On the interpretation of long-distance agreement in Border Lakes Ojibwe

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Abstract The aim of this article is to show that Long Distance Agreement (LDA) in Border Lakes Ojibwe (Central Algonquian) correlates, not with topicality as claimed in past literature, but with evidentiality (direct evidence). Another important observation introduced in this article is that LDA in this language typically occurs in contexts involving verbs of perception and cognition marked as TRANSITIVE ANIMATE. Based on these facts, we propose that these verbs are associated with a set of ϕ features on matrix v while selecting an Evidential feature. The latter is associated with an EPP property allowing the embedded external or internal argument to raise to the specifier of embedded C. Finally, we show that LDA in Border Lakes Ojibwe has epistemic extensions, to do with probability and speaker's commitment towards the information expressed and we propose that the evidential effect exhibited by LDA in the language under investigation is of the epistemic rather than illocutionary type. The finding that Ojibwe uses agreement to signal evidentiality adds to the set of existing evidential extensions of non-evidential categories (e.g. the perfect in Georgian, participles in Lithuanian, the conditional in French) while bolstering the view that verbal agreement can correlate with special semantics, beyond mere concordance.

Keywords: long distance agreement - interpretation - perception/cognition verbs - evidentiality - features - Ojibwe - Algonquian - source of information - epistemic commitment

1 Introduction

Traditionally, the trigger for long distance agreement (LDA) in Algonquian languages is claimed to be associated with topicality (Rhodes, 1994; Branigan & MacKenzie, 2002; Ritter & Rosen, 2005; Bjorkman & Zeijlstra, 2019). The aim of this article is to show that LDA in Border Lakes Ojibwe (Central Algonquian) correlates, not with topicality, but with evidentiality.[1] In particular, we show that LDA in Border Lakes Ojibwe typically occurs in

[1]Ojibwe has many dialects: Saulteaux, Chippewa, Oji-Cree, Odawa, Eastern Ojibwe, etc. (Valentine, 2001). This article focuses on Border Lakes Ojibwe, a variant of Ojibwe, spoken in Northwestern Ontario and parts of Northern Minnesota. Abbreviations used in this article: ANIM = animate; AI = animate intransitive; COMP = complementizer; CDN = conjunct dubitative neutral; DEM = demonstrative; DET = determiner; DIR = direct; DOM = direct object marker; ERG = ergative; F = feminine; FUT = future; INAN

contexts involving verbs of perception and cognition marked as TRANSITIVE ANIMATE (TA) and that, in this case, the subject referent of the attitude verb has direct evidence for the at-issue content described by the embedded clause. In contrast, verbs of perception and cognition marked as ANIMATE INTRANSITIVE (AI) do not trigger LDA and, in this case, the subject referent has indirect evidence for the at-issue content described by the embedded clause. This contrast in source of information is a novel observation that places LDA in a new light.[2] Topicality notwithstanding (Rhodes, 1994; Branigan & MacKenzie, 2002; Ritter & Rosen, 2005; Bjorkman & Zeijlstra, 2019), work on the semantics of LDA is seldom in the literature. Our article aims to fill that gap.

To illustrate LDA, consider the examples in (1) from Border Lakes Ojibwe. In (1a), there is no agreement between the matrix verb and the third person embedded subject—the matrix verb appears in the AI form, where agreement only appears with the first person matrix subject. In contrast, with (1b), we have an example of LDA where the matrix verb, now in the TA form, agrees with the third person embedded subject (LDA related morphemes shown in bold). The verb stem in (1a) includes a root *giken-* and the verbalizing head *-am*, which encodes transitivity and animacy, while the verb stem in (1b) is composed of the root *giken-* and the verbalizing head *-im* (on Algonquian verb stems, see Brittain 2003, Newell and Piggott 2006 as well as Section 2.1 below).[3,4]

(1) a. nin-gikendam mooz mindido-d
1-know.AI moose big-3
'I know that the moose is big' (indirect evidence)

= inanimate; INF = infinitive; IC = initial change; M = masculine; MOD = agreement with negation and conjectural evidential; NEG = negation; NOM = nominative; OBJ = object; OBV = obviative; Q = question marker; PART = particle; PEJ = pejorative; PFV = perfective; PRES = present; PDUB = preterit dubitative; PL = plural; PROG = progressive; PROX = proximate; RPTREPORT = reportative; SG = singular; SUBJ = subjunctive; TA = transitive animate; 1 = first person; 2 = second person; 3 = third person.

[2]LDA has been a popular topic in the syntactic literature for a number of years (Rhodes, 1994; Bliss, 2008; Bruening, 2001; Polinsky & Potsdam, 2001; Branigan & MacKenzie, 2002; Boeckx, 2004; Bobaljik & Wurmbrand, 2005; Bhatt, 2005; Ritter & Rosen, 2005; Etxepare, 2006; Bliss, 2008; Lochbihler & Mathieu, 2016; Hamilton & Fry, 2016; Bjorkman & Zeijlstra, 2019).

[3]Unless otherwise indicated, the natural language data reported in this paper comes from novel fieldwork conducted between 2019 and 2024 by Christopher Hammerly, a member of the White Earth Nation in Minnesota, with elder and language keeper Nancy Jones (NJ), from Nigigoonsiminikaaning First Nation in Northwestern Ontario. The variety spoken in this area, known as Border Lakes Ojibwe, does not have a distinct ethnologue entry or ISO code, but is generally grouped with Southwestern Ojibwe [ciw] or under the macro-code for the Ojibwe languages [oji]. Data was collected with typical fieldwork interview techniques and following both community and university ethical protocols, both in person in Ontario and Minnesota, and over video conference software. In most cases, Christopher Hammerly provided a sentence in Ojibwe with a context and asked whether the sentence was acceptable in that context or in general. In some cases, an English sentence was given first, which was then translated into Ojibwe and evaluated. Natural language data and judgments were audio recorded and recorded in writing. Audio recordings, which have been shared with other community members as requested (no community archive currently exists), were generally used by Christopher Hammerly to confirm accurate transcription of the natural language data and judgments following each session.

[4]While verbs in *-am* are analyzed as objectless AI verbs in this article (following Piggott, 1989; Valentine, 2001), it must be noted that they are sometimes analyzed as objectless TI verbs (Nichols, 1980). For the purpose of this article, nothing hinges on this difference. What is important is that the verb associated with LDA is of a different morphological form from that of the verb associated with non-LDA.

b. nin-gikenim**-aa** mooz mindido-d
1-know.TA**-3** moose big-3
'I know that the moose is big' (direct evidence) [NJ 11.07.19]

Based on the observed variation in source of information between (1a) and (1b), we propose that, in Border Lakes Ojibwe, certain verbs of perception/cognition (e.g. 'see', 'hear', 'know') select an Evidential feature. The Evidential feature is a special flavour of C that is not associated with all Border Lakes Ojibwe attitude verbs, and not necessarily with all verbs of perception/cognition. The evidential effect is lexically determined and source of information encoded by the Evidential feature varies according to the verb stem being used. In the case of TA verbs of perception/cognition, the Evidential feature expresses direct evidence, while in the case of AI verbs of perception/cognition, the Evidential feature expresses indirect evidence. In addition, the Evidential feature when selected by a TA verb is associated with an EPP property that attracts the EA or IA to the specifier of C.

Although the TA verb stem is an essential feature of an LDA construction in Border Lakes Ojibwe (agreement with the embedded argument is possible in the first place because matrix v is associated with a set of φ-features and it is the verb that selects the Evidential feature), it is the long distance agreement itself that signals direct evidence. In standard cases, as shown in (2), agreement is used to simply track arguments. The verbs stem is the same as the one used in (1b), but the third person suffix simply marks agreement with 'him'. In this case, no direct (or indirect) evidence is conveyed.

(2) nin-gikenim**-aa**
1-know.TA**-3**
'I know him/her.'

Since the primary role of agreement in Border Lakes Ojibwe (and in Algonquian generally) is not to mark the source of information, but simply to track arguments, we propose that the marking of direct evidence in Border Lakes Ojibwe is a strategy of evidentiality in the sense of Aikhenvald (2004). The argument for an evidential effect of LDA is new. Many Algonquian languages, including Border Lakes Ojibwe, have a fully grammaticalized evidential system by way of special suffixes (Cree, Mikmaq, Potawatomi, Menominee, Cheyenne, see James et al., 2001; Blain & Déchaine, 2007; Murray, 2010, 2016), but what we describe is different in that it is a special evidential extension of another grammatical phenomenon.

The finding that Border Lakes Ojibwe uses agreement to signal variation in the source of information (direct vs. indirect) adds to the set of existing evidential extensions of non-evidential categories (e.g. the dubitative mood in Algonquian, the perfect in Georgian, participles in Lithuanian, the conditional in French, Aikhenvald, 2004, 105-107) while bolstering the view that verbal agreement can correlate with special semantics, beyond mere concordance.

Section 2 provides background information on clause structure in Ojibwe. Section 3 shows how LDA in Border Lakes Ojibwe correlates with direct evidence, applying standard tests found in the literature related to at-issueness, scope, and epistemic commitment. Section 4 provides an analysis. Section 5 concludes.

2 Preliminaries

This section provides background information about clause structure (Section 2.1) and gives a list of arguments against a putative prolepsis analysis of LDA in Border Lakes Ojibwe (Section 2.2).

2.1 Clause structure

Algonquian languages – Ojibwe included – have two major types of inflectional paradigms known as the INDEPENDENT and CONJUNCT orders. The independent order appears in declarative matrix clauses, while the conjunct order appears with embedded clauses, questions, participles, and focus constructions (Bloomfield, 1957; Brittain, 2000; Cook, 2008). While there is shared morphology across the paradigms, there are a number of key differences. Consider the two forms in (3).

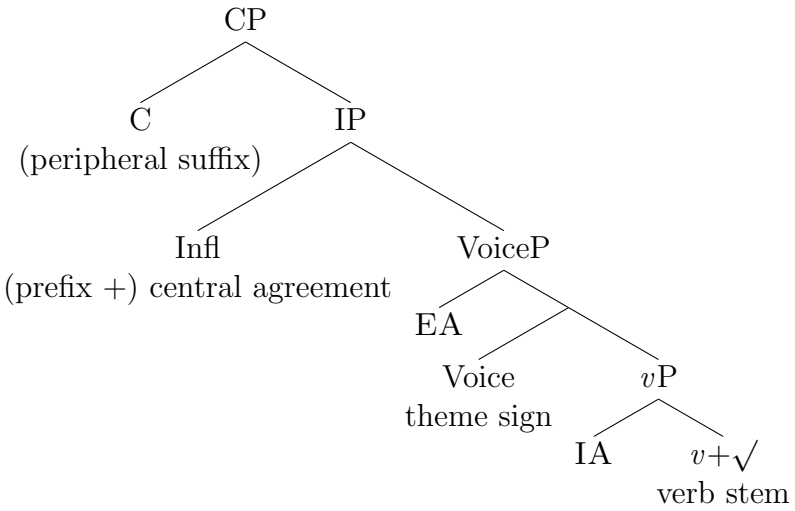
(3) a. o-waabam-aa-waa-n [Independent]
3-see.TA-3-PL-3′
'They (PROX.PL) see them (OBV.SG)'

b. waabam-aa-waad [Conjunct]
see.TA-3-3PL
'...they (PROX.PL) see them (OBV.SG)'

In the independent order (3a), there are four pieces of agreement morphology known as the person prefix (*o-*), the theme sign (*-aa*), the central agreement marker (*-waa*), and the peripheral suffix (*-n*). In the conjunct order, only two markers appear: the theme sign (*-aa*) and the central agreement marker (*-waad*).

Following the work of Oxford (2014, 2018) and others, we adopt a morphosyntactic system where pieces of morphology in the Algonquian verbal complex correspond to specify positions within a phrase marker. These correspondences are schematized in (4), where the theme sign is recognized as the realization of Voice, the person prefix and central agreement together as the realization of Infl, and the peripheral suffix as the realization of C. Broadly, the lack of person prefix and peripheral suffix in the conjunct order is attributed to clause typing differences. The tree also shows our assumptions regarding argument positions within the VP: The external argument (EA) or agent is merged as specifier to VoiceP, while the internal argument (IA) or patient is merged as specifier to v. Finally, the verb stem consists of the root ($\sqrt{}$) and the verbalizing head v.

(4)



Following Oxford (2014), we assume that the structures for intransitive clauses are identical to those that were proposed for transitive clauses except for the absence of an argument (and, for unaccusatives, the absence of Voice^0). Following Chomsky (2007, 2008), we take agreement relations to be associations between uninterpretable φ-features and interpretable φ-features, and movement (internal Merge) of XPs to follow from the introduction of a relativized EPP property on the relevant functional heads (Hammerly, 2024b). Semantic effects such as topicalization and focus are due to the property of the relevant functional head and the position of the moved CP.

While agreement relations are supposed to be local Chomsky (2000, 2001, 2007, 2008), LDA appears to create situations where agreement is across a phase. For example, in Hindi (5), the matrix verb *chaah* 'want' agrees with *kitaab* 'book', which is not an argument of *chaah* 'want'.

(5) Vivek-ne [kitaab paṛh-nii] chaah-ii [Hindi]
Vivek-ERG book.F read-INF.F want-PFV.FSG
'Vivek wanted to read the book.'
(Bhatt, 2005, p. 760)

Such Hindi examples have, in fact, been argued to involve reduced embedded domains. Much evidence points to the view that the embedded clause is non-finite, with Agree into the non-finite clause under restructuring as a likely account of LDA for this language, (Corbett, 2006; Richards, 2009) as well as for Tsez, since there is no evidence of an intermediate C in either language (Richards, 2009).[5]

In Border Lakes Ojibwe, on the other hand, the clause is not defective: the embedded verb is always tensed/finite (there are no infinitives), indicating the embedded clause is not a reduced clause (although complementizers in Ojibwe are often silent, they sometimes surface as *awe* 'that', *giishpin* 'if/whether', Valentine (2001)). In (6), we see that both the non-LDA sentence (6a) and the LDA alternative (6b), contain an embedded verb *nagamo* 'sing' that carries past tense morphology, i.e. *gii-* (in addition to agreement, here third

[5]See also Itelmen (Bobaljik & Wurmbrand, 2005).

person).[6,7]

(6) a. In-gii-noondam Mary gii-nagamo-d
1-PAST-hear.AI Mary.PROX PAST-sing.AI-3
'I heard that Mary sang.'
b. In-gii-noondaw-**aa** Mary gii-nagamo-d
1-PAST-hear.TA-DIR Mary.PROX PAST-sing.AI-3
'I heard Mary sing.' [NJ 11.06.19]

As mentioned already in the introduction, note that the embedding verb 'hear' in Border Lakes Ojibwe is either marked as Animate Intransitive (non-LDA) or Transitive Animate (LDA). In Algonquian, the paradigms of agreement and verbal morphology are commonly split four-ways based on transitivity and the animacy of arguments (e.g. Bloomfield, 1957): There are TAs (TRANSITIVE ANIMATE; a transitive verb with an animate theme), TIs (TRANSITIVE INANIMATE; a transitive verb with an inanimate theme), AIs (ANIMATE INTRANSITIVE; an intransitive verb with an animate argument), and IIs (INANIMATE INTRANSITIVE; an intransitive verb with an inanimate argument). These are characterized by differences in a morpheme known as the *verb final*, which is recognized as the realization of the verbal categorizing head v (Brittain, 2003; Branigan et al., 2005; Mathieu, 2008).

2.2 Prolepsis?

In this section, we show that the phenomenon under investigation in this article is truly LDA, and not prolepsis.[8] On the prolepsis account, LDA is only an illusion: agreement is local, i.e. between the matrix verb and a proleptic object that surfaces in the main clause (Dahlstrom, 1995). The proleptic object is coreferential with an argument in the embedded

[6]In this respect, LDA verbs are not ECM verbs: 1) all embedded clauses in Ojibwe are finite whereas ECM complements are tense deficient (Johnson, 1991; Bowers, 1993; Kitaoka, 1995; Bošković, 1997); 2) ECM clauses lack referential (or relative) tense, requiring simultaneous interpretation with the tense of the matrix (Higginbotham, 1983), a constraint not seen in Ojibwe since each clause must have its own tense; 3) Ojibwe LDA is possible with both embedded subjects and objects whereas ECM is only possible with subjects; 4) ECM is case-related whereas Algonquian languages do not have case (Ritter & Rosen, 2005).

[7]LDA is subject to much variation across the Algonquian family. Previous work on LDA across the family has identified three basic types of LDA: 1) Free LDA (either the EA or IA can be targeted for LDA). Attested in Passamaquoddy (Bruening, 2001; LeSourd, 2010), Innu (Branigan & MacKenzie, 2002), and some dialects of Ojibwe (Kitigan Zibi Ojibwe/Algonquin, Lochbihler & Mathieu, 2016, see also Rhodes (1994))); 2) Agent LDA (only the EA can be targeted for LDA). Attested in Plains Cree (Dahlstrom, 1991) and a small subset of Ojibwe speakers (Rhodes, 1994); 3) Highest-Ranked LDA (only the highest-ranked argument on the person-animacy hierarchy – 1 and 2 rank higher than 3, proximate ranks higher than obviative, etc. – can be targeted for LDA). Attested in the Listuguj dialect of Mi'gmaq (Hamilton & Fry, 2016) and larger subset of Ojibwe speakers (Rhodes, 1994). Border Lakes Ojibwe shows a mixture of all three types depending on the particular configuration of arguments within the embedded clause. Non-Local only ($3 \leftrightarrow 3'$) targets Highest-Ranked LDA (3 = proximate, 3' = obviative); Local only ($1 \leftrightarrow 2$) exhibits Free LDA; Mixed configurations ($1/2 \leftrightarrow 3$) give variable patterns: with $1/2 \rightarrow 3$, LDA targets the first/second person agent (Agent LDA) and with $3 \rightarrow 1/2$, LDA freely targets either the agent or patient (Free LDA). See Hammerly & Mathieu (2024) for a syntactic analysis of these facts.

[8]Section 2.2 is a response from a reviewer's comment, asking whether LDA in Ojibwe could not simply be prolepsis.

clause, and thus no long-distance agreement is manifested. Under this approach an LDA sentence such as (6b) is equivalent to the English sentence 'I heard of Mary that she sang'.

There exist many arguments against the prolepsis account of LDA (see, for example Branigan & MacKenzie, 2002, for Innu-Aimûn). We will mention five. First, as Branigan and MacKenzie (2002) point out for Innu, if there is a proleptic object, it must be *pro* and a sentence such as (6b) would look like (7).

(7) In-gii-noondaw-**aa** pro_i [$_{CP}$ gii-nagamo-d Mary$_i$]
1-PAST-hear.TA-DIR PAST-sing.AI-3 Mary
'I heard Mary sing.'

However, coreference of *Mary* with the c-commanding *pro* violates Principle C. We know independently that Principle C is active in Ojibwe. Consider (8) where, according to the speaker consulted, coindexation between 'she' and 'Ziibiins' is impossible. 'Ziibiins' must refer to someone other than 'she'.[9]

(8) Gii'-ikido gii'-niimi-d Ziibiins dibikong
PST-say.TA.3 PST-dance.AI-3 Ziibiins last.night
'She$_1$ said that Ziibiins$_{2/*1}$ danced last night.' [NJ 08.16.23]

In the same vein, the following sentence is only good if there are two people who happen to be named 'Ziibiins':

(9) Ziibiins o-waabam-aa-n Ziibiins-an waabamojichaagwaan-ing
Ziibiins 3-see-DIR-3′ Ziibiins-OBV mirror-LOC
'Ziibiins$_1$ sees Ziibiins$_{2/*1}$ in the mirror.' [NJ 08.16.23]

Second, whereas proleptic objects can freely refer to DPs within conjoined DPs (10), in the case of LDA, this is not possible. This has been shown by Branigan & MacKenzie (2002) for Innu and Frantz (1978) for Blackfoot. In other words, prolepsis is unbounded and not sensitive to islands (Lohninger et al., 2022), but LDA is sensitive to islands.

(10) I said of Tanya$_i$ that [she$_i$ and you] would work well together.
(Branigan and MacKenzie 2002:392)

In Border Lakes Ojibwe, LDA is restricted just like Blackfoot. LDA cannot be triggered by one DP inside a conjoined DP. Consider the baseline with no LDA in (11).

(11) in-gii-noondam giinawaa Ziibiins gii'-niimi-yeg dibikong
1-PST-hear.AI 2PL Ziibiins PST-danceAI-2PL last.night
'I heard that you(pl) and Ziibiins were dancing last light.' [NJ 08.16.23]

LDA with *Ziibiins* is not possible regardless of word order of the pronoun/name, as shown

[9]This is what the speaker offered up instead, tagging the verb *say* on at the end:

(i) Ziibiins gii'-niimi dibikong, ikido
Ziibiins PST-dance.AI.3 last.night say.3
'Ziibiins$_1$ danced last night, she$_1$ said.' [NJ 08.16.23]

by (12a) and (12b).

(12) a. *in-gii-noondaw-aa giinawaa Ziibiins gii'-niimi-yeg dibikong
1-PST-hear.TA-3 2PL Ziibiins PST-dance.AI-2PL last.night
Intended: 'I heard of Ziibiins$_i$ that you(pl) and her$_i$ were dancing last light.'
b. *in-gii-noondaw-aa Ziibiins giinawaa gii'-niimi-yeg dibikong
1-PST-hear.TA-3 Ziibiins 2PL PST-dance.AI-2PL last.night
Intended: 'I heard of Ziibiins$_i$ that you(pl) and her$_i$ were dancing last light.'
[NJ 08.16.23]

The same results obtain with a different embedding verb, e.g. 'see'. Third person agreement on the matrix verb with the third person argument inside the embedded conjoined phrase is impossible.[10]

(13) *in-gii-waabam-aa giinawaa Ziibiins gii'-niimi-yeg dibikong
1-PST-see.TA-3 2PL Ziibiins PST-dance.AI-2PL last.night
Intended: 'I saw you(pl) and Ziibiins dancing last light.' [NJ 08.16.23]

LDA is possible with second person plural, thus targeting the overall phrase, as shown in (14).

(14) gi-gii-waabam-in-im giinawaa Ziibiins gii'-niimi-yeg dibikong
2-PST-see-2-2PL 2PL Ziibiins PST-dance.AI-2PL last.night
'I saw you(pl) and Ziibiins dancing last light.' [NJ 08.16.23]

Third, as shown by (15b), LDA is possible with wh-phrases, but a proleptic pronoun cannot be coreferential with a wh-phrase, as shown by (16).

(15) a. gi-gikendam ina awenen gaa'-miigwechiwi'-aa-d ikwe-wan?
2-know.AI Q who.PROX PAST.IC-thank-3-3 woman-OBV
'Do you(sg) know who thanked the woman?'
b. gi-gikenim-**aa** ina awenen gaa'-miigwechiwi'-aa-d ikwewan?
2-know.TA-**3** Q who.PROX PAST.IC-thank-3-3 woman-OBV
'Do you(sg) know who thanked the woman?' [NJ 11.06.19]

(16) a. *Do you know of him who is laughing?
b. *Do you know of them who is laughing?

Fourth, prolepsis is very productive and is possible in basically any context where a full propositional CP occurs (Lohninger et al., 2022). In Border Lakes Ojibwe, on the other hand, LDA is restricted to a few verbs, that of perception and knowledge.

Finally, prolepsis involves referential, specific, or generic NPs, and targeted NPs can be said to be topicalized (Lohninger et al., 2022), but as we shall see in the next section, there is evidence against the idea that LDA correlates with topicalization.

To conclude, the arguments against the prolepsis analysis are summarized in (17).

[10]Note the absence of a conjunction word in such examples. This is common in Ojibwe (although *miinawaa* 'and' exists).

(17) *Summary of arguments against a prolepsis analysis*

a. Using *pro* for LDA would trigger a Principle C violation
b. Unlike prolepsis, reference to DPs within conjoined DPs in LDA contexts is impossible
c. LDA is possible with wh-phrases whereas prolepsis does not allow it
d. LDA is restricted to verbs of perception and knowledge whereas prolepsis is much freer
e. Prolepsis correlates with topicalization whereas LDA does not

3 The meaning of LDA

This section has four aims. First, we introduce evidence against the idea that LDA in Border Lakes correlates with topicality. Second, we review cases involving the verbs 'see', 'hear', and 'know' and we argue that LDA with such verbs consists of a strategy of evidentiality (in the sense of Aikhenvald 2004). Third, we provide evidence that, in Border Lakes Ojibwe, LDA constructions, the main clause is not-at-issue while the embedded clause is at-issue. Fourth, we argue that LDA sentences correlate not only with direct evidence but with strong(er) epistemic commitment while non-LDA alternatives correlate not only with indirect evidence but with weak(er) epistemic commitment.

3.1 LDA and topicality

As pointed out by Bruening (2001), for a long time, linguists working on Algonquian LDA found it difficult to pinpoint its exact semantics – Frantz (1978:96) suggested simply that LDA is used "if the complement is emotive". However, in more recent years, it has been claimed that LDA expresses "aboutness" or topicality (Branigan & MacKenzie, 2002). In the Algonquian literature, a typical translation for a case like (18b), where LDA is triggered, is thus 'I know that, as for the moose, it is big', leaving (18a) with no LDA with no such "topic" interpretation. This claim is often given without justification.

(18) a. nin-gikendam mooz mindido-d
1-know.AI moose big-3
'I know that the moose is big'

b. nin-gikenim**-aa** mooz mindido-d
1-know.TA**-3** moose big-3
'I know that the moose is big' [NJ 11.07.19]

Typically, it has been proposed that the argument that agrees with the matrix verb moves to the specifier of the embedded CP (Branigan & MacKenzie, 2002) providing a configuration whereby the argument is in a topic position and also accessible to a higher probe (i.e. on the matrix transitive v).

There are problems, however, with the idea that the argument undergoing long-distance agreement is a topic. First, as noted by Bruening (2001, p. 282) for Passamaquoddy, wh-elements like 'who' and 'what' can trigger LDA in Border Lakes Ojibwe, as seen in (19b) (this is, in fact, also the case in Innu, as noted by Branigan and

MacKenzie 2002). There is general agreement that wh-elements are foci rather than topics (Chomsky, 1977; Brody, 1990; Rizzi, 1997). (19a) is the non-LDA version of (19b).

(19) a. gi-gikendam ina awenen gaa'-miigwechiwi'-aa-d ikwe-wan?
2-know.AI Q who.PROX PAST.IC-thank-3-3 woman-OBV
'Do you(sg) know who thanked the woman?'
b. gi-gikenim-**aa** ina awenen gaa'-miigwechiwi'aad ikwewan?
2-know.TA-**3** Q who.PROX PAST.IC-thank-3-3 woman-OBV
'Do you(sg) know who thanked the woman?' [NJ 11.06.19]

The wh-phrase is not interpreted as a topic ((19b) does not mean something like 'Do you know, as for who, thanked the woman?', which is hardly interpretable as a question), but as a focus, as are wh-phrases generally (Rizzi, 1997).

Second, as also noted by Bruening (2001, p. 282) for Passamaquoddy, LDA is possible with universal quantifiers such as 'everyone' (see also Branigan and MacKenzie 2002 for Innu), as in (20b), when it is well known that universal quantifiers tend to be focused elements rather than topics: for example, they are interveners in wh-questions in theories where intervention effects follow from focus interpretation (Beck, 2006) and they do not topicalize very well (Rizzi, 1997).

(20) a. nin-gii-noondam gakina awiya wii-pi-izhaa-waa-d
1-PAST-hear.AI everyone FUT-towards-go-PL-3
'I heard everyone will be coming (someone told you about it).'
b. nin-gii-noondaw-**aa-g** gakina awiya wii-pi-izhaa-waa-d.
1-PAST-hear.TA-**3-pl** everyone FUT-towards-go-PL-3
'I heard everyone will be coming (everyone called to tell you).' [NJ 11.06.19]

The control examples in (21) illustrate that topicalization is otherwise possible with non-quantified phrases. The object NP *awe ikwe* 'that woman' in (21a) moves to the front of the sentence in (21b), presumably into a topic phrase.

(21) a. nin-gichi-apiitenim-aa awe ikwe
1-really-honor-3 DEM.PROX woman.PROX
'I am really honoring that woman.'
b. mii awe ikwe gechi-apiitenim-ag
MII DEM.PROX woman.PROX really.IC-honor-1>3
'That woman, I am really honoring.' [NJ 11.06.19]

As shown by the control sentence in (22b), universal quantifiers cannot be topicalized in Border Lakes Ojibwe.

(22) a. nin-gii-gichi-apiitenim-aa-g gakina awiya
1-PAST-really-honor-3-PL everyone
'I am really honoring everyone.'
b. *mii gakina awiya gechi-apiitenim-agwaa
MII everyone really.IC-honor-1>3PL
intended: 'Everyone, I am really honoring.' [NJ 11.06.19]

Bruening (2001) concludes for Passamaquoddy that the target of LDA is either a topic or a focus. It might tempting to adopt a similar conclusion for Border Lakes Ojibwe. However, what we have observed in fieldwork calls for a different kind of analysis: when Border Lakes Ojibwe speakers are asked about the meaning of LDA, they naturally appeal to notions of evidentiality, and more precisely to the notion of direct evidence, rather than topicality. In what follows, we will show how this is represented in the data we collected and the tests that we carried out.

3.2 LDA and source of information

First, we note that LDA in Border Lakes Ojibwe is typical with perception and cognition verbs. It is possible with a variety of embedding/attitude verbs: 'hear' (23), 'know' (24), 'see' (25), 'want' (26), 'recall, remember' (27), 'think' (28), and 'forget' (29).

(23) a. in-gii-noondam Mary gii-nagamo-d [hear]
1-PAST-hear.AI Mary.PROX PAST-sing.AI-3
'I heard that Mary sang.'

b. in-gii-noondaw-**aa** Mary gii-nagamo-d
1-PAST-hear.TA-DIR Mary.PROX PAST-sing.AI-3
'I heard Mary sing.' [NJ 11.06.19]

(24) a. nin-gikendam mooz mindido-d [know]
1-know.AI moose.PROX big.AI-3
'I know that the moose is big'

b. nin-gikenim-**aa** mooz mindido-d
1-know.TA-DIR moose.PROX big.AI-3
'I know that the moose is big.' [NJ 11.07.19]

(25) a. in-gii-waabamdaan Tom gii-pashkizwaad adikwan [see]
1-PAST-see.AI Tom PAST-shoot.AI-3 caribou
'I saw Tom shoot a caribou.'

b. in-gii-waabmaa Tom gii-pashkizwaad adikwan
1-PAST-see.TA-DIR Tom PAST-shoot.AI-3 caribou
'I saw Tom shoot a caribou.' [NJ 11.07.19]

(26) a. nin-andawendam gwiiwizens ji-miigwechiwi'-aa-d ini ikwe-wan [want]
1-want.AI boy.PROX FUT-thank.TA-DIR-3 that woman-OBV
'I want that the boy thanks that woman.'

b. nin-andawenim-**aa** gwiiwizens ji-miigwechiwi'-aa-d ini ikwe-wan
1-want.TA-DIR boy.PROX FUT-thank.TA-DIR-3 that woman-OBV
'I want that the boy thanks that woman.' [NJ 11.06.19]

(27) a. ni-minjimendam mooz gii-mindido-d [remember]
1-remember.AI moose.PROX PAST-big.AI-3
'I recall that the moose was big.'

b. ni-minjimenim-**aa** mooz gii-mindido-d
1-remember.TA-DIR moose.PROX PAST-big.AI-3
'I recall that the moose was big.' [NJ 11.06.19]

(28) a. nin-gii-tanendaan Ziibiins gii'-nagamo-d dibikong [think]
1-PAST-think.AI Ziibiins PAST-sing.AI-3 last.night
'I thought that Ziibiins sang last night.'

b. nin-gii-tanenim-**aa** Ziibiins gii'-nagamo-d dibikong
1-PAST-think.TA-DIR Ziibiins PAST-sing.AI-3 last.night
'I thought that Ziibiins sang last night.' [NJ 12.07.24]

(29) a. in-gii'-wanendaan Ziibiins gii'-nagamo-d dibikong [forget]
1-PAST-forget.AI Ziibiins PAST-sing.AI-3 last.night
'I forgot that Ziibiins sang last night.'

b. in-gii'-wanenim-**aa** Ziibiins gii'-nagamo-d dibikong
1-PAST-forget.TA-DIR Ziibiins PAST-sing.AI-3 last.night
'I forgot that Ziibiins sang last night.' [NJ 12.07.24]

Not all embedding verbs tolerate LDA. For example, *izhi* 'say' does not, but in addition, not all embedding verbs of cognition and perception do either. As shall be argued in detail later, LDA is lexically determined (i.e. it depends on the type of embedding verb). (30) and (31) illustrate examples where LDA is not possible (see the Appendix for a list of verbs with which LDA is possible and not possible).[11]

(30) a. ni-maaminonendam Ziibiins gii'-nagamo-d dibikong [realize]
1-realize.AI Ziibiins PAST-sing.AI-3 last.night
'I realize that Ziibiins sang last night.'

b. *ni-maaminonenim-**aa** Ziibiins gii'-nagamo-d dibikong
1-realize.TA-DIR Ziibiins PAST-sing.AI-3 last.night
'I realize that Ziibiins sang last night.' [NJ 12.07.24]

(31) a. nin-gii-mikige Ziibiins gii'-nagamo-d dibikong [discover]
1-PAST-discover.AI Ziibiins PAST-sing.AI-3 last.night
'I discovered that Ziibiins sang last night.'

b. *nin-gii-mikaw-**aa** Ziibiins gii'-nagamo-d dibikong
1-PAST-discover.TA-DIR Ziibiins PAST-sing.AI-3 last.night
'I discovered that Ziibiins sang last night.' [NJ 12.07.24]

Testing sentences where LDA is possible against relevant scenarios, we observed in fieldwork that LDA in Border Lakes Ojibwe was typical in contexts of direct evidence, but not of indirect evidence.[12] As is well-known (Willett, 1988), direct evidence include visual, auditory and other sensory evidence while indirect evidence can be inferentials or reported information. Based on our observations, we propose the following generalizations ($p =$

[11]Note that, while *danenim* 'think', (28), allows LDA, the verb *inenim* 'think' does not. See Appendix. *inenim* is more like 'think about X', while *danenim* is more akin to 'think X'. Thus, the difference in meaning might have something to do with why one allows it and the other does not, but a lot more probing on the subtle meanings will be needed in future work. Suffice it to say for the moment that, while the *danenim* is lexically marked as introducing the relevant feature for evidentiality, *inenim* is not. See Section 4.

[12]Using standard methodology (Matthewson, 2004), we gave a specific context before asking for judgments, see footnote 3 for more details on methodology.

proposition; in our case, the embedded clause):[13,14]

(32) An NP embedded under an attitude verb in Border Lakes Ojibwe can be agreed with the matrix verb only if and only if the subject referent of the attitude verb has direct evidence for *p*.

(33) An NP embedded under an attitude verb in Border Lakes Ojibwe that does not trigger agreement with the matrix verb if the subject referent of the attitude has indirect evidence for *p*.

First, we provide evidence from examples that involve 'hear', as in (34). (34a) means something like 'I heard Mary sing', i.e. 'I was in the room with her (or in the apartment with her) and I heard her sing.' (34b) means something like 'I heard it reported that Mary sang', i.e. 'I wasn't there, someone told me'. (34a-i) is not ungrammatical, just not compatible with the direct evidence interpretation and (34b-ii) is not ungrammatical, just not with the indirect evidence interpretation.

(34) Testing 'hear'

a. *Context: Tonight is the community talent night. You attend the event and hear Mary sing.*
   (i) #Ingii-noondam Mary gii-nagamod (no LDA)
   (ii) Ingii-noondawaa Mary gii-nagamod (LDA)
   'I heard Mary sing.' (direct evidence)

b. *Context: Tonight is the community talent night. You and Paul cannot attend the event but Tom tells you both that Mary sang well.*
   (i) Ingii-noondam Mary gii-nagamod (no LDA)
   (ii) #Ingii-noondawaa Mary gii-nagamod (LDA)
   'I heard that Mary sang.' (indirect evidence)

(35) involves examples with 'know' against two different contexts. LDA correlates with direct evidence, 'I know because I witnessed it' while no-LDA correlates with indirect evidence 'I know that Tom shot the caribou, I've heard about it.' Since knowledge can be acquired via visual, auditory, tactile, olfactive, etc. stimuli, it is not surprising that verbs of knowledge can also participate in the alternation of the type seen in (34) when they refer to knowledge via perception.[15]

[13]Non-attitude verbs do not trigger LDA, and therefore in the absence of LDA, no evidence is at stake.

[14](33) does not apply in the case of attitude verbs that do not trigger LDA.

[15]The verb 'know' is traditionally viewed as a factive verb (necessarily entailing the truth of the embedded complement), and it might thus come as a surprise that it can correlate with less certainty and indirect evidence. But, as we point out in the main text, 'know' in the cases at hand refer to knowledge acquired via visual, auditory, tactile, olfactive, etc., which means that the speaker could be the victim of an illusion (the sentence being technically false; in this sense, 'know' means 'believe'). We know independently that 'know' is not always used factively (Chierchia & McConnell-Ginet, 2000; Hazlett, 2010, 2012): (i) when we are speaking of conventional wisdom or common knowledge, e.g. *when I was a child, I knew Santa Claus would come down the chimney at Christmas* (Goldman, 2002, pp. 183-185 and Kusch, 2009, pp. 72-3) or when "we speak of scientific knowledge, as when we speak of the progress of scientific knowledge over time, or when we speak of our knowledge improving.", *every so often something comes along which shows that almost everything you know about a subject is wrong. From "Aid 2.0," The Economist, 13th August, 2011*

(35) Testing 'know'

a. *Context: You and Tom were hunting caribou together when Tom shot a caribou. You saw Tom shoot the animal.*
   (i) #Nin-gikendaan Tom gii-pashkizwaad adikwan (no LDA)
   (ii) Nin-gikenimaa Tom gii-pashkizwaad adikwan (LDA)
   'I know that Tom shot a caribou.' (direct evidence)

b. *Context: Tom and Jerry were out hunting when Tom shot a caribou. Jerry told you that Tom shot the caribou.*
   (i) Nin-gikendaan Tom gii-pashkizwaad adikwan (no LDA)
   (ii) #Nin-gikenimaa Tom gii-pashkizwaad adikwan (LDA)
   'I know that Tom shot a caribou.' (indirect evidence)

(36) involves examples with 'see'. LDA correlates with the meaning 'I saw Tom shoot a caribou'. Non-LDA, on the other hand, is typical in a context of indirect reporting, meaning something like 'I saw that John shot a caribou'.

(36) Testing 'see'

a. *Context: You and Tom were hunting caribou together when Tom shot a caribou. You saw Tom shoot the animal.*
   (i) #Ingii-waabamdaan Tom gii-pashkizwaad adikwan (no LDA)
   (ii) Ingii-waabmaa Tom gii-pashkizwaad adikwan (LDA)
   'I saw Tom shoot a caribou.' (direct evidence)

b. *Context: Tom was out hunting for the day. When he returns, you see a dead caribou in his truck.*
   (i) Ingii-waabamdaan Tom gii-pashkizwaad adikwan (no LDA)
   (ii) #Ingii-waabmaa Tom gii-pashkizwaad adikwan (LDA)
   'I saw that Tom shot a caribou.' (indirect evidence)

The fact that LDA in Border Lakes Ojibwe correlates with direct evidence while non-LDA correlates with indirect evidence shows that LDA and non-LDA sentences express evidentiality. As is well-known, evidentials indicate the speaker's source of information for a proposition, showcasing indirect evidence via inference, report, hearsay or common knowledge, or direct (attested) evidence via sensory input, for example visual, auditory, tactile (Aikhenvald 2006, 2007).

The phenomenon we describe reflects an evidential strategy. Agreement in Border Lakes Ojibwe is not tied to evidentiality generally, but in the case of embedded contexts and verbs of perception and cognition, agreement is associated with an evidential *effect*. Many Algonquian languages independently have a grammaticalized evidential system by way of special suffixes (Cree, Mikmaq, Potawatomi, Menominee, Cheyenne, see James et al., 2001; Blain & Déchaine, 2007; Murray, 2010, 2016).[16] (37) are examples from Cheyenne. (37a) contains a reportative evidential *sėstse* and absence of it indicates direct

(Hazlett 2012, p. 470)

[16]Blain and Déchaine (2007) also describe quotative verbs and reportative particles for Cree.

evidentiality (37b).[17]

(37) a. É-némene-sèstse.
3-sing-RPT.3SG
'He sang, I hear.' (reportative/indirect evidence)
b. É-néméne-∅.
3-sing-DIR
'He sang, I'm sure.' (direct evidence)
(Murray, 2009, p. 325)

In Innu, indirect evidence is expressed via the suffixes *-tak* (present tense) and *-shapan* (past tense). Thus, while (38a) simply means 'He/she is asleep', (38b) means 'She must be asleep' and would be used when the speaker hears someone snoring and infers from this that he/she must be asleep.

(38) a. nipa:u
s/he.sleep
'He/she is asleep.' (neutral)
b. nipa:tak
s/he.sleep.tak
'He/she must be asleep.' (indirect evidence)
(James et al., 2001, p. 235)

(39) contains *shapan*: it is used because the speaker is making an inference that a fire must have already been made.

(39) sha:sh tshi:-kutaueshapan tshishiteshinu tekushinu:tshi:tsh
already he.made.a.fire-shapan it.is.warm when.we.arrived
'He must have already made a fire, it was warm when we arrived.' (indirect evidence)
(James et al., 2001, p. 235)

It turns out that *-tak* and *-shapan* can only be used with verbs inflected with affixes belonging to the independent order: when the conjunct order is used, an alternative inflection is used, that of the dubitative mode, which is otherwise modality related. Dubitative suffixes are normally used to indicate, with respect to some issue, that there is uncertainty about the true state of affairs. "No implication is necessarily made about the nature of the speaker's evidence for his or her statement; the evidence is not relevant." (James et al., 2001, p. 250). There is, thus, a shift of meaning in certain contexts. The dubitative inflection has become a strategy of evidentiality (Aikhenvald 2004:187). Compare (40a) with (40b). The negative element *apu:* requires a conjunct verb and (40b) shows that *-shapan* is replaced by a dubitative suffix, i.e. *-kue*.

[17]Note that these patterns are the opposite of what we describe for the direct versus indirect contrast with regard to LDA: presence of LDA in Border Lakes Ojibwe correlates with direct evidence while absence of LDA correlates with indirect evidence.

(40) a. nipa:shapan
s/he.sleep-shapan
'It turned out that he/she was asleep.' (indirect evidence)
b. apu: nipa:kue
not s/he.sleep.CDN
'It turned out that he/she was not asleep.' (indirect evidence)
(James et al., 2001, p. 255)

In Southwestern Ojibwe, it seems that the independent dubitative can generally indicate the speaker's indirect knowledge (Junker et al., 2018). (41) contains the evidential particle *giiwenh* and an independent preterit dubitative, and relates to indirect evidence in that the speaker heard the story from her grandmother.

(41) Bezhig giiwenh a'aw mindimooyenyish gii-ayaagoban
one PART that.ANIM old.woman.PEJ PAST-she.was.PDUB
maji-mindimooyenyish.
bad-old.woman.PEJ
'There was said to have been an old woman, a witch.' (reportative/indirect evidence)
(Kegg, 2002, p. 61-62), cited in (Junker et al., 2018, p. 448)

A reviewer asks whether LDA is compatible with this other strategy for marking evidentiality. The answer is no. We tested the following two sentences. In (42), the (non-preterit) dubitative is used in the (conjunct) embedded clause and the matrix verb is non-LDA. The interpretation is that of indirect evidence, non-LDA is used, and the sentence is grammatical. On the other hand, in (43), the matrix verb agrees long-distance with the third person subject of the embedded clause, which creates a clash. While the dubitative indicates uncertainty as well as indirect source, LDA suggests direct evidence.

(42) Nin-gii'-noondam Ziibiins gii'-nagamo-g-wen dibikong
1-PST-hear.AI Ziibiins PST-sing.AI-3-DUB last.night
'I heard that Ziibiins might have been singing last night.'
(comment: don't know for sure, but just heard about) [NJ 08.20.23]

(43) #Nin-gii'-noondaw-aa Ziibiins gii'-nagamo-g-wen dibikong
1-PST-hear.TA-3 Ziibiins PST-sing.AI-3-DUB last.night
(comment: need to have "noondam") [NJ 08.20.23]

To summarize Section 3.2, special extensions of existing grammatical phenomena are not uncommon in the world's languages. We know independently that languages use the conditional (e.g. French, *Il aurait choisi la mort* 'He is said to have chosen death' source = hearsay, legend, Kronning, 2012) or the perfect (e.g. Turkish *Gita gel-mIs* 'Gita has come (presumably / apparently / surprisingly)', Dancy, 1985) to express source and/or reliability of information and contrast it with the use of other tenses or moods (the 'passé composé' in French is used when the source of information does not entail hearsay; the conditional is limited to the hearsay reading). Following the evidence we introduce in Section 3.2, we propose to add agreement to the set of existing strategies of evidentiality.

3.3 LDA and (not)-at-issueness

In this section, we show that the Border Lakes Ojibwe embedding/attitude verbs under review, coupled with LDA, serve the discourse function of evidentiality while the embedded clause carries the main point of the utterance (Simons, 2007). The latter proposition expresses at-issue content: it is the sentence's main point or primary contribution ('comments upon an asserted core' Potts 2005, p. 57) while the clause with the embedding verb expresses not-at-issue content, i.e. not the main point of the sentence (Chierchia & McConnell-Ginet, 2000; Potts, 2005).

Evidentials have generally been claimed to contribute not-at-issue content distinct from that expressed by the declarative's main clause (Faller, 2002, 2006; Izvorkski, 1997; Murray, 2010, 2014, 2017; Matthewson et al., 2007). A typical test for at-issue versus not-at-issue content is that of challengeability: not-at-issue content is not challengeable. In Border Lakes Ojibwe LDA examples, it is not possible to negate what was heard or seen. Consider first the case of 'hear' in (44). The first clause cannot be denied, which suggests strongly it is not-at-issue.

(44) a. Speaker A: in-gii-noondaw-aa Ziibiins gii-nagamo-d
1-PST-hear.TA-3 Ziibiins PST-sing-3
'I heard Ziibiins singing last night.' (direct evidence)

b. Speaker B: #Gaawiin! Gaawiin gi-gii-noondan-zii
NEG NEG 2-PST-hear.TI-NEG
'No! You didn't hear that.' [NJ 08.16.23]

In the case of 'see', both forms of Speaker B answers are impossible, as seen in (45).

(45) a. Speaker A: in-gii-waabam-aa Ziibiins gii-pashkizw-aa-d adikw-an
1-PST-see.TA-3 Ziibiins PST-shoot-3-3 caribou-OBV
'I saw Ziibiins shooting at the caribou.' (direct evidence)

b. Speaker B1: #Gaawiin! Gaawiin gi-gii-waabandan-zii
NEG NEG 2-PST-see.TI-NEG
'No! You didn't see that.'

c. Speaker B2: #Gaawiin! Gaawiin gi-gii-waabam-aa-sii
NEG NEG 2-PST-see.TA-3-NEG
'No! You didn't see her.' [NJ 08.16.23]

The speaker consulted reported that it would be very rude/odd to say something like (44b) or (45b) and (45c) in response to someone. This emphasizes the idea/observation that the direct evidence witnessed by the subject referent comes with strong epistemic commitment (see Section 3.4).

Whereas the not-at-issue content is not challengeable, the at-issue content, on the other hand, is perfectly challengeable. That is, you can challenge the notion that Ziibiins was even at the powwow:

(46) a. Speaker A: nin-gii-noondam Ziibiins gii'-nagamod gii-niimi'id-ing
1-PST-hear.AI Ziibiins PST-sing-3 powwow-LOC
'I heard that Ziibiins sang at the powwow.' (indirect evidence)

[NJ 08.16.23]

b. Speaker B: Gaawiin gosha imaa gii-ayaa-sii
NEG EMPH there PAST-be-NEG
'She wasn't even there!' [NJ 08.16.23]

In sum, we saw in this subsection that sentences with embedding verbs of perception and cognition in Border Lakes Ojibwe can be split in two parts: 1) the at-issue part, and 2) the not-at-issue part. The latter, coupled with LDA, corresponds to the part of the sentence expressing evidentiality and this part cannot be challenged.

3.4 LDA and epistemic commitment

In addition to expressing the source of evidence, the contrast between LDA vs. non-LDA triggers inferences about how certain the speaker is of the truth of p. In particular, LDA correlates, not only with direct evidence, but also indicates that the speaker believes that p is true with a high degree of certainty. On the other hand, indirect evidence often shows that the speaker is not as committed to the truth of what he/she is saying. Consider (47). By using LDA, the speaker signals that he/she has a justified belief in p (where p = Ziibiins sang at the powwow): it is not felicitous for the first part of (47) to be followed by an additional comment comment such as 'but I believe she didn't'.

(47) #In-gii-noondaw-aa Ziibiins nagamod gii-niimi'iding, gaawiin nindebwetaanzii
1-PST-hear.TA-3 Ziibiins sing-3 powwow-LOC, NEG 1-believe-NOT
Intended: 'I heard Ziibiins sing at the powwow, but I don't believe it.'
(Comment: Would mean I don't believe myself!) [NJ 08.16.23]

On the other hand, by using a non-LDA sentence, although the speaker believes p to be true, the epistemic commitment of the speaker is not as strong as with LDA. Consider (48). The non-LDA sentence can be followed by additional comments such as 'but I don't believe it'.

(48) In-gii-noondam Ziibiins nagamo-d gii-niimi'id-ing, gaawiin nin-debwetaan-zii
1-PST-hear.AI Ziibiins sing-3 powwow-LOC, NEG 1-believe-NOT
'I heard that Ziibiins sang at the powwow, but I don't believe it.' (indirect evidence) [NJ 08.16.23]

The fact that a speaker who makes a statement using a hearsay or reportative evidential is not committed to believing that the propositional content of the utterance is possibly true seems to suggest that the non-LDA/indirect evidential is of the illocutionary type rather than the propositional type.

Two types of evidentials have been recognized in the literature: illocutionary evidentials and epistemic evidentials (Faller, 2002; Matthewson et al., 2007; Murray, 2010, 2017). Illocutionary evidentials contribute use-conditional meaning while epistemic evidentials contribute truth-conditional meaning. As stated by Kroeger (2018, p. 325), "[a] speaker who makes a statement using hearsay or reportative evidential of the illocutionary type is not committed to believing that the propositional content of the utterance is

possibly true." In Cuzco Quechua (Faller, 2002) and Cheyenne (Murray, 2010, 2017), it is not a contradiction, nor is it infelicitous, for a speaker to assert something as hearsay and then deny that he or she believes it.

(49) a. Para-sha-n=si, ichaqa mana crei-ni-chu.
rain-PROG-3=REPORT but not believe-1-NEG
'It is raining (someone says), but I don't believe it.'
(Faller, 2002, p. 194)

b. É-hoo'kòhó-nèse naa oha ná-sáa-oné'séomátséstó-he-∅
3-rain-REPORT.INAN.SG and CONTR 1-NEG-believe$_{inan}$-MOD$_{anim}$-DIR
'It's raining, they say, but I don't believe it.'
(Murray, 2010, p. 58)

In languages with epistemic evidentials, the reportative evidential commits the speaker at least to the possibility that the scope of the proposition is true. The St'át'imcets example is infelicitous.

(50) #um-en-tsal-itás ku7 i án'was-a xetspqíqen'kst táola, t'u7
give-DIR-1SG.OBJ-3PL.ERG REPORT DET.PL two-EXIS hundred dollar but
aoz kw s-7um'-en-tsál-itas ku stam'
NEG DET NOM-give-DIR-1S.OBJ-3PL.ERG DET what
'[reportedly] They gave me $200, but they didn't give me anything.'
(Matthewson et al., 2007, p. 240)

In Section 4, we will provide evidence that the LDA versus non-LDA contrast in Border Lakes Ojibwe has, in fact, more properties in common with epistemic evidentials than illocutionary evidentials, a state-of-affairs that is expected since LDA in the language under review represents a strategy of evidentiality rather than a dedicated evidential morpheme. As pointed out by Kroeger (2018, p. 327), 'there seems to be a strong tendency for illocutionary evidential markers to be "true evidentials" in Aikhenvald's sense, i.e., grammatical morphemes whose primary function is to mark source of information; and for propositional [epistemic] evidentials to be evidential uses/senses of morphemes whose primary function is something else: perfect aspect in Turkish and Bulgarian; modality in German and St'át'imcets. [...] illocutionary evidentials seem to contribute use-conditional meaning, while propositional evidentials seem to contribute truth-conditional meaning."

To summarize Section 3, we saw that:

(51) a. LDA in Border Lakes Ojibwe does not express topicality
b. The contrast between LDA versus non-LDA in Border Lakes Ojibwe expresses evidentiality (LDA correlates with direct evidence while non-LDA correlates with indirect evidence)
c. In using the LDA versus non-LDA contrast for evidential purposes, the speaker conveys a not-at-issue proposition about the evidence for the at-issue proposition
d. In a direct evidential context, the speaker is committed to the truth of the proposition in the scope of the evidential, but not in the reportative context.

In the next section, we turn to the formal account of our basic idea, relying on syntactic structures proposed in Hammerly & Mathieu (2024). We aim to explain how long distance agreement is achieved and what triggers the raising of a DP.

4 Analysis

In view of the observations reported in Section 3, we propose that certain verbs of perception and cognition in Border Lakes Ojibwe select an uninterpretable Evidential feature.[18,19] In the case of TA verbs, the Evidential feature is associated with direct evidence while in the case of AI verbs, the Evidential feature is associated with indirect evidence. This is summarized in (52).

(52) a. TA verbs of perception/cognition select an uninterpretable Evidential feature (expressing direct evidence)
b. AI verbs of perception/cognition select an uninterpretable Evidential feature (expressing indirect evidence)

The selected Evidential feature is part of the lexical make-up of such verbs. Not all verbs carry this feature; only those verbs of perception and cognition that are associated with source of information. Syntactically, the difference between (52a) and (52b) is as follows. TA verbs of perception/cognition are associated with a complex Probe on matrix v: the latter contains, not only an uninterpretable Evidential feature, but also ϕ features. In this case, the uEV feature selected by TA verbs is associated with an EPP property – it attracts the embedded EA or IA to the specifier of embedded C. On the other hand, AI verbs of perception/cognition do not introduce ϕ features on matrix v and the uEV feature selected by such verbs is not associated with an EPP property: no movement to the specifier of embedded C occurs.

In Section 4.1, we provide a full analysis of LDA (the (52a) situation) while Section 4.2 introduces an account of the epistemic effect found with LDA.

4.1 LDA derivations

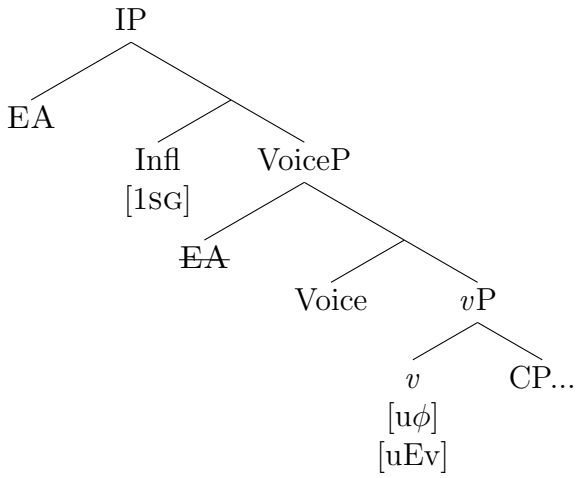
We begin by giving the structure for a main clause. (53b) is the structure for the matrix clause 'I heard Mary sing' introduced in (23a). Note the ϕ features and the uEV feature introduced by v.

(53) a. In-gii-noondawaa... (I heard...)

[18]We use the term "uninterpretable" in the broad sense, to mean a feature that defines the search conditions for a probe, but does not necessarily cause a derivational crash (Preminger, 2014; Coon & Keine, 2021; Hammerly, 2024a).

[19]This account is inspired by Alboiu and Hill's (2016) account of raising to object in Romanian where an Evidential feature is proposed. Raising to object differs from LDA in that, in raising to object constructions, an NP from the embedded clause moves to the main clause and the Evidential feature correlates with indirect, rather than direct, evidence. Hyperraising also correlates with indirect evidence in languages such as Cantonese and Vietnamese (Lee & Yip, 2022).

b.

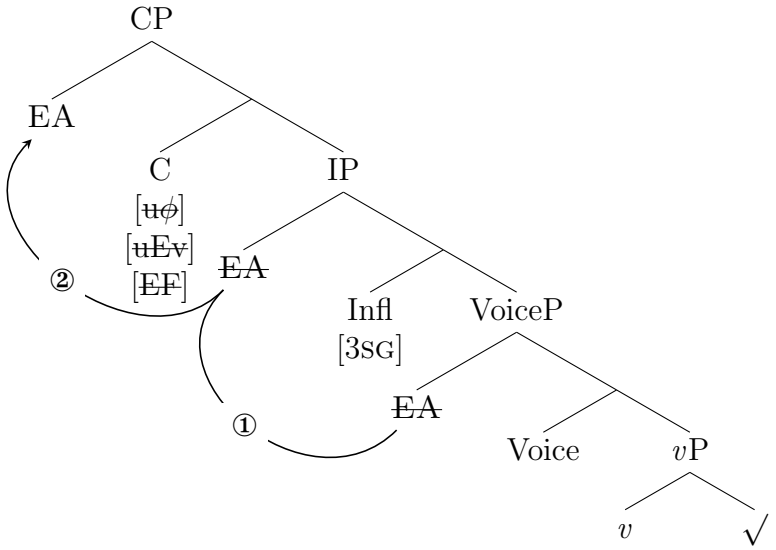


Turning now to the structure of the embedded clause, suppose that embedded C inherits or copies both probes of its selector (via feature inheritance, Richards 2007, Chomsky 2008): this satisfies the selecting requirements of the matrix verb and allows v to connect with the appropriate embedded CP. The Evidential feature on embedded C is thus a special flavour of C: C in Algonquian does not always carry this feature (and nor does matrix v).

We assume that the uEV feature on embedded C is associated with an EPP property that attracts the EA or IA to the specifier of C (for a detailed formalization of the EPP in this context, see Hammerly & Mathieu, 2024; Hammerly, 2021, 2024b). Once the EA or IA argument has reached Spec-CP, the ϕ-features of v in the matrix clause can enter into an agreement relationship with the ϕ-features of the external or internal argument of the embedded clause. Consider the structure in (54b) for the embedded CP part of the LDA example. Here an intransitive structure with only one argument, i.e. an external argument, is first generated in Spec-VoiceP, then moves to Spec-InflP, and then to Spec-CP. The raising of the argument to Spec-CP, and the "long-distance" agreement with the matrix verb that follows, signals direct evidence.

(54) a. ...Mary gii-nagamo-d (...Mary sing)

b. ...



Since LDA is possible across a WH phrase, Algonquian C should possibly be deconstructed in several discourse heads, minimally one that hosts WH phrases and another that is associated with an evidential feature (on split C, see Rizzi, 1997; Speas, 2004, 2010). However, since this solution raises phase-boundary problems,[20] an alternative is needed: we propose that C can bear both WH and Ev features, and that it then takes two specifiers: one for the wh-phrase and the other for non-WH phrases. Either agreement is triggered with the WH phrase or it is 'skipped', in which case a lower DP is agreed with after movement to the outer specifier of C.[21]

Let us now review a more complicated case, i.e. one involving two arguments, where languages can differ in which arguments can be targeted for LDA. In free LDA Algonquian languages/dialects, agreement is possible between the matrix verb and either the external or internal argument of the embedded clause. In Border Lakes Ojibwe, the situation is more complex: only so-called "local only" configurations (i.e. those involving only first and second persons) allow free LDA, while all other argument combinations are restricted in some way (Hammerly & Mathieu, 2024). As shown in (55) with embedded 2 → 1, LDA is with either the first person (55a) or second person (55b). This can be seen by the realization of the person prefix on the matrix verb (in bold).

(55) a. **gi-**gii-waabam-ig John [$_{CP}$ gii-miigwechiwi'-i-yan]
2-PAST-see.TA-INV John.PROX PAST-thank.TA-1-2
'John saw that you(sg) thanked me.' (direct evidence)
b. **in-**gii-waabam-ig John [$_{CP}$ gii-miigwechiwi'-i-yan]
1-PAST-see.TA-INV John.PROX PAST-thank.TA-1-2
'John saw that you(sg) thanked me.' (direct evidence) [NJ 08.20.19]

Similarly, with embedded 1 → 2, one can get LDA with either 1 (56a) or 2 (56b).

(56) a. **in-**gii-waabam-ig John [$_{CP}$ gii-miigwechiwi'-in-aan]
1-PAST-see.TA-INV John.PROX PAST-thank.TA-2-1
'John saw that I thanked you(sg).' (direct evidence)
b. **gi-**gii-waabam-ig John [$_{CP}$ gii-miigwechiwi'-in-aan]
2-PAST-see.TA-INV John.PROX PAST-thank.TA-2-1
'John saw that I thanked you(sg).' (direct evidence) [NJ 08.20.19]

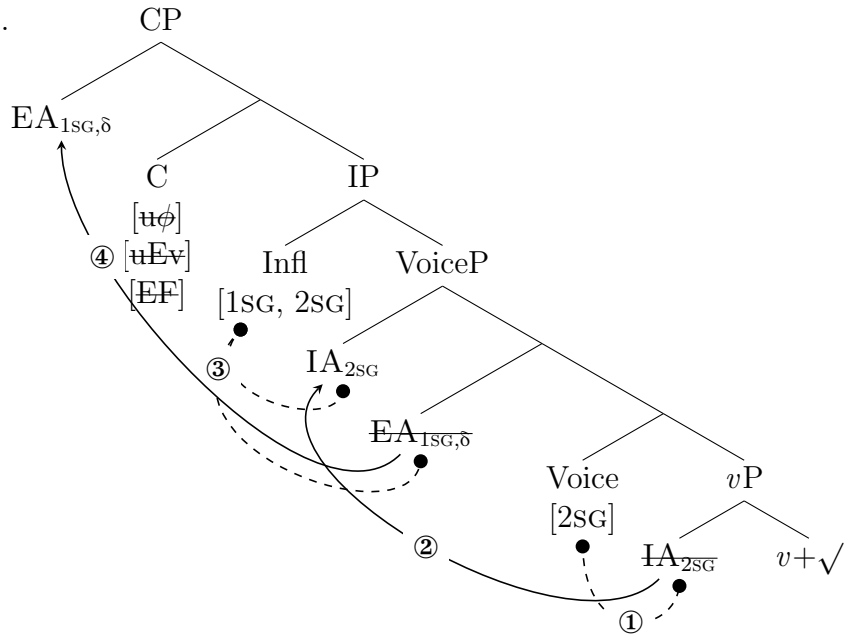
To illustrate, (57) is the embedded clause structure for the local only cases with a configuration where first is acting on second, and LDA occurs with the first person EA (for the full account, see Hammerly & Mathieu (2024)). Relevant here is the fact that embedded Voice has a *relativized* EPP property, where only first or second persons are promoted to Spec,VoiceP. Therefore when Voice first probes down to agree with the second person IA (step ①), this results in the realization of the second person form of the theme sign as well as movement of the IA to Spec,VoiceP (step ②). This gives rise to a double

[20]If the wh phrase is generated higher than the evidential feature, it will block the agreement relation with the relevant feature on matrix v and the relevant argument in the embedded clause; on locatity and cartography, see Abels (2012) and Rizzi (2017).

[21]Thanks to PB for this suggestion.

specifier configuration, making both the EA and IA equidistant to the probe on Infl. Infl therefore copies the features of both the EA and IA (Multiple Agree; step ③), but cannot move either due to the impossibility of Multiple Merge.[22] Because neither the EA or IA have moved from Spec-VoiceP, both the IA and EA are equidistant to C. Since both equally match in φ-features, it will instead be the presence of a δ-feature on one or the other that leads one to be a better match for the EPP probe on embedded C. As should be clear by now, this δ-feature is an evidential feature. If the first person argument bears this feature (as shown below), then it will be promoted to Spec,CP and be targeted for LDA. If instead the second person bears this feature (no tree shown), then it will be promoted to Spec,CP and be targeted. This accounts for the "free" pattern seen in these contexts.

(57) ...



In sum, embedded C carries features that ensure overt movement of the targeted argument occurs to Spec,CP of the embdded clause. This allows for an agreement relationship between the matrix verb and the embedded argument while signalling source of information (direct evidence).

That C or complementizers can signal source of information can be seen in other languages. Consider Lele, an Austronesian language (Frajzyngier 1995). In this language, the complementizer *gō* used with verbs of perception, as in (58a), denotes a direct perception whereas the use of the complementizer *ná* with verbs of perception, as in (58b), denotes indirect perception (Frajzyngier 1995:485-488).

(58) a. 'n-gòl-dù gō jè wàl-dù kúlbà.
1SG-see-3F COMP PROGR kill-3F cow

[22]Multiple Merge (e.g. moving two elements in a single derivational step) is ruled out as it requires relating three elements: the two moved elements and the location to which the elements are meant to move. Assuming that Merge is a binary operation, such a step would be ill-formed and thus ruled out (see Coon & Keine, 2021; Hammerly & Mathieu, 2024)

'I saw him kill a cow.' (Frajzyngier 1995:485)

b. 'n-gòl ná wàl-dí kúlbà.
1SG-see COMP kill-3M cow
'I saw that he killed a cow.' (Frajzyngier 1995:487)

According to Aikhenvald (2004, p. 121), "Russian achieves a similar effect by choosing different complementizers with verbs of perception and cognition. The conjunction *kak* implies direct perception (Barentsen, 1996, 24), while the conjunction *čto*, a general complementizer, implies that what the speaker actually perceives is a clue, or basis of an inference which may give an idea about the situation." Compare (59a) with (59b).

(59) a. Len videl, čto Mardži igraet v kroket. [Russian]
Len see.PAST.SG.M that Margie play.PRES.3SG in croquet
'Len saw Margie play croquet.'

b. Len videl, kak Mardži igraet v kroket.
Len see.PAST.SG.M how/that Margie play.PRES.3SG in croquet
'Len saw that Margie played croquet.' (Frajzyngier, 1995, p. 485 and p. 487)

In English, the contrast is expressed by presence vs. absence of the complementizer 'that' and via selection of a finite or non-finite complement clause (Izvorski1997, 225 and Aikhenvald 2006, 321, 2007, 213, see also Dixon 2012, 270-271). Compare (60a) and (60b).

(60) a. I heard John cross the street.

b. I heard that John crossed the street.

The sentence in (61a) expresses the fact that the speaker has perceptual evidence for the truth of p (where p = John crossed the street) whereas (61b) marks the evidence as indirect: the sentence is interpreted as a report of p (e.g. a verbal report referring only to indirect knowledge).

4.2 Epistemic effect

As pointed out by Izvorski (1997), sentences such as those in (60) trigger, in addition to expressing the source of evidence, inferences about how certain the speaker is of the truth of p (we take our perceptions to be knowledge, Dancy 1985, p. 178, and perhaps all evidence is knowledge – and vice-versa, Williamson 2000). Under normal circumstances, (60b) "entails that the speaker has a justified belief in p, i.e. knows p, or more accurately, has come to know p" (Izvorski 1997, p. 225). Because the speaker could be mistaken, for instance, due to an auditory illusion or a fake noise, it is clear, however, that (60b) entails neither p, nor that the speaker believes p. This is a presupposition, not a logical entailment: As a report, (60b) simply expresses that the speaker is not as committed to the truth of p, as can be shown in follow-ups such as: "I heard that John crossed the street, but it's not true, he was out of town."

Izvorski's (1997) approach to indirect evidentials has been influential in the literature (see Faller 2006 for German *sollen*, Matthewson et al 2007 for St'at'imcets). On this view, evidentiality and modality are banded together (see also Palmer, 1986, p.51-54). Modals

are quantifiers over possible worlds and evidentials are viewed as ways to express characteristics of the modal base (Kratzer, 1981, 1977, 2012), which includes all logically possible worlds. Thus, Izvorski (1997) proposes a semantics for indirect evidentials that includes a universal epistemic modal as well as an added presupposition of the type of evidence that the speaker has, as seen in (61). The speaker believes p to be true but the epistemic commitment of the speaker is not strong.

(61) a. Assertion: □p in view of the speaker's knowledge state
b. Presupposition: The speaker has indirect evidence for p

Sentences containing direct evidence are different since, as pointed our by Speas (2010), the situation upon which the judgement is based contains the situation being reported (the speaker witnessed the relevant situation), asserting that p is true, not that p is necessarily (or possibly) true (they entail p). In other words, the assertion is epistemically neutral. However, the epistemic commitment of the speaker is strong; it is in fact an entailment rather than a presupposition (for the semantics of direct evidentials, see Lecarme, 2008 and Faller, 2015).

(62) a. Assertion: p is true
b. Entailment: The speaker has direct evidence for p

The contrast in epistemic commitment discussed in relation to LDA vs. non-LDA in Section 3 can be explained along those lines. LDA involves an assertion (p is true) and an entailment (the speaker has direct evidence for p) whereas non-LDA involves a belief (p might be true) as well as indirect evidence for p.

By adopting a modality-type analysis of LDA in Border Lakes Ojibwe, we take the view that the evidentiality expressed by LDA is of the epistemic rather than illocutionary type (Faller, 2002; Matthewson et al., 2007; Murray, 2010). Since LDA is a strategy of evidentiality rather than a true evidential, this is a sensible proposal. As already pointed out in Section 3, there seems to be a strong tendency for illocutionary evidential markers to be "true evidentials" in Aikhenvald's sense, i.e., grammatical morphemes whose primary function is to mark source of information; and for epistemic evidentials to be evidential uses/senses of morphemes whose primary function is something else: perfect aspect in Turkish and Bulgarian; modality in German and St'át'imcets. Illocutionary evidentials are speaker-oriented: they indicate the source of information of the speaker, and cannot be used to indicate the source of information of some other participant. In contrast, epistemic evidentials can be used to indicate the source of information of some participant other than the speaker (Kroeger, 2018).

The evidential flavour that LDA sentences carry is oriented towards the attitude holder, not the speaker (see in particular the comments in (64)). In (63a) and (64a), we introduce the non-LDA baseline, and in (63b) and (64b), the LDA version.

(63) a. Adikoons gii-noondam Ziibiins-an nagamo-ni-d
Adikoons PST-hear.AI Ziibiins-OBV sing-3′-3
'Adikoons heard that Ziibiins was singing.'

b. Adikoons o-gii-noondaw-aa-n Ziibiins-an nagamo-ni-d
Adikoons 3-PST-hear.TA-3-3′ Ziibiins-OBV sing-3′-3
'Adikoons heard Ziibiins singing.' [NJ 08.16.23]

(64) a. Ziibiins gii-noondam Adkioons-an bashkizw-aa-ni-d adikw-an.
Ziibiins 3-PST-hear.AI Adikoons-OBV shoot-3-3′-3 caribou-OBV
'Ziibiins heard that Adikoons shot a caribou.' (comment: she wasn't there)

b. Ziibiins o-gii-noondaw-aa-n Adkioons-an bashkizw-aa-ni-d adikw-an.
Ziibiins 3-PST-hear.TA-3-3′ Adikoons-OBV shoot-3-3′-3 caribou-OBV
'Ziibiins heard Adikoons shoot a caribou.' (comment: she was there) [NJ 08.16.23]

Evidentials of the illocutionary type cannot appear in embedded environments, but this is possible for evidentials of the epistemic type. In Border Lakes Ojibwe, LDA is possible in if-clauses and in when clauses. First, we introduce the baseline without LDA (65), then the example showing LDA is possible with embedded clauses (the conjunct order in Ojibwe).

(65) Giishpin noondam-aan Ziibiins nagamo-d niimi'id-ing, gi-ga-wiindamaw-in
if hear.AI-1SG Ziibiins sing-3 powwow-LOC 2-FUT-tell-2
'If I hear that Ziibiins is singing at the powwow, I'll let you(sg) know.' (comment: heard about it) [NJ 08.16.23]

(66) Giishpin noondaw-ag Ziibiins nagamo-d niimi'id-ing, gi-ga-wiindamaw-in
if hear.TA-1SG¿3SG Ziibiins sing-3 powwow-LOC 2-FUT-tell-2
'If I hear Ziibiins singing at the powwow, I'll let you(sg) know.' (comment: heard it in person) [NJ 08.16.23]

This concludes Section 4. We proposed that both TA and AI verbs of perception/cognition select an uninterpretable Evidential feature, but that only (a number of) TA verbs of perception/cognition introduce a set of ϕ-features (on matrix v). In the case of TA verbs of perception, i.e. those that trigger LDA, the uninterpretable Evidential feature is associated with an EPP property that ensures either the External or Internal argument raises to Spec-CP to be in a proper configuration with the ϕ-features of matrix v. In the case of AI verbs of perception/cognition, only an Evidential feature is selected by the verb: the probe on matrix v is not complex in that it does not introduce ϕ-features. Verbs of attitude not associated with evidentiality do not select an Evidential feature, and of course, no LDA is possible. In such cases, if there is evidence of some sort present in the context, it is either irrelevant, vague or undisclosed/not reported. In other words, the Evidential feature we proposed is a special flavour of C: it is not always introduced by the kind of verbs analyzed in this article (i.e. verbs of perception/cognition).

We saw that, cross-linguistically, it is not uncommon for C to be involved with the way source of information is reported: some languages have different lexicalized complementizers to express either direct or indirect evidence.

Finally, we contended that, in addition to expressing the source of evidence, the contrast between LDA vs. non-LDA in Border Lakes Ojibwe triggers inferences about how certain the speaker is of the truth of the proposition expressed by the embedded clause. By

adopting a modality-type analysis of LDA in Border Lakes Ojibwe, we proposed that the evidentiality expressed by LDA in that language is of the epistemic rather than illocutionary type.

5 Conclusion

The aim of this article was to introduce a novel generalization regarding Long Distance Agreement in Border Lakes Ojibwe: LDA is typical when the verb in the matrix clause is a TA verb of perception or cognition, in which case LDA correlates with direct evidence + strong(er) epistemic commitment while non-LDA in the context of AI verbs of perception/cognition correlates with indirect evidence + weak(er) epistemic commitment, as summarized in (67).

(67) a. TA verb of perception/cognition: [CP] = direct evidence + strong(er) epistemic commitment
b. AI verb of perception/cognition: [CP] = indirect evidence + weak(er) epistemic commitment

LDA was argued to be a strategy of evidentiality: the long distance agreement signals to the hearer that direct evidence matters to the information provided. Only in these contexts does source of information matter: agreement in Border Lakes Ojibwe otherwise simply tracks the External or the Internal argument of the verb. We proposed that the mechanism behind LDA in Border Lakes Ojibwe involves a set of ϕ-features on matrix v and an uninterpretable Evidential feature associated with an EPP property, all of which are selected by TA verbs of perception/cognition. The phenomenon under investigation is partially lexical in that LDA depends on the kind of matrix verb being used: not all attitude verbs participate in LDA, only those that select for the proper features. That C is associated with evidentially cross-linguistically is not surprising: many languages express direct versus indirect evidence with different complementizers. Finally, by giving arguments in favour of a modality-type account of LDA in Border Lakes Ojibwe, we concluded that the evidential effect exhibited by LDA in the language under investigation is of the epistemic rather than illocutionary type.

In future work, we will extend our proposal to: 1) other dialects of Ojibwe, and 2) other Algonquian languages. It will be interesting to see whether LDA necessarily correlates with perception/cognition verbs as well as epistemic effects across the board or whether there is variation in the semantics of LDA and the type of verbs that select it.

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Appendix

Ojibwe	English	LDA?
maaminonendam maaminonenim	realize, notice	no
idan izhi	say	no
mikige mikaw	discover, find	no
bagosendam bagosenim	wish, hope	no
debwetam debwetaw	believe	no
naagotoon naago'	reveal	no
minjimendam minjimenim	hold in memory, remember	no
izhinan izhinaw	perceive, think	no
inendam inenim	think	no
noondam noondaw	hear	yes
waabandan waabam	see	yes
gikenda gikenim	know	yes
andawendam andawenim	want	yes
misawendam misawenim	need, desire, want	yes
danendan danenim	think	yes
wanendam wanenim	forget	yes
mikwendam mikwenim	remember	yes
dibaadodan dibaajim	report	yes
debweyendam debweynim	believe, be confident	yes
nisidawinan nisidawinaw	recognize	yes
nisidotam nisidotaw	understand	yes

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