1 Introduction

- The Algonquian languages are known for their complex transitive verbal morphology
- A number of people have proposed ways of accounting for it (e.g. Bruening 2005; Bianchi 2006; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2013)
- I will propose a derivation for transitive agreement morphology in Ojibwe
- However, I will first examine the internal structure of the Ojibwe vP

Goals of this paper:
- Describe the structural template of Ojibwe transitive verbs
  - Show that Ojibwe verbs may contain multiple vPs
- Outline my own proposal for Ojibwe verbal agreement
  - Propose that the theme signs are portmanteau morphemes that agree with both the subject and the object simultaneously

2 Ojibwe Data

2.1 Verbal Morphology

The Ojibwe verb is made of at least two parts:

- **initial** - verbal root with potentially nominal, adjectival, or verbal meaning
- **final** - verbalising head, marks transitivity, animacy of transitive object/intransitive subject, carries some semantic meaning (Valentine, 2001, p. 333)¹

Some example Ojibwe verbs, with initials and finals glossed separately:²

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¹Special thanks to Éric Mathieu, Kyumin Kim, and the members of the U. Ottawa Syntax-Semantics Lab for helpful comments on previous versions of this paper.

²Verbs may optionally contain a third part, a **medial**, an incorporated element, including classifiers or nominals (not discussed here).

²Note, despite the glosses, these examples are not infinitives; it is not possible to form infinitives in Ojibwe (Valentine, 2001, p. 648).
(1)  

a.  

mnopaw  
mino -ipw  
good -taste.VTA  
“like the taste of X (AN)”

b.  

mnopdan  
mino -ipid.am  
good -taste.VTI  
“like the taste of X (IN)”

(Valentine, 2001, p. 461)

(2)  

a.  

nokii  
anok -ii  
work -move.VAI  
“work”

b.  

nokiitoon  
anok -ii -it.oo  
work -move.VAI -cause.VTI  
“cause X to work”

(Valentine, 2001, p. 435)

Algonquianists break verbs down into four types based on their morphology (Valentine, 2001, p. 132):

- transitive animate (VTA) - transitive verb, animate object
- transitive inanimate (VTI) - transitive verb, inanimate object
- animate intransitive (VAI) - intransitive verb, animate subject
- inanimate intransitive (VII) - intransitive verb, inanimate subject

The category of each verb is determined by the verb final (Valentine, 2001, p. 132).

2.2 Transitive Agreement

- Ojibwe exhibits a topicality hierarchy and direct/inverse morphology
- The hierarchy ranks participants by personhood
- Full hierarchy: 2 > 1 > X > 3 > 3’ > 0 (Valentine, 2001, p. 268)
  - where X is an unspecified actor, 3’ is third person obviative, and 0 is third person inanimate
- The highest participant on the hierarchy will be spelled out as a proclitic
- Transitive verbs have a suffix called a theme sign; the VTA theme sign, is a portmanteau morpheme indexing both arguments
- See Example (3)

(3)  

a.  

Direct:  

Nwaabmaa.  

ni- waab -am -aa  
1- see -VTA -1>3  
“I see him.”

b.  

Inverse:  

Nwaabmig.  

ni- waab -am -ig  
1- see -VTA -3>1  
“He sees me.”

(Valentine, 2001, p. 287)

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3Abbreviations used in the glosses: sg = singular, pl = plural, 1 = first person, 2 = second person, 3 = third person animate proximate, 3’ = third person animate obviative, 0 = third person inanimate, > = acts on/does to, as in “X does verb to Y”, in = inanimate noun, an = animate noun
2.2.1 Aside: Portmanteau Morphemes in Ojibwe Agreement

Supporting evidence for this claim comes from VTA plural agreement morphology, which also shows evidence of portmanteau morphemes.

<table>
<thead>
<tr>
<th></th>
<th>Indicative</th>
<th>Preterit</th>
<th>Dubitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1PL co-occurring with 2SG</td>
<td>-min</td>
<td>-minaaban</td>
<td>-minaadig</td>
</tr>
<tr>
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<tr>
<td>1PL co-occurring with 3SG</td>
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<td>-minaaban</td>
<td>-minaadig</td>
</tr>
<tr>
<td>1PL co-occurring with 3PL</td>
<td>-naanig</td>
<td>-minaabaniig</td>
<td>-minaadigenag</td>
</tr>
<tr>
<td>2PL co-occurring with 1SG</td>
<td>-im</td>
<td>-imwaaban</td>
<td>-imwaadig</td>
</tr>
<tr>
<td>2PL co-occurring with 1PL</td>
<td>-imin</td>
<td>-iminaaban</td>
<td>iminaadig</td>
</tr>
<tr>
<td>2PL co-occurring with 3SG</td>
<td>-waa</td>
<td>-waaban</td>
<td>-waadig</td>
</tr>
<tr>
<td>2PL co-occurring with 3PL</td>
<td>-waag</td>
<td>-waabaniig</td>
<td>-waadigenag</td>
</tr>
</tbody>
</table>

Table 1: Combinations of agreement suffixes containing 1st or 2nd person plural forms (preterite dubative forms not included), from Valentine (2001, pp. 287-289)

- Both 1PL and 2PL forms vary based on the person of the other argument
  - E.g. A 1PL co-occurring with a 2PL is spelled out as a different morpheme than when a 1PL co-occurs with a 3PL
- These plural forms show evidence of being portmanteau morphemes, agreeing multiply with the subject and the object
- If one agreement suffix (plural agreement) is a portmanteau morpheme, it is not unreasonable to suggest another agreement suffix (theme signs) is also a portmanteau morpheme

3 Verbal Templates

3.1 Theoretical Tools

- The external argument is spec-VoiceP
  - The external argument is truly external from the verb, i.e. outside of vP
  - Voice is a head that introduces the external argument and assigns accusative case
  - VoiceP appears in the derivation just above vP
  - Oxford (2013), for Proto-Algonquian, the reconstructed ancestor of the Algonquian language family

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4 Third person plurals do not show the same portmanteau morphology. Third person plural usually shows up on the outer agreement suffix, along with third person obviative, and there is debate in the literature whether this outer suffix should be treated as true agreement, or as a clitic.

5 Case assignment is not applicable to Ojibwe, which does not appear to have Case.
* Voice hosts an agreement probe, as well as introducing the external argument in spec-Voice.
* Oxford derives most of the Proto-Algonquian theme signs as Voice heads
  - In my proposal, Voice is null, and the theme signs are portmanteau agreement morphemes appearing on a separate higher head

- The internal argument is spec-vP
  - In Distributed Morphology, lexical items are assumed to be made up of an acategorial root, and a categorising morpheme (v, n, or a) (Halle & Marantz, 1993; Embick & Noyer, 2007); a structure where first Merge is V and v captures this6
  - A number of authors have equated the verb final with v, (e.g. Hirose 2001; Brittain 2003; Mathieu 2006; Ritter & Rosen 2010; Slavin 2012; Oxford 2013; Mathieu 2014)
  - Both Hirose (2001) (for Plains Cree) and Oxford (2013) (for Proto-Algonquian) propose structures in which the internal argument is introduced in spec-vP

### 3.2 Transitive Verbs

Transitive verbs:

- May have either a vta or vti final; therefore, either an animate or inanimate object
- In this paper, I am only looking at vta verbs
- One of the arguments must be animate (Valentine, 2001, p. 426), although only animate subjects are extant in my data
- All transitive verb finals are followed by a theme sign
- VTA theme signs constitute part of agreement morphology, and vary based on the personhood of the subject and object

Example transitive animate derivation7:

(4) a. *Gwaabmaa.*
   gi- waab -am -aa
   2- see -vta -2>3
   “You see him/her.”

   (Valentine, 2001, p. 287)

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6Where V and √ are both labels for the same head.
7In the following trees, I am abstracting away from the agreement facts. I will return to them in Section 4.
b. 

\[
\begin{array}{c}
\text{VoiceP} \\
\text{DP} \\
\emptyset \\
\text{vP} \\
\text{DP} \\
3.\text{sg} \\
\text{v} \\
-\text{am} \\
\sqrt{\text{waab}} \\
\text{VTA} \quad \text{“see”}
\end{array}
\]

3.3 Ditransitives

Ditransitive verbs:

- Have vTA morphology as only animate arguments may be the Goal of a ditransitive (Valentine, 2001, p. 137)
- Lochbihler (2012) identifies this restriction to animate Goals as an instance of the Person Case Constraint (PCC)
- Have a multiple vP structure
- Show agreement with the Agent and the Goal (not the Theme) (Valentine, 2001, p. 136)

Example ditransitive derivation:

(5) a. \textit{ndazhtamaag}
\begin{tabular}{l}
\text{nid-} & \text{izhi} & \text{-it} & \text{-amaw} & \text{-ig} \\
1- & \text{thus} & \text{-cause.vti} & \text{-for.X.vta} & \text{-3>1} \\
\end{tabular}
\text{“she is making it for me.”}  \\
(adapted from Valentine 2001, p. 700)
4 Agreement Morphology

4.1 Theoretical Tools

- My own proposal for Ojibwe agreement morphology is partially based on Oxford (2013)
- Like Oxford (2013), I use multiple Agree (Hiraiwa, 2001) and multiple equi-distant specifiers (Chomsky, 2001)
  - Multiple Agree
    * A head baring 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)
  - Equi-distance of specifiers
    * The equidistance principle, “Terms of the edge of HP are equidistant from probe P.” (Chomsky, 2001, p. 27)
    * If a head has multiple specifiers, they are assumed to be equi-distant from that head

4.2 Agreement in the Syntax

- The internal argument moves up to spec-VoiceP, making it equi-distant with the external argument for the purpose of agreement, as proposed in Oxford (2013)

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As Oxford (2013) was working with Proto-Algonquian, parts of his analysis do not apply to Ojibwe.
• Theme signs
  – The theme sign is spelled out on a functional head above VoiceP; I label this head Topicality (Tpl)\(^9\) in reference to the topicality hierarchy, and the salience relations it spells out
  – The theme sign in TplP can agree with both the external and internal arguments, as they are both equi-distant from it; based on the persons of the arguments, the correct theme sign will be spelled out

• Pronominal proclitics
  – The pronominal proclitic must move to attach to the verb above T, in spec-TP
  – As per languages like English, there is an EPP feature that causes one of the arguments to move up to spec-TP
  – However, because the internal and external arguments are equally far apart when this EPP feature is triggered, the syntax needs a different way to choose which argument moves
  – Therefore, instead of the most local argument (the subject) moving up to spec-TP, the highest argument on the hierarchy (regardless of whether it is subject or object) moves to spec-TP, and is spelled out as the pronominal proclitic

• See Example (6) and (7)
  – Solid lines indicate movement
  – Dashed lines indicate Agree

\(^9\)This head bears no relation to Topic heads, despite the similarity in their names.
(6) Direct:

```
TP
  \rightarrow DP
    \rightarrow T
      \rightarrow TpP
        \rightarrow Theme Sign
          \rightarrow DP
            \rightarrow Subject
              \rightarrow T
                \rightarrow TpP
                  \rightarrow VoiceP
                    \rightarrow DP
                      \rightarrow Object
                        \rightarrow DP
                          \rightarrow Subject
                            \rightarrow \emptyset
                              \rightarrow vP
                                \rightarrow v'
                                  \rightarrow v
                                    \rightarrow Final
                                      \rightarrow Initial
```
4.3 The Semantics of Theme Signs

- In my current research, I am developing a formal compositional semantics for transitive and ditransitive Ojibwe verbs
- This semantics fits neatly into the syntactic framework I propose here
- My proposal is inspired by Kratzer's (1996) work on Voice and Pylkkänen’s (2008) work on applicatives and causatives
- I wish to show that the complex verbal agreement morphology contributes to an interpretation that tells us something about the event and its participants
- Semantically, I propose the vta theme signs denote predicates of events that give information about the relative saliency of arguments
- In composition with the rest of the sentence, the theme sign informs us that one argument is more salient than the other
- The non-local theme signs:
  - \([\text{aa}] = \lambda e . \text{the Agent of } e \text{ is more salient than the Theme of } e\)
  - \([\text{igw}] = \lambda e . \text{the Theme of } e \text{ is more salient than the Agent of } e\)
- All pronouns are interpreted in their base positions (the movement to spec-TP to satisfy the EPP is purely syntactic)
- Speech Act Participants (1st and 2nd persons) are assumed to always be more salient than 3rd persons, this relationship appears to be universal (Aissen, 1997; Bianchi, 2006)
• The obviation marker -an introduces a presupposition about the relative salience of an argument, i.e. that it is less salient, and is interpreted as a pronominal modifier
• Based on the assumption that 1st and 2nd persons are equally salient, the local theme signs are a special case
• The local theme signs specify which argument is the Agent, and which the Theme without reference to salience
  - [i] = λe . the Agent of e is the addressee and the Theme of e is the speaker
  - [in] = λe . the Agent of e is the speaker the Theme of e is the addressee

5 Conclusion

In sum, this paper has:
• Explored the structure of Ojibwe transitive verbal morphology, and demonstrated instances of multiple vP structures
• Used this understanding of Ojibwe verbal structure to motivate an approach to agreement using Multiple Agree and equi-distance of specifiers as theoretical tools

References


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