

A verb raising analysis of the Ojibwe VOS/VSO alternation

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Abstract Like many of verb-initial languages, Ojibwe shows an alternation between VOS and VSO word orders. In this paper, I provide an argument for a verb-raising account of this alternation. I argue that verbs raise to C via a head amalgamation operation that applies in narrow syntax, with lower copies being interpreted and higher copies being pronounced. This derives, V1, the affixation of functional morphology, and the lack of interpretive effects of head movement. I then show that optional phrasal movement targets the highest obviative argument in the clause, promoting it to Spec,#P and deriving a VOS/VSO alternation in direct alignments (where the object is obviative), and static VSO in inverse (where the subject is obviative). I further show that proximate subjects undergo movement to Spec,IP, while proximate objects are trapped within VoiceP. The analysis captures word order facts in both transitive and ditransitive clauses, suggests that indefinite proximate arguments are PPIs, forms a link between word order and agreement, and provides strong evidence that Ojibwe is a configurational language.

1 INTRODUCTION

A number of typologically diverse language families, most notably Austronesian and Mayan, contain languages that display alternations between VOS and VSO word orders. Within the generative tradition, a variety of analyses have been employed to derive these alternations: object post-posing, headedness parameters, predicate fronting, remnant movement, and head movement being the primary operations at play. One of the principal conclusions to be drawn from this literature is that verb-initial languages, and VOS/VSO alternations, are not uniform in their behavior or how they are derived. In this paper, a previously unexamined VOS/VSO alternation in Southwestern Ojibwe (Algonquian) is explored. I argue that V1 in Ojibwe is the result of the verb raising to C, while the alternation in the linear order of the subject and object is the result of whether the object moves to the specifier of #P (resulting in VOS) or stays in situ (resulting in VSO). I further show that proximate subjects independently move to Spec,IP (cf. Oxford, 2018). The analysis informs the typology of how VOS/VSO alternations can be derived syntactically, links agreement and word order in Ojibwe, and provides evidence in favor of a configurational analysis of the Ojibwe clause.

The VOS/VSO alternation in Ojibwe is most readily described in relation to the DIRECT/INVERSE agreement marking, which is introduced in detail in Section 2. To preview, in DIRECT environments, where the subject is *proximate* and the object is *obviative*, VOS word order occurs preferentially (1a), but VSO is also possible (1b). In INVERSE environments, where the object is *proximate* and the subject *obviative*, only VSO occurs (1c)—VOS is ungrammatical (1d).¹

- (1) *Word orders for direct (preferentially VOS, but also VSO) and inverse (VSO only)*
- | | | |
|----|---|---------------|
| a. | o-gii-waabam-aa-n ikwe-wan gwiiwizens | |
| | 3-PAST-see-DIR-OBV woman-OBV boy | |
| | ‘The boy (PROX) saw the woman (OBV)’ | DIRECT, VOS |
| b. | o-gii-waabam-aa-n gwiiwizens ikwe-wan | |
| | 3-PAST-see-DIR-OBV boy woman-OBV | |
| | ‘The boy (PROX) saw the woman (OBV)’ | DIRECT, VSO |
| c. | o-gii-waabam-igoo-n gwiiwizens-an ikwe | |
| | 3-PAST-see-INV-OBV boy-OBV woman | |
| | ‘The boy (OBV) saw the woman (PROX)’ | INVERSE, VSO |
| d. | *o-gii-waabam-igoo-n ikwe gwiiwizens-an | |
| | 3-PAST-see-INV-OBV woman boy-OBV | |
| | <i>Intended:</i> ‘The boy (OBV) saw the woman (PROX)’ | INVERSE, *VOS |

¹The following abbreviations will be used for glosses: ABS = absolutive case, ERG = ergative case, PAST = past tense, PROX = proximate, OBV = obviative, SG = singular, PL = plural, DIR = direct agreement, INV = inverse agreement, DUB = dubitative mode, PRET = preterit mode, h/ = him/her, s/he = she/he. The name of the language in the example will appear at the right margin of the last line of the example, unless the language is Southwestern Ojibwe, which will be unmarked. When necessary, the source will also appear at the right margin of the final line of the example, unless unmarked, in which case it is from original fieldwork conducted by the author in Minnesota over the Summer and Fall of 2017 and the Summer of 2018. When relevant, the word order and direct/inverse sign will appear at the right margin of each example and sub-example for ease of interpretation.

Ojibwe has many of the canonical properties of a nonconfigurational language as predicted by the Pronominal Argument Hypothesis (PAH; Jelinek, 1984) and the Polysynthesis Parameter (Baker, 1996), including *pro*- and argument-drop, highly rich agreement and head-marking, seemingly free word order, and discontinuous constituents. Despite this, the empirical findings, and the proposed analysis, bring Ojibwe into a growing body of work that argues that Algonquian languages are in fact *configurational* (e.g. Brittain, 2001; Bruening, 2001b, 2009; LeSourd, 2006; Hamilton, 2015; Morris, 2018) in the sense that overt arguments of the verb occupy syntactic argument positions within a hierarchical phrase structure, rather than adjunct positions (Junker, 2004) or a position in a flat structure (Grafstein, 1984).

Given this claim, the central question of the paper is *how* the syntax is configured to give rise to verb-initiality and the VOS/VSO alternation shown above. There are, broadly speaking, three syntactic approaches to deriving verb-initial word orders and VOS/VSO alternations (Clemens and Polinsky, 2017). The *rightward specifier analysis* base-generates VOS with rightward specifiers and derives VSO with object post-posing. In the *predicate fronting analysis*, SVO is base-generated and VOS is derived with VP-fronting. The VSO order is produced by moving the object out of the VP, followed by remnant movement of the VP. In the *verb raising analysis*, SVO is base-generated, and VSO is derived by head movement of the verb. VOS is derived by additional movement of the object above the subject. I argue that only the last of the three approaches can capture the facts, and show the rightward specifier and the predicate fronting analyses are incompatible with the empirical landscape.

The proposed verb raising analysis builds from the recent account of head movement as post-syntactic amalgamation by Harizanov and Gribanova (2018). In order to restrict the interpretive effects of certain types of head movement, Harizanov and Gribanova split head movement into two types: phrasal movement and Raising. Raising is argued to apply only at PF, forms morphologically complex words, and lacks interpretive effects. I adopt the mechanics of the operation, but argue that Raising applies in narrow syntax. Instead of an appeal to derivational timing, I posit that restrictions on the interpretation and pronunciation of copies can derive both the morphological and interpretive profile of Raising: while higher copies within the head-adjunction structure must be pronounced, the lower copies in the base-generated position must be interpreted.

The roadmap for the paper is as follows. In Section 2, I present the basic morphosyntax of Southwestern Ojibwe, and introduce the VOS/VSO alternation in more detail. In Section 3, I motivate a verb-raising analysis on the basis of morphology, scope, and the structure of ditransitives. In Section 4, I provide evidence against two alternative configurational analyses: predicate fronting and rightward specifiers. In Section 5, I turn to an evaluation of non-configurational accounts of Algonquian and the evidence against adopting them for Ojibwe. In Section 6, I consider the broader implications of the analysis, including connections to analyses of agreement and the typology of verb-initiality. Section 7 concludes.

2 OJIBWE MORPHOSYNTAX

Ojibwe a continuum of dialects spoken around the Great Lakes. At present, there are as many as 90,000 speakers across the dialects. While the dialects are largely mutually intelligible, there are significant phonological, morphological, and syntactic differences (see Valentine (2001) and Sullivan (2016b) for reviews). Within generative linguistics, the eastern dialects have been the most studied. This literature includes significant descriptive work, including a grammar (Valentine, 2001), as well as wide-ranging theoretical work on agreement, *wh*-questions, noun incorporation, nominalization, and the morphophonology of the verb (e.g. Béjar and Rezac, 2009; Lochbihler and Mathieu, 2013, 2016; Mathieu, 2013; Newell and Piggott, 2014; Barrie and Mathieu, 2012, 2016; Mathieu, 2014).

In the present paper, the dialect of interest is Southwestern Ojibwe, spoken in what is now Northern Minnesota, Southwestern Ontario, and Northern Wisconsin. While estimates vary greatly, it is likely that there are not more than 5,000 total speakers of the dialect, with approximately 1,000 speakers in Minnesota, where the fieldwork for this study was conducted. The two speakers consulted come from the geographical area around the US-Canadian border between International Falls, Minnesota and Thunder Bay, Ontario. This restricted focus on a single dialect may result in the failure of the empirical generalizations of this paper to be straightforwardly extended to other dialects and communities. However it is necessary to ensure the constellation of facts represents a true dialect of Ojibwe. The question of variation within Ojibwe, and indeed Algonquian generally, is enlightening and important, but will not be explored over the course of this paper.

In the remainder of this section. I present three morphosyntactic properties of Southwestern Ojibwe:² the proximate-obviative system, the verbal morphology, and the range of available word orders. Over the course of this section, the central facts surrounding the VOS/VSO alternation will come into greater focus.

2.1 Obviation and direct/inverse

Obviation is a discourse sensitive system that organizes third person referents (e.g. Aissen, 1997).³ In Ojibwe, the system is most clearly active with grammatically ANIMATE nouns—it only plays a peripheral role in nouns in the INANIMATE class. As a result, the paper focuses solely on nouns classified as animate. Within a given domain, one referent is designated *proximate*, a morphologically unmarked distinction, and all others are designated *obviative*, a distinction marked morphologically on overt nouns with the suffix *-(y/w)an* and as agreement on the verb. How a particular referent is ultimately designated as proximate or obviative remains an open question. Obviation is thought to be related to topicality or prominence, but has also been understood as encoding perspective (Russell, 1996; Bliss, 2005; Muehlbauer, 2012; Hammerly and Göbel, 2019). In any case,

²I refer to Southwestern Ojibwe simply as Ojibwe unless the discussion warrants further disambiguation.

³Though see Bliss and Jesney (2005) and Hammerly (2018) for analyses where first and second person referents also participate in obviation.

an approximate description is that the perspective center or most topical referent is designated proximate, while all other referents are marked obviative.

Obviative marking is obligatory in contexts where there are multiple third persons—most notably possessive constructions and transitive (and ditransitive) verbs. An example of obviative marking with a transitive verb is shown in (2a), where the subject is proximate, and the object is obviative. In these contexts, obviative marking on one of the arguments is obligatory, as shown in (2b), and at least one of the arguments must be proximate (2c). These judgments hold regardless of agreement on the verb and word order alternations.

- (2) a. o-gii-waabam-aa-n ikwe-wan gwiiwizens
 3-PAST-see-DIR-OBV woman-OBV boy.PROX
 ‘the boy (PROX) saw the woman (OBV)’
 b. *ogii-waabamaan ikwe gwiiwizens
 c. *ogii-waabamaan ikwewan gwiiwizensan

The sentence in (2a) shows what is referred to in the descriptive literature as a *direct* agreement marker: the morpheme *-aa*. With transitive verbs with two animate third person arguments, this marker occurs when the subject is proximate and the object is obviative. This is most readily understood in contrast to *inverse* agreement, shown in (3) as *-igoo*, which arises when the subject is obviative and the object is proximate.⁴

- (3) o-gii-waabam-igoo-n gwiiwizens-an ikwe
 3-PAST-see-INV-OBV boy-OBV woman.PROX
 ‘the boy (OBV) saw the woman (PROX)’

Importantly, reversing obviative marking does not change the meaning of the utterance *per se*: both (2a) and (3) mean ‘the boy saw the woman’. Informally, the alternation is reported by speakers to be associated with a shift in perspective. Direct sentences, where the subject is proximate, take the perspective of the subject referent. Inverse sentences, where the object is proximate, take the perspective of the object referent. For this reason speakers will often translate inverse sentences in passive voice (i.e. (3) would be translated as ‘the woman was seen by the boy’), however the inverse is syntactically and morphologically distinct from the passive form: the passive decreases the valency of the verb, and is marked by passive morphology on the verb.

A precise formulation of the intricacies of the contexts that license direct and inverse environments will not be attempted here.⁵ What is important to hold in mind for the purposes of the

⁴In fact, direct agreement occurs in a variety of environments and takes a number of forms, depending on the person features of the object. For this reason, recent analyses have contended that direct marking is essentially a form of object agreement. On the other hand, inverse has come to be understood as impoverished or default agreement. See Thivierge (2017), Bhatia, Vostrikova, and Kusmer (2018), and Oxford (2018) for recent accounts in this vein.

⁵A note to clarify the adopted terminology: direct and inverse *environments* refer to the syntactic arrangements that condition direct and inverse *agreement*, which is the morphological marking on the verb. Direct and inverse *contexts* are discourses or situations that lead to the subject or object, in the case of transitive verbs with animate arguments, to be marked proximate or obviative. The primary concern of this paper is therefore direct/inverse environments.

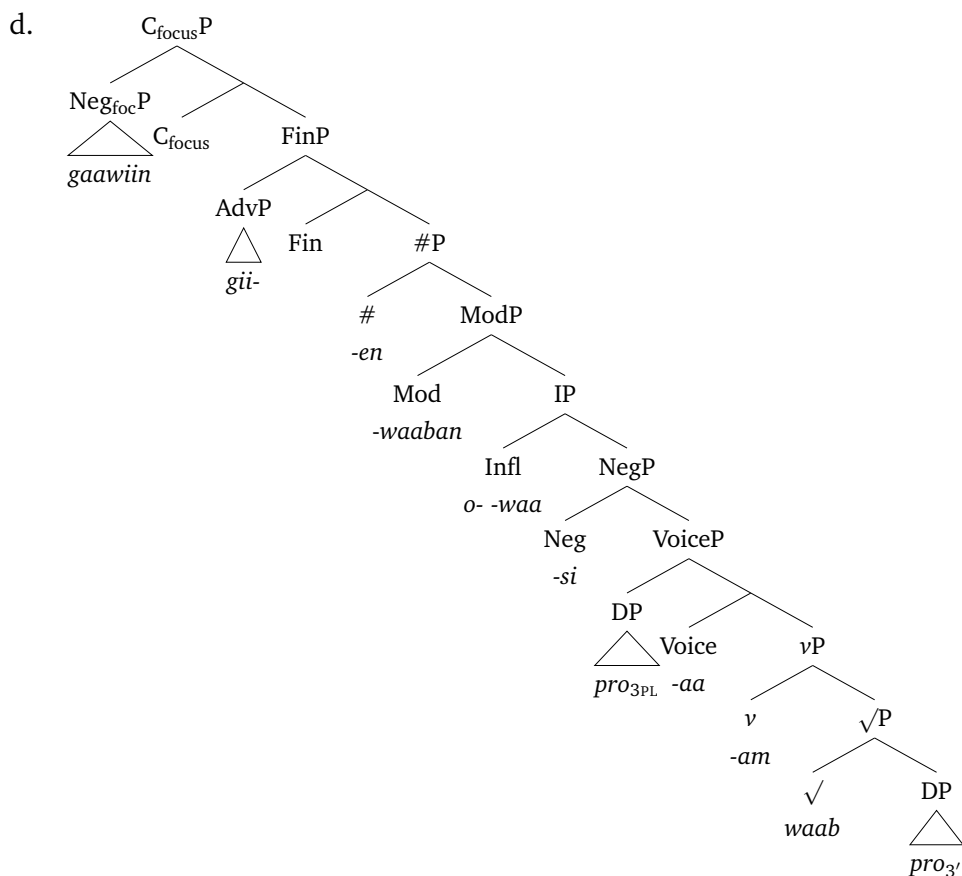
present paper is that direct environments consist of a proximate subject and obviative object, and inverse environments a proximate object and obviative subject.

2.2 Verbal morphology

The verbal morphology of Algonquian is the most intensely studied aspect of the language family. For the present work, the verbal morphology primarily serves as a guide for determining structure. This follows from the Mirror Principle of Baker (1985), where inner morphemes are taken to be heads of lower projections. The shape of the proposed structure, shown in (4d), follows most directly the syntax proposed by Oxford (2018) for the Algonquin dialect of Ojibwe. For reference, the correspondences between the terminology used within the Algonquianist tradition and heads in the phrase structure are given in (4a,b), and exemplified in (4c).

(4) Ojibwe verbal template (for matrix verbs)

- a. **Person Prefix** + Tense + STEM + Final + *Theme Sign* + Negation + **Central** + Mode + Peripheral
- b. **Infl** + Tense (adverbial) + $\sqrt{\text{ROOT}}$ + *v* + *Voice* + Neg + **Infl** + Mod + #
- c. gaawiin o- gii- waab -am -aa -si -waa -waaban -en
 GAAWIIN **Pre-** Tense- STEM -Final -Theme -Neg -**Cent** -Mode -Periph
 ‘They (PROX) might not have seen h/ (OBV)’



The geometry of the Ojibwe VP (for present purposes, the projections contained within VoiceP) conform to established assumptions. The internal argument, in this example a null *pro*, is merged as sister to the root ($\sqrt{\text{ }}$). The root is verbalized via the category defining head *v*, which is argued to be identifiable as the *final* morpheme from the descriptive literature (see Brittain (2003) for details). The external argument, also a null *pro* in the current example, is merged as specifier to VoiceP (Bruening, 2001a, 2005, 2009). Voice is realized as the morpheme referred to as the *theme sign* in the descriptive literature. In contrast the literature which has assumed Ojibwe to be non-configurational, I assume that all external and internal arguments are realized in the positions described above: they are not adjuncts associated with these positions via *pro*. The motivation for this will be clear when facts about scope and word order are explored in the following sections, with the alternative non-configurational accounts examined directly in §5.

The middle field is associated with negation, mood, and agreement morphology. The first projection dominating VoiceP is Neg (Tilleson, 2019). Note that negation in Ojibwe matrix clauses is bipartite. I follow Tilleson (2019) in placing the semantic force of negation on Neg, with *gaawiin* being analyzed as a focus negator sitting in Spec,C_{focus}P. The role of negation is explored further in the discussion of scope in §3.3.

Following Neg is Infl, which shows agreement with the “most prominent” argument in person and number (Oxford, 2018). I adopt an analysis where Infl does not encode tense, but rather person features (Ritter and Wiltschko, 2014; Zubizarreta and Pancheva, 2017). In matrix clauses, Infl is morphologically realized discontinuously as the person prefix and central agreement. Following (Oxford, 2018), I assume that this falls into line with a wider cross-linguistic pattern of person-number discontinuities accounted for by Harbour (2008). I discuss this account further in §3.1.3.

The third morpheme in the middle field is mode. In most examples in this paper, the null *neutral mode* has been specified. However there are at least two other possible modes, described as the *preterit* and the *dubitative*, which can surface overtly. Examples are given in (5a-b), respectively. To my knowledge, the exact modal/aspectual force behind these morphemes has not been examined, though the preterit is described as signaling completed actions, and the dubitative doubt or uncertainty about whether an event has occurred.

- (5) a. o- gii- waab -am -aa -ban -en
 3- PAST- see -TRANS -DIR -PRET -OBV
 ‘S/he (PROX) did see h/ (OBV)’
 b. o- gii- waab -am -aa -dogen -an
 3- PAST- see -TRANS -DIR -DUB -OBV
 ‘S/he (PROX) might have seen h/ (OBV)’

The final morpheme in the middle field is the agreement projection #, which shows phonologically conditioned alternations between *-n*, *-an*, and *-en* in the preceding examples. This slot indexes agreement in obviation, number, and grammatical animacy with either the subject or the object. In the examples discussed in this paper, agreement with the obviative argument appears regardless of

whether it is the subject or object. I return to the question of the role of this probe in movement of obviative arguments in §6.

Finally, the left periphery is generally expanded in Ojibwe to include a variety of topic and focus projections (Sullivan, 2016b) following the split CP hypothesis of Rizzi (1997). I have simplified the left periphery here to include only the central projections at play. The first is FinP, which I argue to house the adverbial tense marker (for a similar proposal for Blackfoot see Ritter and Wiltschko, 2004). The second is the focus projection $C_{\text{focus}}P$. As mentioned above, following Tilleson (2019) I assume this projection houses the focus negator *gaawiin* in its specifier.

The goal of this section was to advance the basic outline of the Ojibwe verbal spine, and to provide a number of landmarks that tie the complex morphological structure to familiar syntactic structures. The major claim is that both the internal and external arguments begin in canonical positions within the VP, and are not considered adjuncts. Over the course of the analysis, additional issues surrounding the fixation of morphology and the mechanisms of agreement will arise, most saliently in the discussion of verb movement.

2.3 Word order alternations

There are six logically possible word orders for a transitive verb with overt arguments: two verb initial (VOS, VSO), two verb medial (SVO, OVS), and two verb final (SOV, OSV). In Ojibwe, only the verb-final word orders are considered ungrammatical in all contexts. Therefore the question arises as to when each of the four remaining word orders is licensed.

Determining the answer to this question is non-trivial—a fact that is due to both linguistic and extralinguistic factors. For example, determining whether elements have undergone movement within the verb initial word orders, which as I discuss below are the most discourse neutral orders, cannot be tested with methods that have been useful in the Germanic literature, such as the relation of arguments to adverbs, as post-verbal adverbs are highly marked, if not entirely ungrammatical, in Ojibwe. For this reason, tests of this sort do not appear in this paper. Furthermore, given that pronouns in Ojibwe only occur in non-neutral contexts in pre-verbal positions under topic and focus, the movement of all first and second person arguments, and third person pronominal arguments, is difficult to diagnose. For this reason, this paper focuses only on the behavior of overt nominals.

A second issue are the extralinguistic factors that influence judgments on word order (for a related discussion see Clemens and Coon, 2018). While there are many fluent speakers of Ojibwe, English has become the default language in many communities, and most second language Ojibwe learners have English as their L1. The idea that word order is not contentful in Ojibwe is pervasive among L2 learners, and as a result English word orders are often imported to Ojibwe by default. As a result, many first speakers are accommodating of non-grammatical word orders, which can still be understood given the information encoded in obviative marking and direct/inverse agreement. Therefore speakers report that ungrammatical word orders ‘makes sense’, but upon further questioning reveal that they find the order to be unnatural. Much care was taken in the present paper

to understand how my consultants distinguish between understandable sentences, and those which are grammatically licensed. These judgments were facilitated through discussions about accommodating L2 speech, and operationalizing judgments as being “first speaker speech”, “learner speech”, or “nonsense”. Learner speech was established as a sentence that was understandable, but was in some way unnatural. Furthermore, the two speakers consulted for this study learned English as a second language in adolescence, and grew up speaking only Ojibwe in the home.

Beyond the judgments provided in the current paper, a recent case study on spontaneous speech and word order in Ojibwe by Sullivan (2016a) has established the conditions under which different word orders arise. Sullivan showed a single speaker of Ojibwe a series of pictures depicting transitive actions, and asked the speaker to describe what was going in each of the scenes. Sullivan found that VOS, and to a lesser extent VSO, dominates in naturally elicited speech—a finding consistent with the judgments reported here and the broader findings in the literature, which take VOS to be the ‘basic’ word order of many of the Ojibwe dialects (e.g. Tomlin and Rhodes, 1992; Valentine, 2001; Meyer, 2013; Dahlstrom, 2017). Furthermore, Sullivan showed that verb-medial word orders are associated with the fronting of topicalized, focused, and new subjects and objects, leading to SVO and OVS, respectively. This finding is consistent with analyses where the left periphery is associated with topic and focus positions (e.g. Rizzi, 1997).

The conditions under which VOS versus VSO arise are initially far less straightforward. Sullivan identifies a number of disparate factors that seem to condition this alternation, with the most robust condition being the focus of the present paper: VOS occurs preferentially in direct environments, though VSO can also occur; VSO occurs in inverse environments. In principle, this alternation can be summarized in two different ways, given in (6) and (7):

- (6) *The Obviative Surface Word Order Generalization*
The obviative argument is preferentially right-adjacent to the verb.
- (7) *The Proximate Surface Word Order Generalization* (not descriptively adequate)
The proximate argument is preferentially at the right edge of the clause.

At first blush, given that a number of papers have made a case for a topic position at the rightmost edge of the clause (Tomlin and Rhodes, 1992; Meyer, 2013), one may favor the generalization in (7). However, a wider look at word order, taking into account ditransitive verbs, allows (6) to be maintained, where (7) fails to capture the surface word order patterns.

Considering first ditransitive word orders in a direct agreement environment, we see that the only grammatical word orders are those in which the direct object (DO), *mishiimin-an*, which is marked obviative, is at the rightmost edge of the clause (8a-b).⁶ This violates the generalization in (7), which predicts a preference for the ungrammatical word orders in (8c) or (8e), where the

⁶In Ojibwe, there is a system of grammatical gender, which is not directly being taken into account in the present paper. As mentioned above, gender is bipartite, and each noun is specified for either *animate* or *inanimate* gender. For the most part, this occurs on intuitive grounds—the word for tree, *mitig*, is animate; the word for stick, *mitigoons*, is inanimate. However there is arbitrariness as well. In Southwestern Ojibwe, the word for apple, *mishiimin*, is, perhaps

proximate subject is the rightmost argument. However, like transitive verbs, ditransitives in direct environments show a preference for the indirect object (IO) to be right-adjacent to the verb (8a), but an alternation where the proximate subject is in this position is also possible (8b).⁷

(8) *Direct ditransitives*

- | | | | | | |
|----|---|---------------|---------------|--------------|------------|
| a. | o-gii-asham-aa-n | gwiiwizens-an | ikwe | mishiimin-an | |
| | 3-PAST-feed-DIR-OBV | boy-OBV | woman.PROX | apple-OBV | |
| | ‘The woman (PROX) fed the boy (OBV) an apple (OBV)’ | | | | V IO S DO |
| b. | ogii-asham-aa-n | ikwe | gwiiwizens-an | mishiimin-an | |
| | 3-PAST-feed-DIR-OBV | woman.PROX | boy-OBV | apple-OBV | |
| | ‘The woman (PROX) fed the boy (OBV) an apple (OBV)’ | | | | V S IO DO |
| c. | *ogii-ashamaan | mishiiminan | gwiiwizensan | ikwe | *V DO IO S |
| d. | *ogii-ashamaan | mishiiminan | ikwe | gwiiwizensan | *V DO S IO |
| e. | *ogii-ashamaan | gwiiwizensan | mishiiminan | ikwe | *V DO IO S |
| f. | *ogii-ashamaan | ikwe | mishiiminan | gwiiwizensan | *V S DO IO |

The word order with ditransitives in inverse environments also map cleanly onto the generalization in (6), and reflect the same restrictions as their transitive counterparts. Only a single word order is available, where the obviative subject is right-adjacent to the verb. There are no alternations in these environments.

(9) *Inverse ditransitives*

- | | | | | | |
|----|---|-------------|-------------|--------------|------------|
| a. | o-gii-asham-igoo-n | ikwe-wan | gwiiwizens | mishiimin-an | |
| | 3-PAST-feed-INV-OBV | woman-OBV | boy.PROX | apple-OBV | |
| | ‘The woman (OBV) fed the boy (PROX) an apple (OBV)’ | | | | V S IO DO |
| b. | *ogii-ashamigoon | gwiiwizens | ikwewan | mishiiminan | *V IO S DO |
| c. | *ogii-ashamigoon | mishiiminan | gwiiwizens | ikwewan | *V DO IO S |
| d. | *ogii-ashamigoon | mishiiminan | ikwewan | gwiiwizens | *V DO S IO |
| e. | *ogii-ashamigoon | gwiiwizens | mishiiminan | ikwewan | *V IO DO S |
| f. | *ogii-ashamigoon | ikwewan | mishiiminan | gwiiwizens | *V S DO IO |

To summarize, the alternation between VOS and VSO word orders can be described in terms of the Obviative Surface Word Order Generalization, given in (6): an obviative argument is preferentially right-adjacent to the verb. The pattern was preferred over a formulation with respect to proximate arguments based on the surface word order of ditransitives, where like the transitive verbs, one of the obviative argument, the indirect object, is preferred to be right-adjacent to the counterintuitively, grammatically animate, and therefore participates in the obviative marking system—in this case being marked obviative, as the direct object of a ditransitive.

⁷The word orders in (8)d and (8)f are technically grammatical, but receive the absurd interpretation of ‘The woman fed the apple the boy’.

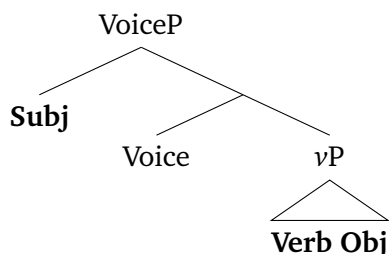
verb. The other obviative argument, the direct object, is at the right-edge of the clause. In the next section, this constellation of facts will be argued to be captured by a verb raising analysis.

3 A VERB RAISING ANALYSIS OF OJIBWE VOS/VSO ALTERNATIONS

In this section, I develop an account that derives the surface word order for Ojibwe sentences with transitive and ditransitive clauses. Two main ingredients are necessary. First, bottom-up head movement that raises the verb to the upper projections of the clause, leading to verb initiality and the affixation of morphology. Second, the possibility of movement of the object from its base generated position to a position in the middle field above the landing site of the subject. The occurrence of this movement derives VOS word order, whereas an in situ object derives VSO. I begin with a general sketch of verb-raising accounts for verb-initial languages. I then turn to the application of the account to Ojibwe.

The verb raising analysis of verb initiality has been advanced for a variety of languages, most notably the Celtic languages (e.g. McCloskey (1991, 1996) for Irish, Sproat (1985) for Welsh), a number of Austronesian languages (see Clemens and Polinsky (2017) for a review), and Mayan (Clemens and Coon, 2018). Verb raising accounts generally start with the assumption that specifiers are generated on the left, and complements on the right. Therefore SVO is base-generated, as schematized in (10), and both VOS and VSO must be derived.

(10) *Base-generated SVO with leftward specifiers*



In §4.2, I provide explicit arguments in favor of leftward (as opposed to rightward) specifiers for Ojibwe on the basis of scope. For now, I simply note that the availability of rightward specifiers would allow the VOS rather than SVO word order to be base-generated.

To derive verb-initiality and the VSO word order, the verb undergoes head movement (Travis, 1984) to a position relatively high in the clause. To derive the VOS order, an additional step is required to move the object to the middle field above the position of the subject but lower than the verb. There are therefore two basic parameters on a verb-raising account: (i) establishing how far the verb raises; and (ii) establishing the landing site of and motivation for movement of the object. To preview the account presented in the following sections, I propose that the verb moves to C in Ojibwe, and that the object undergoes (optional) movement to the specifier of #P.

Verb raising has commonly been diagnosed via ellipsis or the relative position of verb-adjacent particles and adverbs (Clemens and Polinsky, 2017). In this paper, another set of diagnostics is

developed. The first set of diagnostics relies on the fact that the raising analysis predicts a lack of constituency between the verb and the object in the VOS word order: the verb and the object move independently, and do not remain within the VP. This ultimately contrasts with both a predicate fronting analysis and the rightward-specifier analysis, where VO constituency is maintained. I argue that the failures of VP coordination and a lack of freezing effects, both of which are used as tests of VP constituency, provide evidence against these analyses for Ojibwe. On the other hand, ATB movement of the verb proves to be freely available independently of the movement of the internal argument, which is predicted by a raising analysis. A further test examines whether other VP-internal material is fronted along with the verb. For example, a predicate fronting analysis predicts that indirect objects and obliques should be fronted along with the verb. On the other hand, the raising analysis allows this material to remain in situ, as the verb moves independently of the other elements within the VP.

An additional line of reasoning in favor of verb raising is that head movement of the verb can derive certain morphosyntactic facts, most notably the presence of suffixing morphology on the verb. Under head movement, the verb moves cyclically through each projection and the head of those projections are added as a right branch. On the Mirror Principle (Baker, 1985), it is therefore expected that the order of morphemes, modulo independently motivated divergences, will map onto the base-generated order of syntactic projections.

3.1 *Verb raising in Ojibwe*

In the literature on Ojibwe dialects, there is broad agreement that the post-verbal morphology is collected on the verb via head movement (Lochbihler, 2008; Newell and Piggott, 2014), and that this process conforms to the Mirror Principle (Baker, 1985). Combined with work establishing the functional aspects of different pieces of morphology, this has allowed the functional sequence within the verbal spine to be established, as outlined in §2.2. However, such arguments for verb-raising based purely on morphology can quickly become circular in the following way: head movement is argued to correctly derive the sequence of morphology, and the sequence of morphology is deduced by assuming head movement under the Mirror Principle. Therefore a contribution of the present account is to show that the process of head movement is independently motivated by a need to bring the verb to a clause-initial position to account for the observed surface word orders.

The presentation of raising is divided into three parts. First, I establish the landing site of raising as C. I then turn to the mechanism that underlies raising, which builds on the proposal of head movement as amalgamation by Harizanov and Gribanova (2018). Finally, I address an issue that arises from this account: how to derive pre-verbal versus post-verbal morphology.

3.1.1 *Raising to C*

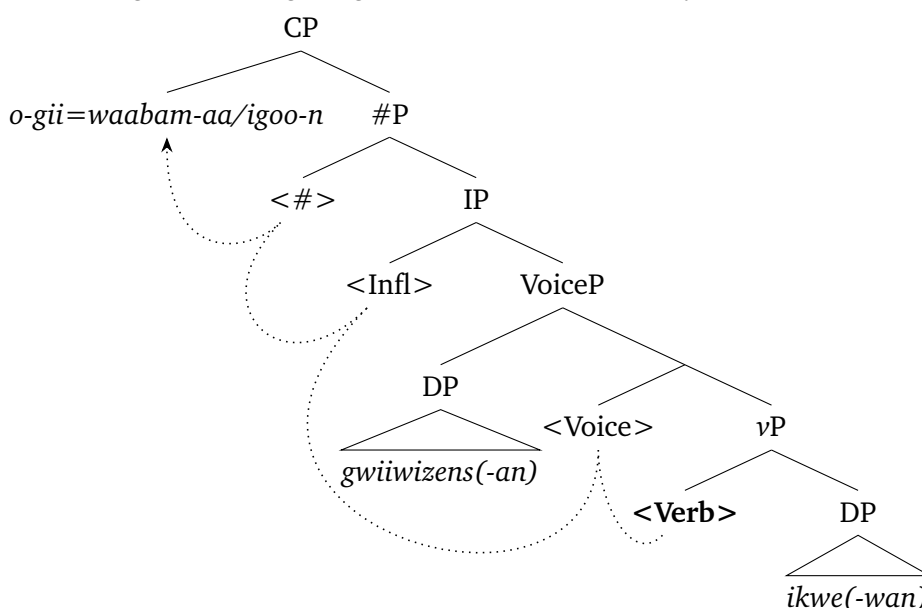
I consider movement of the verb irrespective of whether the greater environment is direct or inverse, as verb raising of the same sort occurs in both cases, and the VSO word order is licensed

in both. The distinction between direct and inverse becomes relevant in the discussion of object movement and the derivation of VOS in §3.2. The proposed path and endpoint of verb raising is shown in (11).⁸

(11) *VSO structure after cyclic head movement* — see (13) for further details

Direct: *ogii-waabamaan gwiwizens ikwewan* ‘The boy (PROX) saw the woman (OBV)’

Inverse: *ogii-waabamigoon gwiwizensan ikwe* ‘The boy (OBV) saw the woman (PROX)’



As shown above, I argue that the verb raises to C (or more specifically under the split-CP analysis, FinP; I simplify the left periphery to CP for expository purposes). This proposal has two antecedents in the Algonquian literature: verb raising to C in matrix clauses (i.e. the *independent order*) has been previously proposed by Halle and Marantz (1993) for Potawatomi (a Central Algonquian language closely related to Ojibwe) and Richards (2004) for Wampanoag (Eastern Algonquian). To my knowledge, the present paper is among the first to extend raising to C to Ojibwe (see also McGinnis, 1995).

It is important to note that this proposal and its antecedents stand in contrast to Campana (1996) for Passamaquoddy-Malecite (Eastern Algonquian) and Brittain (1997) for Sheshatshit Montagnais (Central Algonquian), who propose movement to C occurs with embedded verbs (i.e. the *conjunct order*), but not matrix verbs. I do not take a direct stand on the derivation of the independent versus conjunct order here, nor the possibility of variation within Algonquian. However I note that the wider picture for Ojibwe is consistent with the proposal of Richards (2004), who argues that raising to C occurs in the independent order but stops at Infl in the conjunct. In line with this analysis, Lochbihler and Mathieu (2013) have argued that raising to C does *not* occur in

⁸Throughout the paper, head movement will be schematized with dotted movement arrows, and phrasal movement with solid movement arrows.

the conjunct order in Ojibwe. Combined with the present proposal that the verb *does* raise to C in the independent order, a pathway emerges to derive the syntactic differences between these two verbal forms in a parallel manner to that proposed by Richards (2004). I leave a further elaboration of this account to future work and retain focus on matrix contexts.

There are two main consequences of the proposed movement to C. First, the verb is promoted to a position that is higher than the position that the object will be argued to land (i.e. #P), but still low enough that the topic and focus positions in the left periphery remain linearly to the left. This correctly allows for the SVO and OVS word orders discussed in §2.3 to be associated with topic/focus of the subject and object, respectively. Second, the account captures the fact that the functional projections within the verbal spine are affixed to the root—modulo the person prefix, which is linearized to the left for independent reasons examined in §3.1.3. On the other hand, the adverbial tense marker, which as shown in (4d) is in the specifier of FinP, remains semi-independent. This is schematized above with the use of ‘=’ to separate tense from the verbal complex.

3.1.2 *Raising as amalgamation*

One question that arises immediately pertains to the mechanism of verb raising. In this section, I propose head movement in Ojibwe is a form of *amalgamation*, an operation recently proposed by Harizanov and Gribanova (2018).

As has been repeatedly noted (e.g. in Chomsky (2000, 2001); Matushansky (2006); Roberts (2010)), head movement occupies an awkward position in syntactic theory: it violates many of the conditions thought to broadly apply to all syntactic operations, including conditions on locality and the Extension Condition (see Harizanov and Gribanova (2018) for a detailed review). This has spawned much debate about the timing and nature of head movement structures and operations, which has recently culminated in a proposal by Harizanov and Gribanova (2018) to split head movement into two separate operations (see also Matushansky, 2006): (i) genuine syntactic movement, akin to phrasal movement, and (ii) (post-syntactic) amalgamation via *Raising* or *Lowering*.

These two operations are argued to have complementary profiles, and can interact to capture a wide variety of cross-linguistic patterns. Syntactic head movement is simply internal merge, and therefore obeys the same constraints, can lead to interpretive effects, and does not lead to the formation of morphologically complex objects. Harizanov and Gribanova (2018) argue that a recent example of such a case comes from a study of the German long passive by Keine and Bhatt (2016), where head movement results in scopal effects that can only be derived if head movement occurs in narrow syntax. On the other hand, amalgamation produces a head-adjunction structure that obeys the Head Movement Constraint (Travis, 1984), maps to a morphologically complex word, and does not have interpretive effects. This movement occurs in a highly-local fashion, and is driven by a *Raising* operation, formalized in (12), which adjoins heads that are structurally adjacent. This operation will be the focus of the head movement in Ojibwe.

(12) Head *Raising* (Harizanov and Gribanova, 2018):

$$[XP \dots X \dots [YP \dots Y [ZP \dots]]] \rightarrow [XP \dots [X \ X \ Y] [YP \dots [ZP \dots]]]$$

(where Y and X are heads, X c-commands Y, and there is no head Z that c-commands Y and is c-commanded by X)

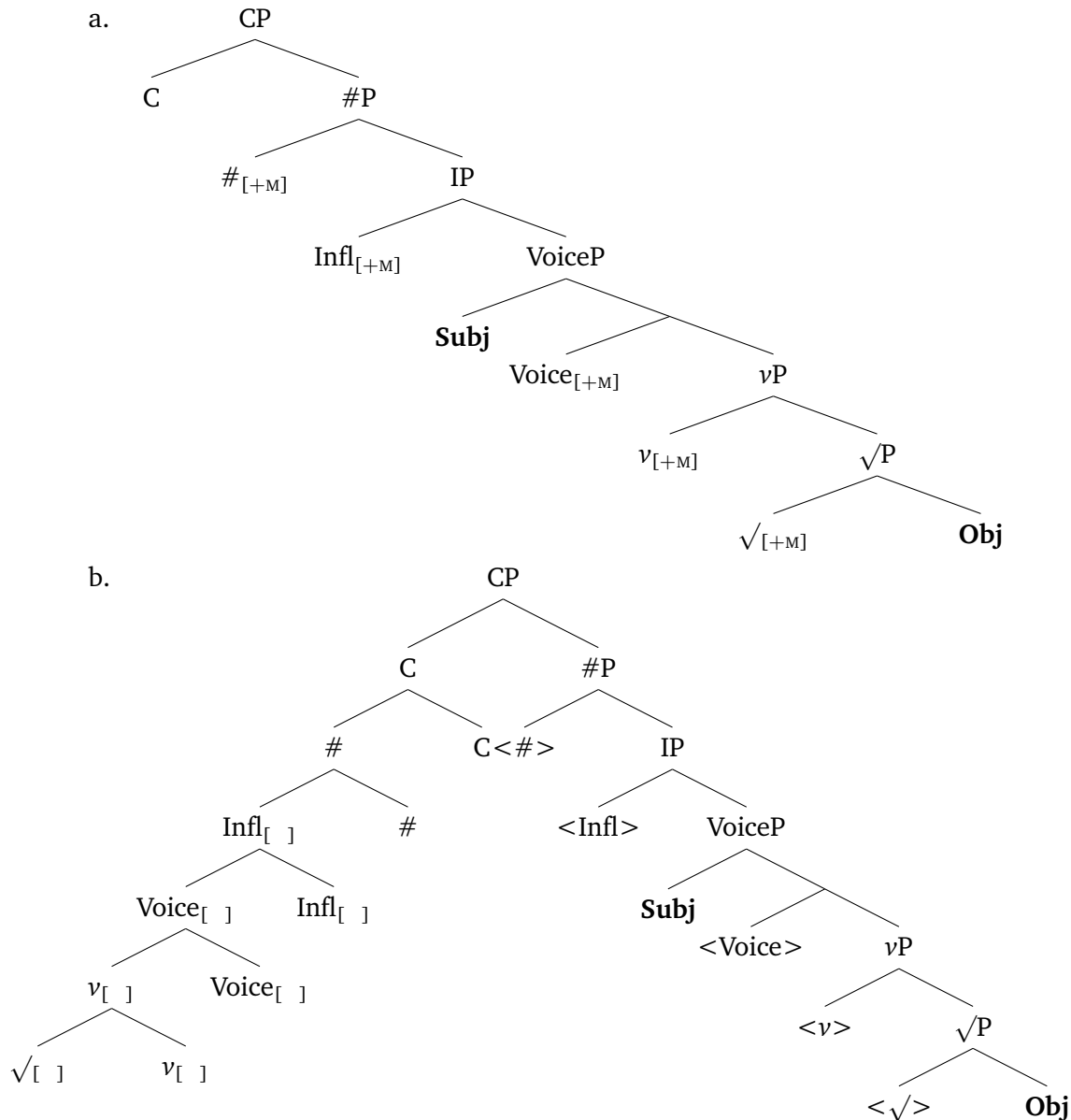
Harizanov and Gribanova stipulate that Raising is fully restricted to PF. In other words, there is no narrow syntax version of the operation, and Raising applies following transfer to the interfaces. This is proposed to ensure that Raising has no interpretive effects, as its output can never be transferred to LF. In this paper, I advocate for a different view: that syntactic operations of all kinds, including Raising, can take place either before transfer to the interfaces (i.e. in narrow syntax), or after transfer (i.e. in either the PF or LF branch of the Y-model). Such a model is familiar on the LF side, where QR covertly moves elements, leading to scope alternations without corresponding alternations in pronunciation. I support a view where an analogous situation holds on the PF branch: there can be movement operations that affect pronunciation, but do not affect meaning—essentially a reconstruction effect. On this model, it becomes necessary to prevent Raising from having an interpretative effect even if it applies prior to transfer. The full argument is introduced surrounding the scope facts described in §3.2.1, but the short of it is that Raising creates a structure with the higher copies that cannot be semantically composed, ensuring that only the lower copies are ever interpreted. On the other hand, the morphological requirements of the heads force only the higher copies to be pronounced.

Harizanov and Gribanova implement the trigger of the amalgamation operation through a feature [M], which can take a positive (+) or negative (−) value. If a given head is specified for the positive M feature [+M], then this triggers Raising of that head to the next structurally adjacent head up.⁹ These features are lexically specified on each given head, and are therefore a source of significant variation. When the Raising operation is triggered, it applies from the bottom up, and the M features are deleted or deactivated by the operation.

Verb raising in Ojibwe conforms in all aspects to the expected patterns under amalgamation described by Harizanov and Gribanova: it obeys the Head Movement Constraint, it forms a morphologically complex object, and it does not have interpretive effects. Ojibwe can be captured if the root ($\sqrt{\quad}$), *v*, Voice, Infl, and # are all specified for [+M], as shown in (13a). The structure in (13a) represents the base-generated structure, where all of the [+M] features remain unchecked. These features trigger the application of Raising, which applies cyclically upwards starting from the bottom of the structure (i.e. $\sqrt{[+M]}$) and deactivates the M feature at each application. The result is the head-adjunction structure in (13b), which feeds into Vocabulary Insertion, the formation of prosodic structure (following the PF model of Embick and Noyer (2001)), and leads the verbal complex to be pronounced in an initial position.

⁹Harizanov and Gribanova also propose an analogous operation *Lowering* (adapted from Embick and Noyer (2001)), which displaces a head downward into the next structurally adjacent head, and is triggered by [−M]. This operation will not be necessary in the present paper.

- (13) *Deriving V1 via Raising. See (4d) for phonological spell-out of heads. The figure in (a) shows the base-generated structure, and (b) the structure after the application of Raising from the bottom up.*



An anonymous reviewer asks whether an alternative account based in Compton and Pittman (2010) could be sustained. Such an account would attribute the complexity of the morphology to the spell-out of morphological words by phase. The Ojibwe verbal complex parallels the Inuit verbal complex examined by Compton and Pittman in that its upper boundary is CP and it lacks free functional elements, giving this account at least initial plausibility. However, there are at least three reasons I set this analysis aside. First, it is not clear how the account would capture V1 without additional mechanisms. Second, the analysis does not account for the directionality of the verbal morphology. Both of these are accounted for with the present analysis. Finally, a major motivation

for their proposal is to avoid positing a generative morphological component. This is avoided under the current account by allowing Raising to apply in narrow syntax (see §3.2.1 for details).

3.1.3 *Pre-verbal versus post-verbal morphology*

The above analysis applies the model of amalgamation-as-head-movement proposed by Harizanov and Gribanova to a novel case, capturing both V1 and the relationship between the root and the post-verbal morphology in Ojibwe. However, the status of the pre-verbal clitics/affixes remains undetermined by the model: Raising leads each head to be realized as suffixal morphology, and does not derive prefixes. There are two basic cases of preverbal material: (i) tense, and other adverbial preverbs, and (ii) the person prefix (i.e. the discontinuous realization of Infl as a preverbal person marker and central number suffix). There is good reason to think that the structural relation of the pre-verbal morphology to the verb is distinct from the post-verbal morphology. These arguments follow from work on the syntax-phonology interface in Ojibwe from Newell and Piggott (2014).

For one, vowel hiatus in Ojibwe is intolerable among the root and the post-verbal morphology (14a), and is usually resolved via deletion or glide insertion (Newell and Piggott, 2014). However, hiatus *can be* tolerated between the verbal root and the preverbal morphology, as shown in (14b) with tense and (14c) with a directional marker.

(14) *Examples taken from Newell and Piggott (2014) showing hiatus tolerance/resolution*

- | | | |
|----|---|--|
| a. | [manido:wi]
/manido:-iwi/
spirit-INCHOATIVE
'S/he becomes a spirit' | <i>Hiatus resolved by deletion post-verbally</i> |
| b. | [gi:anoki:]
/gi:-anoki:/
PAST-work
'S/he worked' | <i>Hiatus tolerated pre-verbally</i> |
| c. | [bia:gamose]
/bi-a:gam-ose/
HERE-snowshoe-walk
'S/he walked here in snowshoes' | <i>Hiatus tolerated pre-verbally</i> |

This suggests that the pre-verbal morphology is in a distinct phonological domain, and is not as closely related to the verbal complex as the post-verbal morphology, which is argued to be wrapped up in a head-adjunction structure. Following Newell and Piggott, I adopt the analysis where the pre-verbal adverbial morphemes including tense and directional preverbs remains separate from

the head adjunction structure, and as a result forms a prosodically separate word (modulo the pre-verbal person marker, which is discussed below).¹⁰

What must be dealt with is the status of the pre-verbal person marker. I take an example with the first person marker, which has an underlying form /ni-/, and does not tolerate hiatus in the same way as its other pre-verbal counterparts. In general, hiatus between the pre-verbal person marker and whatever element is to the right is resolved by epenthesis /d/. Two examples of this strategy are shown below. First, between the person marker and the root (15a); Second, the person marker and a pre-verbal directional prefix (15b).

(15) *Hiatus resolved by /d/ insertion with pre-verbal person marker. Example from Newell and Piggott (2014)*

- a. [nida:gamose]
 /ni-a:gam-ose/
 1-snowshoe-walk
 ‘I walk in snowshoes’
- b. [nidinia:gamose]
 /ni-ini-a:gam-ose/
 1-AWAY-snowshoe-walk
 ‘I walk away in snowshoes’

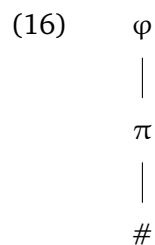
The preverbal person marker therefore appears to be a part of the same phonological domain as the root and post-verbal morphology (15a), but can be blocked from being a part of this domain through the insertion of preverbs (15b). In both cases, vowel hiatus is not tolerated between the person prefix and whatever is to the right of it.

To account for this behavior, it is first necessary to take a step back. As previously mentioned, I assume that the person prefix is the discontinuous realization of agreement on Infl, with the other part being the central agreement marker (Oxford, 2018). In contrast to Oxford, who argues that agreement on Infl is an instance of “pure” agreement, I take this agreement to be an example of clitic doubling triggered by a π -probe on Infl. While Infl *probes* for π -features alone, clitic doubling *copies* all of the φ -features of the goal, including person and number (i.e. it shows *featural coarseness*; Preminger, 2014).

The spell-out of Infl as discontinuous then follows from Harbour (2008). Harbour shows that in cases where a single head contains a complex φ -set (in this case Infl, which contains both person and number), the linearization algorithm dictates that the exponence of person must precede the exponence of number, as person dominates number within the φ -feature structure, shown in (16). This rules out all linearizations where # precedes π . The exponents of person and number further require linear adjacency to the stem. As a result, STEM- π -# is ruled out, as # is not adjacent to the

¹⁰Newell and Piggott (2014) further tie the formation of prosodic words to *phase boundaries*. While this analysis likely can extend to Southwestern Ojibwe, I do not explore this in the present paper.

stem with π as an intervenor. The solution is for π to be linearized to the left of the stem, resulting in π -STEM-#, the ordering observed in Ojibwe.



While the circumstances of the linearization of the complex φ -structure lead to the realization of the person features of Infl as a prefix rather than a suffix, the prefix remains a part of the amalgamation structure created by Raising and is thus subject to vowel hiatus resolution in the same manner as the post-verbal morphology. This stands in contrast to the temporal and directional preverbs, which are not within the same phonological domain as the head amalgamation structure and tolerate vowel hiatus as a result.

One question that remains is why the person prefix becomes a part of the phonological domain of the preverb when such an element is present. For this, I adopt the idea of Newell and Piggott (2014), who propose that the preverbal person marker can undergo Phonological Merger, which integrates phonologically deficient elements into the prosodic word directly to the right of it. Once prosodically merged with one of these elements, it must resolve hiatus within that domain. This merger follows from conditions on stress assignment, which result in the pre-verbal person marker being a degenerate foot when a preverb intervenes. The details of this account can be found in Newell and Piggott (2014).

3.2 Object movement in Ojibwe

Given the geometry produced by Raising, object movement, schematized in (18), must occur in order to derive the VOS word order preferred within direct environments, repeated in (17a). However, it must also be possible to leave the object in situ to derive the VSO order shown in (17b). To review, in direct environments, the subject is proximate and the object is marked obviative. Therefore this movement can be framed as an alternation as to whether the obviative marked argument remains in situ, or moves to the middle field. I argue this position is the specifier of #P, which is the projection that shows agreement with obviative arguments (see §2.2 for a description of this morphology and §6 for a development of the link between this agreement and the proposed movement).

(17) *Direct (preferentially VOS, but also VSO). Repeated from (1a,b).*

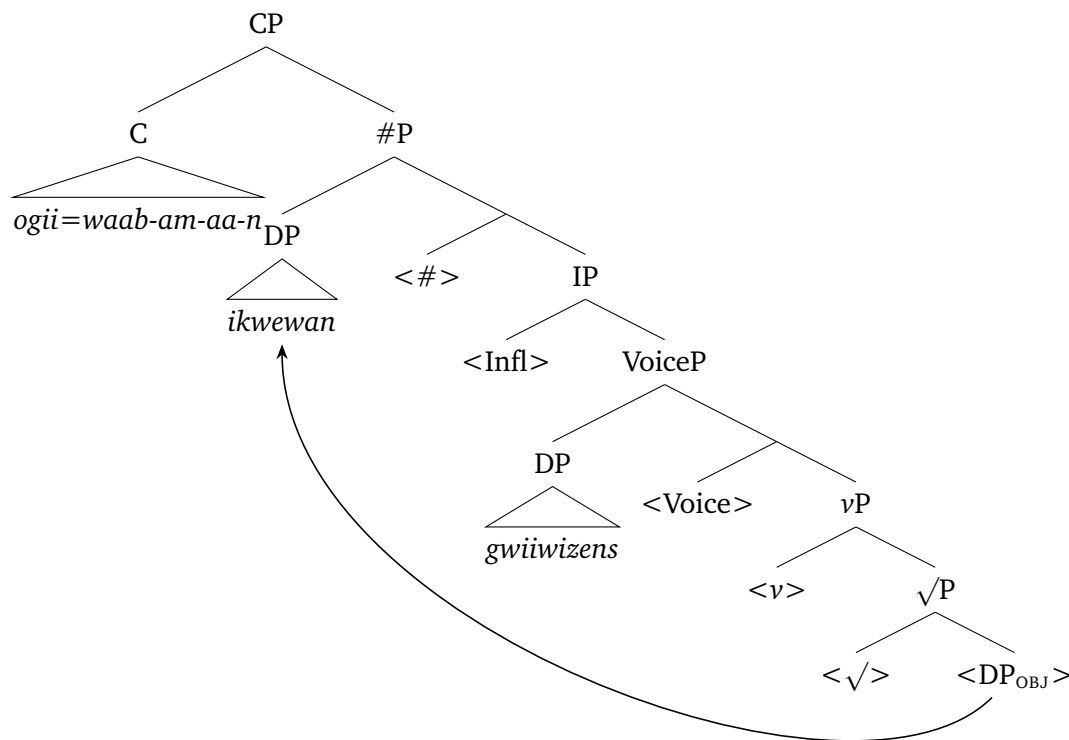
- a. o-gii-waabam-aa-n ikwe-wan gwiiwizens
 3-PAST-see-DIR-OBV woman-OBV boy.PROX
 ‘The boy (PROX) saw the woman (OBV)’

VOS

- b. o-gii-waabam-aa-n gwiiwizens ikwe-wan
 3-PAST-see-DIR-OBV boy.PROX woman-OBV
 ‘The boy (PROX) saw the woman (OBV)’

VSO

- (18) *Direct VOS via post-syntactic Raising + object movement + in situ subject (see §3.3.1 for a final analysis with subject movement)*



If this account is on the right track, then there should be interactions between the scope of negation and indefinite objects with different word orders. Two direct sentences with negation, one with VOS word order and one with VSO, are shown in (19).

- (19) *Negation (in bold) in direct environments*

- a. gaawiin o-gii-waabam-aa-**sii**-n ikwe-wan gwiiwizens
 GAAWIIN 3-PAST-see-DIR-NEG-OBV woman-OBV boy.PROX
 ‘The boy (PROX) didn’t see the woman (OBV)’
- b. gaawiin o-gii-waabam-aa-**sii**-n gwiiwizens ikwe-wan
 GAAWIIN 3-PAST-see-DIR-NEG-OBV boy.PROX woman-OBV
 ‘The boy (PROX) didn’t see the woman (OBV)’

VOS

VSO

To review the discussion in §2.2, there are two elements associated with negation in matrix clauses. The first, *gaawiin*, is assumed not to encode the semantic force of negation following Tilleson (2019). The second element, the morpheme within the verbal complex *-sii*, is taken to be the true negative marker. In the examples below, the negative morpheme appears above the direct/inverse agreement marker (Voice), and below obviative agreement (mode is null in these cases, otherwise Mod would appear between Neg and #). In the broader morphology, the negative morpheme

always appears in this stable position. Therefore based on the Mirror Principle, I assume that negation is merged as sister to VoiceP. As we will see, this reasoning is bolstered by the scope facts, ensuring the analysis is not entirely reliant on the surface order of the morphology.

On this analysis, if an indefinite object undergoes movement, deriving VOS word order, then the indefinite should be interpretable outside of the scope of negation. On the other hand, if an indefinite object remains in situ, giving rise to VSO word order, the indefinite should be interpreted within the scope of negation. These two eventualities are shown in (20) and (21).

- (20) *Moved object (VOS), $\exists \gg \text{NEG}$ predicted*
 gaawiin ogii-waabamaasiin ikwewan_{OBJ} [_{NegP} NEG] [_{VoiceP} gwiiwizens_{SUBJ} ... <DP_{OBJ}>]]
- (21) *In situ object (VSO), $\text{NEG} \gg \exists$ predicted*
 gaawiin ogii-waabamaasiin [_{NegP} NEG] [_{VoiceP} gwiiwizens_{SUBJ} ... ikwewan_{OBJ}]]
-

Both of these predictions are borne out, as shown in (22) and (23). In (22), where the indefinite object *bezhig gwiiwizensan* ‘one boy (OBV)’ is moved such that VOS is derived, the indefinite is necessarily interpreted outside of the scope of negation. On the other hand, in (23), when the indefinite object remains in situ, resulting in VSO word order, the indefinite is necessarily interpreted within the scope of negation.

- (22) gaawiin o-gii-nageshkaw-aa-sii-n bezhig gwiiwizens-an Ziibiins
 GAAWIIN 3-PAST-meet-DIR-NEG-OBV one boy-OBV Ziibiins.PROX
 ‘Ziibiins (PROX) didn’t meet one boy (OBV)’
 a. * $\text{NEG} \gg \exists$: There is no boy x such that Ziibiins met x.
 b. $\exists \gg \text{NEG}$: There is a boy x such that Ziibiins did not meet x. VOS
- (23) gaawiin o-gii-nageshkaw-aa-sii-n Ziibiins bezhig gwiiwizens-an
 GAAWIIN 3-PAST-meet-DIR-NEG-OBV Ziibiins.PROX one boy-OBV
 ‘Ziibiins (PROX) didn’t meet one boy (OBV)’
 a. $\text{NEG} \gg \exists$: There is no boy x such that Ziibiins met x.
 b. * $\exists \gg \text{NEG}$: There is a boy x such that Ziibiins did not meet x. VSO

Besides supporting the predictions of the analysis, these data provide evidence that the VOS/VSO alternation is not at all random or due to fully optional movement: the alternation is associated with interpretative effects that are only visible when scope is relevant. When there is no negation and two definite arguments—the cases that have been discussed in the literature—these effects are not clear, and thus the alternation appears random.

3.2.1 Restricting the interpretive effects of Raising

One important issue that the raising analysis must contend with is how the scope relations between indefinite arguments and negation are established. Under a view where head movement creates

adjunction structures in the narrow syntax, verb raising picks up the negative morpheme and moves it out of a position where it c-commands the direct object. In order to capture the scope relations under this account, one must ensure that whatever is left behind by movement allows for the maintenance of the base-generated relations between the heads picked up by verb raising and the other elements in the structure, most notably indefinite arguments.

On the other hand, if the proposal of Harizanov and Gribanova (2018) is taken at face value and Raising only applies at PF, then the structure sent to LF is such that the heads remain in their base-generated positions and must be interpreted there. Only in the PF branch, which is insulated from causing interpretive effects, are the heads displaced and the c-command relations disturbed.

Harizanov and Gribanova stipulate that Raising can only apply at PF in order to capture the fact that it has no interpretive effects. However, one might wonder whether this restriction, or more fundamentally the lack of interpretive effects of Raising, can be derived. As outlined earlier, if we take the current implementation of the Y-model to its logical conclusion, then we have three places where syntactic operations can occur: narrow syntax, which feeds both LF and PF, and post-transfer syntax in both the LF and PF branches, which feed these respective interfaces. If possible, it is desirable to make the syntactic operations identical in all three cases, and allow any restrictions and effects to be derived from conditions on interpretation at the interfaces, as captured under the Strong Minimalist Thesis of Chomsky (1995, 2004)

I suggest that the lack of interpretive effects can be captured under the copy theory of movement without any appeal to timing. In short, requirements at the interfaces will ensure that the lower copy (occupying the base-generated position) is interpreted, while the higher copy (in the head adjunction structure) is pronounced. This is in essence a reconstruction effect. I propose that the lower copy must be the one that is interpreted, as the heads within the adjunction structure cannot semantically compose, while the lower copies can. For example, the higher copy of Voice would lack an external argument with which to compose, and the higher copy of Neg would fail to compose with something containing propositional content (assuming negation is a propositional operator). Therefore Raising can apply in narrow syntax (cf. Harizanov and Gribanova, 2018), but the derivation will crash if an attempt is made to interpret the higher copies. This enforces the restriction that heads are interpreted in their base-generated position without stipulation.

The second desideratum is to ensure only the higher copy is pronounced. I propose that this follows from the morphological requirements of the spell-out of the heads. As previously discussed, each head is lexically specified for an [M] feature that requires it to be bound as a phonological dependent. Spelling out the lower copies leads the exponents of each head to be phonologically defective, causing a crash. On the other hand, spelling out the higher copies allows for the morphological requirements of the heads to be met.

3.3 *The Obviative Movement Generalization*

A critical theoretical leap from the Obviative Surface Word Order Generalization in (6), which reflects the linear ordering of obviative arguments with respect to the verb, is to formulate a gener-

alization that captures the same schema of facts, but does so in terms of syntactic movement. The generalization in (24) is argued to capture the movement more generally, including the movement of obviative objects discussed in the previous section.

- (24) *Obviative movement generalization*
(Optionally) move the highest obviative argument.

Because of the fact that this generalization targets the *highest* obviative argument, rather than obviative direct objects in particular, the generalization also predicts movement of the subject in inverse environments, where the subject is obviative, and movement of the indirect object in ditransitive constructions, where the indirect object is the highest obviative argument. In the following sections, these predictions are examined.

3.3.1 Subject movement

Like the direct contexts seen in the previous section, negation occurs in inverse environments, shown in (25), and can be used to diagnose whether movement of obviative subjects occurs.

- (25) *Negation (in bold) in inverse environments*
gaawiin o-gii-waabam-igoo-**sii-n** gwiiwizens-an ikwe
GAAWIIN 3-PAST-see-INV-NEG-OBV boy-OBV woman.PROX
'The boy (OBV) didn't see the woman (PROX)' VSO

On the Obviative Movement Generalization, the movement schematized in (27) is predicted: the obviative marked subject in an inverse environment optionally moves to the same position in the middle field as the obviative marked object in a direct environment. Crucially, this movement will have no surface level effects on the word order. In both cases, VSO will be derived. However, effects of scope are predicted such that an in situ indefinite subject should be interpreted within the scope of negation (26), and a moved subject should be interpreted outside of the scope of negation (27).

- (26) *In situ subject (VSO), NEG » ∃ predicted*
gaawiin ogii-waabamigoosiin [NegP(NEG)[VoiceP gwiiwizensan_{SUBJ} ... ikwe_{OBJ}]]
- (27) *Moved subject (VSO), ∃ » NEG predicted*
gaawiin ogii-waabamigoosiin gwiiwizensan_{SUBJ} [NegP(NEG)[VoiceP <DP_{SUBJ}> ... ikwe_{OBJ}]]
↑

My consultants report that the most natural reading of VSO inverse sentences with indefinite subjects is one where the existential takes scope over negation. However, it is marginally possible to get the narrow scope reading. This is shown in (28).

- (28) gaawiin o-gii-nageshkaw-igoo-sii-n bezhig gwiiwizens-an Ziibiins
 GAAWIIN 3-PAST-meet-INV-NEG-OBV one boy-OBV Ziibiins.PROX
 ‘A boy (OBV) didn’t meet Ziibiins (PROX)’ VSO
- a. ?NEG » ∃: There is no boy x such that x met Ziibiins.
 b. ∃ » NEG: There is a boy x such that x did not meet Ziibiins.

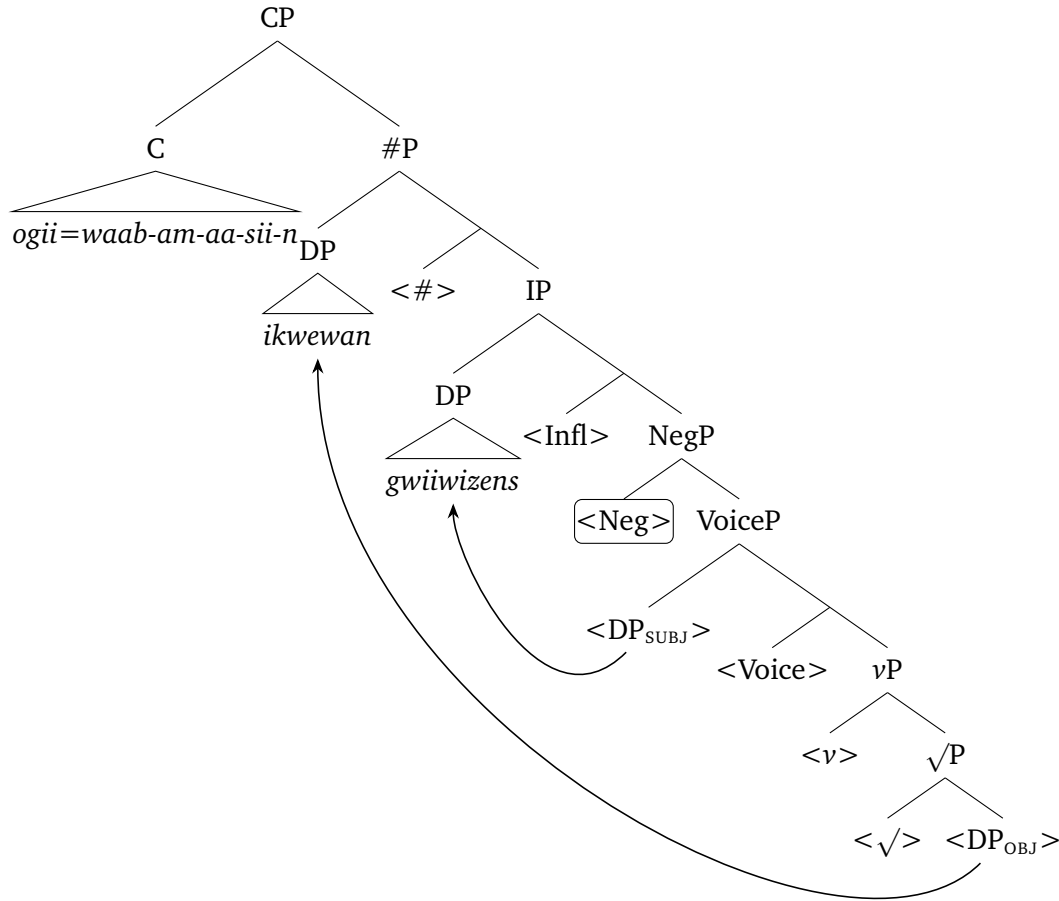
The marginality of the narrow scope reading suggests the possibility that obviative subjects *never* remain in situ. In general, this would not be surprising, as languages rarely show evidence that subjects remain in their base generated positions. In what follows, I present two additional sources of evidence that support the idea that subjects in Ojibwe undergo movement to a position above negation. The first comes from the scope readings of indefinite proximate subjects, as occurs in *direct* environments. The second comes from indefinite proximate objects, as occurs in *inverse* environments. Besides supporting movement of the subject, the data lead to greater clarity about the semantics of proximate.

To review, in direct environments like those in (29), the subject is proximate and the object is obviative. When the proximate subject is indefinite and the sentence is negated, we find that only the wide scope reading (∃ » NEG) is possible. The narrow scope reading (NEG » ∃) is categorically ungrammatical. This is true regardless of whether the word order is VOS (29a) or VSO (29b). The Obviative Movement Generalization alone cannot account for these facts, as it does not predict the movement of a proximate subject out of its base-generated position inside the scope of negation to a position outside the scope of negation. However, the fact that only the wide scope reading is possible in these examples suggests that movement of the subject must be occurring.

- (29) a. gaawiin o-gii-nageshkaw-aa-sii-n Ziibiins-an bezhig gwiiwizens
 GAAWIIN 3-PAST-meet-DIR-NEG-OBV Ziibiins-OBV one boy.PROX
 ‘A boy (PROX) didn’t meet Ziibiins (OBV)’ VOS
- (i) *NEG » ∃: There is no boy x such that x met Ziibiins.
 (ii) ∃ » NEG: There is a boy x such that x did not meet Ziibiins.
- b. gaawiin o-gii-nageshkaw-aa-sii-n bezhig gwiiwizens Ziibiins-an
 GAAWIIN 3-PAST-meet-DIR-NEG-OBV one boy.PROX Ziibiins-OBV
 ‘A boy (PROX) didn’t meet Ziibiins (OBV)’ VSO
- (i) *NEG » ∃: There is no boy x such that x met Ziibiins.
 (ii) ∃ » NEG: There is a boy x such that x did not meet Ziibiins.

Critically, these examples further show that movement of the subject must land in a position that is lower than where the object moves to. If the subject were to move to a higher position, then we would be unable to derive the VOS word order, where the object appears in a higher position than the subject. I argue that proximate subjects move to Spec,IP, as shown in (30) for VOS direct. The same movement of the subject occurs with VSO orders in direct environments, as evidenced in (29b).

(30) *Final analysis: Direct VOS via post-syntactic Raising + object movement + subject movement*



Movement of proximate arguments to the specifier of IP has recently been proposed by Oxford (2018) for the Algonquin dialect of Ojibwe on the basis of agreement: Infl uniformly indexes proximate arguments, and moves the goal of this agreement (the proximate DP) into its specifier. The data presented here provide converging evidence of this movement on the basis of indefinite proximate subjects taking scope over negation.

3.3.2 Indefinite proximates and the scope of negation

So far, there is motivation for the movement of (i) obviative arguments, regardless of whether it is the internal or external argument, and (ii) proximate subjects. However, we have not yet seen evidence regarding *proximate objects*. Under the analysis so far, we might expect that proximate objects must be interpreted within the scope of negation. This prediction is derived from the fact that proximate objects do not match either of the properties that our movement operations are relativized to: they are not obviative, so the Obviative Movement Generalization should not apply, and they are not external arguments, so they may not be raised to Spec,IP. Evidence in support of a lack of movement of proximate objects to Spec,IP comes from the judgment in (31), where

indefinite proximate objects (found in inverse environments) are ungrammatical under both wide and narrow scope readings.

- (31) *gaawiin o-gii-nageshkaw-igoo-sii-n Ziibiins-an bezhig gwiiwizens
 GAAWIIN 3-PAST-meet-INV-NEG-OBV Ziibiins-OBV one boy.PROX
Intended ‘Ziibiins (OBV) didn’t meet a boy (PROX)’ VSO
- a. *NEG » ∃: There is no boy x such that x met Ziibiins.
 b. *∃ » NEG: There is a boy x such that x did not meet Ziibiins.

The fact that the wide scope reading is unavailable directly supports the hypothesis that proximate objects remains under the scope of negation.¹¹ However, the unavailability of the narrow scope reading must receive another explanation. A full accounting of this is beyond the scope of the paper, but a direction for an analysis can be outlined.

Recall that narrow scope readings are also impossible with indefinite proximate *subjects*. In other words, it seems there is no context in which indefinite proximate arguments can be interpreted within the scope of negation. This contrasts with indefinite obviative arguments, which can receive either reading. In essence, this makes indefinite proximate arguments positive polarity items (PPIs).¹² When the proximate argument is a subject, it escapes the scope of negation and takes wide scope by movement to Spec,IP. In contrast, proximate objects are unable to move above negation, and are therefore trapped within its scope. This results in the ungrammaticality reported in (31). The precise semantic properties that lead to differences in how indefinite proximate and obviative arguments tolerate being within the scope of negation will not be settled here. However, it is cross-linguistically common for certain types of indefinites to behave as PPIs (e.g. Haspelmath, 1997; Szabolcsi, 2004; Fălăuş, 2018).

To summarize, the scope possibilities under different word orders, proximate/obviative status, and subject versus object indefinites are given in (32).

- (32) *Scope with respect to negation based on word order, whether the indefinite argument is the subject or object, and the proximate/obviative status of the indefinite argument*

Word Order	Indefinite argument	Proximate/Obviative?	NEG » ∃	∃ » NEG
VSO	Subject	Proximate	✗	✓
VSO	Subject	Obviative	??	✓
VSO	Object	Proximate	✗	✗
VSO	Object	Obviative	✓	✗
VOS	Subject	Proximate	✗	✓
VOS	Object	Obviative	✗	✓

¹¹This fails to support the proposal of Oxford (2018), who argues that proximate objects are promoted to Spec,IP via successive cyclic movement through Spec,VoiceP. This would predict that proximate objects can escape the scope of negation. It is still possible given these facts that proximate objects undergo A-movement to VoiceP (a position within the scope of negation), while additional A-movement of the DP to Spec,IP is blocked.

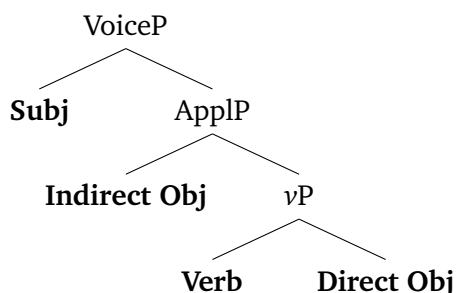
¹²Thanks to Amy Rose Deal for this insight.

The analysis included three components to capture this array of facts: (i) (optional) movement of obviative arguments to Spec,#P (the Obviative Movement Generalization); (ii) movement of proximate subjects to Spec,IP and proximate objects no further than Spec,VoiceP; (iii) the status of indefinite proximate arguments as PPIs.

3.3.3 Movement in ditransitive constructions

The Obviative Movement Generalization can be shown to neatly capture the pattern of word orders observed in the ditransitive constructions introduced in (8) and (9). For Ojibwe, I adopt the double object structure in (33) (following, e.g. Larson (1988) and Pykkänen (2008)). For the current analysis, it is not crucial to establish whether the indirect object is high or low—what is crucial is for the indirect object to be higher than the direct. This geometry holds regardless of whether the ditransitives are high or low applicatives, in the sense of Pykkänen (2008).

(33) Ditransitive structure



To review the data from (8), in direct environments, where the subject is proximate and both the direct and indirect objects are obviative, the only licit word orders are V IO S DO and V S IO DO. This essentially shows the same alternation to the transitive counterpart, but with potential movement of the indirect object rather than the direct. The structure with a moved IO is schematized in (34), deriving V IO S DO, and the base-generated is in (35), deriving V S IO DO.

(34) The highest obviative argument can move:

ogii-ashamaan gwiiwizensan_{IO} [_{VoiceP} ikwe_S [_{ApplP} <DP_{IO}> [_{vP} mishiiminan_{DO}]]]


(35) Derivation with all arguments in situ:

ogii-ashamaan [_{VoiceP} ikwe_S [_{ApplP} gwiiwizensan_{IO} [_{vP} mishiiminan_{DO}]]]

Again, on the analysis that the indirect object is syntactically higher than the direct object, we see that the movement operation that targets the obviative argument is subject to Relativized Minimality (Rizzi, 1990). For the movement to target the obviative direct object, as shown in (36), it would have to skip over the obviative indirect object, violating Minimality. Furthermore, the movement cannot target the subject, as shown in (37), as it does not contain the obviative feature necessary to be the target of such a movement.

(36) *Minimality violation results in movement targeting the obviative DO:*

*ogii-ashamaan_V mishiiminan_{DO} [_{VoiceP} ikwe_S [_{ApplP} gwiiwizensan_{IO} [_{VP} <DP_{DO}>]]]



(37) *The movement is not relativized to target proximate arguments:*

*ogii-ashamaan_V ikwe_S [_{VoiceP} <DP_S> [_{ApplP} gwiiwizensan_{IO} [_{VP} mishiiminan_{DO}]]]



The generalization can similarly derive the non-alternating V S IO DO word order in the inverse environments, shown in (9), where the subject and direct object are obviative, and the indirect object is proximate. As the subject is the highest obviative argument, it may undergo movement. Again, there is no surface-level evidence for this movement. Whether or not the movement occurs, the subject will be right-adjacent to the verb.

3.4 Summary

In this section, I argued that verb initiality in Ojibwe is derived via *Raising*. In contrast to the original formulation by Harizanov and Gribanova (2018), who stipulate that this operation is restricted to PF, I argued that the lack of interpretive effects of Raising is derived by the fact that only the lower copies of the movement chain can be interpreted, while only the higher copies can be pronounced. The VOS/VSO alternation in Ojibwe was claimed to be the function of the movement of obviative marked arguments to Spec,#P. This movement was shown to obey Relativized Minimality, deriving the word order patterns for both transitive and ditransitive verbs in direct and inverse environments. In addition, we saw evidence that proximate subjects move to Spec,IP in Ojibwe, but that this movement is short enough to have no effect on surface word order. The derivation was shown to capture not only facts about the word orders of Ojibwe, but also the interaction between negation and indefinite arguments, and led to an insight regarding the role of indefinite proximate nouns as PPIs. In the next section, I provide direct arguments against two alternative configurational analyses of VOS/VSO alternations: predicate fronting and rightward specifiers.

4 AGAINST PREDICATE FRONTING AND RIGHTWARD SPECIFIER ANALYSES

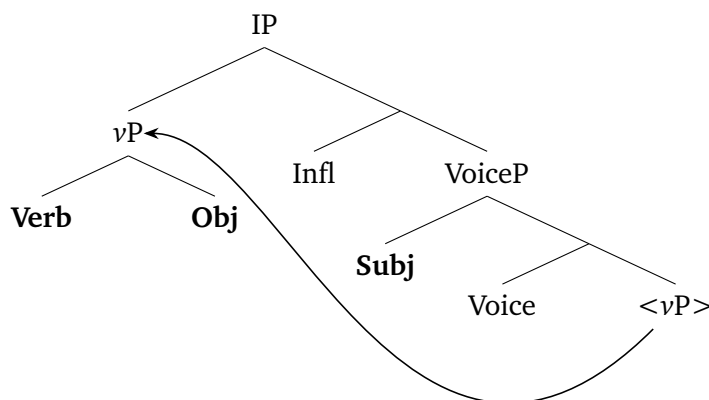
In this section, I consider two alternative configurational analyses of verb initiality and VOS/VSO alternations—the predicate fronting analysis and the rightward specifier analysis—showing both are incompatible with the observed data. For each, I begin with the evidence taken to favor each of the accounts, then turn to a discussion of how they fail to account for the Ojibwe VOS/VSO alternation.

4.1 The predicate fronting analysis

Like the verb raising analysis, the predicate fronting analysis begins with the assumption that specifiers are parameterized to the left, base-generating VSO word order. Therefore both VOS and VSO

must be derived. The derivation of VOS is sketched in (38). On this account, an XP crucially containing the verb and the object, but not the subject, undergoes movement to a projection above the subject. Within this class of analysis, there is considerable debate about what the highest maximal projection of the moved element is (i.e. ν P, VoiceP, or even TP), where the moved element lands (usually Spec,TP or higher), and why such movement should occur in the first place (e.g. the EPP).

(38) *Predicate fronting analysis of VOS*



Much of the argumentation in support of the predicate fronting analysis of VOS word order centers around tests of VP constituency and island constraints on extraction from VPs. I briefly consider each of these pieces of evidence. The arguments are discussed at length by Chung (2005) and Clemens and Polinsky (2017), and the reader is referred to these papers for more detail, though the fundamentals of these arguments are repeated here.

The first line of argumentation, from VP constituency, centers around the ability of the predicative material, in this case the verb and object, to be coordinated in many VOS languages. If one takes on the common assumption that only constituents can be coordinated, then predicate coordination should only be possible if the verb and object have undergone movement together, rather than two separate movements, as proposed under the raising analysis.

Perhaps the clearest evidence of this comes from Malagasy (Austronesian), a language with fixed VOS word order. In (39), the coordinate structure precedes the subject *Rabe*, and consists of two conjuncts (in brackets) separated by *sy*, each of which contain a verb and its complement.

- (39) [Misotro toaka] sy [mihinam-bary] Rabe.
 drink alcohol and eat-rice Rabe.
 'Rabe is drinking alcohol and eating rice.'

Malagasy (Keenan, 1978)

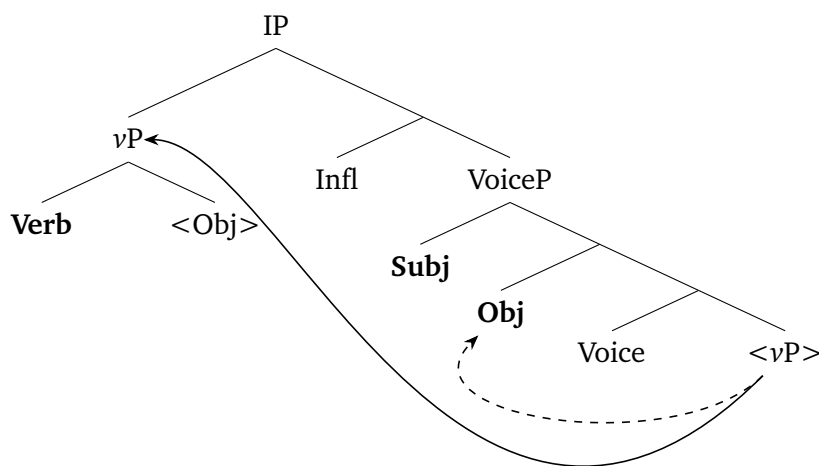
The second piece of evidence, freezing effects, stems from the fact that the predicate fronting account requires movement of a VP constituent to derive VOS orders. Following the freezing principle, the analysis predicts that the moved constituent should become an island for further extraction. In other words, once the VP has fronted, it should not be possible to move anything internal to the VP.

Again, clear evidence of freezing effects can be observed in Malagasy. Taking a sentence with fixed VOS word order as the baseline (40a), while it is possible to extract the subject, which is external to the moved predicate, forming a subject relative clause (40b), it is ungrammatical to form an object relative clause by extracting the object in these cases (40c), as it is internal to the moved predicate and subject to the freezing principle.

- (40) a. [manasa ny lamba] ny zazavavy
washed the clothes the girl
'The girl washed the clothes'
- b. ny zazavavy izay [manasa ny lamba] ____
the girl that washed the clothes
'The girl that washed the clothes'
- c. *ny lamba izay [manasa ____] ny zazavavy
the clothes that washed the girl
intended: 'The clothes that the girl washed'
- Malagasy (Keenan, 1976)

Taken together, predicate coordination and freezing effects support an analysis of VOS as predicate fronting for languages such as Malagasy. Given this, the question becomes how to derive the VSO word order. The leading analysis is remnant movement, schematized in (41).

(41) *Remnant movement analysis of VSO*



To gain traction on understanding remnant movement, one must consider the contexts in which VOS and VSO arise. Taking the analysis of Niuean from Massam (2001) (see also Clemens, 2019) as an example, VOS occurs with *pseudo-incorporation* environments, as exemplified in (42a). When the verb selects for an NP object, the object does not require case—therefore it stays internal to the VP and raises with it, deriving VOS. An example of VSO is given in (42b). When the verb selects for a DP object, the object moves out of the VP to a position below the subject where it receives case, and the predicate undergoes remnant movement, deriving V1.

- (42) a. Takafaga ika tumau ni a ia
 hunt fish always EMPH ABS he
 ‘He is always fishing’ VOS
- b. Takafaga tumau ni e ia e tau ika
 hunt always EMPH ERG he ABS PL fish
 ‘He is always fishing’ Niuean (Massam, 2001); VSO


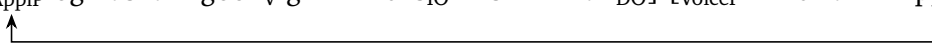
While there is good reason to apply the predicate fronting analysis to languages such as Malagasy, I show the analysis is untenable for Ojibwe. From what has been said thus far, this fact is not entirely clear. In principle, one could imagine the scope facts discussed in the previous section being accounted for under such an account: when the object is fronted with the predicate and the VOS word order is derived, the object will be outside of the scope of negation. If the object undergoes movement out of the VP, but below the subject, it will remain in the scope of negation.

The three main sources of evidence outlined above are considered to rule out a predicate fronting analysis on empirical grounds, focusing on tests of the derivation of VOS. First, I return to the surface word order patterns of ditransitives, and find that a predicate fronting analysis predicts a different constellation of facts than what is observed. Second, the classic tests from coordination are presented for Ojibwe, which fail to find support for verb-object constituency in VOS clauses. Finally, it is shown that objects in Ojibwe do not appear to be subject to freezing effects of the type seen in predicate fronting languages.

4.1.1 Evidence from ditransitives

On a predicate fronting analysis, the fronted XP must take with it all of the projections that it dominates, unless these elements are subject to independent movement. In the transitive case, if the *vP* (the categorizing projection analogous to VP in a lexicalist account) is fronted, then both the verb and the object are fronted.

For Ojibwe, a predicate fronting analysis where ApplP is fronted therefore predicts that the ungrammatical strings in (43), where V IO DO S word order has been derived in both the direct (43a) and inverse (43b) environments, should be grammatical. The derivation of verb initiality on such an account naturally leads to the fronting of both the direct and indirect objects from their base generated positions to a position above the subject. However, there is no known context in which such a word order is licensed.

- (43) a. *_[ApplP] ogii-ashamaan_v gwiiwizensan_{IO} mishiiminan_{DO}] [_{VoiceP} ikwe <ApplP>]

 b. *_[ApplP] ogii-ashamigoon_v gwiiwizens_{IO} mishiiminan_{DO}] [_{VoiceP} ikwewan <ApplP>]


As discussed in the previous section, independent movement of the verb and the highest obviative argument (the subject in inverse environments, the indirect object in direct environments) predicts the proper patterns of word order: an alternation between V IO S DO and V S IO DO in direct

environments, and V S IO DO in inverse environments whether there is string vacuous movement of the subject.

In principle, the same patterns should hold for other verb-internal modifiers. Future work should examine whether these predictions are borne out.

4.1.2 Evidence from coordination

One of the crucial tests that have been used to argue in favor of a predicate fronting analysis is the availability of verb-object coordination in VOS word orders. On the assumption that only constituents can be coordinated, the ability to coordinate a moved predicate indicates that the verb and object remain constituents, and are not moved independently. Therefore if VOS word order is derived by predicate fronting in Ojibwe, it should be possible to coordinate two verb-object pairs with a single string-final subject, as shown for Malagasy above.

In sentences of the type that have been the focus of the present analysis, it is not possible to coordinate verb-object pairs, as shown in (44). The predicate coordination test therefore fails to find evidence for a [V O] constituency in Ojibwe VOS sentences.

- (44) *o-gii-giishkijiin-aa-n ikwe-wan miinawaa o-gii-miigwechiwi'-aa-n inini-wan
 3-PAST-hug-DIR-OBV woman-OBV and 3-PAST-thank-DIR-OBV man-OBV
 gwiiwizens.
 boy.PROX.
Intended: 'The boy hugged the woman and thanked the man.'

On the verb-raising analysis proposed in the present paper, where the verb and object move independently, this ungrammaticality is predicted, as the verb and the object are not constituents in VOS clauses, and therefore should not be available for coordination.

However, it is possible that the connective *miinawaa* used in (44) is not compatible with the conjunction of predicates of this type. While it can be shown to coordinate DPs (45a) and full clauses (45b), it has not been shown to coordinate VPs (or predicates of the size available for predicate fronting). In order to be convinced that the ungrammaticality in (44) is due to a lack of constituency between the verb and the object, rather than a failure of the connective to combine VPs, independent evidence of predicate coordination is necessary.

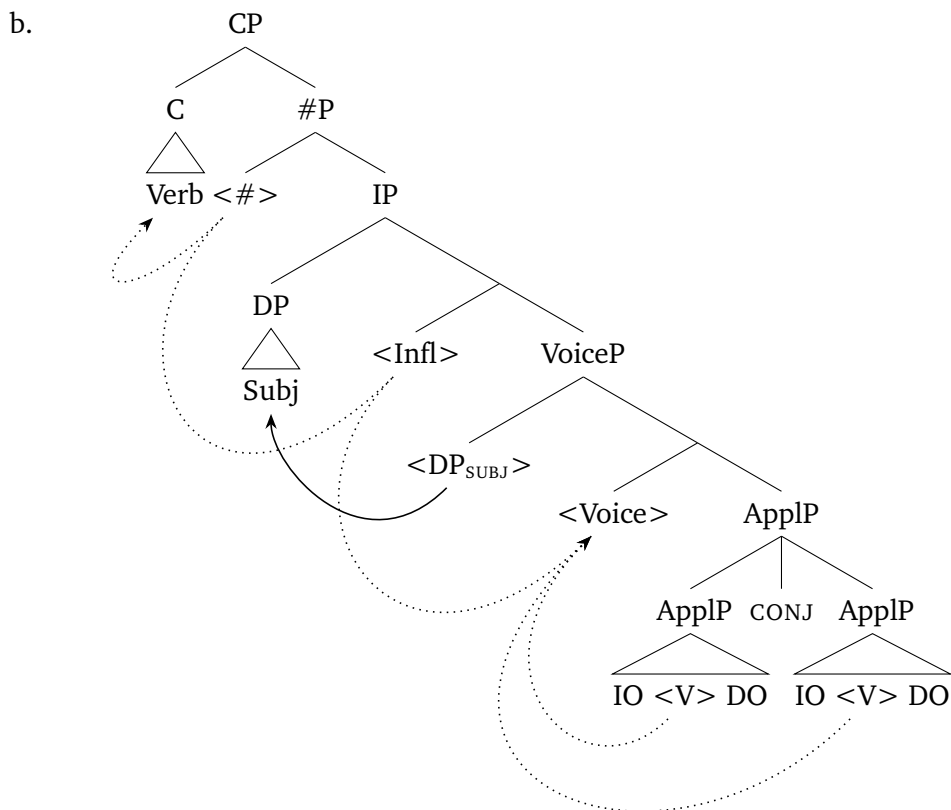
- (45) *Miinawaa can coordinate DPs and full clauses*

- a. Amik miinawaa wazhashk
 beaver and muskrat
 'The beaver and the muskrat'
- b. a'aw bineshiinh mekade-windib-e-d miinawaa wezaaw-aakigan-g
 that bird black-head-INC-3 and yellow-chest-3
 'That bird has a black head and a yellow chest' (Sullivan 2016:234)

Support for the notion that the connective *miinawaa* can coordinate predicates comes from ATB movement of the verb in ditransitive constructions, shown in (46), and further supports the verb-raising analysis of Ojibwe. In this example, the verb *ogii-ashamaan* ('feed') has ATB moved out of two predicates (ApplP) coordinated by *miinawaa*. The availability of coordination of this type suggests (i) the connective *miinawaa* can coordinate predicative material, therefore the failure of VO coordination is due to a failure of constituency between the verb and the object; and (ii) the verb undergoes movement, allowing for the ATB construction in (46).

(46) *Example and derivation of ATB movement of verb*

- a. o-gii=asham-aa-n ikwe gwiiwizens-an mishiimin-an miinawaa
 3-PAST=feed-DIR-OBV woman.PROX boy-OBV apple-OBV and
 ikwezens-an zaasagokwaan-an
 girl-OBV frybread-OBV
 'The woman (PROX) fed the boy (OBV) the apple (OBV) and the girl (OBV) the frybread (OBV).'



4.1.3 Evidence from object extraction

A final piece of evidence against a predicate fronting analysis is the availability of object extraction (i.e. object relative clauses) in Ojibwe. Such a pattern suggests that Ojibwe is not subject to the same freezing effects as languages such as Malagasy, as the object is not part of an already moved

constituent, and therefore remains available. An example of subject and object relative clauses are given in (47a) for the direct environment, and (47b) for the inverse environment.

(47) *Subject and object extraction ambiguities with relative clauses*

- a. gegwejim-aad
ask-DIR.CONJ
'the one (PROX) that asks h/ (OBV)'
'the one(s) (OBV) that s/he (PROX) asks'
- b. gegwejim-igod
ask-INV.CONJ
'the one(s) (OBV) that ask h/ (PROX)'
'the one (PROX) that s/he (OBV) asks'

(Sullivan, 2016b)

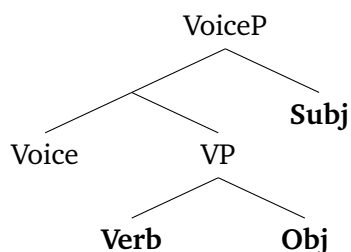
In both cases, the sentences lack overt arguments, and are thus fully ambiguous between a subject relative clause and object relative clause meaning. However, the point is clear that both subject and object extraction, albeit with non-overt pronominals, is possible regardless of direct/inverse agreement contexts. Again, this test fails to show support for the predicate fronting analysis, further bolstering the verb raising account.

4.2 *The rightward specifier analysis*

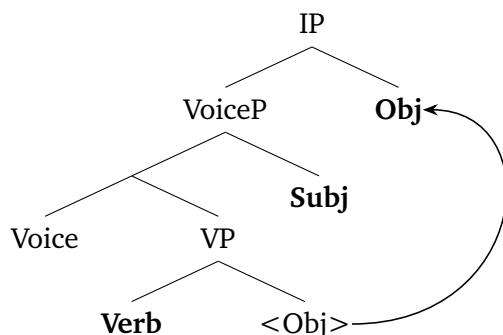
The second alternative account, the rightward specifier analysis, is one in which VOS is base-generated by the parameterization specifier linearization. Again, a comprehensive review of where and how this account has been advanced can be found in Clemens and Polinsky (2017). Here, I sketch the basic outline of such an account and show that it is unsustainable for Ojibwe as it cannot account for the scope facts discussed in §3.3.

The account, which has been proposed for Mayan (e.g. Aissen (1992), but see Coon (2010) for a predicate fronting analysis for Chol), certain branches of the Austronesian family (e.g. Chung, 1998), and Salish (e.g. Davis, 2005), is schematized in (48).

(48) *Base-generated VOS with right side specifiers*



In general, to derive the VSO word order, object post-posing is employed, as schematized in (49).

(49) *Deriving VSO with rightward specifiers and object post-posing*

For current purposes, a critical fact is that the rightward specifier account makes exactly opposite predictions to the verb raising account with respect to when the object stays in situ, and when it moves. On the verb raising account, VOS is the result of object movement, whereas it is the result of an in situ object in the rightward specifier analysis. Similarly, on the verb raising account, VSO is the result of an in situ object, where the rightward specifier requires object-postposing.

As a result, the two analysis also make opposite predictions regarding the scope of negation with respect to indefinite objects. The fact that indefinite objects in the VOS word order are rigidly interpreted outside of the scope of negation, as shown in (22), and indefinite objects in VSO word orders are rigidly interpreted within the scope of negation, as shown in (23), is not predicted by a rightward specifier account, where the geometries to support these scope relations do not hold.

4.3 Summary

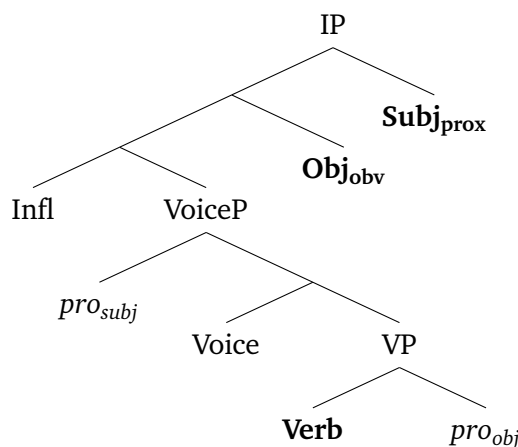
Both a predicate fronting analysis and a rightward specifier analysis were argued to be insufficient to account for Ojibwe verb-initiality and the VOS/VSO alternation. Three pieces of converging evidence were advanced to argue against a predicate fronting account. First, in ditransitive constructions, Ojibwe obligatorily strands the direct object. On a predicate fronting account, this is not predicted, as all elements dominated by the fronted XP must also be fronted. Second, we saw that it is not possible to coordinate verb-object pairs in VOS sentences, as has been shown for predicate fronting languages such as Malagasy. The result suggest that the verb and object are not a constituent, providing further support for the verb raising account. In addition, ATB movement of the verb was shown to be available, as predicted on the verb raising account. Finally, it was shown that Ojibwe can extract objects, making object relative clauses, regardless of whether there is direct or inverse marking on the verb. Again, in predicate fronting languages, such a movement should be prohibited due to freezing. The rightward specifier analysis was ruled-out on the basis of scope, as it make predictions in direct opposition to both the verb raising analysis and the reported facts with respect to when an indefinite object would be interpreted inside or outside the scope of negation.

5 AGAINST A NON-CONFIGURATIONAL ANALYSIS

As discussed in the introduction, one of the leading analyses of word order and argument structure across Algonquian languages has been based in non-configurationality. In this section I discuss these proposals and provide evidence against them.

Ojibwe (along with nearly all Algonquian languages) descriptively displays the hallmarks of non-configurationality proposed by Hale (1983): *pro*- and argument-drop, apparently free word order, and discontinuous DPs (Grafstein, 1984). Two major accounts based in non-configurationality have been proposed as a result (terminology adopted from Hamilton, 2015): (i) Pronominal Argument Hypothesis (PAH) accounts, where A-positions are associated with ϕ -feature indexing affixes sitting in a flat-structure, and (ii) Hybrid accounts, where A-positions are associated with *pro* in a canonical asymmetrical configuration where the subject c-commands the object. In both cases, overt DPs are adjuncts sitting in TP/IP, which are associated with the elements occupying the A-positions via coindexation.

The most directly relevant account is Junker (2004), who gives a Hybrid account of word order in East Cree. Junker shows that East Cree has the same fundamental word order patterns as those presented here for Southwestern Ojibwe: VOS is preferred in direct environments, while VSO is preferred in inverse. The structure for VOS direct is shown in (50), which is derived via the direct align constraint of Aissen (1997) combined with an obviation-based hierarchy and phrase structure hierarchy. These hierarchies align to ensure that proximate DPs are in a higher position in the phrase structure than obviative DPs. When both DPs are linearized to the right, VOS is derived.¹³

(50) *Derivation of VOS in direct environments based on Junker (2004)*

¹³These constraints also derive SVO, OVS, and SOV word orders. These additional word orders result in a focus interpretation of the left-most DP, given that the DP is to the left of the verb. Therefore the VOS word order is derived as neutral, as it is the only word order derived from these constraints that does not lead to a focus interpretation of one of the DPs. To derive VSO, a third constraint based in linear order that prefers higher nodes to precede lower nodes is applied. Obeying this constraint leads to the violation of the phrase structure hierarchy. This violation is tolerated, but not preferred, deriving the preference for VOS over VSO. For the purposes of this paper I set these cases aside to retain focus on the VOS word order.

Immediate evidence against the analysis in (50) comes from data that has already been extensively discussed: scope of the overt arguments of the verb with respect to negation. The central thrust of the non-configurational analysis is that DPs are generated as adjuncts within IP, and do not undergo syntactic movement to arrive at their position. Instead, they are fed to linearization constraints that have no effect on the c-command/scope relations between the overt arguments of the verb and negation. This is particularly relevant in the contrast between VOS and VSO in direct environments: there is no way beyond stipulation to capture the wide versus narrow scope readings that respectively arise in these two word orders.

A further issue for non-configurational accounts arises upon consideration of the ditransitive constructions in (8) and (9). The V IO S DO direct case is repeated for reference in (51).

(51) *Only one obviative argument is “licensed” by the verbal morphology in ditransitives:*

o-gii-asham-aa-n	gwiiwizens-an	ikwe	mishiimin-an	
3-PAST-feed-DIR-OBV	boy-OBV	woman.PROX	apple-OBV	
'The woman (PROX) fed the boy (OBV) an apple (OBV)'				V IO S DO

Non-configurational languages are subject to the Morphological Visibility Condition (MVC; Baker, 1996, p. 17), which requires each argument to be licensed by a pronominal element or morpheme in the verb. However, as shown in (51), only one of the obviative arguments is indexed by the verbal morphology (which is identical to the morphology seen with transitive verbs), leaving the other to violate the MVC. The fact that Ojibwe does not obey the MVC is a mark against adopting a non-configurational analysis.

While a non-configurational analysis of Ojibwe is untenable based on the reasoning presented above, I do not wish to claim that all Algonquian languages are configurational. Furthermore, even Algonquian languages that are provably configurational, such as Mi'gmaq and Ojibwe, have the surface appearance of non-configurationality. As Hamilton (2015) suggests, examining the role of discourse-based configurationality (Miyagawa, 2010, 2017) is an important avenue for future research.

6 AGREEMENT AND TYPOLOGY

There were two goals of the present analysis. First, to establish the basic facts of Ojibwe clausal syntax, and to provide an analysis of these facts. Second to provide a case study of a language where a VOS/VSO alternation is derived via verb raising. In this section, I broaden the scope of the analysis to suggest repercussions for the study of the agreement in Ojibwe, and the typology of verb initiality.

6.1 Agreement in Ojibwe

Much of the work on Ojibwe in generative linguistics, and indeed in the descriptive Algonquianist tradition largely stemming from Bloomfield, has centered on the form and derivation of agreement

morphology in Ojibwe. While not the focus of the paper, the current analysis could stand to clarify a number of issues that have appeared within this literature.

On the face of it, the current analysis contradicts the recent predictions made by Oxford (2018) with respect to the relationship between agreement and movement. In his analysis of direct/inverse marking of Algonquin, a northeastern dialect of Ojibwe, Oxford predicts that VOS should occur in inverse clauses, and VSO should occur in direct—the opposite of what was observed in the present paper. These claims are driven by A-movement of the proximate argument triggered by agreement with a probe on Infl. In direct agreement contexts, the goal is the subject, predicting that the VSO order should be maintained. In the inverse, the goal is the object, predicting VOS. While these predictions are outlined by Oxford, the relevant word order data are not available to evaluate them for Algonquin, thus these predictions have yet to be tested.

The present paper also lacks the data to test these predictions for Algonquin. However, the same agreement facts described by Oxford for Algonquin hold in Southwestern Ojibwe: Voice shows parallel direct/inverse alternations, and Infl omnivorously agrees with proximate arguments (i.e. Infl agrees with either the subject or object, depending on which is proximate). Therefore under Oxford's analysis proximate arguments are expected to be promoted to Spec,IP, and the word order patterns described above are erroneously predicted to apply to Southwestern Ojibwe.

I propose that the solution to this contradiction lies in the #-probe, which omnivorously agrees with *obviative* arguments, and was proposed in the present paper as the landing site of obviative arguments undergoing movement. Oxford sets aside this agreement for the purposes of his analysis—therefore this can be pinpointed as the source of the diverging word order predictions. As already discussed in §3.3, the scope facts for Ojibwe support Oxford's analysis in that proximate subjects move to Spec,IP in direct environments.¹⁴ However the additional (optional) movement of obviative arguments to Spec,#P ultimately places obviative objects to the left of the proximate subject, deriving VOS.

As a result, the core of Oxford's analysis can be maintained by building in an analysis of agreement with #. In ongoing work, I am examining the mechanics of this agreement (Hammerly, 2019). The core issue is that the movement of obviative objects is optional, while the movement of obviative subjects is obligatory (recall only the wide-scope reading is licensed). Furthermore, obviative agreement does not vary as a function of the optional movement of obviative objects. I suggest the solution to this lies in analyzing obviation as a feature that spans the divide between φ -features and δ -features (i.e. discourse features). I leave the details to be presented in future work.

6.2 The typology of verb initiality

While at first blush it may appear theoretically appealing, there is no a priori reason to believe that verb initiality, and indeed VOS/VSO alternations, across all languages of the world can be unified

¹⁴Recall, however, that in inverse environments there was no evidence that proximate objects move higher than Spec,VoiceP, as they are trapped within the scope of negation.

under a single analysis. The development of a verb-raising account over the course of this paper, which was contrasted with the predicate fronting, rightward specifier, and non-configurational analyses, highlights the diversity of underlying structures that can be associated with initially surface-similar patterns. Rather than pitting analyses against each other, the paper affirms the wide range of morphosyntactic operations ultimately underlying otherwise similar surface-level generalizations. Head movement, argument movement, remnant movement, predicate fronting, specifier parameterization, and object post-positioning all appear to have a place in determining the syntax of verb initial languages. The question of which analysis these surface-similar patterns receive should not be taken for granted.

7 CONCLUSION

This paper had two overarching goals. First, to establish the basic facts of Ojibwe clausal syntax, and to provide an analysis of these facts. Second to provide a case study for deriving verb initiality and VOS/VSO alternations via verb raising. In Ojibwe, it was shown that verb raising can occur as syntactic head movement. Constraints at PF ensure that the higher copies of heads are pronounced as suffixal morphology, while constraints on interpretation ensure that the lower copies are interpreted.

The VOS/VSO alternation, which was described in terms of its relation to direct and inverse agreement environments, was argued to be the function of the movement of obviative marked arguments to the Spec,#P. In direct contexts, the object can undergo movement deriving VOS word order, or stay in situ deriving VSO. This movement was shown to have semantic effects in the relationship between indefinite objects and negation. The movement, summarized under the Obviative Movement Generalization, was further shown to obey Relativized Minimality, deriving the word order patterns for both transitive and ditransitive verbs in direct and inverse environments. In addition to obviative movement, the scope facts supported an analysis where proximate subjects move to Spec,IP, and provided evidence that indefinite proximate arguments are PPIs.

Finally, using the word order patterns of ditransitives, predicate coordination, and object extraction, Ojibwe was shown to disobey the patterns expected under the alternative accounts of predicate fronting, rightward specifiers, and non-configurationality.

The proposal is a marked shift away from non-configurational accounts of Ojibwe word order alternations. The surfacing of evidence that word order is derived via syntactic movement of the arguments and the verb furthers our knowledge of how the Ojibwe clause is organized. This finding has the potential to have broad impacts on our understanding of agreement in Ojibwe and Algonquian languages in general, and to inform the typology of how verb initiality can be derived in languages of the world.

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