

## Inverse marking and Multiple Agree in Algonquin: Complementarity and variability

Will Oxford

**Abstract** This paper shows that inverse marking and portmanteau agreement are in complementary distribution in Algonquin: inverse marking is possible only in contexts where portmanteau agreement is not. This correlation holds despite intralanguage variation in both phenomena. The paper proposes that the two phenomena pattern together because both are determined by the outcome of the Agree operation on Infl. When Infl enters a Multiple Agree relation with both arguments, the realization of portmanteau agreement morphology is possible. When Infl agrees only with the object, it duplicates the result of an earlier object agreement operation on Voice. The presence of identical features on Infl and Voice triggers an impoverishment operation that deletes the features of Voice, resulting in its spellout as an underspecified elsewhere form—which is the exponent that we know descriptively as the inverse marker. This analysis explains why inverse marking and portmanteau agreement never co-occur in Algonquin: the two phenomena are determined by alternative outcomes of the Agree operation on Infl. The analysis also enables a simple account of the intralanguage variation in the patterning of the two phenomena, which is shown to follow from variation in the specification of the probe on Infl.

**Keywords** agreement · inverse marking · equidistance · portmanteaux · Algonquin

### 1 Introduction

This paper examines two typologically marked phenomena that lie on the boundary of morphology and syntax: INVERSE MARKING, in which a special exponent appears when the logical object outranks the logical subject on a person hierarchy, and PORTMANTEAU AGREEMENT, in which a single agreement morpheme indexes the

---

W. Oxford  
545 Fletcher Argue Building  
University of Manitoba  
Winnipeg, MB Canada R3T 5V5  
E-mail: will.oxford@umanitoba.ca

subject and object simultaneously. The paper shows that in Algonquin, a dialect of the Algonquian language Ojibwe, the two phenomena are in complementary distribution: inverse marking is possible only in contexts where portmanteau agreement is not. This correlation holds despite intralanguage variation in both phenomena. The paper proposes that the two phenomena pattern together because they have the same syntactic source: both are determined by the outcome of an Agree operation on Infl.

In brief, the proposal is that the Algonquin agreement pattern is driven by an interaction between two agreement heads. The lower head, Voice, always agrees with the object, but the higher head, Infl, is able to agree with either the subject, the object, or both arguments simultaneously, depending on which argument best matches the probe's features. When Infl agrees simultaneously with both arguments, the realization of portmanteau agreement morphology is possible. When Infl agrees only with the object, it duplicates the object agreement that already occurred on Voice, which consequently undergoes an impoverishment operation that results in its spellout as an underspecified elsewhere form—which is the exponent that we know descriptively as the inverse marker. This analysis derives the complementary distribution of inverse marking and portmanteau agreement: the two phenomena never co-occur because they are determined by two alternative outcomes of the Agree operation on Infl.

The paper proceeds by building an analysis of the Algonquin agreement system, with the facts regarding inverse marking and portmanteau agreement being introduced along the way. Section 2 provides background on Algonquin. Section 3 examines the Voice head, showing that it indexes the object except when realized as a special exponent known as the inverse marker. Section 4 moves on to Infl, which agrees with either the subject, the object, or both arguments (Multiple Agree). The specification of the probe on Infl varies between main clauses and embedded clauses, with concomitant variation in the distribution of Multiple Agree. Section 5 shows that the inverse marker appears in Voice whenever Infl agrees solely with the object. An impoverishment analysis is developed to account for the realization of inverse marking and its complementary distribution with Multiple Agree. Section 6 discusses two additional syntactic correlates of the Agree operation on Infl in order to reinforce the conclusion that Infl-agreement, which determines the patterning of both inverse marking and portmanteau agreement, must take place in the syntax.<sup>1</sup>

## 2 Background

This section introduces Algonquin, a dialect of Ojibwe (§2.1), and describes the layout of the Algonquin agreement system, focusing on the template for agreement inflection (§2.2) and a distinction between two parallel sets of verb inflection (§2.3).

<sup>1</sup> Interlinear glosses employ the Leipzig glossing conventions, with the following additions: 1PL = exclusive first-person plural, 21PL = inclusive first-person plural, 3 = proximate third person, 3' = obviative third person, DIR = direct, INV = inverse, T.S. = theme sign, X→Y = X acts on Y. Other abbreviations that occur in the paper are: PA = Proto-Algonquian, SUBJ = logical subject, OBJ = logical object, [Pers, Prox, Part, Addr] = [Person, Proximate, Participant, Addressee]. For compactness, feminine is used as a default in English translations of Algonquin 3SG forms, which show no masculine-feminine contrast.

## 2.1 Ojibwe and Algonquin

Ojibwe (ISO 639-3 *oji*) is a Central Algonquian language (Bloomfield 1946) with many dialects (Rhodes and Todd 1981; Valentine 1994). This paper focuses on the Ojibwe dialect spoken at Kitigan Zibi, Quebec, as documented by Jones (1977).<sup>2</sup> Linguists refer to this dialect as either Nipissing Ojibwe (Rhodes 2006) or Nipissing Algonquin (Valentine 2001:15). Speakers of the dialect refer to it in English simply as Algonquin (ISO 639-3 *alg*), a usage that I will follow. The 2011 Canadian census reports 485 speakers of Algonquin in Kitigan Zibi (Statistics Canada 2013).

I have chosen to focus on Kitigan Zibi Algonquin for expository convenience, as this dialect is morphophonologically conservative and its inflectional patterns have remained especially crisp (and are well-documented). I emphasize, however, that the crucial correlation between portmanteau agreement and inverse marking is not restricted to this dialect—rather, it is found across most of the Algonquian language family. The broad attestation of this pattern is indicated by its reconstruction in Proto-Algonquian (PA), which displays exactly the same distribution of portmanteau and inverse forms as the Kitigan Zibi Algonquin data in this paper (see the PA reconstructions in Bloomfield 1946 and Goddard 2000, 2007, 2015). Despite the focus on Kitigan Zibi Algonquin, then, we are discussing not a quirk of this particular dialect, but rather a robust property that holds across many Algonquian languages.

## 2.2 The Algonquin agreement inflection template

An Algonquin verb can appear with up to three agreement markers. The form in (1), for example, contains the agreement markers *-a:* ‘3OBJ’, *-e:gw* ‘2PL’, and *-wa:* ‘3PL’. In all glossed data presented in this paper, the leftmost two agreement slots will be visually distinguished through the use of underline and bold formatting, as in (1).

- (1)    *wa:bama:siwe:gowa:*  
       *wa:bam -a: -siw -e:gw -wa:*  
       see     -3OBJ -NEG **-2PL** -3PL  
       ‘You (pl) don’t see them.’<sup>3</sup>

The agreement slots can be represented more abstractly by the template in (2), which employs the terminology of Goddard (1974, 1979) and Nichols (1980).

- (2)    Stem + Theme sign + **Central agreement** + Peripheral agreement

An even more abstract representation of the agreement template is given in (3), which anticipates the analysis of the agreement slots that will be developed in this paper.

- (3)    Stem + Voice + **Infl** + C

A brief description of the patterning of the three agreement slots is given in (4).

<sup>2</sup> Kitigan Zibi has also been known as River Desert or Maniwaki (as in Jones 1977).

<sup>3</sup> All Algonquin forms cited in this paper are from Jones’s (1977) grammar. A negative form is cited in (1) because its morphophonology is more straightforward than that of the corresponding affirmative form.

- (4)
- a. Voice normally agrees for person with the logical object, but is sometimes replaced by a special “inverse” marker.
  - b. Infl agrees for person and number with either the logical subject, the logical object, or both arguments, as determined by a person hierarchy.
  - c. C agrees for number, animacy, and obviation with a third-person argument, which may be either the logical subject or the logical object.

The patterning of the Voice and Infl slots is examined in detail in Sections 3 and 4. The C slot will not be examined further as it plays no role in the patterns discussed in this paper, although it will appear in some examples. (For the analysis of this slot as C, see Halle and Marantz 1993, Branigan and MacKenzie 1999, and Bliss 2013. The patterning of Algonquian C-agreement is examined in Oxford 2017a.)

### 2.3 Two parallel sets of verb inflection

Like most Algonquian languages, Algonquin has two parallel sets of verb inflection known as the Independent and Conjunct Orders (Bloomfield 1946). Both sets of inflection encode the same contrasts, but they do so using different morphology. As an example, consider the form in (1) above, repeated in (5a). This is a Conjunct form. The parallel Independent form is given in (5b).

- (5)
- a. *wa:bama:siwe:gowa:*  
*wa:bam -a: -siw -e:gw -wa:*  
 see -3OBJ -NEG -2PL -3PL  
 ‘You (pl) don’t see them.’ (Conjunct)
  - b. *giwa:bama:si:wa:g*  
*gi- wa:bam -a: -siw -wa: -ag*  
 2- see -3OBJ -NEG -2PL -3PL  
 ‘You (pl) don’t see them.’ (Independent)

Both forms share the same stem (*wa:bam-* ‘see’), the same agreement on Voice (*-a:* ‘3OBJ’), the same negative marker (*-siw*), and the same overall order of suffixes (Stem-Voice-Neg-Infl-C). The shapes of the Infl and C agreement markers, however, are completely different in the two forms. Perhaps the most striking difference is that Infl-agreement in the Independent is a discontinuous prefix-suffix combination (*gi-...-wa:* ‘2PL’) rather than simply a suffix as in the Conjunct (*-e:gw* ‘2PL’). (The discontinuous realization of Infl in the Independent is discussed in Section 4.)

The distribution of the two sets of inflection is conditioned by clause type: Independent inflection canonically occurs in main clauses and Conjunct inflection canonically occurs in embedded clauses, although the details are subtle and vary among the Algonquian languages (see e.g. Brittain 2001a for Western Naskapi and Cook 2014 for Plains Cree). In theoretical work, the Independent/Conjunct distinction has been attributed to a difference in the structural position of the verb (Campana 1996; Brittain 2001a; Richards 2004), or, more recently, to a difference in the inheritance of features from C to T (Lochbihler and Mathieu 2016). In this paper I take no position

on the ultimate source of the Independent/Conjunct distinction, but I will account for certain differences in the patterning of agreement in the Independent and Conjunct by positing that the probe on Infl is specified differently in the two orders, perhaps due to inheritance from two different flavors of C (cf. Lochbihler and Mathieu 2016).

### 3 Agreement on Voice

This section begins to build a model of Algonquin morphosyntax by examining the innermost layer of agreement inflection: the “theme sign”. After arguing that theme signs are best understood as object agreement (§3.1) on Voice (§3.2), the section formalizes the agreement operation that takes place on Voice (§3.3) and identifies an instance of A-movement that is triggered by this agreement operation (§3.4).

#### 3.1 Theme signs as object agreement

The theme sign, which immediately follows the verb stem, is often characterized as a DIRECT/INVERSE marker (e.g. Wolfart 1973; Béjar and Rezac 2009). To see why, consider the pair of examples in (6). Both examples involve a first-person plural argument, but the role of this argument differs: in (6a) the logical *subject* is 1PL, while in (6b) the logical *object* is 1PL. Despite this difference, the 1PL argument is indexed by exactly the same Infl-agreement marker in both forms (*ni-...-ina:n* ‘1PL’). Infl-agreement alone, then, is not sufficient to identify the role of the indexed argument.

- |     |    |   |    |   |
|-----|----|---|----|---|
| (6) | a. | niwa:bama:na:n<br><b>ni-</b> wa:bam <b>-a:</b> <b>-ina:n</b><br><b>1-</b> see <b>-DIR -1PL</b><br>‘We see her.’ (1PL→3) | b. | niwa:bamigona:n<br><b>ni-</b> wa:bam <b>-igw -ina:n</b><br><b>1-</b> see <b>-INV -1PL</b><br>‘She sees us.’ (3→1PL) |
|-----|----|---|----|---|

The job of identifying thematic roles falls to the theme sign. A typical description is as follows. The DIRECT theme sign *-a:* indicates that the logical subject outranks the logical object on the person hierarchy  $1/2 > 3 > 3'$ , as in (6a), while the INVERSE theme sign *-igw* indicates the opposite, as in (6b). Infl-agreement and the theme sign thus act in concert: Infl-agreement identifies the phi-features of an argument while the theme sign indicates whether this argument is the logical subject or object. (For convenience, I will refer to the logical subject and object—i.e. the external and internal arguments—simply as the “subject” and “object” in the remainder of this paper.<sup>4</sup>)

The preceding description is complicated by the existence of two further theme signs, *-i* and *-in*, which are illustrated in (7) and glossed temporarily as ‘T.S.’

<sup>4</sup> My use of “subject” and “object” to refer to the logical subject (external argument) and logical object (internal argument) follows the practice of many Algonquianists (e.g. Goddard 1979), though not all (e.g. Rhodes 1976, 1994).

- (7) a. giwa:bamimin                      b. giwa:baminimin  
       **gi-** wa:bam -i    **-imin**                      **gi-** wa:bam -in    **-imin**  
       2- see    -T.S. -1PL                      2- see    -T.S. -1PL  
       ‘You see us.’ (2→1PL)                      ‘We see you.’ (1PL→2)

The symmetry of the agreement inflection in these forms makes it tempting to analyze *-i/-in* as a second pair of direct/inverse markers dedicated to local configurations, i.e. configurations in which both arguments are first or second person. If we expand the person hierarchy to include the ranking  $2 > 1$ , we can analyze *-i* as a LOCAL DIRECT theme sign (2→1) and *-in* as a LOCAL INVERSE theme sign (1→2), as in Wolfart’s (1973) grammar of Plains Cree. However, despite its adoption in much subsequent theoretical work (e.g. Béjar and Rezac 2009), this “local inverse” analysis is not accepted by most traditional descriptive Algonquianists (e.g. Bloomfield 1946, 1962; Hockett 1966, 1992; Goddard 1979; Nichols 1980; Pentland 1999; Valentine 2001). Explicit arguments against the local inverse analysis have been provided by Zúñiga (2006, 2008) and Macaulay (2009). The crucial evidence comes from the 3→1 forms in the Conjunct Order, such as the 3SG→1SG form in (8).

- (8) wa:bamij  
       wa:bam -i    **-j**  
       see    -T.S. -3  
       ‘She sees me.’ (3SG→1SG Conjunct)

This form contains the theme sign *-i*, which is the putative “local direct” theme sign that we saw in the 2→1 form in (7a) above. However, in a 3→1 form like (8), the “local direct” characterization of *-i* is doubly inappropriate. First, a 3→1 form is not a local configuration. Second, given the hierarchy  $1/2 > 3 > 3'$ , the theme sign in a 3→1 form should, if anything, be inverse rather than direct, as it is in the corresponding 3SG→1SG Independent form in (9).

- (9) niwa:bamig  
       **ni-** wa:bam -igw  
       1- see    -INV  
       ‘She sees me.’ (3SG→1SG Independent)

The local direct/inverse analysis of *-i/-in* is thus not tenable, as the putative “local direct” theme sign *-i* occurs in contexts such as (8) that are neither local nor direct.

How, then, should *-i/-in* be characterized? The answer becomes clear when we take a comprehensive look at the patterning of theme signs. The distribution of all theme signs in the Conjunct and Independent Orders is summarized in Table 1. The forms are presented according to the configuration in which they appear: LOCAL configurations involve two speech-act participants (SAPs), MIXED configurations involve an SAP and a third person, and NON-LOCAL configurations involve two third persons (one of which must be marked as less topical or “obviative”, notated 3').

The distribution of the inverse theme sign *-igw* (shaded in Table 1) is problematic, not least because it varies between the Conjunct and Independent. If we temporarily set *-igw* aside, however, a simple characterization of the remaining three theme signs

**Table 1** Distribution of theme signs in Algonquin (see Appendix for full forms)

Configuration		Theme Sign	
		Conjunct	Independent
Local	2→1	-i	-i
	1→2	-in	-in
Mixed	1/2→3	-a:	-a:
	3→1	-i	-igw
	3→2	-in	-igw
Non-local	3→3'	-a:	-a:
	3'→3	-igw	-igw

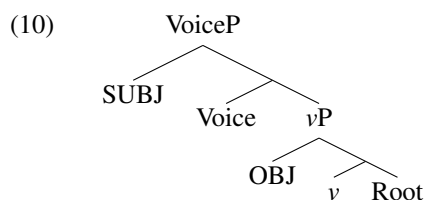
emerges across both the Conjunct and the Independent: *-i* always occurs with 1st-person objects, *-in* always occurs with 2nd-person objects, and *-a:* always occurs with 3rd-person objects. For these three theme signs, then, a direct/inverse analysis is not needed: the theme signs are most straightforwardly analyzed as nothing more than object person markers, as proposed by Rhodes (1976, 1994) and McGinnis (1999) for Ojibwe and Brittain (1999) for Western Naskapi (cf. Goddard's (2007:232) statement that Algonquian theme signs indicate “the identity specifically of the object”).

This leaves us with the inverse theme sign *-igw*. Unlike the other three theme signs, *-igw* cannot be characterized as an object person marker, as it occurs with objects of all three persons (i.e. in both 3→1/2 and 3'→3 contexts). Descriptively, the only coherent way to capture the contexts for *-igw* is to retain the person hierarchy 1/2 > 3 > 3', with *-igw* appearing when the object outranks the subject (under conditions that vary between the Independent and Conjunct). Unlike the other theme signs, then, *-igw* must continue to be described as an inverse marker—that is, a marker that appears when the object outranks the subject on the person hierarchy.

The theme sign slot thus hosts two distinct types of marking: there is a background pattern of object agreement (*-i* ‘1OBJ’, *-in* ‘2OBJ’, *-a:* ‘3OBJ’) that is overridden in certain contexts by the inverse marker *-igw* (cf. Bliss, Ritter and Wiltschko 2014). I will set aside the problematic inverse marker until Section 5, as its patterning is connected to the Infl-agreement patterns that will be examined in Section 4. The remainder of this section lays out an analysis of the background pattern of object agreement. The analysis of this simple pattern is straightforward, but it is important in that it provides a foundation for the analysis of the rest of the agreement system.

### 3.2 Theme signs as Voice

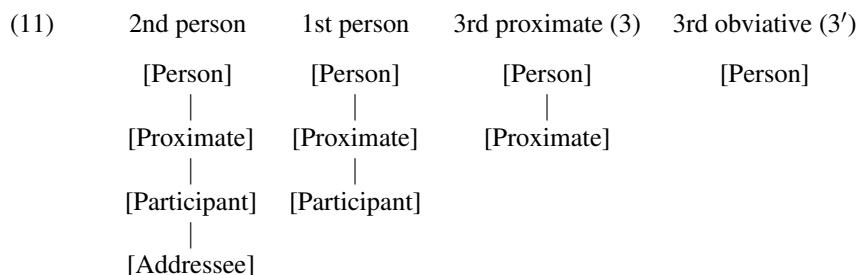
I take transitive VoiceP in Algonquin to have the structure shown in (10) (cf. Hirose 2003 for Plains Cree, Bruening 2005 for Passamaquoddy, and Oxford 2014 for Proto-Algonquian), in which *v* introduces the internal argument (“OBJ”) and Voice introduces the external argument (“SUBJ”).



Both *v* and Voice are overtly realized in Algonquian languages: *v* is the stem-forming lexical suffix known by Algonquianists as a “verb final” (Brittain 2003; Hirose 2003; Branigan et al. 2005; Mathieu 2007), and Voice, I propose, is the theme sign (cf. Bruening 2005; Béjar and Rezac 2009; Lochbihler 2012; Tollan and Oxford 2018).<sup>5</sup> Head movement gives the surface morpheme order Root-*v*-Voice, i.e. root-final-theme sign, as attested.

### 3.3 The agreement operation on Voice

We saw above (§3.1) that Voice displays a background pattern of object person agreement (*-i* ‘1OBJ’, *-in* ‘2OBJ’, *-a*: ‘3OBJ’) that is sometimes overridden by the appearance of the inverse marker. In order to formalize the person-agreement pattern, I assume the model of articulated person features in (11) (Béjar 2003; Béjar and Rezac 2009; Lochbihler 2012), in which entailment relations among features cause persons closer to the deictic centre to have more articulated feature representations.<sup>6</sup>



The person-agreement pattern displayed by the theme sign can be accounted for by positing that Voice carries the probe [*u*Person], which is valued by copying a goal’s [Person] feature and any dependents. For example, if the [*u*Person] probe agrees with a 1st-person goal, the probe will be valued as [Person, Proximate, Participant] (cf. Béjar and Rezac 2009). Under a standard downward-probing model of agreement (Chomsky 2000, 2001), the result is that Voice will always acquire the person speci-

<sup>5</sup> Béjar and Rezac (2009) and Lochbihler (2012) in fact analyze the theme sign as *v*, but in their analysis, *v* is the head that introduces the external argument, equivalent to Voice in my analysis.

<sup>6</sup> The use of [Addressee] to distinguish 1st and 2nd persons follows Béjar and Rezac 2009, but either [Addressee] or [Speaker] would be equally sufficient for the purposes of my analysis. The representation of inclusive 1st-person plurals may involve both [Addressee] and [Speaker] (Harley and Ritter 2002).

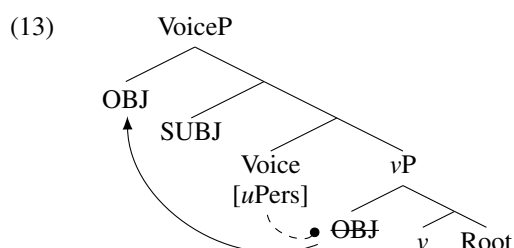


fication of the object.<sup>7</sup> The simple spellout rule in (12) can then be given to account for the realization of Voice, setting aside the inverse marker *-igw* for now.

- (12) Spellout of Voice (= theme sign)
- |            |                       |                    |                                    |
|------------|-----------------------|--------------------|------------------------------------|
| <i>-in</i> | $\longleftrightarrow$ | [Pers, Part, Addr] | (= 2nd person)                     |
| <i>-i</i>  | $\longleftrightarrow$ | [Pers, Part]       | (= 1st person)                     |
| <i>-a:</i> | $\longleftrightarrow$ | [Pers]             | (= 3rd person proximate/obviative) |

### 3.4 Movement triggered by agreement on Voice

I propose that the object agreement operation on Voice has an additional consequence: it triggers movement of the object to the specifier of VoiceP, creating the multiple-specifier configuration shown in (13) (cf. Hirose 2003 for Plains Cree and Bruening 2005 for Passamaquoddy). Here and in subsequent diagrams, I use a dotted arrow to denote agreement and a solid arrow to denote movement.



I further propose that the two specifiers of VoiceP are equidistant from higher heads. To formalize this proposal, I adopt Hornstein's (2009) path-based definition of structural distance:

- (14) A path is the set of maximal projections (XPs) that dominate the target or the launch site. (Hornstein 2009:40)

Hornstein (2009:43–44) shows that if distance is evaluated in terms of paths, the equidistance of multiple specifiers follows. Consider, for example, a structure in which the VoiceP from (13) occurs as the complement of Infl, as in (15).

- (15) [<sub>InflP</sub> Infl [<sub>VoiceP</sub> OBJ SUBJ Voice [<sub>vP</sub> ... ]]]

The path from OBJ to Infl is {InflP, VoiceP}. The path from SUBJ to Infl is the same. Since both specifiers of VoiceP have the same path to Infl, the two specifiers are equidistant from Infl.

The equidistance of multiple specifiers is controversial in the literature, with arguments both for (e.g. Reinhart 1981; Ura 1996; Chomsky 2000; Hornstein 2009)

<sup>7</sup> Although I follow Béjar and Rezac's approach to person features, I do not adopt their Cyclic Agree model of agreement. The Cyclic Agree analysis of Ojibwe theme signs in Béjar and Rezac 2009 is grounded in the premise that all theme signs are direct/inverse markers, but I argued in Section 3.1 that most theme signs are better understood as object agreement. Under this interpretation of the data, standard downward-probing Agree gives the simplest account.

and against (e.g. Chomsky 2001; Hiraiwa 2001).<sup>8</sup> In Algonquian languages, strong evidence for equidistance comes from the fact that most morphosyntactic operations are insensitive to the distinction between logical subjects and logical objects. In transitive verb forms, for example, Infl-agreement is governed by the person hierarchy (1/2 > 3 > 3') rather than the thematic hierarchy (logical subject > logical object). This point is illustrated by the forms in (6) above, repeated in (16): Infl-agreement (*ni*...*-ina:n* '1PL') tracks the 1st-person argument regardless of whether it is the subject, as in (16a), or the object, as in (16b).

- |      |    |   |    |   |
|------|----|---|----|---|
| (16) | a. | niwa:bama:na:n<br><b>ni-</b> wa:bam -a: <b>-ina:n</b><br><b>1-</b> see <b>-3OBJ -1PL</b><br>'We see her.' (1PL→3) | b. | niwa:bamigona:n<br><b>ni-</b> wa:bam -igw <b>-ina:n</b><br><b>1-</b> see <b>-INV -1PL</b><br>'She sees us.' (3→1PL) |
|------|----|---|----|---|

We will see in Section 6 that the same "symmetry" of arguments (Wunderlich 2005) holds for word order and binding, which are also governed by the person hierarchy rather than the thematic hierarchy. Asymmetries between the logical subject and object are so scarce that Wolvengrey (2011) argues against the existence of a grammatical subject in Cree and Rhodes (1994) uses the term "subject" to refer to the higher-ranked argument on the person hierarchy rather than the logical subject in Ojibwe. The morphosyntactic symmetry of the subject and object follows from the proposal that object agreement on Voice renders the subject and object equidistant, as in (13). This equidistance removes minimality as a factor in subsequent operations, opening the door to other factors such as featural richness (i.e. the person hierarchy).

### 3.5 Summary: Agreement on Voice

This section has set the stage for an analysis of the Algonquin agreement system by examining the innermost layer of agreement, known traditionally as the theme sign. I have proposed that the theme sign is in fact the realization of Voice, which agrees with the object for person. This agreement operation triggers A-movement of the object to the specifier of VoiceP, creating a configuration in which both arguments are equidistant for the purposes of subsequent operations. There is also an exceptional "inverse" realization of Voice, *-igw*, which I have temporarily set aside. The discussion of Infl-agreement in Section 4 will provide us with the tools needed to understand the nature of inverse marking, which I will return to in Section 5.

## 4 Agreement on Infl

In this section we shift our focus from the theme sign (Voice) to the next layer of agreement, which Algonquianists refer to as "central agreement" (Goddard 1979) and

<sup>8</sup> The equidistance proposed in (13) is consistent with Richards' (2001:102) suggestion that multiple specifiers created by A-movement are equidistant while those created by A-bar movement are not.

I will analyze as agreement on Infl (equivalent to T).<sup>9</sup> Infl-agreement is interesting in that its outcome varies: in transitive forms, Infl can index the subject, the object, or both arguments simultaneously. This section focuses on the distribution of forms in which Infl indexes both arguments simultaneously. We will see that this can occur in *local and mixed configurations* in the Conjunct (§4.1), but in *local configurations only* in the Independent (§4.2). To account for this difference, I will propose that the probe on Infl is more articulated in the Independent than in the Conjunct (§4.3). I then show in detail how this proposal derives the patterning of Infl-agreement (§4.4). The analysis of Infl-agreement developed in this section will also provide the key to understanding the patterning of inverse marking, as we will see in Section 5.

#### 4.1 Description of Conjunct Infl-agreement

This section shows that in the Conjunct, Infl-agreement can index both arguments simultaneously in *local* configurations (SAP + SAP) and *mixed* configurations (SAP + 3), but not in *non-local* configurations (3 + 3). Before looking at these transitive configurations, however, it is useful to consider intransitive agreement in order to establish a baseline. The Infl-agreement suffixes that occur in intransitive Conjunct forms are shown in (17). (See the Appendix for the complete paradigm.) Since these suffixes occur in intransitive forms, we know that each one indexes only a single argument.

(17) Simple Infl-agreement in the Conjunct (initial *y* occurs after vowels)

1SG	2SG	1PL	21PL	2PL	3SG	3PL
-(y)a:n	-(y)an	-(y)a:ng	-(y)angw	-(y)e:gw	-j	-wa:j

The simple suffixes in (17) occur in many transitive forms as well. For example, the simple 2PL suffix *-(y)e:gw* occurs not only in intransitive 2PL forms such as (18a), but also in transitive 2PL→3 forms such as (18b). The sharing of the 2PL suffix reflects the fact that both forms are part of the same overall Conjunct paradigm.

- (18) a. niba:ye:g  
niba: **-ye:gw**  
sleep **-2PL**  
'You (pl) sleep.'
- b. wa:bame:g  
wa:bam **-Ø** **-e:gw**  
see **-3OBJ -2PL**  
'You (pl) see her.'<sup>10</sup>

<sup>9</sup> My "Infl" is the same head as Chomsky's (2000, 2001) "T", but I use the label Infl rather than T because tense plays no role in the realization of the central agreement marker in Algonquin (cf. Ritter and Wiltschko 2014 on the non-universality of tense as the clausal anchoring feature).

<sup>10</sup> This form contains a null allomorph of the 3OBJ theme sign (Voice). The null allomorph occurs when the 3OBJ theme sign is followed by a vowel-initial suffix such as *-e:gw* (Rhodes 1976:176–7; Lochbihler 2012:85–6). The overt allomorph *-a:* can be restored in such forms by adding the negative suffix *-siw* after the theme sign (Jones 1977:77), as in the following example, which is the negative counterpart of (18b):

- (i) wa:bama:siwe:g  
wa:bam **-a:** **-siw** **-e:gw**  
see **-3OBJ -NEG -2PL**  
'You (pl) do not see her.'

Not all transitive forms make use of the simple Infl-agreement suffixes in (17), however. Some transitive forms display a special Infl suffix dedicated specifically to a particular subject-object combination. An example is the 1SG→2PL form in (19). This form displays the Infl-agreement suffix *-agogw*, which is clearly distinct from both the simple 1SG suffix *-(y)a:n* and the simple 2PL suffix *-(y)e:gw*.

- (19) wa:baminagog  
 wa:bam -in **-agogw**  
 see -2OBJ **-1SG→2PL**  
 ‘I see you (pl).’

Since the Infl-agreement suffix *-agogw* occurs only in transitive 1SG→2PL forms, we have no choice but to analyze *-agogw* as an agreement marker dedicated to this particular subject-object combination. That is, *-agogw* is a PORTMANTEAU Infl-agreement marker that simultaneously indexes both the 1SG subject and the 2PL object. (I use the term “portmanteau agreement” to refer to cases in which a single exponent in a single morphological slot indexes features of two arguments.<sup>11</sup>)

The 1SG→2PL form in (19) attests the possibility of portmanteau agreement in *local* configurations in the Conjoint. Portmanteau agreement is also attested in *mixed* configurations in the Conjoint. The three mixed forms in (20) each display an Infl-agreement suffix that is not part of set of simple suffixes in (17). Instead, each Infl suffix is a portmanteau marker that occurs uniquely in that particular transitive form.

- (20) a. wa:bamag  
 wa:bam -Ø **-ag** (1SG→3 *-ag* ≠ 1SG *-a:n*, 3SG *-j*)  
 see -3OBJ **-1SG→3**  
 ‘I see her.’
- b. wa:bamina:k  
 wa:bam -in **-a:k** (3→2PL *-a:k* ≠ 3SG *-j*, 2PL *-e:gw*)  
 see -2OBJ **-3→2PL**  
 ‘She sees you (pl).’
- c. wa:bamiyaminj  
 wa:bam -i **-yaminj** (3→1PL *-yaminj* ≠ 3SG *-j*, 1PL *-ya:ng*)  
 see -1OBJ **-3→1PL**  
 ‘She sees us (excl).’

Unlike local and mixed configurations, however, *non-local* configurations in the Conjoint never display portmanteau agreement. A non-local configuration involves

<sup>11</sup> This definition of portmanteau agreement could be taken to apply not only to agreement suffixes like *-agogw* (Infl) but also to the inverse theme sign *-igw* (Voice), which is sensitive to the relative rank of the two arguments on the person hierarchy  $1/2 > 3 > 3'$  (§3.1). Because of their sensitivity to both arguments, inverse (and direct) theme signs have been characterized as portmanteaux by Trommer (2003) and Fry (2015). One important difference, however, is that the inverse theme sign expresses only a relation (“object outranks subject”) whereas a true portmanteau agreement marker such as *-agogw* indexes particular person and number features (1SG→2PL). In Section 5 the apparent portmanteau nature of the inverse theme sign will be attributed to an impoverishment operation that involves both Voice and Infl.

two third persons: one proximate (3SG/3PL) and one obviative (3'). As the examples in (21) show, Infl-agreement in non-local Conjunct forms invariably indexes only the proximate argument (3SG/3PL), using the same simple suffixes that occur in 3SG/3PL intransitives: 3SG *-j* and 3PL *-wa:j*. The obviative argument (3') is left unmarked.

- (21) a. *wa:bama:j*  
           *wa:bam -a: -j*  
           see    -3OBJ **-3SG**  
           ‘She sees the other(s).’ (3SG→3')
- b. *wa:bamigoj*  
           *wa:bam -igw -j*  
           see    -INV **-3SG**  
           ‘The other(s) see **her**.’ (3'→3SG)
- c. *wa:bama:wa:j*  
           *wa:bam -a: -wa:j*  
           see    -3OBJ **-3PL**  
           ‘They see the other(s).’ (3PL→3')
- d. *wa:bamigowa:j*  
           *wa:bam -igw -wa:j*  
           see    -INV **-3PL**  
           ‘The other(s) see **them**.’ (3'→3PL)

The absence of portmanteau agreement in non-local Conjunct forms holds not only in Algonquin, but across the Algonquian language family. To my knowledge, no Algonquian language displays portmanteau Infl-agreement in 3-on-3 configurations.

In summary, this section has shown that in the Conjunct, Infl-agreement can index the subject and object simultaneously in some local and mixed forms, but never in non-local forms, where agreement with the proximate third person is the only option. The following section repeats the same survey for the Independent, where some forms pattern differently from their Conjunct counterparts.

#### 4.2 Description of Independent Infl-agreement

This section shows that in the Independent, Infl-agreement can index both arguments simultaneously in *local* configurations (SAP + SAP), but not in *mixed* (SAP + 3) or *non-local* configurations (3 + 3'). Before we survey these configurations, a brief discussion of exponence is necessary. We saw earlier (§2.3) that Independent Infl-agreement can be realized as a discontinuous prefix-suffix combination, as in (22).

- (22) a. *niwa:bama:na:n*                      b. *niwa:bamigona:n*  
           **ni-** *wa:bam -a: -ina:n*            **ni-** *wa:bam -igw -ina:n*  
           **1-** see    -3OBJ **-1PL**            **1-** see    -INV **-1PL**  
           ‘We see her.’ (1PL→3)            ‘She sees **us**.’ (3→1PL)

Despite being separate morphemes, the prefix (*ni-* ‘1’) and suffix (*-ina:n* ‘1PL’) work together to index a single argument and thus function as a single agreement marker, as recognized by Goddard’s (1979:104) characterization of prefix-suffix combinations like *ni...-ina:n* as “central-participant markers”. All discontinuous realizations of Infl-agreement are composed of a person prefix (e.g. *ni-* ‘1’) plus a number suffix that, in some forms, secondarily marks person as well (e.g. *-ina:n* ‘1PL’). From a crosslinguistic perspective, this pattern is unsurprising: discontinuous prefix-suffix agreement markers are almost always composed of a person prefix plus a number suffix (Harbour 2008; Campbell 2012). Harbour (2008) develops a crosslinguistic account of person prefixes in which the discontinuous realization of the prefix results from fission of the person features of the agreement head (in this case, Infl) together with a non-adjacency requirement that forces the fissioned features to be realized to the left of the stem rather than immediately adjacent to the Infl suffix. I assume that the discontinuous realization of Infl-agreement in Algonquin is derived in this way (cf. McGinnis 1995 for Ojibwe).

We may now turn to the question of whether Infl-agreement in the Independent can index both arguments simultaneously, like it often does in the Conjunct. For the most part, the answer is no. In Independent *mixed* forms (SAP + 3), Infl-agreement consistently indexes only the SAP argument. The mixed forms in (22) above provide an example: in both forms, Infl indexes only the 1PL argument (*ni...-ina:n* ‘1PL’). Similarly, in Independent *non-local* forms (3 + 3’), Infl-agreement consistently indexes only the proximate 3SG/3PL argument, as in the forms in (23) (*o...-wa:* ‘3PL’).

- (23) a. owa:bama:wa:n  
       o- wa:bam -a: -wa: -an  
       3- see -3OBJ -3PL -3’  
       ‘They see the other.’ (3PL→3’)
- b. owa:bamigowa:n  
       o- wa:bam -igw -wa: -an  
       3- see -INV -3PL -3’  
       ‘The other sees **them**.’ (3’→3PL)

Simultaneous Infl-agreement with both arguments does happen, however, in some Independent *local* forms. The crucial examples are the 2→1PL and 1PL→2 forms in (24). The Infl-agreement marker in these forms, *gi...-imin*, is composed of the prefix *gi-* ‘2’, which indexes the second-person argument, and the suffix *-imin* ‘1PL’, which indexes the first-person argument.<sup>12</sup> These are the only Independent forms in which Infl-agreement indexes two arguments simultaneously.

<sup>12</sup> The 1PL suffix has two allomorphs, *-ina:n* (in (22)) and *-imin* (in (24)), which go back to Proto-Algonquian (PA) *\*-wena:n* and *\*-ehmena:n* respectively. PA *\*-wena:n* (> *-ina:n*) occurred in non-final position (i.e. when followed by a peripheral suffix) and *\*-ehmena:n* (> *-imin*) occurred in final position (i.e. when not followed by a peripheral suffix) (Goddard 2007). In Algonquin, the loss of final vowels has made the conditioning of the two allomorphs more opaque, as both can now be found in final position.

- (24) a. giwa:bamimin                      b. giwa:baminimin  
       **gi-** wa:bam -i                      **gi-** wa:bam -in                      **-imin**  
       2- see        -1OBJ -1PL                      2- see        -2OBJ -1PL  
       ‘You see us.’ (2→1PL)                      ‘We see you.’ (1PL→2)

In summary, this section has shown that in the Independent, Infl-agreement can index the subject and object simultaneously in some local forms, but never in mixed or non-local forms. In mixed forms, Infl agrees only with the SAP argument. In non-local forms, Infl agrees only with the proximate third-person argument.

#### 4.3 Proposal: Variation in probe articulation

We have seen that the patterning of Infl-agreement shows language-internal variation. In the Conjunct, simultaneous Infl-agreement with both arguments is possible in *local and mixed configurations*, while in the Independent, it is possible in *local configurations only*. In configurations where agreement with both arguments is not possible, Infl indexes the argument that ranks higher on the  $SAP > 3 > 3'$  hierarchy, which may be either the subject or the object. This distribution is summarized in Table 2.

**Table 2** Can Infl-agreement index both arguments simultaneously?

Configuration	Inflection type	
	Conjunct	Independent
Local (SAP + SAP)	yes	yes
Mixed (SAP + 3)	yes	no (must index SAP)
Non-local (3PROX + 3'OBV)	no (must index 3PROX)	no (must index 3PROX)

The set of Infl-agreement patterns in Table 2 can be derived from the specification of the person-agreement probe on Infl. Recall from above (§3.3) that I take person features to have the articulated structure in (25a) (Béjar and Rezac 2009; Lochbihler 2012). I propose that the person probe on Infl has an articulated structure in both the Conjunct and the Independent, but that the degree of articulation differs: Conjunct Infl probes for [*u*Pers, *u*Prox], as in (25b), while Independent Infl is slightly more articulated, probing for [*u*Pers, *u*Prox, *u*Part], as in (25c) (Oxford 2014).

- (25) a. Person structure                      b. Conjunct Infl                      c. Independent Infl
- |   |   |  |
|---|---|--|
| <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[Person]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[Proximate]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[Participant]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[Addressee]</div> | <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[<i>u</i>Person]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[<i>u</i>Proximate]</div> | <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[<i>u</i>Person]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[<i>u</i>Proximate]</div> <div style="text-align: center;"> </div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; padding-bottom: 5px;">[<i>u</i>Participant]</div> |
|---|---|--|

The effects of this difference in probe structure will be shown in the following section (§4.4), but first it is necessary to lay out some general assumptions about the Agree operation. I make the standard assumption that a probe can agree only with the closest goal with matching features in its c-command domain (Chomsky 2000, 2001). This assumption runs into a problem in Algonquin, however. I proposed above (§3.4) that the subject and object end up as equidistant specifiers of VoiceP in Algonquin, as shown in (26). There are thus *two* possible goals that are equally close to Infl. How is the outcome of the Agree operation determined in such cases?

(26) [InflP Infl [VoiceP OBJ SUBJ Voice [<sub>VP</sub> ... ]]]

I propose that when a probe P is faced with two equally local goals, P agrees with the goal that matches the most of P's unvalued features. I will refer to this goal as the probe's "Best Match". Imagine, for example, that the probe on Infl is specified as [*u*Pers, *u*Prox] and the two equidistant goals are specified as [Pers] and [Pers, Prox], as in (27). Here the Best Match principle requires Infl to agree with the [Pers, Prox] goal, as this goal matches more of the probe's features than the [Pers] goal does.

(27)

```

      Infl
    [uPers, uProx]
      |
      |
    DP  DP
  [Pers] [Pers, Prox]
  
```

The Best Match principle predicts the outcome of agreement in examples such as (27), where there is only one goal that matches all the unvalued features of the probe. We can also imagine cases, however, in which both goals are an equally good match. For example, imagine that the same [*u*Pers, *u*Prox] probe is faced with two equidistant goals specified as [Pers, Prox] and [Pers, Prox, Part]. Both goals match the same number of unvalued features on the probe (i.e. [*u*Pers, *u*Prox]), so the Best Match principle does not favor one goal over the other. In such cases, I propose that the probe agrees simultaneously with both goals, as in (28) (cf. Anagnostopoulou 2005 for simultaneous Multiple Agree in languages with the weak Person-Case Constraint).

(28)

```

      Infl
    [uPers, uProx]
      /  \
     DP   DP
  [Pers, Prox] [Pers, Prox, Part]
  
```

Equidistance and the Best Match principle thus derive a very restricted version of Multiple Agree: a probe can agree multiply only when (i) two goals are equally close (cf. van Koppen 2005, 2006, 2008 for agreement with conjoined subjects in Dutch) and (ii) the two goals are an equally good match for the probe's unvalued features.

The occurrence of Multiple Agree enables the realization of portmanteau agreement morphology. Imagine, for example, a 3SG→2PL form in which Infl agrees si-



multaneously with both the 3SG argument ([Pers, Prox]) and the 2PL argument ([Pers, Prox, Part, Addr, Pl]). Infl will end up with two bundles of phi-features, as in (29).

- (29) Infl {[Pers, Prox], [Pers, Prox, Part, Addr, Pl]}

Now imagine that one of the vocabulary items (VIs) in (30) must be inserted to spell out Infl. The Subset Principle (Halle 1997) requires the insertion of the VI in (30a), *-a:k*, as this VI discharges a proper superset of the features discharged by the other VIs. Since the VI *-a:k* is conditioned by the features of two arguments, it is, descriptively, a portmanteau agreement marker, unlike the simpler VIs in (30b–c).

- (30) a. *-a:k*  $\longleftrightarrow$  {[Pers, Prox], [Pers, Prox, Part, Addr, Pl]} (=3SG $\rightarrow$ 2PL)  
 b. *-e:gw*  $\longleftrightarrow$  [Pers, Prox, Part, Addr, Pl] (=2PL)  
 c. *-j*  $\longleftrightarrow$  [Pers, Prox] (=3SG)

Note that there is no guarantee that a language will have a full set of portmanteau VIs for every possible subject-object combination. If the VI *-a:k* ‘3SG $\rightarrow$ 2PL’ in (30a) did not exist, Infl would instead be spelled out as the next most specified VI, *-e:gw* ‘2PL’ in (30b), which is not a portmanteau. The occurrence of Multiple Agree in the syntax thus does not automatically lead to the realization of portmanteau agreement morphology. Rather, the occurrence of Multiple Agree makes the realization of portmanteau morphology possible in cases where the relevant VIs are available.

This approach makes two predictions about the distribution of portmanteau agreement. There is a weak prediction that forms in which Infl agrees with both arguments *might* display portmanteau agreement, subject to the availability of VIs. There is also a strong prediction that forms in which Infl does *not* agree with both arguments *cannot* display portmanteau agreement, since portmanteau VIs such as (30a) cannot be inserted when Infl bears only one phi-feature bundle.

#### 4.4 Deriving the patterning of Infl-agreement

This section shows how the above assumptions derive the patterning of Infl-agreement in non-local, local, and mixed configurations in both the Conjunct and Independent.

**Non-local configurations.** The derivation of Infl-agreement in non-local forms is straightforward. Recall from (25) that both versions of the Infl probe seek the [Prox] feature, as indicated in (31).

- (31) a. Conjunct Infl: [*u*Pers, *u*Prox]  
 b. Independent Infl: [*u*Pers, *u*Prox, *u*Part]

A non-local configuration involves a proximate argument, specified as [Pers, Prox], and an obviative argument, specified as [Pers].<sup>13</sup> Thanks to its [Prox] feature, the proximate argument will always be a better match for the probe than the obviative argument in both the Conjunct and the Independent. We thus predict that Infl-agreement

<sup>13</sup> When an Algonquin clause contains two referential third persons, only one can be proximate; the other must be obviative (see e.g. Rhodes 1990). This restriction applies to referential third persons only. First, second, and impersonal third persons do not participate in or trigger obviation.

in non-local forms should universally index only the proximate argument. This is exactly the pattern that we observed in Sections 4.1–4.2 above.

**Local configurations.** A local configuration involves a first-person argument, specified as [Pers, Prox, Part], and a second-person argument, specified as [Pers, Prox, Part, Addr]. The Conjunct Infl probe seeks the features [*u*Pers, *u*Prox], which are present on both arguments. Similarly, the Independent Infl probe seeks the features [*u*Pers, *u*Prox, *u*Part], which are also present on both arguments. In both the Conjunct and the Independent, then, the Best Match principle requires Infl to agree simultaneously with both arguments, since both are an equally good match.<sup>14</sup>

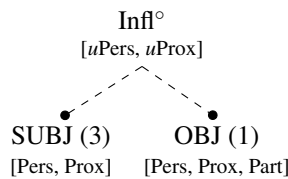
The occurrence of Multiple Agree in local forms provides Infl with the phi-features of both arguments. We thus predict that the spellout of Infl-agreement in local forms should be able to reflect the features of both arguments. This prediction is correct: as we have seen (§4.1–4.2), Infl-agreement indexing both arguments is attested in local forms in both the Conjunct and the Independent. The Conjunct has the portmanteau Infl-agreement suffix *-agogw* ‘1SG→2PL’ while the Independent has forms in which the two discontinuous exponents of Infl-agreement index different arguments (i.e. *gi-...-min*, with *gi-* ‘2’ and *-min* ‘1PL’).

**Mixed configurations.** Mixed configurations involve an SAP argument and a third-person argument—that is, one argument that has the [Participant] feature and one that does not. Mixed configurations are where the patterning of Infl-agreement varies: in the Conjunct, Infl-agreement often indexes both arguments, but in the Independent, Infl always indexes only the SAP argument (§4.1–4.2). There is a simple reason for this variation: the feature that differentiates the two arguments in a mixed form—[Participant]—is also the feature that differentiates the probe on Infl in the Independent versus the Conjunct. In the Independent, Infl has the [Participant] feature and will thus prefer to agree with the argument that has this feature (i.e. the SAP argument). In the Conjunct, on the other hand, Infl lacks the [Participant] feature and is thus matched equally well by both arguments, so it agrees with both.

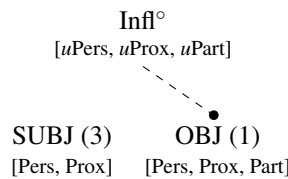
To make this explanation more concrete, the outcome of Infl-agreement in a 3→1 form is schematized in (32). In the Conjunct, both arguments are an equally good match for the [*u*Pers, *u*Prox] features of Infl, so Infl agrees with both. This makes the spellout of portmanteau Infl-agreement possible, subject to the availability of the relevant vocabulary items (see discussion in §4.3 above). In the Independent, where Infl seeks [*u*Participant], the SAP object is a better match thanks to its [Participant] feature, so the Best Match principle restricts Infl-agreement to the SAP.

(32) Infl-agreement in mixed 3→1 forms

a. Conjunct



b. Independent



<sup>14</sup> Similarly, Bruening (2005:22) suggests that in local forms in the Eastern Algonquian language Pasamaquoddy, both arguments move to the specifier of InflP.

#### 4.5 Summary: Agreement on Infl

Infl-agreement is the Algonquin analog of subject agreement in languages like English: it occurs in all verb forms, it realizes both person and number, and its goal can have any thematic role.<sup>15</sup> (Further parallels involving word order and binding will be discussed in Section 6 below.) Unlike in English, however, where subject agreement favors the external argument and can only index the internal argument in special forms such as passives, Algonquin Infl is always freely able to agree with either argument (or both arguments). The outcome of Algonquin Infl-agreement depends not on a *structural* asymmetry between the two arguments, but rather on a *featural* asymmetry, as captured descriptively by the person hierarchy  $SAP > 3 > 3'$ , with the details of the outcome varying between the Conjunct and Independent.

This section has shown that the patterning of Infl-agreement can be derived from two key proposals. First, the subject-object omnivory of Infl-agreement reflects the equidistance of the two arguments from Infl, which leaves the outcome of agreement to be determined by the Best Match principle rather than by minimality. Second, the variation in the patterning of Infl-agreement reflects the articulation of the probe on Infl, which differs between the Conjunct and Independent. The proposed analysis is summarized in Table 3, which identifies the argument that is the best match for the probe on Infl in each different agreement context. In local and non-local forms, the Conjunct and Independent pattern the same: in local forms, both arguments are always an equally good match, while in non-local forms, the proximate argument is always a better match. In mixed forms, however, the Conjunct and Independent differ: Conjunct Infl is matched equally well by both arguments, but the [*uParticipant*] feature of Independent Infl favors agreement with the SAP argument only.

**Table 3** Which argument is the best match for the probe on Infl?

Configuration	Best match for Infl	
	Conjunct [ <i>uPers</i> , <i>uProx</i> ]	Independent [ <i>uPers</i> , <i>uProx</i> , <i>uPart</i> ]
Local (SAP + SAP)	both arguments	both arguments
Mixed (SAP + 3)	both arguments	SAP argument only
Non-local (3PROX + 3'OBV)	3PROX argument only	3PROX argument only

The syntactic agreement relations shown in Table 3 derive the patterning of Infl-agreement morphology that was described in Sections 4.1–4.2 and summarized in Table 2 above. The contexts in Table 3 in which the Infl probe is matched equally well by both arguments are the same as the contexts in Table 2 in which Infl-agreement can

<sup>15</sup> Voice-agreement (§3), on the other hand, occurs only in transitive forms, realizes person only, and always tracks the internal argument. Tollan and Oxford (2018) argue that the Voice head is completely absent from intransitives in Algonquian languages.

index both arguments simultaneously. The contexts in Table 3 in which one argument is a better match for the Infl probe (shown by shading) are the same as the contexts in Table 2 in which Infl-agreement must index only that argument.

## 5 Inverse marking as impoverishment of Voice-agreement

This section returns to the most controversial component of the Algonquin agreement system: the inverse marker. We saw in Section 3 that the ordinary spellout of Voice as an object agreement marker (*-i* ‘1OBJ’, *-in* ‘2OBJ’, *-a:* ‘3OBJ’) is overridden in some forms by the so-called inverse marker *-igw*, which appears when the object outranks the subject on the person hierarchy  $SAP > 3 > 3'$ . The inverse marker occurs with objects of all three persons, so it cannot be characterized as object person agreement, unlike the other three exponents of Voice. To further complicate matters, the distribution of the inverse marker varies between the Conjunct and Independent.

The discussion of Infl-agreement in Section 4 opens the door to a simple analysis of inverse marking. When we take Infl-agreement into account, it turns out that the inverse marker appears in Voice in only one context: *when Infl and Voice both agree only with the object*. I will propose that such configurations trigger an impoverishment operation that deletes the object’s features from Voice due to their duplication on Infl. This impoverishment results in Voice being spelled out as an elsewhere form, *-igw*, the morpheme traditionally labelled as the inverse theme sign. Under this analysis, the inverse marker is simply the elsewhere realization of the object-agreement head Voice, spelled out when the role of agreeing with the object has been usurped by Infl (Oxford 2017b). As for the variation in the distribution of the inverse marker in the Conjunct and Independent, this will be shown to follow from the variation in the Infl probe that was established on independent grounds in Section 4.

The discussion will proceed as follows. Section 5.1 describes the distribution of the inverse marker and its connection to Infl-agreement. Section 5.2 shows how the inverse marker can be analyzed as an underspecified elsewhere form of Voice. Section 5.3 shows that the variation in the distribution of inverse marking follows from the already-established variation in the articulation of the probe on Infl.

### 5.1 Distribution of the inverse marker

Inverse marking in Algonquin, like Infl-agreement, is subject to language-internal variation conditioned by the Conjunct/Independent contrast. Table 4, adapted from Table 1 above, summarizes the realization of Voice across all Algonquin transitive forms. Contexts in which the inverse marker appears are shaded.

The Conjunct and Independent display the same pattern in local forms, which are never marked as inverse: all  $2 \rightarrow 1$  forms have the object marker *-i* ‘1OBJ’ and all  $1 \rightarrow 2$  forms have the object marker *-in* ‘2OBJ’. The pattern is uniform in non-local forms as well, which permit the inverse marker *-igw* in both the Conjunct and Independent. In mixed forms, however, there is a difference. In mixed forms with an SAP object (i.e.  $3 \rightarrow 1$  and  $3 \rightarrow 2$ ), Voice is realized as an object marker in the Conjunct, where  $3 \rightarrow 1$

**Table 4** Realization of Voice in Algonquin (see Appendix for full forms)

Configuration		Realization of Voice			
		Conjunct		Independent	
Local	2→1	-i	1OBJ	-i	1OBJ
	1→2	-in	2OBJ	-in	2OBJ
Mixed	1/2→3	-a:	3OBJ	-a:	3OBJ
	3→1	-i	1OBJ	-igw	INV
	3→2	-in	2OBJ	-igw	INV
Non-local	3→3'	-a:	3OBJ	-a:	3OBJ
	3'→3	-igw	INV	-igw	INV

forms have *-i* ‘1OBJ’ and 3→2 forms have *-in* ‘2OBJ’, but as the inverse marker in the Independent, where both forms have *-igw*. The distribution of inverse marking is thus more restricted in the Conjunct than in the Independent: inverse *-igw* is excluded from both *local* and *mixed* configurations in the Conjunct, while in the Independent, it is excluded only from *local* configurations. This distribution is summarized in Table 5.

**Table 5** Can Voice be realized as the inverse marker *-igw*?

Configuration	Inflection type	
	Conjunct	Independent
Local	no	no
Mixed	no	yes
Non-local	yes	yes

It is interesting to compare the distribution of inverse marking in Table 5 with the observations that we made in Section 4 regarding the distribution of forms in which Infl-agreement can index both arguments simultaneously, shown in Table 6.

**Table 6** Can Infl index both arguments? (repeated from Table 2)

Configuration	Inflection type	
	Conjunct	Independent
Local	yes	yes
Mixed	yes	no
Non-local	no	no

When we compare Tables 5 and 6, we see that inverse marking and multiple Infl-agreement are in complementary distribution: the contexts in which inverse marking is *not* possible—i.e. local forms and Conjunct mixed forms—are exactly the contexts in which multiple Infl-agreement *is* possible. The correlation is most striking in the

mixed forms, which differ across the Conjunct and Independent with respect to both inverse marking and multiple Infl-agreement.

The complementary distribution of inverse marking and multiple Infl-agreement is not an idiosyncratic property of Kitigan Zibi Algonquin. The Algonquin portmanteau and inverse patterns shown above are an exact match for those of Proto-Algonquian (PA), the reconstructed ancestor of all the Algonquian languages (see the PA forms in Bloomfield 1946 and Goddard 2000, 2007, 2015). The reconstruction of these patterns in PA reflects their broad attestation across the Algonquian family.

Even stronger evidence for a deep connection between inverse marking and multiple Infl-agreement comes from Algonquian languages that have extended the distribution of inverse marking. Recall from the description in Table 4 that mixed 3→1/2 forms in Algonquin use the object-marking theme signs in the Conjunct but are marked as inverse in the Independent, an asymmetry that goes back to PA. Some Algonquian languages have begun to level out this asymmetry by extending inverse marking to certain 3→1/2 Conjunct forms. In Plains Cree, for example, the original object markers in the 3→1/2 Conjunct forms have been replaced by the inverse marker in forms with plural objects (Dahlstrom 1989), giving the pattern in Table 7.

**Table 7** Extension of inverse marking in Conjunct mixed forms

	PA	Algonquin	Plains Cree
3→1SG	-i 1OBJ	-i 1OBJ	-i 1OBJ
3→1PL			-ikw INV
3→2SG	-eθ 2OBJ	-in 2OBJ	-is 2OBJ
3→2PL			-ikw INV

What is significant about the Plains Cree change is that the extension of inverse marking to the 3→1PL and 3→2PL forms was accompanied by the *loss of multiple Infl-agreement* in these forms. In PA and Algonquin, both of these forms display portmanteau Infl-agreement, as illustrated for Algonquin in (33) (repeated from (20)). The 3→1PL form in (33a) contains the portmanteau Infl suffix *-yaminj*, which differs from both 3SG *-j* and 1PL *-ya:ng*, and the 3→2PL form in (33b) contains the portmanteau Infl suffix *-a:k*, which differs from both 3SG *-j* and 2PL *-e:gw*.

- (33) a. wa:bamiyaminj                      b. wa:bamina:k  
       wa:bam -i    -**yaminj**                wa:bam -in    -**a:k**  
       see    -1OBJ -**3→1PL**                see    -2OBJ -**3→2PL**  
       ‘She sees us.’ (3→1PL)                ‘She sees you (pl).’ (3→2PL)

The corresponding Plains Cree forms are shown in (34) (Wolfart 1973). In these forms, not only has the original object-marking realization of Voice been replaced by the inverse marker *-ikw*, but so too has the original portmanteau Infl suffix been replaced by a simple Infl suffix indexing only the object. The 3→1PL form in (34a) contains the simple 1PL suffix *-ya:hk*, as in the 1PL intransitive form *nipa:ya:hk* ‘we

sleep’, and the 3→2PL form in (34b) contains the simple 2PL suffix *-ye:k*, as in the 2PL intransitive form *nipa:-ye:k* ‘you (pl) sleep’.

- |      |    |   |    |   |
|------|----|---|----|---|
| (34) | a. | wa:pamikoya:hk<br>wa:pam -ikw -ya:hk<br>see -INV -1PL<br>‘She sees us.’ (3→1PL) | b. | wa:pamikoye:k<br>wa:pam -ikw -ye:k<br>see -INV -2PL<br>‘She sees you (pl).’ (3→2PL) |
|------|----|---|----|---|

The generalization that inverse marking and multiple Infl-agreement are mutually exclusive is thus quite robust. Synchronically, contexts that allow inverse marking disallow multiple Infl-agreement, and vice versa. Diachronically, the extension of inverse marking to a given form is accompanied by the loss of multiple Infl-agreement in that form. The empirical strength of the correlation between inverse marking and multiple Infl-agreement is such that it cannot possibly be a coincidence.

The Plains Cree examples suggest an even more restrictive generalization about the nature of the correlation between inverse marking and Infl-agreement. Note that in the innovative Plains Cree inverse forms in (34) above, the original portmanteau Infl-agreement has been replaced by Infl-agreement indexing the *object*. It turns out that this is the case in all inverse forms, in both Plains Cree and Algonquin: in addition to disallowing multiple Infl-agreement, inverse forms further require Infl-agreement to index the object rather than the subject.<sup>16</sup> The reader can verify this generalization by examining the verb paradigms in the Appendix: in all forms in which Voice is realized as the inverse marker, Infl-agreement indexes the object. This generalization provides the key to the analysis of inverse marking proposed in the next section.

## 5.2 The inverse marker as an elsewhere form

We are now in a position to understand why Voice is sometimes realized as the inverse marker *-igw* rather than the usual object agreement (*-i* ‘1OBJ’, *-in* ‘2OBJ’, *-a:* ‘3OBJ’). The key, I propose, is the generalization from the previous section: inverse forms are those in which the probe on Infl agrees with the object rather than agreeing with the subject or with both arguments. Since Voice always agrees with the object, inverse forms have the unique property of being the only forms in which the object is the sole target of both Voice-agreement *and* Infl-agreement.

A consequence of the double occurrence of object agreement is that inverse forms are also the only forms in which Voice and Infl end up with identical person features: both heads have the person features of the object. It is this configuration of repeated person features, I propose, that gives rise to the inverse theme sign: due to a constraint against adjacent identical person features (Nevins 2007), the person features on Voice are deleted in inverse forms. The absence of person features makes it impossible for Voice to be spelled out as one of the usual person markers (*-i* ‘1’, *-in* ‘2’, *-a:* ‘3’), so an underspecified elsewhere form of Voice is spelled out instead. The elsewhere form is *-igw*, the morpheme traditionally labelled as the inverse theme sign. Under

<sup>16</sup> This generalization appears to hold in all Algonquian languages (Oxford 2017b), although space limitations prevent the presentation of supporting data here.

this analysis, then, the inverse theme sign is simply the elsewhere realization of the object-agreement head Voice, spelled out whenever the usual object person features on Voice have been “stolen” by a second round of object agreement on Infl.

To develop the analysis in more detail, let us work through the derivation of four Independent forms: two non-inverse forms (mixed  $1 \rightarrow 3$ , non-local  $3 \rightarrow 3'$ ) and their two inverse counterparts (mixed  $3 \rightarrow 1$ , non-local  $3' \rightarrow 3$ ). The two non-inverse forms are shown in (35). In both forms, Voice is realized as the 3rd-person object marker *-a:* and Infl-agreement tracks the subject, which outranks the object on the person hierarchy. (The  $3 \rightarrow 3'$  form also displays word-final C-agreement indexing the obviative argument. C-agreement plays no role in the patterning of inverse marking.)

- (35) a. niwa:bama:na:n                      b. owa:bama:wa:n  
       **ni-** wa:bam **-a:**    **-ina:n**                      **o-** wa:bam **-a:**    **-wa:** -an  
       **1-** see    **-3OBJ -1PL**                      **3-** see    **-3OBJ -3PL -3'**  
       ‘We see her.’ ( $1PL \rightarrow 3$ )                      ‘They see the other.’ ( $3PL \rightarrow 3'$ )

The agreement relations in these forms are shown in (36). In both forms, Voice agrees, as always, with the object (hence the theme sign *-a:* ‘3OBJ’) and Infl agrees with its best match, the highest-ranked person, which happens to be the subject.

- (36) Agreement on Voice and Infl in non-inverse forms
- |  |  |
|--|--|
| a. $1 \rightarrow 3$                       | b. $3 \rightarrow 3'$                      |
| Infl <sup>o</sup><br>[uPers, uProx, uPart] | Infl <sup>o</sup><br>[uPers, uProx, uPart] |
| ⋮  | ⋮  |
| SUBJ (1)<br>[Pers, Prox, Part]             | SUBJ (3)<br>[Pers, Prox]                   |
| Voice <sup>o</sup><br>[uPers]              | Voice <sup>o</sup><br>[uPers]              |
| ⋮  | ⋮  |
| OBJ (3)<br>[Pers, Prox]                    | OBJ (3')<br>[Pers]                         |

These agreement relations are consistent with the data in (35): Voice indexes the 3rd-person object and Infl indexes the higher-ranked subject. Since Infl and Voice are valued by different arguments, the person features of the two heads remain distinct.

Consider now the inverse counterparts of the above forms: the  $3 \rightarrow 1$  and  $3' \rightarrow 3$  forms in (37). In both forms, Infl-agreement tracks the object, which outranks the subject on the person hierarchy, and Voice is realized as the inverse marker *-igw* rather than an object marker.

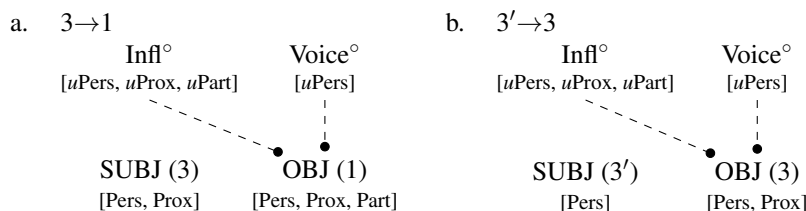
- (37) a. niwa:bamigona:n                      b. owa:bamigowa:n  
       **ni-** wa:bam **-igw** **-ina:n**                      **o-** wa:bam **-igw** **-wa:** -an  
       **1-** see    **-INV -1PL**                      **3-** see    **-INV 3PL -3'**  
       ‘She sees us.’ ( $3 \rightarrow 1PL$ )                      ‘The other sees them.’ ( $3' \rightarrow 3PL$ )

The agreement relations in these forms are shown in (38). In both forms, Voice agrees, as always, with the object, but unlike the forms in (36) above, Infl *also* agrees with the object, as the object is the best match for the articulated probe on Infl.<sup>17</sup>

<sup>17</sup> I assume that the agreement of Voice with the object does not prevent Infl from also agreeing with the object. That is, Chomsky’s (2000, 2001) Activity Condition does not constrain the outcome of the Agree



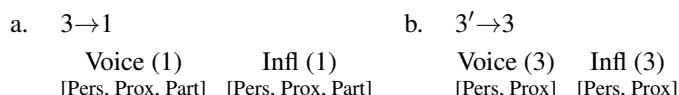
## (38) Agreement on Voice and Infl in inverse forms



The agreement of Infl with the object correctly captures the fact that Infl-agreement tracks the object in these forms. The agreement of Voice with the object, however, incorrectly leads us to expect Voice to express object agreement, as it usually does: 1st-person *-i* in (38a) and 3rd-person *-a* in (38b). This is not the case: Voice is instead spelled out as the inverse marker *-igw* in both forms.

Why does Voice fail to mark object agreement in these forms? Crucially, the forms in which Voice does *not* mark object agreement are exactly those forms in which Infl *does* mark object agreement. I suggest that it is not a coincidence that object agreement disappears from Voice exactly when it appears on Infl. To see why, consider the person features that Voice and Infl gain as a result of the Agree operations in the inverse forms in (38). Since both heads agree with the object in these forms, both heads end up with identical person specifications, as shown in (39).

## (39) Person features on Voice and Infl in inverse forms



What is unique about inverse forms, then, is that two adjacent heads end up with identical person feature specifications. Importantly, there is evidence from other languages that such configurations can be ill-formed. A prominent example is the “spurious *se*” of Spanish (Perlmutter 1971; Bonet 1991; Nevins 2007). In a clause in which 3rd-person dative and accusative arguments both undergo clitic doubling, the expected clitic cluster is *le lo* (3.DAT + 3.ACC), but what is instead realized is *se lo*, in which dative *le* is replaced by reflexive/impersonal *se*. Nevins (2007:276) proposes that the spurious *se* arises because of a constraint under which “the presence of two identical adjacent person feature specifications is illicit” (see also Arregi and Nevins 2007). Structures that violate this constraint, Nevins proposes, are repaired by deleting the person features of the first clitic. In the case of *le lo*, the deletion of the person features of the first clitic leads to its spellout as the underspecified form *se* rather than the expected 3rd-person dative form *le*.

I propose that a similar constraint is active in Algonquin: two adjacent heads cannot have exactly the same person feature specifications.<sup>18</sup> This constraint is violated

operation in Algonquin. Baker (2008) has shown that this is the case for many languages; see Oxford 2017a for discussion specific to Algonquian languages.

<sup>18</sup> The formulation of the constraint as applying to “two adjacent heads” may in fact be too strong, as Neg can intervene between Voice and Infl without disrupting the inverse-marking pattern. Some notion of locality is required, however, as the constraint applies to Voice and Infl but does not apply to Voice

by the inverse structures in (39), in which both Voice and Infl have the person features of the object. The repair of illicit structures is also similar to Spanish: the person features of Voice are deleted, as shown in (40) for the structures in (39).

(40) Person features on Voice and Infl in inverse forms after impoverishment

a.	$3 \rightarrow 1$		b.	$3' \rightarrow 3$	
	Voice ( $\{ \}$ )	Infl (1)		Voice ( $\{ \}$ )	Infl (3)
	{Pers, Prox, Part}	[Pers, Prox, Part]		{Pers, Prox}	[Pers, Prox]

Under this analysis, inverse forms can be characterized as those forms in which Voice lacks person features. This gives us a simple way to explain why Voice is spelled out as the inverse marker *-igw* in these forms: *-igw* is in fact the *elsewhere* form of Voice, spelled out whenever Voice lacks person features—a state of affairs that arises only in forms traditionally labeled as “inverse”, such as those in (40). I accordingly amend the spellout rule for Voice to add *-igw* as the elsewhere form, as in (41).<sup>19</sup>

(41) Spellout of Voice

<i>-in</i>	$\longleftrightarrow$	[Pers, Part, Addr]	(= 2nd person)
<i>-i</i>	$\longleftrightarrow$	[Pers, Part]	(= 1st person)
<i>-a:</i>	$\longleftrightarrow$	[Pers]	(= 3rd person proximate/obviative)
<i>-igw</i>	$\longleftrightarrow$	[ ]	(when person features are absent)

The elsewhere analysis of inverse *-igw* allows us to understand why inverse marking interrupts the otherwise regular pattern of object agreement in the theme sign slot (i.e. Voice). Voice does indeed agree with the object in all forms, but in those forms in which Infl also agrees with the object—that is, in forms traditionally labeled as “inverse”—the object person features in Voice are deleted, resulting in the spellout of Voice as the underspecified elsewhere form *-igw* (known as the “inverse” marker) rather than one of the more specified object agreement markers.

This analysis finds an interesting parallel in recent work by Sandalo (2016) on Kadiwéu, a Waikurúan language of Brazil. Kadiwéu has a “relational” prefix *d:-* that appears when the internal argument is fronted to a subject-like position. Sandalo argues that this *d:-* prefix should be described as an inverse marker. To derive its distribution, Sandalo proposes that *d:-* is in fact an underspecified spellout of *v*-agreement that is realized due to the impoverishment of *v* in contexts where agreement is doubled on *v* and Infl. I have made essentially the same proposal for Algonquin. It seems, then, that despite the vast differences between Algonquin and Kadiwéu, inverse marking arises in exactly the same way in both languages.<sup>20</sup>

and C: regardless of which argument C agrees with, C-agreement never affects the appearance of inverse marking. Alternatives to strict adjacency include “two heads within the same phase” (cf. Richards 2010) or “two adjacent phi-bearing heads”, with intervening heads that do not bear phi-features (such as Neg) being transparent (cf. the transparency of underspecified segments in phonological dissimilation, e.g. Steriade 1987). I leave the precise formulation of the constraint to future work.

<sup>19</sup> I thank Bethany Lochbihler (p.c.) for expressing to me the insight that the inverse is “elsewhere-like”.

<sup>20</sup> I thank an anonymous reviewer for bringing the Kadiwéu parallel to my attention.

### 5.3 Deriving variation in inverse marking

This section shows how the proposed “elsewhere” analysis derives the patterning of inverse marking across all configurations in the Conjunct and Independent. The distribution of the inverse marker is summarized in Table 8.

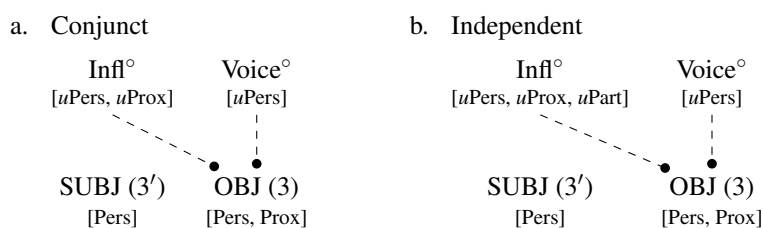
**Table 8** Can Voice be realized as the inverse marker *-igw*? (repeated from Table 5)

Configuration	Inflection type	
	Conjunct	Independent
Local	no	no
Mixed	no	yes
Non-local	yes	yes

The variation in inverse marking will be derived as follows. Recall that to account for the distribution of multiple Infl-agreement in Section 4, I proposed that the probe on Infl varies: Conjunct Infl probes for [*uPers*, *uProx*] while Independent Infl is slightly more articulated, probing for [*uPers*, *uProx*, *uPart*]. Because of this difference in the probe, the contexts in which Infl will agree solely with the object vary between the Conjunct and Independent. Since Infl-agreement with the object is what triggers the appearance of the inverse marker *-igw* in Voice, variation in inverse marking is predicted to be an automatic side-effect of variation in Infl-agreement with the object. The predicted variation in inverse marking works out to exactly the pattern in Table 8, as I show below for non-local, local, and mixed configurations in turn.

**Non-local configurations.** Non-local configurations allow inverse marking in both the Conjunct and the Independent. The agreement relations in a non-local  $3' \rightarrow 3$  form are schematized in (42). Voice, as always, consistently agrees with the object. As for Infl, the probe differs in the Conjunct and Independent, but since the [*uProx*] feature is present on both versions of the probe, the proximate object, which has the [Prox] feature, is always a better match for the probe than the obviative subject, which does not have the [Prox] feature. Infl thus agrees with the proximate object in both the Conjunct and the Independent.

(42) Agreement in non-local  $3' \rightarrow 3$  forms (Infl agrees with object)

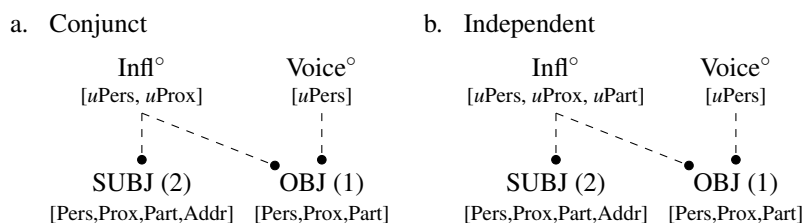


The occurrence of Infl-agreement with the object in both the Conjunct and the Independent results in the impoverishment of the object features on Voice in both forms.

As a result of this impoverishment, Voice is predicted to be realized as the inverse marker *-igw* in both of the non-local  $3' \rightarrow 3$  forms. This is the attested pattern.

**Local configurations.** Local configurations disallow inverse marking in both the Conjunct and the Independent. The agreement relations in a local  $2 \rightarrow 1$  form are schematized in (43). Voice, as always, consistently agrees with the object. As for Infl, its probe is matched equally well by both arguments in both the Conjunct and the Independent. The Conjunct probe seeks the  $[uPers, uProx]$  features, which are present on both arguments. The Independent probe additionally seeks the  $[uParticipant]$  feature, which is also present on both arguments, as both are SAPs. Infl thus agrees simultaneously with both arguments in both the Conjunct and the Independent.

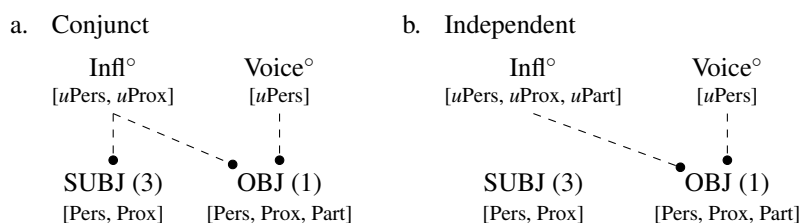
(43) Agreement in local  $2 \rightarrow 1$  forms (Infl agrees with both arguments)



Since Voice agrees only with the object while Infl agrees with both arguments, the person specifications of Voice and Infl differ: Voice has the features  $[Pers, Prox, Part]$  while Infl has the features  $\{[Pers, Prox, Part, Addr], [Pers, Prox, Part]\}$ . Although the person specifications of Voice and Infl partially overlap, they are distinct, so the symmetry-breaking impoverishment rule that deletes the features of Voice and gives rise to inverse marking will not be triggered. We thus predict that inverse marking will not appear in local forms. This is the attested pattern.

**Mixed configurations.** Mixed configurations disallow inverse marking in the Conjunct but allow it in the Independent. The difference follows from the variation in the articulation of the probe on Infl, as shown for a mixed  $3 \rightarrow 1$  form in (44). In the Conjunct, Infl seeks  $[uPers, uProx]$ . Since these features are present on both arguments, Conjunct Infl agrees with both. In the Independent, however, Infl additionally seeks the  $[uParticipant]$  feature, which is present on the 1st-person object but not the 3rd-person subject. Independent Infl thus agrees with the object only.

(44) Agreement in mixed  $3 \rightarrow 1$  forms (Infl agrees with both in (a), object in (b))



Impoverishment of Voice occurs when Infl and Voice have identical person features. This is not the case in the Conjunct, where Infl agrees with both arguments but Voice

agrees only with the object. It is the case, however, in the Independent, where Infl and Voice both agree only with the object. We therefore predict that impoverishment of Voice, and thus inverse marking, will occur in mixed Independent forms but not in mixed Conjunct forms. This is the attested pattern.

#### 5.4 Summary: Inverse marking as impoverishment of Voice-agreement

This section has shown that the Algonquin verb forms traditionally labeled as inverse are those in which the syntactic Agree operation on Infl targets the object, creating a structure in which Voice and Infl both have the same person feature specification (i.e. that of the object). This configuration violates a constraint against adjacent identical person features, which is satisfied by deleting the person features of Voice. The absence of person features forces Voice to be spelled out as the elsewhere (“inverse”) form *-igw* rather than the usual object person markers (*-i* ‘1OBJ’, *-in* ‘2OBJ’, *-a:* ‘3OBJ’). The inverse marker is thus simply the elsewhere realization of the object-agreement head Voice in contexts where object agreement is duplicated on Infl.

We have seen that inverse marking and multiple Infl-agreement are in complementary distribution: multiple Infl-agreement occurs only in configurations where inverse marking is impossible. The proposed analysis derives this complementarity from the fact that both phenomena are determined by the probe on Infl: inverse marking occurs when Infl agrees *only with the object* while multiple Infl-agreement, by definition, occurs only when Infl agrees with *both arguments*. Since these contexts are mutually exclusive, the complementarity of the two phenomena follows.

The proposed analysis also gives us a straightforward account of variation in the distribution of inverse marking. The variation follows directly from the specification of the probe on Infl, which seeks the [*uParticipant*] feature in the Independent but not in the Conjunct. Since the Conjunct probe is less “picky” than that of the Independent, the Conjunct presents fewer contexts in which the object alone is the best match for the probe (i.e. fewer inverse contexts) and more contexts in which the probe is satisfied equally well by both arguments (i.e. more Multiple Agree contexts). Intralanguage variation in both inverse marking and multiple Infl-agreement thus boils down to nothing more than the presence or absence of the [*uParticipant*] feature.

Table 9 summarizes the analysis by indicating which argument best matches the probe on Infl in a local 2→1 form, a mixed 3→1 form, and a non-local 3'→3 form in the Conjunct and the Independent. Inverse marking occurs when the best match is the object; multiple Infl-agreement (which enables the spellout of portmanteau morphology) occurs when both arguments are an equally good match.

Attributing the patterning of both inverse marking and multiple Infl-agreement (and, in turn, portmanteau agreement) to the probe on Infl provides an elegant account of the complementarity of the two phenomena and their parallel variation.

## 6 More syntactic correlates of Infl-agreement

Inverse marking and portmanteau agreement both straddle the morphology-syntax boundary and there is debate in the literature regarding just how morphological and/or

**Table 9** Which argument is the best match for the probe on Infl?

Form	Best match for Infl	
	Conjunct [ <i>uPers</i> , <i>uProx</i> ]	Independent [ <i>uPers</i> , <i>uProx</i> , <i>uPart</i> ]
Local 2→1	both arguments (multiple agr)	both arguments (multiple agr)
Mixed 3→1	both arguments (multiple agr)	object only (inverse)
Non-local 3'→3	object only (inverse)	object only (inverse)

syntactic these phenomena are (see e.g. Aissen 1999, Bruening 2001, 2005, and Béjar and Rezac 2009 for inverse marking and Trommer 2007, 2010, Woolford 2008, 2010, and Georgi 2013a,b for portmanteau agreement). The analysis proposed in this paper recognizes a role for morphology in both phenomena in Algonquin: the inverse marker appears due to a postsyntactic impoverishment operation and portmanteau agreement appears only when vocabulary items conditioned by two sets of phi-features are available. Ultimately, however, it is the syntactic Agree operation on Infl that creates the circumstances under which both phenomena can appear and governs their distribution and variation. At their core, then, inverse marking and portmanteau agreement in Algonquin are phenomena of the syntax.



This conclusion presupposes that the agreement operation on Infl is indeed syntactic, as I have assumed in this paper. We might imagine an alternative approach in which Infl-agreement is entirely postsyntactic. However, in the case of Algonquian languages, there is strong evidence that the syntactic approach is the correct one, for there are clear connections between Infl-agreement and such unambiguously syntactic phenomena as word order, binding, quantifier scope, and crossover, as established most notably in the work of Bruening (2001, 2005, 2009) on the Eastern Algonquian language Passamaquoddy. The fact that Infl-agreement is implicated in these syntactic phenomena reinforces the proposal that Infl-agreement takes place in the syntax, thus bolstering the claim that inverse marking and portmanteau agreement, as additional consequences of Infl-agreement, are also rooted in the syntax.

After some preliminary remarks on the syntax of Infl-agreement (§6.1), this section illustrates the point in the preceding paragraph by describing two syntactic correlates of Infl-agreement: word order (§6.2) and binding (§6.3).

### 6.1 Infl-agreement and syntax

Let us consider the derivation of two opposite non-local forms, 3→3' ("direct") and 3'→3 ("inverse"), with respect to not only agreement, but also movement. As always, Voice first agrees with the object and attracts it to [Spec, VoiceP], as shown in (45).



(45) Voice agrees with, and attracts, the object

- a.  $3 \rightarrow 3'$  direct  $[\text{VoiceP OBJ}(3') \text{ SUBJ}(3) \text{ Voice } [\text{VP } \text{OBJ}(3') ]]$   

- b.  $3' \rightarrow 3$  inverse  $[\text{VoiceP OBJ}(3) \text{ SUBJ}(3') \text{ Voice } [\text{VP } \text{OBJ}(3) ]]$   


Imagine that the object movement in (45) was the only A-movement operation to apply in Algonquin. In that case, the structures in (45) would represent the unmarked word order in the language. We would thus predict the unmarked word order to be uniformly Object-Subject in both direct and inverse forms.<sup>21</sup>

The syntactic derivation does not stop here, however. We have seen that Infl agrees with the argument that best matches its probe—which, in a non-local form, is always the proximate 3 rather than the obviative 3'. Infl thus agrees with the proximate *subject* of a direct  $3 \rightarrow 3'$  form and the proximate *object* of an inverse  $3' \rightarrow 3$  form. If the goal of Infl-agreement moves to [Spec,InflP], the result will be that the subject moves in direct  $3 \rightarrow 3'$  forms while the object moves in inverse  $3' \rightarrow 3$  forms, as in (46) (cf. Rhodes 1976, 1994 and Perlmutter and Rhodes 1988 for Ojibwe).

(46) Infl agrees with, and attracts, the proximate argument

- a.  $3 \rightarrow 3'$  direct  $[\text{InflP SUBJ}(3) \text{ Infl } [\text{VoiceP OBJ}(3') \text{ SUBJ}(3') \text{ Voice } \dots ]]$   

- b.  $3' \rightarrow 3$  inverse  $[\text{InflP OBJ}(3) \text{ Infl } [\text{VoiceP OBJ}(3) \text{ SUBJ}(3') \text{ Voice } \dots ]]$   


If this A-movement does indeed take place, then we make a different prediction about word order: since the proximate argument always ends up in [Spec,InflP], the unmarked word order should be uniformly Proximate-Obviative regardless of which argument is the subject and which is the object, as in both (46a) and (46b). That is, if Infl-agreement really does occur in the syntax, and triggers movement of its goal, we predict that proximates will occupy a higher A-position than obviatives in all forms. The following sections show two pieces of evidence that this prediction is correct.

## 6.2 Word order

Word order in Algonquian languages is largely determined on a discourse-configurational basis, with many overt nominals appearing in preverbal topic/focus positions (e.g. Tomlin and Rhodes 1979 for Ojibwe, Dahlstrom 1995 for Meskwaki, Russell and Reinholtz 1995 for Swampy Cree, Junker 2004 for East Cree). However, for at least two languages it has been possible to isolate an unmarked, pragmatically neutral word order, and in these cases an interesting finding has emerged: the basic order is conditioned by the person hierarchy. Since this paper has focused on Algonquin, an

<sup>21</sup> Or, alternatively, if we assumed “tucking in” of the object in multiple-specifier configurations such as (45) (Richards 2001), we would predict the unmarked order to be uniformly Subject-Object.

Ojibwe dialect, I consider here the findings from Ojibwe (Rhodes 1994); see Junker 2004 for comparable (though not identical) findings in East Cree.

Rhodes (1994:436–38) shows that the unmarked word order in the Ottawa dialect of Ojibwe is VSO in direct clauses ( $3 \rightarrow 3'$ ) but VOS in inverse clauses ( $3' \rightarrow 3$ ). This disjunctive statement is required if we express the word order in terms of (logical) subjects and objects, but Junker (2004) shows that a unified statement becomes possible if we consider the ranking of the arguments on the person hierarchy. Since a direct form involves a proximate 3 subject and an obviative  $3'$  object, the unmarked VSO order entails the order  $V-3-3'$ . Since an inverse form involves an obviative  $3'$  subject and a proximate 3 object, the unmarked VOS order entails, again, the order  $V-3-3'$ . The unmarked word order in Ottawa, then, is neither VSO nor VOS, but rather  $V-3-3'$ , as indicated in (47). That is, the higher-ranked person precedes the lower-ranked person, regardless of which argument is the (logical) subject.<sup>22</sup>

(47) Unmarked word order in Ottawa (Rhodes 1994)

- a. Direct ( $3 \rightarrow 3'$ , VSO):  $V\text{--}SUBJ(3)\text{--}OBJ(3')$
- b. Inverse ( $3' \rightarrow 3$ , VOS):  $V\text{--}OBJ(3)\text{--}SUBJ(3')$
- c. Unified statement:  $V-3-3'$

As discussed above, the unmarked  $3-3'$  order is exactly what we predict if Infl-agreement takes place in the syntax and triggers A-movement of its goal: since Infl always agrees with the proximate argument, we predict the proximate to uniformly precede the obviative, exactly as attested. The Infl-agreement analysis thus gives us a straightforward account of the derivation of the unmarked word order in Ojibwe—but only if Infl-agreement takes place in the syntax.<sup>23</sup>

### 6.3 Binding

Bruening (2001, 2005, 2008, 2009) has shown that in the Eastern Algonquian language Passamaquoddy, variable binding, weak crossover, and quantifier scope all pattern according to the person hierarchy: the proximate 3 argument behaves as though it c-commands the obviative  $3'$  argument regardless of the thematic roles of the arguments. This effect is illustrated for variable binding by the Passamaquoddy examples in (48) (Bruening 2005:13). In both examples, an object quantifier is intended to bind

<sup>22</sup> Bruening (2001) suggests that the same effect may hold in Passamaquoddy as well: “the object of the Inverse should pattern with the subject of the Direct in word order” (65). However, in his textual data “there are simply not enough examples of Inverse clauses with overt NPs to draw any definitive conclusions” (68).

<sup>23</sup> The insight that A-movement of inverse objects can derive the unmarked word order is from Bruening (2001:65). I differ from Bruening, however, on the triggering of this movement, which I attribute to an articulated probe on Infl<sup>o</sup> but Bruening (2005) attributes to an [EPP] feature that is optionally added to Voice in precisely those forms in which inverse marking appears: “If the feature is present, the clause ends up being inverse; if it is absent, direct” (20). The optional [EPP] approach misses the fact that the appearance of inverse marking is not, in fact, optional, but rather fully predictable from the person features of the arguments. For example, inverse marking is obligatory in an Independent  $3 \rightarrow 1$  form and impossible in a  $1 \rightarrow 3$  form. If the addition of the [EPP] feature is optional, what ensures that this option is always exercised in  $3 \rightarrow 1$  forms and never exercised in  $1 \rightarrow 3$  forms?



a variable in the subject. Such binding is not possible in the direct  $3 \rightarrow 3'$  form in (48a), but it is possible in the inverse  $3' \rightarrow 3$  form in (48b).<sup>24</sup>

- (48) a. [Skitap musqitaham-ac-il] 'koti-tqon-a-l [psi=te wen-il].  
 man hate-3CONJ-3' 3-FUT-arrest-DIR-3' all=EMPH someone-3'  
 '[A man that \***he**<sub>i</sub> hates] will arrest [**everyone**<sub>i</sub>].'  
 ( $3 \rightarrow 3'$ , object cannot bind into subject)
- b. [Yatte wen pilsqehsis] 'kis-cem-ku-l [w-ikuwoss-ol].  
 each who girl 3-PERF-kiss-INV-3' 3-mother-3'  
 '[**Her**<sub>i</sub> mother] kissed [**each girl**<sub>i</sub>].'  
 ( $3' \rightarrow 3$ , object can bind into subject)

Lochbihler (2012:99–101) shows that pronominal binding in Ojibwe possession structures displays the same pattern: the object can bind into the subject in inverse forms but not in direct forms. This pattern is illustrated in (49) using data from the author's own fieldwork on Oji-Cree, an Ojibwe dialect. The object 'him' cannot bind the possessor of the subject 'his dog' in the direct form in (49a), but it can (and must) in the inverse form in (49b) (cf. Brittain 2001b:80 for Cree-Innu-Naskapi).<sup>25</sup>

- (49) a. Otayihshan owaapamaan.  
 o- tayihsh -an o- waapam -aa -an  
 3- dog -3' 3- see -3OBJ -3'  
 '[**His**<sub>i/\*j</sub> dog] sees [**him**<sub>j</sub>]. (e.g. John's dog sees a bear)
- b. Otayihshan owaapamikoon.  
 o- tayihsh -an o- waapam -ikw -an.  
 3- dog -3' 3- see -INV -3'  
 '[**His**<sub>i/\*j</sub>] dog sees [**him**<sub>i</sub>]. (e.g. John's dog sees John)

The binding patterns follow from Infl-agreement in the same way that the unmarked word order does. In a direct form, the subject is the best match for the probe on Infl, so Infl agrees with and attracts the subject, producing a configuration in which the subject c-commands the object. In an inverse form, Infl instead agrees with and attracts the object, producing a configuration in which the object c-commands the subject (cf. Bruening 2005, although Agree plays a less central role in Bruening's analysis). Under the analysis proposed in this paper, then, the inverted binding relations in inverse forms can be understood as just another syntactic consequence of Infl-agreement.

<sup>24</sup> The abbreviations in the glosses are those of Bruening (2005), except his OBV is replaced by 3'.

<sup>25</sup> Direct forms are normally characterized as  $3 \rightarrow 3'$ , but the direct form in (49a) is actually  $3' \rightarrow 3'$ , with *both* arguments obviative. However, the subject *otayihshan* 'his dog' is marked as obviative only because it is possessed by a third person. Rhodes (1990:102,111–12) shows that such instances of DP-internal "possessor obviation" often do not affect the external morphosyntax of the DP, which can behave as though it were proximate for the purposes of apposition, agreement, and inverse marking. This is the case in the  $3' \rightarrow 3'$  direct form in (49a), which has the same morphosyntax as a regular  $3 \rightarrow 3'$  direct form.

## 7 Conclusion

The picture of Algonquin morphosyntax that has emerged in this paper is, in many respects, quite ordinary: there is a lower agreement head, Voice, that always agrees with the object, and a higher agreement head, Infl, that has much in common with subject agreement in languages like English, such as the syntactic prominence of the argument indexed by Infl-agreement discussed in the preceding section. The overall structure aligns well with Baker's (2008) crosslinguistic model of agreement, which posits probes on  $v$  ( $\approx$ Voice) and T ( $\approx$ Infl). The only unusual aspect of the Algonquin system is the ability of Infl to agree with either the subject, the object, or both arguments simultaneously. The subject-object omnivory of Infl-agreement was attributed to the prior occurrence of Voice-agreement, which attracts the object to a position in which it is equidistant with the subject for the purposes of Infl-agreement.

This architecture allows the complementary distribution of inverse marking and portmanteau agreement in Algonquin to be accounted for by attributing the patterning of both phenomena to an articulated probe on Infl. Since the two possible goals are equidistant from Infl, the outcome of Agree is determined by featural considerations (Best Match) rather than structural considerations (Minimal Link). When both goals are an equally good match for the probe on Infl, the result is Multiple Agree, which enables the spellout of portmanteau agreement morphology. When the object is the best match, Infl agrees with the object only, an outcome that gives rise to inverse marking due to an impoverishment operation that deletes the identical object agreement features on Voice (cf. Sandalo 2016 for Kadiwéu). Under this analysis, the complementary distribution of inverse marking and portmanteau agreement reflects the fact that the two phenomena are alternative outcomes of the same Agree operation. The analysis also identifies a simple source for the shared variation exhibited by inverse marking and portmanteau agreement in the Conjunct and Independent: since both phenomena are determined by the articulated probe on Infl, their shared variation can be attributed to variation in the articulation of the probe in the Conjunct and Independent, with consequent variation in the outcome of the Agree operation.

The most direct theoretical consequence of this analysis involves the syntactic status of inverse marking and portmanteau agreement. The articulated probe on Infl in Algonquin instigates a person-hierarchy effect that is responsible for the patterning of a diverse range of phenomena: inverse marking, portmanteau agreement, unmarked word order, and binding. That some of these phenomena are clearly syntactic indicates that the agreement operation on Infl must indeed take place in the syntax. The Algonquin facts thus provide clear evidence that it is possible for the distribution of inverse marking and portmanteau agreement to be determined in the syntax.

The conclusion that portmanteau agreement morphology in Algonquin reflects Multiple Agree in the narrow syntax parallels Bobaljik and Branigan's (2006:57–58) suggestion that portmanteau morphology in Chukchi may reflect multiple case-checking. Georgi (2013a,b) has subsequently developed this idea more extensively in a Multiple Agree framework. However, Georgi's analysis inherently restricts portmanteau agreement morphology to local (SAP + SAP) configurations. Although this restriction is based in the typological literature, we have seen that it is not appropriate for the Algonquin Conjunct inflection, where mixed (SAP + 3) configurations

also display portmanteau agreement. An approach that permits a degree of systematic variation in the distribution of portmanteau agreement is thus desirable.

The analysis has broader theoretical implications as well. I have proposed that portmanteau agreement in Algonquin is enabled by the equidistance of the subject and object, which makes it possible for Infl to enter a Multiple Agree relation with both arguments. The equidistance of the two arguments is also the source of the direct-inverse person-hierarchy effect: with minimality out of the picture, Infl is able to agree with whichever argument has the richer person features rather than being constrained to agree only with the logical subject. If portmanteau agreement and person-hierarchy effects are indeed both natural consequences of subject-object equidistance, we expect to find the two phenomena occurring hand-in-hand in other languages as well. This expectation is borne out by the typological literature, which has shown that most languages with portmanteau subject-object agreement morphology also display person hierarchy effects (Heath 1991, 1998, cited by Georgi 2013a). Under the analysis proposed here, the existence of a derivational step in which the subject and object are equidistant is what makes such languages distinct from those that lack portmanteau agreement and person-hierarchy effects.

This explanation raises a deeper question: why does subject-object equidistance arise in only a relatively small number of languages? Why do most languages make a robust morphosyntactic distinction between subjects and objects rather than displaying portmanteau agreement and direct-inverse alignment? The Algonquin facts suggest an answer. I have proposed that the equidistance of the subject and object in Algonquin arises because Voice agrees with the object for person, an agreement operation that is “strong” in that it is realized by overt morphology (i.e. the object-marking theme signs in Voice) and triggers A-movement of the object to [Spec, VoiceP]. Under this analysis, then, subject-object equidistance is a direct consequence of strong object agreement. This conclusion is significant in light of a series of recent proposals that object agreement is in fact extremely rare, with most putative examples of object agreement actually being object clitic doubling instead (Arregi and Nevins 2008; Woolford 2008, 2010; Preminger 2009; Nevins 2011; Kramer 2014). If these proposals are correct, and if subject-object equidistance results from object agreement, as I have proposed, then the typological markedness of subject-object equidistance is simply a reflection of the typological markedness of object agreement.

Ultimately, then, we gain more from the Algonquin case study than just an analysis of correlations between inverse marking and portmanteau agreement. The Algonquin facts suggest that inverse marking, portmanteau agreement, and the variable Multiple Agree operation that governs the distribution of both phenomena are all consequences of strong object agreement low in the syntactic structure. The crosslinguistic rarity of such agreement explains why subject-object equidistance and attendant phenomena such as portmanteau subject-object agreement and direct-inverse alignment are crosslinguistically rare as well.

**Acknowledgements** The material in this paper has benefited from the helpful comments of Jonathan Bobaljik, Phil Branigan, Brandon Fry, Michael Hamilton, Bethany Lochbihler, and four anonymous reviewers, as well as audiences at WCCFL 32 (USC), WSCLA 19 (Memorial), the 47th Algonquian Conference (Manitoba), WCCFL 34 (Utah), NELS 47 (UMass Amherst), and the University of Ottawa. The research was supported by the Social Sciences and Humanities Research Council of Canada (Insight Development Grant 430-2016-00680).

## References

- Aissen, Judith. 1999. Markedness and subject choice in Optimality Theory. *Natural Language and Linguistic Theory* 17:673–711.
- Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: A feature checking analysis. In *Clitic and affix combinations: Theoretical perspectives*, ed. Lorie Heggie & Francisco Ordóñez, 199–235. Amsterdam: Benjamins.
- Arregi, Karlos & Andrew Nevins. 2007. Obliteration vs. impoverishment in the Basque g-/z- constraint. In *Proceedings of the 30th Penn Linguistics Colloquium*, ed. Tatjana Scheffler, Joshua Tauberer, Aviad Eilam & Laia Mayol, 1–14. Philadelphia: University of Pennsylvania Working Papers in Linguistics 10.1.
- Baker, Mark C. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Béjar, Susana. 2003. Phi-syntax: A theory of agreement. Ph.D. dissertation, University of Toronto.
- Béjar, Susana & Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40:35–73.
- Bliss, Heather. 2013. The Blackfoot configurationality conspiracy. Ph.D. dissertation, University of British Columbia.
- Bliss, Heather, Elizabeth Ritter & Martina Wiltschko. 2014. A comparative analysis of theme marking in Blackfoot and Nishnaabemwin. In *Papers of the 42nd Algonquian Conference*, ed. J. Randolph Valentine & Monica Macaulay, 10–33. Albany: SUNY Press.
- Bloomfield, Leonard. 1946. Algonquian. In *Linguistic structures of native America*, ed. Harry Hoijer, 85–129. New York: Viking Fund Publications in Anthropology.
- Bloomfield, Leonard. 1962. *The Menomini language*. New Haven: Yale University Press.
- Bobaljik, Jonathan D. & Phil Branigan. 2006. Eccentric agreement and multiple case-checking. In *Ergativity: Emerging issues*, ed. Alana Johns, Diane Massam & Juvénal Ndayiragije, 47–77. Dordrecht: Springer.
- Bonet, Eulalia. 1991. Morphology after syntax: Pronominal clitics in Romance. Ph.D. dissertation, MIT.
- Branigan, Phil, Julie Brittain & Carrie Dyck. 2005. Balancing syntax and prosody in the Algonquian verb complex. In *Papers of the 36th Algonquian Conference*, ed. H. C. Wolfart, 75–93. Winnipeg: University of Manitoba.
- Branigan, Phil & Marguerite MacKenzie. 1999. Binding relations and the nature of *pro* in Innu-aimun. In *Proceedings of NELS 29*, ed. Pius Tamanji, Masako Hirotani & Nancy Hall, 475–485.
- Brittain, Julie. 1999. A reanalysis of transitive animate theme signs as object agreement: Evidence from Western Naskapi. In *Papers of the 30th Algonquian Conference*, ed. David H. Pentland, 34–46. Winnipeg: University of Manitoba.
- Brittain, Julie. 2001a. *The morphosyntax of the Algonquian conjunct verb: A Minimalist approach*. New York: Garland.
- Brittain, Julie. 2001b. Obviation and coreference relations in Cree-Montagnais-Naskapi. *Linguistica Atlantica* 23:69–91.
- Brittain, Julie. 2003. A Distributed Morphology account of the syntax of the Algonquian verb. In *Proceedings of the 2003 Annual Conference of the Canadian Linguistic Association*, ed. Stanca Somesfalean & Sophie Burelle, 25–39.
- Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Ph.D. dissertation, MIT.
- Bruening, Benjamin. 2005. The Algonquian inverse is syntactic: Binding in Passamaquoddy. Ms., University of Delaware.
- Bruening, Benjamin. 2008. Quantification in Passamaquoddy. In *Quantification: A cross-linguistic perspective*, ed. L. Matthewson, 67–103. Bingley, UK: Emerald.
- Bruening, Benjamin. 2009. Algonquian languages have A-movement and A-agreement. *Linguistic Inquiry* 40:427–445.

- Campana, Mark. 1996. The conjunct order in Algonquian. *Canadian Journal of Linguistics* 41:201–234.
- Campbell, Amy M. 2012. The morphosyntax of discontinuous exponence. Ph.D. dissertation, Berkeley.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on Minimalism in honor of Howard Lasnik*, ed. Roger Martin, David Michaels & Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Cook, Clare. 2014. *The clause-typing system of Plains Cree: Indexicality, anaphoricity, and contrast*. Oxford: Oxford University Press.
- Dahlstrom, Amy. 1989. Morphological change in Plains Cree verb inflection. *Folia Linguistica Historica* 22:59–72.
- Dahlstrom, Amy. 1995. *Topic, focus and other word order problems in Algonquian*. The 1994 Belcourt Lecture. Winnipeg: Voices of Rupert's Land.
- Fry, Brandon. 2015. The derivation of theme-signs in Algonquin Ojibwe: A multiple agree approach. Talk presented at the 2015 CLA Annual Conference, University of Ottawa, June.
- Georgi, Doreen. 2013a. Deriving the distribution of person portmanteaux by relativized probing. In *Proceedings of NELS 42*, ed. Stefan Keine & Shayne Sloggett, 155–168.
- Georgi, Doreen. 2013b. A relativized probing approach to person encoding in local scenarios. *Linguistic Variation* 12:153–210.
- Goddard, Ives. 1974. Remarks on the Algonquian Independent Indicative. *International Journal of American Linguistics* 40:317–327.
- Goddard, Ives. 1979. *Delaware verbal morphology: A descriptive and comparative study*. New York/London: Garland.
- Goddard, Ives. 2000. The historical origins of Cheyenne inflections. In *Papers of the 31st Algonquian Conference*, ed. John D. Nichols, 77–129. Winnipeg: University of Manitoba.
- Goddard, Ives. 2007. Reconstruction and history of the independent indicative. In *Papers of the 38th Algonquian Conference*, ed. H. C. Wolfart, 207–271. Winnipeg: University of Manitoba.
- Goddard, Ives. 2015. Arapaho historical morphology. *Anthropological Linguistics* 57:345–411.
- Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from Building 20*, ed. Ken Hale & Samuel J. Keyser, 111–176. Cambridge, MA: MIT Press.
- Halle, Morris. 1997. Distributed morphology: Impoverishment and fission. In *Papers at the interface* (MITWPL 30), ed. Benjamin Bruening, Yoonjung Kang & Martha McGinnis, 425–449. Cambridge, MA: MITWPL.
- Harbour, Daniel. 2008. Discontinuous agreement and the syntax-morphology interface. In *Phi-theory: Phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger & Susana Béjar, 185–230. Oxford: Oxford University Press.
- Harley, Heidi & Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526.
- Heath, Jeffrey. 1991. Pragmatic disguise in pronominal-affix paradigms. In *Paradigms: The economy of inflection*, ed. Frans Plank, 75–89. Berlin/New York: Mouton de Gruyter.
- Heath, Jeffrey. 1998. Pragmatic skewing in 1 ↔ 2 pronominal combinations in Native American languages. *International Journal of American Linguistics* 64:83–104.
- Hiraiwa, Ken. 2001. Multiple Agree and the defective intervention constraint in Japanese. In *Proceedings of HUMIT 2000*, ed. Ora Matushansky et al., 67–80. Cambridge, MA: MIT Working Papers in Linguistics 40.
- Hirose, Tomio. 2003. *Origins of predicates: Evidence from Plains Cree*. New York: Routledge.
- Hockett, Charles F. 1966. What Algonquian is really like. *International Journal of American Linguistics* 32:59–73.
- Hockett, Charles F. 1992. Direction in the Algonquian verb: A correction. *Anthropological Linguistics* 34:311–315.
- Hornstein, Norbert. 2009. *A theory of syntax: Minimal operations and Universal Grammar*. Cambridge: Cambridge University Press.
- Jones, David. 1977. *A basic Algonquin grammar: For teachers of the language at Maniwaki, Quebec*. Maniwaki: River Desert Band Council.
- Junker, Marie-Odile. 2004. Focus, obviation, and word order in East Cree. *Lingua* 114: 345–65.
- van Koppen, Marjo. 2005. One probe – two goals: Aspects of agreement in Dutch dialects. Ph.D. dissertation, Leiden University.

- van Koppen, Marjo. 2006. One probe, multiple goals: The case of first conjunct agreement. In *Leiden Papers in Linguistics* 3.2, ed. M. van Koppen et al., 25–52.
- van Koppen, Marjo. 2008. Agreement with coordinated subjects. A comparative perspective. *Linguistic Variation Yearbook* 7:121–161.
- Kramer, Ruth. 2014. Clitic doubling or object agreement: The view from Amharic. *Natural Language & Linguistic Theory* 32:593–634.
- Lochbihler, Bethany. 2012. Aspects of argument licensing. Ph.D. dissertation, McGill University.
- Lochbihler, Bethany & Eric Mathieu. 2016. Clause typing and feature inheritance of discourse features. *Syntax* 19:354–391.
- Macaulay, Monica. 2009. On prominence hierarchies: Evidence from Algonquian. *Linguistic Typology* 13: 357–389.
- Mathieu, Eric. 2007. Petite syntaxe des finales concrètes en ojibwe. In *Papers of the 38th Algonquian Conference*, ed. H. C. Wolfart, 295–321. Winnipeg: University of Manitoba.
- McGinnis, Martha. 1995. Word-internal syntax: Evidence from Ojibwa. In *Proceedings of the 1995 Annual Conference of the Canadian Linguistic Association*, ed. Paivi Koskinen, 337–347.
- McGinnis, Martha. 1999. Is there syntactic inversion in Ojibwa? In *Papers from the Workshop on Structure and Constituency in Native American Languages*, ed. Leora Bar-el, Rose-Marie Déchaine & Charlotte Reinholtz, 101–118. MIT Occasional Papers in Linguistics 17.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language & Linguistic Theory* 25:273–313.
- Nevins, Andrew. 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language & Linguistic Theory* 29:939–971.
- Nichols, John D. 1980. Ojibwe morphology. Ph.D. dissertation, Harvard.
- Oxford, Will. 2014. Microparameters of agreement: A diachronic perspective on Algonquian verb inflection. Ph.D. dissertation, University of Toronto.
- Oxford, Will. 2017a. The Activity Condition as a microparameter. *Linguistic Inquiry* 48:711–722.
- Oxford, Will. 2017b. Inverse marking as impoverishment. In *Proceedings of WCCFL 34*, ed. Aaron Kaplan et al., 413–422.
- Pentland, David H. 1999. The morphology of the Algonquian independent order. In *Papers of the 30th Algonquian Conference*, ed. David H. Pentland, 222–266. Winnipeg: University of Manitoba.
- Perlmutter, David M. 1971. *Deep and surface structure constraints in syntax*. New York: Holt, Rinehart, and Winston.
- Perlmutter, David M. & Richard A. Rhodes. 1988. Thematic-syntactic alignments in Ojibwa: Evidence for subject-object reversal. Paper presented at the 63rd annual meeting of the Linguistic Society of America, New Orleans.
- Preminger, Omer. 2009. Breaking agreements: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40:619–666.
- Reinhart, Tanya. 1981. A second COMP position. In *Theory of markedness in generative grammar: Proceedings of the 1979 GLOW Conference*, ed. Adriana Belletti, Luciana Brandi & Luigi Rizzi, 517–551. Pisa: Scuola Normale Superiore.
- Rhodes, Richard A. 1976. The morphosyntax of the Central Ojibwa verb. Ph.D. dissertation, University of Michigan.
- Rhodes, Richard A. 1990. Obviation, inversion, and topic rank in Ojibwa. In *Proceedings of the 16th Annual Meeting of the Berkeley Linguistics Society: Special Session on General Topics in American Indian Linguistics*, ed. David Costa, 101–115.
- Rhodes, Richard A. 1994. Agency, inversion, and thematic alignment in Ojibwe. In *Proceedings of the 20th Annual Meeting of the Berkeley Linguistics Society*, ed. Susanne Gahl, Andy Dolbey & Christopher Johnson, 431–446.
- Rhodes, Richard A. 2006. Ojibwe language shift: 1600–present. Paper presented at Historical Linguistics and Hunter-Gatherer Populations in Global Perspective, MPI-EVA Leipzig.
- Rhodes, Richard A. & Evelyn Todd. 1981. Subarctic Algonquian languages. In *Handbook of North American Indians, volume 6: Subarctic*, ed. June Helm, 52–66. Washington, DC: Smithsonian.
- Richards, Norvin. 2001. *Movement in language*. Oxford: Oxford University Press.
- Richards, Norvin. 2004. The syntax of the conjunct and independent orders in Wampanoag. *International Journal of American Linguistics* 70:327–368.
- Richards, Norvin. 2010. *Uttering trees*. Cambridge, MA: MIT Press.
- Ritter, Elizabeth & Martina Wiltschko. 2014. The composition of INFL: An exploration of tense, tenseless languages, and tenseless constructions. *Natural Language and Linguistic Theory* 32:1331–1386.

- Russell, Kevin & Charlotte Reinholtz. 1995. Hierarchical structure in a nonconfigurational language: Asymmetries in Swampy Cree. In *Proceedings of WCCFL 14*, ed. Jose Camacho, Lina Choueiri & Maki Watanabe, 431–445.
- Sandalo, Filomena. 2016. The relational morpheme of Brazilian languages as an impoverished agreement marker. In *Proceedings of WSCLA 20* (UBCWPL 43), ed. Emily Sadlier-Brown, Erin Guntly & Natalie Weber, 82–88.
- Statistics Canada. 2013. Kitigan Zibi Anishinabeg. Indian band area, Quebec (Code 630073). National Household Survey (NHS) Aboriginal Population Profile. 2011 National Household Survey. Catalogue no. 99-011-X2011007. <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E> (accessed December 20, 2016).
- Steriade, Donca. 1987. Redundant values. In *Chicago Linguistic Society 23*, Part II, ed. Anna Bosch, Barbara Need & Eric Schiller, 339–362.
- Tollan, Rebecca & Will Oxford. 2018. Voice-less Unergatives: Evidence from Algonquian. In *Proceedings of WCCFL 35*, ed. William G. Bennett, Lindsay Hracs & Dennis Ryan Storoshenko, 399–408.
- Tomlin, Russell & Richard A. Rhodes. 1979. An introduction to information distribution in Ojibwa. In *Chicago Linguistic Society 15*, 307–320.
- Trommer, Jochen. 2003. Distributed optimality. Ph.D. dissertation, Universität Potsdam.
- Trommer, Jochen. 2007. On portmanteau agreement. Talk presented at the Harvard-Leipzig Workshop on Morphology and Argument Encoding, Harvard, September.
- Trommer, Jochen. 2010. The typology of portmanteau agreement. Talk presented at the DGfS-CNRS Summer School on Linguistic Typology, Leipzig, September.
- Ura, Hiroyuki. 1996. Multiple feature-checking: A theory of grammatical function splitting. Ph.D. dissertation, MIT.
- Valentine, J. Randolph. 1994. Ojibwe dialect relationships. Ph.D. dissertation, University of Texas, Austin.
- Valentine, J. Randolph. 2001. *Nishnaabemwin reference grammar*. Toronto: University of Toronto Press.
- Wolfart, H. C. 1973. *Plains Cree: A grammatical study*. Transactions of the American Philosophical Society, new series, volume 63, part 5. Philadelphia.
- Wolvengrey, Arok. 2011. Semantic and pragmatic functions in Plains Cree syntax. Ph.D. dissertation, University of Amsterdam.
- Woolford, Ellen. 2008. Active-stative agreement in Lakota: Person and number alignment and portmanteau formation. Ms., University of Massachusetts.
- Woolford, Ellen. 2010. Active-stative agreement in Choctaw and Lakota. *Revista Virtual de Estudos da Linguagem* 8:6–46.
- Wunderlich, Dieter. 2005. The challenge by inverse morphology. *Lingue e Linguaggio* 4:195–214.
- Zúñiga, Fernando. 2006. *Deixis and alignment: Inverse systems in Indigenous languages of the Americas*. Amsterdam/Philadelphia: Benjamins.
- Zúñiga, Fernando. 2008. How many hierarchies, really? Evidence from several Algonquian languages. In *Scales*, ed. Marc Richards & Andrej L. Malchukov, 277–294. *Linguistische Arbeits Berichte* 86, Universität Leipzig.

## A Appendix: Algonquin agreement paradigms

This appendix displays the agreement paradigms for Kitigan Zibi Algonquin AI (Animate Intransitive) and TA (Transitive Animate) verbs as provided in Jones 1977. The orthography follows that of Jones, with two exceptions: the phoneme /dʒ/ is written as <j> instead of <dj> (cf. Valentine 2001) and long vowels are marked by a colon instead of an acute accent.

The paradigms show the underlying morphemic forms. Surface forms are derived by applying the following rules: (1) /w/ deletes word-finally; (2) /i/ deletes word-finally; (3) /i/ deletes after a vowel; (4) /a/ deletes after a vowel; (5) /w-i/ coalesces to /o/; (6) /-igw-wa:/ becomes /-igowa:/; (7) /-igw-j/ becomes /-igo-j/; (8) /-igw-an/ becomes /-igo:n/; (9) /-ih-g/ becomes /-ik/.

The following abbreviations are used in the table headers: Pfx = person prefix (Infl); Agr = agreement; T.S. = theme sign (Voice); Centr = central agreement (Infl); Periph = peripheral agreement (C). All instances of inverse marking and portmanteau agreement (or multiple Infl-agreement) are shown in bold.

**Table 10** AI Independent and Conjunct (Jones 1977:60)

	Independent		Conjunct	
	Pfx	Stem Agr	Stem Agr	
1SG	ni-	niba: 1- sleep	niba: -ya:n sleep -1SG	'I sleep'
2SG	gi-	niba: 2- sleep	niba: -yan sleep -2SG	'You sleep'
1PL	ni-	niba: -imin 1- sleep -1PL	niba: -ya:ng sleep -1PL	'We (excl.) sleep'
21PL	gi-	niba: -imin 2- sleep -1PL	niba: -yangw sleep -21PL	'We (incl.) sleep'
2PL	gi-	niba: -imw 2- sleep -2PL	niba: -ye:gw sleep -2PL	'You (pl.) sleep'
3SG		nibe: -w sleep -3SG	niba: -j sleep -3SG	'She sleeps'
3PL		nibe: -wag sleep -3PL	niba: -wa:j sleep -3PL	'They sleep'

**Table 11** TA Independent mixed (Jones 1977:76,80), inverse marking bolded

	Pfx	Stem	T.S.	Centr	
1SG→3	ni-	wa:bam -a:			'I see her'
	1-	see	-3OBJ		
2SG→3	gi-	wa:bam -a:			'You see her'
	2-	see	-3OBJ		
1PL→3	ni-	wa:bam -a:	-ina:n		'We (excl.) see her'
	1-	see	-3OBJ -1PL		
21PL→3	gi-	wa:bam -a:	-ina:n		'We (incl.) see her'
	2-	see	-3OBJ -1PL		
2PL→3	gi-	wa:bam -a:	-wa:		'You (pl.) see her'
	2-	see	-3OBJ -2PL		
3→1SG	ni-	wa:bam <b>-igw</b>			'She sees me'
	1-	see	<b>-INV</b>		
3→2SG	gi-	wa:bam <b>-igw</b>			'She sees you'
	2-	see	<b>-INV</b>		
3→1PL	ni-	wa:bam <b>-igw</b>	-ina:n		'She sees us (excl.)'
	1-	see	<b>-INV</b> -1PL		
3→21PL	gi-	wa:bam <b>-igw</b>	-ina:n		'She sees us (incl.)'
	2-	see	<b>-INV</b> -1PL		
3→2PL	gi-	wa:bam <b>-igw</b>	-wa:		'She sees you (pl.)'
	2-	see	<b>-INV</b> -2PL		



**Table 12** TA Conjunct mixed (Jones 1977:76,80), portmanteau agreement bolded

	Stem	T.S.	Centr	
1SG→3	wa:bam -Ø	<b>-ag</b>		'I see her'
	see	-3OBJ	<b>-1SG→3</b>	
2SG→3	wa:bam -Ø	<b>-aj</b>		'You (sg.) see her'
	see	-3OBJ	<b>-2SG→3</b>	
1PL→3	wa:bam -Ø	<b>-angij</b>		'We (excl.) see her'
	see	-3OBJ	<b>-1PL→3</b>	
21PL→3	wa:bam -Ø	-angw		'We (incl.) see her'
	see	-3OBJ	-21PL	
2PL→3	wa:bam -Ø	-e:gw		'You (pl.) see her'
	see	-3OBJ	-2PL	
3→1SG	wa:bam -i	-j		'She sees me'
	see	-1OBJ	-3	
3→1PL	wa:bam -i	<b>-yaminj</b>		'She sees us (excl.)'
	see	-1OBJ	<b>-3→1PL</b>	
3→2SG	wa:bam -ih	-g		'She sees you (sg.)'
	see	-2OBJ	-3	
3→21PL	wa:bam -in	-angw		'She sees us (incl.)'
	see	-2OBJ	-21PL	
3→2PL	wa:bam -in	<b>-a:k</b>		'She sees you (pl.)'
	see	-2OBJ	<b>-3→2PL</b>	

**Table 13** TA Independent local (Jones 1977:89), multiple Infl-agreement bolded

	Pfx	Stem	T.S.	Centr	
2SG→1SG	gi-	wa:bam -i			'You (sg.) see me'
	2-	see	-1OBJ		
2PL→1SG	gi-	wa:bam -i	-imw		'You (pl.) see me'
	2-	see	-1OBJ	-2PL	
2→1PL	<b>gi-</b>	wa:bam -i	<b>-imin</b>		'You see us (excl.)'
	<b>2-</b>	see	-1OBJ	<b>-1PL</b>	
1SG→2SG	gi-	wa:bam -in			'I see you (sg.)'
	2-	see	-2OBJ		
1SG→2PL	gi-	wa:bam -in	-imw		'I see you (pl.)'
	2-	see	-2OBJ	-2PL	
1PL→2	<b>gi-</b>	wa:bam -in	<b>-imin</b>		'We (excl.) see you'
	<b>2-</b>	see	-2OBJ	<b>-1PL</b>	

**Table 14** TA Conjunct local (Jones 1977:89), portmanteau agreement bolded

	Stem	T.S.	Centr	
2SG→1SG	wa:bam -i see	-yan -1OBJ -2SG		'You (sg.) see me'
2PL→1SG	wa:bam -i see	-ye:gw -1OBJ -2PL		'You (pl.) see me'
2→1PL	wa:bam -i see	-ya:ng -1OBJ -1PL		'You see us (excl.)'
1SG→2SG	wa:bam -in see	-a:n -2OBJ -1SG		'I see you (sg.)'
1SG→2PL	wa:bam -in see	<b>-agogw</b> -2OBJ <b>-1SG→2PL</b>		'I see you (pl.)'
1PL→2	wa:bam -in see	-a:ng -2OBJ -1PL		'We (excl.) see you'

**Table 15** TA Independent non-local (Jones 1977:76,80), inverse marking bolded

	Pfx	Stem	T.S.	Centr	Periph	
3SG→3'	o- 3-	wa:bam -a: see	-a: -3OBJ	-an -3'		'She sees the other(s)'
3PL→3'	o- 3-	wa:bam -a: see	-wa: -3OBJ -3PL	-an -3'		'They see the other(s)'
3'→3SG	o- 3-	wa:bam <b>-igw</b> see	<b>-igw</b> <b>-INV</b>	-an -3'		'The other(s) see her'
3'→3PL	o- 3-	wa:bam <b>-igw</b> see	<b>-igw</b> -wa: <b>-INV</b> -3PL	-an -3'		'The other(s) see them'

**Table 16** TA Conjunct non-local (Jones 1977:76,80), inverse marking bolded

	Stem	T.S.	Centr	
3SG→3'	wa:bam -a: see	-j -3OBJ -3SG		'She sees the other(s)'
3PL→3'	wa:bam -a: see	-wa:j -3OBJ -3PL		'They see the other(s)'
3'→3SG	wa:bam <b>-igw</b> see	<b>-igw</b> -j <b>-INV</b> -3SG		'The other(s) see her'
3'→3PL	wa:bam <b>-igw</b> see	<b>-igw</b> -wa:j <b>-INV</b> -3PL		'The other(s) see them'