Linking agreement and movement:
A case study of long distance agreement in Border Lakes Ojibwe

**Christopher Hammerly & Éric Mathieu**

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**Abstract** This paper argues for an extension of current models of Agree to capture *relativized EPP effects*, where a probe for movement targets an element with a specific set of features. We support the proposal through a case study of long distance agreement (LDA) in the Border Lakes dialect of Ojibwe (Central Algonquian), where the patterns of LDA depend on the particular combination of person/animacy features of the embedded arguments. This can be captured by the feeding and bleeding relationships between agreement and movement probes on Voice, Infl, and C.

**Keywords:** Long Distance Agreement, EPP, movement, relativized probes, Ojibwe, Algonquian

One foundational finding is that probes can be *relativized* (e.g. Rizzi, 1990) to seek out only goals with a particular feature. While probes generally show agreement with the structurally closest goal, there are cases of so-called *omnivorous probing* (Nevins, 2011; Preminger, 2014) where a probe skips over a goal that lacks some particular feature in favor of agreement with a more distant goal that *does* bear the relevant feature. One recent formalization of these effects within the domain of agreement is the *interaction-satisfaction* model of Deal (2015, 2023), where probes are specified for two sets of conditions: (i) Interaction conditions, which regulate what types of goals a probe can copy features from (and, therefore, which ones it will skip); (ii) Satisfaction conditions, which regulate when a probe will halt its search for a goal. In this paper, we argue that this approach to probe relativization in agreement can be generalized to regulate movement, deriving a *relativized EPP* (Hammerly, 2021, 2024b). Within the movement domain, interaction conditions regulate which types of a goal will move to a specifier position of a probe, while satisfaction conditions regulate when a movement probe will halt its search. We provide empirical justification through a case study of long distance agreement (LDA) in the Border Lakes dialect of Ojibwe (Central Algonquian).

LDA, which is characterized by an agreement relation between a matrix verb and an argument of its sentential complement, has raised considerable interest in recent years (see Bruening 2001 for Passamaquoddy, Polinsky and Potsdam 2001 for Tsez, Branigan and MacKenzie 2002 for Innu-aimûn, Boeckx 2004 and Bhatt 2005 for Hindi, Bobaljik and Wurmbrand 2005 for Itelmen, Etxepare 2006 for (substandard) Basque, Bliss 2008 for Blackfoot, Lochbihler and Mathieu 2016 for Ojibwe, Hamilton and Fry 2016 for Mi'gmaq and Ojibwe). LDA is particularly interesting from a syntactic perspective, because while core cases of agreement are taken to be local, applying between elements belonging to the same clause (Chomsky, 2000, 2001), LDA instead involves a relation that appears to cross a clausal boundary.

To illustrate, consider the examples in (1) from Border Lakes Ojibwe.[1] In (1a), there is no agreement between the matrix verb and the third person embedded subject—the matrix verb appears in the ANIMATE INTRANSITIVE (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 ANIMATE TRANSITIVE (TA) form, agrees with the third person embedded subject (LDA related morphemes shown in bold).

(1) a. nin-gikendam mindido-d mooz
1-know.AI big-3 moose

[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 (the speakers consulted are from Northwestern Ontario near Fort Frances).

'I know that the moose is big'

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

Algonquian languages differ in which arguments within the embedded clause can be targeted for LDA in the matrix clause (e.g. Dahlstrom, 1995). There are three basic patterns (Hamilton and Fry, 2016). Some languages show FREE LDA, where either of the embedded arguments can be targeted. This pattern is characteristic of Algonquin (Lochbihler and Mathieu, 2016), non-subordinative clauses in Passamaquoddy (Bruening, 2001; LeSourd, 2010, 2019; Grishin, 2023, 2024), and Innu-aimûn (Branigan and MacKenzie, 2002). Other languages such as Plains Cree (Dahlstrom, 1991) show AGENT LDA, where only the external argument or agent can be targeted. Finally, there are languages such as Mi'gmaq (Hamilton, 2015; Hamilton and Fry, 2016) that show HIGHEST-RANKED LDA, where only the argument that is most prominent on the person-animacy hierarchy can be targeted, regardless of its argument position.

We follow existing work on Algonquian (e.g. Hamilton and Fry, 2016) by arguing that LDA in the matrix clause can target whatever argument of the embedded clause has been moved to Spec,CP. Therefore, the core question becomes how to arrange the syntax of the embedded clause to move the argument targeted by the matrix clause to this position. As a result, this paper focuses on agreement and movement in Border Lakes Ojibwe embedded clauses, with the patterns of LDA in the matrix clause serving as a bellwether for the arrangement of the lower clause's syntax—in particular, which argument ends up in Spec,CP. Agreement in the matrix clause proceeds as normal, as if the argument targeted for LDA were a base-generated internal argument of the matrix verb. We refer the interested reader to Hammerly (2021, 2024b) and Oxford (2019, 2023) for recent accounts of agreement and movement in the matrix clause in Ojibwe and Algonquian more generally, and to Hammerly and Mathieu (2023) for an account that specifically links matrix clause agreement to the evidential properties of LDA in Border Lakes Ojibwe.

While our account captures the full range of LDA with different combinations of arguments in the embedded clause, the key pattern is with the MIXED configurations, where one argument is a local person and the other a third person. Here, we see a crucial asymmetry that most strongly motivates the need for a relativized EPP. With 1/2 $\rightarrow$ 3 we get LDA only with the external argument, which is best described as Agent LDA. In contrast, with 3 $\rightarrow$ 1/2, LDA can appear with either argument, resulting in Free LDA. We capture this by proposing a relativized EPP feature on Voice that moves first and second person internal arguments (resulting in the Free LDA pattern with 3 $\rightarrow$ 1/2), but not third person internal arguments (resulting in the Agent LDA pattern with 1/2 $\rightarrow$ 3). The overall

picture reveals an intricate pattern of feeding/bleeding of movement to Spec,CP in Border Lakes Ojibwe via agreement and movement with the probes on Infl and Voice, while also having the potential to capture the wider typology of LDA in Algonquian.

## 1 Background

Algonquian languages – Ojibwe included – have two major types of inflectional paradigms known as the INDEPENDENT and CONJUNCT orders. At a first approximation, 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 (2).

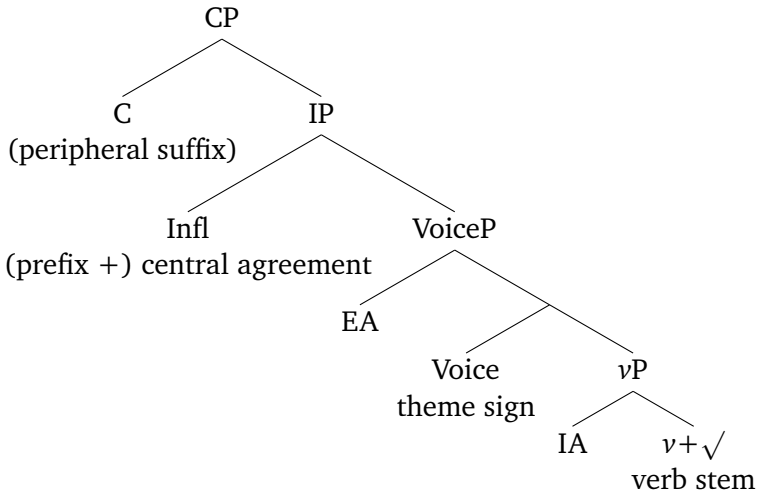
(2) a. o-waabam-aa-waa-n
3-see.TA-3-PL-3′
'They (PROX.PL) see them (OBV.SG)' Independent

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

In the independent order (2a), 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*).

The current literature on Algonquian agreement, especially following the work of Oxford (2014, 2019), has converged on an analysis of how these pieces of morphology correspond to positions within a phrase marker. These correspondences are schematized in (3), 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*—this is discussed further below.

(3)




Another key aspect of the morphosyntax of the Ojibwe verb is the system of DIRECT-INVERSE Voice. Consider the two examples in (4), which show the state of affairs in the conjunct order. The two sentences encode the same basic thematic relation between the arguments and the verb, but otherwise differ on three critical dimensions: (i) whether the agent (4a) or patient (4b) is encoded as proximate, (ii) whether the theme sign appears as the so-called "direct" marker, in the case in (4a) *-aa*, or the "inverse" marker *-igo* as in (4b), (iii) whether the proximate agent (4a) or the proximate patient (4b) occupies the verb-initial position. As shown below, our consultants generally translate the direct voice as an active sentence in English, while the inverse voice is commonly translated as a passive.

(4) a. ikwe gii-miigwechiwi'-aa-d ininiw-an
woman.PROX PAST-thank.TA-3-3 man-OBV
'. . . the woman (PROX) thanked the man (OBV).' Direct

b. inini gii-miigwechiwi'-igo-d ikwew-an
man.PROX PAST-thank.TA-INV-3 woman-OBV
'. . . the man (PROX) was thanked by the woman (OBV).' Inverse

Conjunct order verbs in Border Lakes Ojibwe only show inverse morphology when an obviative is acting on proximate, as in (4b). All other cases (local acting on local, local acting on proximate, proximate acting on local, and, as seen directly above, proximate acting on obviative) appear with some form of "direct" morphology. In the conjunct order, the direct forms of Voice, without exception, index the person features of the internal argument, as exemplified above with the third person form *-aa* in (4a). When the internal argument is first person, the direct marker surfaces as *-i*, and with second person, *-in*.

Finally, 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 internal argument), TIs (TRANSITIVE INANIMATE; a transitive verb with an inanimate internal argument), 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). The key contrast in the present paper will be between the TA and TI classes. In the examples in (5), we see the same root *waab* taking either one of the TA finals (*-am*) as in (5a) or TI finals (*-and*) as in (5b). Throughout the paper we will gloss the root and final together as the verb stem with the exception of the example below.

(5) a. ni-waab-am-aa
1-see-TA-3
'I see them (PROX.SG)' TA
b. ni-waab-and-aan
1-see-TI-0
'I see it (INAN.SG)' TI

## 2 Long distance agreement

### *2.1 Overview*

Border Lakes Ojibwe shows long distance agreement: it is possible in Ojibwe for a verb in the higher clause to agree with an argument originating in an embedded clause. This type of agreement is broadly optional, yet it is a productive feature of Ojibwe grammar. The sentence in (6a) is a non-LDA construction with the matrix verb of perception *waaband* 'see' in the TI form that takes a finite clausal complement (agreement is with the first person subject), while (6b) exhibits not only agreement of the first person subject, but also LDA of the embedded subject 'Tom' with the matrix verb *waabam* 'see' in the TA form.[2] This agreement appears in the theme sign, which shows the animate third person form *-aa*, higlighted in bold. Note also that the agreement and word order in the embedded clause remains unchanged whether or not LDA occurs in the matrix clause. Generally speaking, LDA in Ojibwe appears to be related to evidentiality—specifially, whether the source of information is direct or indirect (Hammerly and Mathieu, 2023).

(6) a. in-gii-waaband-aan [$_{CP}$ Tom gii-pashkizw-aa-d adikw-an ]
1-PAST-see.TI-0 Tom.PROX PAST-shoot-3-3 caribou-OBV

[2]While we primarily exemplify LDA with the verb *waabam* "see", we have also examined these patterns with the following matrix verbs: *noondam* "hear", *gikendam* "know", *andawendam* "want", *minjimendam* "remember", and *inendam* "think". For additional details, see Hammerly and Mathieu (2023).

'I saw that Tom shot the caribou.'

b. in-gii-waabam**-aa** [$_{CP}$ Tom gii-pashkizw-aa-d adikw-an ]
1-PAST-see.TA**-3** Tom.PROX PAST-shoot-3-3 caribou-OBV
'I saw Tom shoot the caribou.'

Since the type of verb that allows LDA or ECM is similar ('I saw him leave', 'I heard her come in', 'I know him to be busy'), it is tempting to analyze LDA in Ojibwe as a case of ECM. However, there are several arguments against this (see also Branigan and MacKenzie 2001 for Innu-aimûn and Lochbihler and Mathieu 2014 for Ojibwe): First, ECM is case-related (the subject of the infinitive cannot receive nominative; it receives accusative case from the matrix verb), whereas LDA is very likely not case-related since Algonquian languages have been argued to lack case (Ritter and Rosen, 2005). Second, ECM complements are tense deficient (Johnson, 1991; Bowers, 1993, 2002; Kitaoka, 1995) and lack referential (or relative) tense, requiring simultaneous interpretation with the tense of the matrix (Higginbotham, 1983), a constraint not seen in Algonquian since each clause must have its own tense. In Ojibwe, the embedded verb is always tensed/finite (there are no infinitives), which also means that LDA in Algonquian is unlike LDA found in Itelmen (Bobaljik and Wurmbrand, 2005) and Hindi (Boeckx, 2004; Bhatt, 2005), where the embedded clause is non-finite, with Agree into the non-finite clause under restructuring as a likely account of LDA for these languages (Corbett, 2006; Richards, 2009). In Tsez, it is also possible to entertain an analysis by which agreement is across a non-phasal category, since there is no evidence of an intermediate C (Richards, 2009), the embedded clause most likely being a reduced clause. Finally, Ojibwe LDA is possible with both embedded subjects and objects, whereas ECM is only possible with subjects.

We can also rule out a prolepsis-based analysis of LDA in Ojibwe, where there is co-reference between the object of the matrix clause and one of the arguments of the embedded clause (we give a flavor of the arguments here, but for full details see our parallel work Hammerly and Mathieu, 2023). If the proleptic object is a null *pro* that is co-referenced with an overt DP in the embedded clause (cf. the analysis of Passamaquoddy advanced by LeSourd, 2019, which we discuss further in Section 4), then such a structure would violate Principle C. In some Algonquian languages, such as Passamaquoddy, such a violation appears to be tolerated. However, Principle C is active in Ojibwe, as shown in the example below where co-reference an antecedent *pro* and an embedded DP is impossible, rendering such an account is untenable.[3]

[3]Note the current example may be confounded with an anti-logophoricity effect (e.g. Dubinsky and Hamilton, 1998). Future work should seek to clarify the roles of Principle C in Ojibwe. In any case, regardless of whether Principle C is active, a prolepsis analysis is untenable due to the restricted nature of LDA in Ojibwe, as discussed further in Section 4.

(7) 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]

As noted in the introduction, there are three basic patterns that have been known to characterize LDA across Algonquian languages. We summarize these patterns in (8), but see Hamilton and Fry (2016) for a more detailed accounting.

(8) a. **Free LDA:** Either the EA or IA can be targeted for LDA. Attested in Passamaquoddy (Bruening, 2001; LeSourd, 2010), Innu-aimûn (Branigan and MacKenzie, 2002), and some dialects of Ojibwe (Kitigan Zibi Ojibwe/Algonquin, Lochbihler and Mathieu, 2016, see also Rhodes (1994)).[4]
b. **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).
c. **Highest-Ranked LDA:** Only the highest-ranked argument on the person-animacy hierarchy can be targeted for LDA. Attested in the Listuguj dialect of Mi'gmaq (Hamilton and Fry, 2016) and a subset of Ojibwe speakers (Rhodes, 1994).

As detailed in the coming sections, we show that the situation in Border Lakes Ojibwe is different: All three patterns arise within the language depending on the particular configuration of arguments. This is a variant of what has been previously reported in Rhodes (1994) for some speakers of Eastern Ojibwe: so-called non-local configurations show Highest-Ranked LDA (as noted above in (8c)), while local-only and mixed configurations can be characterized by Agent LDA. We show that Border Lakes Ojibwe differs by allowing Free LDA under certain conditions.

### *2.2 Non-local only configurations*

The non-local only configurations are those with two third person (animate) arguments. In the cases we consider, one of the arguments is proximate and the other obviative. In direct voice clauses, where proximate is acting on obviative ($3 \rightarrow 3'$), we observe that LDA occurs with the proximate agent (9a). As we saw previously, this is apparent both by the matrix verb appearing in the TA form, as well as by the appearance of the third person animate theme sign *-aa*. We also observe that only the word order with PROX V OBV is

[4] "Freedom" in the context of LDA can be further expanded to refer to cases where arguments beyond those in the immediately embedded clause can be targeted for agreement in the matrix clause, as well as non-arguments such as possessors. This is discussed further in Section 4 in the context of LeSourd's (2019) analysis of Passamaquoddy. At present, no data is available to show whether or not LDA in Border Lakes Ojibwe can target arguments outside of the immediately embedded clause. However, the presence of restrictions on LDA with arguments in the immediately embedded clause, discussed in detail the next section, already confirms that LDA is not truly "free" in Border Lakes Ojibwe.

grammatical (9b-d). Note that this word order holds independently of whether there is LDA in the matrix clause, so is a general property of embedded clauses (see Hammerly, 2020, pg. 259).

(9) a. in-gii-waabam**-aa** [$_{CP}$ John gii-paashkizw-aa-d adikw-an ]
1-PAST-see.TA**-3** John.PROX PAST-shoot.TA-3-3 caribou-OBV
'I saw that John shot the caribou.' ✓ V [PROX V OBV]
b. *ingii-waabamaa gii-paashkizwaad John adikwan ✗ V [V PROX OBV]
c. *ingii-waabamaa gii-paashkizwaad adikwan John ✗ V [V OBV PROX]
d. *ingii-waabamaa adikwan gii-paashkizwaad John ✗ V [OBV V PROX]

As shown in (10), LDA with the obviative object is out regardless of word order. That is, it is not possible for the matrix verb to appear with the obviative theme sign *-imaa* nor with the obviative peripheral suffix *-n*.[5]

(11) a. *in-gii-waabam**-imaa-n** [$_{CP}$ John gii-paashikizw-aa-d adikw-an ]
1-PAST-see.TA**-3′-3′** John.PROX PAST-shoot.TA-3-3 caribou-OBV
b. *ingii-waabamimaan gii-paashkizwaad inini adikwan
c. *ingii-waabamimaan gii-paashkizwaad adikwan John
d. *ingii-waabamimaan adikwan gii-paashkizwaad John

The inverse, where obviative is acting on proximate (3′ → 3), shows LDA agreement with the proximate patient (12a). Once again, this appears in the theme sign taking the third person form *-aa*. We also see a reversal of word order, which again is generally characteristic of embedded inverse clauses, where the proximate patient is in a preverbal position (in contrast to the agent, as seen in the direct form in (11a)). The obviative agent cannot be the target of LDA, as shown in (12b).

(12) a. in-gii-waabam**-aa** [$_{CP}$ ikwe gii-miigwechiwi'-igo-d John-an ]
1-PAST-see.TA**-3** woman.PROX PAST-thank.TA-INV-3 John-OBV
'I saw that the woman was thanked by John.'
b. *in-gii-waabam**-imaa-n** [$_{CP}$ John-an gii-miigwechiwi'-igo-d ikwe ]
1-PAST-see.TA**-3′-3′** John-OBV PAST-thank.TA-INV-3 woman.PROX
[NJ 08.20.19]

We can therefore characterize the patterns in the non-local only configurations as a

[5]This agreement is more generally possible, for example with a first person subject acting on a possessed object (example from Hammerly, 2020, pg. 441):

(10) nin-gii-waabam-imaa-n Ziibiins o-maamaa-yan
1-PAST-see-3′-3′ Ziibiins.PROX 3-mother-OBV
'I saw Ziibiin's (PROX) mother (OBV).

Highest-Ranked LDA, as only the higher-ranked proximate argument is available as a target for LDA regardless of whether it is the agent (as in direct voice clauses) or the patient (as with inverse voice clauses).

### *2.3 Local only configurations*

Turning now to the patterns in the local-only configurations, where both arguments are a first or second person, with embedded 2 → 1, we see LDA with either the first person (13a) or second person (13b). In both cases, LDA is apparent by the realization of the person prefix in the first or second person form (and, less directly, by the appearance of the inverse marker; in the independent order, 3 → 1/2 configurations trigger the inverse marker on Voice).

(13) 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 thanked me.'
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 thanked me.' [NJ 08.20.19]

Likewise, with embedded 1 → 2, LDA is possible with either 1 (14a) or 2 (14b). Once again, this is most clear by the realization of the person prefix.

(14) 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.' ('John saw me giving thanks to you')
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.' ('John saw you when I thanked you') [NJ 08.20.19]

The two local-only configurations therefore show Free LDA, where either argument of the embedded clause can be a target for agreement on the matrix verb.

### *2.4 Mixed configurations*

The final set of data concerns the mixed configurations, where a local and (proximate) third person are interacting. First, with embedded 2 → 3, you can get LDA with the second person (15a), as evidenced by the presence of the second person theme sign *-in* and person prefix *gi-*, but it is not possible to get LDA with the proximate person (15b).

(15) a. **gi-**gii-waabam**-in** [$_{CP}$ gii-miigwechiwi'-ad John ]
**2-**PAST-see.TA**-2** PAST-thank.TA-2>3 John.PROX

'I saw that you thanked John.'

b. *in-gii-waabam**-aa** [$_{CP}$ gii-miigwechiwi'-ad John ]
1-PAST-see.TA**-3** PAST-thank.TA-2>3 John.PROX
*intended:* 'I saw that you thanked John.' [NJ 08.20.19]

With embedded 3 → 2, you can get LDA with either the third person (16a), as evidenced by the presence of the third person theme sign *-aa*, or second person (16b), as evidence again by the second person theme sign and person prefix.

(16) a. in-gii-waabam**-aa** [$_{CP}$ ikwe gii-miiwechiwi'-ik ]
1-PAST-see.TA**-3** woman.PROX PAST-thank.TA-3>2
'I saw that the woman thanked you.'

b. **gi-**gii-waabam**-in** [$_{CP}$ gii-miiwechiwi'-ik ikwe ]
**2-**PAST-see.TA**-2** PAST-thank.TA-3>2 woman.PROX
'I saw that the woman thanked you.' [NJ 08.29.19]

An analogous pattern to what was observed with 2 → 3 occurs with 1 → 3. It is not possible for LDA to target the embedded proximate person, as shown in (17).

(17) a. *gi-gii-waabam**-aa** ina [$_{CP}$ gii-miiwechiwi'(-aa)-ag ikwe ]
2-PAST-see.TA**-3** Q PAST-thank.TA(-3)-1>3 woman.PROX
*intended:* 'Did you see that I thanked the woman?'

b. *gi-gii-waabam**-aa** ina [$_{CP}$ ikwe gii-miiwechiwi'(-aa)-ag ]
2-PAST-see.TA**-3** Q woman.PROX PAST-thank.TA(-3)-1>3
*intended:* 'Did you see that I thanked the woman?' [NJ 08.29.19]

Keeping with 1 → 3, LDA with the embedded first person is grammatical, as shown in (18). Note that the first person theme sign *-i* is deleted in the surface form as the result of a general phonological process that deletes short vowels are the end of a word.

(18) gi-gii-waabam**(-i)** ina [$_{CP}$ gii-miiwechiwi'(-aa)-ag ikwe ]
2-PAST-see.TA**(-1)** Q PAST-thank.TA(-3)-1>3 woman.PROX
'Did you see that I thanked the woman?'

Rounding out the mixed configurations, with 3 → 1 we again get an analogous pattern to that with 3 → 2, where LDA can target either the third person as in (19a), or the first person as in (19b), respectively evident by the presence of the third and first person theme signs on the matrix verb.

(19) a. gi-gii-waabam**-aa** ina [$_{CP}$ ikwe gii-miiwechiwi'-i-d ]
2-PAST-see.TA**-3** Q woman.PROX PAST-thank.TA-1-3
'Did you see that the woman thanked me?'

b. gi-gii-waabam**(-i)** ina [$_{CP}$ gii-miiwechiwi'-i-d ikwe ]
2-PAST-see.TA**(-1)** Q PAST-thank.TA-1-3 woman.PROX

'Did you see that the woman thanked me?' [NJ 08.29.19]

Overall, the patterns of LDA in the mixed alignments do not have a single, unified characterization. With 1/2 → 3, we see Agent LDA, where only the first or second person argument can be targeted. In contrast, 3 → 1/2 is best characterized as Free LDA, as either argument can be targeted. Note that the existence of the latter pattern rules out an analysis of the 1/2 → 3 cases as Highest-Ranked LDA, as we do not see the higher-ranked first and second persons being targeted to the exclusion of the lower-ranked proximate person when first or second is the patient. It is only the confluence of being a local person *and* an agent that can characterize the patterns in the 1/2 → 3 configurations.

### *2.5 Summary*

In this section, we have shown that Border Lakes Ojibwe shows a mixture of Free, Agent, and Highest-Ranked LDA depending on the particular person features of the embedded arguments. We summarize the patterns in (20) before turning to a formal analysis.

(20) *Summary of LDA in Border Lakes Ojibwe*

- a. Non-Local Only (3 ↔ 3′): Highest-Ranked LDA
  - (i) With 3 → 3′, LDA targets the proximate agent
  - (ii) With 3′ → 3, LDA targets the proximate patient
- b. Local Only (1 ↔ 2): Free LDA
  - (i) With 1 → 2, LDA freely targets either the agent or patient
  - (ii) With 2 → 1, LDA freely targets either the agent or patient
- c. Mixed Configurations (1/2 ↔ 3): Variable Pattern
  - (i) With 1/2 → 3, LDA targets the first/second person agent (Agent LDA)
  - (ii) With 3 → 1/2, LDA freely targets either the agent or patient (Free LDA)

## 3 A Formal Account

### *3.1 Background*

Let us start with the assumption that the argument that is targeted by LDA with the matrix clause is in Spec,CP within the embedded clause (Hamilton and Fry, 2016). This generally follows from the idea the C defines a phase, thereby rendering anything within its complement inaccessible to further operations, while anything within its specifier remains available for LDA or further syntactic operations into the higher clause. The question is thus: What is the specification of the probe on C that can allow the LDA patterns of Ojibwe to be accounted for? Furthermore, how do lower agreement relations on Infl and Voice feed/bleed the possible agreement relations of C?

We can get initial traction on these questions by following Hamilton and Fry (2016), who provide a syntactic characterization of Free, Agent, and Highest-Ranked LDA, summarized in (21).

(21) a. **Free LDA:** A δ-probe on C moves either the EA or IA, regardless of syntactic position, depending only on whether the EA or IA has the relevant δ-feature (e.g. a feature related to evidentiality, as proposed by Hammerly and Mathieu (2023)).
b. **Agent LDA:** A φ-probe on C moves the closest argument. There is no A-Movement to Spec,IP of the IA over the EA (no "syntactic inverse") so the EA is always closest.
c. **Highest-Ranked LDA:** A φ-probe on C moves the closest argument. These languages have a "syntactic inverse", where the highest ranked argument undergoes A-Movement to Spec,IP, making the higher-ranked argument closer to the probe on C.

In short, languages differ in whether C hosts a probe that is sensitive to φ-features (i.e. person, number, gender, obviation, etc) or δ-features (i.e. features related to topic, focus, evidentiality or other A′ properties), with the latter resulting in Free LDA languages. Then, within languages with a φ-based probe, languages differ in whether the inverse is syntactic (resulting in Highest-Ranked LDA) or morphological (resulting in Agent LDA). Border Lakes Ojibwe differs from the types of languages discussed by Hamilton and Fry in that it shows all three patterns. Therefore none of these current analyses will work if just taken off-the-shelf. This frames our basic analytical problem: How can we capture a language that shows a mixture of these patterns under different conditions?

Our account finds its foundation in the operation AGREE first proposed in Chomsky (2000, 2001), where an "unvalued" probe searches its locally-restricted c-command domain for a goal with matching "valued" features. The features of the goal are then copied back to the probe. To start, let us make explicit the basic properties that follow from current models of AGREE including our extension to movement:

1. **Relativized Probes**: Both feature copying ("agreement") and displacement ("movement") can be relativized to be sensitive to particular φ- and/or δ-features of the goal (e.g. Rizzi, 1990; Preminger, 2014; Hammerly, 2021, 2024b).

2. **Interaction versus Satisfaction**: Probes for agreement (and movement) must dictate conditions on interaction and satisfaction (Deal, 2015, 2023). Interaction describes what types of elements can be targeted for movement/agreement, while satisfaction describes when a probe halts its search for something to move or agree with.

3. **Independence of Movement and Agreement**: A head may have only conditions for movement, only conditions for agreement, conditions for both movement *and* agreement, or no conditions whatsoever (e.g. Chomsky, 2000, where movement does not necessarily follow agreement).

4. **Equidistance and Best Match**: When two goals are equidistant (i.e. are dominated by the same number of maximal projections; Hornstein 2009), Best Match (see discussion below for a definition) determines which goal is targeted (Oxford, 2019; Coon and Bale, 2014; Van Urk, 2015; Hammerly, 2021).

5. **Multiple Agree**: Multiple Agree is possible. A probe can copy the features of more than one goal in a single derivational step if both are equidistant and an equal match for the probe (Hiraiwa, 2001; Oxford, 2019).

6. **Ban on Multiple Move**: Multiple Move is impossible under all circumstances. It is not possible to move more than one element in a single derivational step, as applying Merge to three items simultaneously violates the standard assumption that the operation is binary (Coon and Keine, 2021; Hammerly, 2021, 2024b).

In particular, these properties follow from an extended version of Deal's (2015, 2020) model of probes proposed by Hammerly (2021).[6] Hammerly applies the idea of interaction and satisfaction conditions to movement. Deal's original proposal is restricted to agreement *qua* feature copying, with interaction features ($\text{INT}_{\text{AGR}}$) defining what types of elements a probe will target for agreement, and satisfaction conditions ($\text{SAT}_{\text{AGR}}$) defining when a probe can stop its search for new goals to copy features from. Hammerly's proposal adds analogous conditions for movement, with interaction conditions ($\text{INT}_{\text{EPP}}$) defining what elements can be targeted for movement by a probe, and satisfaction conditions ($\text{SAT}_{\text{EPP}}$) defining when a probe can stop its search for elements to move. The proposal allows both agreement and movement to be relativized (i.e. to be sensitive to *particular* features) within a unified framework, and can replace interface conditions such as the P-Constraint (Zubizarreta and Pancheva, 2017; Pancheva and Zubizarreta, 2017) that have been used to derive systems where certain projections appear to require or prefer elements with a particular feature such as [Participant] in their specifier.

[6] More recent work developed while this paper was under review by Hammerly (2024a) has shown that distinguishing between interaction and satisfaction conditions is redundant, and that a single set of conditions can be used to govern the behavior of a probe. The current analysis could readily be reformulated without a distinction between interaction and satisfaction, as seen in Hammerly (2024b). That said, the key take away that a probes should be separately specified for conditions on movement and agreement holds regardless of whether interaction and satisfaction are distinguished within the representation of a probe.

Also important to highlight is our adopted formulation of Best Match, which we take from Hammerly (2021), but has antecedents in Coon and Bale (2014), Van Urk (2015), and Oxford (2019):

(22) *Best Match*
When there are $n$ goals $G_1$, $G_2$, ..., $G_n$ that are equidistant from a probe $P$, $P$ copies features from/moves the goal that matches the most $\text{SAT}_{\text{AGR}}$/$\text{SAT}_{\text{EPP}}$ conditions of $P$.

Particularly relevant to the present account is what occurs with a probe that has *disjunctive* interaction or satisfaction conditions (Roversi, 2020). The example that comes up in Ojibwe is a case where *either* $\varphi$- or $\delta$-features can fully satisfy the probe. In these cases, a goal that has both $\varphi$- *and* $\delta$-features would provide a better match than a goal with one or the other, since a goal that matches both features matches more features than a goal that only matches one or the other (see also Hammerly (2024a) on defining Best Match under disjunction and conjunction).

Finally, it is necessary to outline our assumptions regarding the feature specification of various arguments, shown in (23). For the purposes of the present paper, we assume that the representation of categories related to person, obviation, and animacy are restricted by a feature geometry (Bliss and Jesney, 2005; Hammerly, 2018; Oxford, 2019). The key consequence is the feature sets that define the categories stand in particular subset-superset relations: All categories share $\varphi$, only the inanimate category lacks [ANIMATE], both inanimate and obviative lack [PROXIMATE], and so on.

(23) *Representation of singular person/obviation/animacy categories*
a. SECOND: {$\varphi$, ANIM, PROX, PART, ADDR}
b. FIRST: {$\varphi$, ANIM, PROX, PART}
c. PROXIMATE: {$\varphi$, ANIM, PROX}
d. OBVIATIVE: {$\varphi$, ANIM}
e. INANIMATE: {$\varphi$}

These relations are critical to deriving the behavior of relativized probes (Béjar, 2003). For example, a probe that is satisfied by finding a goal that bears [PARTICIPANT] will only stop probing when it encounters a first or second person, or a probe with interaction conditions that restrict it to moving or copying features from elements with [ANIMATE] will never agree with or move an inanimate goal, since it lacks this feature, but will move any argument that bears the animate feature including obviative, proximate, first, and second persons.

### *3.2 Three probes*

As outlined earlier in the paper, there are three probes within the Ojibwe clausal spine: Voice, Infl, and C. In this section we advance a proposal for the interaction and satisfaction conditions for agreement and/or movement that govern each of these three probes in embedded clauses (i.e. the conjunct order).

Following Oxford (2023), we adopt the proposal that there are two varieties of Voice in Ojibwe which we refer to as plain Voice, shown in (24a), and ergative Voice, also known as "inverse" Voice, shown in (24b).

(24) a. Voice = [$\text{INT}_{\text{AGR}}$: {φ}, $\text{SAT}_{\text{AGR}}$: {φ},
$\text{INT}_{\text{EPP}}$: {PART}, $\text{SAT}_{\text{EPP}}$: {PART}]

b. $\text{Voice}_{\text{ERG}}$ = [$\text{INT}_{\text{EPP}}$: {φ}, $\text{SAT}_{\text{EPP}}$: {φ}]

Plain Voice (24a) has conditions for both agreement and movement[7]. Plain Voice has a flat agreement probe, so it will copy features and be satisfied by the first DP that it encounters within its c-command domain. However, it will only move to its specifier (and be satisfied by) a DP that has a participant feature. This relativized EPP plays a key role in capturing the asymmetry in the mixed configurations. In contrast, the second "ergative" Voice (24b) only has a probe for movement. Within the current model, this can be framed as a probe that only has EPP conditions. We assume a flat probe that will move whatever φ-bearing DP it encounters, which more explicitly formalizes the proposed mechanics in Oxford's original analysis. Ergative voice also has the property of assigning inherent case to the external argument. Again following Oxford, these two varieties of Voice have a different distribution, which is independently explained by the Person Licensing Condition (PLC; Béjar and Rezac, 2003). The $3' \rightarrow 3$ configurations only converge when $\text{Voice}_{\text{ERG}}$ is part of the derivation, and this is the only configuration within the cases considered here where that variant of Voice can appear (Oxford also argues that it can appear in $3' \rightarrow 3'$ configurations, which are not considered here). This gives rise to what Oxford calls the "deep inverse", where the patient is prompted to the structural subject position of Spec,IP. All other configurations only have a convergent derivation in the presence of plain Voice, as ergative Voice is unable to fully license the local arguments, violating the PLC. Plain Voice is associated with the "shallow inverse", where inverse morphology appears, but not inverse syntax. Our account can be seen as providing converging evidence for this recent proposal.

[7]Note, this differs from Oxford's proposal, who does not propose an EPP feature on the plain Voice head for reasons of parsimony: He lacks evidence that plain Voice ever drives movement. Such movement will be deemed necessary in the present account. The addition of conditions governing movement does not affect the core insights of Oxford's original analysis.

We can next consider the probe on Infl in the conjunct order, shown in (25).

(25) Infl = [$\text{INT}_{\text{AGR}}$: {φ}, $\text{SAT}_{\text{AGR}}$: {PROX},
$\text{INT}_{\text{EPP}}$: {PROX}, $\text{SAT}_{\text{EPP}}$: {PROX}]

This probe has conditions that govern both agreement and movement. For agreement, all φ-bearing DPs will be a potential target, while the probe will only be fully satisfied by finding a DP with a proximate feature. This also adjudicates what provides the "best match" for the probe, with agreement with proximate-bearing DPs being preferred. The EPP conditions dictate that only DPs with a proximate feature will be moved (i.e. first, second, and proximate third persons), and only such a DP can satisfy the probe and halt its search.

Finally, we consider the probe on embedded C, which is a mixed φ/δ-probe:

(26) C = [$\text{INT}_{\text{EPP}}$: {φ ∨ δ}, $\text{SAT}_{\text{EPP}}$: {φ ∨ δ}]

There is no evidence of any feature copying in the conjunct order (i.e. the peripheral agreement slot never appears) therefore we assume there is no feature copying taking place, so C hosts only an EPP probe to regulate movement. This probe has disjunctive interaction/satisfaction conditions (Roversi, 2020) and will interact with any φ- *or* δ-bearing DP, and will be satisfied and halt probing upon encountering a DP with *either* φ- or δ-features. To review, when it comes to Best Match, a goal that bears both φ- *and* δ-features will be a better match than a probe that only bears one or the other type of feature. For the purposes of this paper, we assume a generic δ-feature, but it is likely that a more specific feature related to evidentiality is what regulates movement in these cases (see Hammerly and Mathieu, 2023).

### *3.3 Non-local only configurations*

Following Oxford's proposal, only plain Voice is compatible with a well-formed derivation in $3 \rightarrow 3'$ configurations, while only ergative $\text{Voice}_{\text{ERG}}$ is compatible with the $3' \rightarrow 3$ configurations. The reader is referred to Oxford's paper for detailed motivations for this split, which allows the "deep inverse" that characterizes these configurations to be captured. As such, the derivation in each case will always result in the proximate argument being moved to Spec,IP, regardless of whether it originates as the EA or IA, therefore the probe on C will always find and move the proximate argument, resulting in Highest-Ranked LDA. We consider each configuration in turn.

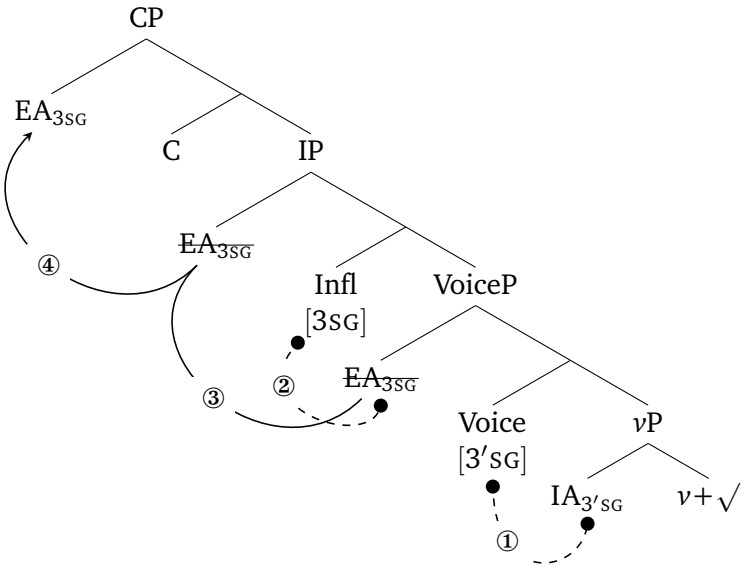
In (27a) we repeat the embedded clause where proximate is acting on obviative. Notice that the agreement on the theme sign takes the third person object form *-aa*, while

the central agreement takes the proximate singular form *-d*. The derivation of this clause is schematized in (27b). We first see that Voice agrees with the obviative IA (step ①) deriving the realization of third person object agreement with the theme sign. However, it does not move the IA to its specifier since it does not meet the conditions of the EPP probe on Voice, which only moves local persons (i.e. those bearing [PART]). Therefore when Infl probes, it will only find the proximate EA. Infl agrees with the EA (step ②), deriving proximate agreement with the central agreement marker, and moves the EA to Spec,IP (step ③). This makes the proximate EA the single closest goal to the EPP probe on C, resulting in movement to Spec,CP (step ④). Therefore the proximate EA can be targeted by LDA in the matrix clause.

(27) *Derivation of the 3 → 3′ configuration*

a. . . . John gii-paashkizw-aa-d adikw-an
John.PROX PAST-shoot.TA-3-3SG caribou-OBV
'. . . that John (PROX.SG) shot the caribou (OBV.SG)'

b.



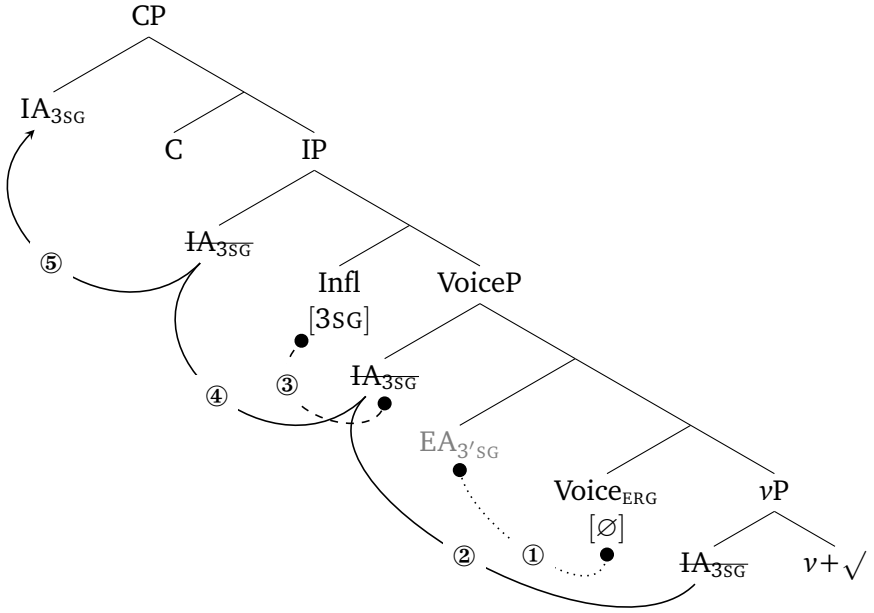

Turning to the inverse cases, where obviative is acting on proximate, recall the form of the embedded clause repeated in (28b). Here we see the inverse theme sign (*-igo*), while central agreement, being realized as *-d*, again indexes the proximate argument. Following Oxford (2019), we assume that the inverse theme sign is an elsewhere form, appearing only when Voice is unspecified for features. Consider now the derivation in (28b), where ergative $\text{Voice}_{\text{ERG}}$ has replaced plain Voice in order to derive the deep inverse (Oxford, 2023). Ergative Voice does not copy any features, since it is not specified for an agreement probe. This lack of features results in the realization of the inverse *qua* elsewhere form. The obviative EA is assigned inherent case by ergative Voice and is

deactivated as a goal (step ①), and the proximate IA is moved to Spec,VoiceP as a result of the EPP conditions of the probe on Voice (step ②). Both of these steps are identical to what was proposed by Oxford (2023) for these configurations. Infl once again only finds the proximate argument, this time the IA, copying its features (step ③) leading central agreement to be realized in its proximate form, and then moves the proximate IA to Spec-IP (step ④). This makes the proximate IA the single closest goal to the EPP probe on C, resulting in movement to Spec,CP (step ⑤). The proximate IA is therefore a viable target for LDA in the matrix clause.

(28) *Derivation of the 3′ → 3 configuration*

a. . . . ikwe gii-miigwechiwi'-igo-d John-an
woman.PROX PAST-thank.TA-INV-3 John-OBV
'. . . that the woman (PROX.SG) was thanked by John (OBV.SG).'

b.




Overall, the result in the non-local only configurations is that the proximate argument (either EA or IA) will always be the highest argument in the clause. The probe on C will therefore look down and always find a proximate argument first, moving it to Spec,CP and making it available for LDA. This derives the Highest-Ranked LDA pattern chatacteristic of the non-local only configurations.

Also of note: We derive the proper word order. Recall that only the word order where proximate precedes obviative is grammatical: in direct clauses, the proximate EA must precede the obviative IA; in inverse, the proximate IA must precede the obviative EA. In both of the derivations above, we see the movement of the proximate argument to a

position to the left of the obviative argument.

### *3.4 Local only configurations*

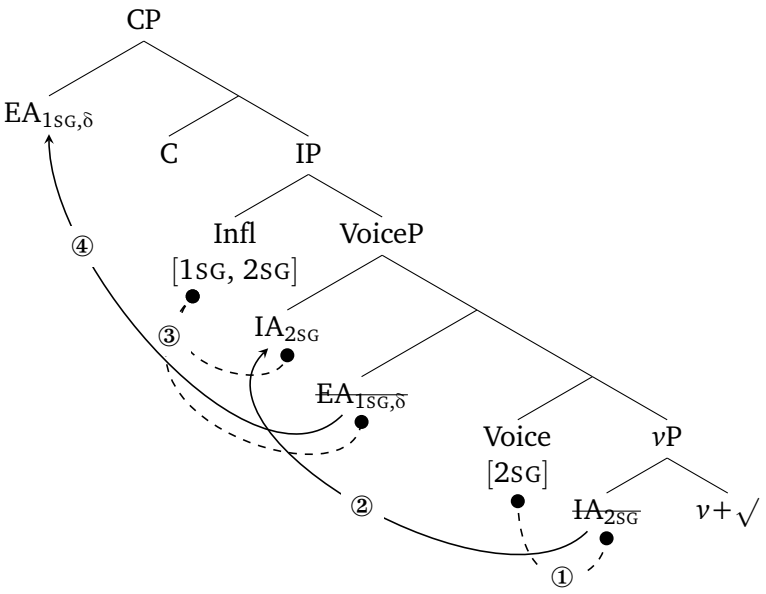
We exemplify the local only cases with the configuration where first is acting on second and LDA occurs with the first person EA, repeated in part in (29a). Here, we see the theme sign appearing in its second person object form (*-in*), while central agreement appears in its first person form (*-aan*). Turning now to the derivation in (29b) we see plain Voice first probes down to agree with the second person IA (step ①), resulting in the realization of the second person form of the theme sign. Because the IA is a second person, and therefore bears [PARTICIPANT], the EPP conditions on the probe are met, and the IA is moved to Spec,VoiceP (step ②). This results in a double 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[8]. 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 $\varphi$-features, it will instead be the presence of a $\delta$-feature on one or the other that leads one to be a better match for the EPP probe. In the example derivation of 1 $\rightarrow$ 2 given below, the first person EA has been specified for the $\delta$-feature and is moved to Spec,CP (step ④). We therefore obtain the Free LDA pattern characteristic of these configurations: Either the IA or EA will be moved to Spec,CP and be an available target for LDA depending on which one is specified for the relevant $\delta$-feature (e.g. a feature related to evidentiality as proposed by Hammerly and Mathieu (2023)).

(29) *Example derivation with the 1 $\rightarrow$ 2 configuration*

a. . . . gii-miigwechiwi'-in-aan
PAST-thank.TA-2-1
'. . . that I thanked you'

[8]Another possibility, raised by two reviewers, is that the failure of Multiple Move would lead to *optionality*, such that only one of the two equally-matched goals is moved, rather than neither. We take this as a live possibility, and highlight that it would still allow us to capture the Free LDA pattern in the relevant cases, exemplified by in (28) and (30), where the double specifier configurations arise. The logic is as follows: In any given derivation, *either* the EA or IA would be moved to Spec,IP. Whichever one is moved would then be the single closest goal to the probe on C, and would thus be moved to Spec,CP and made available for LDA in the higher clause.

b.




One question that arises from this derivation is why we see Infl realized as the first person singular central agreement marker when the features of both the first and second person are copied back to the probe. We assume, following (Oxford, 2021, p. 420), that there is a morphological impoverishment operation that deletes the features singular first or second persons from Infl just in case the same first or second person features are expressed on Voice. In this case, Voice appears as the second person theme sign, so the second person features are deleted (post-syntactically) from Infl, leading central agreement to be realized in the first person singular form.

### *3.5 Mixed configurations*

Mixed patterns provide the strongest evidence for our proposal of a relativized EPP on Voice, where local IAs are promoted to Spec,VoiceP, resulting in Free LDA, while third person IAs are not, resulting in Agent LDA. In this section we show how the derivation proceeds in each case.

#### *3.5.1 1/2 → 3*

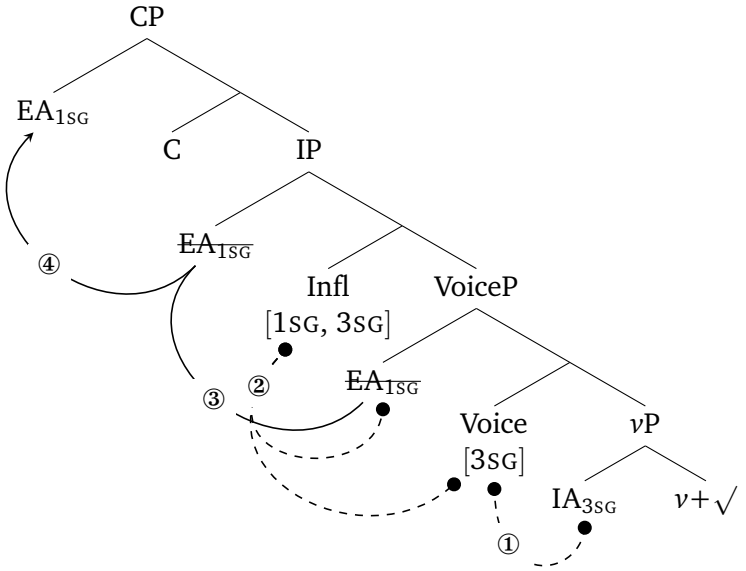
We exemplify the first type of mixed pattern with the first acting on proximate configurations, repeated in part in (30a). We see the theme sign appear in it third person object form *-aa*, while central agreement appears as a portmanteau form *-ag*, which indexes both the first and third person. In these cases, we again have plain Voice, which agrees with the proximate IA (step ①), deriving the expression of the third person theme

sign. However, Voice does not move the proximate IA, since it does not meet the condition of being specified for [Participant] stemming from the relativized EPP. The agreement probe on Infl engages in Multiple Agree with both the local person EA and Voice (step ②), which has inherited features from its previous agreement relation with the proximate IA (this follows exactly the proposal of Oxford). This results in both the first and third person features being copied to the probe, which is expressed as a portmanteau form of central agreement. For the EPP probe on Infl, we further assume that only nominal elements can be moved. Therefore the local person EA is moved to its specifier position (step ③). This results in the local EA being the closest DP to the probe on C, and is thus the only argument that can be moved to Spec,CP (step ④) and targeted by LDA. This captures the appearance of Agent LDA within these configurations.

(30) *Example derivation with the 1 → 3 configuration*

a. . . . gii-miiwechiwi'(-aa)-ag ikwe
PAST-thank.TA(-3)-1>3 woman.PROX
'. . . that I thanked the woman'

b.




We can contrast the appearance of a portmanteau form of the central agreement marker with our non-local only case in (29). The impoverishment rule proposed by Oxford (2021) specifically deletes the features of first or second persons on Infl, not third persons, when both Voice and Infl overlap. In the case in (30), it is instead third person features that are shard by Voice and Infl, so no impoverishment occurs and a portmanteau form is realized.

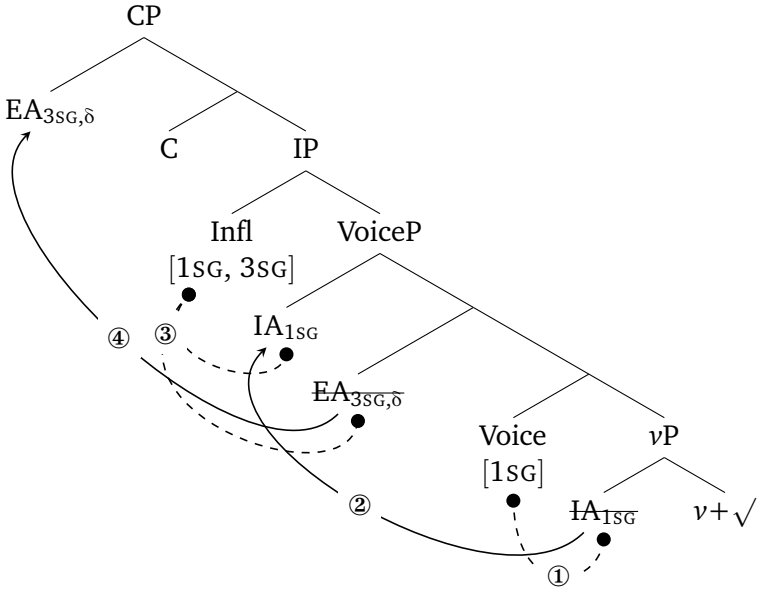
### *3.5.2 3 → 1/2*

We exemplify the second type of mixed configuration with the proximate acting on first configuration, repeated in part in (31a). Here we see the theme sign appear in the first person object form *-i*, while central agreement appears in the third person singular form *-d*. Turning to the derivation in (31b), as in the other mixed configuration, plain Voice agrees with (step ①) the first person IA. This results in the realization of the first person form of the theme sign. In contrast to the other mixed configuration, the first person IA also meets the EPP-based interaction conditions of the probe (i.e. it is specified for [PARTICIPANT], triggering movement to Spec,VoiceP (step ②). As was seen previously in the local only configurations, this results in a double specifier configuration, making both the EA and IA equidistant to the probe on Infl. Infl ends up copying the features of both the EA and IA (Multiple Agree; step ③), but cannot move either due to the impossibility of Multiple Merge. As a result, both the IA and EA are equidistant to the probe on C as well. Since both equally match in φ-features, it will again be the presence of a δ-feature on one or the other that leads one to be a better match for the EPP probe and to be moved to Spec,CP. In the example in (31), the proximate EA has been specified for the δ-feature and moves to Spec,CP (step ④) to be available for LDA.

(31) *Example derivation with the 3 → 1 configurations*

a. . . . ikwe gii-miiwechiwi'-i-d
woman.PROX PAST-thank.TA-1-3
'. . . that the woman thanked me'

b.




Here again we see the impoverishment operation on Infl at work. While Infl copies

the features of both the third person EA and first person IA, we do not see a portmanteau form nor the expression of the more marked first person feature set: We see third person singular agreement instead. This follows again from the idea that local person features on Infl are impoverished just in case Voice expresses the features of that local person. In this case, Voice appears in its first person form, so the first person features are deleted from Infl and it is realized as the third person singular central agreement.

## 4 Towards a typology of Algonquian LDA

Previous work by Hamilton and Fry (2016) identified three types of LDA within the Algonquian family: Free, Agent, and Highest-Ranked LDA. Hamilton and Fry showed that parametric variation on two dimensions could capture these three types of languages: (i) Whether the probe governing movement on embedded C is sensitive to $\varphi$-features or $\delta$-features, and (ii) Whether a language does or does not have the syntactic inverse. The relationship between these parameters and the three types of LDA couched within the adopted representation of probes is shown in (32).

(32) a. **Free LDA:** C = [$\text{INT}_{\text{EPP}}$: $\{\delta\}$, $\text{SAT}_{\text{EPP}}$: $\{\delta\}$] (+ Syntactic Inverse)
b. **Agent LDA:** C = [$\text{INT}_{\text{EPP}}$: $\{\varphi\}$, $\text{SAT}_{\text{EPP}}$: $\{\varphi\}$]
c. **Highest-Ranked LDA:** C = [$\text{INT}_{\text{EPP}}$: $\{\varphi\}$, $\text{SAT}_{\text{EPP}}$: $\{\varphi\}$] + Syntactic Inverse

Languages with a pure $\delta$-probe on C will show free LDA regardless of whether the language has a syntactic inverse or not—the probe will find whichever argument in the clause is specified for the $\delta$-feature, skipping those that lack that feature. In contrast, languages with a $\varphi$-probe will always end up moving whichever argument is syntactically closest to C. If arguments remain in their base-generated positions we derive Agent LDA, since agents (external arguments) are merged higher than patients and will always be the closest matching goal. Languages with a syntactic inverse, where more prominent DPs undergo A-movement to a syntactic position above the less prominent DP in the clause, will show Highest-Ranked LDA, since the highest-ranked argument will always end up closer to the probe on C regardless of whether it is the agent or patient.

The proposal advanced in the present paper argues that an additional logically possible probe is indeed attested within the Algonquian languages: One where the satisfaction conditions on the probe on C are a *disjunction* of $\varphi$- and $\delta$-features, as shown in (33).

(33) **Mixed LDA:** C = [$\text{INT}_{\text{EPP}}$: $\{\varphi \vee \delta\}$, $\text{SAT}_{\text{EPP}}$: $\{\varphi \vee \delta\}$]

That is, the probe will move the first argument that it finds that is specified for either $\varphi$- or

δ-features. When combined with the particular syntax generated on the lower probes on Voice in Infl, which includes a syntactic inverse within the non-local only configurations, we are able to derive the appropriate mixture of Free, Highest-Ranked and Agent LDA characteristic of Border Lakes Ojibwe, while also filling out an additional typological possibility in terms of the structure of the probe on C.

At present, we do not wish to take a strong stance on whether our analysis can extend to all Algonquian languages that show LDA—a much more extensive typological survey going beyond the scope of this paper would be necessary. However, we think the account shows promise in that direction, and fares better in its coverage than other recent theories of LDA in Algonquian. For example, LeSourd (2019) argues explicitly against a raising-based account of LDA in the Eastern Algonquian language Passamaquoddy, favoring instead a "purely local" principle of argument selection, where a null proleptic argument is generated in the matrix clause and co-refers with a non-local argument, leading to the appearance of LDA. As briefly noted earlier in the paper, the key fact for LeSourd (2019) is that LDA in Passamaquoddy appears to be free in a rather radical sense: it is able to target not only arguments in the immediately embedded clause, but also those in more deeply embedded clauses and in non-argument possessor positions.

However, there are issues with LeSourd's proposal both in its description of LDA in Passamaquody and its extension to restricted LDA systems like the one we describe for Ojibwe. On the empirical side, recent work on LDA in Passamaquoddy by Grishin (2023, 2024) reveals that *subordinative* clauses in Passamaquoddy show a restricted LDA pattern, calling into question the idea that LDA in Passamaquoddy is in fact entirely free (Note: Ojibwe does not have subordinative clauses in the relavant sense). Grishin shows that local-only and mixed configurations result in Agent-LDA, while non-local only configurations show highest-ranked LDA. Grishin gives evidence that subordinative clauses are reduced, lacking a CP layer, and therefore also lack the A′-Movement otherwise associated with CP that would result in a Free LDA pattern. As a result, the movement patterns to IP (the highest projection in the clause) end up governing what is accessible for LDA in the matrix clause. Like we saw with Ojibwe in our paper, in mixed/local configurations, there is no syntactic inverse, so the agent is always highest, deriving Agent LDA. In contrast, the presence of a syntactic inverse in non-local only clauses leads to the Highest-Ranked pattern. This is fully consistent with the analysis we present, where movement in the lower clause is the key to regulating patterns of LDA in the higher clause.

More generally, an account like LeSourd's where the agreeing NP in the matrix clause is a base-generated (null pronominal) object of the higher verb would need to explain why there are restrictions on what types of arguments can fill this position depending on the

particular configuration of arguments in the immediately embedded clause. For example, turning back to Ojibwe, with a mixed local/non-local configuration in the embedded clause, LDA with the third person proximate argument is possible when that argument is the external argument of the embedded clause (see our example 15a), but not when it is the internal argument (see our 16b). What's more, this is not a general restriction on targeting third person proximate internal arguments, as they can be targeted for LDA with non-local only configurations in the embedded clause (see our 11a). It is not clear how LeSourd's "purely local" principle on argument selection in the matrix clause could capture this asymmetry, allowing proximate arguments to be generated in the matrix clause only in particular cases that depend on the features and position of arguments in the embedded clause. However, this asymmetrical restriction is naturally accounted for under our analysis, since agreement and and movement in the embedded clause is directly feeding/bleeding possible targets for agreement in the matrix clause. Furthermore, as discussed around example (7), the fact that Principle C appears to be active in Border Lakes Ojibwe makes an extension of LeSourd's account to Ojibwe untenable, as the prolepsis analysis relies on a violation of Principle C being tolerated such that a null pronoun binds or co-refers with an embedded overt DP.

## 5 Conclusion

The current paper presented and provided an analysis for a novel pattern of Long Distance Agreement in Algonquian from Border Lakes Ojibwe. Previous work on LDA across the family could be categorized into three basic types: Free LDA, Agent LDA, and Highest-Ranked LDA (Hamilton and Fry, 2016). We show that Border Lakes Ojibwe shows a mixture of all three types depending on the particular configuration of arguments within the embedded clause. We argued that an extended version of Deal's (2015, 2020) interaction/satisfaction model of probing proposed by Hammerly (2021) can capture these effects. We took as our particular starting the point the proposal of Oxford (2023), who provides an account of agreement on Voice in Infl across Algonquian languages. There were two key facets of the account. First, the idea that the relativized EPP on (plain) Voice moves first/second internal arguments to Spec,VoiceP, but not third person internal arguments. This leads to the asymmetrical pattern in the mixed configurations where 1/2 $\rightarrow$ 3 gives rise to Agent LDA, which 3 $\rightarrow$ 1/2 gives rise to Free LDA. Second, that C hosts a mixed disjunctive $\varphi/\delta$-probe, which attracts arguments to Spec,CP, allowing them to be accessible for LDA in the matrix clause. Overall, the paper shows how probes regulating agreement and movement on Voice, Infl, and C feed and bleed one another, resulting in complex and fine-grained interactions that vary cross-linguistically.

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Christopher Hammerly
University of British Columbia – Department of Linguistics
chris.hammerly@ubc.ca

Éric Mathieu
University of Ottawa – Department of Linguistics
emathieu@uottawa.ca