

**THE SYNTAX AND SEMANTICS OF THE OJIBWE VERBAL
DOMAIN**

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Abstract

Ojibwe is a member of the Algonquian language family. These languages are known for their complex verbal morphology. This makes Ojibwe an excellent case study for testing theoretical concepts. In this thesis, I examine the syntax and semantics of the Ojibwe verbal domain, drawing on three theoretical frameworks, the Minimalist Program (Chomsky, 1993; 1998), Distributed Morphology (Halle & Marantz, 1993; Embick & Noyer, 2007), and Neo-Davidsonian Semantics (Heim & Kratzer, 1998; Kratzer, 2015).

I begin my analysis by looking at the composition of *vP*. I show that Ojibwe verb phrases may contain multiple *vPs*. Following a Distributed Morphology account (Halle & Marantz, 1993; Embick & Noyer, 2007), this structure must be built in the syntax; at all stages in the derivation, if the verb stem has at least one *vP*, it may be used as a fully-formed verb. Further, I discuss the semantics of categorising *v* in Ojibwe, and provide sample denotations for different types of *v*.

Ojibwe verbal agreement morphology is complex and a number of previous accounts have been proposed (Bruening, 2005; Béjar & Rezac, 2009; Lochbihler, 2012; Oxford, 2013). I demonstrate that these previous proposals run into difficulty with multiple *vP* structures. Oxford (2013) comes closest, and I build on his proposal to account for Ojibwe verbal agreement. I argue that Voice (Kratzer, 1996) is the phase edge, and verbal agreement occurs on a head above this. Agree happens simultaneously with both arguments, and a portmanteau morpheme (the *theme sign*) results.

Only the argument in the highest spec-*v* can agree with the theme sign. As a result, applicatives show agreement with the Goal rather than the Theme. I discuss two other agreement suffixes and argue that they are the result of a post-syntactic fission operation (Embick & Noyer, 2007, p. 314).

Finally, I examine the semantics of agreement. While much has been written on the syntax of agreement in Ojibwe, the semantics has been left relatively unstudied. I show that the theme sign puts constraints on argument structure based on the saliency of arguments to the discourse. My proposal assumes speech act participants are always more salient than non-participants, and that obviation modifies a third person argument to mark it as less salient. I propose that instead of referring only to semantic roles, the denotation of the theme signs refer to bundles of syntactic features. In this way, the theme sign will impose conditions on the two highest DPs in a sentence, regardless of their semantic role. This allows the same denotation to target the Theme in monotransitive sentences, and the Goal in applicative sentences. Thus, I provide both syntactic and semantic analyses of agreement in Ojibwe.

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Abbreviations

>	acts on/does to, as in “X does verb to Y”
0	3rd person inanimate
1	1st person
2	2nd person
3	3rd person
3'	3rd person obviative
AN	animate
APPL	applicative
DEM	demonstrative
DETR	detransitiviser
FUT	future
IN	inanimate
LF	logical form
NEG	negative
OBV	obviative
PC	participle
PL	plural
POSS	possessor
PST	past
PV	preverb
SG	singular
VAI/AI	animate intransitive verb
VII/II	inanimate intransitive verb
VTI/TA	transitive animate verb
VTI/TI	transitive inanimate verb

Chapter 1

Introduction

1.1 Aims of this Thesis

The Algonquian languages make a good case study for syntactic and semantic theories, being both complex and relatively unusual amongst the world's languages. While intransitive verbs appear relatively simple, the transitive paradigm displays a topicality hierarchy, and direct/inverse system. Ideally, our linguistic theories should be able to explain, not only well-known languages like English, but also more unusual languages like Ojibwe. In this thesis, I examine the existing data and descriptions of Ojibwe, and set out to enumerate and explain the syntax and semantics of the Ojibwe verbal domain. In this way, I intend to encapsulate a broad range of verbal facts in Ojibwe, as Hirose (2001) did for Plains Cree. I use current theoretical models, and apply them to the Ojibwe data, with adjustments as necessary. While this thesis is not, itself, a cross-linguistic study, this application of current theoretical models to Ojibwe will provide avenues for future research.

In order to fully explain the research questions discussed in this section, some background information is required. First, I discuss verbal categorising morphemes and demonstrate the presence of multiple *vP* structures. The goal of this thesis is to

examine what effects these multiple *vP* structures have on the syntax and semantics of Ojibwe. This leads me to three research questions. The first question pertains to the syntactic and semantic consequences of said multiple *vP* structures. I then proceed to provide background on Ojibwe verbal agreement, as my next question pertains to an account of agreement, given the multiple *vP* structures previously discussed. Finally, I turn to a complementary semantic analysis of agreement, important components of which are the system of obviation, and ditransitive agreement. The examination of all these features will provide a full picture of the Ojibwe verbal domain.

As stated above, my analysis starts with a morpheme which Algonquianists call a *verb final* (Bloomfield 1957, p. 12; Valentine 2001, p. 333). The verb final suffixes to a verbal root, and gives information about the verb’s transitivity, the nature of one of the verb’s arguments (depending on whether it is a transitive or intransitive verb), and some semantic information. This verb final has been equated with *v* in the literature by a number of different researchers (Hirose, 2001; Brittain, 2003; Mathieu, 2006; Ritter & Rosen, 2010; Slavin, 2012; Oxford, 2013; Mathieu, 2014). This morpheme is an excellent example of the categorising head in Distributed Morphology.

An examination of the Ojibwe data shows that, while a verb final suffixes to a root to create a stem, the verb final can also be directly suffixed to another verb final. This creates a verbal stem that already has a full verb contained within it. While there has been much written on the nature of categorising *v*, this phenomenon of stacking *vPs* remains relatively unstudied. My thesis aims to expand the understanding of the nature of verbalisers.

Example (1) demonstrates multiple stacking verb finals in Ojibwe. The causative “make X work” is formed by adding another verb final to the intransitive verb for “work”. That intransitive verb for “work” is formed by adding a intransitive verb

final to a root that means “work”.

- (1) (Ojibwe)
- | | |
|--|---|
| <p>a. <i>nokii</i></p> <p>anok -ii</p> <p>work -move.VAI</p> <p>“work”</p> | <p>b. <i>nokiitoo</i></p> <p>anok -ii -it.oo</p> <p>work -move.VAI -cause.VTI.∅</p> <p>“get X(IN) to work”</p> <p style="text-align: right;">(Valentine, 2001, p. 435)</p> |
|--|---|

Thus, the stem which the second verb final attaches to is, itself, a full verb in the language. According to Distributed Morphology, this structure must be built in the syntax (Halle & Marantz, 1993; Marantz, 1997; Embick & Noyer, 2007). Ojibwe can have a verbaliser *v* suffixed directly to another verbaliser *v*. The result is a structure with multiple *v*Ps.

What are the syntactic and semantic consequences of this multiple *v*P structure? This is the first question this thesis seeks to answer. I propose that *v* introduces the internal argument in its specifier. It turns a root into a full verb and adds an argument. This is true both in the syntax and in the semantics. Semantically, *v* is also an argument-introducer.

In Chapter 3, I give syntactic templates for clauses containing different types of verb finals, including clauses containing multiple *v*Ps. I also give semantic denotations for several verb finals. I have chosen a representative sample, so as to give an idea of the kinds of denotations Ojibwe verb finals will have. This set of information has not, to my knowledge been laid out all together in one place before, but it is crucial for understanding Ojibwe verbal agreement.

Having completed my exploration of the Ojibwe *v*P, I turn next to verbal agreement morphology. As previously noted, transitive agreement in Ojibwe is unusual and complex, but some background on it is required in order to give context to my next research question.

In transitive agreement, Ojibwe displays a direct/inverse system and topicality hierarchy. In such a system, the linear order of arguments is not based on their argument structure.¹ Rather, linear order is based on some salient features of the participants, like person, gender, or animacy, arranged in a hierarchy. The grammar then indicates whether the clause is direct, with the subject ranking higher on the hierarchy, or whether the clause is inverse, with the object ranking higher on the hierarchy (Payne, 1997, p. 209).

In Ojibwe, arguments are indicated with a pronominal prefix (Bloomfield 1957, p. 24; Valentine 2001, p. 269), and a number of suffixes. The most important of these suffixes is called a *theme sign* by Algonquianists, and carries direction marking, i.e. whether the subject, or the object, is higher on the topicality hierarchy (Bloomfield 1957, p. 25; Valentine 2001, p. 267). The following example is an illustration of transitive agreement morphology. The verbal agreement morphemes, i.e. the pronominal prefix and theme sign, are bolded.

- (2) (Ojibwe)
- | | |
|---|---|
| <p>a. <i>Nwaabmaa.</i></p> <p>ni- waab -am -aa</p> <p>1- see -VTA -1>3</p> <p>“I see him/her.”</p> | <p>b. <i>Nwaabmig.</i></p> <p>ni- waab -am -igw</p> <p>1- see -VTA -3>1</p> <p>“He/she sees me.”</p> |
|---|---|
- (Valentine, 2001, p. 287)

Direct/inverse verbal agreement has long been a puzzle to scholars, and several previous syntactic accounts have been offered (e.g. Bruening 2005; Bianchi 2006; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013). However, I do not find the previous accounts of agreement in the Algonquian languages to be entirely satisfactory. In my opinion, they do not adequately account for the multiple *vP* constructions

¹This refers only to the linear order of argument marking on verbs. In the case of full noun phrases, word order seems to have more to do with pragmatic factors such as focus, or new versus given information (Valentine, 2001, p. 951).

discussed above.

This leads to my second question. How can the Ojibwe verbal agreement system be accounted for in a way that encompasses both the complexities of the direct/inverse system, and of the multiple *vP* structures? This question is taken up in Chapter 4, where I discuss some previous accounts, and explain where I believe they run into problems. In my view, Oxford (2013) comes closest, and my proposal for Ojibwe builds on his proposal for Proto-Algonquian.

I argue that agreement does not happen in the lowest phase, but that it occurs on Agr, a head above Voice. The internal argument in spec-*v* moves up to an outer specifier of Voice for the purpose of agreement. This results in both specifiers of Voice being equi-distant. The Agr head agrees with both at the same time. This portmanteau agreement is spelled out as the theme sign.

I will demonstrate that my approach does not run into problems with multiple *vPs*. While my analysis captures the complexity of the direct/inverse morphology in transitive paradigms, I will show that it also has no problem with the simpler intransitive paradigms.

In the final chapter, I take a different approach and turn to the semantics of agreement, in order to complete my examination of the verbal domain. Given Ojibwe's unconventional verbal agreement structure, my final question is the following. What is happening in the semantics when agreement takes place? The answer to this question is contained in Chapter 5. I argue for a different, but complementary semantic analysis for agreement.

While syntacticians argue that agreement phenomena are purely syntactic, in this chapter, I examine the semantics of agreement. This approach goes back to Heim & Kratzer (1998), and their discussion of pronominal features. I will argue that semantically, the direct/inverse system encodes a salience relationship between arguments. In any transitive Ojibwe sentence, the two arguments must be disjoint

referents, i.e. on different places on the topicality hierarchy (Valentine, 2001, p. 273). Semantically, I will show that this means one argument will always be more salient than the other.

Also crucial to agreement is the system of *obviation*. Obviative marking indicates that one argument is less salient than the other. Obviation is particularly relevant to the semantics, because it serves both syntactic and discourse functions. Syntactically, it distinguishes between two third persons. In discourse, the proximate argument is foregrounded, in comparison to the other (obviative) arguments. As such, the system of obviation allows a speaker to highlight which argument is the most important to the discourse (Bloomfield 1957, p. 32; Valentine 2001, p. 183).

I illustrate the phenomenon of obviation with the following example. In this sentence, the children are obviative, as indicated by the use of an obviative demonstrative pronoun and an obviation suffix on the noun. Obviative morphology is the same for both singular and plural obviative nouns. In contrast, the women have a proximate demonstrative pronoun, and the noun is marked as plural. Thus, we know that the women are proximate, and the children are obviative, marking the women as the more salient participants in this sentence.

(3) (Ojibwe)

Giw dash kwewag wgii-gnawenmaawaan niw binoojiinyan.

giw	dash	ikwe	-wag	o-	gii-	ganawen	-im	-aa	-waa	-n
those.DEM.3.PL	and	woman	-PL	3-	PST	take care of	-VTA	-3>3'	-3.PL	-3'
niw	abinoojiin	-yan								
those.DEM.3'	child	-3'								

“The women took care of the children.”

(Valentine, 2001, p. 623)

Semantically, obviation marks arguments as less salient to the discourse. A formal semantics of obviation has never been given before. Therefore, as part of

my discussion on the semantics of agreement, I offer a denotation for obviative in Ojibwe.

One of the results of verbs containing multiple verbalisers, as discussed above, is that agreement in ditransitives involve a different set of arguments than agreement in transitives. To that end, I discuss the semantics of ditransitives, wherein the direct/inverse system targets the Agent and the Goal in applicatives, rather than the Agent and the Theme (Valentine, 2001, p. 136). I propose a novel approach by incorporating syntactic features into the semantics. I argue that the semantics makes use of syntactic features so as to target different arguments, depending on the type of clause they are a part of. The theme sign needs to target the two highest arguments; in most clauses, those arguments are the Agent and the Theme, but in applicatives, those arguments are the Agent and the Goal. By making use of syntactic features, the semantics will be able to accomplish this.

My analysis starts with the syntactic and semantic consequences of multiple *vP* structures. This leads into an analysis of the mechanics of verbal agreement syntax that can work with said multiple *vP* clauses. An exploration of the semantics of agreement concludes my analysis. In this way, I end up with a proposal that encompasses the syntax and semantics of all independent order verbal paradigms in Ojibwe. This covers everything from verbal roots to agreement morphology, taking into account Ojibwe's complex and unusual nature. Thus, we arrive at a full and complete picture of the Ojibwe verbal domain.

In the next section, I share some background information on the Ojibwe language.

1.2 The Ojibwe Language

Ojibwe belongs to the Algonquian language family. Algonquian languages were, at one time, spoken throughout much of eastern North America. There are a number

of very varied dialects, spoken widely in southern regions of Ontario, Manitoba, and into Saskatchewan which are collectively known as Ojibwe, as shown in Figure 1.1 (Valentine, 2001, p. 14). An estimated 30,255 people are Ojibwe speakers in Canada (Statistics Canada, 2010). Dialects of Ojibwe are also spoken in areas of the United States, e.g. Minnesota Ojibwe (Dryer & Haspelmath, 2013; Lewis, Paul, Simons & Fennig, 2013); however, I do not focus on those dialects in this thesis.

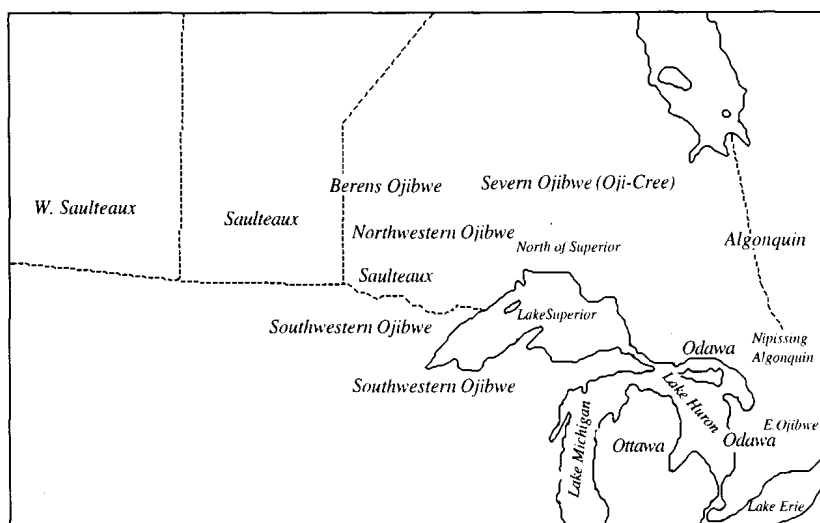


Figure 1.1: Map of Ojibwe dialects (Valentine, 2001, p. 15)

This thesis focuses specifically on dialects of Ojibwe which exhibit vowel syncope, and are mainly documented in Valentine (2001). The vowel-syncope dialects of Ojibwe, known collectively to their speakers as Nishnaabemwin, are spoken in Ontario, along the shores of Lake Huron, and east towards the Ottawa River (Valentine, 2001, p. 1).

The Algonquian language family is known for its complex and unusual verbal agreement morphology. This has made it an object of study for a number of syntacticians (e.g. Bruening 2005; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013), especially as the Algonquian languages display direct/inverse morphology and person hierarchies. Theoretical linguists have been particularly interested in how to

codify these features in the syntax (and semantics) in recent years. The morphology of verbal stems is also complex, even simple verbs are made up of at least two morphemes (Valentine, 2001, p. 318), allowing for a more in-depth study of verb-internal syntax. These features make Ojibwe an excellent case study for the application of syntactic theory to verbal morphology.

I turn now to the theoretical frameworks upon which my analysis is based.

1.3 Theoretical Framework

The analysis in this thesis is centred in three theoretical frameworks, the Minimalist Program (Chomsky 1993, 1998), Distributed Morphology (Halle & Marantz, 1993; Embick & Noyer, 2007), and neo-Davidsonian compositional semantics (Heim & Kratzer, 1998; Kratzer, 2015).

1.3.1 The Minimalist Program

The Minimalist Program was originally proposed by Noam Chomsky in 1993, when he published the paper *A Minimalist Program for Linguistic Theory*, and expanded upon in later work (Chomsky, 1993; 1998; 2001; 2004; 2008, &c.). Minimalism seeks to know, not only what the properties of language are, but why they are the way that they are (Chomsky, 2004). Minimalism, as a branch of generative grammar, seeks to find a framework that can explain the syntactic features of all languages.

In Minimalism, a syntactic derivation is built up from lexical items via the operations of Merge and Move. The lexical items, and the syntactic elements created by combining them contain syntactic features, some of which are interpretable, and others which are uninterpretable. These syntactic features trigger the operations of Merge and Move, as uninterpretable features must be checked and deleted before the derivation is sent to the interfaces for spell-out. If uninterpretable features are

not deleted, the derivation will crash.

The analysis of the Ojibwe verb phrase depends crucially on the mechanism of Agree. In standard Minimalist theory, Agree is a relationship between a probe and a goal, where the probe has some uninterpretable features, and must search down in its c-command domain to check against the nearest goal that has matching interpretable features (Chomsky, 1998; 2001). Thus, uninterpretable features are checked and deleted before spell-out.

1.3.2 Distributed Morphology

Distributed Morphology postulates that morphological operations take place throughout the derivation process. In other words, the same generative system is at work at both the word level, and the phrase level (Embick & Noyer, 2007). In this system, some operations of word formation occur within the syntax proper, while others occur post-syntactically at the phonological interface.

Every word is assumed to start off with an acategorical root, to which is added a *v*, *n*, or *a* head to form verbs, nouns, or adjectives respectively (Halle & Marantz, 1993; Marantz, 1997; Embick & Noyer, 2007). Thus, every Ojibwe verb starts with an acategorical root, to which is added a verbalising morpheme.

Ditransitive verbs in Ojibwe have a multiple *v*P structure. A ditransitive is formed by adding a second verbaliser to a verb stem already formed from a root and a verbalising morpheme. According to Distributed Morphology, the structure of the simple transitive verb will be contained within the structure of the ditransitive (Halle & Marantz, 1993; Embick & Noyer, 2007). This means that the transitive verbaliser is already a part of the syntactic derivation when the ditransitive verbaliser is added. At all stages of the derivation, if the verb stem has at least one *v*P, it may be used as a fully-formed verb.

Distributed Morphology postulates several operations that happen post-syntac-

tically at the phonological interface. These include operations on terminal nodes like fission and fusion, and movement operations like lowering and local dislocation (Halle & Marantz, 1993; Embick & Noyer, 2007). Fission, an operation that allows more than one morpheme to be inserted at a terminal node during vocabulary insertion, will play a crucial role in the syntactic analysis of verbal agreement.

1.3.3 Neo-Davidsonian Compositional Semantics

Compositional semantics seeks to build the meaning of a sentence from the meaning of its parts. This is done by identifying the truth conditions of meaningful units as functions and arguments, and combining those denotations using specified operations such as Function Application, or Event Identification (Kratzer, 1996; Heim & Kratzer, 1998). In this way, we can determine how the meaningful parts of a sentence contribute to the meaning of the whole.

It was Donald Davidson who first formalised the semantics of verbs as events and states. This gave rise to the question of whether a verb carried all of the information about the number and kinds of its arguments in its denotation (Kratzer, 2015, p. 3). In the neo-Davidsonian method, a verb describes properties of events or states. The verb’s arguments are secondary predicates which describe general thematic roles like Agent, Theme, or Goal (Kratzer, 2015, p. 6). In this thesis, I take a neo-Davidsonian approach, arguing that all of a verb’s arguments are secondary predicates rather than inherent properties of the verb itself.

1.4 Pronouns and Arguments

Jelinek (1984) proposed that for some languages, verbal agreement or clitics count as pronominal arguments, but separate nouns were actually adjuncts. That is, the verbal inflection is the arguments themselves, rather than agreement with said argu-

ments. Ojibwe and the other Algonquian languages, with their rich verbal agreement system look like good candidates for this Pronominal Argument Hypothesis (PAH), and a number of analyses have assumed this.²

For the purpose of my analysis, I assume the PAH throughout this thesis. While the adoption of the PAH does not materially change the syntactic analysis of agreement in Chapter 4, it is consistent with the semantic analysis in Chapter 5. I assume arguments are small *pros* with DPs as adjuncts in all of the syntactic trees given in this thesis.

The following section gives an overview of the topics covered in this thesis.

1.5 Thesis Overview

1.5.1 Chapter 2: Ojibwe Verbal Morphology

Chapter 2 introduces the relevant Ojibwe data. I start by exploring the structure of verbal stems. The Ojibwe verb is composed of at least two morphemes, which Algonquianists refer to as an *initial* and a *final*, based on where they appear in linear order before agreement morphology is added (Bloomfield 1957, p. 12; Valentine 2001, p. 333). In the simplest case, the initial is a verbal root to which one or more finals may be added; I will later argue that the aforementioned is a structure the may contain more than one *vP*. The verb final specifies the transitivity of the verb and the gender of one of the verb's arguments (the argument so specified depends on whether it is a transitive or intransitive verb). The verb final also usually contributes some semantic content to the verb (Bloomfield 1957, p. 33; Valentine 2001, p. 333). I start by discussing the structure of verbs in § 2.2, including the different types of verb finals that can occur in intransitive, transitive, and ditransitive verbs.

Next, I describe the Ojibwe verbal agreement morphology for transitive animate

²However, LeSourd (2006) argues that there are issues applying the PAH to Maliseet-Pasamaquoddy, and quite likely, therefore, to the Algonquian language family as a whole.

verbs. This agreement morphology uses a direct/inverse system. In such a system, the order in which participants appear in the sentence is not based on their argument structure. Rather, linear order is based on some salient features of the participants, like person, gender, or animacy, arranged in a hierarchy. The grammar then indicates whether the clause is direct, with the subject ranking higher on the hierarchy, or whether the clause is inverse, with the object ranking higher on the hierarchy (Payne, 1997, p. 209). In § 2.3, I will show how Ojibwe utilises a topicality hierarchy in the agreement morphology of transitive verbs.

When two (or more) third person arguments appear in the same clause, one argument will be proximate (unmarked), and all of the other arguments will be marked obviative. Obviation is discussed in § 2.3.3. While obviation is needed in order to distinguish between two third persons for the purpose of direct/inverse marking, the choice of which argument(s) to make obviative is discourse-driven. An obviative third person is less prominent or less salient to the discourse than a proximate third person³ (Bloomfield 1957, p. 32; Valentine 2001, p. 183). This is particularly interesting, because obviation involves the intersection of both discourse and syntactic factors. Obviation provides evidence for how syntactic and semantic features work together to convey information.

The final set of inflections in the transitive animate verb paradigm that I will be examining in this thesis, is the inflections used for agreement with inanimate subjects (Bloomfield 1957, p. 26; Valentine 2001, p. 287). Agreement with inanimate subjects is of particular interest, because on the whole, Ojibwe seems to disprefer inanimate Agents; in fact, transitive verbs must always have at least one animate argument, preferably the subject (Valentine, 2001, p. 426). There is a question then, about how often these forms are used, and in which contexts. Based on the paradigms in Valentine (2001, p. 287), these inflections show interesting properties, which I will

³For accounts of obviation, including comparisons with phenomena in other languages, see Dahlstrom (1986); Rhodes (1990); Aissen (1997); Kiparsky (2002); Manyakina (2012).

explore in later chapters.

Finally, I will cover the agreement morphology of the other three verb types. Traditionally, Algonquianists break verbs down into four types based on their morphology: transitive animate (VTA), transitive inanimate (VTI), animate intransitive (VAI), and inanimate intransitive (VII). The category of each verb is determined by the verb final (Bloomfield 1957, p. 33; Valentine 2001, p. 132). For intransitive verbs, the classification as animate or inanimate is based on the gender of the subject, and for transitive verbs, this classification is based on the gender of the object. The four classes denote four different agreement morphology paradigms. I will be examining TI, II, and AI verbs. Although they appear to be simpler than TA verbs, there are still interesting phenomena happening in the other verbal paradigms that are worth considering in the analysis of agreement morphology.

1.5.2 Chapter 3: The Syntax and Semantics of *vP*

In Chapter 3, I examine the composition of *vP*. This discussion forms the answer to my first research question. What are the syntactic and semantic consequences of multiple *vP* structures?

I start with a discussion of the syntax of *vP* in § 3.2. I introduce some relevant theoretical background in § 3.2.1. I explore the syntactic structures of different verb types and give templates for different *vP* structures. Section 3.2.2 examines unaccusative verbs, which are one-argument predicates. The next sections look at two-argument predicates, namely unergative (§ 3.2.3) and simple transitive (§ 3.2.5) *vPs*. Finally, I give templates for structures which I argue contain more than one *vP*. Following a Distributed Morphology account (Halle & Marantz, 1993; Embick & Noyer, 2007), this structure must be built in the syntax; at all stages in the derivation, if the verb stem has at least one *vP*, it may be used as a fully-formed verb. These multiple *vP* structures include ditransitives (§ 3.2.6), transitivisers and

detransitivisers (§ 3.2.7), and the unique verb final *-magad*, which changes VAI to VII verbs (§ 3.2.8). Ditransitives are further broken down into applicatives (§ 3.2.6.1), and causatives (§ 3.2.6.2), each of which have their own syntactic template.

In the second half of the chapter, I discuss the semantics of categorising *v* in Ojibwe, and provide sample denotations for different types of *v*. Section 3.3.1 looks at the semantics of verb roots which I treat as events in this thesis. Finally, Section 3.3.2 focuses on the semantics of verb finals. Denotations are given for a representative selection of verb finals, intransitive in § 3.3.2.1, transitive in § 3.3.2.2, causative in § 3.3.2.3, and applicative in § 3.3.2.4.

1.5.3 Chapter 4: The Syntax of Agreement

This chapter forms the answer to my second research question. How can the Ojibwe verbal agreement system be accounted for in a way that encompasses both the complexities of the direct/inverse system, and of the multiple *vP* structures?

Ojibwe verbal agreement morphology is complex and a number of previous accounts have been proposed (e.g. Bruening 2005; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013). I start Chapter 4 by discussing the aforementioned previous proposals in § 4.2, and demonstrating how they run into difficulty with multiple *vP* structures. Oxford (2013) comes closest (§ 4.2.3), and I build on his proposal to account for Ojibwe verbal agreement.

I argue, in § 4.3, that Voice (Kratzer, 1996) is the phase edge, and verbal agreement occurs on a head above this. Agree happens simultaneously with both arguments, and a portmanteau morpheme (the *theme sign*) results. I discuss two other agreement suffixes in § 4.3.2, and argue that these agreement suffixes are the result of a post-syntactic fission operation (Embick & Noyer, 2007, p. 314). In Section 4.3.3, I apply my analysis to multiple *vP* structures, only the argument in the highest spec-*v* can agree with the theme sign. As a result, applicatives show agreement

with the Goal rather than the Theme. I finish this chapter with a discussion of agreement in the intransitive verb paradigms in § 4.4.

1.5.4 Chapter 5: The Semantics of Agreement

In Chapter 5, I examine the semantics of agreement in order to answer my final research question. What is happening in the semantics when agreement takes place? In this chapter, I shift perspective from a syntactic to a semantic framework. While syntacticians argue that agreement phenomena are purely syntactic, I examine the semantics of agreement. This approach goes back to Heim & Kratzer (1998), and their discussion of pronominal features. This provides a different but complementary analysis of agreement.

Section 5.1.1 introduces the semantics of arguments separate from their verb, based on the work of Kratzer (1996). This is one of the ways in which the syntax and semantics parallel each other; Voice and *v* are as necessary for the semantics as they are for the syntax.

I discuss the denotation of animate arguments and agreement in § 5.2. Section 5.2.1 discusses the denotations of pronominals. I discuss the two sets of theme signs in § 5.2.2 when both arguments are participants, and § 5.2.3 when one or more arguments is a non-participant. While my proposal assumes that speech act participants are always more salient than non-participants, in § 5.2.4, I show that obviation modifies a third person argument to mark it as less salient. I show that the theme sign puts constraints on the argument structure based on the saliency of the arguments to the discourse.

Next, I tackle the denotation of inanimate arguments in § 5.3. Inanimacy is a grammatical gender in Ojibwe rather than a semantic feature. However, I will discuss a suffix used to mark inanimate arguments, and show that this suffix has the same denotation as the obviative suffix for the purpose of marking the salience

relationship between arguments.

In Section 5.4, I propose that instead of referring only to semantic roles, the denotation of the theme signs refer to bundles of syntactic features. In this way, the theme sign will impose conditions on the two highest DPs in a sentence, regardless of their semantic role. This lets the same denotation target the Theme in monotransitive sentences, and the Goal in applicative sentences. Thus, in my analysis, the syntax and semantics of Ojibwe parallel each other. Further, the semantics makes use of, and builds on, the syntactic structure.

Finally, in § 5.5, I examine the semantics of animate intransitive verbs. While at first appearing simple, it turns out that the same suffix used for inanimate third persons may also be used with animate third persons in this specific case. I propose a way to account for this based on the idea that this suffix marks an argument as less salient.

1.5.5 Chapter 6: Conclusion

In this final chapter, I summarise the results of this thesis, and suggest some avenues for future research.

Chapter 2

Ojibwe Verbal Morphology

2.1 Introduction

This chapter focuses on the Ojibwe data relating to the issues I will discuss throughout the rest of this thesis.

I start by exploring the structure of verbal stems. The Ojibwe verb is composed of at least two morphemes, which Algonquianists refer to as an initial and a final, based on where they appear in linear order, i.e. the initial is the first part of the verb, and the final is the last, before agreement morphology is added (Bloomfield 1957, p. 12; Valentine 2001, p. 333). In the simplest case, the initial is a verbal root to which one, or more, finals may be added, in what I will later argue is a structure containing more than one *v*P. The verb final specifies the transitivity of the verb, the gender of one of the verb's arguments; the argument so specified depends on whether it is a transitive or intransitive verb. The verb final also usually adds some semantic content to the verb (Bloomfield 1957, p. 33; Valentine 2001, p. 333).

Next, I describe the Ojibwe verbal agreement morphology for transitive animate verbs. This agreement morphology uses a direct/inverse system. In such a system, the order in which participants appear in the sentence is not based on their argu-

ment structure. Rather, argument ordering is based on some salient features of the participants, like person, gender, or animacy, arranged in a hierarchy. The grammar then indicates whether the clause is direct, with the subject ranking higher on the hierarchy, or whether the clause is inverse, with the object ranking higher on the hierarchy (Payne, 1997, p. 209). Ojibwe does this using a verbal suffix which is called a *theme sign* by Algonquianists (Bloomfield 1957, p. 25; Valentine 2001, p. 267), and a set of pronominal proclitics (Bloomfield 1957, p. 24; Valentine 2001, p. 269). Agreement between singular persons is achieved via a combination of three proclitics and four theme signs, except for 3rd person obviative, which involves an additional suffix, *-an* (Bloomfield 1957, p. 28; Valentine 2001, p. 287).

When two (or more) third person arguments show up in the same clause, one argument will be proximate (unmarked), and all of the other arguments will be marked obviative. While obviation is needed in order to distinguish between two third persons for the purpose of direct/inverse marking, the choice of which argument(s) to make obviative is discourse-driven. An obviative third person is less prominent or less salient to the discourse than a proximate third person¹ (Bloomfield 1957, p. 32; Valentine 2001, p. 183). This is particularly interesting, because obviation involves the intersection of both discourse and syntactic factors. Obviation provides evidence that syntactic and semantic features work together to convey information.

The final set of inflections in the transitive animate verb paradigm that I will be examining in this thesis, is the inflections used for agreement with an inanimate subject (Bloomfield 1957, p. 26; Valentine 2001, p. 287). Inanimate subject agreement is of particular interest, because on the whole, Ojibwe seems to disprefer inanimate Agents; in fact, transitive verbs must always have at least one animate argument, preferably the subject (Valentine, 2001, p. 426). There is a question then, about how often inanimate subject forms are used, and in which contexts. Based on the

¹For accounts of obviation, including comparisons with phenomena in other languages, see Dahlstrom (1986); Rhodes (1990); Aissen (1997); Kiparsky (2002); Manyakina (2012).

paradigms in (Valentine, 2001, p. 287), they show interesting properties, which I will explore in later chapters.

Ditransitive verbs show the same agreement morphology as monotransitive verbs. All such verbs are transitive animate verbs. Applicatives have an animate Goal, which is marked on the verb rather than the Theme, which remains unmarked (Bloomfield 1957, p. 138; Valentine 2001, p. 136), i.e. the Goal argument is Merged above the Theme. This interpretation of the data has been argued for in Algonquian by several people (Hirose, 2001; Lochbihler, 2012; Slavin, 2012; Oxford, 2013). The Theme in a ditransitive applicative cannot be a participant (1st or 2nd person), which Lochbihler (2012, p. 118) identifies as a variation of the Person Case Constraint, known especially from the Romance languages.

Finally, I will cover the agreement morphology of the other three verb types. Traditionally, Algonquianists break verbs down into four types based on their morphology: transitive animate (VTA), transitive inanimate (VTI), animate intransitive (VAI), and inanimate intransitive (VII). The category of each verb is determined by the verb final (Bloomfield 1957, p. 33; Valentine 2001, p. 132). For intransitive verbs, the classification as animate or inanimate is based on the gender of the subject, and for transitive verbs, this classification is based on the gender of the object. The four classes denote four different agreement morphology paradigms. The previous sections covered agreement with transitive animate verbs, which are the most complex. I will be examining TI, II, and AI verbs. The other three agreement paradigms do not appear to show the same topicality hierarchy or direct/inverse morphology, as agreement is with one argument only.² Although they appear to be simpler than VTA verbs, there are still noteworthy phenomena happening in the other verbal paradigms that must be considered in the analysis of agreement morphology.

²While transitive inanimate verbs do agree with two arguments, the object is always third person (though it can vary by plurality) for all members of this paradigm, so agreement is simpler than it is with transitive animate verbs.

2.2 The Structure of Verbs

The Ojibwe verb is composed of at least two morphemes, traditionally labelled an initial and a final, based on where their order within the verb, i.e. the initial is the first part of the verb, and the final is the last, before agreement morphology is added (Bloomfield 1957, p. 12; Valentine 2001, p. 333).³ Example (4) demonstrates the construction of a verbal stem formed from an initial and a final.⁴

(4) (Ojibwe)

- | | |
|--|---|
| <p>a. <i>bwaazh</i></p> <p>abwaa -n</p> <p>roast -VTA</p> <p>“roast X(AN)”</p> | <p>c. <i>miigaazh</i></p> <p>miigaa -n</p> <p>fight -VTA</p> <p>“fight X(AN)”⁵</p> |
| <p>b. <i>ziigin</i></p> <p>ziig -n</p> <p>spill -VTA</p> <p>“spill X(AN)”</p> | |

(Valentine, 2001, p. 475)

Initials may be nominal, adjectival, or verbal, and may be free or bound morphemes. That is to say, an initial may be an independent word. As a consequence, a final may take a full verb (an initial+final complex) as its initial (Bloomfield 1957, p. 12; Valentine 2001, p. 333). This forms a structure with two verb finals, and, as I will argue in the next chapter, two *v*Ps.

³Verbs may also have a medial, which, as the name implies, appears between the initial and final. Medials generally have either a nominal or classificatory meaning (Valentine, 2001, p. 333). However, I will not be discussing medials in this thesis.

⁴For clarity, the morpheme-by-morpheme glosses are given without vowel syncope. I also include the Ojibwe sentences as they occur with vowel syncope whenever possible. Vowel syncope is discussed in Valentine (2001, pp. 51-55).

⁵Despite the glosses, these examples are not infinitives, as it is not actually possible to form infinitives in Ojibwe (Valentine, 2001, p. 648).

Unlike initials, the set of finals are a closed class of bound morphemes. The verb final specifies the transitivity of the verb, the gender of one of the verb’s arguments (the argument so specified depends on whether the verb is transitive or intransitive), and usually contributes some semantic content to the verb (Bloomfield 1957, p. 33; Valentine 2001, p. 333).

Traditionally, Algonquianists break verbs down into four types based on their morphology: transitive animate (VTA), transitive inanimate (VTI), animate intransitive (VAI), and inanimate intransitive (VII), verbs. The category of each verb is determined by the verb final (Bloomfield 1957, p. 33; Valentine 2001, p. 132).

	Animate	Inanimate
Intransitive	VAI	VII
Transitive	VTA	VTI

Table 2.1: Ojibwe Verbal Classes (adapted from Valentine 2001, p. 132)

As can be seen, gender in Ojibwe is not only relevant to nouns, but also to verbs, as just noted. Morphological verb classes are based partially on the animacy of one of their arguments. The verb final encodes gender information (animate or inanimate) about one of the verb’s arguments; in transitive verbs, the gender of the object is indicated with the final, and in intransitive verbs, the gender of the subject is indicated with the final (Bloomfield 1957, p. 33; Valentine 2001, p. 132).

Animacy, therefore, looks like it might be relevant to the semantics of verb finals, as well as to the syntax. Indeed, there is some debate about this in the Algonquianist literature. In Ojibwe, semantically animate entities are always grammatically animate; however, semantically inanimate entities may be either animate or inanimate (Goddard, 2002), as demonstrated in the following example.

- (5) (Ojibwe)
- | | |
|-------------------|----------------|
| a. <i>mskomin</i> | b. <i>miin</i> |
| miskomin | miin |
| raspberry.AN | blueberry.IN |
| “raspberry” | “blueberry” |
- (Rhodes, 1985)

Following Quinn (2015) for Penobscot, Mathieu (2012) for Ojibwe, Johansson (2008) for Plains Cree but not for Blackfoot, Goddard (2002), Dahlstrom (1995), amongst others, I maintain that the animate/inanimate distinction is one of grammatical gender rather than one of semantic animacy. Thus, gender in Ojibwe works similarly to grammatical gender in more well-known languages like French or German.

The following examples show some Ojibwe verb stems, illustrating how the initial and final both contribute to the verb’s meaning. As can be seen here, the verb final also gives information about the transitivity of the verb.

I now turn to examples of different types of verb finals and how they are used, starting with a demonstration of how multiple verb finals may be added to a single root in Example (6). The causative “make X work” is formed by adding a transitive inanimate verb final to the animate intransitive verb for “work”.

- (6) (Ojibwe)
- | | |
|-----------------|-----------------------------|
| a. <i>nokii</i> | b. <i>nokiitoo</i> |
| anok -ii | anok -ii -it.oo |
| work -move.VAI | work -move.VAI -cause.VTI.∅ |
| “work” | “get X(IN) to work” |
- (Valentine, 2001, p. 435)

A causative final may be added to a verb, as demonstrated above, but it may also be added to a root directly, as shown in Example (7) below.

- (7) (Ojibwe)
- | | |
|---|--|
| <p>a. <i>giizhih</i></p> <p>giizh -ih</p> <p>finish -cause.VTA</p> <p>“finish (doing/making) X(AN)”</p> | <p>b. <i>aanjih</i></p> <p>aand -ih</p> <p>change -cause.VTA</p> <p>“change X(AN)”</p> |
|---|--|
- (Valentine, 2001, p. 434)

Examples (8) and (9) are applicative constructions. In (8), the applicative is formed from a transitive verb, and in (9), the applicative is formed from an intransitive verb.

- (8) (Ojibwe)
- | | |
|---|--|
| <p>a. <i>zhitoo</i></p> <p>azhi -it.oo</p> <p>make -cause.VTI.Ø</p> <p>“make X(IN)”</p> | <p>b. <i>zhitmaw</i></p> <p>azhi -it -amaw</p> <p>make -cause -for.X.VTA</p> <p>“make something for X(AN)”</p> |
|---|--|
- (Valentine, 2001, p. 434) (Valentine, 2001, p. 467)

- (9) (Ojibwe)
- | | |
|---|---|
| <p>a. <i>nwapwaanke</i></p> <p>nwapwaan -ike</p> <p>lunch -work.with.VAI</p> <p>“make lunch (for a trip)”</p> | <p>b. <i>nwapwaankaw</i></p> <p>nwapwaan -ike -aw</p> <p>lunch -work.with -for.someone.VTA</p> <p>“make lunch (for a trip) for someone”</p> |
|---|---|
- (Valentine, 2001, p. 466)

The following sections discuss the expression of different types of verbs in Ojibwe in more detail.

2.2.1 Intransitive (AI and II) Verbs

According to the Unaccusative Hypothesis (Perlmutter, 1978), intransitive verbs may be unaccusative or unergative. They will have either an internal argument, or an external argument. In Ojibwe, these two types of intransitive verbs share the same morphological structure; however, they have different underlying syntactic structures, as I will argue in § 3.2.2 and § 3.2.3.

Since unaccusative verbs may have either an animate or inanimate subject, they can thus have either a VAI or VII final, as seen in Example (10).

- | | | |
|------|--|---------------------------|
| (10) | | (Ojibwe) |
| | <div style="width: 45%;"> <p>a. <i>mskozi</i></p> <p>misko -izi</p> <p>red -VAI</p> <p>“be red (AN)”</p> </div> <div style="width: 45%;"> <p>b. <i>mskwaa</i>.</p> <p>misko -aa</p> <p>red -VII</p> <p>“be red(IN)”</p> </div> | |
| | | (Valentine, 2001, p. 342) |

In Ojibwe, there is a rule which states that transitive verbs must always have at least one animate argument, preferably the subject (Valentine, 2001, p. 426). As an extension of this preference, verbs with VII finals may only be unaccusative. There appears to be no inanimate unergative verbs in the language. Pairs of related animate and inanimate verb finals exist for most intransitive verbs; however, there are no pairs of related finals for concepts that clearly derive unergative verbs. This gap is illustrated in Example (11), where there is a VAI final meaning “climb”. No similar VII final exists.

(11) (Ojibwe)

maajiiyaandwe.

maajii -aandawe

start -climb.VAI

“start climbing(AN)”

(Valentine, 2001, p. 375)

2.2.1.1 Pseudo-Transitive (VAI+O) Verbs

In Ojibwe, there is a set of verbs which are morphologically intransitive, i.e. they use VAI agreement morphology, but may optionally have a third person (animate or inanimate) object. When they have an object, they agree with this object in some paradigms (Valentine, 2001, p. 243). These verbs are known as pseudo-transitive, or VAI+O (VAI+object) verbs (Bloomfield 1957, p. 33; Valentine 2001, p. 242).

(12) (Ojibwe)

a. *Wmiigwen.*

o- miig -iwe -n

3- give -VAI -0.SG

“He/she gives it away.”⁶

(Valentine, 2001, p. 244)

b. *Ow idash gii-inendam: "Goni ge gaawiin ningagashkitoosin."*

ow idash gii- inend -am -∅ goni ge

this.DEM.0.SG and.PC PST.PV- think -VAI -3.SG maybe.PC and.PC

gaawiin ni- ga- gashki -too -siin

not.PC 1- FUT.PV- be able -act.VAI -NEG.0.SG

“Now, this he thought: ‘I wonder if I am unable to do it!’”

(Jones, 1917, p. 44)

2.2.1.2 Pseudo-Intransitive (Objectless TI) Verbs

The final set of intransitive verbs in Ojibwe are known as pseudo-intransitives, or objectless TI verbs. The aforementioned verbs are a set of VAI verbs whose final ends in *-am*. Due to various Ojibwe phonological processes, this set of verbs look nearly identical to the set of VTI verbs that also end in *-am* (Valentine, 2001, p. 248). Indeed, there are many verb roots which form stems with both VAI and VTI finals. These verb pairs have almost identical meanings, where any difference in meaning comes from a difference in transitivity (Valentine, 2001, p. 309).⁷

- (13) (Ojibwe)
- | | |
|--|--|
| <p>a. <i>Ndi-nendam.</i></p> <p>nid- in -endam</p> <p>1- thus -think.VAI</p> <p>“I think/decide/vote.”</p> | <p>b. <i>Ndi-nendaan.</i></p> <p>ni- in -endam -n</p> <p>1- thus -think.VTI -0.SG</p> <p>“I think it.”</p> <p style="text-align: right;">(Valentine, 2001, p. 309)</p> |
|--|--|

As these verbs are neither morphologically nor syntactically distinct from other AI verbs, I assume they are, in fact, just the same as regular VAIs, and that the apparent similarity to VTIs is only a quirk of phonology.

Next, I discuss different types of transitive verbs in Ojibwe.

2.2.2 Transitive (TA and TI) Verbs

There are two types of transitive verbs, those with animate objects (VTAs), and those with inanimate objects (VTIs). Like intransitive verb finals, transitive verb finals usually come in pairs (Valentine, 2001, p. 426).

⁶The initial in *miigwe* is suppletive, as it comes from the VTA verb *miin-*, “give something to X” (Valentine, 2001, p. 407).

⁷Other Algonquianists (e.g. Valentine 2001, p. 309) argue that this is a distinct class of VTI verbs that can sometimes appear without objects, rather than two sets of similar VTI and VAI verbs, as I argue for here.

- (14) (Ojibwe)
- | | |
|---|---|
| <p>a. <i>aanjih</i></p> <p>aand -ih</p> <p>change -cause.VTA</p> <p>“change X(AN)”</p> | <p>b. <i>aanjtoo</i></p> <p>aand -it.oo</p> <p>change -cause.VTI.∅</p> <p>“change X(IN)”</p> <p style="text-align: right;">(Valentine, 2001, p. 434)</p> |
|---|---|

All VTI finals end in either *-am*, *-oo*, or, in a very small number of cases, *-i*. These suffixes are referred to as theme signs by Algonquianists (Valentine, 2001, p. 305). VTA verbs also have a suffix called a theme sign. In the case of VTA verbs, the theme sign is a part of agreement morphology, as I will discuss in § 2.3. However, for VTI verbs, the suffixes referred to as theme signs appear to be purely phonological. They do not vary depending on person, like the VTA theme signs do, and instead, appear to be determined by the final itself. That is to say, a given VTI final will always have the same theme sign (Valentine, 2001, p. 305). This phenomenon is what Distributed Morphology calls an ornamental morpheme (Embick & Noyer, 2007, p. 301). Under this account, the VTI theme signs are added at the phonological interface, and are not syntactic. Therefore, when I give VTI finals in my glosses, I have glossed the VTI theme signs as ∅ to indicate that they do not add to the syntax or semantics of the phrase.

2.2.3 Ditransitive (TA) Verbs

Ditransitive verbs show the same agreement morphology as monotransitive verbs. All ditransitive verbs are VTA verbs. With ditransitive applicatives, it is the Goal that is marked on the verb, and the Theme remains unmarked. Thus, while a ditransitive verb in Ojibwe may have either an animate or inanimate Theme, it must always have an animate Goal (Valentine, 2001, p. 136). This is shown in Example (15).

(15) (Ojibwe)

a. **gi-** gii- miin **-i** emkwaanes

2- PST- give **-2>1** spoon

“You gave a spoon to me.”

b. **gi-** gii- miin **-in** emkwaanes

2- PST- give **-1>2** spoon

“I gave a spoon to you.”⁸

(Lochbihler, 2012, p. 116)

The verb “give” in Example (15) has agreement with both a first and a second person argument. In both cases, it is the Agent and the Goal which are inflected on the verb. The Theme, “the spoon”, remains unmarked on the verb in both sentences.

A second example is given below in (16).

(16) (Ojibwe)

Aw kwe ndazhtamaag nbabgiwayaan.

aw ikwe **nid-** azhi -it -amaw **-ig** ni-
 that.DEM.3.SG woman.AN **1-** make -cause.VTI -for.X.VTA **-3>1** 1.POSS-
 babagiwayaan
 shirt.IN

“That woman is making me a shirt.”

(Valentine, 2001, p. 700)

This type of ditransitive agreement is known as a secundative ditransitive pattern and is less common amongst the world’s languages (Dryer, 1986; Haspelmath, 2005; Malchukov, Haspelmath & Comrie, 2010).

⁸The VTA verb *miinaad*, “give something to X”, is unusual in that it is one of the few times where the verb final is not readily obvious (which is even more striking, as most ditransitive verbs clearly have two verb finals), and I assume it has a $\emptyset$ -morpheme final.

The Theme in an Ojibwe ditransitive applicative cannot be a participant (1st or 2nd person), as demonstrated in Example (17). Lochbihler (2012, p. 118) identifies this as a variation of the Person Case Constraint, known especially from the Romance languages.

(17) (Ojibwe)

- a. * ni- gii- miin -aa giin
 1- PST- give -1>3 you
 (intended) “I gave you to him/her.”
- b. * gi- gii- miin -aa niin
 2- PST- give -2>3 me
 (intended) “You gave me to him/her.”

(Lochbihler, 2012, p. 118)

This concludes my review of the different types of verbs in Ojibwe. Next, I turn to the language’s verbal agreement morphology.

2.3 VTA Agreement Morphology

Ojibwe transitive verbal agreement morphology uses a direct/inverse system. In such a system, the order of participants in the sentence is not based on their argument structure. Rather, the order of arguments is based on some salient features of the participants, like person, gender, or animacy, arranged in a hierarchy. The grammar then indicates whether the subject is the higher ranked on the hierarchy (direct), or whether the object is the higher ranked on the hierarchy (inverse). Direction marking can be done, for example, through verbal morphology, or through using different pronouns for direct and inverse constructions (Payne, 1997, p. 209).

In the Algonquianist literature,⁹ a topicality hierarchy may also be referred to

⁹For example, Bruening (2005); Macaulay (2005); Bianchi (2006); Bruening (2009); Béjar &

as an animacy hierarchy, a prominence hierarchy, a precedence hierarchy, a person and/or person/gender hierarchy, &c. I refer to the Ojibwe hierarchy as a topicality hierarchy throughout, following the usage in Valentine (2001). I find Valentine's (2001) terminology preferable, as I believe it best captures the factors at work in the Ojibwe agreement morphology. That is to say, as I will demonstrate in Chapter 5, the apparent hierarchy is based on the relative discourse salience of arguments, where some arguments may be more, or less, topical.

According to Valentine (2001, p. 268), the full topicality hierarchy for Ojibwe is as follows (where X is an unspecified actor, and 0 is inanimate):

$$(18) \quad 2 > 1 > X > 3 > 3' > 0$$

Each argument of a transitive sentence must be at a different place on the hierarchy, i.e. they must be disjoint referents (Valentine, 2001, p. 273). Without this rule, there would be no way to indicate whether a sentence is direct or inverse. Arguments cannot be distinguished only by number in the Ojibwe agreement system.

Topicality hierarchies and direct/inverse contrasts are one area where the syntactic derivation does not appear, on the surface, to follow the expected paradigm from more well-known languages. The argument structure and checking relationships that were designed to account for languages without a direct/inverse system appear, at first glance, to be unable to account for languages like Ojibwe. However, several authors have proposed ways of fitting the Algonquian direct/inverse system into the Minimalist syntactic framework (e.g. Bruening 2005; Bianchi 2006; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013).

Arguments are indicated with a pronominal prefix (Bloomfield 1957, p. 24; Valentine 2001, p. 269) and a number of suffixes. The most important of these is the theme sign which carries direction marking, i.e. whether the subject, or the object, is higher on the topicality hierarchy (Bloomfield 1957, p. 25; Valentine 2001, p. 267).

Rezac (2009); Bliss, Ritter & Wiltschko (2014); Wiltschko & Ritter (2014).

The VTA theme signs can be grouped into two sets of two, the *local* set, and the *non-local* set. The local theme signs are those used when both the subject and the object are first and second persons, i.e. the subject and object are both speech act participants. The non-local set appears when at least one of the arguments, either the subject, or the object, is third person (Bloomfield 1957, p. 46; Valentine 2001, p. 270). I describe the morphology and distribution of these theme signs in Sections 2.3.1 and 2.3.2.

2.3.1 Non-Local Theme Signs

In languages like English, word order is determined by the syntactic structure, and it is the word order which lets us know which argument is the subject, and which is the object. For example, we know that “I love you” and “you love me” mean different things because of where each argument appears in the sentence. Other languages, like Russian, use Case to accomplish the same thing, i.e. they may mark the subject with nominative and/or the object with accusative case.

Neither of these strategies are in place for Ojibwe. Lochbihler (2012) argues that Ojibwe does not have Case. Also, Ojibwe is a pro-drop language that greatly disfavours pronouns (Valentine, 2001, p. 609), with very free word order (Bloomfield 1957, p. 131; Valentine 2001, p. 951). Both arguments in Ojibwe are marked on the verb, but the linear order of the argument marking is determined by the topicality hierarchy,¹⁰ i.e. the topicality hierarchy determines which argument is spelled out as a proclitic, and which argument is encoded only with a verbal agreement suffix (Valentine, 2001, p. 269).

In any independent order sentence,¹¹ a second person argument will always be

¹⁰This refers only to the linear order of argument marking on verbs. In the case of full noun phrases, word order seems to have more to do with pragmatic factors such as focus, or new versus given information (Valentine, 2001, p. 951).

¹¹Ojibwe has a second verbal paradigm, known as the conjunct order, used mostly in dependent clauses. It does not use proclitics, but marks all agreement with suffixes (Bloomfield 1957, pp 51-59; Rizzi 1978; Valentine 2001, p. 944 and Lochbihler 2012, pp 83-91 for Ojibwe, Cook 2008 for

spelled out as a proclitic, and any other argument will be spelled out as a verbal suffix, the theme sign (Bloomfield 1957, p. 25; Valentine 2001, p. 270). If no second person arguments are present, then a first person will be spelled out as a proclitic, and any third person argument will be spelled out as a suffix. A third person argument will be spelled out as a proclitic only in the case where there are neither first nor second person arguments (Valentine, 2001, p. 269). This is demonstrated in Example (19).

- (19) (Ojibwe)
- | | |
|---|---|
| <p>a. <i>Nwaabmaa.</i></p> <p>ni- waab -am -aa</p> <p>1- see -VTA -1>3</p> <p>“I see him/her.”</p> | <p>b. <i>Nwaabmig.</i></p> <p>ni- waab -am -igw</p> <p>1- see -VTA -3>1</p> <p>“He/she sees me.”</p> <p style="text-align: right;">(Valentine, 2001, p. 287)</p> |
|---|---|

In both sentences of Example (19), the proclitic *ni-* indicates only that one of the arguments is first person. It is the suffix which marks both the person of the second argument, and the grammatical functions of both arguments, i.e. which is the Agent, and which is the Theme.¹² In Example (19), (19a) is direct, indicating the Agent is higher on the hierarchy (thus, the Agent is first person), and (19b) is inverse, indicating the Theme is higher on the hierarchy (thus, the Agent is third person).

The two theme signs demonstrated in Example (19) constitute the non-local set, that is to say, the set of theme signs used when one of the arguments is third person. These two theme signs, in combination with one of the three proclitics shown in Table 2.2 and the obviation marker (discussed further in § 2.3.3), derives all verbal

Plains Cree, Bruening 2001 for Western Naskapi). Discussion of the conjunct order is beyond the scope of this thesis.

¹²In this section, I refer specifically to Agents and Themes for simplicity; however, this holds for monotransitive sentences only. As noted in Section 2.2.3, for ditransitives, it is the Agent and the Goal which are spelled out with verbal agreement morphology instead.

agreement where both arguments are singular, and at least one argument is a third person. The local theme signs, i.e. those used when both arguments are speech act participants, are discussed next in § 2.3.2.

	1st	2nd	3rd
Proclitic	ni-	gi-	o-

Table 2.2: Independent Order Agreement Pronominal Proclitics (adapted from Valentine 2001, p. 269)

Plural agreement is achieved by adding additional suffixes (Valentine, 2001, p. 287). Plural agreement is complex, showing different patterns to the singular agreement discussed here. Therefore, plural agreement is beyond the scope of this thesis, and must be left for future research.

2.3.2 Local Theme Signs

The local theme signs are those used when both the Agent and the Theme are first and second persons, i.e. the Agent and Theme are both speech act participants. As discussed in the previous section, the non-local theme signs appear when at least one of the arguments, either the subject, or the object, is third person. Example (20) shows the use of the local theme signs.

- (20) (Ojibwe)
- | | |
|--|---|
| <p>a. <i>Gwaabam.</i></p> <p>gi- waab -am -i</p> <p>2- see -VTA -2>1</p> <p>“You(SG) see me.”</p> | <p>b. <i>Gwaabmin.</i></p> <p>gi- waab -am -in</p> <p>2- see -VTA -1>2</p> <p>“I see you(SG).”</p> <p style="text-align: right;">(Valentine, 2001, p. 270)</p> |
|--|---|

Once again, we see that the second person argument always appears as a clitic at the beginning of the verb, as second persons are highest on the topicality hierarchy.

The usage of the local direct and inverse theme signs indicates that the other argument is first person rather than third person. The local direct theme sign *-i* tells us that the second person argument is the Agent, and the first person argument is the Theme. The local inverse theme sign *-in* tells us that the second person argument is the Theme, and the first person argument is the Agent.

Table 2.3 shows the full set of theme signs. Along with the three proclitics given previously in Table 2.2, and the obviation marker, discussed next in § 2.3.3, every licit set of two singular animate arguments can be formed.

	Direct	Inverse
Local	-i	-in
Non-local	-aa	-igw

Table 2.3: Independent Order Agreement Theme Signs (adapted from Valentine 2001, p. 270)

2.3.3 Obviation

In the direct/inverse system of Ojibwe, no two arguments can be in the same place on the topicality hierarchy, otherwise, there would be no way to indicate which argument is the subject, and which argument is the object. This poses a problem for the cases in which a sentence contains two third person animate arguments. To solve this problem, Ojibwe makes use of obviation, sometimes referred to in the literature as the fourth person, as in, for example, Oxford (2013).

When two (or more) third person arguments show up in the same clause, one argument will be proximate (unmarked), and all of the other arguments will be marked obviative. While obviation is needed in order to distinguish between two third persons for the purpose of direct/inverse marking, the choice of which argument(s) to make obviative is discourse-driven. An obviative third person is less prominent or less salient to the discourse than a proximate third person. For example, in a story about John’s trip to the store where he met Mary and Tom, John, as the main

participant of the story, would be proximate (unmarked), and Mary and Tom would both be marked obviative.

Examples including the obviative suffix are given below in (21). Because obviation only shows up in sentences with two third persons, obviative marking will only appear with the non-local theme signs. Example (21a) uses the non-local direct theme sign, indicating that the obviation marker is associated with the object. In this case, the Agent is a more salient third person argument than the Theme. In contrast, the non-local inverse theme sign is used in Example (21b). This indicates that the obviation marker is associated with the subject, and the Theme is more salient than the Agent.

- (21) (Ojibwe)
- | | |
|---|---|
| <p>a. <i>Wwaabmaan.</i></p> <p>o- waab -am -aa -an</p> <p>3- see -VTA -3>3' -3'</p> <p>“He/she sees him/her(OBV).”</p> | <p>b. <i>Wwaabmigoon.</i></p> <p>o- waab -am -igw -an</p> <p>3- see -VTA -3' >3 -3'</p> <p>“He/she(OBV) sees him/her.”</p> <p style="text-align: right;">(Valentine, 2001, p. 287)</p> |
|---|---|

Obviation is particularly interesting, as previously mentioned, because it involves the intersection of discourse and syntactic factors. The grammar requires that, in any sentence with two or more third person arguments, only one argument may be proximate; however, the choice of which arguments to mark as obviative is based on discourse factors. Generally, the argument that is the most salient will be marked proximate. Rhodes (1990) gives a descriptive account of the constructions in which obviation may appear in Ojibwe. For other accounts of obviation, including comparisons of obviation in Algonquian with phenomena in other languages, see Dahlstrom (1986); Dryer (1992); Aissen (1997); Kiparsky (2002); Manyakina (2012), among others.

2.3.4 Inanimate Subjects

There is another set of transitive animate verb inflections which I will examine in this thesis, that contain inanimate subjects and animate objects. Valentine (2001) gives these inflections along with the rest of the VTA paradigm.

	1 SG	2 SG	3/3' SG
0 SG	ni- -igw -n	g- -igw -n	o- -igw -n

Table 2.4: Inanimate Subjects in the VTA Paradigm (adapted from Valentine 2001, p. 287)

Valentine also provides one example inanimate subject sentence.

(22) (Ojibwe)

Wwaabmigon.

o- waab -am -igw -n

3- see -VTA -0>3 -0

“It sees him/her.

(Valentine, 2001, p. 270)

An example of a VTA with an inanimate subject and animate object in the related language Passamaquoddy appears in Bruening (2005), which I have included below.

(23) (Passamaquoddy)

kenuk olu 't-ol-sonuw-akon anqoc (')-nokol-ok-un

however Emph 3-thus-strong-Nom sometimes 3-leave.TA-Inv-N¹⁴

“...but his strength would sometimes leave him.”

(Bruening, 2005, p. 5)

As previously mentioned in § 2.2.1, and discussed in Valentine (2001, p. 426), Ojibwe grammar requires at least one argument of any transitive sentence to be

¹⁴According to Bruening (2005), the morpheme glossed “N” in this sentence is used for a number of things, including inanimate objects.

animate. Furthermore, there appears to be a strong preference for the subject to be the animate argument. I have not found any further examples making use of this paradigm, and more research is needed to determine the extent to which these forms are still in use in the language.

The set of inanimate subject inflections is interesting because they contain a morpheme, *-n*, to indicate inanimacy that also shows up in VTI and VII paradigms. In the VTA and VII forms, it is used with inanimate subjects, but in VTIs, it is used with inanimate objects. This *-n* morpheme appears to indicate only that one of the arguments is inanimate, but not which argument is the inanimate one. In fact, this same suffix *-n* also even marks animate third persons in some VAI+O paradigms. For simplicity, I refer to this suffix as an inanimacy suffix, because it is used most often to indicate an inanimate third person argument.

2.3.5 Theme Signs as Portmanteau Morphemes

In this section, I provide evidence from the plural agreement suffixes to support the idea that the theme signs are portmanteau morphemes. It is this portmanteau morphology that lets the theme signs agree with both the subject and the object in the syntax (discussed in § 4.3), and introduce presuppositions about two arguments at once in the semantics (discussed in § 5.2).

Table 2.5 lays out all the possible combinations of proclitics and theme signs in the independent order singular paradigm, where the rows indicate the person of the subject, and the columns indicate the person of the object.

There is ongoing debate in the theoretical literature as to the status of theme signs. Oxford (2013) argues that all of the theme signs, except the non-local inverse, are actually object agreement. He argues, based on data from archaic Cree, that the inverse theme sign occupies a different head than the other theme signs. On the other hand, Fry (2015a) explains that characterising the theme signs as object

	1 SG	2 SG	3 SG	3' SG
1 SG		gi- -in	ni- -aa	
2 SG	gi- -i		gi- -aa	
3 SG	ni- -igw	gi- -igw		o- -aa -an
3' SG			o- -igw -an	
0 SG	ni- igw	gi- -igw	o- -igw	

Table 2.5: Independent Order Singular Agreement (adapted from Valentine 2001, p. 287)

agreement may work descriptively, but it is a theoretically awkward supposition. He argues that Ojibwe agreement morphology is composed of portmanteau morphemes.

Data from the plural agreement suffixes support the notion that Ojibwe agreement morphology is composed of portmanteau morphemes. This is demonstrated in Table 2.6.

	Indicative	Preterit	Dubitative
1PL co-occurring with 2SG	-min	-minaaban	-minaadig
1PL co-occurring with 2PL	-min	-minaaban	-minaadig
1PL co-occurring with 3SG	-naan	-minaaban	-minaadig
1PL co-occurring with 3PL	-naanig	-minaabaniig	-minaadigenag
2PL co-occurring with 1SG	-im	-imwaaban	-imwaadig
2PL co-occurring with 1PL	-imin	-iminaaban	iminaadig
2PL co-occurring with 3SG	-waa	-waaban	-waadig
2PL co-occurring with 3PL	-waag	-waabaniig	-waadigenag

Table 2.6: Combinations of Agreement Suffixes Containing 1st or 2nd Person Plural Forms (preterite dubative forms not included), adapted from Valentine (2001)

This table shows that 1st and 2nd person plural forms vary depending on the form of both arguments. That is to say, a 1st person plural co-occurring with a 2nd person form will be a different morpheme than a 1st person plural co-occurring with a 3rd person form. Likewise, a 2nd person plural co-occurring with a 1st person form is spelled out as a different morpheme than if a 2nd person plural is co-occurring with a 3rd person.

Table 2.6 shows that 1st and 2nd person plural morphemes are both portmanteau morphemes. The person features of both the subject and the object are considered

when choosing the 1st or 2nd person plural form. That is to say, the 1st and 2nd person plural morphemes actually agree with the persons of both arguments.¹⁵

This is supporting evidence for the notion that the theme signs are actually portmanteau morphemes. If portmanteau morphology shows up in one part of the grammar, the plural agreement suffixes, it is not unreasonable to suggest the same pattern will show up in other parts of the grammar, namely, the theme signs.

2.4 Agreement in Other Verb Paradigms

The other verb classes do not appear to be as complex in their agreement morphology. AI and II verbs only have to agree with one argument, the subject, so the topicality hierarchy, and direct/inverse marking, which is based on the subject being higher or lower on a hierarchy than the object, does not apply. TI verbs do mark agreement for both the subject and the object, but the object is always 3rd person inanimate, making the paradigm much simpler than the VTA paradigm (Valentine, 2001, p. 310). I will discuss each of these verb types in the following sections.

2.4.1 VTI Agreement

Like TA verbs, the VTI paradigm must encode two arguments, both a subject, and an object. However, in VTIs, the object is always inanimate, greatly simplifying the paradigm.

As discussed in § 2.2.2, Algonquianists identify VTI verbs as having theme signs. However, while VTA theme signs are clearly a part of agreement morphology (see § 2.3), the VTI theme signs appear to be purely phonological. VTI theme signs carry

¹⁵Third person plurals do not show the same portmanteau morphology; however, third person plural usually shows up on the outer agreement suffix, in complementary distribution with the third person obviative (Valentine, 2001, p. 287). There is debate in the literature as to whether this outer suffix should be treated as true agreement, or as a clitic (on the debate of clitic doubling vs. agreement see Preminger 2009a; Nevins 2011; Kramer 2014).

no syntactic, nor semantic information, and are phonologically conditioned.

VTIS have two other pieces of agreement morphology, the pronominal proclitic that also shows up on VTAs, and an inanimate suffix. Agreement morphology is indicated by boldface in the following example.

(24) (Ojibwe)

- | | |
|--|---|
| <p>a. <i>Nwaabndaan.</i></p> <p>ni- waab -and.am -n</p> <p>1- see -VTI.∅ -0</p> <p>“I see it.”</p> | <p>c. <i>Wwaabndaan.</i></p> <p>o- waab -and.am -n</p> <p>3- see -VTI.∅ -0</p> <p>“He/she sees it.”</p> |
| <p>b. <i>Gwaabndaan.</i></p> <p>gi- waab -and.am -n</p> <p>2- see -VTI.∅ -0</p> <p>“You see it.”</p> | |

(Valentine, 2001, p. 311)

As can be seen here, the subject is spelled out by the prefix, and the inanimate object is shown using the inanimate suffix *-n*. This same inanimate suffix, *-n*, shows up with VTAs (§ 2.3.4), where it indicates the inanimacy of the subject.

The VTI paradigms in Valentine (2001, p. 311) appear to include a form for a third person obviative subject; however, this paradigm is incomplete in the independent order with only this one form given.

(25) (Ojibwe)

Waabndamni.

waab -and.am **-ini**

see -VTI **-3'**

“He/she(OBV) sees it.

(Valentine, 2001, p. 311)

It is difficult to parse what is happening in this case, as it is unclear whether there is a single suffix, or two (one for the inanimate, and one for the obviative). For the rest of the paradigm, this sort of information can be gleaned from the placement of negative, preterite, or plural suffixes, that are not extant in this instance, given the incomplete paradigm.

2.4.2 VII Agreement

The third, and final place where the inanimate suffix appears is in the VII paradigm. VIIs are intransitive verbs that have a single inanimate argument. VIIs are notable, also, for being the only paradigm that includes inanimate obviatives, a phenomenon which is otherwise impossible in the language.

- (26) (Ojibwe)
- | | |
|--|--|
| <p>a. <i>Mchaa.</i></p> <p>michi -aa -∅</p> <p>large -be.VII -0.SG</p> <p>“It is large.”</p> | <p>b. <i>Mchaani.</i></p> <p>michi -aa -ini</p> <p>large -be.VII -0'.SG</p> <p>“It(OBV is large.”</p> <p style="text-align: right;">(Valentine, 2001, p. 256)</p> |
|--|--|

Example (26a) does not appear to contain any overt agreement morphology. In fact, this is a null variant of the *-n* inanimate morpheme we saw previously (§ 2.3.4 & § 2.4.1). This suffix shows up as *-oon* with the negative morpheme. If, in fact, there was no inanimate suffix at all in the singular proximate form, we would also expect there to be no suffix present in the negative paradigm. As Example (27) shows, this is not the case; a variant of the inanimate suffix is present once the negative morpheme is added.

(27) (Ojibwe)

Mchaasnoon.

michi -aa -siin -oon

large -be.VII -NEG -0.SG

“It is large.”

(Valentine, 2001, p. 258)

2.4.3 VAI Agreement

The final relevant verb paradigm is that of VAIs, intransitive verbs with a single animate argument. AI verbs are the simplest paradigm, having only a pronominal proclitic, and obviative suffix, as demonstrated in the following example.

(28) (Ojibwe)

a. *Nboodwe.*

ni- bood -we

1- make.fire -VAI

“I make fire.”

c. *Boodwe.*

bood -we -∅

make.fire -VAI -3.SG

“He/she makes fire.”

b. *Gboodwe.*

gi- bood -we

2- make.fire -VAI

“You(SG) make fire.”

d. *Boodwewan.*

bood -we -wan

make.fire -VAI -3'

“He/she(OBV) makes fire.”

(Valentine, 2001, p. 232)

This paradigm shows no evidence for any kind of theme sign agreement morpheme, presumably because the verb is agreeing with only one argument.

There is, however, a more complex version of this paradigm, the AI+O verbal paradigm. AI+O verbs have animate intransitive morphology, but add an extra suffix in some paradigms to indicate an optional object. The VAI+O paradigm is shown in Examples (29), (30), and (31).

(29) (Ojibwe)

a. *Nmiigwenan.*

ni- miig -we -nan

1- give -VAI -3.SG

“I give him/her away.”

b. *Nmiigwen.*

ni- miig -we -n

1- give -VAI -0.SG

“I give it away.”

(Valentine, 2001, p. 244)

(30) (Ojibwe)

a. *Gmiigwenan.*

gi- miig -we -nan

2- give -VAI -3.SG

“You give him/her away.”

b. *Gmiigwen.*

gi- miig -we -n

2- give -VAI -0.SG

“You give it away.”

(Valentine, 2001, p. 244)

(31) (Ojibwe)

a. *Wmiigwenan.*

o- miig -we -nan

3- give -VAI -3'

“He/she gives him/her(*obv*)
away.”

b. *Wmiigwen.*

o- miig -we -n

3- give -VAI -0.SG

“He gives it away.”

(Valentine, 2001, p. 244)

2.5 Conclusion

In conclusion, this chapter has examined the morphology of common Ojibwe verb types and verbal agreement. A syntactic and semantic analysis of this data will be given in the following chapters.

I started by exploring the structure of verbal stems in Ojibwe. The Ojibwe verb is composed of at least two morphemes, which Algonquianists refer to as an initial and a final (Bloomfield 1957, p. 12; Valentine 2001, p. 333). The initial is a verbal root

to which one or more finals may be added. The verb final specifies the transitivity of the verb, the gender of one of the verb's arguments (the argument so specified depends on whether it is a transitive or intransitive verb), and usually contributes some semantic content to the verb (Valentine, 2001, p. 333). The structure of verbs was discussed in § 2.2, specifically intransitive verb types in § 2.2.1, transitive verb types in § 2.2.2, and ditransitive verb types in § 2.2.3.

Next, I described the Ojibwe verbal agreement morphology for transitive animate verbs in § 2.3. This agreement morphology uses a direct/inverse system. In such a system, the order in which participants appear in the sentence is not based on argument structure. Rather, the linear order of arguments is based on some salient features of the participants, like person, gender, or animacy, arranged in a hierarchy. The grammar then indicates whether the clause is direct, with the subject ranking higher on the hierarchy, or whether the clause is inverse, with the object ranking higher on the hierarchy (Payne, 1997, p. 209).

The last topic this chapter covered, in § 2.4, is the agreement morphology of the other three verb types. Traditionally, Algonquianists break verbs down into four types based on their morphology: transitive animate (VTA), transitive inanimate (VTI), animate intransitive (VAI), and inanimate intransitive (VII). The category of each verb is determined by the verb final (Bloomfield 1957, p. 33; Valentine 2001, p. 132). The four classes denote four different agreement morphology paradigms. The previous sections had covered agreement with transitive animate verbs, which are the most complex. The other three agreement paradigms do not show the same topicality hierarchy, or direct/inverse morphology, as agreement is with one argument only.¹⁶ Although they appear to be simpler than VTA verbs, there are still interesting phenomena happening in the other verbal paradigms that must be

¹⁶While transitive inanimate verbs do agree with two arguments, the object is the same in all members of this paradigms, so agreement only varies with the features of the subject, rather than the features of both, as happens with transitive animate verbs.

considered in the analysis of agreement morphology.

In the next chapter, I will focus on the syntax and semantics of the vP domain, and how Ojibwe verbal morphology maps onto syntactic structure. The first half of Chapter 3 (§ 3.2) examines the syntactic structure of vP , giving syntactic templates for different kinds of verbs. I will show that Ojibwe verbs containing multiple verb finals have multiple vPs , where each verb final maps onto its own v head. In Section 3.3, I move on to discuss the semantics of the vP domain. Section 3.3.1 will investigate the semantics of roots. In Section 3.3.2, I will examine the semantics of verb finals and give denotations for a representative sample.

Chapter 3

The Syntax & Semantics of *vP*

3.1 Introduction

In this chapter, I examine the composition of *vP*. This discussion forms the answer to my first research question. What are the syntactic and semantic consequences of multiple *vP* structures?

I start with a discussion of the syntax of *vP* in § 3.2. I introduce some relevant theoretical background in § 3.2.1. I explore the syntactic structures of different verb types and give templates for different *vP* structures. Section 3.2.2 examines unaccusative verbs, which are one-argument predicates. The next sections look at two-argument predicates, namely unergative (§ 3.2.3) and simple transitive (§ 3.2.5) *vPs*. Finally, I give templates for structures which I argue contain more than one *vP*. Following a Distributed Morphology account (Halle & Marantz, 1993; Embick & Noyer, 2007), this structure must be built in the syntax. At all stages in the derivation, if the verb stem has at least one *vP*, it may be used as a fully-formed verb. These multiple *vP* structures include ditransitives (§ 3.2.6), transitivisers and detransitivisers (§ 3.2.7), and the unique verb final *-magad* which changes VAI to VII verbs (§ 3.2.8). Ditransitives are further broken down into applicatives (§ 3.2.6.1),

and causatives (§ 3.2.6.2), each of which have their own syntactic template.

In the second half of the chapter, I discuss the semantics of categorising *v* in Ojibwe, and provide sample denotations for different types of *v*. Section 3.3.1 looks at the semantics of verb roots. Finally, Section 3.3.2 focuses on the semantics of verb finals. Denotations are given for a representative selection of verb finals: intransitive in § 3.3.2.1, transitive in § 3.3.2.2, causative in § 3.3.2.3, and applicative in § 3.3.2.4.

3.2 The Syntax of *v*P

The following sections give analyses and sample derivations for intransitive, transitive, and ditransitive verbal structures in the *v* domain.

3.2.1 Theoretical Background

As I will discuss further in § 5.1.1, I follow Kratzer (1996) and project the external argument as the specifier of a Voice head above *v*. The Voice head will be especially relevant in the discussion of verbal agreement morphology.

I am not the first to make use of Kratzer’s (1996) Voice head with an Algonquian language. Previously, Oxford (2013) has used Voice to explain agreement morphology in Proto-Algonquian, the reconstructed ancestor of the Algonquian language family. For Oxford, Voice hosts an agreement probe, and introduces the external argument in spec-Voice. Previous to Oxford’s (2013) work, Hirose (2001) analyses Plains Cree as having more than one *v*P based on a modification of the Theta Criterion. Hirose’s (2001) highest *v* is functionally equivalent to Kratzer’s (1996) Voice.

Further, I would like to suggest that the internal argument is best represented as a specifier of *v* rather than as the complement of V, just as the external argument is the specifier of Voice. As shown in § 2.2, the verb final, located on *v*, is the locus of

transitivity in Ojibwe, such that the presence (or absence) of an internal argument is directly linked to the form of the verb final in *v*. Situating the internal argument as the specifier of *v* makes this link more transparent than if the internal argument is left in its traditional place as the complement of *V*.

Alexiadou (2014) and van Craenenbroeck (2014) suggest, in their responses to Harley (2014), that at least some roots cannot take complements. If correct, this means the object of those verbs must be the specifier of *v*, rather than the complement of *V*.

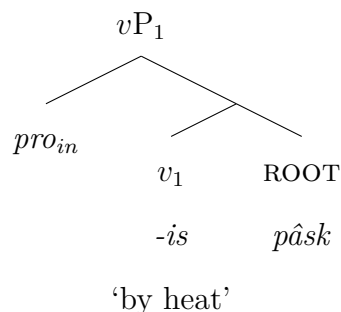
Having the internal argument in spec-*vP* is also more in line with a Distributed Morphology account of Ojibwe. In Distributed Morphology, every morpheme must be a terminal node in the structure (though there may be other terminal nodes present that contain null morphemes). Further, a root is assumed to have no category (i.e. it is neither a noun, verb, adjective, &c.). A root receives its category from combining with a category-defining head such as *n*, *v*, *a*, &c. (Halle & Marantz, 1993; Embick & Noyer, 2007). Thus, I take *v* to be a verbalising head as per Hale & Keyser (1993) and Marantz (1997).

Under my account, the verb initial is the acategorical root of Distributed Morphology. It is the verb final which defines the type of verb, e.g. whether it will be a transitive or intransitive verb. A number of authors have equated the verb final in various Algonquian languages with *v* (Hirose, 2001; Brittain, 2003; Mathieu, 2006; Ritter & Rosen, 2010; Slavin, 2012; Oxford, 2013; Mathieu, 2014). Thus, the initial (root) combines with the verb final, which is *v*, and receives its category from said final. The aforementioned process makes this initial+final complex into a verb that may now combine with arguments, starting with the internal argument in the specifier of *vP*.

This proposal follows Hirose's (2001) proposal for Plains Cree, and Oxford's (2013) proposal for Proto-Algonquian, as shown in Examples (32) and (33). In both

cases, the internal argument is introduced in the specifier of v .

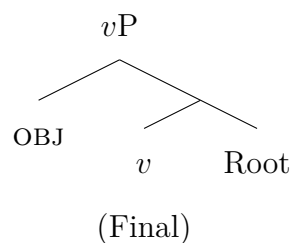
(32) (Plains Cree)



(Hirose, 2001, p. 93)

In this example, v_1 ($-is$) is the verb final, and the object is represented by pro_{in} .

(33) (Proto-Algonquian)



(Oxford, 2013, p. 99)

As shown in Example (33), Oxford also derives the verb final as v and the object in spec- v .

I will discuss the syntax and semantics of agreement in detail in the following chapters. However, in brief, I follow Oxford in assuming that in both the direct and the inverse, the internal argument moves up to spec-Voice with the external argument, and agreement proceeds from there. Multiple specifiers are equi-distant, as they are sisters of their head, as in Chomsky (2001). The movement of the object to a specifier of VoiceP allows the possibility for agreement to happen equally with both the subject and the object. Unlike earlier proposals (e.g. Bruening (2005), where movement only occurred in the inverse, this movement of the object to spec-

VoiceP occurs in both the direct and the inverse. The theme signs are all portman-teau morphemes, that are the spell-out of agreement with both the subject and the object via Multiple Agree (Hiraiwa, 2001). The theme signs appear on a head above VoiceP, which I label as Agreement (Agr). Voice, itself, is a null morpheme with the sole purpose of introducing the Agent. On my view, theme signs do not introduce an Agent; therefore, they are not spelled out as Voice heads.

In the following sections, I will lay out my templates for the syntactic derivation of the various types of Ojibwe verbs.

3.2.2 Unaccusative Verbs

As discussed in § 2.2.1, both AI and II verbs can be unaccusative. Unaccusative verbs only have an internal argument, and do not an external argument. The internal argument is projected in spec-*v*, but a VoiceP is not projected.



Unaccusatives have the simplest structure, containing only one argument both on the surface, and underlyingly.

Example (35) shows the derivation for a VII unaccusative verb.

(35) Ojibwe

a. *Mchaanoon.*

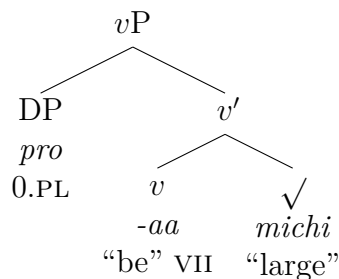
michi -aa -noon

large -be.VII -0.PL

“They are large.”

(Valentine, 2001, p. 256)

b.



As can be seen in Example (36), VAI unaccusative verbs are derived in exactly the same way as VII unaccusative verbs.

(36)

(Ojibwe)

a. *Dgoshnoog.*

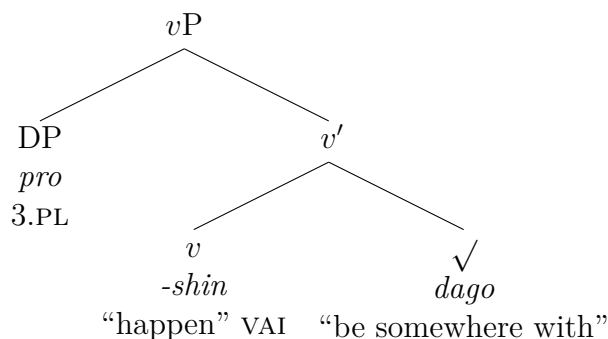
dago -shin -wag

be.somewhere.with -happen.VAI -3.PL

“They arrive.”

(Valentine, 2001, p. 233)

b.



The verb final on *v* comes with an animacy restriction, such that only an inanimate argument can be the specifier of a VII final *v*, and only an animate argument can be the specifier of a VAI final *v*.

Because Voice is not projected in unaccusatives, the internal argument cannot move up to a specifier of Voice. However, there is also no external argument to block agreement of the internal argument with Agr.¹ Agreement will thus proceed normally.

¹The mechanics of agreement and AgrP will be explained in more detail in Chapter 4.

3.2.3 Unergative Verbs

A number of arguments have been made that unergatives are underlyingly transitive (e.g. Hale & Keyser, 1993). An unergative sentence may include the presence of an optional direct object, as in the sentences in Example (37).

(37) (English)

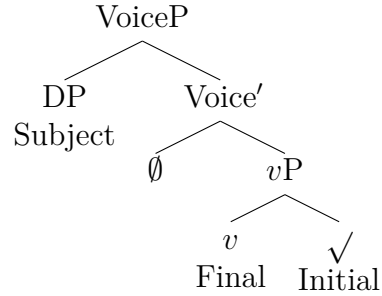
- a. He danced.
- b. He danced **a jig**.
- c. She ate.
- d. She ate **a muffin**.

This is possible with unergatives but not with unaccusatives, because in unaccusatives, the apparent subject is underlyingly an object, blocking the insertion of a new direct object. However, in unergatives, the subject is a subject underlyingly, and there is space in the derivation to add a direct object in the internal argument position (Carnie, 2013, p. 344).

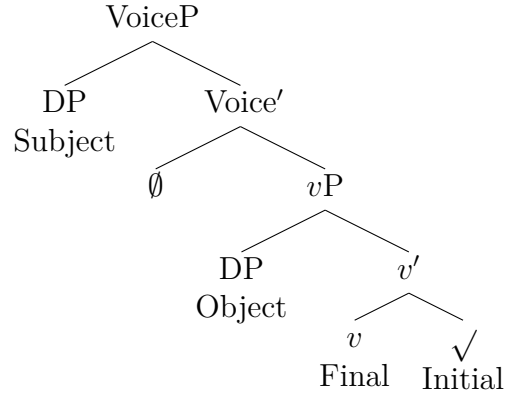
In Ojibwe, only AI verbs can be unergative, as discussed in § 2.2.1. Ojibwe disallows transitive sentences where both the subject and object are inanimate (Valentine, 2001, p.426), and also disprefers inanimate subjects in general. This has resulted in II verbs all being unaccusative, as far as I can ascertain from the Ojibwe data available to me. AI verbs, however, have the option of being either unaccusative or unergative.

For unergatives, I propose the following transitive verbal structure, shown first without the optional object, and then with the optional object.

(38) a.



b.



In the case of unergative verbs, unlike transitive verbs, the specifier of vP remains unfilled (except in the case of VAI+O verbs, discussed next). The animacy restriction placed on the argument of v by the verb final cannot be left unfulfilled, so it will percolate up the tree to be fulfilled by the specifier of Voice.

(39)

(Ojibwe)

a. *Boodwewag.*

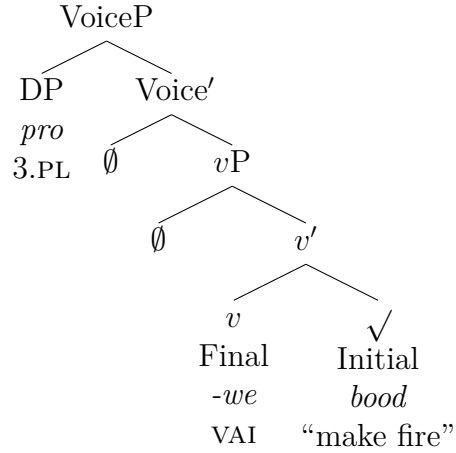
bood -we -wag

make.fire -VAI -3.PL

“They make fire.”

(Valentine, 2001, p. 233)

b.



3.2.4 AI+Object Verbs

As discussed in § 2.2.1.1, there is a set of animate intransitive verbs that may optionally take an object. In those cases, the verb is marked for the gender and number of the object in some paradigms (Bloomfield 1957, p. 33; Valentine 2001, p. 242). These VAI+O verbs are all unergative, as they may optionally take an object, while unaccusative verbs cannot.

(40) (Ojibwe)

a. *Wmiigwenan.*

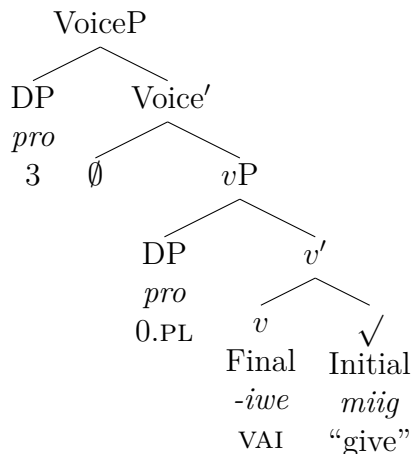
o- miig -iwe -nan

3- give -VAI 0.PL

“He/she gives them away.”

(Valentine, 2001, p. 244)

b.



AI+O verbs are derived like other unergative VAI verbs, with the exception that the internal argument in the specifier of v will be filled. However, a problem arises with the animacy restriction introduced by the verb final. In AI+O verbs, the animacy restriction falls on the subject, as with other unergative verbs; however, an object is present in the specifier of v that could fulfil this restriction instead. This is a problem that requires further research to resolve. It is the case, though, that in all other verb types the verb final restricts the animacy of the argument introduced in its specifier (or in a specifier above it, in the case where v has an empty specifier), leaving AI+O verbs as a specific problem case.

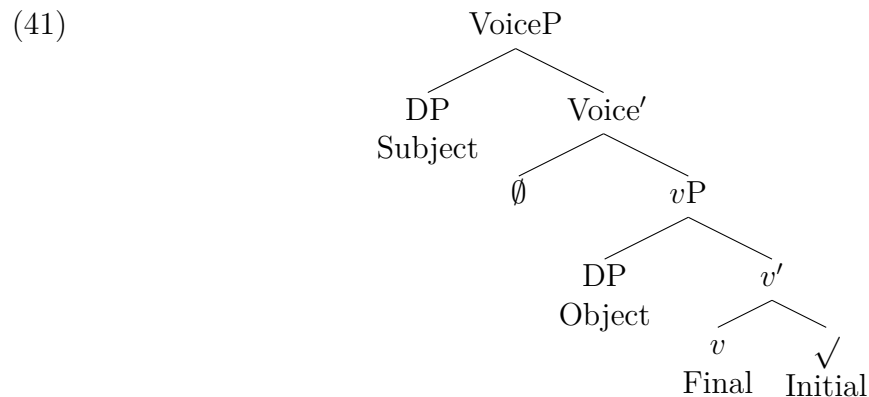
The next section discusses the structure of simple transitive verbs.

3.2.5 Simple Transitive Verbs

Simple transitive verbs, in this case, refer to transitive verbs that have one verb final and two arguments, an external argument in spec-Voice, and an internal argument in spec- v . Verbs of this type include verbs of transportation like “carry”, “drag”, and “haul”. They also include a set of finals relating to the five senses, “look”, “hear”, “smell”, and “taste”. Interestingly Valentine (2001, p. 459) does not include a final for “touch” in this set, but does include the final for “think about”.

These simple transitives have the same syntactic structure as unergative verbs,

except the direct object is not optional (structure template repeated from Example (38b)).



Simple transitives are morphologically different from unergatives, despite having the same underlying syntactic structure. Monotransitives will have either a VTA or VTI final, and corresponding transitive verbal agreement morphology. The verb final determines the animacy of the object, an animate object with a VTA final, and an inanimate object with a VTI final.

Example (42) gives a VTI derivation, and (43) gives a VTA derivation.²

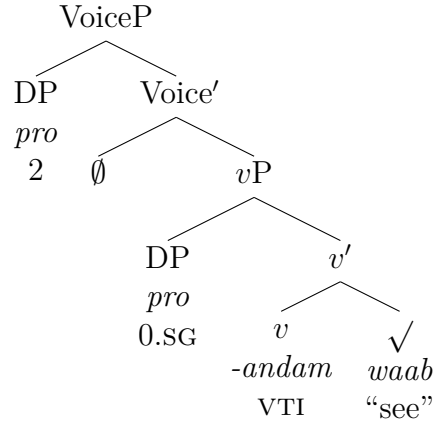
(42) (Ojibwe)

- a. *Gwaabndaan.*
 gi- waab -and.am -n
 2- see -VTI.∅ -0.SG
 “You see it.”

(Valentine, 2001, p. 311)

²The theme sign, *-aa*, is not shown in this tree, as it is spelled out on Agr above VoiceP. This is discussed in detail in the next chapter.

b.



(43)

(Ojibwe)

a. *Gwaabmaa.*

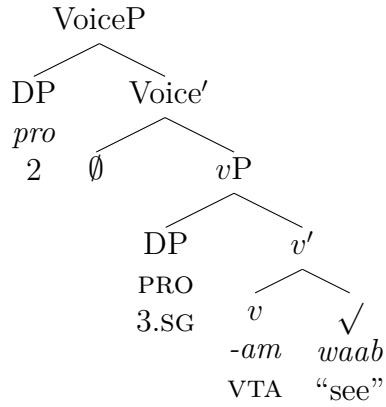
gi- waab -am -aa

2- see -VTA -2>3

“You see him/her.”

(Valentine, 2001, p. 287)

b.



In the next section, I look at ditransitive verbs, and show that they have a structure with multiple *vP* layers.

3.2.6 Ditransitive Verbs

Ditransitive verbs are most often applicatives or causatives. Each of these structures will be discussed in more detail in the following sections.

3.2.6.1 Applicatives

In the Ojibwe applicative construction, the Goal argument is Merged above the Theme. Ditransitive structures with the Goal above the Theme in Algonquian have been argued for by several people (Hirose, 2001; Lochbihler, 2012; Slavin, 2012; Oxford, 2013).

This structure is evident in the agreement morphology of ditransitive verbs. As shown in Section 2.2.3, ditransitives are only found with VTA agreement morphology. This means only one internal argument can be the target of agreement. In the case of Ojibwe, it is the highest internal argument which is the agreement target. With applicatives, the Goal, not the Theme, is the agreement target, suggesting that the Goal appears higher in the derivation, blocking agreement with the Theme. Thus, the Theme remains unindexed on the verb. An example of a ditransitive verb is given in Example (44), repeated from § 2.2.3.

(44) (Ojibwe)

Aw kwe ndazhtamaag nbabgiwayaan.

aw	ikwe	nid-	azhi	-it	-amaw	-igw	ni-
that.DEM.3.SG	woman.AN	1-	make	-cause.VTI	-for.X.VTA	-3>1	1.POSS-
babagiwayaan							
shirt.IN							

“That woman is making me a shirt.”

(Valentine, 2001, p. 700)

Ditransitive verbs have a multiple *vP* structure. A ditransitive in Ojibwe is

formed by adding a second verb final to a verb stem already formed from a root and a transitive final. According to Distributed Morphology, the structure of the simple transitive verb is contained within the structure of the ditransitive (Halle & Marantz, 1993; Embick & Noyer, 2007) which means the transitive verb final is already a part of the syntactic derivation when the ditransitive final is added. While it seems clear that Ojibwe has *vP* recursion, it is equally clear that languages like English do not. Therefore, it may be that there is a *vP* recursion parameter, where cross-linguistically, some languages have multiple-*vP* structures, and others do not.

Hirose (2001) proposes the structure in Example (45) for ditransitive verbs in Plains Cree. For Hirose, ditransitives involve three *vPs*. Hirose's (2001) highest *vP*, in the case of ditransitives *vP*₃, appears to be functionally equivalent to VoiceP in my analysis. The applicative final is spelled out as *v*₂, and *vP*₂ introduces the Goal. Finally, *vP*₁ introduces the Theme, and *v*₁ is the transitive final for the verb from which the ditransitive is derived.

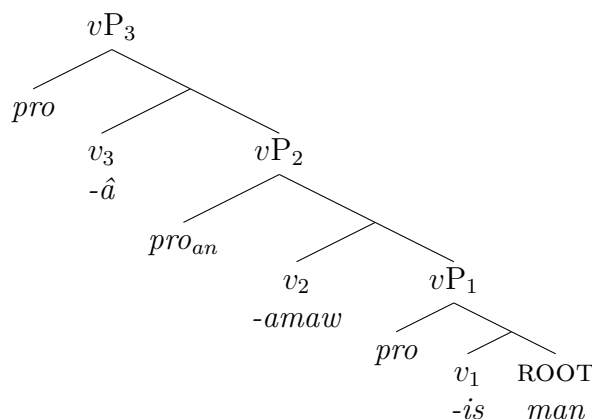
(45) (Plains Cree)

a. *nimanisamawâw*

ni- man -is -amaw -â -w Karen sîsîp -a
 1- cut -by.edge -APPL -A.TH -3 K. duck -OBV
 "I cut a/the duck(s) for Karen."

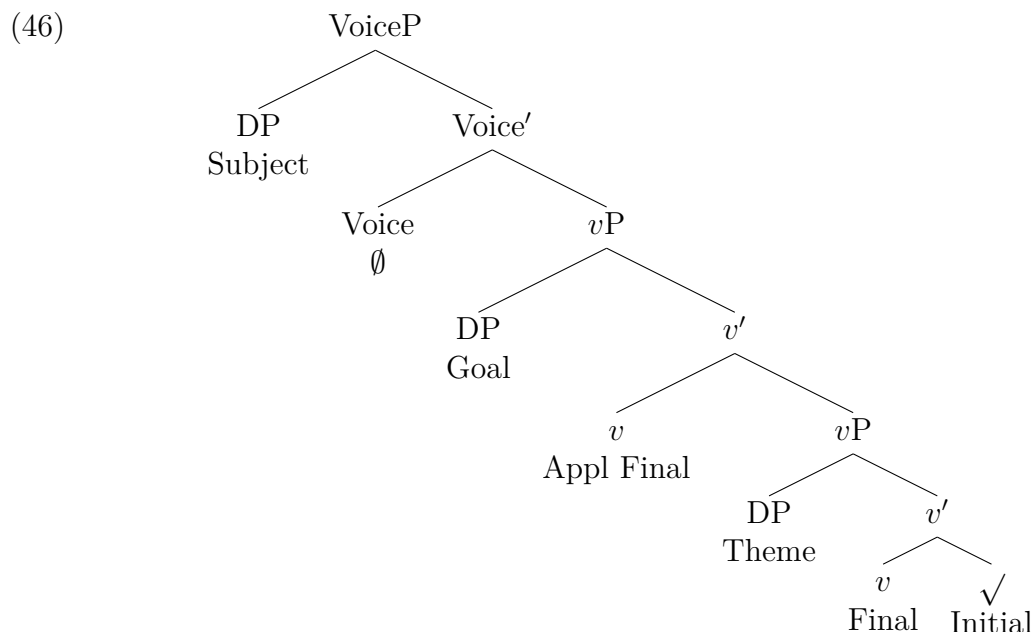
(Hirose, 2001, p. 113)

b.



(Hirose, 2001, p. 113)

The structure I am proposing for applicatives in Ojibwe is very similar to the one that Hirose (2001) proposes for Plains Cree above. My proposed structure is shown in Example (46).



In the following tree, the highest *vP* is an applicative verb final. I have marked it as *vP* to highlight the fact that it is a kind of verb final rather than some other part of morphology, but it could equally be called something like ApplP without materially changing the analysis.

(47) (Ojibwe)

a. *Ndazhtamaag*

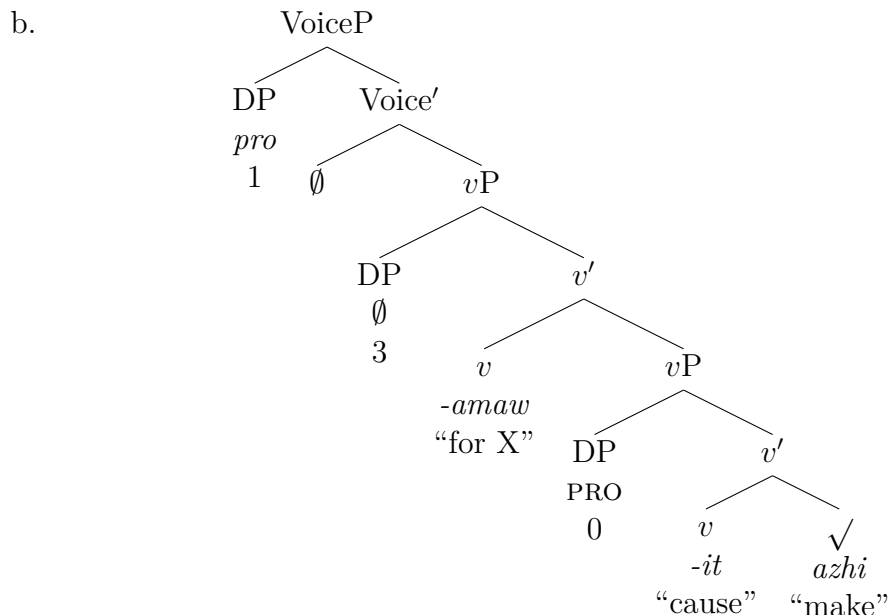
ni- azhi -it -amaw -igw

1- make -cause.VTI -APPL.VTA -3>1

“She is making it for me.”

(adapted from Valentine 2001, p. 700)

²The theme sign, *-igw*, is not shown in this tree, as it is spelled out on Agr above VoiceP. This is discussed in detail in the next chapter.



Example (47) shows the derivation of an applicative ditransitive verb.

3.2.6.2 Causatives

Ditransitive causatives in Ojibwe are structurally quite different from causatives in more familiar languages. Figure 3.1 provides an English example. This example does not separate *v* and Voice into separate heads, as I do for Ojibwe. Unlike English, Ojibwe shows evidence for multiple *v*Ps, as I have discussed, so that in English, the causative is the only *v* present in the tree. In Ojibwe, when a causative is formed from another verb, we see the *v* verb final from the caused predicate, and the causative *v* final stacked on top of it. This is explained in more detail below.

Forming a ditransitive with a causative verb final adds a Causer argument as a new external argument above the Agent (or Theme). A number of causatives that would be bi-clausal in more well-known languages, like English, are derived in Ojibwe by adding a causative verb final to a VTI or VAI+O verb, forming a mono-clausal ditransitive verb (Valentine, 2001, p. 435). In these cases, the Causer is the external argument, and the Agent or Experiencer of the transitive verb is marked as the internal argument. The Theme of the TI or AI+O verb remains unmarked,

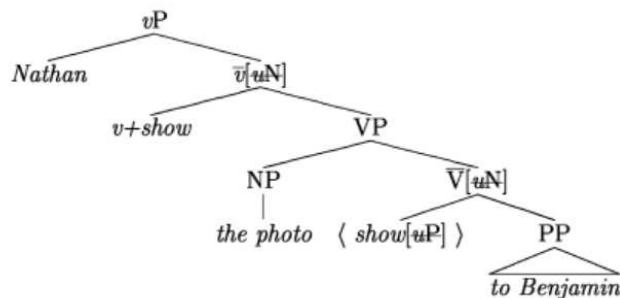


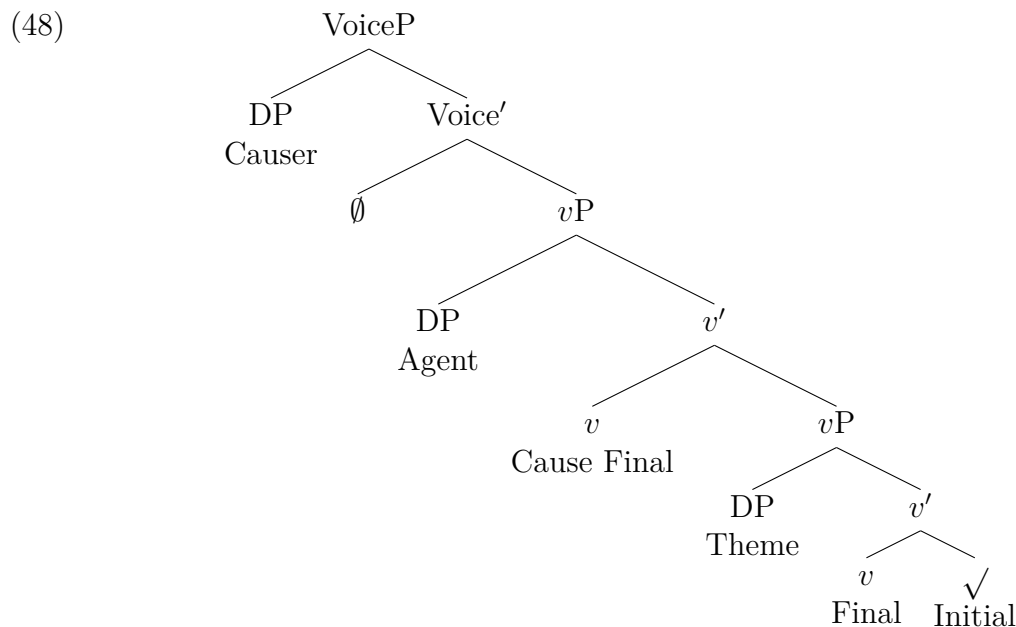
Figure 3.1: Syntactic structure of an English causative (Adger, 2003, p. 107)

just as it is with applicatives.

A causative verb final may form a ditransitive from a transitive verb, but it may equally be used to form a transitive from an intransitive verb. In all cases, the causative final adds a Causer argument. The internal argument, however, may be either the Agent or a Theme of the caused event. In fact, the internal argument marked on the verb is always the Theme of the causing event, whether it is the Agent, or the Theme, of the caused event.

From examining the data available to me, it appears the lowest argument in the tree is always a Theme in Ojibwe, in both transitive and ditransitive verbs. Therefore, if the causative final *-ih* attaches to a root, the argument it inserts will be a Theme. If the causative final attaches above another final, it will insert an Agent of the caused event. This Agent is still the Theme of the causing event. A causative final may form a transitive verb by attaching above a root, or it may form a ditransitive by attaching above a transitive or unergative verb. However, a causative final never attaches to a full initial+final unaccusative verb. It is this fact which dictates whether the same final will introduce either the Theme or the Agent of the causing event in its specifier.

My proposed structure for ditransitive causatives is as follows:



Valentine (2001, p. 435) lists several verbs as being derived from VTI verbs ending with a final and the theme sign *-am*. This is followed by the addition of a link element *-oo* (or possibly *-aw* and the causative VTA final *-ih*. These are given in Table 3.1.

Causative VTA	English Translation
<i>baaknamooh</i>	“get/cause X(AN) to open something”
<i>daapnamooh</i>	“get/cause X(AN) to pick up (something)”
<i>gkendmooh</i>	“let X(AN) know (something)”
<i>mbinmooh</i>	“cause/get X(AN) to lift (something)”
<i>nsidtamoooh</i>	“explain something to X(AN) (by illustrating)”

Table 3.1: Causatives derived from TI verbs (Valentine, 2001, p. 435))

However, Valentine notes that these may actually be VAI stems ending in final *-am*. If that is the case, these would, in fact, be causatives derived from intransitives, meaning they would be transitive causatives rather than ditransitive causatives. Valentine does not give any example sentences using these verbs which would demonstrate how many arguments said verbs take. Without this, I am unable to determine if these are monotransitive, or ditransitive causatives, i.e. whether they conform to the structure I have suggested here. More research is required in this area.

In the next section, I examine other kinds of multiple *vP* structures, namely transitivity and detransitivising verb finals.

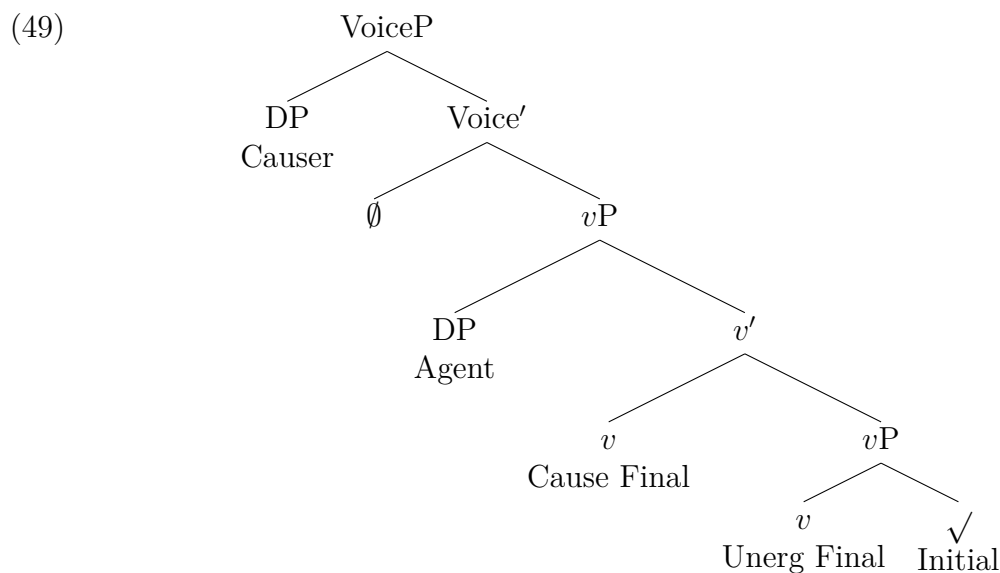
3.2.7 Transitivity & Detransitivisers

Ojibwe also exhibits other multiple *vP* structures making use of a number of transitivity and detransitivising verb finals.

3.2.7.1 Transitivity Verb Finals

Transitivity, as the name suggests, add another argument to make intransitive verbs into transitive verbs. A number of causative finals can do this. That is, while a causative final may be added to a transitive verb to make a ditransitive verb, as discussed in Section 3.2.6.2, such a final may also be added to an intransitive verb to make a transitive verb (Valentine, 2001, p. 433).

My analysis indicates that when a causative final attaches to a full intransitive verb, it will only attach to an unergative intransitive. The following example illustrates this phenomenon.



In this case, the internal argument is not generated in the lower *vP*, as unergatives have a null object.³

The causative *vP* is projected immediately above the unergative *vP*, preventing the unergative *vP* from projecting VoiceP. Derivation proceeds from the causative *vP* as it would in any transitive sentence, with the internal argument generated in spec-*v* and the external argument in spec-Voice. Example (50) gives a sample derivation.⁴

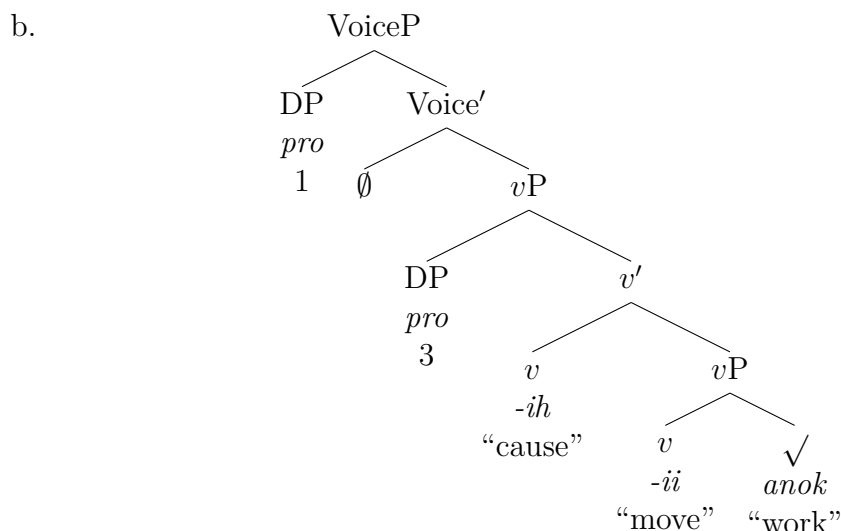
(50) (Ojibwe)

a. ni- anok -ii -ih -aa

1- work -move.VAI -cause.VTA -1>3

“I am getting him/her to work.”

(Valentine, 2001, p. 435)

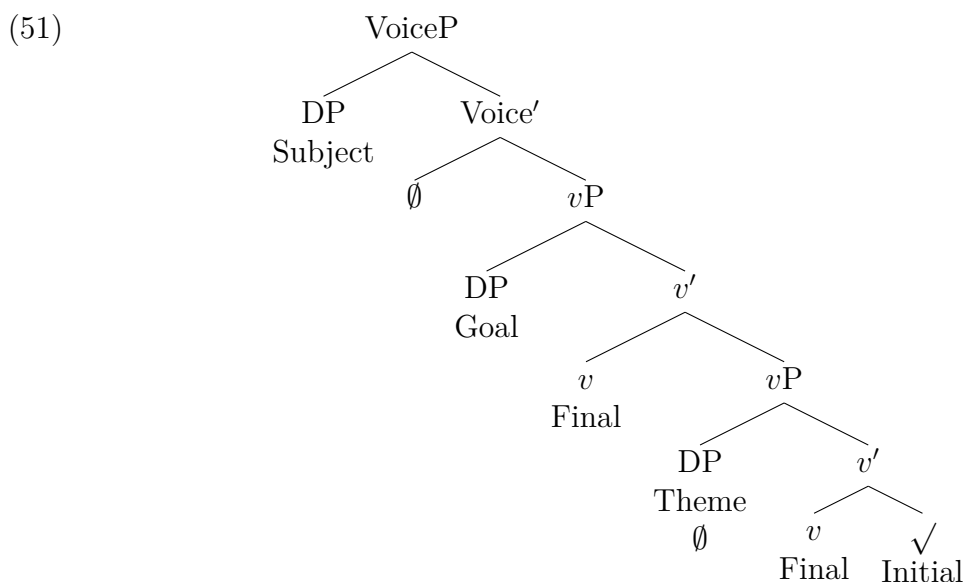


It is also possible to make transitive applicatives from VAI intransitives. In the case of a transitive applicative formed from a VAI stem, and the applicative final

³In the case of VAI+O verbs, the internal argument may optionally not be null, though I do not have any examples of transitives being formed from VAI+O unergative verbs. If such a derivation is possible, I assume the internal argument would move from the specifier of the lowest *vP* to the specifier of the highest *vP*.

⁴The theme sign, *-aa*, is not shown in this tree, as it is spelled out on Agr above VoiceP. This is discussed in detail in the next chapter.

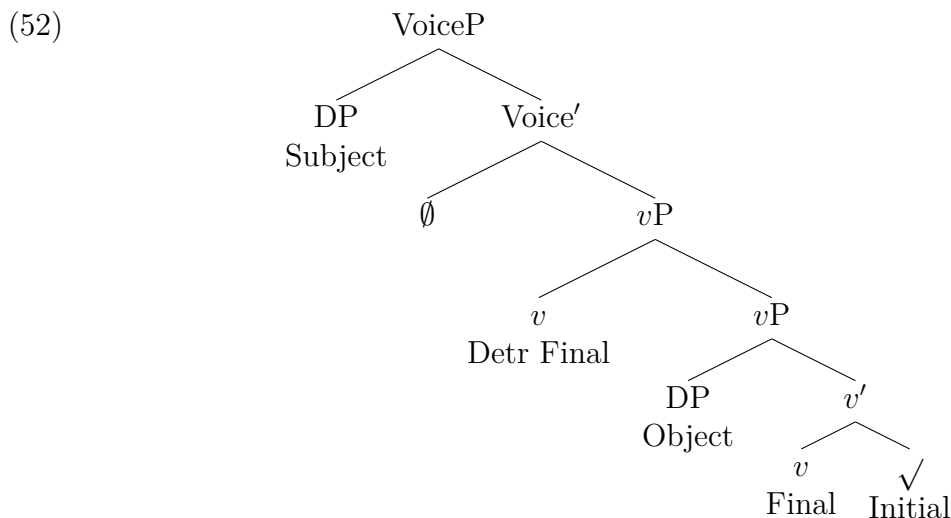
-amaw, an extra *-t* is added between the stem and the final. Valentine (2001, p. 465) describes this as a “dummy VTI final”. Applicatives may also be formed from VAI verb stems ending in *-e* by use of the final *-aw*; in this case, the *-e* is deleted before the applicative final is added (Valentine, 2001, p. 466). Like transitive causatives, transitive applicatives, when derived from a full (initial+final) verb root, are only created from unergative intransitive verbs. Consequently, a ditransitive applicative and a transitive applicative have very similar *vP* structures, with the only difference being that the transitive applicative will have an optional Theme, and the ditransitive will an obligatory one. In both cases, however, agreement with the Theme is not spelled out morphologically.



3.2.7.2 Detransitivising Verb Finals

Along with finals that make intransitive verbs into transitive verbs, there are also some finals that make transitive verbs into intransitive verbs by suppressing the internal argument. This is a particularly productive process in Ojibwe, as only intransitive verbs may be nominalised (Valentine, 2001, p. 403). The result of detransitivisation is an unergative verb with two *vPs*.

I propose the following structure for detransitivised verbs.



The detransitivising final saturates the object. Therefore, there is nothing to move up to the specifier of detransitivising v , nor is there any argument that needs to move up to spec-Voice for the purposes of agreement. This saturation also prevents the object argument as being realised as a DP adjunct, perhaps because it cannot be indexed with a pronominal argument, as that pronominal argument has also been prevented from appearing. This results in agreement only happening with the external argument.⁵

Example (53) gives the derivation of an Ojibwe sentence containing a detransitivised verb.

(53) (Ojibwe)

a. *Nwiindmaage.*

ni- wiindam -aw -ge

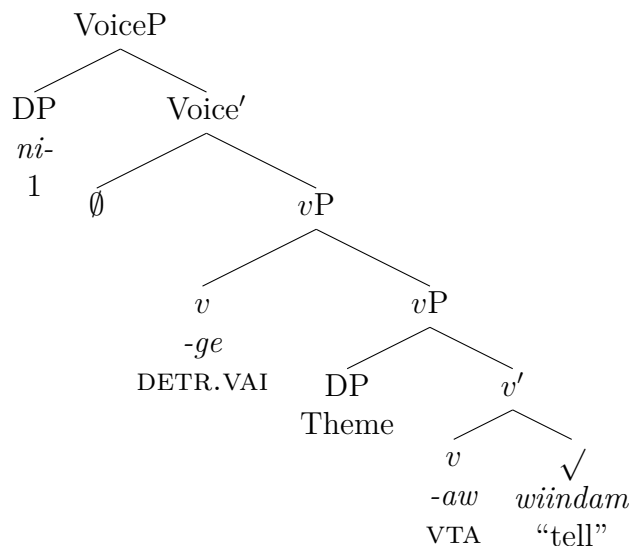
1- tell -VTA -DETR.VAI

“I tell/give a report.”

(Valentine, 2001, p. 40)

⁵My thanks to Will Oxford for offering this solution.

b.



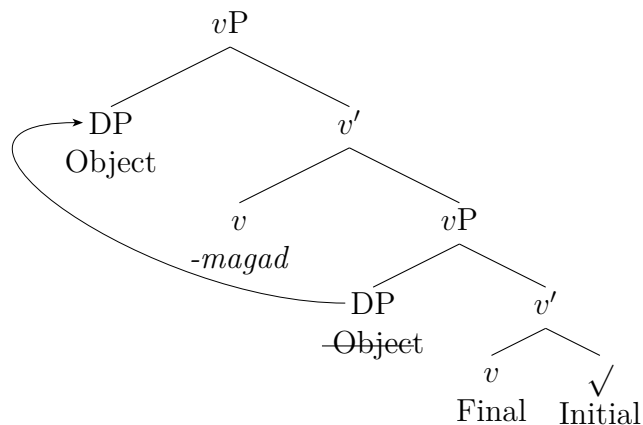
The next section discusses one final multiple *vP* structure, that of verbs ending in the final *-magad*, which turns a VAI into a VII without changing valency of the verb.

3.2.8 VII Final *-magad*

The verb final *-magad* changes AI verbs into II verbs. It does not increase or reduce valency; the number of arguments remains the same (Valentine, 2001, p. 373). Based on semantic tests, all VIIs in my data set appear to be unaccusative.⁶ Thus, it seems that while *-magad* attaches to unergative VAIs, it forms unaccusative VII verbs. *-magad* must, therefore, block the spell-out of VoiceP. A *-magad* verb has the following unaccusative multiple *vP* structure.

⁶Further research and tests are required to confirm that VIIs are all unaccusative. If there are unergative VIIs, this might be a possible Ojibwe test for them, whether they can be combined with *-magad*.

(54)



Interestingly, *-magad* may also be redundantly added to a VII (Valentine, 2001, p. 373). In this instance, as it is not being added to a VAI, it is not changing a VAI into a VII. This redundant *-magad* verb has the same structure as above. An example of a *-magad* verb follows.

(55)

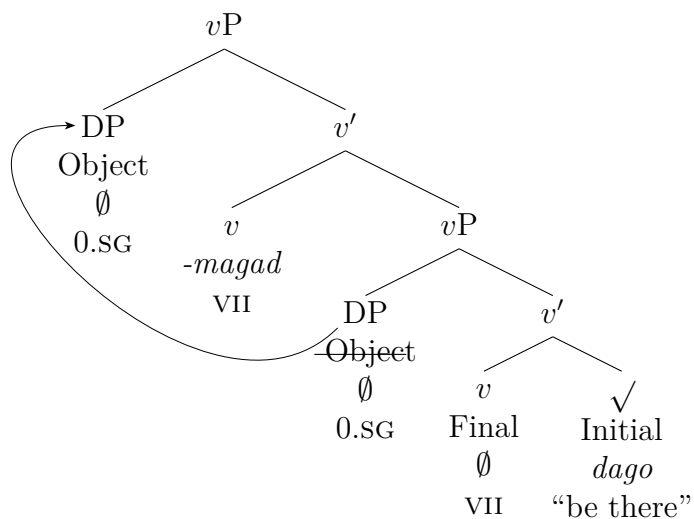
(Ojibwe)

 a. *Dagomagad.*

dago - $\emptyset$ -magad - $\emptyset$
 be.there -VII -VII -0.SG
 “It is over there.”

(Valentine, 2001, p. 715)

b.



The previous sections have demonstrated that two, possibly three verb finals can be stacked atop each other in the tree, but not more than that. There appears to be a limit to the number of verb finals that can be built on to each other in a single clause. The limit may also be a restriction on the number of core arguments to not more than three, i.e. a ditransitive argument structure. More research is needed to ascertain what factor limits *vP* recursion in this language.

Having examined the syntactic structure of the *vP* domain, I now move on to a discussion of the semantics of *vP*.

3.3 The Semantics of *vP*

The denotation of the *vP* will be covered in the following sections. Section 3.3.1 looks at the denotation for roots, and Section 3.3.2 explores the denotation of verb finals.

3.3.1 Denotation of the Root

I follow a Distributed Morphology analysis for Ojibwe. In Distributed Morphology, every word is assumed to start off with an acategorical root, to which is added a *v*, *n*, or *a* head to form verbs, nouns, or adjectives respectively (Halle & Marantz, 1993; Marantz, 1997; Embick & Noyer, 2007). Thus, every Ojibwe verb starts with an acategorical root, to which is added a verbalising morpheme. As previously discussed in § 2.2, these are the morphemes called verb finals by Algonquianists.

For simplicity, I am assuming that the root gives a property of events, i.e. a function from events to truth values. This works well for roots like “work” or “change”.

- (56) (Ojibwe)
(Weshki-ayaad, Lippert & Gambill, 2012)
a. *nokii*
anok -ii
work -move.VAI
“work”

- b. *aanjii* (Valentine, 2001, p. 383)
 aand -ii
 change -move.VAI
 “change location”

However, there are also many roots that look to be nominal or adjectival. The next two examples have roots that look adjectival.

(57) (Ojibwe)

- a. *mskozi*
 misko -zi
 red have.the.attribute.of.being.VAI
 “be red”

- b. *gnoozi*
 ginw -zi
 tall have.the.attribute.of.being.VAI
 “be tall”

(Valentine, 2001, p. 342)

The finals *-wi* (VAI) and *-wan* (VII) verbalise nouns with a loose translation of “be an X” or “be Xy” (Valentine, 2001, p. 363).

(58) (Ojibwe)

- a. *mshkikiwan*
 mashkiki -wi
 medicine -be.VII
 “be a medicine”

- b. *niniwi*
 inini -wi
 man -be/become.VAI
 “be/become a man”

(Valentine, 2001, p. 364)

Ojibwe does not generally distinguish between the stative and inchoative senses of verbs (the difference between “be” and “become”), leaving it up to context to

disambiguate (Valentine, 2001, p. 336). The nominal roots in Example (58), while interesting, will be set aside for the purposes of this thesis, as these verbal stems are full nouns rather than nominal roots. The examples are included here to illustrate the possible complexity of Ojibwe verbal roots.

Given the above examples, it is not at all clear whether an event structure denotation of verbal roots is the best analysis. Along with the adjectival roots shown in Example (57), there are also examples like (74b), discussed in Section 3.3.2.3 which involve a causative verb formed from a root *biini* which the dictionary translates as “clean, pure” (Weshki-ayaad et al., 2012). While I interpret this as denoting a cleaning event as in Example (59a), it could also be easily interpreted as a property of entities, as in Example (59b). However, then a semantics for turning entities into events would need to be posited, and such an endeavour is beyond the scope of this thesis. Therefore, for simplicity and ease of exposition, I am assuming verbal roots denote a property of events. However, further research is needed in order to determine the most accurate type of denotations for roots (events or entities).

(59) a. $\llbracket \text{biini} \rrbracket = \lambda e . e \text{ is a cleaning event}$

b. $\llbracket \text{biini} \rrbracket = \lambda x . x \text{ is clean}$

Choosing to give roots denotations as properties of entities, rather than events, would require a semantics of converting entities into events; however, such an endeavour is beyond the scope of this thesis. Therefore, for simplicity and ease of exposition, I am assuming verbal roots denote a property of events. Further research is needed in order to determine the most accurate type of denotations for roots (events or entities).

The next section explores the semantics of verb finals, and gives denotations for a selection of finals to illustrate the types of denotations they may have.

3.3.2 Denotations of Verb Finals

As the class of verb finals is quite large, it is well beyond the scope of this thesis to attempt to give a denotation for all of them. In the following sections, I give denotations for a select few finals to illustrate the types of denotations which verb finals will have.

3.3.2.1 Intransitive Finals

The class of intransitive verb finals includes finals for both unaccusative and unergative verbs. In this section I will give denotations for the unaccusative verb final *-izi*, and the unergative final *-ii*.

Semantically, the verb final does two things. It indicates the transitivity of the verb, and introduces an argument,⁷ in most cases a Theme. The verb final often also gives some information about the kind of event described by the verb. For example, the final *-izi* indicates that the initial (root) is descriptive, and the final *-ii* describes an event involving movement.

The final *-izi* is paired with more adjectival roots, and has an attributive meaning, as shown in Example (57), repeated below. The final *-izi* is a VAI final, which is paired with VII finals *-aa*, *-an*, or *-ad*. It is unclear how the choice of VII final is determined (Valentine, 2001, pp. 342-347).

(60) (Ojibwe)

- a. *mskozi*
 misko -zi
 red have.the.attribute.of.being.VAI
 “be red”

⁷Except in the case of detransitivisers which saturate the previously introduced Theme argument, discussed in § 3.2.7.2.

- b. *gnoozi*
 ginwaa -zi
 tall have.the.attribute.of.being.VAI
 “be tall”

(Valentine, 2001, p. 342)

While Valentine describes the attributive finals as having the meaning “have the attribute of being X” (Valentine, 2001, p. 342), full verbs are translated most often as “be X”. An attributive event, therefore, is an event of having an attribute, for example, being red-coloured, or being tall.

I propose that *-izi* has the following denotation.

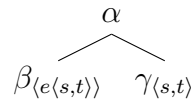
(61) (Ojibwe)

$\llbracket \text{-izi} \rrbracket = \lambda e . \lambda x . e \text{ is a kind of attributive event, and } x \text{ is the Theme of } e$

The verb final combines with the root using Event Identification (discussed also in § 5.1.1) in the same way that Voice combines with *vP*. Event Identification takes a function of type $\langle e\langle s,t \rangle \rangle$ and a function of type $\langle s,t \rangle$, and outputs a function of type $\langle e\langle s,t \rangle \rangle$, as shown in Example (62). This rule lets us add conditions to the event argument

(62) Event Identification

Where:



Then: $\llbracket \alpha \rrbracket = \lambda x_e . \lambda e_s . \llbracket \beta \rrbracket(x)(e) = 1 \text{ and } \llbracket \gamma \rrbracket(e) = 1$
 (adapted from Kratzer 1996, p. 122)

Thus, the denotation of *mskozi*, Example (60a), is the following.

(63) (Ojibwe)

- a. $\llbracket \mathbf{misko} \rrbracket = \lambda e . e$ is an event of being red
- b. $\llbracket \mathbf{-izi} \rrbracket = \lambda x . \lambda e . e$ is a kind of attributive event, and x is the Theme of e
- c. $\llbracket \mathbf{mskozi} \rrbracket = \lambda x . \lambda e . e$ is an attributive event of being red, and x is the Theme of e

The final *-ii* combines with verbal roots to form unergative verbs. As only animate intransitive verbs can be unergative, this final does not have a VII counterpart. Examples are given below, repeated from (56).

(64) (Ojibwe)

- | | |
|---|---|
| <p>a. <i>nokii</i></p> <p>anok -ii</p> <p>work -move.VAI</p> <p>“work”</p> <p>(Weshki-ayaad et al., 2012)</p> | <p>b. <i>aanjii</i></p> <p>aand -ii</p> <p>change -move.VAI</p> <p>“change location”</p> <p>(Valentine, 2001, p. 383)</p> |
|---|---|

Unergative verbs are comparably more problematic than unaccusatives. They have an optional Theme argument, as demonstrated by the VAI+O unergative variant. The denotation of an unergative final that includes the optional object, i.e. a VAI+O final, will have a similar structure to the denotations of unaccusative verb finals. I give the final *-ii* when it includes the object the following denotation.

(65) (Ojibwe)

- $\llbracket \mathbf{-ii} \rrbracket = \lambda e . \exists x . e$ is an event involving movement, and x is the Theme of e

The final introduces the Theme argument, indicates something about the kind of event, and combines with the initial via Event Identification, just as the unaccusative final we looked at previously.

(66) (Ojibwe)

- a. $\llbracket \mathbf{anok} \rrbracket = \lambda e . e$ is an event of working
- b. $\llbracket \mathbf{-ii} \rrbracket = \lambda x . \lambda e . e$ is an event involving movement, and x is the Theme of e
- c. $\llbracket \mathbf{nokii} \rrbracket = \lambda x . \lambda e . e$ is a working event involving movement and x is the Theme of e

Of course, most unergative verbs do not have an object, and that requires a different denotation.

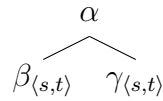
(67) (Ojibwe)

$\llbracket \mathbf{-ii} \rrbracket = \lambda e . e$ is an event involving movement

In this case, the initial and the final will combine using Predicate Modification, as the semantic types are not compatible with Event Identification.

(68) Predicate Modification

Where:



Then: $\llbracket \alpha \rrbracket = \lambda e_s . \llbracket \beta \rrbracket(e) = 1$ and $\llbracket \gamma \rrbracket(e) = 1$

(adapted from Heim & Kratzer 1998, p. 65)

This would give an unergative verb without its optional object the following denotation. This will be the most common kind of denotation for unergative verbs.

(69) (Ojibwe)

- a. $\llbracket \mathbf{anok} \rrbracket = \lambda e . e$ is an event of working
- b. $\llbracket \mathbf{-ii} \rrbracket = \lambda e . e$ is an event involving movement
- c. $\llbracket \mathbf{nokii} \rrbracket = \lambda e . e$ is a working event involving movement

Ideally, there should only be one denotation for an unergative final like *-ii*. A possible solution involves the existential closure of the Theme *x*, when the initial and final are combined, i.e. there is a possible Theme but it is not specified, when the optional object is not present. In this way, the first denotation for a *-ii*, Example (65), and other unergative finals could be used. Then the existential closure of *x* would occur in the specifier of *v* instead of a Theme argument. However, this raises the question of whether an object is, in fact, always present in unergatives, even when it is not specified. This requires further research before a definitive answer may be given.

In the next section, I discuss the semantics of transitive verb finals, and give a denotation for the VTA final *-n*.

3.3.2.2 Transitive Finals

Like the intransitive verb finals, the class of transitive verb finals is quite large, and it is also beyond the scope of this thesis to give a denotation for all of them. Therefore, to illustrate how a denotation of these finals might be derived, I will discuss and give a denotation for the transitive final *-n* in this section.

The VTA transitive final *-n* is a very common verbaliser (it is paired with the VTI final *-dam*). It is somewhat unusual amongst the verb finals for not containing any semantic information beyond carrying the internal argument. Most of the other Ojibwe verbalisers also give some information about the event being described, e.g. “carry X”, “hear X”, “cut X”, “measure X”, &c.

The following are some examples combining a root with the transitive animate verb final *-n*.

(70) (Ojibwe)

- a. *bwaazh*
 abwaa -n
 roast -VTA
 “roast X(AN)”

- | | |
|---|---|
| <p>b. <i>ziigin</i></p> <p>ziig -n</p> <p>spill -VTA</p> <p>“spill X(AN)”</p> | <p>c. <i>miigaazh</i></p> <p>miigaa -n</p> <p>fight -VTA</p> <p>“fight X(AN)”</p> |
|---|---|

(Valentine, 2001, p. 475)

In each of these cases, the root denotes an event (of roasting, spilling, or fighting, respectively), and the verb final denotes that they are transitive verbs by adding an internal Theme argument. In this way, *v* is much like Voice, except that it adds an internal argument rather than an external argument.

I give the final *-n* the following denotation.

(71) (Ojibwe)

$$\llbracket \mathbf{-n} \rrbracket = \lambda e . \lambda x . x \text{ is the Theme of } e$$

Then, the denotation of a verb can be calculated. The verb final will combine with the root using Event Identification (see § 5.1.1) in the same way that Voice combines with *vP*. For this example, I am using the verb “fight” from Example (70c) above.

(72) (Ojibwe)

- a. $\llbracket \mathbf{miigaa} \rrbracket = \lambda e . e \text{ is a fighting event}$
- b. $\llbracket \mathbf{-n} \rrbracket = \lambda e . \lambda x . x \text{ is the Theme of } e$
- c. $\llbracket \mathbf{miigaazh} \rrbracket = \lambda x . \lambda e . e \text{ is a fighting event and } x \text{ is the Theme of } e$

In the next section, I turn to a discussion of causatives, and give a denotation for the causative final *-ih*.

3.3.2.3 Causatives

Causativisation is the process by which a causing event is introduced into the semantics. In many instances, a non-core Causer argument is also introduced, but Pylkkänen (2008, pp. 77-85), using data from Japanese and Finnish, shows that this need not be the case.

According to Pylkkänen (2008), the semantics of Cause is universal across languages. Example (73) shows Pylkkänen’s (2008) universal causative.

(73) Universal Causative

$$\lambda P . \lambda e (\exists e') P(e') \ \& \ \text{CAUSE}(e, e') \quad (\text{Pylkkänen, 2008, p. 72})$$

Pylkkänen argues that the variation in the semantics of causatives is the result of two factors, which she calls Voice-bundling and selection.

If Cause and Voice appear on the same head, the causative introduces an external Causer argument as well as adding a causing event to the semantics. If Cause is not paired with Voice, the causative does not introduce an external argument, though it still introduces a causing event (Pylkkänen, 2008, p. 86).⁸

In Ojibwe, causatives appear to be argument-bundling rather than Voice-bundling. Ojibwe does not follow Pylkkänen’s (2008) model in that Voice still adds a Causer argument, even though causative semantics is introduced by the verb final below Voice.

The other source of variation for Pylkkänen focuses on where the causative appears in the tree, which Pylkkänen calls selection. Cause may select for roots, verbs, or phases, i.e. VoiceP. Root-selecting causatives combine with an acategorical root, as in Distributed Morphology (Halle & Marantz, 1993; Marantz, 1997), to form verbs. Ojibwe shows clear evidence of root-selecting causatives. The language has several causative verb finals, many of which describe the kind of action that makes

⁸See also, Harley (2017).

up the causing event (e.g. “cause using the hand”, “cause using the foot”, “cause by prolonged force”, &c). The following examples give some causatives formed by acategorical roots combining with the verb final *-ih*. This final denotes a causing event without denoting anything specific about the kind of causing event it is.

(74) (Ojibwe)

- a. *giizhih*
 giizh -ih
 finish -cause.VTA
 “finish (doing/making) X(AN)”
- b. *biinih*
 biini -ih
 clean -cause.VTA
 “make X(AN) clean”

(Valentine, 2001, p. 434)

The same causative final *-ih* may also be used as a verb-selecting causative.

(75) (Ojibwe)

- | | |
|---|--|
| <p>a. <i>nokii</i>
 anok -ii
 work -move.VAI
 “work”
 (Weshki-ayaad et al., 2012)</p> | <p>b. <i>nokiih</i>
 anok -ii -ih
 work -move.VAI -cause.VTA
 “get X to work”
 (Valentine, 2001, p. 434)</p> |
|---|--|

(76) (Ojibwe)

(Valentine, 2001, p. 383)

- a. *aanjii*
 aand -ii
 change -move.VAI
 “change location”

b. *aanjih* (Valentine, 2001, p. 434)

aand -ii -ih
change -move.VAI -cause.VTA
“change X(AN)”

In the case of Example (77), this may be a verb-selecting causative or it may be a phase-selecting causative, as the causative adds a Causer, but the knowing event already has an Agent, i.e. an external argument. Given that all of these causatives are monoclausal, I am assuming these are verb-selecting, rather than phase-selecting causatives.

(77) (Ojibwe)

a. *gkendm*

gik -endam
know -think.VTI¹⁰
“know X(IN)”

b. *gkendmooh*

gik -endam -oo -ih
know -think -∅ -cause.VTA
“let X(AN) know (something)”

(Valentine, 2001, p. 434)

Root-selecting causatives combine with an acategorical root to form a verb. This causative adds an internal Theme argument, and appears under Voice. Voice will still add the Causer argument in this case. In Ojibwe, root-selecting causatives always have an unaccusative base. The causative, then, will have a Causer and a Theme, but no Agent.

¹⁰There is a homophonous VAI verb final with the same meaning, except that it is intransitive and takes the VAI inflectional paradigm instead of the VTI paradigm (Valentine, 2001, p. 434). It is ambiguous as to whether the causative *gkendmooh* derives from the VAI *gkendm* or the VTI *gkendm*. Indeed, as the causative has an optional Theme, it may be that there are, in fact, two causatives, one derived from the intransitive *gkendm* and one derived from the transitive *gkendm*.

Causatives built from unergatives and from transitives are verb-selecting causatives in Ojibwe, i.e. the causative final attaches to an initial+final verb stem. These causatives will have Causer, Agent, and (sometimes null) Theme arguments. In all cases, the root (the verb initial) by itself does not add any arguments.

3.3.2.3.1 Denotation of the Causative Final *-ih*

In order to understand what is happening in the semantics, it is necessary to look at the syntax. In the syntax, the lowest argument in the tree is always a Theme. When building causatives, this is the Theme of the caused event. If the causative is being built on an unaccusative, i.e. a verbal root without previously added verb finals, the causative final will add a Theme argument. If the causative final is being added to a transitive, or unergative verb, i.e. added on top of another verb final, it will add an Agent argument, the Agent of the caused event. It is only after the Theme argument slot has been filled that other kinds of arguments can be added to the derivation (discussed previously in § 3.2.6).

At first glance, the semantics of the causative looks very strange. The causative final *-ih* has two denotations, one for a root-selecting causative, and one for a verb-selecting causative, as follows.

(78) (Ojibwe)

- a. Root-selecting Causative Final *-ih*

$\llbracket \text{-ih} \rrbracket = \lambda P . \lambda x . \lambda e . \exists e' . P(e') = 1 \ \& \ \text{CAUSE}(e, e') \ \& \ x \text{ is the Theme of } e'$

- b. Verb-selecting Causative Final *-ih*

$\llbracket \text{-ih} \rrbracket = \lambda P . \lambda x . \lambda e . \exists e' . P(e') = 1 \ \& \ \text{CAUSE}(e, e') \ \& \ x \text{ is the Agent of } e'$

In the root-selecting case, the causative final adds the Theme of the caused

event, and in the verb-selecting case, the causative final adds the Agent of the caused event. However, in every other respect, these two causative denotations are the same. They both have the same phonological form, and they both add the same causative semantics. The only difference is in the type of argument that the causative final adds to the denotation. It seems, therefore, that this should not be two denotations, but rather, one unified denotation. The question, then, is how can this unified denotation be reached?

One possibility is to assume the causative is not argument-bundling, that the argument, whether it be a Theme or an Agent, is added by some null transitiviser. This null transitiviser would have the same semantics as the transitiviser *-n*, which we saw in § 3.3.2.2. The causative verb final, therefore, would have the denotation of Pylkkänen’s (2008) universal causative only, and the argument would be added by a separate null verb final. One must then assume there are different kinds of null transitivisers, depending on which argument needs to be added to the semantics.

The evidence for such null transitivisers is questionable, although there is a handful of verbs where a null verb final is assumed to occur. For example, the verb “give” does not appear to have a verb final.

(79) (Ojibwe)

Nmiinaa.

ni- miin -∅ -aa

1- give VTA -1>3

“I give it to him/her.”

(Valentine, 2001, p. 281)

A null final is assumed in Example (79), because almost every other verb in the language has at least a root+final structure. Therefore, one could assume the same is happening in the case of causatives, with a null transitivising final preceding the causative final. If that was the case, however, one would expect to be able to use

the verbs with the (assumed) null final, but no causative semantics. This is because, once a final is added, the initial+final complex is a full verb (see § 2.2).

In the cases I am examining here, no indication of a null final is evidenced, unlike there is with *miinaad*, “give”, above. I have no evidence of roots like *biin-*, “clean” (from Example (74)), being used as full verbs without a visibly present verb final. Likewise, with the verb-selecting causatives, the previous root+final complex exists as a full verb, but there is no indication of a root+final complex with an extra argument, i.e. with an argument added by the null transitiviser. As such, there is little evidence to support the null transitiviser hypothesis. Thus we can conclude that the argument is added by the causative final rather than being added separately.

The solution to this quandary is to look at the different thematic roles of the arguments. Speculations about null transitivisers rests on needing to add semantic roles for the *caused* event, not for the *causing* event. However, the argument that is the Agent or Theme of the *caused* event may also be the Theme argument of the *causing* event. If we assume a causative final always adds the Theme of the causing event, the two denotations for causative *-ih*, and other causatives, can be unified.

(80) (Ojibwe)

$$\llbracket \text{-ih} \rrbracket = \lambda P . \lambda x . \lambda e . \exists e' . P(e') = 1 \ \& \ \text{CAUSE}(e, e') \ \& \ x \text{ is the Theme of } e$$

This denotation states that there is an event e' that is caused by another event e , and that the Theme of e is the entity x .

The primary focus for the semantics is the causing event; the caused event is secondary. Thus, the semantics does not care whether that same argument is an Agent or a Theme of the caused event. It is only relevant that the argument is the Theme of the causing event.

This parallels what is happening in the syntax. When adding the argument of the causative final in the syntax, the argument’s status is determined by whether a previous Theme argument is already present. If there is no Theme present, this

argument will be the Theme. If a Theme argument is already present, on account of there being a previous verb final, the new argument will appear above the original Theme. It will, however, have the syntax of an internal argument, although it is the Agent of the caused event. This argument is, therefore, being treated as the Theme of the causing event, not as the Agent of the caused event in the syntax.

As I have argued previously (see § 3.2.1), it is my view that a verb final adds an internal argument in the same way that Voice adds an external argument. We saw this in § 3.3.2.2 with the transitive final *-n*. In the case of a causative verb final like *-ih*, it must contain the semantics for a causing event and the semantics for adding an internal argument, the Theme of the causing event. Pylkkänen argues that for Voice-bundling causatives, Cause and Voice are one unit syntactically, but two units semantically. Thus, they are applied separately, one after the other. Cause must be applied first, as applying Voice first would result in a type mismatch. The result is that Voice contains the external argument for the causing event (Pylkkänen, 2008, p. 86). The same is true of Ojibwe argument-bundling causatives. In the Ojibwe case, however, after CAUSE is applied, a Theme argument is added via Event Identification rather than a Causer argument. The Causer, in the case of Ojibwe, is added by Voice separately, both syntactically, and semantically.

I am aware that this produces an unexpected causative semantics. I have chosen this particular semantic denotation for the causative in order to both provide causative semantics and introduce an internal argument. If there is not an internal argument introduced by the causative verb final, we must posit a null verb final to introduce an internal argument separate from, but adjacent to, the causative final that only occurs in causatives. There is no other supporting evidence for such a null argument-introducing final. I suspect this unusual causative semantics may be a result of these Ojibwe causatives being monoclausal where in a different language, a biclausal causative structure might be expected. Therefore, I anticipate that a

similar causative semantics might be found in other languages that prefer a monoclausal causative structure. More research is required, however, to ascertain if this hypothesis is borne out.

Using this causative semantics, I can now give a denotation for a full causative verb. I illustrate using *biinih*, “make X(AN) clean”, from Example (74b).

(81) (Ojibwe)

- a. $\llbracket \mathbf{biini} \rrbracket = \lambda e . e \text{ is an event of cleaning}$
- b. $\llbracket \mathbf{-ih} \rrbracket = \lambda P . \lambda x . \lambda e . \exists e' . P(e') = 1 \ \& \ \text{CAUSE}(e, e') \ \& \ x \text{ is the Theme of } e$
- c. $\llbracket \mathbf{biinih} \rrbracket = \lambda x . \lambda e . \exists e' . e' \text{ is an event of cleaning} \ \& \ \text{CAUSE}(e, e') \ \& \ x \text{ is the Theme of } e$

In the next section, I move on to a discussion of the denotation of applicative verb finals.

3.3.2.4 Applicatives

In this section, I propose denotations for applicative verb finals by focusing on the final *-aw*. I show that the highest verb final in an applicative clause adds a Goal argument in the same way Voice adds an Agent, based on Pylkkänen’s (2008) denotation of high applicatives. This changes which argument can agree with the theme sign. The syntax and semantics of agreement and theme signs are discussed in Chapter 4 and 5.

3.3.2.4.1 Denotation of the High Applicative Head

This section begins with an overview of the applicative semantics proposed by Pylkkänen (2008). I show that applicatives in Ojibwe are high applicatives, and I give a denotation of the applicative verb final *-aw*.

Other Algonquianists have discussed applicatives in the past, such as Brittain (1993) for Innu-aimun, Quinn (2008) for Penobscot, and Bliss (2010) who argues that Blackfoot TA finals are all high applicatives.

According to Pylkkänen (2008), applicatives add an indirect object (the applied object) so as to have a double-object construction. A language may have several types of applicative heads, e.g. benefactive, malefactive, instrumental, &c. All applicatives are similar in that the applied argument asymmetrically c-commands the direct object. Pylkkänen argues that there are two distinct categories of applicatives, that may look similar, but are quite different syntactically and semantically (Pylkkänen, 2008, p. 11).

Low applicatives are the more complicated category of applicatives. They denote a transfer of possession relationship between the applied argument and the direct object. This does not have anything to do with the verbal event structure; however, in formal semantics, the low applicative head takes the Theme, Goal, and verb as its arguments. Low applicatives can have a recipient Goal, as in English, or a source Goal, as in Korean (Pylkkänen, 2008, p. 15).

(82) Low Applicative:

a. Low- Appl_{To} (Recipient applicative):

$$\lambda x . \lambda y . \lambda f_{\langle e, \langle s, t \rangle \rangle} . \lambda e . f(e, x) \ \& \ \text{Theme}(e, x) \ \& \ \text{to-the-possession}(x, y)$$

b. Low- $\text{Appl}_{\text{From}}$ (Source applicative):

$$\lambda x . \lambda y . \lambda f_{\langle e, \langle s, t \rangle \rangle} . \lambda e . f(e, x) \ \& \ \text{Theme}(e, x) \ \& \ \text{from-the-possession}(x, y)$$

(Pylkkänen, 2008, p. 16)

On the other hand, high applicatives are relatively simple semantically. They relate the applied argument to the verb by introducing a new argument to the event structure. The high applicative head looks just like Kratzer's (1996) Voice head, except that it adds a Goal argument, rather than an Agent argument. Syntacti-

cally, high applicatives appear above the verb (Pylkkänen, 2008, p. 15). The high applicative has the following denotation.

(83) High Applicative:

$\lambda x . \lambda e . x$ is the Goal of e (Pylkkänen, 2008, p. 15)

Pylkkänen (2008) gives two diagnostics to determine if an applicative is high or low. The first test is that only high applicatives can be formed from unergative verbs, and the second test is that only high applicatives can be formed from stative verbs.

The first test is whether the applicative can apply to an unergative verb. Since low applicatives involve a relationship between the Theme and the applied argument, an applicative that does not have a Theme cannot be low. High applicatives, on the other hand, do not do anything with the Theme, but rather, add another argument to the verb's event structure. Therefore, a high applicative can be made from an unergative verb (Pylkkänen, 2008, p. 17). The following Ojibwe applicatives are formed from unergative verbs (Valentine, 2001, p. 466).

(84) (Ojibwe)

- | | |
|--|---|
| <p>a. <i>jiibaakwaadan</i>
 jiibaakw -aadan
 cook -VTI
 “cook something”</p> | <p>c. <i>jiibaakwaw</i>
 jiibaakw -aw
 cook -APPL.VTA
 “cook for someone”</p> |
| <p>b. <i>jiibaakwe</i>
 jiibaakw -we
 cook -DETRANS.VAI
 “cook”</p> | |

(Valentine, 2001, p. 435)

In this example, the transitive verb “to cook” is first detransitivised, removing the Theme. Then, the benefactive verb final *-aw* is applied to the resulting unergative intransitive verb. This results in a transitive verb where the applied argument, the Goal, is the only internal argument, and a Theme is not present. This shows that the verb must be a high applicative, as low applicatives cannot be formed from unergative verbs.

(85) (Ojibwe)

a. *nwapwaan*

nawapwaan

lunch.IN

“lunch”

b. *nwapwaanke*

nawapwaan -ike

lunch -work.with.VAI

“make lunch (for a trip)”

c. *nwapwaankaw*

nawapwaan -ike -aw

lunch -work.with -for.someone.VTA

“make lunch (for a trip) for someone”

(Valentine, 2001, p. 435)

In the above example, we start with a noun meaning “lunch” or “provisions packed for a trip”. The intransitive verb final *-ike* is added to the noun to make it into an unergative intransitive verb. Finally, the benefactive verb final *-aw* is added. As “lunch” is an incorporated nominal, there is no Theme, only an Agent and a Goal, and again, this must be a high applicative.

Pylkkänen’s (2008) second test is that only high applicatives can be formed from

stative verbs. Because low applicatives involve some kind of transfer of possession, they cannot be formed from stative verbs. High applicatives, on the other hand, add another argument to the event semantics, which is unaffected by whether the event is stative or not.

Unfortunately, I do not have sufficient data to test this prediction. In order to test this hypothesis, more research is required, specifically, by gathering native speaker judgments, especially as the stativity of many verbs will vary across languages.

3.3.2.4.2 Denotation of the Applicative Final *-aw*

As discussed in the previous section, there is good evidence that the verb final *-aw* is a high applicative. Therefore, I propose the following denotation for the *-aw* verb final.

$$(86) \quad \llbracket \text{-aw} \rrbracket = \lambda x . \lambda e . x \text{ is the Goal of } e \quad (\text{Ojibwe})$$

To illustrate this denotation, I use the verb *jiibaakwaw*, “cook for someone”, from Example (84c).

$$(87) \quad \begin{array}{ll} \text{a. } \llbracket \text{jiibaakw} \rrbracket = \lambda e . e \text{ is an event of cooking} \\ \text{b. } \llbracket \text{-aw} \rrbracket = \lambda x . \lambda e . x \text{ is the Goal of } e \\ \text{c. } \llbracket \text{jiibaakwaw} \rrbracket = \lambda x . \lambda e . e \text{ is an event of cooking, and } x \text{ is the Goal of } e \end{array} \quad (\text{Ojibwe})$$

The applicative final is combined with the verb root via Event Identification (see § 5.1.1. This example uses an applicative formed from an unergative verb, but the semantics of the applicative would be the same if it was formed from a transitive verb.

3.4 Conclusion

In this chapter, I have examined the syntax and semantics of the *vP* domain. Section 3.2 focused on the syntax of *vP*. I started with some relevant theoretical background in § 3.2.1. Then I moved on to give templates for different *vP* structures. Section 3.2.2 examined unaccusative verbs, which are one-argument predicates. The next sections looked at two-argument predicates, namely unergative (§ 3.2.3), AI+O verbs (§ 3.2.4), and simple transitive *vPs* (§ 3.2.5). Finally, I gave templates for structures containing more than one *vP*. These multiple *vP* structures include ditransitives (§ 3.2.6), transitivisers and detransitivisers (§ 3.2.7), and the unique verb final -*magad*, which changes AI to II verbs (§ 3.2.8). Ditransitives are further broken down into causatives (§ 3.2.6.2) and applicatives (§ 3.2.6.1), each of which have their own syntactic template.

In Section 3.3, I have examined the semantics of the *vP* domain. Section 3.3.1 looked at the semantics of verb roots. While roots are treated as events in this thesis, I have concluded that more research is required to determine whether this is the best approach. Finally, § 3.3.2 focused on the semantics of verb finals. Denotations were given for a representative selection of verb finals: intransitive in § 3.3.2.1, transitive in § 3.3.2.2, causative in § 3.3.2.3, and applicative in § 3.3.2.4.

In the next chapter, I discuss the syntax of verbal agreement. I begin with a discussion of previous syntactic accounts, and show that they cannot adequately account for agreement in multiple *vP* clauses in § 4.2. Thus, I proceed to my own analysis of verbal agreement, which builds on the work of Oxford (2013). In Section 4.3, I discuss agreement with transitive verbs, and in § 4.4, I discuss agreement with intransitive verbs. Finally, I will show that my proposal can account for verbs in all four paradigms.

Chapter 4

The Syntax of Agreement

4.1 Introduction

This chapter forms the answer to my second research question. How can the Ojibwe verbal agreement system be accounted for in a way that encompasses both the complexities of the direct/inverse system, and of the multiple *vP* structures?

Ojibwe verbal agreement morphology is complex, and a number of previous accounts have been proposed (e.g. Bruening 2005; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013). I start with a discussion of these previous proposals in § 4.2, and I demonstrate that they run into difficulty with multiple *vP* structures. Oxford's (2013) work (§ 4.2.3) comes closest, and I build on his proposal to account for Ojibwe verbal agreement.

I argue, in § 4.3, that Voice (Kratzer, 1996) is the phase edge, and verbal agreement occurs on a head above this. Agree happens simultaneously with both arguments, and a portmanteau morpheme (the *theme sign*) results. I discuss two other agreement suffixes in § 4.3.2, and argue that they are the result of a post-syntactic fission operation (Embick & Noyer, 2007, p. 314). In § 4.3.3, I apply my analysis to multiple *vP* structures. Only the argument in the highest spec-*v* can agree with

the theme sign. As a result, applicatives show agreement with the Goal rather than the Theme. I finish this chapter with a discussion of agreement in the intransitive verbal paradigms in § 4.4.

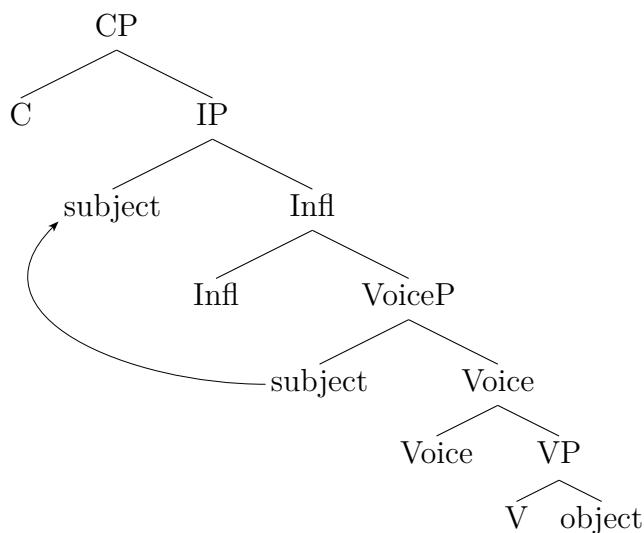
4.2 Previous Syntactic Agreement Accounts

In this section, I discuss three influential syntactic accounts of Algonquian agreement morphology. Each of these accounts provide insight into the Algonquian agreement system, but are, in the end, unsatisfactory.

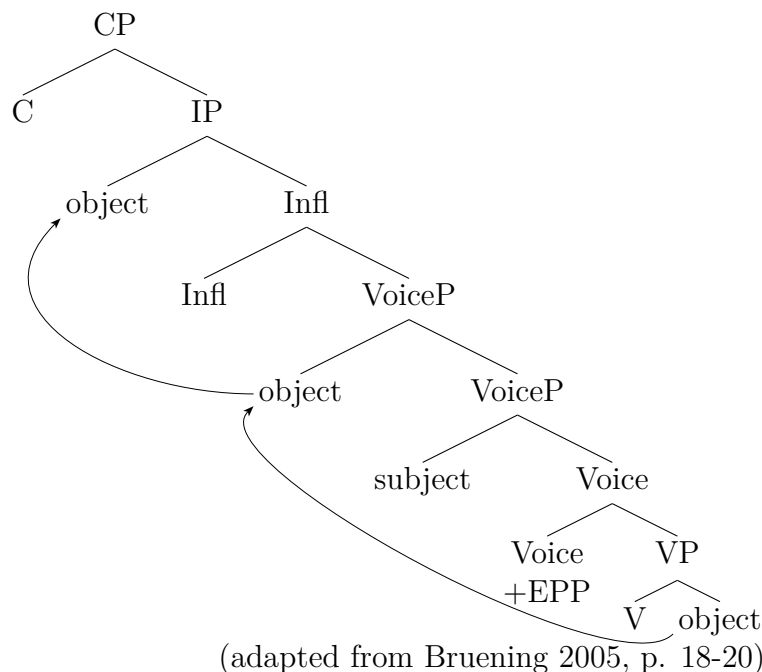
4.2.1 Bruening (2005) and Syntactic Inversion

Bruening (2005) is one of the first proposals to account for the Algonquian verbal agreement system entirely through syntax. In fact, Bruening argues that there is no topicality hierarchy at all; the apparent hierarchy affects result entirely from syntactic operations. Using data from the related language Passamaquoddy, Bruening proposes the following derivations.

(88) a. Direct:



b. Inverse:



In both the direct, and the inverse, the object is the argument of the verb, and the subject is generated in spec-VoiceP. In the direct, the subject is Moved to spec-IP. However, in the inverse, there is an EPP feature on Voice that causes the object to move to spec-VoiceP, above the subject. It is then the object that moves up to spec-IP (Bruening, 2005). The morpheme order observed in inverse forms is, therefore, a result of this syntactic inversion.

Bruening gives scope and variable binding data from Passamaquoddy to support his analysis. In Passamaquoddy, inverse scope is not available in the direct, only surface scope. In the inverse, both surface, and inverse scope are available. However, the same cannot be said for Ojibwe, where scope is the same in both the direct and the inverse (Lochbihler, 2012).

Also, in Bruening's (2005) analysis, the inverse requires extra movement, making it syntactically more marked than the direct. I do not see this in the Ojibwe data, however. In Ojibwe, the direct and the inverse appear to have the same level of markedness. Instead, the use of direct or inverse is the only way to express certain combinations of arguments.

Further, I find Bruening’s (2005) inverse-only EPP feature on Voice potentially problematic. No explanation is given for why this EPP feature should only show up in the inverse, and this makes it appear rather stipulative.

Therefore, while Bruening gives us one of the first syntactic approaches to Algonquian direct/inverse morphology, it does not provide, in my view, an entirely satisfactory explanation of the phenomenon.

4.2.2 Cyclic Agree

Béjar & Rezac (2009) and Lochbihler (2012) take a different approach for deriving Ojibwe verbal agreement in the syntax, using an operation which Béjar & Rezac (2009) call Cyclic Agree. Lochbihler builds on and refines Béjar & Rezac’s (2009) original Cyclic Agree analysis. However, I will show that, like Bruening’s (2005) proposal above, these analyses also run into some difficulty.

4.2.2.1 Béjar & Rezac (2009)

Béjar & Rezac (2009) propose that Agree, i.e. the checking and deleting of features, can happen cyclically. On their view, Agree checks the complement in the first cycle, deleting the relevant features. If features remain unchecked, Agree proceeds to check and delete relevant features of the specifier. This will continue until all features have been checked and deleted. See Figure 4.1 for an illustration of this proposal.

To account for the Ojibwe topicality hierarchy, Béjar & Rezac propose that there is a verbal head, *v*, which has a fully specified set of person features that form a hierarchy of entailment relations. In Ojibwe, 2nd person has the most highly specified set of features. The hierarchy is derived as follows: 2nd person has a [speaker] feature. In order to have a [speaker] feature, one must also have a [participant] and a [π] (person) feature. A first person is a [participant], and therefore also has a [π] feature, but not a [speaker] feature. And finally a third person is just [π]. Under

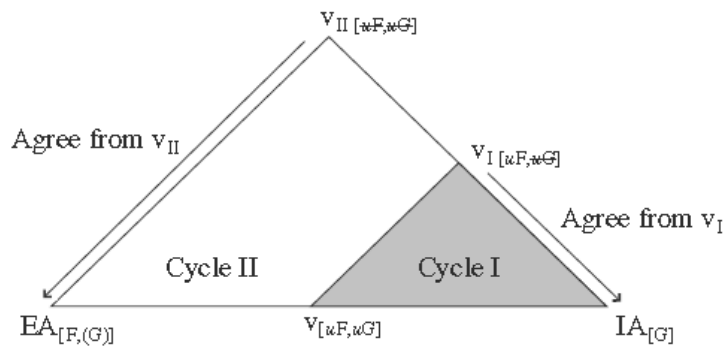


Figure 4.1: Illustration of Cyclic Expansion of the Search Space, from (Béjar & Rezac, 2009, p. 49)

Cyclic Agree, a goal checks its person feature and all the features entailed by it, on the v probe (Béjar & Rezac, 2009).

When the VP is merged, the person features of the internal argument are checked against the fully articulated v probe. In the next cycle, the external argument is merged, and its person features are also checked against v . In the case of the direct, the derivation is straightforward, as there will be features remaining on v for the external argument to check against (Béjar & Rezac, 2009). Example (89) illustrates Béjar & Rezac’s (2009) proposed derivation.¹

(89) (Ojibwe)

a. *Nwaabmaa.*

ni- waab -am -aa

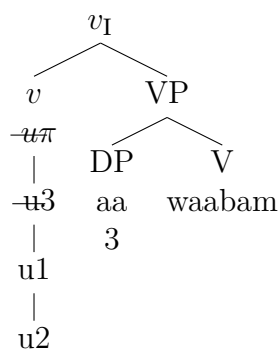
1- see -VTA -3

“I see him/her.”

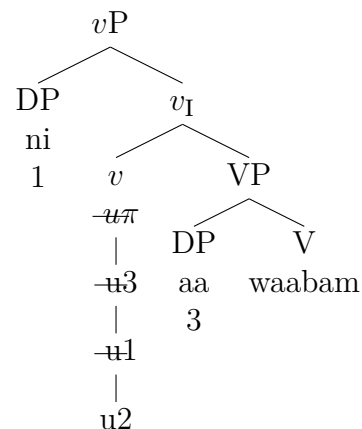
(Valentine, 2001, p. 287)

¹All Béjar & Rezac (2009) trees are adapted as Béjar & Rezac give all their derivations as tables rather than trees.

b. Cycle 1:



Cycle 2:



(adapted from Béjar & Rezac 2009, p. 54)

In the inverse, however, when the external argument is Merged, there are no features left on *v* for it to check. Therefore, the derivation must be rescued by adding an extra head as a repair strategy. That is to say, in the inverse, the internal argument has already checked and deleted all the features that the external argument would also be checking and deleting (Béjar & Rezac, 2009). This is illustrated in Example (90).

(90)

(Ojibwe)

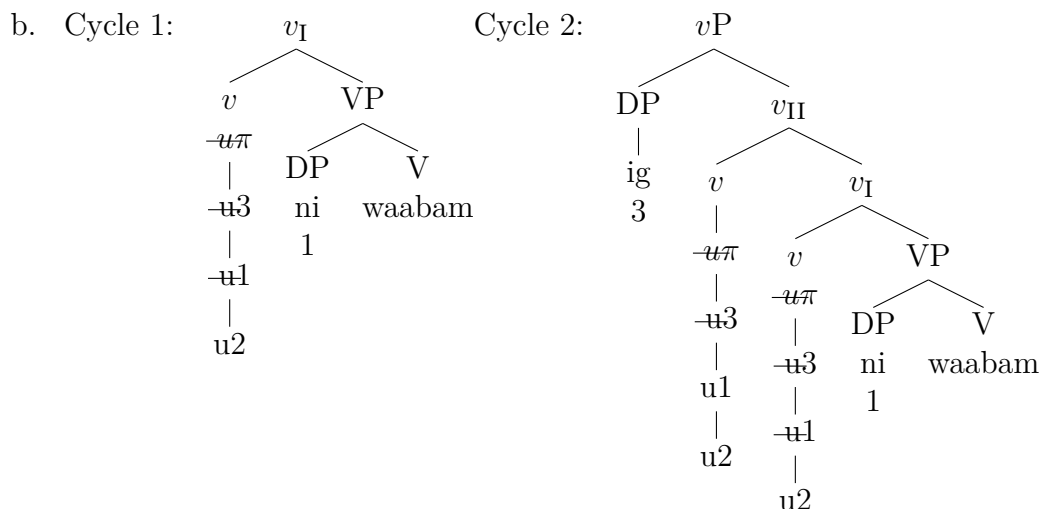
 a. *Nwaabmig.*

ni- waab -am -ig

1- see -VTA -3

“He/she sees me.”

(Valentine, 2001, p. 287)



(adapted from Béjar & Rezac 2009, p. 54)

Like in Bruening’s (2005) analysis above, in Béjar & Rezac’s (2009) analysis, the inverse appears to be a marked case. Indeed, it seems to me that suggesting that the inverse is more marked, is like suggesting, for example, that in English, “He sees me” is marked compared to “I see him.” Neither of these English sentences are more marked than the other; rather, they say different things.

Furthermore, Béjar & Rezac’s (2009) addition of a new probe in the inverse appears counter to the Inclusiveness Condition, which states that no new features are introduced during the course of the derivation (Chomsky, 1998, p. 113). The added probe is, once features have been checked by the external argument, distinct from the core probe. While a direct copy and deletion operation (as with movement, for example) is permissible under the Inclusiveness Condition, adding a new and distinct probe to the operation is not.

Therefore, while Béjar & Rezac’s (2009) Cyclic Agree proposal introduces interesting new ideas, it does not seem to adequately explain what is happening in Ojibwe.

4.2.2.2 Lochbihler (2012)

Lochbihler (2012) builds on Béjar & Rezac’s (2009) Cyclic Agree proposal. She

starts, like Béjar & Rezac, by proposing that there is a v head which agrees cyclically with the internal argument first, then the external argument. The difference between Lochbihler (2012) and Béjar & Rezac (2009), is that for Lochbihler, when a feature is checked and deleted, all the features entailed by it are made active, though not deleted (Lochbihler, 2012, p. 46).

Deriving the direct is the same as in Béjar & Rezac's (2009) analysis, and this is straightforward and unproblematic. The derivation of the direct can be seen in Example (91), deleted features are struck through, and active features are bolded.

There is a head v which has a fully specified set of person features. When a feature is checked and deleted, all the features entailed by it are made active, though not deleted. By Cyclic Agree, v first checks and deletes the person feature of the internal argument. Then, in the second cycle, the person feature of the external argument is checked and deleted (Lochbihler, 2012, p. 46).

(91) (Ojibwe)

a. *Nwaabmaa*

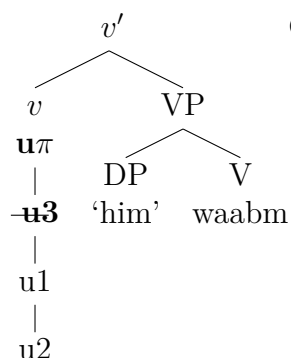
ni- waab -am -aa

1- see -VTA -3

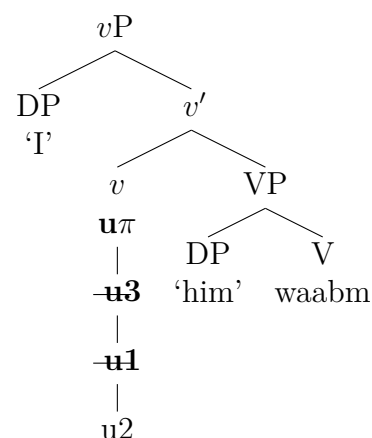
“I see him/her.”

(Valentine, 2001, p. 287)

b. Cycle 1:



Cycle 2:



(adapted from Lochbihler 2012, p. 47)

Lochbihler’s proposal differs from Béjar & Rezac’s when it comes to the inverse. The first cycle of the inverse is much the same as the direct. The VP is merged with *v*, and the person feature of the internal argument is checked and deleted, rendering all the features it entails active, but not deleted. However, in this case, during the second cycle, the external argument checks and deletes an already active feature (shown in *italics* in Example (92)), rather than activating a new feature (Lochbihler, 2012, p. 48).

(92) (Ojibwe)

a. *Nwaabmig*

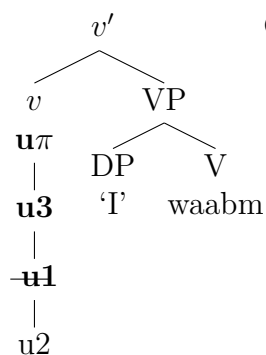
ni- waab -am -ig

1- see -VTA -3

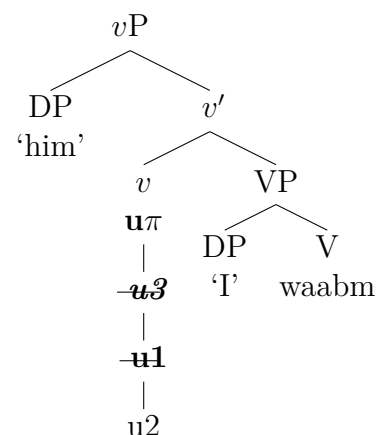
“He/she sees me.”

(Valentine, 2001, p. 287)

b. Cycle 1:



Cycle 2:



(adapted from Lochbihler 2012, p. 49)

At this point, in both the direct and the inverse, vocabulary insertion occurs. The pronominal pro-clitic is inserted for the argument with the most specified person feature, and the appropriate theme sign is inserted for the other argument. Information about which theme sign should be spelled out is encoded in the syntax according to which of the person features on *v* have been checked and deleted, and in which cycle. That is to say, the direct theme sign is inserted if the external argument has

checked and deleted a previously inactive feature on *v*, and the inverse theme sign is inserted if the external argument has checked and deleted an already active feature (Lochbihler, 2012, p. 50).

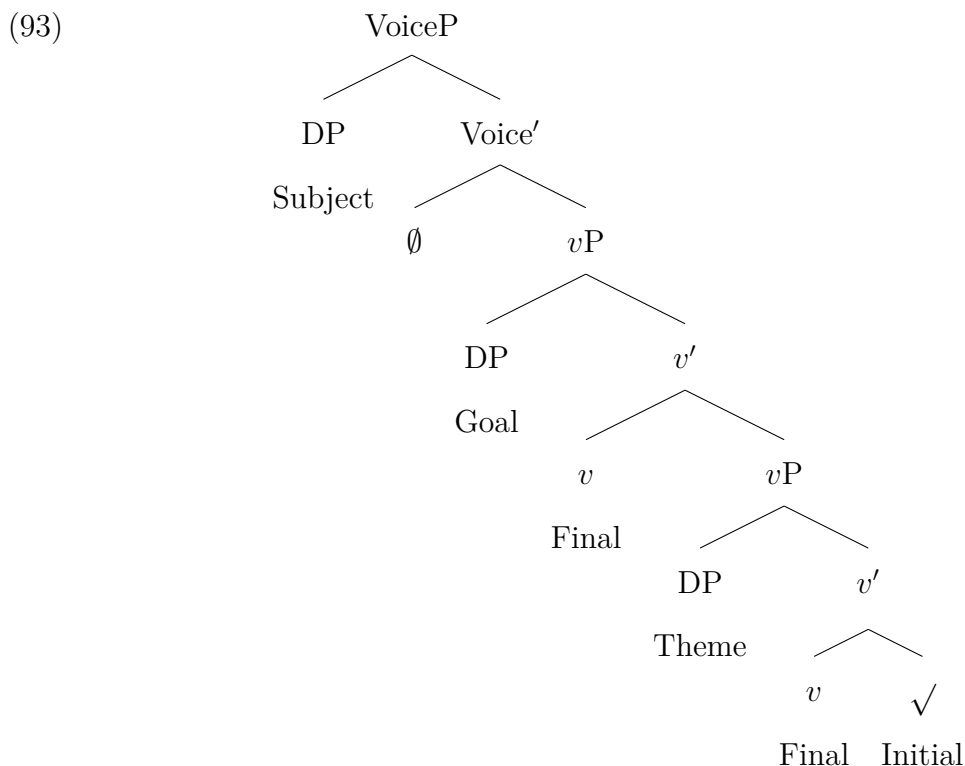
A distinct issue with previous proposals (Bruening, 2005; Béjar & Rezac, 2009) is that they analysed the inverse as a more marked case, i.e. the inverse always involved an extra step, whether that step is extra movement (Bruening, 2005), or an extra syntactic head (Béjar & Rezac, 2009). Lochbihler's (2012) analysis avoids this problem. Her analysis has a major advantage, in that the inverse is not more marked than the direct. This analysis also neatly encodes the choice of pro-clitic and theme sign as part of the syntax, and unlike Béjar & Rezac (2009), does not resort to ad hoc solutions to save the derivation. With Lochbihler's (2012) proposal, there is no need for an Inclusiveness-violating, extra probe repair strategy like there is with Béjar & Rezac (2009).

Even with Lochbihler's (2012) improved Cyclic Agree approach, problems arise when one examines ditransitive verbs. This is discussed in the next section.

4.2.2.3 Cyclic Agree and Ditransitives

While Lochbihler's (2012) Cyclic Agree proposal repairs many of the issues I identified in Béjar & Rezac (2009), neither analysis can readily account for the agreement morphology of ditransitive applicatives, discussed in 2.2.3. In Ojibwe, the Goal is projected above the Theme in applicative ditransitives, such that agreement with the Goal blocks agreement with the Theme.

In Section 3.2.6.1, Example (51), I proposed the following ditransitive structure, repeated below.



For both Béjar & Rezac (2009) and Lochbihler (2012), according to Cyclic Agree, the articulated v probe searches down through its complement for a matching goal, and only when it cannot find one does it search up into its specifier. This means that with both the Goal and the Theme in the complement of v , the articulated v probe should be able to Agree with both of them before searching up into its specifier to Agree with the external argument.

Clearly, this is not what happens. An Ojibwe ditransitive is always a VTA verb showing agreement morphology for only one internal argument (Valentine, 2001, p. 136).

One way to repair this problem is to stipulate, as Hamilton (2014) does, that Cyclic Agree only looks down one level into the complement, i.e. v cannot Agree with the Theme because it is too far away. Why would this be the case? This seems to me to be an unusual and theoretically undesirable locality condition.

Further, I have argued, as Hirose (2001) does for Plains Cree, that Ojibwe di-

transitives contain more than one vP . I have also shown that Ojibwe contains other multiple vP structures. Any Cyclic Agree analysis is going to run into problems with multiple vPs , even if one assumes, for example, that only transitive v contained an articulated probe. A ditransitive structure contains two transitive vPs , only one of which shows agreement morphology. Thus, it must be stipulated somehow, that only one of the v heads in a ditransitive structure may host an articulated π feature probe, but with no explanation for why that might be the case.

Finally, in the structures I have argued for, all arguments appear above v , i.e. in the specifier of v for internal arguments, and the specifier of Voice for external arguments. This means that a probe on v can only probe upwards to find a goal, as no argument appears in the complement of v at all. The only exception is in the case of ditransitives, where the Theme is in the complement of the higher v , and a Goal or Agent (for applicatives and causatives respectively) is its specifier. However, as previously noted, the Theme of a ditransitive never shows up in agreement morphology, so it cannot be that Cyclic Agree is happening in this case.²

However, having said this, these final two arguments are negated by the arguing the external argument is introduced above v as a specifier of Voice. If it is an articulated Voice probe, rather than a v probe, problems arising from multiple v heads disappear, as each clause only has one Voice head. The issue still remains, however, as to why the probe doesn't continue to Agree downwards in ditransitive structures. It seems that upwards Agree should be an operation of last resort.

4.2.3 Oxford (2013) and Multiple Equi-distant Specifiers

Finally, Oxford (2013) develops a story for agreement in Proto-Algonquian, the reconstructed ancestor of the Algonquian language family. Oxford builds on insights provided by Bruening (2005) and Béjar & Rezac (2009).

²For further argumentation against Cyclic Agree, especially for the Algonquian languages, see Fry (2015b).

According to Oxford, three of the four Proto-Algonquian theme signs, *-i*, *-eθ*, and *-a* (equivalent to Ojibwe *-i*, *-in*, and *-aa*, respectively), are object agreement. The fourth theme sign, *-ekw* (equivalent to Ojibwe *-igw*), indicates the inverse. Oxford further argues that object agreement theme signs are spelled out on Voice, and that the inverse theme sign appears on a different, higher head, Infl (Oxford, 2013, p. 62).

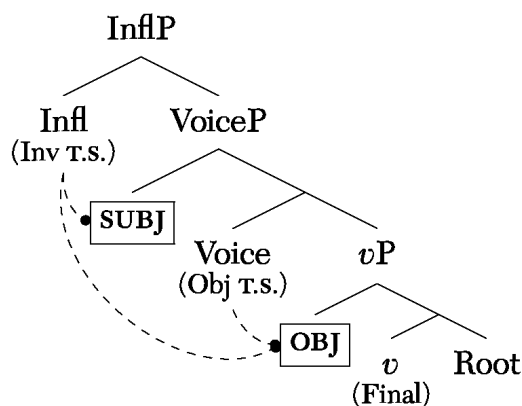


Figure 4.2: Positions of the Proto-Algonquian Theme Signs, from Oxford (2013, p. 100)

On Oxford’s (2013) account, the object is introduced by *v* as spec-*v*. The object probe is Voice, which also introduces the subject, as per Kratzer (1996). Therefore, object agreement is spelled out on Voice, and the subject is introduced as spec-Voice. As part of object agreement, there is an EPP feature that causes the object to move to an outer specifier of Voice. This renders the two specifiers of Voice, the subject and the object, equidistant for purposes of locality for all subsequent operations (Oxford, 2013, p. 102).

The inverse theme sign, when it appears, is spelled out on a head above Voice, which Oxford, following Bruening (2005), labels simply as Infl. This Infl head carries an articulated phi-probe, like the articulated *v* probe of Béjar & Rezac (2009). This probe will agree with whichever argument best matches its features. Because

multiple specifiers are equidistant, this could be either the subject, or the object (Oxford, 2013, p. 104).

Because of the equidistance of multiple specifiers, it is possible for the object to agree twice, once with Voice, and once with Infl. It is not the case that both Voice and Infl will be spelled out. Rather, spell-out is complementary depending on what Infl agrees with (Oxford, 2013, p. 112).

In derivations containing two speech act participants, Infl will agree with both the subject and the object, as both will have an equally complex feature set. Voice, once again, agrees with the object, and an object theme sign is spelled out. In direct non-local forms, Infl will agree with the subject, Voice will agree with the object, and one of the object theme signs will be spelled out. In inverse non-local forms, Infl and Voice will both agree with the object and the subject will remain unagreed with. Following Preminger (2009a), failure to agree does not immediately cause the derivation to crash. In these cases, Voice and Infl have the same set of person features; Voice is null, but the inverse theme sign is spelled out on Infl (Oxford, 2013, p. 112).

Oxford (2013) continues his analysis with a morpheme called the formative that is spelled out on T. There may be residual phonological effects resulting from this formative morpheme, but it does not appear to have any impact on Ojibwe syntax. The important thing for the analysis of agreement, is Oxford's (2013) argument that the rest of the agreement system, the pronominal prefix and two agreement suffixes (for plural and obviative agreement), are tied to T and Infl. Specifically, the prefix and inner (plural) suffix always agree with the same argument as Infl, and the outer (3rd person obviative/plural) suffix always agrees with the same argument as T (Oxford, 2013, p. 180). Rather than probes themselves, the prefix and suffixes are post-syntactically generated case-tracking morphemes (Oxford, 2013, p. 188).

Thus, Oxford uses elements of both Bruening's (2005) and Béjar & Rezac's (2009)

work to build an analysis of agreement in Proto-Algonquian. In Oxford's (2013) analysis, the inverse is not a marked case. His analysis has fewer problems with ditransitives and other multiple *vP* structures. On the other hand, despite these advances, I believe Oxford's (2013) analysis still has some outstanding issues. Namely, I will argue in § 4.3.1 that all of the theme signs are portmanteau morphemes; I disagree with Oxford's (2013) characterisation of the theme signs as mostly being object agreement. Also, while it may be the case in Proto-Algonquian that the non-local inverse theme sign occupies a different place in the structure than the other theme signs, I find no indication that this is the case in Ojibwe. Finally, using a reconstructed language as a basis of analysis seems like a peculiar choice, as one is unable to test theories against actual speaker data in the language.

The crucial insight from Oxford (2013) that I have incorporated into my analysis, is the notion that the internal argument moves up to an outer specifier of Voice, with the external argument as an inner specifier. The movement of the object to a specifier of Voice allows the possibility for agreement to happen equally with the subject and with the object. Unlike earlier proposals (e.g. Bruening 2005), where movement only occurred in the inverse, this movement of the object to spec-VoiceP occurs in both the direct and the inverse. Thus, it is less problematic than the earlier proposals.

4.3 The Syntax of Transitive Agreement

The previous proposals have all helped expand the understanding of the Algonquian direct/inverse system. However, I believe said proposals can still be improved upon. I therefore propose my own analysis of agreement and the direct/inverse system in Ojibwe. My analysis accounts for the independent indicative forms in all four agreement paradigms, and does not encounter problems with multiple-*vP* structures. In Chapter 5, I will give a complementary analysis of the semantics of agreement in

Ojibwe, which to my knowledge, has not been done before.

4.3.1 Multiple Equidistant Specifiers and Portmanteau Agreement

Starting from the bottom of the tree, the verb initial is the acategorical root of Distributed Morphology, and *v* is spelled out as the verb final, as I discussed previously in § 3.2. The verb final defines the type of verb, i.e. transitive or intransitive. A number of other authors have also equated the verb final in various Algonquian languages with *v* (Hirose, 2001; Brittain, 2003; Mathieu, 2006; Ritter & Rosen, 2010; Slavin, 2012; Oxford, 2013; Mathieu, 2014).

Like Hirose (2001) proposes for Plains Cree and Oxford (2013) proposes for Proto-Algonquian, I analyse the internal argument as being introduced in the specifier of *v*. This was discussed in § 3.2.1. Example (94) shows the derivation for *vP*.

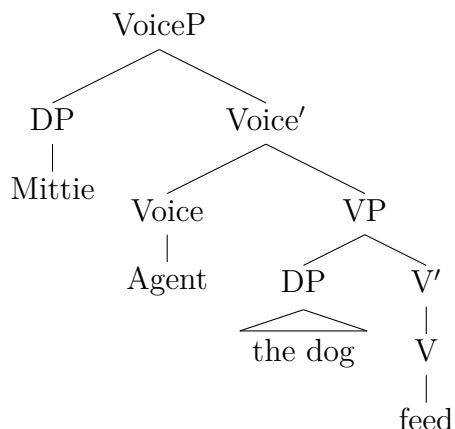


Continuing up the tree, I follow Kratzer (1996) in positing a Voice head, whose sole function is to introduce the subject. Voice in Ojibwe is null and appears directly above *vP*. This is discussed in more detail in § 5.1.1. Chomsky (2001, p. 12) identifies *v* as the head of a phase, and *v* and Voice have sometimes been used interchangeably. As my analysis requires both *v* and Voice, I assume it is Voice, rather than *v*, which is the head of the phase in Ojibwe (this will be important later).

Example (95) shows Kratzer's (1996) original proposal for the syntax of Voice.

(95)

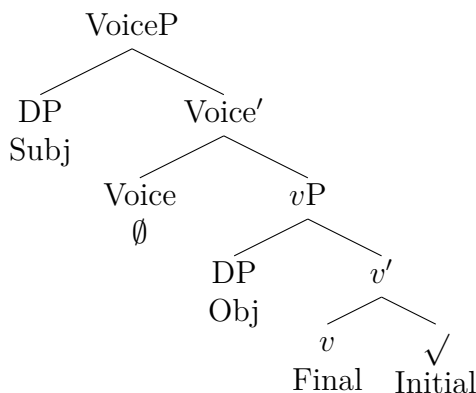
(English)



(Kratzer, 1996, p. 121)

Like Oxford's (2013) analysis for Proto-Algonquian, I analyse Ojibwe as having both *v* and a separate Voice head. For Oxford, Voice hosts an agreement probe, and also introduces the external argument in spec-Voice. Previous to Oxford's (2013) work, Hirose (2001) analyses Plains Cree as having more than one *v*P, based on a modification of the Theta Criterion. Hirose's (2001) highest *v* is functionally equivalent to Kratzer's (1996) Voice.

(96)

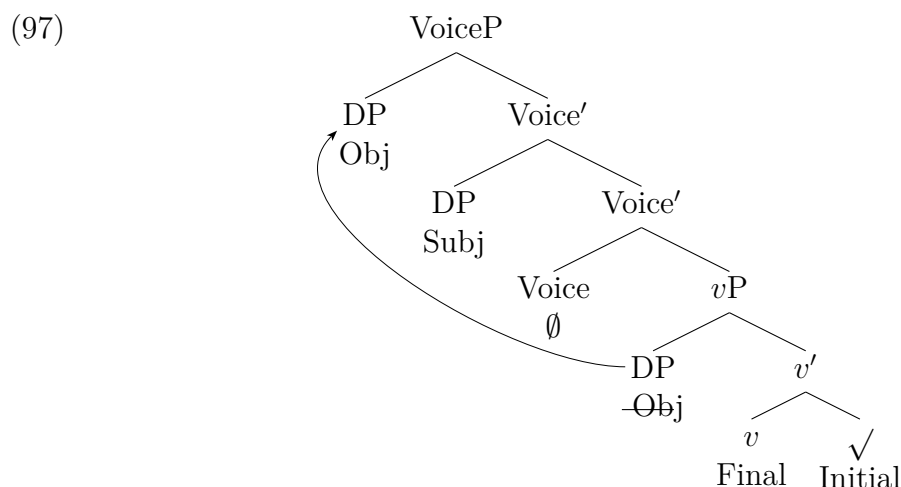


Example (96) illustrates the derivation of VoiceP in Ojibwe.

Under Kratzer's (1996) original proposal, Voice is also the place where accusative Case is checked. Ojibwe does not have morphological case, and does not appear to have syntactic Case, either. Lochbihler's (2012) work (based partially on, for example, Ritter & Rosen's (2005) and Ritter & Wiltschko's (2014) arguments for

Blackfoot) argues for such a lack of Case in Ojibwe. Lochbihler argues that the lack of a true passive, and of ECM in Ojibwe indicate a lack of Case, and instead proposes a broader Person Licensing Constraint (Lochbihler, 2012, pp. 152-168).³ I find Lochbihler's (2012) arguments for a lack of Case in Ojibwe to be well-founded, and therefore, treat Ojibwe as not having Case in this thesis.

Therefore, in Ojibwe, Voice is not the locus of accusative Case. This means there is nowhere in the VoiceP for the object to Agree. Consequently, the object must move to the outer specifier of VoiceP, the phase edge, so that it can still be seen by the syntax and Agree in the next phase (the CP phase). The movement of the object is shown in Example (97).



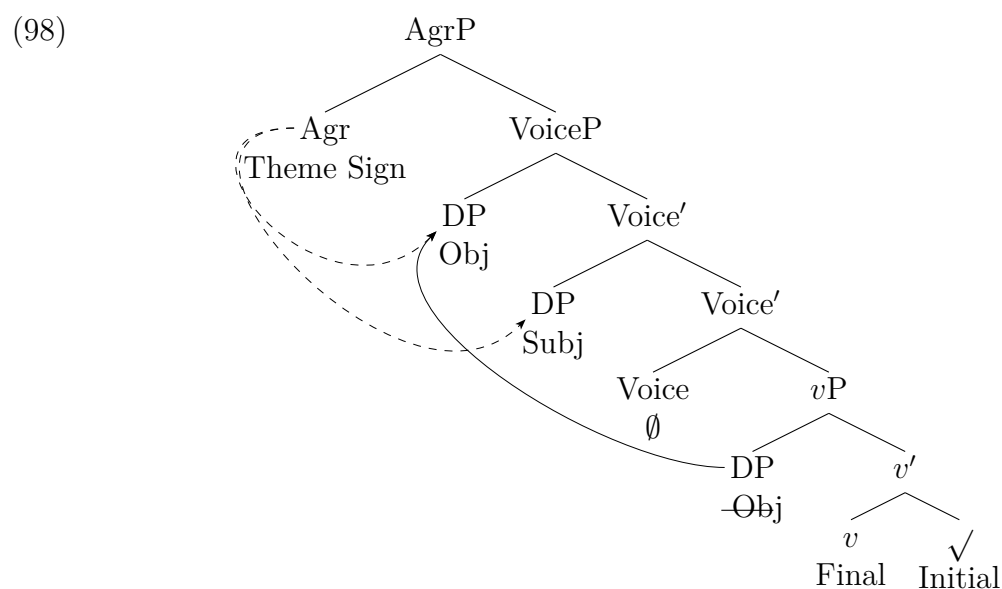
As per Chomsky, multiple specifiers of the same head are assumed to be equidistant from the head. This is the equidistance principle, “[t]erms of the edge of HP are equidistant from probe P” (Chomsky, 2001, p. 27). Thus, at this stage in the derivation, the subject and the object are both equally local to Voice, and equally local goals for any higher probe looking to Agree with them.

On my view, theme signs do not introduce an Agent; therefore, they are not

³The system of obviation has a similar function to Case in that it tracks different 3rd persons. Proximates also show syntactic features, such as displaying subject-like properties, and a restriction of one per clause. In this way, obviation provides an alternative to Case in Ojibwe.

spelled out on Voice. Rather, the theme signs appear on a functional head above VoiceP. The theme signs are portmanteau morphemes that encode information about the person of the subject and object. Therefore, I label this head as Agreement (Agr).

Agr probes down and finds two equidistant goals, the subject and the object, which are both now specifiers of Voice. This probe will Agree with both the subject and the object, as shown in Example (98).



Multiple Agree was originally proposed by Hiraiwa (2001). According to Hiraiwa, a head bearing a feature [+multiple] may Agree with multiple goals. It will probe down and find the first goal, but instead of Agreeing immediately, it will continue to probe down and find any other matching goals in its accessible domain. Once all matching goals have been found, the head will Agree with all of them simultaneously; this is not multiple instances of Agree, but one operation of Agree happening to multiple goals at once (Hiraiwa, 2001). Thus the Agr probe will Agree with two goals, the subject and the object, being the two equidistant specifiers of Voice. The probe cannot search further, as it has reached the edge of the current phase.

The choice of theme signs is, therefore, not a result of a topicality hierarchy. At

Vocabulary Insertion, the spell-out of the theme sign on Agr is determined by which two arguments have been agreed with. This is demonstrated in Table 4.1. The spell-out of the non-local theme signs does display homophony; however, this sort of thing is not uncommon in the conjugations of verbs, or declensions of nouns across the world’s languages.

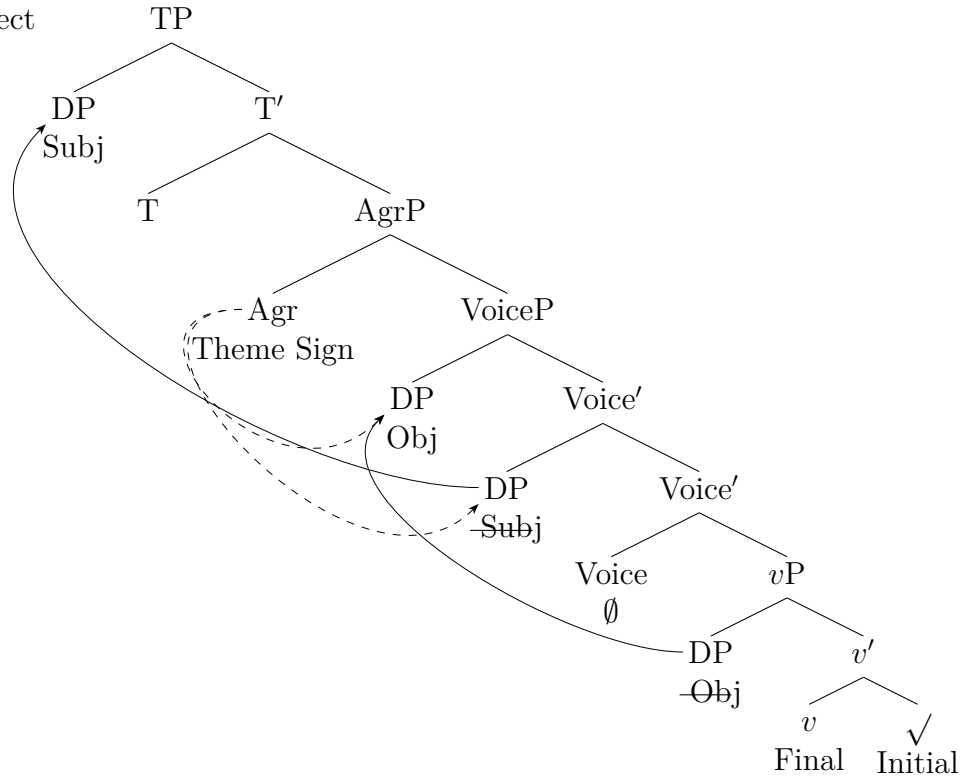
Subject	Object	Theme Sign Inserted
1	2	<i>-in</i>
1	3	<i>-aa</i>
2	1	<i>-i</i>
2	3	<i>-aa</i>
3	1	<i>-igw</i>
3	2	<i>-igw</i>
3	3'	<i>-aa</i>
3'	3	<i>-igw</i>

Table 4.1: Vocabulary Insertion of Theme Signs

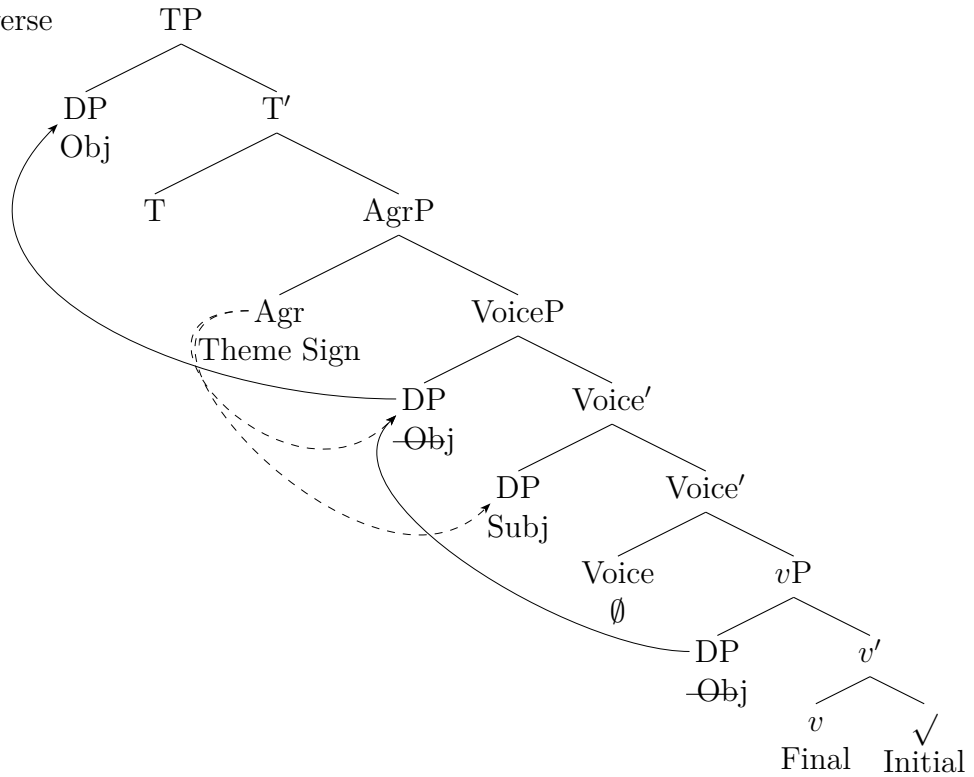
Finally, in the syntactic derivation, there is an EPP feature on T that dictates that the specifier of T must be filled, which causes one of the arguments to move up to spec-T. This is the same EPP feature found in more well-known languages like English. However, given that the subject and the object are equally local to T, the EPP cannot use locality to choose between them, as it does in English and other languages. This is where the topicality hierarchy comes into play; it is the highest argument on the hierarchy that will move to fill spec-T, which will be the subject in direct sentences, but the object in inverse ones.⁴ As illustrated in Example (99), the subject moves in the direct, and the object in the inverse.

⁴There are a couple possibilities for exactly what is going on here. It may be that in this case the topicality hierarchy is a syntactic primitive. It may be that the semantics plays a role; speech act participants are uncontroversially assumed to be more salient than non speech act participants. Or this may be where Béjar & Rezac’s (2009) articulated probe comes into play, where 2nd person has the most specified set of features, and 3rd person has the least specified set, and so the argument with the most highly specified set of features is moved to spec-T.

(99) a. Direct



b. Inverse



In this way, verbal agreement is derived in the syntax. As such, verbal agreement does not require the inverse to be a marked case, and does not require any counter-

cyclic operations like Cyclic Agree.

In the next section, I discuss the obviation and inanimacy agreement suffixes.

4.3.2 Other Agreement Suffixes

There are two other suffixes which need to be discussed in relation to the agreement morphology. These are the obviation suffix *-an* (§ 2.3.3), and inanimacy suffix *-n* (§ 2.3.4). Both of these suffixes come after the theme sign agreement. Both suffixes are unusual, in that a single suffix may be used for either the subject, or the object depending on context, as illustrated in the example below, repeated from § 2.3.3.

- (100) (Ojibwe)
- | | |
|------------------------------|-------------------------------|
| a. <i>Wwaabmaan.</i> | b. <i>Wwaabmigoon.</i> |
| o- waab -am -aa -an | o- waab -am -igw -an |
| 3- see -VTA -3>3' -3' | 3- see -VTA -3' >3 -3' |
| “He/she sees him/her(OBV).” | “He/she(OBV) sees him/her.” |
| | (Valentine, 2001, p. 287) |

As this example shows, the obviation suffix (bolded) is the same in both sentences. In (100a), the object is obviative, but in (100b), the subject is obviative. In this case, the theme sign identifies which argument the obviation suffix refers to.

The same thing holds for the inanimacy suffix, except that it occurs in different verb paradigms. The inanimacy suffix is bolded in the following example.

- (101) (Ojibwe)
- | | |
|----------------------------|---------------------------|
| a. <i>Wwaabmigon.</i> | b. <i>Wwaabndaan.</i> |
| o- waab -am -igw -n | o- waab -and.am -n |
| 3- see -VTA -0>3 -0 | 3- see -VTI.∅ -0 |
| “It sees him/her. | “He/she sees it.” |
| (Valentine, 2001, p. 270) | (Valentine, 2001, p. 311) |

In the VTA paradigm, the inanimacy suffix shows up with inanimate subjects. This is indicated with the non-local inverse theme sign, along with the inanimacy suffix. This suffix also shows up in the VTI and VII paradigms. In VTIs, the inanimacy suffix refers to the object rather than the subject. This information is relayed by the verb final; a transitive inanimate verb always has an inanimate object and an animate subject. Based on similarity of form and place in linear order, I conclude that the same inanimacy suffix shows up in the agreement paradigms of VTA, VTI, and VII verbs.

Thus, both the obviation suffix and the inanimacy suffix only indicate that one argument is obviative or inanimate, respectively, but not which argument that is.

What we can gather from the aforementioned facts, is that like the choice of pronominal proclitic, these two suffixes are not affected by argument structure. That is to say, the introduction of the subject does not block these suffixes from referencing the object. From this, I conclude that as with the theme signs and pronominal proclitics, these suffixes must be introduced above Voice.

In fact, I would like to suggest that the obviation and inanimacy suffixes are not syntactic at all. Rather, I turn to Distributed Morphology for the answer. In my analysis, the suffixes are an instance of a post-syntactic fission operation, like that described in Embick & Noyer (2007, p. 314). My analysis also draws on Oxford's (2013) analysis of T agreement in Proto-Algonquian (p. 190). In my analysis, all the features of the subject and object are contained on the Agr node in the narrow syntax. As a post-syntactic operation, any obviative or inanimate feature on Agr is fissioned off to its own node for spell-out at the phonological interface.

At first glance, this appears to be a fairly powerful fission operation. The inanimate and obviative morphemes show up in separate places from the Agr node from which they are fissioned. However, I would contend that this is a wholly morphologic operation. The fissioned nodes are slotted into their place in morphological order at

spell-out, apart from syntax.

This also aligns well with the semantic analysis I give in the next chapter (§ 5.2.4 for the obviative suffix, and § 5.3 for the inanimacy suffix). Briefly, I analyse these two suffixes as spelling out a pronominal presupposition that modifies the subject or object, denoting that the argument is less salient. Other pronominal presuppositions, e.g. if the argument is an individual (singular) or more salient (proximate), are not spelled out as their own individual heads.

Although I have not examined this process in depth, as it is beyond the scope of this thesis, it seems the spell-out of plural morphology in Ojibwe may also be the result of a post-syntactic fission process.

In the next section, I will discuss how verbal agreement is derived in clauses containing more than one *vP*.

4.3.3 Multiple *vP* Structures

While my analysis derives agreement for simple transitive clauses, the question of what happens in multiple *vP* clauses still remains. We saw in § 2.2.3, that while a ditransitive has three arguments, only two are ever spelled out morphologically on the verb as Example (102) illustrates. The subject, “that woman”, and the indirect object, “me”, are indexed on the verb, shown in bold-face. However, the direct object, “a shirt”, is not indexed on the verb at all.

(102)

(Ojibwe)

Aw kwe ndazhtamaag nbabgiwayaan.

aw ikwe **nid-** azhi -it -amaw **-igw** ni-
that.DEM.3.SG woman.AN **1-** make -cause.VTI -for.X.VTA **-3>1** 1.POSS-
babagiwayaan
shirt.IN

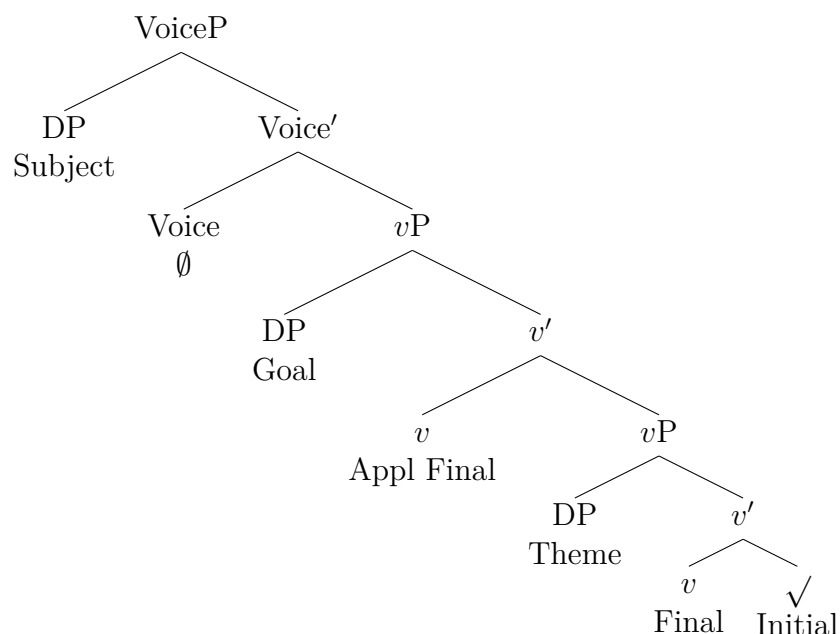
“That woman is making me a shirt.”

(Valentine, 2001, p. 700)

In the previous section, I argued that the object of a transitive verb does not Agree in the verbal domain, but moves up to an outer specifier of Voice, so that it can Agree in the next phase. In a ditransitive sentence, what stops the probe on Agr from Agreeing with all three arguments?

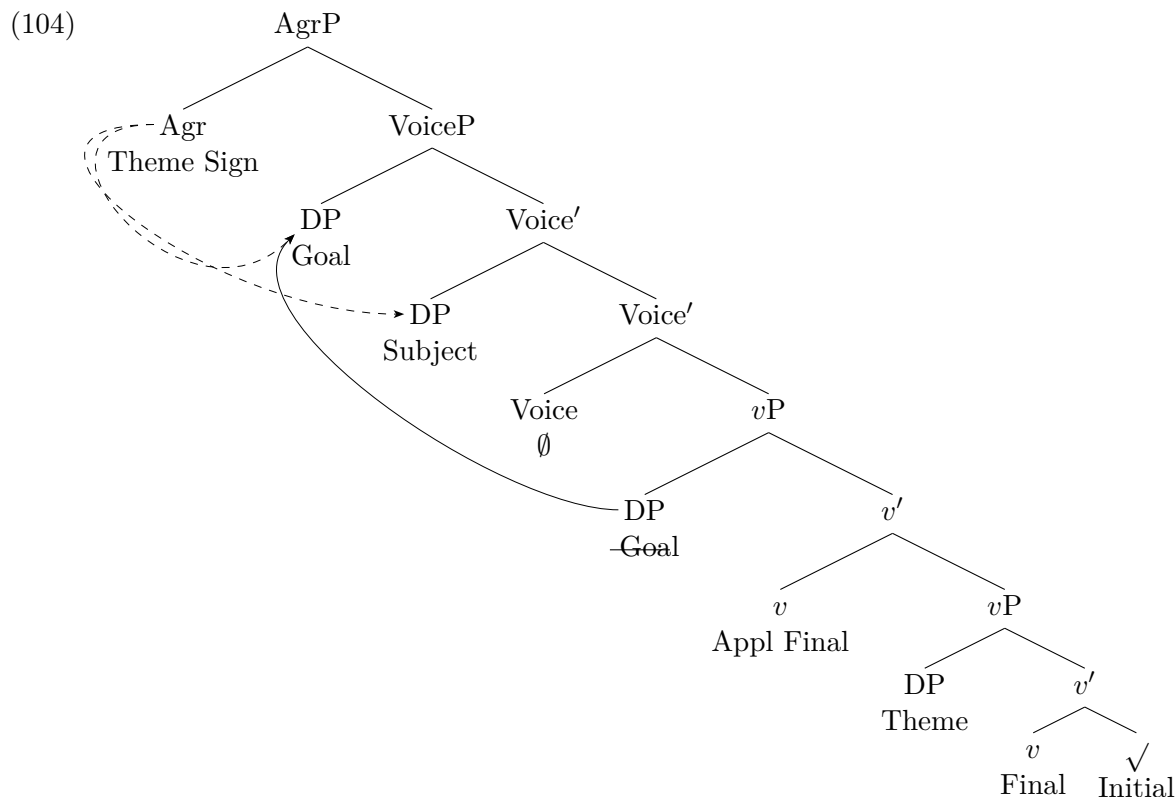
Before I give my analysis of agreement, here is the structure for applicatives that I proposed in § 3.2.6.1, repeated below.

(103)



I propose that the addition of a second *v* blocks the specifier of the first *v* from moving up to spec-Voice. That is to say, no argument can move past a *v* to reach

spec-Voice. In any case of a multiple *vP* structure, only the specifier of the highest *v* can move up to spec-Voice to take part in Agree.



Like Oxford (2013), I follow Preminger (2009b) in assuming that a lack of Agree does not cause the derivation to crash. Agree is not optional however. Features must attempt to Agree, but if Agree fails, it is important to note that the derivation does not crash. In the case of Ojibwe, higher *vP*s prevent the arguments of lower *vP*s from moving to the edge of the VoiceP phase for the purpose of Agreement, but this does not cause the derivation to crash.

In the next section, I analyse the syntax of intransitive verbal agreement.

4.4 The Syntax of Intransitive Agreement

In this section, I analyse verbal agreement syntax in intransitive verbs. Section 4.4.1 examines unergative verbs, and § 4.4.2 examines unaccusative verbs.

4.4.1 Agreement in Unergative Verbs

I argue in § 3.2.3 that unergatives are two-place predicates, and that they have the following form:

(105) (Ojibwe)

a. *Boodwewag.*

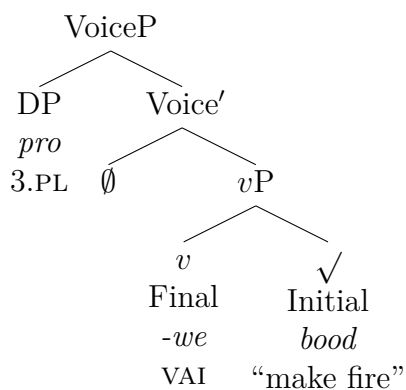
bood -we -wag

make.fire -VAI -3.PL

“They make fire.”

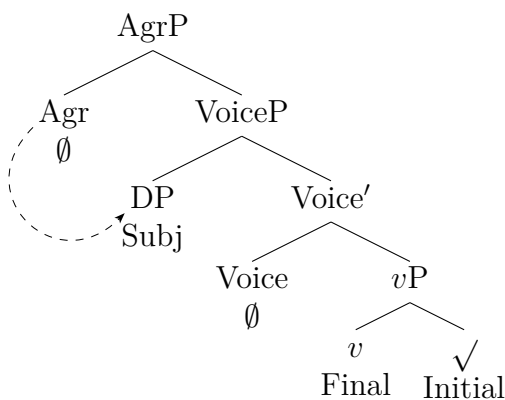
(Valentine, 2001, p. 233)

b.



As such, they are treated exactly like other transitive verbs. AgrP is built on top of VoiceP, and the argument in spec-Voice agrees with Agr.

(106)



There is no spell-out of Agr, in this case. I assume this is because there is no portmanteau agreement in intransitive sentences.⁵ Even unergatives, while underlyingly transitive, only spell-out one argument. Agr is, therefore, only agreeing with one argument.

The obviative and inanimate suffixes still show up on intransitive verbs, showing that Agr is still present, given that these suffixes are fissioned from the Agr node.

As I discussed in § 3.2.4, one of the pieces of evidence for the transitivity of unergative verbs in Ojibwe comes from VAI+Os. The following is an example of a VAI+O, repeated from Example (40).

(107) (Ojibwe)

Wmiigwenan.

o- miig -iwe -nan

3- give -VAI 0.PL

“He/she gives them away.”

(Valentine, 2001, p. 244)

Like other transitives, AI+O verbs have portmanteau agreement with both arguments in Agr. However, unlike agreement in VTAs, Agr remains phonologically null, a result of AI+O verbs having intransitive morphology. The effect of agreement on Agr is shown by morphemes that I have previously established in § 4.3.2, are fissioned from Agr post-syntactically. The “extra” argument in VAI+Os is indicated using the inanimacy suffix (though in this particular case, it is used to indicate animate third persons as well).

Finally, in the next section, I turn to agreement in unaccusative verbs, the simplest agreement case in Ojibwe.

⁵Except in VAI+O verbs, discussed next.

4.4.2 Agreement in Unaccusative Verbs

I argued in Section 3.2.2 that unaccusative verbs have no VoiceP layer. This is shown in Example (108), repeated from Example (35).

(108) a. (Ojibwe)

Mchaani.

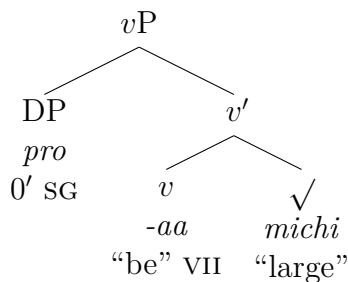
michi -aa -ini

large -be.VII -0'.SG

“It(OBV) is large.”

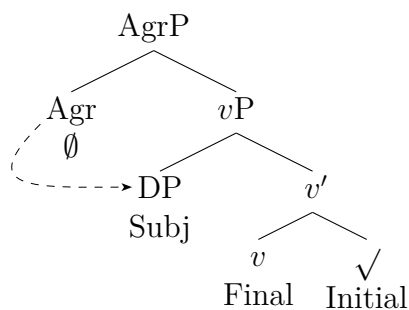
(Valentine, 2001, p. 256)

b.



Because there is only one argument in spec-*v* and no VoiceP, there is no movement to the phase edge at spec-Voice. Rather than Voice, *v*P is the phase edge.

(109)



The object in spec-*v* does not move, but will agree with Agr directly.

Thus, the same analysis that accounts for the complex direct/inverse agreement morphology of TA verbs also accounts for the simpler agreement morphology of intransitive verbs.

4.5 Conclusion

In this chapter, I examined the syntax of verbal agreement in Ojibwe. Ojibwe verbal agreement morphology is complex, and a number of previous accounts have been proposed to account for it (e.g. Bruening 2005; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013). I started this chapter by discussing these previous proposals in § 4.2, and demonstrating that they run into difficulty with multiple *v*P structures. Oxford’s (2013) work (§ 4.2.3) comes closest, and I built on his proposal to account for Ojibwe verbal agreement. In Section 4.3, I proceeded to give my own analysis of the syntax of verbal agreement that addresses the concerns I raised about the previous accounts.

I argued, in § 4.3, that Voice (Kratzer, 1996) is the phase edge, and that verbal agreement occurs on a head above this. Agree happens simultaneously with both arguments, and a portmanteau morpheme results. I discussed two other agreement suffixes in § 4.3.2, and argued that they are the result of a post-syntactic fission operation (Embick & Noyer, 2007, p. 314). In § 4.3.3, I applied my analysis to multiple *v*P structures. Only the argument in the highest spec-*v* can agree with the theme sign. As a result, applicatives show agreement with the Goal rather than the Theme. I finished this chapter with a discussion of agreement in the intransitive verb paradigms in §4.4.

Now that I have detailed the syntax of verbal agreement, in the next chapter, I move on to discuss the effects of verbal agreement in the domain of semantics. After sharing some useful theoretical background in § 5.1.1, I begin my semantic analysis with an examination of animate arguments in § 5.2. I give denotations for pronouns, theme signs, and obviation, and conclude that the theme sign encodes a salience relationship between two arguments. In § 5.3, I move on to the denotation of inanimate arguments. Next, I tackle the semantics of ditransitives in § 5.4. In order to account for the denotation of theme signs with applicatives, I suggest

that the semantics makes use of syntactic features, thereby allowing the theme sign to reference the Goal in applicatives, but the Theme in other types of transitive clauses. Finally, § 5.5 completes the account by examining the semantics of animate intransitive agreement.

Chapter 5

The Semantics of Agreement

5.1 Introduction

In this chapter, I take a different approach and turn to the semantics of agreement, in order to complete my examination of the verbal domain and answer my final research question. What is happening in the semantics when agreement takes place? While much has been written on the syntax of agreement in Ojibwe, the semantics has been left relatively unstudied. Therefore, in this chapter, I argue for a different, but complementary semantic analysis for agreement. This type of analysis has its start with Heim & Kratzer (1998) and their analysis of pronominal features. While I do believe semantic and syntactic analyses of features should ideally be unified, as in, for example, Heim (2008), that is not what the analysis in this thesis sets out to do. I am hopeful, however, that the ideas presented here may prove useful for building such a unified feature analysis for Ojibwe in the future.

Section 5.1.1 introduces the semantics of arguments separate from their verb, based on the work of Kratzer (1996). This is one of the ways in which the syntax and semantics parallel each other; Voice and *v* are as necessary for the semantics as they are for the syntax.

I discuss the denotation of animate arguments and agreement in § 5.2. Section 5.2.1 looks at the denotations of pronominal forms. I discuss the two sets of theme signs in § 5.2.2 (when both arguments are participants), and § 5.2.3 (when one or more arguments are non-participants). While my proposal assumes speech act participants are always more salient than non-participants, in § 5.2.4, I show that obviation modifies a third person argument to mark it as less salient. I show that the theme sign puts constraints on argument structure based on the saliency of the arguments to the discourse.

Next, I tackle the denotation of inanimate arguments in § 5.3. Inanimacy is a grammatical gender in Ojibwe, rather than a semantic feature. However, I discuss a suffix used to mark inanimate arguments, and show that it has the same denotation as the obviative suffix for the purpose of marking the salience relationship between arguments.

In § 5.4, I propose that instead of referring only to semantic roles, the denotation of the theme signs refer to bundles of syntactic features. In this way, the theme sign will impose conditions on the two highest DPs in a sentence, regardless of their semantic roles. This lets the same denotation target the Theme in monotransitive sentences, and the Goal in applicative sentences. Thus, in my analysis, the syntax and semantics of Ojibwe parallel each other, with the semantics building on the syntactic structure.

Finally, in § 5.5, I examine the semantics of animate intransitive verbs. While at first appearing simple, it turns out that the same suffix used for inanimate third persons may also be used with animate third persons in this specific case. I propose a way to account for this based on the idea that this suffix marks an argument as less salient.

5.1.1 Kratzer's (1996) Voice Head

An important piece of theoretical background for the semantics in this section is Kratzer's (1996) influential proposal about argument structure. Building on work by Marantz (1984) and Hale & Keyser (1993), Kratzer proposes that the external argument of a verb is truly external from that verb. That is to say, she argues that the external argument is not a part of *v*P at all. Instead, the external argument is the specifier of a head above *v*P that Kratzer labels Voice. Voice introduces the external argument and assigns accusative case to the internal argument. Ojibwe, however, does not display any Case features, as discussed in § 2.3, so the Case-assigning function of Voice is not applicable here.

Marantz (1997) proposes a similar idea. However, he distinguishes between a *v* that introduces an Agent, and a *v* that does not, rather than positing a separate Voice head. Folli & Harley (2005) offer a similar flavours-of-*v* analysis for causatives, proposing that *v* is a light verb that introduces the external argument, and may specify whether the causer must be an animate Agent or not. I analyse *v* as introducing an internal argument rather than an external one in Ojibwe. While there are different “flavours” of *v* in Ojibwe, depending on what internal argument they introduce, or none at all for detransitivisers, all *vs* appear under Voice.

According to Kratzer, then, a verb consists of an event and its internal arguments, but not its external argument. This captures both the observed asymmetries between subjects and objects and the selectional restrictions that verbs may place on objects, but not subjects (Kratzer, 1996).

The Voice head would then have the following denotation, with the purpose of introducing the external argument.

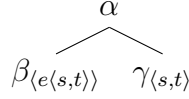
$$(110) \quad \lambda x . \lambda e . x \text{ is the Agent of } e \quad (\text{Kratzer, 1996, p. 121})$$

Semantically, Voice combines with *v*P using Event Identification. Event Identi-

fication takes a function of type $\langle e\langle s,t \rangle \rangle$ and a function of type $\langle s,t \rangle$, and outputs a function of type $\langle e\langle s,t \rangle \rangle$, as shown in Example (111).

(111) Event Identification

Where:



Then: $\llbracket \alpha \rrbracket = \lambda x_e . \lambda e_s . \llbracket \beta \rrbracket(x)(e) = 1$ and $\llbracket \gamma \rrbracket(e) = 1$
(adapted from Kratzer 1996, p. 122)

This rule lets us add conditions to the event argument, in this case, the addition of the external argument. The same Event Identification rule was also used to introduce the Goal argument of applicatives in Section 3.3.2.4.

As I will detail below, structures using a Voice head (or equivalent) have been proposed for Algonquian languages before.

Hirose (2001) proposes multiple *vP* structures for verbs in Plains Cree, where each *vP* has an argument in its specifier. On Hirose's (2001) view, the external argument is the specifier of the highest *vP* (for verbs that have an external argument). Hirose refers to them all as *vP*, but the highest argument-introducing head can readily be equated to Kratzer's (1996) VoiceP. Hirose proposes this structure as a modification to the Theta Criterion (Chomsky, 1981), whereby instead of every argument bearing one and only one theta role, every *v* introduces one and only one theta role feature, and each theta role feature can appear on only one *v* within the derivation (Hirose, 2001, p. 19). Following Hale & Keyser (1993), Hirose claims that *vP* structure makes up predicates, and that argument structure is *vP* structure.

According to Hirose (2001), a ROOT in Plains Cree is not a full predicate, just as I have shown for Ojibwe. A ROOT must be combined with at least one *vP* to make a full predicate. For Hirose, the ROOT encodes conceptual content, and *v* encodes valency, both of which are required to make a full predicate (Hirose, 2001, p. 13).¹

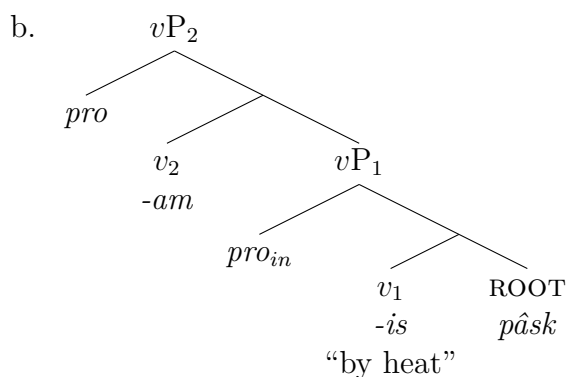
¹The third property required to form a full predicate is τ , temporality, located on v_1 , the *v*

(112)

(Plains Cree)

- a. *pâskiskam(w)*
 pâsk -is -am -w
 shoot -by.heat -I.TH -3
 “s/he shoots it.”

(Hirose, 2001, p. 92)



(Hirose, 2001, p. 93)

As Example (112) shows, Hirose equates the Plains Cree verb final with *v*, as I do with the Ojibwe verb finals. Hirose derives the theme sign as *v*₂. In my view, Hirose’s (2001) highest *v*, *v*P₂, is equivalent to Kratzer’s (1996) Voice. In Hirose’s (2001) analysis, the theme sign is the spell-out of *v*₂/Voice. However, in my analysis, I have proposed that the theme sign in Ojibwe appears on an Agr head above Voice.

As discussed in § 4.2.1, Bruening, using data from Passamaquoddy, proposes derivations for transitive verbs that use Kratzer’s (1996) Voice head. In both the direct and the inverse, the subject is generated in spec-VoiceP. In the direct, the subject is Moved to spec-IP. In the inverse, there is an EPP feature on Voice that causes the object to move to spec-VoiceP above the subject, where the object then moves to spec-IP (Bruening, 2005). In this way, Bruening derives topicality hierarchy effects directly in the syntax.

Oxford (2013) also makes use of Kratzer’s (1996) VoiceP to explain agreement

head closest to ROOT (Hirose, 2001, p. 13); this aspect, however, is not relevant to my proposal, and I do not discuss it further.

morphology in Proto-Algonquian. This was discussed in Section 4.2.3. For Oxford, Voice hosts an agreement probe, and also introduces the external argument in spec-Voice.

On Oxford's (2013) view, the theme signs (except the non-local inverse theme sign, which he considers to be different) are derived as Voice heads. In my analysis, I propose that the theme signs are all portmanteau morphemes (as discussed in § 4.3.1) that appear on an Agreement head above VoiceP. Voice, itself, is a null morpheme whose sole purpose is to introduce the Agent. On my view, theme signs do not introduce an Agent; therefore, they are not spelled out as Voice heads.

In the following sections, I will discuss the denotation of the theme signs, and conclude that they express a saliency relationship between two arguments.

5.2 Denotation of Animate Arguments

The following sections lay out my account of the semantics of verbal agreement and theme signs. I start, however, with a discussion on the semantics of pronouns in the next section.

5.2.1 Pronouns

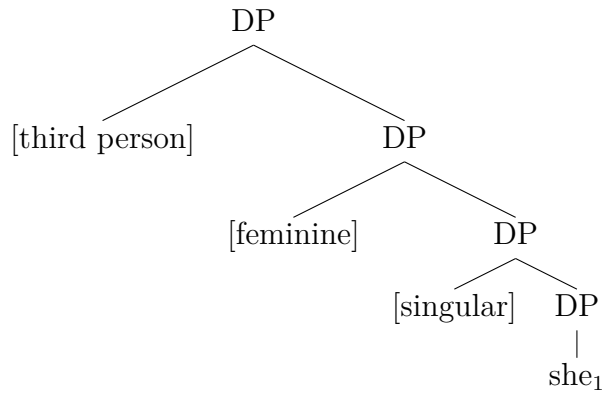
In this section, I will examine the semantics of pronouns. Pronouns in Ojibwe are often either phonologically null, or spelled out as a proclitic on the verb. Because Ojibwe is a pro-drop language, separate pronouns are rare. Overt pronouns are only used either in sentences without an overt verb (ellipsis or verbless constructions), or for emphasis, or focus (Valentine, 2001, p. 609).

For the purposes of this thesis, I assume that while one argument is spelled out as the pronominal clitic that appears at the beginning of the verb, all other pronouns are null. I further assume that all pronouns are interpreted in their base positions,

and that while the proclitic moves to fill that verb initial position, this movement is a purely syntactic phenomenon, and does not affect the semantic interpretation.

I will follow the proposal sketched in Heim & Kratzer (1998, p. 244) for the interpretation of pronouns. According to Heim & Kratzer, pronominal features are best treated as a set of presuppositions that are adjoined to the pronominal DP node (as in Example (113)).

(113) (English)

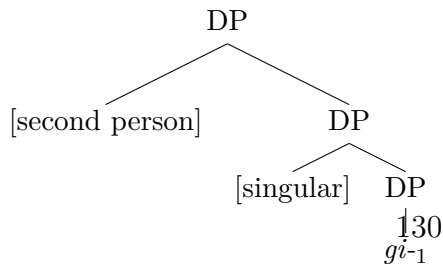


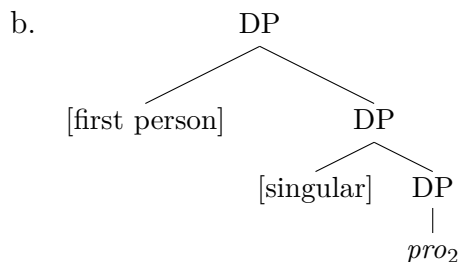
(Heim & Kratzer, 1998, p. 244)

Heim & Kratzer suggest pronominal presuppositions are partial functions that pick out entities that have the requisite feature. The pronominal DP is interpreted using the Pronouns and Traces Rule (Heim & Kratzer, 1998, p. 241), and the presuppositions are interpreted via Functional Application (Heim & Kratzer, 1998, p. 44).

Looking at Ojibwe, both of the local theme sign sentences have the same two pronouns, a 2nd person pronominal proclitic *gi-*, and a 1st person null *pro*. Using Heim & Kratzer's (1998) method, the pronouns that appear in the Ojibwe local sentences have a representation at logical form (LF) as follows:

(114) a. (Ojibwe)





Each of the items in square brackets in the above trees is a presupposition. As such, they are each a partial function from entities to entities, and have the denotations shown in the following example.

- (115) a. $\llbracket \textbf{second person} \rrbracket = \lambda x : x \text{ is the addressee} . x$
 b. $\llbracket \textbf{first person} \rrbracket = \lambda x : x \text{ is the speaker} . x$
 c. $\llbracket \textbf{singular} \rrbracket = \lambda x : x \text{ is an individual} . x$

A presupposition for obviation is also required for the denotation of third person pronouns, as I will discuss later in § 5.2.3.

5.2.2 Denotation of the Local Theme Signs

As demonstrated in § 2.3, verbal agreement consists of two parts, the proclitic, and the theme sign, that work together. With singular arguments, the local agreement inflection consists of only two forms, as shown in Example (116), repeated from Example (20). The local theme signs are used when both arguments are speech act participants, i.e. one argument is the speaker, and the other argument is the addressee.

- (116) (Ojibwe)
- | | |
|--|--|
| <p>a. Direct</p> <p><i>Gwaabam.</i></p> <p>gi- waab -am -i</p> <p>2- see -VTA -2>1</p> <p>“You(SG) see me.”</p> | <p>b. Inverse</p> <p><i>Gwaabmin.</i></p> <p>gi- waab -am -in</p> <p>2- see -VTA -1>2</p> <p>“I see you(SG).”</p> <p style="text-align: right;">(Valentine, 2001, p. 270)</p> |
|--|--|

Both the direct, and inverse forms have the same pronominal proclitic, *gi-*, 2nd person. With the direct theme sign, it is the Agent, and with the inverse theme sign, it is the Theme that is represented by said pronominal proclitic.

The local theme signs are the simplest set of data, as there are only two forms, 2nd person Agent with 1st person Theme, and 1st person Agent with 2nd person Theme (as shown in Example (116)). This makes them the ideal place to start when coming up with a denotation for the theme signs.

However, the denotations I propose in this section are only a first approximation. As we look at the data for the non-local theme signs in Section 5.2.3, and for ditransitives in § 5.4, we will see that the denotation of the theme signs will have to be changed in order to account for this data as well.

In all cases, the theme signs indicate the roles in which the pronouns should be interpreted, i.e. the roles of Agent and Theme in transitive sentences.² As such, the denotation of the theme signs needs to tell us which argument fills each semantic role. Therefore, I propose the denotations in Example (117) as a first approximation.

- (117) (Ojibwe)
- a. Local Direct

$\llbracket \mathbf{i} \rrbracket = \lambda e . \text{ the Agent of } e \text{ is the addressee \& the Theme of } e \text{ is the speaker}$

²For applicative ditransitive sentences, the theme signs denote the semantic roles of Agent and Goal; this will be explored in § 5.4.

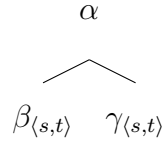
b. Local Inverse

$\llbracket \mathbf{in} \rrbracket = \lambda e$. the Agent of e is the speaker & the Theme of e is the addressee

Given my proposed denotations for the theme signs, they will be combined with VoiceP via Event Modification. Based on Predicate Modification (Heim & Kratzer, 1998, p. 65), the rule for Event Modification is as follows:

(118) Event Modification

Where:



Then: $\llbracket \alpha \rrbracket = \lambda e_s$. $\llbracket \beta \rrbracket(e) = 1$ and $\llbracket \gamma \rrbracket(e) = 1$

Semantically, the way in which the theme sign combines with the rest of the structure looks very adverbial. The theme sign modifies event argument structure by combining with VoiceP using Event Modification in the same way as a manner adverb does.³ While it is true that Event Modification is the rule of composition used with manner adverbs, this does not necessitate that only adverbs may make use of this rule. Syntactically, the theme signs are the spell-out of verbal agreement, while semantically, they have a modifying effect on the event structure.

There are also parallels between the denotation of the theme signs and the denotation of applicatives, or even the denotation of the Voice head, in that they all manipulate event argument structure. Ojibwe already has applicatives in the form of some of the verb finals that make transitive verbs into ditransitives. The syntax and semantics of applicatives in Ojibwe was discussed in Sections 3.2.6.1 and 3.3.2.4 respectively. Syntactically, the applicative verb finals appear in a different place in the derivation than the theme signs. Also, while they both modify event

³For more on adverbs, see, for example, Geuder (2000, p. 5).

structure, they do so in different ways, i.e. with different composition rules (Event Identification and Event Modification respectively).

The trees in Examples (119) and (120) assume a movement analysis of the pronominal prefix, i.e. that it is interpreted semantically in its base position, but moves up to spec-TP for syntactic reasons (namely, that T requires its specifier be filled). In the syntax, I assume that in both the direct and the inverse, the object moves up to the outer specifier of VoiceP, which results in two equidistant specifiers for the purposes of agreement with the theme sign (see § 4.3). The semantic representations here are a simplification; the movement of the object to the outer spec of Voice, and the proclitic to spec-TP are not shown.

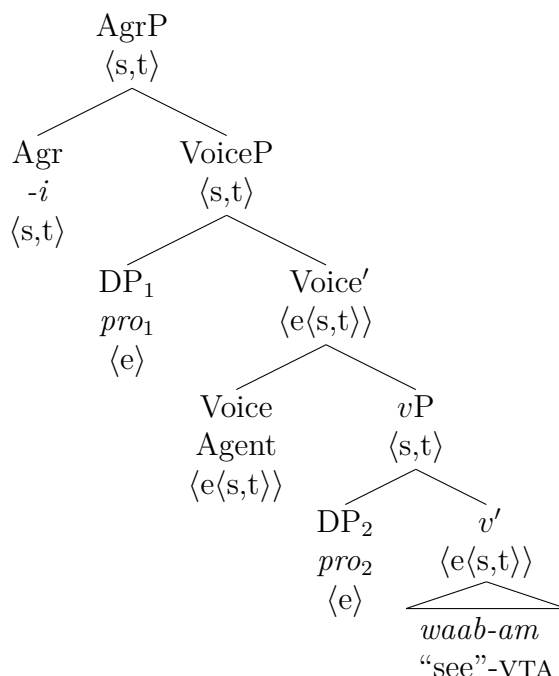
(119) (Ojibwe)

a. *Gwaabam.*

gi- waab -am **-i**
2- see -VTA **-2>1**
 “You see me.”

(Valentine, 2001, p. 270)

b.



Example (119), above, shows the LF representation for a local direct sentence, i.e. 2nd person Agent and 1st person Theme. Example (120) shows the LF representation for a local inverse sentence, i.e. 1st person Agent, and 2nd person Theme. The trees also show the semantic type of each node.

(120) (Ojibwe)

a. *Gwaabmin.*

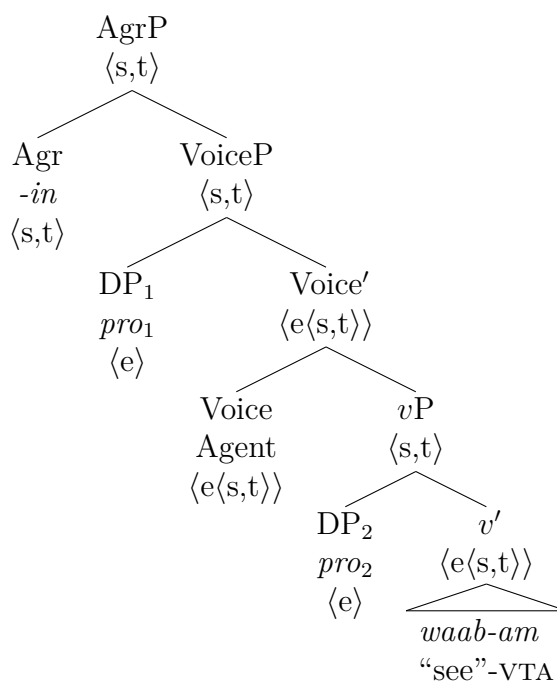
gi- waab -am **-in**

2- see -VTA **-1>2**

“I see you(SG).”

(Valentine, 2001, p. 270)

b.



The theme signs pick out the person of argument of the Agent, and of the Theme. In this way, the theme signs are very similar to the presuppositions on pronouns, in that pronominal presuppositions also select the kinds of arguments to which the pronoun refers. This parallel suggests a possible alternative analysis, wherein the theme signs are treated as pronominal presuppositions. With this alternative, the

theme signs would be interpreted as presuppositions on pronouns, just as features like number and gender are interpreted.

Semantic roles like Agent and Theme are properties of events, whereas pronouns are entities. Therefore, if the theme sign denotations are about semantic roles, in order to add them to the interpretation of pronouns, the pronouns would have to also be interpreted as properties of events, rather than as properties of entities. The denotations of pronouns would have to be completely changed. While a new semantics of pronouns could be developed, this would be a questionable move, given the current understanding of pronouns, and little would be gained from it.

Finally, there is another possible alternative analysis that needs to be considered. If there are only two possibilities, as there are with the local theme signs, then the denotation of said theme signs only needs to vary along one dimension, which could be either the argument of the Theme, or the argument of the Agent. Therefore, the theme sign would need to specify the features of only one argument, as in Example (121).

(121) (Ojibwe)

a. Local Direct

$\llbracket \mathbf{i} \rrbracket = \lambda e . \text{ the Agent of } e \text{ is the addressee}$

b. Local Inverse

$\llbracket \mathbf{in} \rrbracket = \lambda e . \text{ the Theme of } e \text{ is the addressee}$

This suggestion, however, must be rejected. Without specifying the features of both arguments, these denotations would overgenerate. There is nothing in these denotations preventing a third person Agent or Theme from appearing with one of the local theme signs, which Ojibwe does not, in fact, allow, as shown in Example (122)⁴ below.

⁴These examples have been constructed by the author, who is not a fluent Ojibwe speaker, based on the information in Valentine (2001, p. 287)

(122)

(Ojibwe)

a. * *Gwaabmi.*

gi- waab -am **-i**

2- see -VTA **-2>1**

(intended) “You(SG) see him/her.”

b. * *Gwaabmin.*

gi- waab -am **-in**

2- see -VTA **-1>2**

(intended) “He/she sees you(SG).”

(adapted from Valentine 2001, p. 287)

Specifying the semantic role, and features of both arguments in the denotation of the theme signs prevents this overgeneration from occurring.

5.2.3 Denotation of the Non-Local Theme Signs

Having come up with a possible interpretation for the local theme signs, I now turn to the non-local theme signs. These are more complicated as each theme sign may appear with either a first, second, or third person pronominal proclitic, as follows:

(123)

(Ojibwe)

a. *Nwaabmaa.*

ni- waab -am **-aa**

1- see -VTA **-1>3**

“I see him/her.”

b. *Nwaabmig.*

ni- waab -am **-ig**

1- see -VTA **-3>1**

“He/she sees me.”

(Valentine, 2001, p. 287)

(124) (Ojibwe)

- | | |
|---|--|
| <p>a. <i>Gwaabmaa.</i></p> <p>gi- waab -am -aa</p> <p>2- see -VTA -2>3</p> <p>“You(SG) see him/her.”</p> | <p>b. <i>Gwaabmig.</i></p> <p>gi- waab -am -ig</p> <p>2- see -VTA -3>2</p> <p>“He/she sees you(SG).”</p> <p>(Valentine, 2001, p. 287)</p> |
|---|--|

(125) (Ojibwe)

- | | |
|---|---|
| <p>a. <i>Wwaabmaan.</i></p> <p>o- waab -am -aa -an</p> <p>3- see -VTA -3>3' -3'</p> <p>“He/she sees him/her(OBV).”</p> | <p>b. <i>Wwaabmigan.</i></p> <p>o- waab -am -igw -an</p> <p>3- see -VTA -3' >3 -3'</p> <p>“He/she(OBV) sees him/her.”</p> <p>(Valentine, 2001, p. 287)</p> |
|---|---|

Section 5.2.3.1 looks at sentences containing one speech act participant (1st or 2nd person) and one third person argument, as in Examples (123) and (124) above. In Section 5.2.4, I examine sentences containing two third person arguments, as in Example (125). I will show that in order to give denotations for these kinds of sentences, a denotation for the obviative must first be composed. I will propose that the obviation marker is a pronominal presupposition, and that the theme signs, rather than specifying arguments by person, actually spell out a salience relationship between arguments.

5.2.3.1 Non-Local Theme Signs with Non-Obviative Third Persons

Looking first at Examples (123) and (124), one argument is always a speech act participant (i.e. 1st or 2nd person), and the other one is always 3rd person. More importantly, in both examples, the speech act participant is an Agent in the direct, and a Theme in the inverse. This pattern lets us give a denotation for the non-local theme signs, as follows:

(126) (Ojibwe)

a. Non-Local Direct

$\llbracket \mathbf{aa} \rrbracket = \lambda e .$ the Agent of e is a participant, and the Theme of e is not a participant

b. Non-Local Inverse

$\llbracket \mathbf{igw} \rrbracket = \lambda e .$ the Agent of e is not a participant, and the Theme of e is a participant

As with the local theme signs in § 5.2.2, it looks like the non-local theme signs vary along only one dimension, i.e. which argument is a speech act participant, and which is not. Again, this would suggest that, perhaps, the denotations for the theme signs could be simplified as in Example (127).

(127) (Ojibwe)

a. Non-Local Direct

$\llbracket \mathbf{aa} \rrbracket = \lambda e .$ the Theme of e is not a participant

b. Non-Local Inverse

$\llbracket \mathbf{igw} \rrbracket = \lambda e .$ the Agent of e is not a participant

At first glance, it even looks like this simplified denotation might work for the case with two third persons. After all, in that case, neither the Agent, nor the Theme is a participant, which is what this denotation specifies.

However, if there are two third person arguments, one must be obviative (Valentine, 2001, p. 273), which these denotations do not account for. That is, nothing in these denotations prevents the second argument from also being 3rd person proximate. As is shown in Example (128), this would yield a grammatically incorrect sentence.⁵

⁵Like Example (122), (128b) has been constructed by the author, using the data from Valentine (2001, p. 287).

(128) (Ojibwe)

a. *Wwaabmaan.*

o- waab -am **-aa -an**

3- see -VTA **-3>3' -3'**

“He/she sees him/her(OBV).”

(Valentine, 2001, p. 287)

b. * *Wwaabmaa.*

o- waab -am **-aa**

3- see -VTA **-3>3**

(intended) “He/she sees him/her.”

(adapted from Valentine 2001, p. 287)

Therefore, this alternative denotation has to be rejected, just like the simplified denotations of the local theme signs in Example (121), because the denotations in Example (127) will overgenerate.

The denotation in Example (126) will account for examples like (123) and (124), but not examples like (125). The question remains, then, of what to do with denotations containing two third person arguments. Not only do the denotations provided in this section not account for the obviative, they also do not allow for both arguments to be non-participants. In the next section, I turn to the denotation of the obviative, and of the non-local theme signs when they occur with two third person arguments.

5.2.4 Denotation of the Obviative

Obviation serves both a discourse function, and a grammatical function. Grammatically, it distinguishes between two third persons in order to track which third person argument is the subject, and which is the object. In discourse, the obviative marks one or more arguments as less salient. For example, when telling a story, the

main character will be proximate, and the other characters will be marked obviative. Thus, there is a grammatical requirement for obviation, but the choice of which arguments to make obviative is based on the discourse context (Valentine, 2001, p. 623).

The following is an example sentence using obviation. In this sentence, the children are obviative, as indicated by the use of an obviative demonstrative pronoun, and an obviation suffix on the noun. Obviative morphology is the same for both singular and plural obviative nouns. In contrast, the women have a proximate demonstrative pronoun, and the noun is marked as plural. Thus, we know that the women are proximate, and the children are obviative, marking the women as the more salient participants in this sentence.

(129) (Ojibwe)

Giw dash kwewag wgii-gnawenmaawaan niw binoojiinyan.

giw dash ikwe -wag o- gii- ganawen -im -aa -waa
those.DEM.3.PL and woman -PL 3- PST take care of -VTA -3>3' -3.PL
-n niw abinoojiin -yan
-3' those.DEM.3' child -3'

“The women took care of the children.”

(Valentine, 2001, p. 623)

The obviation marker is used in sentences with two or more third person arguments. In fact, in any such sentence, only one argument may be proximate; all other third person arguments must be marked obviative (Valentine, 2001, p. 623). This is shown in the sentence in Example (129) where only one participant, the women, is marked proximate, and the other participant, the children, is marked obviative.

Obviation can be accounted for in one of three possible ways: as a modifier of the theme sign (§ 5.2.4.1), via a new rule of Entity Identification (§ 5.2.4.2), or as a pronominal presupposition (§ 5.2.4.3). I will show that the third option is the most

ideal.

5.2.4.1 Obviation as a Modifier of the Theme Signs

At first glance, it looks like the obviation marker *-an* has an effect on the theme sign by combining directly with it. This can be seen in Example (125), repeated below as Example (130).

- (130) (Ojibwe)
- | | |
|---|--|
| <p>a. <i>Wwaabmaan.</i></p> <p>o- waab -am -aa -an</p> <p>3- see -VTA -3>3' -3'</p> <p>“He/she sees him/her(OBV).”</p> | <p>b. <i>Wwaabmigan.</i></p> <p>o- waab -am -igw -an</p> <p>3- see -VTA -3' >3 -3'</p> <p>“He/she(OBV) sees him/her.”</p> <p style="text-align: right;">(Valentine, 2001, p. 287)</p> |
|---|--|

Interpreting the obviative marker as a modifier of the theme sign, it could be given the following denotations.

- (131) (Ojibwe)
- | | |
|--|---|
| <p>a. Non-Local Direct Obviative</p> <p>$\llbracket \mathbf{an} \rrbracket = \lambda e . \text{ the Theme of } e \text{ is less salient}$</p> | <p>b. Non-Local Inverse Obviative</p> <p>$\llbracket \mathbf{an} \rrbracket = \lambda e . \text{ the Agent of } e \text{ is less salient}$</p> |
|--|---|

These could then be combined with the appropriate theme signs via Event Modification. The non-local direct theme sign and obviation is given as an example, below.

(132) (Ojibwe)

- a. Non-Local Direct Theme Sign

$\llbracket \mathbf{aa} \rrbracket = \lambda e . \text{ the Theme of } e \text{ is not a participant}$

- b. Non-Local Direct Obviative

$\llbracket \mathbf{an} \rrbracket = \lambda e . \text{ the Theme of } e \text{ is less salient}$

- c. Theme Sign + Obviation

$\llbracket \mathbf{aa-an} \rrbracket = \lambda e . \text{ The Theme of } e \text{ is not a participant \& the Theme of } e \text{ is less salient}$

Of course, the obviation marker is *-an* regardless of whether the sentence is direct or inverse. Ideally, there should be one obviative denotation for both the direct, and the inverse.

Further, there are at least three possible suffixes which may intervene between the theme sign and the obviation marker: negation, plural, and aspect (Valentine, 2001, p. 274). Example (133) demonstrates two of the three possible suffixes, negation (*-sii*) and 3rd person plural (*-waa*), intervening between the theme sign and the obviation marker.

(133) (Ojibwe)

Wwaabmigosiwaan.

o- waab -am -igo **-sii** **-waa** -an

3- see -VTA -3' >3 **-NEG** **-3.PL** -3'

“He/she(OBV) doesn’t see them.”

((Valentine, 2001, p. 291)

This suggests that the theme sign and the obviation marker are unlikely to combine directly in the semantics. Therefore, another solution is required.

5.2.4.2 Obviation with Entity Identification

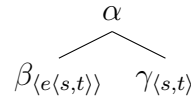
As noted in § 5.2.4 and in the last section, the obviation marker is *-an* regardless of whether the theme sign is direct or inverse. Ideally, then, there would be a single denotation for obviation which could be paired with either theme sign. This was a problem with the proposal where obviation modifies the theme sign; it required two denotations for the obviation marker, one for the direct, and another for the inverse.

In this section, I attempt to find a single denotation for the obviation marker that can be used in both the direct and the inverse. In this proposal, obviation will be able to target one of the arguments introduced by the theme sign, but crucially, a different argument in the direct than in the inverse. Along with requiring the new rule of Entity Identification, this will require a change to both the type, and the denotation of the theme signs.

First, we must add a new rule, Entity Identification, to the semantics. Entity Identification is based on Event Identification (Kratzer, 1996, p. 122), and is very similar to it. This rule modifies an entity in the same way as Event Identification modifies an event.

(134) a. Event Identification

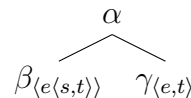
Where:



Then: $\llbracket \alpha \rrbracket = \lambda x_e . \lambda e_s . \llbracket \beta \rrbracket(x)(e) = 1$ and $\llbracket \gamma \rrbracket(e) = 1$
(Kratzer, 1996, p. 122)

b. Entity Identification

Where:



Then: $\llbracket \alpha \rrbracket = \lambda x_e . \lambda e_s . \llbracket \beta \rrbracket(x)(e) = 1$ and $\llbracket \gamma \rrbracket(x) = 1$

The denotation of the non-local theme signs will be as follows. These denotations are composed in such a way as to make them be of type $\langle e\langle s,t \rangle \rangle$, so that they will

be able to combine via Entity Identification with the obviative.

(135) (Ojibwe)

a. Non-Local Direct

$\llbracket \mathbf{aa} \rrbracket = \lambda x . \lambda e . x \text{ is the Theme of } e \text{ and } x \text{ is not a participant}$

b. Non-Local Inverse

$\llbracket \mathbf{igw} \rrbracket = \lambda x . \lambda e . x \text{ is the Agent of } e \text{ and } x \text{ is not a participant}$

The obviation suffix has a denotation as shown in the following example. In this way, the obviative suffix has the same denotation, regardless of whether the sentence is direct or inverse, thus solving the problem identified in § 5.2.4.1.

(136) (Ojibwe)

$\llbracket \mathbf{an} \rrbracket = \lambda x . x \text{ is less salient}$

Using the new rule of Entity Identification, the obviation suffix can be combined with either of the non-local theme signs.

(137) (Ojibwe)

a. Non-Local Direct Obviative

$\llbracket \mathbf{aa-an} \rrbracket = \lambda x . \lambda e . x \text{ is the Theme of } e \text{ and } x \text{ is not a participant \& } x \text{ is less salient}$

b. Non-Local Inverse Obviative

$\llbracket \mathbf{igw-an} \rrbracket = \lambda x . \lambda e . x \text{ is the Agent of } e \text{ and } x \text{ is not a participant \& } x \text{ is less salient}$

However, this possible solution leads to other potential problems, namely in how these new theme sign denotations would combine with other parts of the tree. It is no longer possible to combine the theme signs using Event Modification. The theme signs can be combined using Event Identification; however, a type mismatch

with T will occur. Using Entity Identification to combine the theme sign with the obviative cannot be the whole story, and other adjustments would need to be made before this solution could be implemented. While this is an interesting idea, there is another possible solution that fits the facts without requiring so many adjustments to other parts of the semantics.

5.2.4.3 Obviation as a Pronominal Presupposition, and Non-Local Theme Signs as Presuppositions about Argument Salience

The last option for the denotation of the obviation marker is as a pronominal presupposition, in the way that Heim & Kratzer (1998) account for other pronominal features (discussed previously in Section 5.2.1). I will show that this is the best way to account for obviation in Ojibwe.

(138) (Ojibwe)

$\llbracket \text{-an} \rrbracket = \lambda x : x \text{ is less salient and } x \text{ is not a participant} . x$

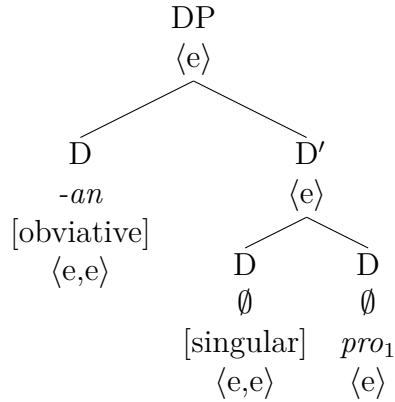
“Less salient” is shorthand to indicate that saliency has fallen below some contextually established threshold. In this denotation, that threshold is the salience of the proximate argument. This denotation also states that *x* is not a participant, as obviation is only applied to third person arguments. Otherwise, one might expect to encounter obviation marking on first or second person arguments, but this is not what we see.

Both of the previous solutions have assumed the obviative suffix combines directly with the theme sign in the semantics. The data suggests this need not be the case. In the simplest cases, as discussed in this paper, the obviation marker and the theme sign are adjacent; in fact, negation, plural marking, and aspect marking may appear between these two suffixes (Valentine, 2001, p. 274), as demonstrated in Example (133) in § 5.2.4.1. This suggests that interpreting the obviative suffix as

a presupposition modifying the pronoun rather than as something modifying the theme sign is an equally viable option.

Based on the denotation of the obviation suffix as a pronominal presupposition, the LF representation of an obviative third person pronoun would look like the following:

(139) (Ojibwe)



Thus, the denotation of any obviative third person pronoun will be as follows:

(140) (Ojibwe)

- a. $\llbracket \text{-an} \rrbracket = \lambda x : x \text{ is less salient and } x \text{ is not a participant} . x$
- b. $\llbracket \text{singular} \rrbracket = \lambda x : x \text{ is an individual} . x$
- c. $\llbracket pro_1 \rrbracket = x \text{ (via the Traces \& Pronouns Rule)}$

When combined, this gives a pronoun with several presuppositions.

(141) (Ojibwe)

$$\llbracket \text{pro-an}_1 \rrbracket^g = g(1) \text{ if } g(1) \text{ is an individual, less salient, and not a participant}$$

Above is the denotation for the obviative third person pronoun. Adjustments, however, must be made to the theme signs' denotation as well.

The current proposal given in § 5.2.3.1 still cannot account for sentences containing two third person arguments. I have shown now, that the distinction between

proximate and obviative third persons is one of salience. While the denotation of the theme signs has so far made use of thematic roles and the arguments' status as (non-)participants, the set of theme sign denotations may be formulated based on thematic roles and salience instead.

This discussion about the non-local theme signs and the proximate/obviative split has shown that the original denotations of theme signs in terms of the status of arguments as participants is too simple to account for the case of two third person arguments. The focus needs to be shifted to the saliency of arguments, rather than just their status as participants. I will modify my original proposal such that the theme signs place constraints on saliency. In this way, the theme sign denotations will have the same form regardless of whether the arguments are a participant and a non-participant, or two non-participants. Obviation no longer needs to modify the theme sign, and the theme sign denotations can take both proximate and obviative pronouns as input.

(142) (Ojibwe)

- a. $\llbracket \mathbf{aa} \rrbracket = \lambda e . \text{ the Agent of } e \text{ is more salient than the Theme of } e$
- b. $\llbracket \mathbf{igw} \rrbracket = \lambda e . \text{ the Theme of } e \text{ is more salient than the Agent of } e$

One minor stipulation is required, which is that participants are always more salient than non-participants. Indeed, arguments have been made for this stipulation in the literature (e.g. Aissen 1997). In this way, (142) captures the same information as the denotations in Example (126).

Given the denotations in (142), it will always be the case that with the non-local theme signs and a first or second person (participant) argument, a direct sentence will be true only if the participant is the Agent, and the non-participant is the Theme, and vice versa in the inverse. This is based on the assumption that participants are always more salient than non-participants. And in the case with two third persons

(both non-participants), the obviation marker denotes either the Agent or the Theme as less salient. Thus, the non-local theme signs are always dealing with the case that one argument is less salient than the other.

In this way, Ojibwe makes explicit a relationship between arguments that is more implicit in other languages. Participants are generally more salient than non-participants, but this relationship is left implicit in languages like English. Ojibwe, however, encodes this salience relationship between arguments explicitly in the theme signs, and, in fact, extends it to allow for the explicit labelling of third person arguments as more or less salient to the discourse.

The local theme signs are a special case. Both first person and second person are participants, and as a consequence, both are equally salient. Therefore, the semantics must specify directly which of the speaker and addressee is the Agent, and which is the Theme. The semantics achieves this using the local set of theme signs with the denotations previously discussed in § 5.2.2.

5.3 Denotation of Inanimate Arguments

The following section examines the denotations of inanimate arguments, starting with the denotation of inanimate Agents. Then, the denotation of inanimate Themes is examined. Finally, the same inanimacy suffix shows up with the single argument of inanimate intransitive verbs.

5.3.1 Denotation of Inanimate Agents

I turn now to the denotation of inanimate Agents of TA verbs. As with obviation in the previous section, inanimacy is marked as its own suffix.

Valentine (2001) gives the following paradigm for VTAs with inanimate subjects.

(143) (Ojibwe)

- | | |
|---|--|
| <p>a. <i>Nwaabmigon.</i></p> <p>ni- waab -am -igw -n</p> <p>1- see -VTA -0>1 -IN</p> <p>“It sees me.”</p> | <p>c. <i>Wwaabmigon.</i></p> <p>o- waab -am -igw -n</p> <p>3- see -VTA -0>3 -IN</p> <p>“It sees him/her.”</p> |
| <p>b. <i>Gwaabmigon.</i></p> <p>gi- waab -am -igw -n</p> <p>2- see -VTA -0>2 -IN</p> <p>“It sees you.”</p> | |

(Valentine, 2001, p. 287)

In each of these sentences, there is the inverse suffix, *-igw*, indicating that the Theme is more salient than the Agent. There is also the suffix *-n*, indicated with boldface in the above examples, which indicates that one argument, in this case the Agent, is an inanimate third person. As we will see when we examine TI and II verbs later in the chapter, in Sections 5.3.2 and 5.3.3 respectively, this inanimate argument suffix will sometimes refer to the Agent, and sometimes to the Theme, as the obviative suffix does.

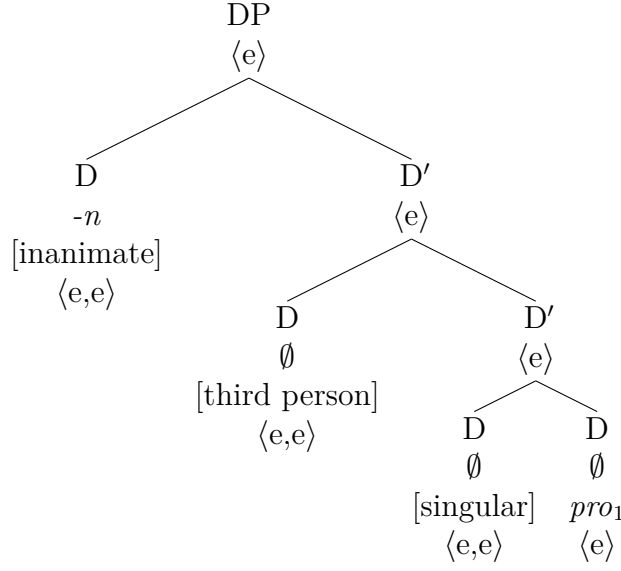
Based on this similarity between the behaviour of the obviative suffix and the behaviour of the inanimate suffix, it might be reasonable to treat them both the same way. That is to say, like obviation, inanimacy is a pronominal presupposition. The inanimate suffix *-n*, would therefore have the following denotation:

(144) (Ojibwe)

$$\llbracket \mathbf{-n} \rrbracket = \lambda x : x \text{ is an inanimate entity} . x$$

An inanimate pronoun would have the following LF representation:

(145) (Ojibwe)



Thus, the denotation of any inanimate third person pronoun would be as follows:

(146) (Ojibwe)

- a. $\llbracket \mathbf{-n} \rrbracket = \lambda x : x \text{ is an inanimate entity} . x$
- b. $\llbracket \mathbf{third person} \rrbracket = \lambda x : x \text{ is not a participant} . x$
- c. $\llbracket \mathbf{singular} \rrbracket = \lambda x : x \text{ is an individual} . x$
- d. $\llbracket \mathbf{pro}_1 \rrbracket = x$ (via the Traces & Pronouns Rule)

When combined, this gives a pronoun with several presuppositions.

(147) (Ojibwe)

$\llbracket \mathbf{pro-n}_1 \rrbracket^g = g(1)$ if $g(1)$ is an inanimate individual, and not a participant

Inanimate entities are always going to be less salient than animate entities. Therefore, any sentence with an inanimate Agent and animate Theme has the inverse suffix to indicate this salience relation. This also results in the Theme argument always being spelled out as a pronominal proclitic in these sentences. The denotation of VTAs with inanimate subjects will proceed, other than the addition of the inanimate suffix, just like other denotations using the non-local theme signs.

This works out very neatly, but there is one problem. Animacy in Ojibwe appears to be equivalent to grammatical gender in languages like French or German. That is to say, as we saw in § 2.2, while semantically animate entities always have animate gender, semantically inanimate entities may be marked either animate, or inanimate in gender. This gender choice does not have any basis in the semantics. This suggests the inanimacy suffix *-in* should be treated as purely morphological, and that inanimacy, in this case, is not a pronominal presupposition at all.

However, that too is problematic. In the case of TA verbs with inanimate subjects, as shown in Example (143), the inverse theme sign is always used. The inverse theme sign indicates that the inanimate Agent is less salient than the animate Theme. Animacy, or rather inanimacy in this case, is indeed having an impact on the semantics. Like the obviative, the inanimacy suffix is indicating that one argument, the Agent, is less salient (by virtue of it being inanimate).

Therefore, I propose that rather than the suffix *-n* having a denotation that indicates inanimacy, it shares the same denotation as the obviative suffix *-an*.

(148) (Ojibwe)

$\llbracket \text{-n} \rrbracket = \lambda x : x \text{ is less salient and } x \text{ is not a participant} . x$

Note that while they look very similar, and I have now argued have the same denotation, these two suffixes occupy different places in the morphology. The obviative suffix appears at the very end of the word, but the inanimacy suffix slots in between negation and aspectual (preterite and dubative) suffixes.

The inanimacy suffix introduced in this section does not just appear with inanimate subjects. It also appears in the agreement of VTI and VII verbs, which I will be discussing next.

5.3.2 Denotation of Inanimate Themes

TI verbs always have an inanimate Theme. The same inanimacy suffix that appears on TA verbs with inanimate Agents also shows up here on TI verbs with inanimate Themes, as shown in Example (149), repeated from Section 2.4.1.

(149) (Ojibwe)

Wwaabndaan.

o- waab -and.am -n

3- see -VTI -0

“He/she sees it.”

(Valentine, 2001, p. 311)

I assume the inanimacy suffix is generated as a pronominal presupposition with the same denotation as the obviative suffix, as I demonstrated in the previous section. The denotation of this suffix is the same when it appears with VTIs; it is simply a presupposition of the Theme rather than of the Agent. The denotation of the inanimacy suffix is repeated below.

(150) (Ojibwe)

$\llbracket \text{-n} \rrbracket = \lambda x : x \text{ is less salient . } x$

Of course, VTIs are a different verb paradigm, even though the same pronominal proclitics, and inanimacy suffix are used. The VTI paradigm is always used when the transitive Theme is inanimate. Ojibwe does not allow both an inanimate Agent, and an inanimate Theme in the same clause (Valentine, 2001, p. 426). Consequently, if the Theme is inanimate, the Agent will always be animate, and therefore, the Agent will always be more salient than the Theme. Thus, this saliency relationship doesn’t need to be explicitly spelled out with theme signs the way it does with VTAs.

As discussed in § 2.2.2, VTIs have a “theme sign” morpheme, like VTAs. However, the VTI theme sign does not carry any agreement or saliency information. Every

VTI final comes with a specific VTI theme sign, and the choice of said theme sign is entirely phonologically conditioned. There may be a syntactic requirement that the Agr head never be null in transitive verbs, or it may be a remnant of some previous language change process. Further research is required to determine the exact nature of this morpheme. Suffice to say, the VTI final itself gives us all the information we need, and the VTI theme sign adds nothing to the semantics.

There is one wrinkle. It is possible to have a VTI containing an inanimate Theme and an obviative third person Agent. But rather than using both the inanimacy suffix and the obviative suffix, a special inanimacy suffix, *-ini* is used.⁶

(151) (Ojibwe)

Waabndamni.

waab -and.am -ini

see -VTI.Ø 3' >0

‘He/she(OBV) sees it.

In this case, the inanimacy suffix appears to be a portmanteau morpheme carrying information about both the Agent, and the Theme. Given my suggestion in § 4.3.2 that the spell out of the obviation and inanimacy suffixes are a result of a post-syntactic fission operation, rather than being derived in the syntax, this is not entirely surprising. The information spelled out on these suffixes is actually contained in the features on the pronouns, i.e. spec-*v* and spec-Voice, and on the Agr head. While I have been writing these suffixes into my trees and denotations for ease of exposition, it should be understood that the information indicated by these suffixes is spelled out before the suffixes themselves are added to linear order.

The peculiarity about this case is that both the Agent and the Theme have denotations that indicate that they are less salient. But the salience relationship is

⁶This is doubtless because inanimate plurals are spelled out in the obviative suffix slot. Plurals, however, are beyond the scope of this dissertation.

a ranking of two arguments in relation to each other. In this case, the two arguments cannot both be less salient in relationship to each other. The verb final does tell us that the inanimate argument is the Theme in this case. If inanimacy, as such, was a semantic feature rather than a grammatical gender, the argument could be made that an inanimate is always less salient than an animate, as I mentioned above. Valentine makes a similar claim, ranking inanimates as lower than obviative animates on the Ojibwe topicality hierarchy (Valentine, 2001, p. 268). This argument cannot be made in this case, however, because the animacy under discussion here is not semantic in Ojibwe.

Absent evidence to the contrary, I assume salience, in cases like this, is in reference to some extra-clausal argument. The verb final already tells us that the inanimate third person is the Theme in this sentence, and the animate obviative third person is the Agent. Nothing within this clause indicates whether one is more or less salient than the other. But there is no reason not to assume that they are not less salient in comparison to other entities in the discourse. That is to say, there is no reason to assume that both arguments having a denotation that they are less salient would actually cause the denotation to fail.

5.3.3 Denotation of Inanimate Intransitive Agreement

Finally, the inanimacy suffix also shows up as part of VII agreement. VIIs are intransitive verbs with a single inanimate argument. Intransitive verbs do not encode a saliency relationship because there is only ever one argument, and a salience relationship requires at least two arguments.

The inanimacy suffix serves to encode the single argument of II verbs, given this is a very limited paradigm. The VII paradigm encodes third person inanimate singular and plural forms, though as previously noted, plural forms are beyond the scope of this thesis. The inanimacy suffix will have the same denotation as the

obviative suffix, as discussed in the previous sections.

There is, however, one very interesting piece of VII agreement data that needs to be examined further. VIIs are, apparently, the only place in the Ojibwe grammar where obviative inanimates appear. This is shown in Example (152b), repeated from Section 2.4.2.

- (152) (Ojibwe)
- | | |
|--|---|
| <p>a. <i>Mchaa.</i></p> <p>mich -aa -∅</p> <p>large -be.VII -0.SG</p> <p>“It is large.”</p> | <p>b. <i>Mchaani.</i></p> <p>mich -aa -ini</p> <p>large -be.VII -0'.SG</p> <p>“It(OBV) is large.”</p> <p style="text-align: right;">(Valentine, 2001, p. 256)</p> |
|--|---|

As I explained in § 2.4.2, the inanimacy suffix in VIIs has different allomorphy. The morpheme will be either ∅, or *-oon*, rather than the *-n* suffix that appears in the VTA and VTI paradigms. Based on its function, meaning, and place in the clause, this is the same inanimacy suffix throughout, and will have the same semantics.

Inanimate obviatives are of particular interest, because as already mentioned, this is the only place they appear in the grammar. But also, an inanimate obviative is marked with the suffix *-ini*. This suffix is, in fact, the same suffix as in the last section. There, it was a portmanteau suffix, encoding both the obviation of the Agent and the inanimacy of the Theme. In that case, the suffix *-ini* indicated that both arguments were less salient (though without specifying in comparison to what). In the case of VIIs, there is only one argument which is both obviative and inanimate. This argument, then, is not only less salient than other third person animate arguments, but is also less salient than other third person *inanimate* arguments.

Here is another example of obviative inanimate agreement. “His cold”, an inanimate noun, is the argument of the verb “to leave”. As can be seen, even though the verb is marked with inanimate obviative agreement, inanimate nominal inflection

does not distinguish between proximate and obviative, meaning the noun itself does not carry obviative marking.

(153) (Ojibwe)

... kina gii-maajaamgadni wdakjiwin.

kina gii- maa-jaa -magad -ini o- dakajiwin

all PST- leave -VII -0' 3.POSS- cold.IN

“...all his cold had gone away.”

(Valentine, 2001, p. 252)

As I have previously established in § 5.2.4.3, obviation encodes information about salience, i.e. that the obviative is less salient than other arguments in the clause. This case is particularly puzzling then, as an intransitive clause only has one argument. Therefore, the salience relationship that the obviative refers to must be a domain larger than a single clause, as determined by the discourse function of obviation. This highlights the unique role of obviation, as both a function of grammar and of discourse.⁷

I now turn to the denotation of theme signs with ditransitive verbs in the next section. My goal is to give denotations for the theme signs that can be used in both monotransitive and ditransitive sentences, and I will show that the best way to do this is to make use of syntactic features in the semantics, in order to relativise the denotation of the internal argument within the theme sign denotation.

⁷This sentence may actually be a case of grammatical obviation, as possessed nouns of third persons must be obviative (Valentine, 2001, p. 204), rather than an example of something being less salient in relation a broader discourse context. However, as the arguments of inanimate verbs may be obviative in the absence of a proximate, the point still stands.

5.4 The Role of Syntactic Features in the Denotation of the Theme Signs

In this section, I turn to the denotation of theme signs with ditransitive verbs. As described in § 2.2.3, ditransitive verbs use the same agreement morphology as monotransitive verbs; however, ditransitives reference different arguments. The theme sign references the Agent and the Goal in applicatives. In ditransitive causatives, the theme sign references the Agent and Theme of the causing event. I gave denotations for applicative and causative verb finals in § 3.2.6.

I will now propose a way to account for theme signs using syntactic features in the semantics. In this way, both monotransitive and ditransitive sentences can be accounted for with the same theme sign denotations, even though they do not always reference the same semantic roles.

My goal is to have a denotation for the theme signs that will be the same regardless of whether the sentence is monotransitive or ditransitive. To this end, I propose that instead of referring only to semantic roles, the denotation of the theme signs also makes use of bundles of syntactic features.

Structurally, a ditransitive verb final, and a transitive verb final are the same. They are both *v* heads. This was shown in Sections 3.2.5 and 3.2.6. However, the agreement morphology does not always target the same arguments as with monotransitives.

I will first examine applicatives. The theme signs in applicative ditransitives target the Agent and the Goal, rather than the Agent and the Theme. I will make use of syntactic features in the semantics to relativise the denotation of the internal argument. In this way, ditransitive and monotransitive theme signs have the same denotation.

Then, I will explore the case of ditransitive causatives. I will argue that the

theme sign targets the Causer and the Theme of the causing event. Further, I will argue that a Causer is Agent-like, and can be accounted for without any further modification of the semantics of the theme signs.

5.4.1 Theme Signs and Applicatives

Example (154) gives the structure for an applicative ditransitive sentence. This sentence contains two verb finals (the two *v*Ps, *-ih* and *-amaw*) and three pronouns (the three DPs, *pro*₁, *pro*₂, and *pro*₃). The theme sign, *-igw*, is located on Agr, which is built above VoiceP. The Goal appears higher than the Theme argument. The theme sign imposes conditions on the two highest DPs, which are the Agent and the Goal in this sentence.

(154) (Ojibwe)

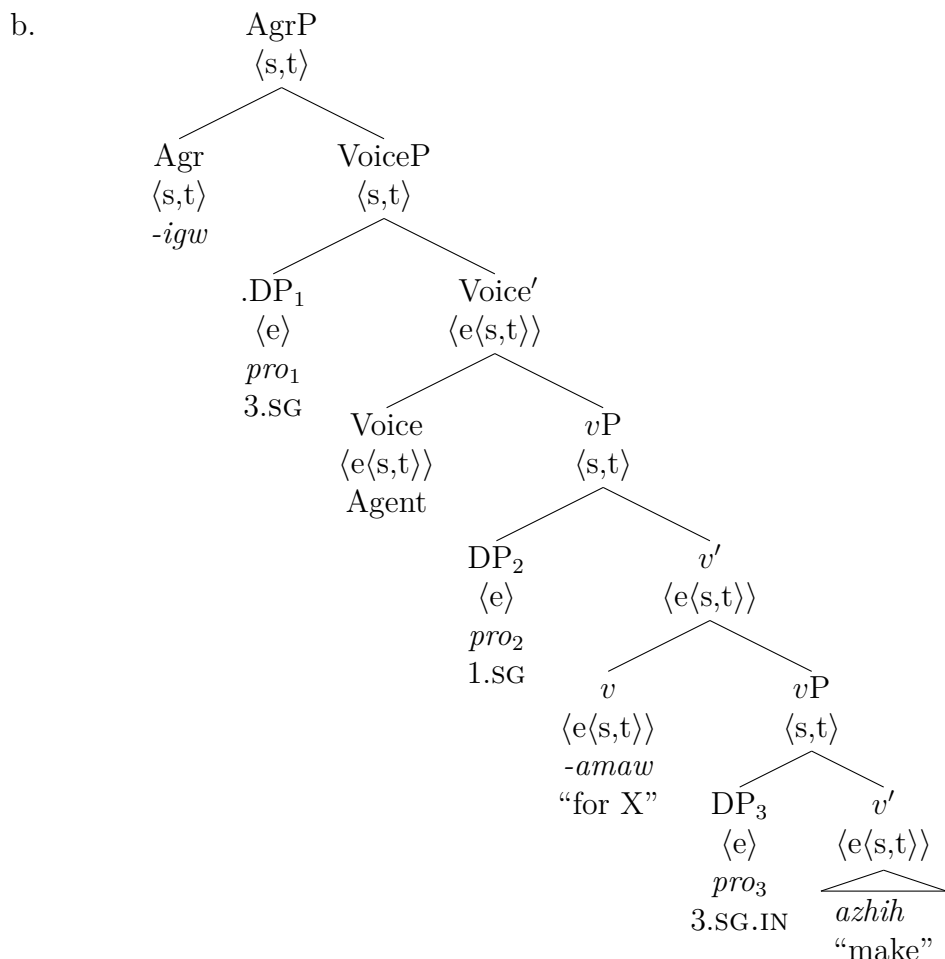
a. *ndazhtamaag*

nid- azhi -ih -amaw -igw

1- make -cause.VTI -for.X.VTA -3>1

“she is making it for me.”

(adapted from Valentine 2001, p. 700)



The theme sign, located in AgrP, targets the pronoun associated with Voice, and the pronoun associated with the highest *v* head. In the case of monotransitive verbs, this is always the Agent and the Theme arguments, but in the case of ditransitive verbs, it varies depending on the verb type. What this means, then, is that the theme signs cannot make reference to the semantic role (i.e. Theme or Goal, Agent or Causer) of the arguments without requiring a different denotation for monotransitive and for ditransitive sentences. This is not the most desirable outcome given that everything else about these theme signs is the same.

What is needed then, is a syntactically sensitive way of identifying the positions targeted by the theme signs in the semantics such that the denotation of the theme sign may remain the same in both monotransitive and ditransitive sentences. It is

the syntactic position that is important in this case, not the thematic role. This needs to be brought into the semantics somehow.

I will propose a denotation for the theme signs that appeals to the agreement between the theme sign and certain DPs, as identified by syntactic structure. The theme sign puts conditions on the DPs so identified.

I explain this in more detail in the next section, and give denotations for the non-local theme signs. In Section 5.4.1.2, I use the same principles to give denotations for the local theme signs.

5.4.1.1 Denotation of the Non-Local Theme Signs Using Features

In standard Minimalist syntactic theory, Agree is a relationship between a probe and a goal, where the probe has some uninterpretable features, and must search down in its c-command domain to check against a goal that has matching interpretable features (Chomsky 1998; 2001). I will make use of these sets of syntactic features in the semantics to generate denotations for the theme signs that capture the desired meanings without relying on the theta roles of arguments to do so.

In order to make this work, the denotations of the theme signs must be changed. The denotation of the DPs will not be changed, but it will be noted in the semantics that one of the argument DPs contains feature set α . The non-local theme signs will have the following denotations:

(155) (Ojibwe)

- a. $\llbracket \text{aa}^\alpha \rrbracket = \lambda e . \text{ the Agent of } e \text{ is more salient than } \llbracket \text{DP}^\alpha \rrbracket$
- b. $\llbracket \text{igw}^\alpha \rrbracket = \lambda e . \text{ the Agent of } e \text{ is less salient than } \llbracket \text{DP}^\alpha \rrbracket$

α refers to a specific set of syntactic features, in this case, the set of features that is shared between the theme sign and the highest internal argument. These syntactic features do not have any effect on the semantics, except that they can be

used to link the theme sign and the pronoun. The theme sign, being a portmanteau morpheme, as discussed in § 2.3.5, also has a set of syntactic features for agreeing with the subject; however, those features are not relevant to the semantics.

In the denotations in Example (155), the Agent is the only semantic role specified. Whereas, there had to have been separate denotations for monotransitive and ditransitive sentences (specifying the relative salience of the Theme or the Goal respectively), the use of the syntactic feature set α makes that unnecessary. No reference is made in the theme sign denotations to either the Theme or the Goal. Instead, the highest internal argument (the Theme in most sentences, and the Goal in applicative sentences) will always be designated as containing feature set α . The theme sign then denotes whether the Agent is more or less salient than the denotation of the DP containing the pronoun which has feature set α .

5.4.1.2 Denotation of the Local Theme Signs Using Features

A ditransitive sentence may also be formed with an Agent and a Goal who are both participants (i.e. containing both a 1st person and 2nd person argument). Because of this, the denotation of the local theme signs given in § 5.2.2 must also be changed, such that the internal argument is specified based on a matching set of syntactic features, rather than on its semantic role.

(156) (Ojibwe)

- a. $\llbracket i^\alpha \rrbracket = \lambda e . \text{ the Agent of } e \text{ is the addressee and } \llbracket DP^\alpha \rrbracket \text{ is the speaker}$
- b. $\llbracket in^\alpha \rrbracket = \lambda e . \text{ the Agent of } e \text{ is the speaker and } \llbracket DP^\alpha \rrbracket \text{ is the addressee}$

In this way, once again, the denotation of the theme sign will be the same in both monotransitive and ditransitive sentences. By using syntactic features, the Theme in monotransitives, and the Goal in applicative ditransitives, will be targeted by the local theme signs, just as the non-local theme signs do.

of causatives. That is to say, Causer and Agent may not really be different semantic roles at all. Something is an Agent if it has certain properties like animacy, and volition. Causers may be seen as being Agent-like, having the same Agentive properties of volition and animacy. We know that in any transitive sentence, one argument must be animate, with a preference for that animate argument to be the subject (Valentine, 2001, p. 426). In fact, Ritter & Rosen (2010) have shown that in Blackfoot, a related language, only semantically animate entities can be external arguments of transitives (including causatives). This means that Causers are going to be Agents in Ojibwe (i.e. animate and having volition) given the Ojibwe preference for Agentive external arguments in general.

Therefore, while we could relativise both the internal and the external arguments to sets of syntactic features, this is not actually necessary. This is only required for the internal argument, leaving us with the denotations for the theme signs as given in the previous section (Examples (155) and (156)).

5.5 Semantics of Animate Intransitive Agreement

Finally, I consider the semantics of agreement as it relates to animate intransitive verbs. There are two types of VAIs.

Like VIIs, there are unaccusative VAIs. Unaccusatives have a Theme but no Agent. Therefore, they do not contain a VoiceP, nor the semantics associated with that. Agr does not contain the denotation of a salience relationship, because it only agrees with one argument. In VIIs, the inanimacy suffix marks the unaccusative Theme as less salient than other arguments in the discourse (see Section 5.3.3). In the same way, a VAI with a third person obviative Theme is less salient than other discourse elements. Otherwise, the denotation of unaccusative verbs, both AI and II, is straightforward.

This is not the full story for animate intransitive verbs, however. VAIs may also be unergative. I argued in § 3.2.3 that all unergative verbs are underlyingly transitive, having an obligatory Agent, but an optional Theme argument. The following illustrative examples are repeated from Examples (39) and (12).

- | | | |
|-------|---|----------|
| (159) | | (Ojibwe) |
| | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>a. <i>Boodwewag.</i></p> <p>bood -we -wag</p> <p>make.fire -VAI -3.PL</p> <p>“They make fire.”</p> <p style="text-align: right;">(Valentine, 2001, p. 233)</p> </div> <div style="width: 45%;"> <p>b. <i>Wmiigwen.</i></p> <p>o- miig -iwe -n</p> <p>3- give -VAI -0.SG</p> <p>“He/she gives it away.”</p> <p style="text-align: right;">(Valentine, 2001, p. 244)</p> </div> </div> | |

Syntactically, Agr must be present, as evidenced by the presence of fissioned morphemes, the inanimacy suffix *-n*. Semantically, however, it is unclear whether Agr is adding the same salience relationship that it adds in the VTA paradigm. In the case of an unergative that does not have an object, there can be no salience relationship between the arguments, because of course, there is only one argument.

In the case of a VAI+O, an unergative with an object, Agr is still null; no equivalent of the theme sign is spelled out. However, there are two arguments, and the Theme will always be less salient than the Agent, by virtue of being either a non-participant Theme with a participant Agent, an obviative Theme with a proximate Agent, or an inanimate third person Theme (under the assumption that any animate person will be more salient as in, Valentine (2001, p. 268)). In a sense then, VAI+Os are always direct, having a more salient Agent than Theme. Therefore, in keeping with the semantics of other transitive verbs, one could assume that when an object is present, Agr has the denotation of a salience relationship.

- | | | |
|-------|--|----------|
| (160) | | (Ojibwe) |
| | $\llbracket \emptyset \rrbracket = \lambda e . \text{ the Agent of } e \text{ is more salient than the Theme of } e$ | |

On the other hand, because the Agent is always more salient than the Theme, this does not provide any further semantic information, and thus, need not be specifically coded into the semantics.

It remains an open question as to why Ojibwe encodes the salience of arguments in relation to each other in one paradigm (VTAs), but not in others (VAI+Os, and VTis). However, this must remain a topic for further research.

5.6 Conclusion

In this chapter, I examined the semantics of verbal agreement. While much has been written on the syntax of agreement in Ojibwe, the semantics has been left relatively unstudied. Section 5.1.1 introduced the semantics of arguments separate from their verb, based on the work of Kratzer (1996). This is one of the ways in which the syntax and semantics intersect; Voice and *v* are as necessary for the semantics as they are for the syntax.

I examined the denotation of animate arguments and agreement in § 5.2. Section 5.2.1 discussed the denotations of pronominals. I discussed the two sets of theme signs in § 5.2.2 (when both arguments are participants) and § 5.2.3 (when one or more arguments is a non-participant). While my proposal assumes that speech act participants are always more salient than non-participants, in § 5.2.4, I showed that obviation modifies a third person argument to mark it as less salient. I showed that the theme sign puts constraints on argument structure based on the saliency of the arguments to the discourse.

Next, I tackled the denotation of inanimate arguments in § 5.3. Inanimacy is a grammatical gender in Ojibwe rather than a semantic feature. However, I discussed a suffix used to mark inanimate arguments, and showed that it has the same denotation as the obviative suffix, i.e. it marks the salience relationship between

arguments.

In Section 5.4, I proposed that instead of referring only to semantic roles, the denotation of the theme signs refers to bundles of syntactic features. In this way, the theme sign will impose conditions on the two highest DPs in a sentence, regardless of their semantic role. This lets the same denotation target the Theme in monotransitive sentences, and the Goal in applicative sentences. Thus, in my analysis, the syntax and semantics of Ojibwe work together, with the semantics building on the syntactic structure.

Finally, in § 5.5, I examined the semantics of animate intransitive verbs. While at first appearing simple, it turns out that the same suffix used for inanimate third persons may also be used with animate third persons in this specific case. I proposed a way to account for this based on the idea that it marks an argument as less salient.

The next chapter concludes this thesis with a summary of the topics discussed, and offers some avenues for future research.

Chapter 6

Conclusion

6.1 Thesis Summary

This thesis examined the syntax and semantics of the Ojibwe verbal domain. The analysis began with the syntax and semantics of *vP*, and how Ojibwe verbal morphology maps onto that structure. I first explored the syntax of *vP*, giving syntactic templates for different kinds of verbs. I showed that Ojibwe verbs containing multiple verb finals in fact have multiple *vPs*, where each verb final maps to its own *v* head. Then, I moved on to discuss the semantics of the *vP* domain. I investigated the semantics of roots. I examined the semantics of verb finals and gave denotations for a representative sample.

Next, I discussed the syntax of verbal agreement. I began with a discussion of previous syntactic accounts, and showed that they cannot adequately account for agreement in multiple *vP* clauses. Thus, I proceeded to my own analysis of verbal agreement, which builds on the work of Oxford (2013). I discussed agreement with both transitive and intransitive verbs. I showed that my proposal can account for verbs in all four paradigms.

After detailing the syntax of verbal agreement, I moved on to discuss the ef-

fects of verbal agreement in the semantics. I began my semantic analysis with an examination of animate arguments. I gave denotations for pronouns, theme signs, and obviation, and concluded that the theme sign encodes a salience relationship between two arguments. I also gave denotations for inanimate arguments. Then, I tackled the semantics of ditransitives. In order to account for the denotation of theme signs with applicatives, I suggested that the semantics makes use of syntactic features, thereby allowing the theme sign to reference the Goal in applicatives, but the Theme in other types of transitive clauses. Finally, I completed my analysis by examining the semantics of animate intransitive agreement.

6.2 Areas of Further Research

My analysis encompasses all four paradigms of Ojibwe verbs, but there is still much research to be done in this area. I have limited myself in this thesis to singular persons only. Plurals add another layer of complexity, not only adding a plural agreement suffix, but the third person plural morpheme is spelled out in the same slot as the obviative suffix, not the plural suffix where first and second person plurals are spelled out. I have high hopes that these plural morphemes may also be accounted for as a post-syntactic fission operation on Agr, but further research is required to ascertain if that is the best analysis for them.

Further, in my analysis, I restricted myself to the independent order. Ojibwe also has two other verbal order, the conjunct, used most often in subordinate clauses, and the imperative (Valentine, 2001, p. 157). Each order has its own set of inflections. For example, conjunct order morphology looks closer to what we see in more familiar languages, without as much of an obvious direct/inverse system. This, too, is an area of further research.

Finally, in Ojibwe, cross-clausal agreement also remains to be accounted for. This

is the case where a matrix verb agrees in person and number with an argument in an embedded clause (Lochbihler, 2012, p. 159). Again, this was beyond the scope of this research project, and remains an excellent area for future study.

6.3 Conclusion

My aim in this thesis was not only to give an analysis of Ojibwe verbal morphology, but to contribute to general theoretical knowledge. I gave evidence for the categorising heads of Distributed Morphology, and showed that these categorising heads may be stacked directly atop each other to form verbs with other complete verbs as their root. I have sought to give a semantics for categorising *v*. Further, having shown that categorising *v* can stack, I have sought to give an analysis that can account for such multiple *v*P structures. My analysis gave evidence that argument structure becomes moot when agreement occurs above the VoiceP phase boundary, resulting in portmanteau agreement and topicality hierarchy effects. I have shown how a profusion of morphological “slots” can result from post-syntactic operations, fission in the case of Ojibwe. I have shown that agreement can have semantic effects, rather than being a purely syntactic phenomenon. I have also shown that the semantics may make use of syntactic features. Finally, I hope to have demonstrated that the syntax and semantics are closely linked, perhaps more closely than previously assumed.

Bibliography

- Adger, D. (2003). *Core syntax: A minimalist approach*. Oxford, United Kingdom: Oxford University Press.
- Aissen, J. (1997). On the syntax of obviation. *Language*, 73(4), 705–750.
- Alexiadou, A. (2014). Roots don’t take complements. *Theoretical Linguistics*, 40(3–4).
- Béjar, S. & Rezac, M. (2009). Cyclic agree. *Linguistic Inquiry*, 40(1), pp. 35–73.
- Bianchi, V. (2006). On the syntax of personal arguments. *Lingua*, 116(12), 2023–2067.
- Bliss, H. (2010). Argument structure, applicatives, and animacy in Blackfoot. *Proceedings of WSCLA*, 13, 58–69.
- Bliss, H., Ritter, E., & Wiltschko, M. (2014). A comparative analysis of theme marking in Blackfoot and Nishnaabemwin. In Valentine, J. R. & Macaulay, M. (Eds.), *Papers of the Forty-Second Algonquian Conference*, (pp. 10–33). SUNY Press.
- Bloomfield, L. (1957). *Eastern Ojibwa: Grammatical sketch, texts, and word list*. University of Michigan Press.
- Brittain, J. (1993). *Two Valency-increasing Processes in Sheshatshit Innu-aimun: Applicative and Causative Formation*. PhD thesis, Memorial University of Newfoundland.
- Brittain, J. (2003). A distributed morphology account of the syntax of the Algonquian verb. unpublished manuscript.
- Bruening, B. (2001). *Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy*. PhD thesis, Massachusetts Institute of Technology.
- Bruening, B. (2005). The Algonquian inverse is syntactic: binding in Passamaquoddy. unpublished manuscript.
- Bruening, B. (2009). Algonquian languages have A-movement and A-agreement. *Linguistic inquiry*, 40(3), 427–445.

- Carnie, A. (2013). *Syntax: A generative introduction* (3 ed.). West Sussex, UK: John Wiley & Sons.
- Chomsky, N. (1981). *Lectures on government and binding*. Foris Publications.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In K. Hale & S. J. Keyser (Eds.), *The view from building 20: Essays in linguistics in honor of Sylvian Bromberger* (pp. 1–52). Cambridge, MA: MIT press.
- Chomsky, N. (1998). *Minimalist inquiries: the framework*. Cambridge, MA: Distributed by MIT Working Papers in Linguistics, MIT, Dept of Linguistics.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, MA: MIT Press.
- Chomsky, N. (2004). Beyond explanatory adequacy. In A. Belletti (Ed.), *Structures and Beyond. The Cartography of Syntactic Structures* (pp. 104–131). Oxford: Oxford University Press.
- Chomsky, N. (2008). On phases. *CURRENT STUDIES IN LINGUISTICS SERIES*, 45, 133.
- Cook, C. E. (2008). *The syntax and semantics of clause-typing in Plains Cree*. PhD thesis, University of British Columbia.
- Dahlstrom, A. (1986). Weak crossover and obviation. In *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistic Society*, (pp. 51–60).
- Dahlstrom, A. (1995). Motivation vs predictability in Algonquian gender. In Pentland, D. H. (Ed.), *Papers of the 26th Algonquian Conference*, (pp. 52–66)., University of Manitoba, Winnipeg, Canada.
- Dryer, M. S. (1986). Primary objects, secondary objects, and antidative. *Language*, 62(4), 808–845.
- Dryer, M. S. (1992). A comparison of the obviation systems of Kutenai and Algonquian. In Cowan, W. (Ed.), *Papers of the Twenty-Third Algonquian Conference*, (pp. 119–163)., Carleton University, Ottawa.
- Dryer, M. S. & Haspelmath, M. (Eds.). (2013). *WALS Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Embick, D. & Noyer, R. (2007). Distributed morphology and the syntax/morphology interface. In G. Ramchand & C. Reiss (Eds.), *The Oxford handbook of linguistic interfaces* (pp. 289–324). Oxford: Oxford University Press.
- Folli, R. & Harley, H. (2005). Flavors of *v*. In *Aspectual inquiries* (pp. 95–120). Springer.

- Fry, B. (2015a). The derivation of theme-signs in Ojibwe via multiple agree. In *Montréal-Ottawa-Toronto-Hamilton syntax workshop (MOTH) 2015*, Ottawa.
- Fry, B. (2015b). The syntactic derivation of VTA theme-signs in Algonquin Ojibwe: A multiple agree approach. unpublished manuscript.
- Geuder, W. (2000). *Oriented adverbs: Issues in the lexical semantics of event adverbs*. PhD thesis, Universität Tübingen.
- Goddard, I. (2002). Grammatical gender in Algonquian. In Wolfart, H. C. (Ed.), *Papers of the 33rd Algonquian Conference*, (pp. 195–231)., University of Manitoba, Winnipeg, Canada.
- Hale, K. & Keyser, S. J. (1993). On argument structure and the lexical expression of syntactic relations. In K. Hale & S. J. Keyser (Eds.), *The view from building 20: Essays in linguistics in honor of Sylvian Bromberger* (pp. 53–109). Cambridge, MA: MIT press.
- Halle, M. & Marantz, A. (1993). Distributed morphology and the pieces of inflection. In K. Hale & S. J. Keyser (Eds.), *The view from building 20: Essays in linguistics in honor of Sylvian Bromberger* (pp. 111–176). Cambridge, MA: MIT press.
- Hamilton, M. (2014). Multiple instances of agreement in Mi'gmaq verbs. unpublished manuscript.
- Harley, H. (2014). On the identity of roots. *Theoretical Linguistics*, 40(3-4).
- Harley, H. (2017). The “bundling” hypothesis and the disparate functions of little v. *The verbal domain*, 3–28.
- Haspelmath, M. (2005). Argument marking in ditransitive alignment types. *Linguistic discovery*, 3(1), 1–21.
- Heim, I. (2008). Features on bound pronouns. *Phi theory: Phi-features across modules and interfaces*, 35, 56.
- Heim, I. & Kratzer, A. (1998). *Semantics in Generative Grammar*. Oxford: Blackwell Publishing.
- Hiraiwa, K. (2001). Multiple agree and the defective intervention constraint in Japanese. *MIT working papers in linguistics*, 40(40), 67–80.
- Hirose, T. (2001). *Origins of predicates: Evidence from Plains Cree*. PhD thesis, University of British Columbia.
- Jelinek, E. (1984). Empty categories, case, and configurationality. *Natural Language & Linguistic Theory*, 2(1), 39–76.

- Johansson, S. (2008). The status of nominal gender in Algonquian: evidence from psych verbs. In *Proceedings of the 2008 Annual Conference of the Canadian Linguistics Association*, University of Toronto, Toronto, Canada.
- Jones, W. (1917). *Ojibwa Texts*, volume 1. E. J. Brill, Limited.
- Kiparsky, P. (2002). Disjoint reference and the typology of pronouns. In I. Kaufmann & B. Stiebels (Eds.), *More than Words*, number 53 in *Studia Grammatica* (pp. 179–226). Berlin, Germany: Akademie Verlag.
- Kramer, R. (2014). Clitic doubling or object agreement: the view from Amharic. *Natural Language & Linguistic Theory*, 32(2), 593–634.
- Kratzer, A. (1996). Severing the external argument from its verb. In *Phrase structure and the lexicon* (pp. 109–137). Springer.
- Kratzer, A. (2015). The event argument and the semantics of verbs. Unpublished manuscript.
- LeSourd, P. S. (2006). Problems for the pronominal argument hypothesis in maliseet-passamaquoddy. *Language*, 486–514.
- Lewis, Paul, M., Simons, G. F., & Fennig, C. D. (2013). *Ethnologue: Languages of the World* (17 ed.). Dallas, Texas: SIL International.
- Lochbihler, B. (2012). *Aspects of argument licensing*. PhD thesis, McGill University, Montréal, Canada.
- Macaulay, M. (2005). On the 2 > 1 prominence hierarchy of Algonquian. *LSO Working Papers in Linguistics*, 5.
- Malchukov, A., Haspelmath, M., & Comrie, B. (2010). Ditransitive constructions: a typological overview. In *Studies in ditransitive constructions: A comparative handbook* (pp. 1–64). De Gruyter.
- Manyakina, Y. (2012). An analysis of obviation in Mi'gmaq. unpublished manuscript.
- Marantz, A. (1984). *On the nature of grammatical relations*. Number 10 in *Linguistic Inquiry Monographs*. Cambridge, Mass.: {MIT} Press.
- Marantz, A. (1997). No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania working papers in linguistics*, 4(2), 14.
- Mathieu, É. (2006). The syntax of abstract and concrete finals in Ojibwe. In Elfner, E. & Walkow, M. (Eds.), *NELS: Proceedings of the North East Linguistic Society*, volume 37, (pp. 101–114). GLSA, University of Massachusetts/Amherst.
- Mathieu, É. (2012). Flavors of division. *Linguistic Inquiry*, 43(4), 650–679.

- Mathieu, É. (2014). Nominalizations in Ojibwe. In I. Paul (Ed.), *Cross-linguistic Investigations of Nominalization Patterns*, volume 210 of *Linguistics Today* (pp. 3–24). John Benjamins Publishing Company.
- Nevins, A. (2011). Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language & Linguistic Theory*, 29(4), 939–971.
- Oxford, W. R. (2013). *Microparameters of agreement: A diachronic perspective on Algonquian verb inflection*. PhD thesis, University of Toronto.
- Payne, T. (1997). *Describing Morphosyntax: A guide for field linguists*. Cambridge, UK: Cambridge University Press.
- Perlmutter, D. M. (1978). Impersonal passives and the unaccusative hypothesis. In *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society*, (pp. 157–190).
- Preminger, O. (2009a). Breaking agreements: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry*, 40(4), 619–666.
- Preminger, O. (2009b). Failure to agree is not a failure: φ -agreement with post-verbal subjects in Hebrew. *Linguistic variation yearbook*, 9(1), 241–278.
- Pylkkänen, L. (2008). *Introducing arguments*, volume 49 of *Linguistics Inquiry Monographs*. MIT press.
- Quinn, C. (2015). Productivity vs. predictability: Evidence for the syntax and semantics of Animate gender in four Northeastern-area Algonquian languages. In *Gender, Class, and Determination*, University of Ottawa, Ottawa, Canada.
- Quinn, C. M. (2008). Applicative and antipassive: Algonquian transitive “stem-agreement” as differential object marking. unpublished manuscript.
- Rhodes, R. A. (1985). *Eastern Ojibwa-Chippewa-Ottawa Dictionary*. Walter de Gruyter.
- Rhodes, R. A. (1990). Obviation, inversion, and topic rank in Ojibwa. In *Annual Meeting of the Berkeley Linguistics Society*, volume 19, (pp. 101–115).
- Ritter, E. & Rosen, S. T. (2005). Agreement without A-positions: Another look at Algonquian. *Linguistic Inquiry*, 36(4), 648–660.
- Ritter, E. & Rosen, S. T. (2010). Animacy in Blackfoot: Implications for event structure and clause structure. In M. Rappaport-Hovav, I. Sichel, & E. Doron (Eds.), *Syntax, lexical semantics and event structure* (pp. 124–152). Oxford, UK: Oxford University Press.
- Ritter, E. & Wiltschko, M. (2014). The composition of INFL: An exploration of tense, tenseless languages, and tenseless constructions. *Natural Language & Linguistic Theory*, 32(4), 1331–1386.

- Rizzi, L. (1978). A restructuring rule in Italian syntax. *Recent transformational studies in European languages*, (3), 113–158.
- Slavin, T. (2012). *The syntax and semantics of stem composition in Ojicree*. PhD thesis, University of Toronto.
- Statistics Canada (2010). 2006 Census: Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census: First Nations people.
- Valentine, R. (2001). *Nishnaabemwin Reference Grammar*. Toronto, ON: University of Toronto Press.
- van Craenenbroeck, J. (2014). On diagnosing complement-taking roots. *Theoretical Linguistics*, 40(3-4).
- Weshki-ayaad, Lippert, C., & Gambill, G. T. (2012). *FREELANG Ojibwe-English and English-Ojibwe online dictionary*. freelang.net.
- Wiltschko, M. & Ritter, E. (2014). Animating the narrow syntax. *Talk given at GLOW*, 37.