Deriving Inverse-Marking Patterns in Nishnaabemwin

Sigwan Thivierge

1. Introduction

In Nishnaabemwin (Algonquian), an abstract person hierarchy ranks discourse participants as 2nd person > 1st person > 3rd person. This abstract ranking seems to determine the form of an affix on the verb stem, often called a theme sign (Valentine 2001). A so-called DIRECT theme sign appears if the subject outranks the object, while a so-called INVERSE theme sign appears if the object outranks the subject.

In the spirit of McGinnis (1999), Béjar & Rezac (2009), Lochbihler (2012), and Oxford (2014), among many, I propose that Nishnaabemwin inverse-marking patterns arise from an agreement system in which two probes work together to license arguments (cf. Oxford 2014; Preminger 2014). Following Oxford (2014), I argue that Nishnaabemwin inverse-marking instantiates a complex form of object agreement. I build on Preminger (2014) in order to account for person hierarchy effects in Nishnaabemwin, specifically his proposal that the Agree operation is fallible. I explore the consequences of failure to Agree in deriving inverse-marking patterns, showing that, in some contexts, object agreement is overridden as a result of failed agreement.

This paper is organized as follows. Section 2 overviews the core Nishnaabemwin agreement pattern. In section 3, I outline my analysis, demonstrating how a two-probe agreement system derives Nishnaabemwin inverse-marking as object agreement in some cases, and failed agreement in others. I discuss remaining issues in section 4, as well as possible solutions and suggestions for future research. Section 5 concludes the paper.

2. Overview of Nishnaabemwin Agreement Patterns

In this section, I review the distribution of DIRECT and INVERSE theme signs in Nishnaabemwin along with their environmental triggers. There are two sets of DIRECT and INVERSE theme signs: one set appears when both arguments are speech act participants (either the speaker or the addressee), and another set appears when at least one of the arguments is not a speech act participant.

The theme signs -i and -in are used when both arguments are speech act participants. Consider the sentences in (1). In both sentences, the 2nd person argument is marked by the prefix gi-. The so-called DIRECT theme sign -i appears suffixed to the verb when the 2nd person argument is the subject, as shown in (1a). The so-called INVERSE theme sign -in appears suffixed to the verb when the 2nd person argument is the object, as shown in (1b).

(1) a. gwaabmi
gi-waabam-i
2-see.VTA-DIR
‘You see me.’
b. gwaabmin
gi-waabam-in
2-see.VTA-INV
‘I see you.’ (Valentine 2001)

The theme signs -aa and -igw are used when at least one argument is not a speech act participant. In (2a), the 2nd person argument is marked by the prefix gi-. In (2b), the 1st person argument is marked by the prefix ni-. The DIRECT theme sign -aa appears when these arguments are the subjects of a sentence.

(2) a. gwaabmaa
gi-waabam-aa
2-see.VTA-DIR
‘You see him/her.’
b. nwaabmaa
ni-waabam-aa
1-see.VTA-DIR
‘I see him/her.’ (Valentine 2001)

In contrast, the 2nd person argument in (3a) and the 1st person argument in (3b) are the objects of their respective clauses, and the INVERSE theme sign -igw appears. This theme sign is all that distinguishes (2a) from (3a) and (2b) from (3b), despite the changes in grammatical role.

(3) a. gwaabamig
gi-waabam-igw
2-see.VTA-INV
‘She/he sees you.’
b. nwaabmig
ni-waabam-igw
1-see.VTA-INV
‘She/he sees me.’ (Valentine 2001)

In (4) we see that the theme signs -aa and -igw of (2-3) are also used when no speech act participant argument is present. In (4ab), the 3rd person proximate argument is marked by the prefix o- and the 3rd person obviative argument is marked by the suffix -n, a person-based distinction known as obviation: proximate arguments are more central to the discourse than obviative arguments. The DIRECT theme sign -aa appears when the 3rd person proximate argument is the subject, as shown in (4a). The INVERSE theme sign -igw appears when the 3rd person proximate argument is the object, as shown in (4b).

(4) a. waabmaan
o-waabam-aa-n
3-see.VTA-DIR-OBV
‘She/he\textsubscript{prox} sees him/her\textsubscript{obv}.’
b. waabmigon
o-waabam-igw-n
3-see.VTA-INV-OBV
‘She/he\textsubscript{obv} sees him/her\textsubscript{prox}.’ (Valentine 2001)

To summarize, the distribution of the four theme signs is dependent on the whether or not arguments are SAPs, as illustrated in (5).\footnote{There is a fifth theme sign, -am, which marks inanimate objects, but I do not discuss this theme sign in detail here.}
The DIRECT theme sign \(-i\) and the INVERSE theme sign \(-in\) appear when both arguments are speech act participants, whereas the DIRECT theme sign \(-aa\) and the INVERSE theme sign \(-igw\) appear when at least one argument is not a speech act participant.

3. Deriving Nishnaabemwin Agreement Patterns

In this section, I analyze inverse-marking as a complex agreement system in which two probes work together to license arguments. This proposal builds on Preminger (2014) in analyzing person hierarchy effects under the crucial principle that the Agree operation is fallible, as well as Oxford (2014) in analyzing Nishnaabemwin theme signs as object agreement markers. Under this view, abstract hierarchies are ephiphenomenal, arising from similar syntactic agreement mechanisms that operate across all languages.

3.1. Pronominal Feature Representations

The representation of pronominals plays a crucial role in explaining the distribution of Nishnaabemwin theme signs. A feature geometric dependency between \(\phi\)-features, e.g. \([\text{ADDRESSEE}] \rightarrow [\text{PARTICIPANT}]\), captures the 'hierarchical' relationship between pronominals in Nishnaabemwin. I adopt the \(\phi\)-feature representations for pronominal arguments in (6) below (see Harley & Ritter 2002 for a full discussion of crosslinguistic feature geometries).

(6) \(\phi\)-feature specifications (adapted from Lochbihler 2012)

<table>
<thead>
<tr>
<th>2nd</th>
<th>1st</th>
<th>3rd PROX</th>
<th>3rd OBV</th>
</tr>
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<tbody>
<tr>
<td>[ANIMATE]</td>
<td>[ANIMATE]</td>
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<td>[PARTICIPANT]</td>
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<tr>
<td>[ADDRESSEE]</td>
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Such representations allow for 2nd person and 1st person arguments to form a natural class as these arguments bear the [PARTICIPANT] feature to the exclusion of the 3rd person proximate and obviative. Under the view that probes can be relativized to search for particular feature(s) (Rizzi 1990; Preminger 2014), this allows for the targeting of a specific feature that is not inherent to a particular pronominal. For example, while the Person Case Constraint (PCC) has been used to describe the prohibition of 1st and 2nd person direct objects appearing alongside indirect objects, Béjar & Rezac (2003) argue that PCC effects can be derived via a licensing requirement on the [PARTICIPANT] feature, motivating the representation of 1st and 2nd person arguments as a natural class.

3.2. Sentence Structure

In this section, I argue that Nishnaabemwin inverse-marking reflects a complex form of object agreement contingent on the success or failure of the Agree operation. Following Oxford (2014), I analyze the theme signs \(-in\), \(-i\), \(aa\) as, respectively, 2nd person, 1st person, and 3rd person object agreement. Following Preminger (2014), I analyze the theme sign \(-igw\) as default morphology resulting from failure to Agree.
The structure in (7) represents a standard analysis of the structure for Nishnaabemwin transitive sentences. My analysis has three steps: First, the lower probe on Voice\(^0\) searches for a \([\text{PERSON}] ([\pi])\) feature. Second, Voice\(^0\) moves to Infl\(^0\) and the two probes fuse (Coon & Bale 2014). Third, a higher probe on Infl\(^0\) searches for a \([\text{PARTICIPANT}] ([\text{PART}])\) feature. I discuss these steps in more detail below.

Evidence for analyzing the theme signs as object agreement can be gleaned from the table in (8) below. If we abstract away from -igw, the remaining theme signs have a predictable distribution: -in appears with a 2nd person object, -i appears with a 1st person object, and -aa appears with a 3rd person object (proximate or obviative). The remaining theme sign -igw is the only morpheme to break this pattern—its distribution, and the conditions on its distribution, must therefore be accounted for (see Oxford 2014).

To account for the distribution of -igw, I follow Preminger (2014) in treating Agree as a fallible operation. The controversial proposal that Agree can fail without crashing the derivation is motivated by languages with person hierarchy effects, such as Nishnaabemwin and other Algonquian languages, as well as Kichean (Mayan). In languages that exhibit these patterns, the derivation must allow a ‘range’ of successful Agree. In Nishnaabemwin, for example, the 2nd person prefix gi- appears over all other person prefixes, regardless of the grammatical role of the 2nd person argument. To explain this pattern, we could propose an uninterpretable/unvalued \([u\text{addressee}]\) probe that finds the 2nd person argument as subject or object. However, the probe must be able to be satisfied with a 1st person argument if there is no 2nd person, which in turn must be able to be satisfied with a 3rd person argument if there are no SAP arguments.\(^3\)

Agree’s success or failure on both Infl\(^0\) and Voice\(^0\) in Nishnaabemwin conditions the spell-out of a theme sign on Infl\(^0\) once the probes fuse, as in (9). It is important to emphasize that probe fusion is not a post-syntactic morpho-phonological fusion of features. Rather, each probe searches separately with unique matching criteria, but it necessarily follows that failure to Agree on one probe results in failure for the whole probe. Thus, failure to Agree for Infl\(^0\) results in failure to Agree for fused Infl\(^0\)+Voice\(^0\) (see Coon & Bale 2014).

\(^3\) A full discussion of Agree as a fallible operation is beyond the scope of this paper (see Preminger 2014).
(9) \textit{Agree fails on Infl}^0 \quad \textit{Agree succeeds on Infl}^0

Agree fails on Infl$^0$ \iff igw

\begin{itemize}
\item Infl$^0$ \iff in \ \_\ Voice$^0$[\_\ \_\ PART, ADDR]
\item Infl$^0$ \iff i \ \_\ Voice$^0$[\_\ \_\ PART]
\item Infl$^0$ \iff aa \ \_\ Voice$^0$[\_\ \_\ ]
\end{itemize}

The theme sign \textit{-igw} spells-out just in case Infl$^0$ fails, regardless of whether Voice$^0$ is successful or not, thus spelling-out as default morphology due to failed agreement. If Infl$^0$ \textit{does} succeed, the remaining theme signs are conditioned by the extent Voice$^0$ is successful: successful Agree on Voice$^0$ copies the entire $\phi$-feature bundle of the object, deriving \textit{-in}, \textit{-i}, \textit{-aa} as, respectively, 2nd person, 1st person, and 3rd person object agreement.

3.3. The Distribution of \textit{-igw}

The theme sign \textit{-igw} spells-out when Infl$^0$ fails to find a \textit{[PARTICIPANT]} feature in the subject. Importantly, a successful Agree operation on Voice$^0$ does not bear on the spell-out of \textit{-igw} on Infl$^0$. Consider the sentence in (3a), repeated as (10) below.

(10) gi-waabam-\textit{-igw}

\begin{itemize}
\item 2-see.VTA-INV
\item ‘She/he sees you.’ \hfill (Valentine 2001)
\end{itemize}

First, Voice$^0$ probes the 2nd person object for a \textit{[PERSON]} feature. Agree succeeds as the 2nd person argument has this feature. Second, Voice$^0$ moves into Infl$^0$ and the probes fuse. Third, Infl$^0$ probes the 3rd person subject for a \textit{[PARTICIPANT]} feature. Agree fails as the 3rd person argument does not have this feature. This process is illustrated in the tree below in (11).

(11) Failure to Agree on Infl$^0$ triggers the spell-out of \textit{-igw}, as in (12).

(12) Infl$^0$ \iff \textit{-igw}

3.4. The Distribution of \textit{-in}

The theme sign \textit{-in} spells-out when: 1) Voice$^0$ succeeds in finding a \textit{[PERSON]} feature in the object, and 2) Infl$^0$ succeeds in finding a \textit{[PARTICIPANT]} feature in the subject. Consider the sentence in (1b), repeated as (13) below.

(13) gi-waabam-\textit{-in}

\begin{itemize}
\item 2-see.VTA-INV
\item ‘I see you.’ \hfill (Valentine 2001)
\end{itemize}
First, Voice⁰ probes the 2nd person object for a [PERSON] feature. Agree succeeds as the 2nd person argument has this feature. Second, Voice⁰ moves into Infl⁰ and the probes fuse. Third, Infl⁰ probes the 1st person subject for a [PARTICIPANT] feature. Agree succeeds as the 1st person argument has this feature. This process is illustrated in the tree below in (14).

(14) InflP
   └── Infl⁰
       └── VoiceP
           ├── [PART]₁
           │   └── Voice⁰
           │       └── vP
           ├── [π]
           └── VP

Agree’s success on both Voice⁰ and Infl⁰ triggers the spell-out of -in on Infl⁰, as in (15).

(15) Infl⁰ ⇔ -in / _Voice⁰[π, PART, ADDR]

### 3.5. The Distribution of -i

The theme sign -i spells-out when: 1) Voice⁰ succeeds in finding a [PERSON] feature in the object, and 2) Infl⁰ succeeds in finding a [PARTICIPANT] feature in the subject. Consider the sentence in (1a), repeated as (16) below.

(16) gi-waabam-i
    2-see.VTA-DIR
    ‘You see me.’ (Valentine 2001)

First, Voice⁰ probes the 1st person object for a [PERSON] feature. Agree succeeds as the 1st person argument has this feature. Second, Voice⁰ moves into Infl⁰ and the probes fuse. Third, Infl⁰ probes the 2nd person subject for a [PARTICIPANT] feature. Agree succeeds as the 2nd person argument has this feature. This process is illustrated in the tree below in (17).

(17) InflP
   └── Infl⁰
       └── VoiceP
           ├── [PART]₂
           │   └── Voice⁰
           │       └── vP
           ├── [π]
           └── VP

Agree’s success on both Voice⁰ and Infl⁰ triggers the spell-out of -i on Infl⁰, as in (18).
3.6. The Distribution of -aa

The theme sign -aa spells-out when: 1) Voice⁰ succeeds in finding a [PERSON] feature in the object, and 2) Infl⁰ succeeds in finding a [PARTICIPANT] feature in the subject. Consider the sentence in (2a), repeated as (19) below.

(19) gi-waabam–aa
    2-see. VTA-DIR
    ‘You see him/her.’  (Valentine 2001)

First, Voice⁰ probes the 3rd person object for a [PERSON] feature. Agree succeeds as the 3rd person argument has this feature. Second, Voice⁰ moves into Infl⁰ and the probes fuse. Third, Infl⁰ probes the 2nd person subject for a [PARTICIPANT] feature. Agree succeeds as the 2nd person argument has this feature. This process is illustrated in the tree below in (20).

(20) Agree’s success on both Voice⁰ and Infl⁰ triggers the spell-out of -aa on Infl⁰, as in (21).

(21) Infl⁰ ⇔ -aa / _ Voice⁰[π]

In summary, Voice⁰ searches the object for a [PERSON] feature whereas Infl⁰ searches the subject for a [PARTICIPANT] feature. Following Agree, Voice⁰ moves into Infl⁰ and the probes fuse, conditioning the theme sign spell-out on Infl⁰ as in (22) below.⁴

(22) Agree fails on Infl⁰

Infl⁰ ⇔ igw

Infl⁰ ⇔ in / _ Voice⁰[π, PART, ADDR]

Infl⁰ ⇔ i / _ Voice⁰[π, PART]

Infl⁰ ⇔ aa / _ Voice⁰[π]

The theme sign -igw spells-out if Infl⁰ fails to find a [PARTICIPANT] feature in the subject. If Infl⁰ does succeed, the spell-out of the theme signs -in, -i, -aa are contingent on Voice⁰’s success in finding a [PERSON] feature in the object. The theme sign -in, -i, and -aa spell-out when Voice⁰ succeeds, triggering object agreement of a 2nd person, 1st person, or 3rd person object, respectively.⁵

⁴ While it is clear that Infl⁰ may fail in certain contexts, it is not so clear that Voice⁰ may also fail. This analysis only discusses verbs from the VTA paradigm, transitive verbs that take an animate object. Verbs from the VTI paradigm, transitive verbs that take an inanimate object, appear with the theme sign -am. I assume that -am is the spell-out of failed agreement on Voice⁰, though I leave the details open to further research.

⁵ The distribution of theme signs involving plural arguments pattern similarly to singular arguments. The 1st person inclusive argument, marked by the prefix ni- and the suffix -naan, is the subject in ni-waabam–aa-naan ‘We incl. see
4. Obviation and Remaining Issues

This section discusses obviation and an issue it creates for the analysis proposed in this paper. As mentioned in section 2, obviation is a grammatical distinction between 3rd person arguments, and it is partially dependent on discourse: obviative arguments typically appear when a proximate argument has already been introduced and obligatorily trigger obviative marking on the verb and noun, as shown in (23) below.

(23) a. giiwisens o-gii-waabam-igo-n wagosh-an
    boy 3-PST-see.VTA-INV-OBV fox-OBV
    ‘The fox saw the boy.’

  b. *giiwisens o-gii-waabam-igo wagosh
    boy 3-PST-see.VTA-INV fox
    ‘The fox saw the boy.’

Obviative marking is also obligatory on possessed nouns when the possessor is 3rd person, as in (24).

(24) a. gi-danis
    2-daughter
    ‘Your daughter.’

  b. ni-danis
    1-daughter
    ‘My daughter.’

  c. o-danis-an
    3-daughter-OBV
    ‘His/her daughter.’

A complication for the proposed analysis arises in contexts with a 3rd person proximate subject and a 3rd person obviative object. The predicted theme sign is -igw, as Infl0 fails to find a [PARTICIPANT] feature in the subject. Consider the sentence in (25) below, repeated from (4a).

(25) o-waabam-aa-n
    3-see.VTA-DIR-OBV
    ‘She/he prox see him/her obv.’

First, Voice0 probes the 3rd person obviative object for a [PERSON] feature. Agree succeeds as the 3rd person argument has this feature. Second, Voice0 moves into Infl0 and the probes fuse. Third, Infl0 probes the 3rd person proximate subject for a [PARTICIPANT] feature. Agree fails as the 3rd person argument does not have this feature. Failure to Agree on Infl0 predicts the spell-out of -igw—however, the attested theme sign in these contexts is -aa, as in (25) above.

One possible proposal is that obviation triggers a ‘ProxP’ rather than an InflP, which only projects in contexts with two 3rd person arguments as part of a c-selectional requirement. Under this approach, a probe on Prox0 searches for a [PROXIMATE] feature; Voice0 still searches for a [PERSON] feature. Prox0 will succeed with a 3rd person proximate subject, conditioning the spell-out of -aa (similar to Infl0 in section 3.2.6). Prox0 will fail with a 3rd person obviative (3') subject, conditioning the spell-out of -igw (similar to Infl0 in section 3.2.3). This process correctly predicts the spell-out of -aa in o-waabam-aa-n ‘She/he prox see him/her obv,’ and -igw in o-waabam-igo-n ‘She/he obv see him/her prox’, as illustrated in the trees below.
This solution is admittedly weak as it relies on the arbitrary projection of a ProxP only in contexts with two 3rd person arguments, but there is some evidence that obviation triggers an additional step in the syntactic derivation. In the nominal and verbal domains, obviation only occurs in contexts with two 3rd person arguments. As was seen in the sentences in (24) above, obiative marking is only obligatory when the possessor is also 3rd person. The sentences in (27) below illustrate obviation in the verbal domain, offering the most compelling evidence. As shown in (27a), there is no obiative agreement on the verb in sentences with a speech act participant subject and a 3rd person obiative object. However, obiative agreement on the verb is obligatory just in case the subject is 3rd person proximate and the object is 3rd person obiative, as in (27b).

(27) a. gi-waabam-aa o-danis-an
   2-see.VTA-DIR 3-daughter-OBV
   ‘You see her/his daughter.’

b. o-waabam-aa-n o-danis-an
   3-see.VTA-DIR-OBV 3-daughter-OBV
   ‘She/heprox sees her/his daughterobv.’

These patterns raise an important question concerning the syntactic—or non-syntactic—nature of obviation. Though I follow Lochbihler (2012) and Oxford (2014) in representing the feature representations of 2nd, 1st, and 3rd proximate arguments with an additional [PROXIMATE] feature, it remains unclear whether this feature is always present or is somehow imposed. Representing the [PROXIMATE] feature in the relevant feature geometries seems arbitrary as the sole purpose of this feature is to distinguish between 3rd person proximate and 3rd person obiative. If the [PROXIMATE] feature is imposed by the syntax, then obviation seems akin to theories of dependent case as obviation is only triggered by the presence of two appropriate arguments within the same domain. In any case, I do not argue for either of these proposals here as obviation is an independent issue to the theories discussed in this paper.

5. Conclusion

The proposed analysis derives the core Nishnaabemwin agreement pattern without appealing to a dependency between abstract person hierarchies and agreement mechanisms. I argued that the two sets of DIRECT and INVERSE theme signs can be analyzed as a combination of object agreement and failed agreement. Following Oxford (2014), I showed that the so-called DIRECT theme signs -in and -aa and the so-called INVERSE theme sign -i have a predictable distribution consistent with object agreement. If we abstract away from the INVERSE theme sign -igw, -in appears with 2nd person objects, -i appears with 1st person objects, and -aa appears with 3rd person objects. The remaining theme sign -igw is the only theme sign that does not straightforwardly generalize to object agreement. Following Preminger (2014), I argued that -igw is the morphological exponence of failed agreement. I also showed that the single morphological slot shared by the theme signs can be derived with probe fusion, a process proposed
by Coon & Bale (2014) in order to account for Mi’gmaq (Algonquian) agreement patterns. Under this view, probes search separately, but failure for one probe implicates failure for the fused probes.

I derived the basics of Nishnaabemwin inverse-marking with a two-probe agreement system under the crucial principle that Agree can fail without crashing the derivation. First, a lower probe on Voice₀ searches for a [PERSON] feature in the internal argument. Second, Voice₀ moves to Infl₀ where the two functional heads fuse. Third, a higher probe on Infl₀ searches for a [PARTICIPANT] feature in the external argument. As Voice₀ and Infl₀ fuse in the second stage in this process, all theme signs spell-out in Infl₀.

The spell-out of either failed agreement or object agreement follows from Agree’s failure or success on Infl₀. If the Agree operation from Infl₀ fails, -igw spells-out. If the Agree operation from Infl₀ succeeds, -in, -i, -aa spell-out as object agreement according to Voice₀: -in marks a 2nd person object, -i marks a 1st person object, and -aa marks a 3rd person object.

References


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