is sufficient and that Mary is a reliable medium. Report as such does not provide either a necessary or a sufficient condition for the use of the partitive evidential here. In a way, indirect evidence can even still count as complete evidence. These data indicate the weakness of the reported hypothesis for the *verba dicendi* class. They provide support for an epistemic modal and partitive based analysis in terms of insufficient degree of evidence for the event with regard to the expectation about complete evidence. Complete evidence would be in typical cases direct perception, or inference, where the speaker’s attitudes can be consequently based on.

7. Mental epistemic verbs

The reportative-quotative construction, where the partitive evidentials are embedded under matrix clauses with *verba dicendi*, is merely one of the environments of the occurrence of this morpheme. The analysis in the previous section may be extended to several mental epistemic matrix verbs such as *arvama* ‘think, have an opinion’, *uskuma* ‘think, believe’, which can be used as *verba dicendi*, illustrated in (29). The test sentence shows that sentence (29) is like (22) with the partitive evidential and unlike sentence (25) without one.

- (29) *Mari arvas end kodus olevat.*
 M[NOM] think-3S.PST self.PART home.INE be-PART_EVID
 ‘Mary thought that she was at home.’

It is odd to continue the sentence with ‘I have full evidence for it’ (or its specifications), as in (30). The opposites, as in (31), are not.

- (30) *??Selleks on mul täielik tõendusmaterjal.*
 this-TRANSL be-3SG I-ADE complete[NOM] evidence[NOM]
 ‘I have full evidence for it.’
- (31) *Aga selleks ei ole mul täielikku tõendusmaterjali.*
 But this-TRANSL NEG be I-ADE complete.PART evidence.PART
 ‘But I do not have full evidence for it.’

Applying the more direct tests that address beliefs and contain completion adjectives or adverbs, ‘In fact, I don’t fully believe that she was’ in (32), encoding less than full belief, indicates an acceptable sequence of sentences while (33), asserting full belief, ‘In fact, I fully believe that she was,’ does not.

- (32) *Tegelikult, ma ei arva päris/täielikult, et ta oli.*
 ‘In fact, I don’t fully believe that she was.’
- (33) ??*Tegelikult, ma arvan täielikult, et ta oligi.*
 ‘In fact, I fully believe that she was.’

The explicit expression of incomplete evidence for the proposition, as in (29), contrasts with (34), which contains the mental epistemic verb and a complement clause representing the proposition, but without the partitive evidential. Like with *verba dicendi*, the complementation without the partitive evidential is possible.¹¹

- (34) *Mari arvas, et ta on kodus.*
 M[NOM] think-3s.PST that s/he[NOM] be.3s home-INE
 ‘Mary thought that she (herself) was at home.’

Sentence (34) can be followed by all test sentences, as seen in (35)–(38).

- (35) *Selleks on mul täielik tõendusmaterjal.*
 this-TRANSL be-3SG I-ADE complete[NOM] evidence[NOM]
 ‘I have full evidence for it.’
- (36) *Aga selleks ei ole mul täielikku tõendusmaterjali.*
 But this-TRANSL NEG be I-ADE complete.PART evidence.PART
 ‘But I do not have full evidence for it.’
- (37) *Tegelikult, ma ei arva päris/täielikult, et ta oli.*
 ‘In fact, I don’t fully believe that she was.’
- (38) *Tegelikult, ma arvan täielikult, et ta oligi.*
 ‘In fact, I fully believe that she was.’

In (35)–(38), the indicative marking is underspecified with respect to the completeness of the evidence in these tests if applied to the constructions of verbs of saying and mental attitude; the meaning of complete evidence is an implicature. The sentences with the partitive evidential cannot appear with continuations that express complete evidence and full belief. On the other hand, incomplete evidence and insufficient belief cannot provide the sufficient conditions for partitive evidential encoding. As the ‘quotatives’ with *verba dicendi*, the mental epistemic verbs easily lend themselves for an epistemic modal analysis and the indirectness hypothesis is

11. Constructions with mental epistemic verbs have the following patterns: [x thinks y V-evid] and [x thinks that y V-fin].

less plausible. The sentences with the partitive evidential express the incomplete, non-maximal nature of the evidence for the situation, while there is a contextually determined or a standard expectation of complete evidence for the situation.

8. Visual evidence and other types of sensory evidence: *Verba sentiendi*

Previous sections compared the occurrences of the partitive evidential in its independent uses, with *verba dicendi* and with *verba sentiendi* and established that there is a discrepancy between an expectation – the contextually determined complete evidence – and the speaker’s evaluation of and belief about the available evidence. Complete evidence could also be a report or an inference. In the previous sections, the main tests for complete evidence included visual perception. This section concentrates on perception verbs. Does visual evidence indeed constitute complete evidence for all types of events, and how do other types of sensory evidence compare to visual evidence? How much does the fact that the event is not directly seen determine the incompleteness of the evidence?

I hypothesize that the types of evidence form a scale of vision>hearing>other sensory perception, as attested in many morphologically explicit evidential systems. In many types of evidential systems, the speaker specifies what kind of evidence he has, that is, what is the source of his information. In some evidential systems, visual evidence differs from auditory or other sensory evidence, providing either stronger or a differentiated type of evidence, which results in different marking. That the Estonian embedded predicates that denote complete evidence are encoded differently from those that have incomplete evidence has remained unnoticed yet. In Modern Estonian, the predicate marked with the partitive evidential is anomalous in combination with a vision verb in the matrix clause if the sentence is used out of context (39).

- (39) # *Mari nägi teda koju tulevat.*
 M[NOM] see-3S.PST him/her.PART home.ILL come-PART_EVID
 Intended meaning: ‘Mary saw him/her come home.’

Instead, it is the *m*-stem non-finite inessive verb form (the *mas*-infinitive) (40) that is grammatical with vision verbs in the matrix clause.¹²

12. The *m*-stem non-finite inessive verb form (the *mas*-infinitive) is the form of the progressive and in different contexts it is also the form of the absentive in Estonian. Constructions of sensory evidence have the following patterns: [x perceives y V-*mas*], [x perceives that y V-*fin*], [x perceives y V-*evid*]. The middle (unaccusative) forms optionally contain the partitive evidential. The patterns are as follows: [y seems V-*evid*], [seems, that y V-*fin*].

- (40) *Mari nägi teda koju tulemas.*
 M[NOM] see-3S.PST him/her.PART home.ILL come-MAS_INF
 ‘Mary saw him/her come home.’

On the contrary, given the same base event that can be seen, heard and sensed (e.g., as in a situation where the giant comes home and the house is shaking); the partitive evidential is grammatical with acoustic and other sensory perception verbs (41), (42).

- (41) *Mari kuulis teda koju tulevat.*
 M[NOM] hear-3S.PST him/her.PART home.ILL come-PART_EVID
 ‘Mary heard him/her come home.’
- (42) *Mari tundis teda koju tulevat.*
 M[NOM] sense-3S.PST him/her.PART home.ILL come-PART_EVID
 ‘Mary felt/sensed/smelled etc him/her come home.’

Acoustic and other sensory perception verbs in the matrix clause are anomalous in combination with the *mas*-infinitive form (43), (44).

- (43) # *Mari kuulis teda koju tulemas.*
 M[NOM] hear-3S.PST him/her.PART home.ILL come-MAS_INF
 Intended meaning: ‘Mary heard him/her come home.’
- (44) # *Mari tundis teda koju tulemas.*
 M[NOM] sense-3S.PST him/her.PART home come-MAS_INF
 Intended meaning: ‘Mary felt/sensed/smelled etc him/her come home.’

Given these data, visual evidence is set apart from other types of sensory evidence. The question is whether the selection is determined by lexical, grammatical or encyclopedic factors. The data in (45) suggest that, as with the constructions with mental epistemic verbs and *verba dicendi*, there are idiosyncratic lexical-syntactic restrictions on the complementation patterns. The use of the partitive evidential in a complement clause with an overt complementizer has not grammaticalized with sensory perception verbs (45).

- (45) * *Mari tundis, et ta tulevat koju.*
 M[NOM] sense-3S.PST that s/he[NOM] come-PART_EVID home.ILL
 Intended meaning: ‘Mary felt/sensed/smelled etc him/her come home.’

There is an interesting difference between reportative and auditory readings and complementation patterns that arise with the matrix verb ‘hear’ (46). While the auditory, temporally simultaneous reading (‘Mary heard him/her come home’) is not possible in a *that*-complement clause with the partitive evidential, the reportative reading is, in a construction referring to two temporally distinct events (‘Mary heard that s/he would come home’).

- (46) *Mari kuulis, et ta tulevat koju.*
 M[NOM] hear-3s.PST that s/he[NOM] come-PART_EVID home.ILL
 Intended meaning: *‘Mary heard him/her come home.’
 ‘Mary heard (from someone) that s/he would come home.’

The example suggests that the partitive evidential unites several types of incomplete evidentiality, but the distinct patterns encode additional temporal and other semantic restrictions.

While the explanation of these restrictions is beyond the limits of this paper, it is important to point out that they exist and yield the question of the interdependence between evidence types, perception and the properties of the base events. The following tests aim at clarifying the semantics containing perception verbs and describing events that can be seen, heard and sensed. I wish to find out if evidence can be understood in terms of a scale, and next, if visual evidence corresponds to the maximal degree of evidence for all events. The tests try to establish if there is an implicational scale ordered according to the completeness of evidence. The test is based on the Gricean maxim of quantity, which requires the Speaker to be maximally informative. If the Speaker chooses to use a term that is weaker on a scale of evidence, there is a scalar implicature that he cannot communicate evidence that is mapped to a stronger term on the implicational scale. If vision is the strongest term, then the test would predict for vision verbs that they behave linguistically as the strongest term as well. With vision verbs in the matrix clause, I expect an odd effect with the continuation with ‘even’ and the information that Mary was unable to hear or sense the event. The odd effect would arise since the information about hearing or sensing the event is less informative than the information about seeing it. In case of auditory verbs, the test would predict the felicity of ‘even’, negation and the vision verb; auditory verbs are predicted to create an odd effect with ‘even’ and the other sensory perception verbs. If someone is reported to have sensed an event, the implicature is that she was unable to hear or see it and the seeing and hearing verbs are predicted to be felicitous with the negation and ‘even’. These tests are applied in (47)–(49).

- (47) *Mari ainult nägi teda koju tulemas,*
 M[NOM] only see-3s.PST him/her.PART home.ILL come-MAS_INF
 ? *aga isegi ei kuulnud / ?aga isegi e tundnud.*
 but even NEG hear-NUD_PTCP but even NEG sense-NUD_PTCP
 ‘Mary only saw him/her come home, ? but did not even hear/sense it.’
- (48) *Mari ainult kuulis teda koju tulevat,*
 M[NOM] only hear-3s.PST him/her.PART home come-PART_EVID
aga isegi ei näinud / ?aga isegi ei tundnud.
 but even NEG see-NUD_PTCP but even NEG sense-NUD_PTCP
 ‘Mary only heard him/her come home but did not even see/?sense it.’

- (49) *Mari ainult tundis teda koju tulevat,*
 M[NOM] only sense-3s.PST him/her.PART home come-PART_EVID
aga isegi ei näinud / aga isegi ei kuulnud.
 but even NEG see-NUD_PTCP but even NEG hear-NUD_PTCP
 ‘Mary only sensed him/her come home, but did not even see/hear it.’

Implicatures create a clear scale of evidence types. The results of the test in (47)–(49) show that there is an implicational scale ordered according to the degree of being informative. The scale of the strength of evidence is made up as follows: vision>hearing>other, if applied to events that can be seen, heard and perceived by other senses. Hearing and sensing are weaker terms on the scale, providing a lower degree of strength of evidence. If the speaker reports about Mary that she heard an event of entering the house, then the speaker (again) obeys the Gricean Maxim of quantity in making his contribution maximally informative, communicating that the stronger claim cannot be made. However, this information is still weaker than required according to the expectation. In sum, the partitive evidential does not mark the embedded predicate of the vision verb but it does mark the embedded predicate of other sensory verbs. There is, therefore, a stronger indication that auditory evidence corresponds to a lower degree of evidence compared to the expected complete evidence for the event on the evidence scale. Any other sensory type of evidence corresponds to an even lower degree of evidence. This sensitivity to the strength of evidence is reflected in the grammatical marking.

However, using different verbs, such as *mängima* ‘play (an instrument, or a song)’ shows the type of events matters for assessing the strength of evidence and consequently, the grammaticality of the form used. In Example (50), there is an audible event for which the evidence is acquired via auditory means of perception, for instance, if music is heard over the radio. The embedded predicate is encoded with the *mas*-infinitive.¹³

- (50) *Ben kuulis Amyt mängimas Meat Loafi hittlugu “I’d Do*
 B[NOM] hear-3s.PST A.[PART] play-MAS_INF ML.GEN hit.PART [TITLE]
Anything For Love”.
 ‘Ben heard Amy play the hit of Meat Loaf, “I’d Do Anything For Love”.’

Vision can provide full evidence if the salient properties of an audible event require vision. This is the situation where small children see the curious form and sound of the cither, which inspires them to choose it as their musical instrument

13. <http://www.u-pop.ee/artist/artistview/184/full>

in music school. The base verb is not encoded with the partitive evidential in that case (51) (exact glossing is omitted for irrelevant parts).¹⁴

- (51) *Kaks esimest teadsid juba enne muusikakooli tulekut,*
 The first two knew already before coming to the music school
et tahavad just kannelt õppida,
 that they wanted to study cither
Viivika nägi kord koolimajas õpetajat mängimas
 v[NOM] see-3S.PST once school.INE teacher.PART play.MAS_INF
ja leidis oma suuna just siis.
 and found her calling right then
 ‘The first two knew already before coming to music school that they wanted to study cither; Viivika once saw the teacher playing [the cither] at school and found her calling right then.’

If the perception is unclear, the partitive evidential is used regardless of perception type. This can be true for vision, if vision cannot give complete evidence about reality, such as in dreams or revelations, as in (52)¹⁵ and (53)¹⁶ respectively.

- (52) *Tarmo unenägede paremikku kuulub ka uus Harry Potteri köide,*
 To the best of Tarmo’s dreams also belongs the new volume of Harry Potter
mille pealkirja ta nägi olevat Harry Potter
 which.GEN title.PART s/he[NOM] see.3.S be-PART_EVID HP[NOM]
ja räimed
 and Baltic_herring-PL
 ‘To the best of Tarmo’s dreams belongs the new volume of Harry Potter, the title of which he saw to be Harry Potter and a Baltic herring.’
- (53) *Ta palvetab ja on nägemuses näinud mehe...*
 s/he[NOM] pray-3.S and be.3.S revelation-INE see-NUD_PTCP man.ACC
sisse tulevat ja käe ta peale panevat...
 in come-PART_EVID and hand.TOT he.GEN upon put-PART_EVID
 ‘He is praying and has seen a man coming in in his dream and putting his hand on his head.’

14. <http://uus.www.valgamaalane.ee/260904/esileht/25000357.php>

15. <http://kodutriibik.blogspot.com/2005/05/tarmo-ngi-sel-unes-et-mul-on-veel-kaks.html>

16. <http://usumaailm.harta.ee/loe.php?tuup=opituba&id=13>

In addition, if the whole perception of an auditory event is disturbed, as in an event of somebody talking at a distance, then, again, the base verb is encoded with the partitive evidential as in (54).¹⁷

- (54) *Ta kuulis õpetajat kusagil kaugel- kaugel*
 s/he[NOM] hear-3.S.PAST teacher.PART somewhere far far
rääkivat rõõmust...
 speak-PART_EVID joy-ELA
 ‘He heard the teacher speak of joy somewhere far away.’

Also, the whole perception of the auditory event is sometimes markedly different from what was expected. Even if hearing itself is reliable, there is a partitive evidential. This is the case in a horror story about an unnatural hearing event of someone playing the piano, while the player is not seen (55). Direct, reliable vision that gives evidence for an event that proceeds according to an expectation is indeed an important component of complete evidence for perceivable events.¹⁸

- (55) *Mustas klaveris kuuldakse kedagi*
 black-INE piano-INE hear-IMPERS someone-PART
 (*musta kätt / jalga, klaverit ennast*) *mängivat.*
 black-PART hand-PART foot-PART piano-PART itself-PART play-PART_EVID
 ‘In the black piano, someone (a black hand or foot, the piano itself)
 is heard playing it.’

In sum, if one can draw conclusions on the basis of the morphological encoding, vision provides complete evidence for events that can be seen, on condition that the perception is reliable. Audible events must also be perceived by vision unless the visible side of the event is toned down as in case of being mediated over the radio, where visibility it is not part of the expectations. The previously applied test can now be extended to a combination of environments, where the audible event is the base, and where two types of information are varied: the form of the base verb and the source of perception.

- (56) *Mari ainult nägi teda mängimas / mängivat,*
 M[NOM] only see-3S.PST him/her.PART play-MAS_INF play-PART_EVID
 (?)*aga isegi ei kuulnud / ?aga isegi ei tundnud.*
 but even NEG hear-NUD_PTCP but even NEG sense-NUD_PTCP
 ‘Mary only saw him/her play, but did not even (?)hear/sense it.’

17. http://www.eelk.ee/h_j-madise.html

18. <http://www.folklore.ee/rl/pubte/ee/cf/mjap/mare.html>

- (57) *Mari ainult kuulis teda mängimas,*
 M[NOM] only hear-3s.PST him/her.PART play-MAS_INF
 ?*aga isegi ei näinud / ?aga isegi ei tundnud.*
 but even NEG see-NUD_PTCP but even NEG sense-NUD_PTCP
 ‘Mary only heard him/her play, but did not even ?see/?sense it.’
- (58) *Mari ainult kuulis teda mängivat,*
 M[NOM] only hear-3s.PST him/her.PART play-PART_EVID
aga isegi ei näinud / ?aga isegi ei tundnud.
 but even NEG see-NUD_PTCP but even NEG sense-NUD_PTCP
 ‘Mary only heard him/her play, but did not even see/?sense it.’
- (59) *Mari ainult tundis teda mängivat,*
 M[NOM] only sense-3s.PST him/her.PART play-PART_EVID
aga isegi ei näinud / aga isegi ei kuulnud.
 but even NEG see-NUD_PTCP but even NEG hear-NUD_PTCP
 ‘Mary only sensed him/her play, but did not even see/hear it.’

The effect of the tests in examples in (56)–(59) is less perspicuous and more context-dependent than the effect of the tests with an event that can be perceived in many ways. In addition, the tests in (56)–(59) show that the scale of strength of evidence for primarily audible events is different in an interesting way. Either vision or auditory perception provides complete evidence, triggering a different context, witnessed by example (56) with a vision verb and (57) with an auditory verb with the base encoded with the *mas*-infinitive form. When an auditory verb appears with the base event encoded with the partitive evidential as in (58), vision can provide stronger evidence. Alongside with that, a context is triggered where the complete evidence must rely on vision, as in an imaginary situation where the piano-playing is also judged upon its visual beauty or it is broadcast on TV. The other sensory evidence ranks below seeing and hearing (59). In sum, the partitive evidential indeed patterns with examples where the given means of perception cannot give the complete evidence as expected, since it is not the most reliable means for perceiving the salient properties of the given event. Clear scales of strength of evidence are composed for different events. Complete evidence is opposed to incomplete evidence, and reflected in the morphological marking. Crucially, completeness does not mean all possible evidence, but completeness according to an expectation about sufficient evidence.

In addition, the Estonian equivalents of the verb ‘seem’ as in (60)–(63), which have complement predicates with partitive evidentials, support a different semantic analysis from that of indirectness. The equivalents of the verb ‘seem’ are originally derived from perception verbs. The exact source of perception has

generally disappeared in the lexical meaning of them, as witnessed by the examples that are constructed with audible events. The exception is *kuulduma* ‘be heard’, where the source of perception is still part of the lexical meaning.

- (60) *Hääl näis tulvat*
 Voice[NOM] seem-3S.PST come-PART_EVID
mu enese pea seest.
 I.GEN own.GEN head.GEN inside-ELA
 ‘The voice seemed to come from the inside of my own head.’¹⁹
- (61) *Piiksatused paistsid tulevat otse kivist.*
 Squeak[NOM]PL seem-3S.PST come-PART_EVID directly stone-ELA
 ‘The squeaks seemed to come right out of the stone.’²⁰
- (62) *Kukki kuuldus külas olevat sadu,*
 Rooster.PART.PL seem-3S.PST village-INE be-PART_EVID hundred.PART.PL
 (*mõni häälitse üpris kummalise ärajoodud häälega.*)
 (some made quite strange drunken sounds)
 ‘There seemed to be hundreds of roosters in the village, some of them made strange drunken sounds.’²¹
- (63) *Heli tundus tulevat koopast.*
 Sound[NOM] seem-3S.PST come-PART_EVID dungeon-ELA.
 ‘The sound seemed to come from a dungeon.’²²

The analysis developed in the previous sections can be extended to the example set (59)–(62) as well. The meaning of the verb ‘seem’ does not encode reportative or any other type of indirectness, but the existence of incomplete evidence as opposed to the expected complete evidence. This language-internal semantic category has more in common with the cross-linguistically attested category of epistemic modality, since the semantic analysis relies on mental attitudes such as expectations and degrees of reliability.

19. Source: <http://www.physic.ut.ee/~larry/mardus/autorig/simpson/TULEK.html>

20. Source: http://hpworld.forumsplace.com/archive/o_t_t_75__fan-rollim%C3%A4ngud.html

21. Source: http://www.loodusajakiri.ee/eesti_loodus/artikkel877_858.html

22. Source: <http://www.obs.ee/cgi-bin/w3-mysql/algernon/jutt.html?id=74>

9. Partial access to the relevant course of events: Unexpected results and *verba sentiendi*

In order to separate the notions of indirectness and incomplete evidence, more examples are needed of a type of incomplete evidence that is not simultaneously indirect. These examples are provided by situations where the evidence of the concrete event as described by the predicate is full. Simultaneously, the event is only the final part of a sequence of related events for which there is no reliable evidence. Section 8 demonstrated that partitive evidential marking does not appear with complete evidence, for instance, with vision verbs and the conditions of perfect visibility. Considering the examples in Section 8, it is unexpected that visual perception verbs may still be compatible with the partitive evidential marked predicate and a situation of perfect visibility described in (64).

- (64) *Mari leidis/nägi end kodus olevat.*
 M[NOM] find/see.3S.PST self.PART home-INE be-PART_EVID
 ‘Mary found herself at home. Mary saw that she was at home.’

The only way for sentence (64) to have an interpretation is when the situation is presented as the result of some previous relevant events that cannot be properly reconstructed into what is expected to be the required whole of events that lead to what is presented as a result state in (64).²³ The example comes close to mirativity and past inferentials in other languages, as in example (65) from Khowar (Bashir 2006: 34) (glossing retained as in the original).

23. There seems to be a recent language change (Tamm 2008a). While Uuspõld (1969, 1985) has examples combining the verb *leidma* ‘find’ and verb marked with a *vat*-evidential (i), a present day user would prefer an elative-marked m-infinitive instead of the evidential (ii) in neutral contexts where no complement set of relevant events is evoked or where the visual perception of event is not obscured, rather the location of the event is unexpected. As situations of finding are typically interpreted to be verified by vision, the use of the partitive evidential has become infelicitous and in need of pragmatic conditioning containing special circumstances, as described above.

- (i) *Leidis poisi mängivat.*
 Find-3S.PST boy-PART play-PART_EVID
 ‘S/He found that the boy was playing.’
- (ii) *Leidis poisi mängimast.*
 Find-3S.PST boy-PART play-MAST_INF
 ‘S/He found that the boy was playing.’

- (65) *awá oreééi asít-am angáh hótam*
 I sleep(PST PERF-D-1s) awake become(PST-D)-1s
ki xúur kos dúr-a asteé-am
 I.saw.that other someone(OBL) house-LOC be(PST-I)-1s

'I had fallen asleep. When I awoke I realized that I was in someone else's house.'

Crucially, the evidence is not available for the full course of the relevant previous events that lead to the situation. There is a complement set of relevant events that is evoked as a presupposition in addition to the event or state described in the sentence. In sentence (64), Mary does not know or did not see how she ended up at home. A plausible situation to illustrate Example (64) is Mary opening her eyes and seeing that she was at home, but the events that brought her there were either wiped from her memory or inaccessible because she had been blind or blindfolded or in a dream. From among the relevant events that provide evidence for the whole situation, only the final result is perceived. The speaker does not know how she ended up at home, but she presupposes that there were events that lead to that situation. Note that this use has not much to do with beliefs or degrees of confidence about the proposition 'Mary is at home'. The speaker believes the proposition fully, which can be verified by the test of complete belief as applied in (37). The test of incomplete evidence, as in (24), can be applied if reworded to suit this context, as follows: *Mul ei ole kõikide asjassepuutuvate sündmuste kohta täielikku tõendusmaterjali* 'I do not have complete evidence about all the relevant events in this situation'. This wording would emphasize the lack of complete evidence; its affirmative counterpart would be odd as a continuation of Example (64).

The sentence is not a report either. The account of Northern Ostyak indirect evidence in Nikolaeva (1999) is based on the idea that the situation of getting the evidence about the event must not be identical to the event itself. Indeed, the relevant relationships seem to hold between events that contribute to getting the evidence. However, the relevant relation in these data is that the described event is part of a number of events that are required to contribute to getting evidence about the situation. More specifically, the final result state (being at home) is a part of a required full set of relevant events that are necessary to construct full evidence. The rest of the events that constitute evidence is missing from the relevant evidence set (e.g., leaving the working place, walking home, opening the front door, stepping in). The relevant set of events precede but also include the given result state (e.g., leaving the working place, walking home, opening the front door, stepping in, AND being at home). In this sense, the partitive has a truly partitive interpretation in Example (64). Again, the strength of the evidence does not amount to the expected degree. A partitive analysis is superior to an indirectness based account but via the notions of expectations and strength of evidence, compatible with an epistemic modality account.

10. Factors reducing the strength of evidence and the partitive evidential occurring with direct evidence

Section 8 and 9 showed that vision verbs do not appear with the partitive evidential base verb without special contexts, such as memory loss, dreams, or revelations. If evidence is complete, the base verb of a matrix vision verb is marked with the *mas*-infinitive morpheme, as the contrast between (39) and (40) demonstrates. In addition to special contexts, there are lexical devices that can be pinned down as elements that contribute to the reduction of the evidence. In Examples (54) and (55), the reduced strength of evidence was highlighted by the use of lexical items such as *kusagi* ‘somewhere’ and *kedagi* ‘somebody’. This subsection discusses impersonalization as a grammatical device that contributes to the reduction of the strength of evidence. In an impersonal sentence, the identity of the agent is not presented by the speaker. This device may reduce the strength of evidence about the event. An impersonal sentence where the identity of the experiencer is not disclosed has an embedded base verb with partitive evidential encoding, as exemplified in sentence (66).

- (66) *Marit nähti koju tulevat.*
 M.PART see-IMPERS.PST home-ILL come-PART_EVID
 ‘Mary was seen to come home.’

Impersonalization (66) changes the properties of sentences with vision verbs, which is an effect that is difficult to account for in terms of indirectness but not in terms of an analysis that relies on the degree of strength of evidence. In case of impersonalization, the speaker-message relationship remains identical. The contextually fixed expectation of the strength of evidence that is compared to actual evidence provides a better ground for the explanation for the choice of the form of the base verb. In addition, no syntactically or lexically stated restrictions can be established between the impersonal and the partitive evidential, since there is still variation in the choice of the form of the base verb, as witnessed by (67).

- (67) *Teda nähti koju tulevat/tulemas...*
 him/her.PART see.IMPERS.PST home come-PART_EVID /COME-MA_INF
 ‘S/he was seen come home.’

The evidence is just more likely to be incomplete if the speaker has no clearly identifiable perceiver (or the speaker is more likely to simultaneously present evidence as incomplete and not to disclose the identity of some participants in the event). Specification about a possible perceiver clearly adds evidence. In (68), the continuation ‘George was at home then’ is understood as ‘George was a witness of the base event’ if the *mas*-infinitive is chosen in (67) and as not witnessing the base event if the partitive evidential is chosen.

- (68) *Jüri oli siis kodus (ja nägi).*
 J[NOM] be.3S.PST then home-INE and see.3S.PST
 ‘George was at home then,’ the continuation of (67) with the
 partitive evidential
 (‘George was at home then and saw it,’ the continuation with the
mas-infinitive (67))

Also, a focus on the vision verb eliminates the variation (69), and only the *mas*-infinitive form is compatible with focusing the source of evidence that is normally associated with complete evidence.

- (69) *Teda nähti koju #tulevat/tulemas.*
 him/her.PART see.IMPERS.PST home.ILL come-PART_EVID/COME-MAS_INF
 ‘S/he was seen come home.’

Therefore, an analysis in terms of the strength of evidence can be preferred over a solely indirectness or modality (belief) based approaches to the semantics of the partitive evidential.

11. Summary of the data analysis and discussion

In all examples with the partitive evidential, it was shown that the speaker presents the evidence for the event as incomplete in comparison to the expectation. The following summarizes the uses of the partitive evidential.

The partitive evidential appears in embedded environments and has an independent use as well. The independent use is compatible with Aikhenvald’s (2004) definition of reported (indirect) evidentiality, which excludes epistemic modality. This form is not an inferential. Contexts expressing inferential evidentiality are incompatible with the partitive evidential, and modifying the partitive evidential predicate with an inferential adverb is anomalous. The evidential is not a pure reportative, but a reportative combined with a judgment of incomplete evidence (or the speaker’s decision to present the evidence as such). The independent use of the partitive evidential presupposes another speaker of the proposition *p*, and an expectation about sufficient, complete evidence for *p*. It asserts that the evidence for *p* is incomplete. The evidence can but does not have to be incomplete, because it is provided by the mediation of another speaker.

Combinations of an embedded partitive evidential verb and *verba dicendi* are the basis for the meaning extension to reported evidentiality in independent, non-embedded clauses. The partitive evidential encoding of the base verb of the matrix verbs of saying may be understood as an instance of embedded reportative. However, the existence of the indicative clause containing a verb of saying

in the matrix suggests that report is not a necessary or sufficient condition for encoding partitive evidentials. Semantically incomplete (indirect) evidence can still count as complete evidence as far as morphological marking is concerned in embedded environments with the equivalent of the Estonian *that*-clause, or when used independently. Only indirect evidence triggers the morphological marking of the partitive evidential in an independent environment or in a complement *that*-clause. The rest of the occurrences are control or raising constructions. On the one hand, the partitive evidential encodes that evidence may be incomplete because it is indirect, uncertain, or not perceived by the appropriate combination of senses. On the other hand, those factors do not determine the morphological encoding, but a range of morpho-syntactic encodings, one of which contains the partitive evidential. The morphological form has its distinct semantics, but this distinct semantics does not necessarily trigger the morphological form. The sentences with the verbs of saying and a partitive evidential express incomplete evidence about the situation, while there is a contextually determined expectation about complete evidence about the situation.

The perception verbs form a scale ordered according to the strength of evidence. The scale is partly dependent on encyclopedic knowledge about which type of evidence is more relevant for a certain type of event. Testing the sentences with the partitive evidential and matrix perception verbs has shown that the evidence forms a scale, visual evidence corresponding to the sufficient degree of evidence; auditory evidence corresponds to a lower degree and any other sensory type of evidence corresponds to an even lower degree of evidence on the evidence scale. The data show that either vision or auditory perception provides complete evidence, depending on the properties of the event. The difference is clearly reflected in the morphological encoding of the base. The choice is between the partitive evidential and the *mas*-infinitive form. When an auditory verb appears with the base event encoded with the partitive evidential, vision can provide stronger evidence in pragmatically conditioned sentences. For instance, a context is triggered where the complete evidence for an auditory event must rely on vision, as in an imaginary situation where the piano-playing is also judged upon its visual beauty or watched on TV. The other sensory evidence ranks below seeing and hearing. In sum, the partitive evidential occurs with examples where the given means of perception cannot give the complete evidence as expected, since it is not the most reliable means of perceiving the given event. Clear scales of strength of evidence are composed for different events. Complete evidence is opposed to incomplete evidence, and reflected in the morphological marking. Those examples are relevant, since they show the relativity of complete evidence. Complete evidence is not to be understood as all possible evidence available in the imagination of the speaker. Instead, the completeness of evidence is defined in comparison to

an expectation about sufficient evidence for each particular event in its each particular setting.

Support for a partitive based analysis comes from constructions with vision verbs and verbs such as 'find'. In those constructions, there is no complete evidence for the expected complete course of the relevant related, previous events that lead to the situation. In an example sentence, the subject is described in a situation where the access to the events that led to the final state is impossible. It is not known how the subject ended up at home, but it is presupposed that there were events that lead to that situation. In addition, modal and indirectness approaches are difficult with other instances where the degree of evidence is toned down. In addition to special contexts, such as dreams, revelations, weird unexpected situations as in horror stories, there are devices that can be pinned down as elements that contribute to the reduction of the strength of evidence and partitive evidential encoding. For instance, referentiality is reduced by the lexical items such as *kusagil* 'somewhere' and *kedagi* 'somebody', or by means of impersonalization.

The specific semantics of the partitive evidential has evolved as a consequence of its historical development from an aspectual partitive object. In case of evidentiality, the morphological encoding is sensitive to the degree of strength of evidence for the event; in case of aspect, the morphological encoding is sensitive to the degree of event realization. The forms without partitive reflect a match between the expectations and the knowledge, judgment or presentation about the actual event. In an indicative sentence, the strength of evidence is sufficient as an implicature; this degree of strength of evidence defines the maximal point on the scale of strength of evidence for the event. In a sentence with the total object case, the event has an endpoint that has been reached; therefore, the realization of the event is sufficient as compared to the expectation. The partitive forms encode that in comparison to the expectation, the reality falls short – the maximal point on the scale is not reached. On the scale of evidence, the strength of evidence does not amount to the defined maximum. On the scale of event realization, the event has not reached the endpoint, the maximal point, either. In other words, partitive encodes that something is less than the expectation, incomplete. In case of the partitive evidential, it is the evidence for the event, and in case of the partitive object, it is the realization of the event. Table 2 represents the parallel between aspect and evidentiality.

Table 2. Events, evidence, and partitive

	Partitive marking	No partitive marking
Evidentiality	incomplete evidence	complete evidence
Aspect	incomplete event	complete event

The sections above presented the data that show that the partitive-related analysis that relies on the completeness and strength of evidence and a comparison to the expected evidence can be preferred over a solely indirectness or modality based approaches to the semantics of the partitive evidential. In all discussed cases, the evidence presented in sentences containing the partitive evidential does not add up to the expected evidence on a scale. The maximal point of this scale of strength of evidence is defined by an expectation about sufficient complete evidence.

12. Summary

The Estonian evidential, epistemic modal and aspectual categories share similarities as the result of the diachronic development of the partitive case. The Modern Estonian partitive evidential is originally an instance of aspectual case-marking. More specifically, it was a partitive-marked personal or impersonal present participle. The partitive case started off as an instance of a semantic separative case marking, developing into aspectual case marking, and through a stage of subjunctive-conjunctive, followed by a stage of epistemic modality marking of embedded predicates, gradually crystallized as a reportative evidential in the Estonian system. These stages of the development of the partitive case are still visible in Modern Estonian examples. In Modern Estonian, partitive is cross-categorial, being part of forms that mark different lexical and functional classes—main predicates, embedded predicates, and objects. The claim of this paper is that the semantics has developed in a strikingly uniform way, but in different functional categories and semantic domains. The Estonian partitive evidential comprises evidential and epistemic modal meanings. The partitive forms have transparent scalar semantics in both categories, denoting either an incomplete event or incomplete evidence. Incompleteness is understood as an insufficient, non-maximal degree of event realization or insufficient strength of evidence compared to the speaker's expectation of a completed event or complete evidence. Expectations about completed events and complete evidence define the upper bound to the scales related to event realization and strength of evidence. The partitive evidential encodes a difference between the degree of strength of evidence available to the speaker and what the speaker fixes as the upper bound to the scale, the maximal degree of required evidence for (the relevant details of) the event in its context. The phenomena related to the partitive evidential show that the partitive semantics has not only carried over from the NP domain to the predicate aspectual domain, but it has pervaded the Estonian TAM system more deeply than previously assumed, providing support to those approaches that regard partitive as a semantic case.

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