Variation in Multiple Agree:
A syntactic connection between portmanteau agreement and inverse marking

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Abstract
Portmanteau subject/object agreement is a typologically marked phenomenon whose status is controversial: does it originate in the syntax or the morphology? In this paper I argue that portmanteau agreement in Algonquin must originate in the syntax. The evidence comes from another typologically marked phenomenon: inverse marking. I show that portmanteau agreement and inverse marking in Algonquin display a previously unnoticed correlation: the two phenomena are always in complementary distribution. We can account for this complementarity by attributing the two phenomena to alternative outcomes of the same Multiple Agree operation on Infl°—an Agree operation that, crucially, also plays a role in such indisputably syntactic phenomena as word order and variable binding. We thus have no choice but to conclude that the Multiple Agree operation that underlies portmanteau agreement takes place in the narrow syntax. Further considerations indicate that this Multiple Agree operation is enabled by an earlier step of strong object agreement on Voice°, which creates a configuration in which the subject and object are equidistant from Infl°. Ultimately, then, it is the crosslinguistically rare occurrence of strong object agreement low in the syntactic structure that creates the conditions under which both portmanteau subject/object agreement and inverse marking can occur.

Keywords: morphosyntax, agreement, equidistance, portmanteau, direct/inverse

1 Introduction
The status of portmanteau subject/object agreement morphology is controversial: does it arise from postsyntactic operations such as fusion (Noyer 1992) or contextual allomorphy (Trommer 2007, 2010), or does it instead reflect true multiple agreement in the narrow syntax (Branigan and Bobaljik 2006; Georgi 2012, 2013)? This paper argues that in Algonquin, portmanteau subject/object agreement is determined purely in the syntax. The evidence comes from a previously unnoticed correlation between portmanteau agreement and a seemingly unrelated phenomenon: inverse marking. Although both phenomena display
language-internal variation in Algonquin, it turns out that across all variants, their distribution is perfectly complementary: portmanteau agreement is possible only in configurations where inverse marking is not possible. The reason for this complementarity, I propose, is that the two phenomena are determined by the same Agree operation: portmanteau agreement occurs when $\text{Infl}^o$ agrees with both arguments while inverse marking occurs when $\text{Infl}^o$ agrees only with the object. Portmanteau agreement and inverse marking thus share the same underlying source. Furthermore, this source must lie in the narrow syntax, as inverse marking has effects on such syntactic phenomena as word order and variable binding (Bruening 2001, 2005). Since inverse marking must be determined in the syntax, and since portmanteau agreement shares the same source as inverse marking, we must conclude that portmanteau agreement in Algonquin is determined in the syntax as well.

The conclusion that portmanteau agreement morphology in Algonquin reflects Multiple Agree in the narrow syntax echoes Bobaljik and Branigan’s (2006:57–58) suggestion that portmanteau morphology in Chukchi may be tied to multiple case-checking. Georgi (2012, 2013) has subsequently developed this idea more extensively in a Multiple Agree framework. However, Georgi’s analysis inherently restricts the derivation of portmanteau agreement morphology to local (“you-and-me”) contexts, a restriction that I will show is not appropriate for Algonquin. Although portmanteau agreement in Algonquin is confined to local contexts in the set of verb inflection known as the Independent Order, the parallel set of Conjunct Order verb inflection displays portmanteau agreement in both local contexts and mixed (“you-and-them”) contexts. An approach that permits a degree of systematic variation in the distribution of portmanteau agreement is thus desirable.

The model of Multiple Agree that I adopt allows for a principled range of variation, but at the same time, it is also more restrained than many existing proposals, as it requires neither the presence of two separate probes on $\text{Infl}^o$ (as in Georgi 2012, 2013) nor the abandonment of locality constraints (as in Hiraiwa 2001, 2005). Instead, I posit a standard Agree configuration in which $\text{Infl}^o$ carries a single probe that searches downwards subject to strict locality (as in Chomsky 2000, 2001). Van Koppen (2005, 2006, 2008) has shown that in such a configuration, Multiple Agree can arise in only one circumstance: when there are two goals that are equidistant from the probe. Van Koppen uses the “one probe, two equidistant goals” approach to capture the patterning of agreement with conjoined subjects in Dutch, as in (1a). To account for the Algonquin patterns, I will propose that under certain conditions, the same effect can arise in the multiple-specifier configuration in (1b), with portmanteau subject/object agreement as the outcome. (The multiple-specifier configuration arises from A-movement triggered by an earlier step of strong object agreement on $\text{Voice}^o$.)
Multiple Agree involving one probe and two equidistant goals

a. Dutch (van Koppen 2005)

\[
\begin{array}{c}
\text{CP} \\
\text{C} \\
\text{TP} \\
\text{CoP} \\
\text{DP}_1 & \& \text{DP}_2
\end{array}
\]

b. Algonquin

\[
\begin{array}{c}
\text{InflP} \\
\text{Infl} \\
\text{VoiceP} \\
\text{DP}_1 \\
\text{DP}_2 \\
\text{Voice}
\end{array}
\]

The structure in (1b) will enable a simple account of variation not only in portmanteau agreement, but in inverse marking as well: I will show that variation in both phenomena follows directly from variation in the featural richness of the probe on Infl° (cf. Béjar and Rezac 2009). Beyond capturing the systematic connection between portmanteau agreement and inverse marking, this analysis also provides a new way to understand the nature of inverse morphology in Algonquian languages. I will propose that inverse marking is in fact an impoverishment effect that arises when person features on a head (Voice°) are deleted due to the presence of identical person features on an adjacent head (Infl°) (cf. Nevins 2007 on “spurious se” in Spanish). This analysis makes it possible to account for inverse marking using conventional downwards Agree rather than Cyclic Agree (contra Béjar and Rezac 2009 and Lochbihler 2012) and it straightforwardly captures the observation that much of the so-called “direct/inverse” system in Algonquian languages is in fact more accurately characterized as an object agreement system (McGinnis 1999; Brittain 1999).

The data in this paper are from Maniwaki Algonquin (Jones 1977), a member of the Ojibwe subgroup of the Algonquian language family (Rhodes and Todd 1981). I have chosen to present data from this dialect as it is morphophonologically conservative and its inflectional patterns can be observed directly with little interference from morphophonemic alternations. I note, however, that the crucial correlation between portmanteau agreement and inverse marking is not restricted to Maniwaki Algonquin—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 Maniwaki Algonquin (see the PA verb paradigms in Oxford 2014, summarized from Bloomfield 1946, Pentland 1999, and Goddard 2007). Despite the focus on Maniwaki Algonquin, then, we are discussing not a quirk of this particular dialect, but rather a deep property that holds across many Algonquian languages.

The paper is laid out as follows. It begins by describing the patterning of portmanteau agreement (§2) and inverse marking (§3) in Algonquin. Both patterns vary across the two sets of verb inflection known as the Independent and Conjunct Orders, but despite this variation, one generalization remains exceptionless: across all forms, portmanteau agreement and inverse marking are always in complementary distribution (§4). To account for this generalization, a unified analysis of the two phenomena is proposed: inverse marking occurs
when an articulated probe on Infl\textsuperscript{c} is best matched by the object (§5) while portmanteau agreement occurs when the probe is matched equally well by both arguments (§6). This analysis derives the complementarity of the two phenomena by attributing them to alternative outcomes of the same Agree operation. Evidence from related phenomena indicates that this Agree operation must take place in the narrow syntax (§7). The paper concludes by considering how the proposed syntactic analysis of portmanteau agreement and inverse marking sheds light on the typological markedness of both phenomena (§8).\textsuperscript{1}

2 Two patterns of portmanteau agreement

This section shows that the distribution of portmanteau subject/object agreement in Algonquin exhibits language-internal variation. The variation is conditioned by the contrast between two parallel sets of verb inflection known as the Independent and Conjunct Orders (§2.1). The Independent allows portmanteau agreement only in local configurations, where both arguments are 1st/2nd person (§2.2). The Conjunct allows portmanteau agreement in both local configurations and mixed configurations, where one argument is 1st/2nd person and the other is 3rd person (§2.3).

2.1 Two sets of inflection

Nearly all Algonquian languages display a distinction between two 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 vastly different morphology. The distinction is illustrated for the Algonquin intransitive verb \textit{niba}: ‘sleep’ in (2). (Here and throughout the paper, all Algonquin forms are from Jones 1977.)

\begin{enumerate}
\item The paper uses the following abbreviations: 1p = exclusive first-person plural, 21 = inclusive first-person plural, 3 = proximate third person, 3\textsuperscript{′} = obviative third person, 3OBJ = third-person object (proximate or obviative), DIR = direct, INV = inverse, NEG = negative, OBJ = internal argument, PA = Proto-Algonquian, SUBJ = external argument, T.S. = theme sign, X\rightarrow Y = subject X and object Y, [Pers, Prox, Part, Addr] = [Person, Proximate, Participant, Addressee].
\end{enumerate}
Independent and Conjunct forms of *niba*: ‘sleep’

<table>
<thead>
<tr>
<th></th>
<th>Independent</th>
<th>Conjunct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s ni-</td>
<td><em>niba:</em> sleep</td>
<td><em>niba:</em> -yan sleep -1s ‘I sleep.’</td>
</tr>
<tr>
<td>2s gi-</td>
<td><em>niba:</em> sleep</td>
<td><em>niba:</em> -yan sleep -2s ‘You (sg.) sleep.’</td>
</tr>
<tr>
<td>1p ni-</td>
<td><em>niba:</em> -min sleep</td>
<td><em>niba:</em> -yang sleep -1p ‘We (excl.) sleep.’</td>
</tr>
<tr>
<td>21 gi-</td>
<td><em>niba:</em> -min sleep</td>
<td><em>niba:</em> -yangw sleep -21 ‘We (incl.) sleep.’</td>
</tr>
<tr>
<td>2p gi-</td>
<td><em>niba:</em> -mw sleep</td>
<td><em>niba:</em> -ye:gw sleep -2p ‘You (pl.) sleep.’</td>
</tr>
</tbody>
</table>
| 3s nibe | *niba:* -w sleep -3s | *niba:* -j sleep -3s ‘She sleeps.’
| 3p nibe | *niba:* -wag sleep -3p | *niba:* -wa:j sleep -3p ‘They sleep.’ |

As these forms show, the Independent and Conjunct differ in both the structure of the inflectional template (e.g. the absence of an agreement prefix position in the Conjunct) and the shapes of the inflectional morphemes (e.g. 1p *-min* in the Independent versus 1p *-ya:ng* in the Conjunct).

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 precise details are subtle and vary among the Algonquian languages (see e.g. Brittain 2001 for Western Naskapi and Cook 2014 for Plains Cree). Theoretical analyses vary as well: the existence of the Independent/Conjunct distinction has been attributed to a difference in the structural position of the verb (Campana 1996; Brittain 2001; Richards 2004), or, more recently, to a difference in the inheritance of features from C to T (Lochbihler and Mathieu to appear). In this paper I am not concerned with the ultimate source of the Independent/Conjunct distinction, as my goal is simply to capture certain differences in the patterning of agreement in the two orders. I will therefore take the existence of the distinction for granted and remain agnostic about its source. The remainder of this section shows how the distribution of portmanteau subject/object agreement differs in the Independent (§2.2) and Conjunct (§2.3).

### 2.2 Portmanteau agreement in the Independent Order

By definition, the possibility of portmanteau subject/object agreement arises only in transitive forms. In the Independent Order, the inflection of transitive verbs follows the template in (3), which employs the terminology of Goddard (1979). The “theme sign” is a direct/inverse marker that will be discussed further in Section 3 below.\(^2\) The remaining

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\(^2\)More accurately ‘she/he sleeps’, but for brevity I will gloss all 3s forms using only ‘she’.

\(^3\)Descriptively, the direct/inverse theme sign indicates the relative rank of the two arguments on the person hierarchy 1/2 > 3 > 3’ (Pentland 1999). Since its realization depends on the person features of both arguments,
affixes are phi-agreement markers that index the two arguments in an agglutinative fashion. One argument is indexed by the CENTRAL AGREEMENT, which consists of the prefix and central suffix, while the other argument is indexed by the PERIPHERAL AGREEMENT, which consists of the peripheral suffix.

(3) Template for transitive verb inflection, Independent Order

$$\begin{align*}
\text{Prefix}_1 & \quad + \quad \text{Verb stem} & \quad + \quad \text{Central suffix}_1 & \quad + \quad \text{Peripheral suffix}_1 \\
(\text{Central agr}) & & (\text{DIR/INV}) & & (\text{Peripheral agr})
\end{align*}$$

I have applied distinct formatting to distinguish each slot in the template. To help clarify the presentation of the data, the same formatting is applied in all subsequent examples.

In order to assess the patterning of agreement in transitive forms, it is necessary to recognize three different configurations of person features. In a LOCAL configuration, both arguments are 1st/2nd person (e.g. ‘I see you’). In a NON-LOCAL configuration, both arguments are 3rd person (e.g. ‘she sees him’). In a MIXED configuration, one argument is 1st/2nd person and the other is 3rd person (e.g. ‘I see him’). In most forms, the agglutinative nature of the Independent inflection means that it displays no portmanteau-like properties. In the mixed forms in (4), the two arguments are clearly indexed by distinct morphology: the central agreement ($\text{prefix} + \text{central suffix}$) indexes one argument and the peripheral agreement ($\text{peripheral suffix}$) indexes the other. (Notice that the central and peripheral agreement are both able to index either the subject or the object; this is due to the direct/inverse alignment pattern, which is discussed further in Section §3.)

(4) a. ni- wà:bam $-\text{a}_1$ $-\text{na}_1$ $-\text{ig}$ $-\text{DIR}$ $-\text{1p}$ $-\text{3p}$
   ‘We see them.’ (1p→3p)
b. gi- wà:bam $-\text{igo}$ $-\text{wa}_1$ $-\text{g}$ $-\text{INV}$ $-\text{2p}$ $-\text{3p}$
   ‘They see you.’ (3p→2p)

In the non-local forms in (5), the pattern is the same: central agreement indexes one argument and peripheral agreement indexes the other. (The notation 3′ in these forms denotes an OBVIATIVE 3rd person. When a clause contains two 3rd person arguments, the less topical one obligatorily receives special obviative marking. The other, more topical argument is said to be PROXIMATE.)

(5) a. o- wà:bam $-\text{a}_1$ $-\text{wa}_1$ $-\text{n}$ $-\text{DIR}$ $-\text{3p}$ $-\text{3′}$
   ‘They see the other(s).’ (3p→3′)
b. o- wà:bam $-\text{igo}$ $-\text{wa}_1$ $-\text{n}$ $-\text{INV}$ $-\text{3p}$ $-\text{3′}$
   ‘The other(s) see them.’ (3′→3p)

In local forms, however, the pattern is disrupted by the absence of peripheral agreement. Due to its diachronic origin as a definite article (Goddard 2007:265), the peripheral suffix

the theme sign itself can be understood as a type of portmanteau subject/object agreement (Trommer 2003; Fry 2015). In this paper, however, I will restrict my use of the term “portmanteau agreement” to the conventional phi-agreement affixes—in particular, the central agreement. The apparent portmanteau nature of the theme sign will be attributed in Section 5 to an impoverishment operation that involves both Voice$^o$ and Infl$^o$. 
has 3rd-person forms only. Peripheral agreement is thus systematically absent in configurations that lack 3rd-person arguments, such as transitive local configurations. In local forms, then, the usual pattern in which central agreement indexes one argument and peripheral agreement indexes the other is impossible. What instead happens in local forms is that the central agreement indexes both arguments. This exceptional use of the central agreement is illustrated by the $2 \rightarrow 1p$ form in (6), where the prefix $gi$- indexes the 2nd-person subject and the central suffix $-\text{min}$ indexes the 1p object.\footnote{In this form the theme sign is an object marker rather than a direct/inverse marker. See Section 3 for more on the analysis of theme signs.}

(6) \begin{tabular}{ll}
$gi$-wabam$\square$-i & $-\text{min}$ \\
2- see & -1OBJ -1p \\
\end{tabular}

‘You see us.’ (2 → 1p)

To appreciate the hybrid nature of the central agreement in (6), compare the transitive $2 \rightarrow 1p$ form in (6) with the intransitive 2p and 1p forms in (7). These intransitive forms clearly establish that the central agreement for 2p is $gi$- + $-\text{mw}$ and for 1p is $ni$- + $-\text{min}$. (Peripheral agreement is absent in these forms, like in (6), because there are no 3rd-person arguments.) The central agreement in the transitive local configuration in (6) above, $gi$- + $-\text{min}$, is a hybrid of these two forms.

(7) a. \begin{tabular}{ll}
$gi$-niba & $-\text{mw}$ \\
2- sleep & -2p \\
\end{tabular}

‘You (pl.) sleep.’ (2p)

b. \begin{tabular}{ll}
$ni$-niba & $-\text{min}$ \\
1- sleep & -1p \\
\end{tabular}

‘We sleep.’ (1p)

Local forms like (6) are the only place in the Independent Order in which the central agreement can index two arguments. In all other forms, the prefix and central suffix always work together to index a single argument. Forms like (6) would not traditionally be labelled as portmanteau agreement, since the two individual agreement morphemes each index only a single argument ($gi$- 2; $-\text{min}$ 1p). However, I contend that the agreement pattern in (6) does in fact qualify as a type of portmanteau agreement, because it involves morphology that normally indexes only a single argument but is here serving to index two arguments. In all other contexts, we can treat the central agreement as a single discontinuous agreement slot. It is only in local configurations like (6) that this slot is able to index two arguments simultaneously. The simultaneous indexing of two arguments by a single agreement slot fits the definition of portmanteau agreement. The only non-traditional aspect of the portmanteau pattern in (6) is that the agreement slot is discontinuous.

In summary, the Independent Order inflection displays no portmanteau properties in mixed and non-local configurations: the central agreement indexes one argument and the peripheral agreement indexes the other. In local configurations, however, a portmanteau-like pattern is possible in which the central agreement exceptionally indexes two arguments simultaneously.
2.3 Portmanteau agreement in the Conjunct Order

Unlike the Independent, the Conjunct agreement template, shown in (8), does not include a person prefix. Central agreement in the Conjunct consists solely of a suffix. The Conjunct also makes less use of peripheral agreement than the Independent. The peripheral suffix is shown in parentheses in (8) because it does not occur in any of the forms that are relevant to this paper.

(8) Template for transitive agreement, Conjunct Order
Verb stem + [Theme sign] + Central suffix (+ Peripheral suffix)

The Conjunct uses the same verb stems and theme signs as the Independent, but the central and peripheral suffixes of the Conjunct are entirely different from those of the Independent. The Conjunct agreement paradigm for the intransitive verb niba:: ‘sleep’ was given in (2) above. These intransitive forms allow us to identify the set of Conjunct central suffixes in (9). Since these central suffixes occur in intransitive forms, we know that each one indexes only a single argument.

(9) Single-argument central suffixes in the Conjunct (initial y occurs after a vowel)

<table>
<thead>
<tr>
<th>1s</th>
<th>2s</th>
<th>1p</th>
<th>21</th>
<th>2p</th>
<th>3s</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>-(y)a:n</td>
<td>-(y)a:n</td>
<td>-(y)a:ng</td>
<td>-(y)a:ngw</td>
<td>-(y)e:gw</td>
<td>-j</td>
<td>-wa:j</td>
</tr>
</tbody>
</table>

In transitive Conjunct forms, I will diagnose the existence of portmanteau subject/object agreement as follows. If the central agreement consists of one of the single-argument suffixes in (9), then the form does not display portmanteau agreement, since the central agreement is being used to index just one of the verb’s two arguments. However, if the central agreement consists of a special suffix that does not belong to the set in (9) and occurs only in that particular transitive form, then we have no choice but to analyze that suffix as an agreement marker dedicated to that particular subject/object combination—in other words, a portmanteau agreement marker.

Portmanteau agreement occurs more frequently in the Conjunct than in the Independent, but the Conjunct matches the Independent in that non-local configurations never involve portmanteau agreement. In all the non-local Conjunct forms in (10), the central agreement indexes only the proximate argument (3s/3p), using the same central suffixes that occur in 3s/3p intransitives: 3s -j and 3p -wa:j. The obviative argument (3′) is left unmarked.

(10) a. wa:bam [-a:] -j
    see -DIR -3s
    ‘She sees the other(s).’ (3s→3′)

b. wa:bam [-igo] -j
    see -INV -3s
    ‘The other(s) see her.’ (3′→3s)

c. wa:bam [-a:] -wa:j
    see -DIR -3p
    ‘They see the other(s).’ (3p→3′)

d. wa:bam [-igo] -wa:j
    see -INV -3p
    ‘The other(s) see them.’ (3′→3p)
The Conjunct also matches the Independent in that local forms do allow portmanteau agreement. First note that it is possible for the agreement in a local Conjunct form not to be portmanteau. In the forms in (11), for example, the central suffix indexes only the 1st-person subject using the same single-argument suffixes that occur in intransitives: 1s \(-a:n\) and 1p \(-a:ng\) (see (9)).

(11) a. wa:bam\[\text{-in}\] -\(a:n\)  see \(-2\text{OBJ} -\text{1s}\)  ‘I see you (sg.).’ (1s\(\rightarrow\)2s) b. wa:bam\[\text{-in}\] -\(a:ng\)  see \(-2\text{OBJ} -\text{1p}\)  ‘We see you.’ (1p\(\rightarrow\)2)

A local Conjunct form that does display portmanteau agreement is shown in (12). This 1s\(\rightarrow\)2p form contains the special central suffix \(-agogw\), which is distinct from both the 1s suffix \(-a:n\) and the 2p suffix \(-e:gw\) (see (9)). We must therefore conclude that the \(-agogw\) suffix is a portmanteau agreement marker dedicated specifically to the 1s\(\rightarrow\)2p form.

(12) wa:bam\[\text{-in}\] -\(agogw\)  see \(-2\text{OBJ} -\text{1s}→\text{2p}\)  ‘I see you (pl.).’

In mixed configurations, we saw above that the Independent does not display portmanteau agreement. The same is true for some mixed Conjunct forms. In (13), for example, the subjects are indexed by the same single-argument suffixes that occur in intransitives: 21 \(-angw\) and 2p \(-e:gw\).

(13) a. wa:bam\[\text{-Ø}\] -\(angw\)  see \(-\text{DIR} -\text{21}\)  ‘We (incl.) see her.’ (21\(→\)3s) b. wa:bam\[\text{-Ø}\] -\(e:gw\)  see \(-\text{DIR} -\text{2p}\)  ‘You (pl.) see her.’ (2p\(→\)3s)

Other mixed Conjunct forms, however, use special central suffixes that are not part of the set of single-argument suffixes in (9) above. Three such mixed forms are shown in (14). In each form, the central suffix is a portmanteau marker that occurs uniquely in that particular transitive form.

5In these forms, like that in (6) above, the theme sign is an object person marker rather than a direct/inverse marker. The nature of theme signs is discussed further in Section 3.

6These forms contain a null allomorph of the direct theme sign. The null allomorph occurs when the direct theme sign is followed by a vowel-initial suffix (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). Compare the following minimal pair, in which the addition of negation in (b) restores the overt allomorph of the direct theme sign.

(i) a. wa:bam\[\text{-Ø}\] -\(ag\)  see \(-\text{DIR} -\text{1s}→\text{3}\)  ‘I see her.’ b. wa:bam\[\text{-Ø}\] -\(siw -ag\)  see \(-\text{DIR} -\text{NEG} -\text{1s}→\text{3}\)  ‘I do not see her.’ (Jones 1977:77)
Unlike the Independent, then, the Conjunct does allow for the possibility of portmanteau agreement in mixed configurations. The Algonquin Conjunct is thus a clear exception to Georgi’s (2013:156) generalization that person portmanteaus “show up virtually only” in local configurations.

2.4 Summary: Two patterns of portmanteau agreement

The distribution of portmanteau subject/object agreement in Algonquin exhibits language-internal variation. In the Independent, portmanteau agreement is possible in local configurations only, while in the Conjunct, it is possible in both local and mixed configurations. Neither order permits portmanteau agreement in non-local configurations. This distribution is summarized in (15).

(15) Can the central agreement index two arguments?

<table>
<thead>
<tr>
<th></th>
<th>Local (1 + 2)</th>
<th>Mixed (1/2 + 3)</th>
<th>Non-local (3 + 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Conjunct</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

3 Two patterns of inverse marking

This section shows that inverse marking in Algonquin, like portmanteau agreement, is subject to language-internal variation conditioned by the Independent/Conjunct contrast. In the Independent, inverse marking is excluded from local configurations, while in the Conjunct, it is excluded from both local and mixed configurations.

In order to formulate a precise statement of the variation, some background is needed on the nature of inverse marking in Algonquin. As in all Algonquian languages, agreement in Algonquin displays a direct/inverse alignment pattern. Neither the central agreement nor the peripheral agreement is dedicated to a particular grammatical function. In (16), for
example, the central agreement ni- -naːn indexes the higher-ranked 1st-person argument regardless of whether it is the subject, as in (16a), or the object, as in (16b).

(16)  

a. ni- waːbam -æː -naːn -ig  

1- see  -DIR 1p -3p  

b. ni- waːbam -igo -naːn -ig  

1- see  -INV 1p -3p  

‘We see them.’ (1p → 3p)  

‘They see us.’ (3p → 1p)

The grammatical functions of the arguments are indicated by an additional marker called the THEME SIGN, which immediately follows the verb stem. The DIRECT theme sign -aː indicates that the subject outranks the object on the person hierarchy 1/2 > 3 > 3′, as in (16a), while the INVERSE theme sign -igo indicates the opposite, as in (16b). The phi-agreement markers and theme signs thus act in concert: the central and peripheral agreement identifies the phi-features of the two arguments; the theme sign indicates which argument is the subject and which is the object.

The preceding description is complicated by the existence of two further theme signs, -i and -in, which are illustrated in (17) and glossed temporarily as ‘T.S.’

(17)  

a. gi- waːbam -i -min  

2- see  -T.S. 1p  

b. gi- waːbam -in -imin  

2- see  -T.S. 1p  

‘You see us.’ (2 → 1p)  

‘We see you.’ (1p → 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. 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 1973 and Béjar and Rezac 2009. However, Zúñiga (2006, 2008) and Macaulay (2009) have shown that the direct/inverse analysis of -i/-in is not coherent (cf. Hockett 1992; Pentland 1999). The crucial evidence comes from the 3 → 1 forms in the Conjunct Order, such as the 3s → 1s form in (18).

(18)  

waːbam -i -j  

see  -T.S. 3  

‘She sees me.’ (3s → 1s Conjunct)

The theme sign in this form is -i, which, under the direct/inverse analysis, is the local direct theme sign, as in (17a) above. However, in a 3 → 1 form like (18), 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 3s → 1s Independent form in (19).

(19)  

ni- waːbam -igo  

1- see  -INV  

‘She sees me.’ (3s → 1s 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 (18) 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 (20). (See the Appendix for the full inflectional forms upon which this summary is based.) The forms are presented according to the configuration in which they appear (local, mixed, non-local) and the inverse theme sign -igo is shaded.

(20) Distribution of theme signs in Algonquin

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Theme Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2→1</td>
<td>-i</td>
</tr>
<tr>
<td>1→2</td>
<td>-in</td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
</tr>
<tr>
<td>1/2→3</td>
<td>-a:</td>
</tr>
<tr>
<td>3→1</td>
<td>-i</td>
</tr>
<tr>
<td>3→2</td>
<td>-in</td>
</tr>
<tr>
<td>Non-local</td>
<td></td>
</tr>
<tr>
<td>3→3'</td>
<td>-a:</td>
</tr>
<tr>
<td>3'→3</td>
<td>-igo</td>
</tr>
</tbody>
</table>

The distribution of the inverse theme sign -igo will be discussed below. If we set aside -igo, however, a simple characterization of the remaining three theme signs 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 more straightforwardly analyzed as nothing more than object person markers (Brittain 1999; McGinnis 1999; cf. Rhodes 1994).

This leaves us with the inverse theme sign -igo, which cannot be characterized as an object person marker, as it occurs with both 1st/2nd-person objects (mixed 3→1/2) and 3rd-person objects (non-local 3'→3). Descriptively, the only coherent way to capture these two contexts is to retain the person hierarchy 1/2 > 3 > 3', with -igo occurring when the object outranks the subject. Unlike the other theme signs, then, -igo must continue to be described as an inverse marker.

The theme sign slot thus hosts two distinct types of marking: object person agreement and inverse marking. The inverse marker -igo appears when the object outranks the subject on the person hierarchy (under conditions that vary between the Independent and Conjunct, as discussed below). The object person markers -i 1OBJ, -in 2OBJ, and -a: 3OBJ occur elsewhere. In other words, the theme sign slot hosts a background pattern of object agreement that gets overwritten by the appearance of the inverse marker in certain forms (cf. Bliss, Ritter and Wiltshcko 2014).
For the purposes of this paper, the crucial property of the distribution of theme signs in (20) is that it varies between the Independent and Conjunct Orders. The two orders agree in local configurations, which are never marked as inverse: in both the Independent and the Conjunct, all 2→1 forms have the object marker -i (1OBJ) and all 1→2 forms have the object marker -in (2OBJ). The two orders also agree in non-local configurations, which permit the inverse marker -igo in both the Independent and the Conjunct. In mixed configurations, however, the two orders differ. In mixed forms with a 3rd-person subject and a 1st/2nd-person object, the Independent uses the inverse marker -igo, as predicted by the person hierarchy, but the Conjunct does not. Instead, the Conjunct uses the object markers: 3→1 forms have the object marker -i (1OBJ) and 3→2 forms have the object marker -in (2OBJ). The 3→1/2 forms are thus marked as inverse in the Independent but not in the Conjunct. As a result, inverse marking has a more restricted distribution in the Conjunct than in the Independent. This distribution is summarized in (21).

(21) Can the inverse theme sign -igo occur?

<table>
<thead>
<tr>
<th></th>
<th>Local (1 + 2)</th>
<th>Mixed (1/2 + 3)</th>
<th>Non-local (3 + 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Conjunct</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

4 A correlation between portmanteau agreement and inverse marking

The distributions of portmanteau agreement and inverse marking are compared in (22).

(22) a. Can portmanteau agreement occur? (repeated from (15))

<table>
<thead>
<tr>
<th></th>
<th>Local</th>
<th>Mixed</th>
<th>Non-loc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indep’t</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Conjurct</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

b. Can inverse marking occur? (repeated from (21))

<table>
<thead>
<tr>
<th></th>
<th>Local</th>
<th>Mixed</th>
<th>Non-loc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indep’t</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Conjurct</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

This comparison reveals a correlation between the two patterns: portmanteau agreement and inverse marking are in complementary distribution. The contexts that allow portmanteau agreement are exactly those contexts that disallow inverse marking. The correlation is most striking in the mixed forms, which differ across the Independent and the Conjunct with respect to both portmanteau agreement and inverse marking. The correlation is so perfect
that the portmanteau and inverse patterns can be combined in a single table, as in (23).

(23) Distribution of portmanteau central agreement and inverse marking

<table>
<thead>
<tr>
<th></th>
<th>Local (1 + 2)</th>
<th>Mixed (1/2 + 3)</th>
<th>Non-local (3 + 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>+port, −inv</td>
<td>−port, +inv</td>
<td>−port, +inv</td>
</tr>
<tr>
<td>Conjunct</td>
<td>+port, −inv</td>
<td>+port, −inv</td>
<td>−port, +inv</td>
</tr>
</tbody>
</table>

The mutual exclusivity of portmanteau agreement and inverse marking is not an idiosyncratic property of Maniwaki 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 (Bloomfield 1946; Goddard 2007; see Oxford 2014 for paradigms). The reconstruction of these patterns in PA reflects their broad attestation across the Algonquian family.

Even stronger evidence for a deep connection between portmanteau agreement and inverse marking comes from Algonquian languages that have extended the distribution of inverse marking. Recall that in PA/Algonquin, mixed 3→1/2 forms are marked as inverse in the Independent but use the object-marking theme signs in the Conjunct (§3). 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 (24).

(24) Extension of inverse marking in Conjunct mixed forms

<table>
<thead>
<tr>
<th></th>
<th>PA</th>
<th>Algonquin</th>
<th>Plains Cree</th>
</tr>
</thead>
<tbody>
<tr>
<td>3→1s</td>
<td>-i 1OBJ</td>
<td>-i 1OBJ</td>
<td>-i 1OBJ</td>
</tr>
<tr>
<td>3→1p</td>
<td>−ikw INV</td>
<td>−ikw INV</td>
<td>−ikw INV</td>
</tr>
<tr>
<td>3→2s</td>
<td>-e 2OBJ</td>
<td>-in 2OBJ</td>
<td>-is 2OBJ</td>
</tr>
<tr>
<td>3→2p</td>
<td>−ikw INV</td>
<td>−ikw INV</td>
<td>−ikw INV</td>
</tr>
</tbody>
</table>

What is significant about the Plains Cree change is that the extension of inverse marking to the 3→1p and 3→2p forms was accompanied by the loss of portmanteau agreement in these forms. In PA and Algonquin, both of these forms display portmanteau agreement, as illustrated for Algonquin in (25) (repeated from (14)). The 3→1p form in (25a) contains the portmanteau central suffix -yaminj, which differs from both 3s -j and 1p -yaŋŋ, and the 3→2p form in (25b) contains the portmanteau central suffix -aːk, which differs from both 3s -j and 2p -eːgw.
The generalization that portmanteau agreement and inverse marking are mutually exclusive is thus quite robust. Synchronically, contexts that allow inverse marking disallow portmanteau agreement, and vice versa. Diachronically, the extension of inverse marking to a given form is accompanied by the loss of portmanteau agreement in that form. The strength of the correlation between portmanteau agreement and inverse marking is such that it cannot possibly be a coincidence. In the following sections I show that the mutual exclusivity of the two phenomena falls out as an unavoidable consequence of the syntactic derivation. Section 5 lays out an analysis of inverse marking and Section 6 shows how this analysis allows us to capture the systematic relationship between inverse marking and portmanteau agreement.

5 The derivation of inverse marking

This section presents an analysis of inverse marking in Algonquin based primarily on Oxford 2014. All theme signs, including the object markers and the inverse marker, will be analyzed as the spell-out of Voice°, the head that introduces the subject and agrees for person with the object. The key proposal is that the inverse theme sign is the elsewhere realization of Voice°, spelled out when Voice° exceptionally lacks object person features due to an impoverishment operation.

The section begins by setting out the structure of VoiceP in Algonquin (§5.1). The analysis is then developed as follows. First, the object-agreement theme sign pattern is attributed to a person agreement operation on Voice° (§5.2). This agreement operation also triggers A-movement of the object to a second specifier of VoiceP, rendering the subject and object equidistant for the purposes of all subsequent syntactic operations (§5.3). One such operation—agreement on the functional head Infl°—is responsible for the central agreement inflection that targets the highest-ranked argument on the person hierarchy (§5.4). Inverse forms are unique in that Infl° and Voice° both target the object, a configuration that
triggers an impoverishment operation which results in Voice° being spelled out as the elsewhere form -igo, i.e. the morpheme traditionally labelled as the inverse theme sign (§5.5). Under this analysis, then, inverse marking is a special spellout of Voice° that arises in forms in which the object is exceptionally agreed with twice rather than just once.

5.1 The structure of VoiceP

I take transitive VoiceP in Algonquin to have the structure shown in (27) (cf. Hirose 2003 for Plains Cree, Bruening 2005 for Passamaquoddy, and Oxford 2014 for Proto-Algonquian), in which vo introduces the internal argument and Voice° introduces the external argument. For convenience, I will refer to the external and internal arguments as “subject” and “object” respectively.

(27) VoiceP
   SUBJ Voice vP
   OBJ v Root

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; Brani-gan et al. 2005; Mathieu 2007), and Voice°, I propose, is the theme sign (cf. Bruening 2005). Head movement gives the surface morpheme order Root-v-Voice, i.e. root-final-theme sign, as attested.

5.2 Agreement on Voice°

We saw above (§3) that the theme sign slot hosts a background pattern of object person agreement (-i 1, -in 2, -a: 3) 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 (28) (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.7

7The use of the feature [Addressee] to distinguish between 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 person-agreement pattern displayed by the theme sign can be accounted for by positing that Voice° carries the probe [uPerson], which is valued by copying a goal’s [Person] feature and any dependents. For example, if the [uPerson] 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 specification of the object. The simple spellout rule in (29) can then be given to account for the realization of Voice°, setting aside the inverse marker -igo for now.

(29) Spellout of Voice° (= theme sign)

\[-in \leftrightarrow [\text{Pers}, \text{Prox}, \text{Part}, \text{Addr}] \quad (= \text{2nd person})\]
\[-i \leftrightarrow [\text{Pers}, \text{Prox}, \text{Part}] \quad (= \text{1st person})\]
\[-a: \leftrightarrow [\text{Pers}] \quad (= \text{3rd person prox/obv})\]

5.3 Movement triggered by 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 (30) (cf. Hirose 2003; Bruening 2005). Here and in subsequent diagrams, I use a dotted arrow to denote agreement and a solid arrow to denote movement.

(30) VoiceP
    \( \overset{\text{OBJ}}{\overset{\text{SUBJ}}{\text{vP}}} \)

---

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 depends crucially on the premise that all theme signs are direct/inverse markers, but I argued in Section 3 that most theme signs are better understood as object agreement. Under this interpretation of the data, standard downward-probing Agree gives the simplest account.
I take the two specifiers of VoiceP to be equidistant. The equidistance of multiple specifiers is controversial in the literature, with arguments both for (e.g. Reinhart 1981; Ura 1996; Chomsky 2000; Hornstein 2009) and against (e.g. Chomsky 2001; Hiraiwa 2001). The equidistance proposed in (30) 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.

In Algonquian languages, strong evidence for equidistance comes from the fact that most morphosyntactic operations are insensitive to grammatical functions. For example, we saw above that the central agreement inflection is governed by the person hierarchy \(1/2 > 3 > 3'\) rather than the grammatical function hierarchy subject > object (§3), and the same will be shown below for word order and variable binding (§7). Subject/object asymmetries 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 external argument in Ojibwe. The morphosyntactic “symmetry” (Wunderlich 2005) of the subject and object is easily explained under the proposal that object person agreement on Voice\(^{°}\) causes the subject and object to become equidistant. This equidistance removes locality as a factor in subsequent operations, opening the door for other factors such as featural richness (i.e. the person hierarchy) to play a role.

5.4 Agreement on Infl\(^{°}\)

The removal of locality as a factor in agreement is crucial to the analysis of the central agreement inflection, which will in turn provide the key to the analysis of the inverse theme sign (§5.5). The central agreement indexes the argument that ranks higher on the person hierarchy \(1/2 > 3 > 3'\) (§3). In this section I will restrict my attention to the central agreement in the two Independent Order mixed forms shown in (31), repeated from (16); a broader range of forms will be considered in Section 6 below. In the forms in (31), the central agreement consists of the prefix \(ni\) ‘1’ and the central suffix \(-n\-\) ‘1p’, which work together to index the 1p argument regardless of whether it is the subject, as in (31a), or the object, as in (31b).

\[
\begin{align*}
(31) & \quad \text{a. } ni \- wabam & -n\-n\-i\-g \quad & \text{b. } ni \- wabam & -i\-g\- -n\-n\-i\-g \\
& \text{1- see} & 3p & \text{1- see} & 1p \ 3p \\
& ‘We see them.’ (1p→3p) & ‘They see us.’ (3p→1p)
\end{align*}
\]

Since the central agreement can target either the subject or the object, it clearly cannot be unified with the agreement operation on Voice\(^{°}\), which always targets the object (§5.2). I accordingly take the locus of central agreement to be a higher functional head Infl\(^{°}\) (cf. Bruening 2005). Head movement gives the surface morpheme order Voice\(^{°}\) + Infl\(^{°}\), i.e. theme sign + central suffix.\(^{10}\)

Why does Infl\(^{°}\) target whichever argument ranks higher on the person hierarchy? Adopting a key insight from Béjar and Rezac (2009), I propose that the person probe on Infl\(^{°}\)

\(^{9}\)The equidistance proposed in (30) 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.

\(^{10}\)To account for the systematic correspondence of the prefix and central suffix, which together make up the central agreement, I regard the prefix as a proclitic (Halle and Marantz 1993; McGinnis 1995; Déchina 1997, 1999; Brittain 2001; Richards 2004; Mathieu 2007) that doubles the features of Infl\(^{°}\) (i.e. the central suffix).
is articulated, consisting of the feature structure \([u_{\text{Pers}}, u_{\text{Prox}}, u_{\text{Part}}]\) rather than simply \([u_{\text{Pers}}]\). At the point at which \(\text{Infl}^\circ\) enters the derivation, the two arguments have already become equidistant due to the earlier operation of agreement on \(\text{Voice}^\circ\) (§5.3), as shown in (32) for the examples in (31). When faced with the choice between these two equidistant goals, the articulated probe on \(\text{Infl}^\circ\) agrees with the goal that best matches its full feature specification. In both of the examples in (32), this is the 1st-person argument, as it matches the probe’s \([\text{Participant}]\) feature while the 3rd-person argument does not. \(\text{Infl}^\circ\) thus agrees with the 1st-person argument in both forms, thereby giving rise to 1st-person central agreement in both forms.

(32)  
a. \textbf{1p}→\textbf{3p} (‘we see them’): best match for \(\text{Infl}^\circ\) is \textbf{1p} subject

\[
\text{InflP} \quad \text{Infl} \quad \text{VoiceP} \\
\quad \quad [u_{\text{Pers}}] \quad [u_{\text{Prox}}] \quad [u_{\text{Part}}] \quad \text{OBJ}(3) \quad \text{SUBJ}(1) \ldots \\
\quad \quad \text{Pers} \quad \text{Prox} \quad \text{Pers} \quad \text{Prox} \quad \text{Part} \\
\]

b. \textbf{3p}→\textbf{1p} (‘they see us’): best match for \(\text{Infl}^\circ\) is \textbf{1p} object

\[
\text{InflP} \quad \text{Infl} \quad \text{VoiceP} \\
\quad \quad [u_{\text{Pers}}] \quad [u_{\text{Prox}}] \quad [u_{\text{Part}}] \quad \text{OBJ}(1) \quad \text{SUBJ}(3) \ldots \\
\quad \quad \text{Pers} \quad \text{Prox} \quad \text{Pers} \quad \text{Prox} \\
\]

Under this analysis, the \(1/2 > 3 > 3’\) preference of the central agreement is derived from three factors: (1) persons closer to the deictic centre have more articulated person feature representations; (2) the articulated probe on \(\text{Infl}^\circ\) favors agreement with more articulated person feature representations; and (3) the equidistance of the two goals removes locality as a factor in agreement, allowing the probe to target whichever goal best matches its features.

5.5 The interaction of \(\text{Infl}^\circ\) and \(\text{Voice}^\circ\)

The preceding sections have explained why the theme sign (\(\text{Voice}^\circ\)) normally indexes the object and the central agreement (\(\text{Infl}^\circ\)) always indexes the higher-ranked person. The pro-
posals required to capture these patterns—object agreement on Voice°, equidistance of the two arguments, and an articulated probe on Infl°—also enable a simple explanation of the most unusual component of the system: the inverse theme sign -igo, which displaces the usual object-agreement theme signs in Voice° whenever the object outranks the subject on the person hierarchy.

The key to understanding the inverse theme sign, I propose, is the simple descriptive fact that inverse forms are those in which the central agreement (Infl°) targets the object rather than the subject (e.g. (32b) above). Since Voice° always targets the object, inverse forms have the unique property of being the only forms in which the object is agreed with by both Voice° and Infl°. 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 feature specifications: both heads have the person feature 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 feature on Voice° is deleted in inverse forms. The absence of the person feature 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 -igo, the morpheme traditionally labelled as the inverse theme sign. Under this analysis, then, the inverse theme sign is how Voice° is spelled out whenever its usual object person feature has been “stolen” by a second round of object agreement on Infl°.

To illustrate the analysis in more detail, I discuss the derivation of four Independent Order forms: two that are not inverse (mixed 1→3, non-local 3→3′) and two that are inverse (mixed 3→1, non-local 3′→3). A more complete range of forms will be examined in Section 6 below.

The non-inverse 1→3 and 3→3′ forms are shown in (33). In both forms, Voice° is realized as the 3rd-person object theme sign -a: and the central agreement tracks the subject, which outranks the object on the person hierarchy.11

(33) a. ni- wa:bam -a: -na:n -ig
   1- see -3OBJ -1p -3p
   ‘We see them.’ (1p→3p)

b. o- wa:bam -a: -wa: -n
   3- see -3OBJ -3p -3'
   ‘They see the other(s).’ (3p→3')

The agreement relations in these forms are shown in (34). 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 (hence the central agreement indexing the subject).

11 The 3rd-person (a.k.a. “direct”) theme sign -a: occurs with all 3rd-person objects, whether they are proximate as in (33a) or obviative as in (33b). This distribution follows from the spellout rule in (29).
(34) Agreement on Voice° and Infl° in non-inverse forms

<table>
<thead>
<tr>
<th></th>
<th>Voice°</th>
<th>Infl°</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>1→3</td>
<td>[aPers]</td>
</tr>
<tr>
<td>b.</td>
<td>3→3'</td>
<td>[aPers]</td>
</tr>
</tbody>
</table>

These agreement relations are consistent with the data in (33): the theme sign (Voice°) indexes the 3rd-person object and the central agreement (Infl°) indexes the higher-ranked subject. Since Infl° and Voice° target different arguments, the person features of the two heads remain distinct.

Consider now the inverse counterparts of the above forms: the 3→1 and 3′→3 forms in (35). In both forms, the central agreement tracks the object, which outranks the subject on the person hierarchy, and Voice° is realized as inverse -igo rather than an object marker.

(35) a. ni- wa:bam -igo -na:n -ig
    1- see -1NV -1p -3p
    ‘They see us.’ (3p→1p)

b. o- wa:bam -igo -wa: -n
    3- see -1NV -3p -3’
    ‘The other(s) see them.’ (3’→3p)

The agreement relations in these forms are shown in (36). In both forms, Voice° agrees, as always, with the object, but unlike the forms in (34) above, Infl° also agrees with the object, as the object is the best match for the articulated probe on Infl°.12

(36) Agreement on Voice° and Infl° in inverse forms

<table>
<thead>
<tr>
<th></th>
<th>Voice°</th>
<th>Infl°</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>3→1</td>
<td>[aPers]</td>
</tr>
<tr>
<td>b.</td>
<td>3′→3</td>
<td>[aPers]</td>
</tr>
</tbody>
</table>

The agreement of Infl° with the object correctly captures the fact that the central agreement tracks the object in these forms. The agreement of Voice° with the object, however, incorrectly leads us to expect the theme sign to express object agreement, as it usually does: 1st-person -i in (36a) and 3rd-person -a: in (36b). This is not the case: the theme sign is instead spelled out as the inverse marker -igo in both forms.

Why does the theme sign fail to mark object agreement in these forms? Crucially, the forms in which the theme sign does not mark object agreement are exactly those forms

12I assume that object agreement on Voice° does not preclude subsequent object agreement on Infl°; that is, Chomsky’s (2000, 2001) Activity Condition does not hold in Algonquin (as shown for many languages by Baker (2008)).
in which the central inflection does mark object agreement. I suggest that it is not a coincidence that object agreement disappears from the theme sign (Voice°) exactly when it appears in the central agreement (Infl°). To see why this is the case, consider the person features that Voice° and Infl° gain as a result of the agreement operations in the inverse forms in (36). Since both heads agree with the object in these forms, both heads end up with identical person specifications, as shown in (37).

(37)  Person features on Voice° and Infl° in inverse forms (after head movement)

<table>
<thead>
<tr>
<th></th>
<th>a. 3→1</th>
<th>b. 3′→3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice (1)</td>
<td>Infl (1)</td>
<td>Voice (3)</td>
</tr>
</tbody>
</table>

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 are 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 less specified form se rather than the expected 3rd-person dative form le.

I propose that the same constraint is active in Algonquin: as in Spanish, adjacent heads cannot have identical person feature specifications. This constraint is violated by the inverse structures in (37), in which both Voice° and Infl° have the person features of the object. The repair of illicit structures is also the same as in Spanish: the person features of the first head are deleted. The structures in (37) will thus be repaired by deleting the person features of Voice°, as shown in (38).

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

<table>
<thead>
<tr>
<th></th>
<th>a. 3→1</th>
<th>b. 3′→3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice (4)</td>
<td>Infl (1)</td>
<td>Voice (4)</td>
</tr>
</tbody>
</table>

Under this analysis, inverse forms can be characterized as those forms in which Voice° lacks person features. The absence of person features gives us a simple way to explain why Voice° is spelled out as the inverse theme sign -igo in these forms: -igo 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 (38). I accordingly amend the spellout rule for Voice° to add -igo as the elsewhere form, as in (39).

(39) Spellout of Voice° (= theme sign)
-\(\text{-in} \leftrightarrow [\text{Pers}, \text{Prox}, \text{Part, Addr}] \) (= 2nd person)
-\(\text{-i} \leftrightarrow [\text{Pers, Prox, Part}] \) (= 1st person)
-\(\text{-a}: \leftrightarrow [\text{Pers}] \) (= 3rd person prox/obv)
-\(\text{-igo} \leftrightarrow [] \) (when person features are absent)

The elsewhere analysis of inverse -igo allows us to understand why inverse marking interrupts the otherwise regular pattern of object agreement in the theme sign slot. The theme sign (i.e. 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 -igo (known as the “inverse” marker) rather than one of the more specified object agreement markers.\(^{13}\)

5.6 Summary: The derivation of inverse marking

This section has presented an analysis of the direct/inverse alignment pattern in Algonquin agreement. Under this analysis, the direct/inverse pattern is enabled by the fact that Voice° (the theme sign) agrees with the object for person and triggers the movement of the object to the specifier of VoiceP, making it equidistant with the subject for the purposes of subsequent operations. One such operation, central agreement on Infl°, is thus able to target whichever argument better matches the features of the articulated probe. The forms traditionally labeled as inverse are those in which Infl° targets the object, creating a structure in which the adjacent heads 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 -igo rather than the usual object person markers (-\(\text{-i}\) 1, \(\text{-in}\) 2, -\(\text{-a}:\) 3).

6 Deriving the variation in inverse marking and portmanteau agreement

With an analysis of inverse marking in place, we can return to the correlation between portmanteau agreement and inverse marking that was identified in Section 4: the two phenomena are in complementary distribution, with portmanteau agreement occurring only in configurations where inverse marking is impossible. The distribution of the two phenomena is shown in (40) (repeated from (23)).

\(^{13}\)I thank Bethany Lochbihler (p.c.) for expressing to me the insight that the inverse is “elsewhere-like”.

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This distribution can be summarized in words as follows:

(41) a. Local configurations allow portmanteau agreement but not inverse marking.
    b. Non-local configurations allow inverse marking but not portmanteau agreement.
    c. In mixed configurations, the Independent allows inverse marking but not portmanteau agreement; the Conjunct allows portmanteau agreement but not inverse marking.

The distribution of portmanteau agreement and inverse marking raises two questions: (1) why are the two phenomena in complementary distribution, and (2) why does their patterning differ between the Independent and Conjunct? This section will show that the answers to these questions follow from the analysis of inverse marking proposed above (§5). I will argue that the two phenomena are in complementary distribution because they are both determined by the articulated probe on Infl°: inverse marking occurs when Infl° agrees only with the object while portmanteau agreement is possible only when Infl° agrees with both arguments. Since these contexts are mutually exclusive, the complementarity of the two phenomena follows.

As for the variation between the Independent and Conjunct, I will show that it can be captured by positing a slight difference in the articulation of the probe in the two orders. In the Independent, Infl° probes for [uPerson, uProximate, uParticipant], as in the analysis laid out above (§5.4), but in the Conjunct the probe is less articulated, lacking the [uParticipant] feature, as shown in (42).

(42) Variation in the probe on Infl°

<table>
<thead>
<tr>
<th>Independent Order</th>
<th>Conjunct Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>[uPerson]</td>
<td>[uPerson]</td>
</tr>
<tr>
<td>[uProximate]</td>
<td>[uProximate]</td>
</tr>
<tr>
<td>[uParticipant]</td>
<td></td>
</tr>
</tbody>
</table>

Since the Conjunct probe is less “picky” than that of the Independent, the Conjunct will feature 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 portmanteau contexts). Intralanguage variation in both inverse marking
and portmanteau agreement thus boils down to nothing more than the presence or absence of the \(u\)Participant feature.

The remainder of this section illustrates the analysis in more detail by discussing the derivation of portmanteau agreement and inverse marking in each type of configuration: non-local (§6.1), local (§6.2), and mixed (§6.3). The upshot of the section is that portmanteau agreement in Algonquin has the same underlying source as inverse marking. The following section (§7) will show that the identification of this shared underlying source allows us to make a strong argument that portmanteau agreement in Algonquin must be determined in the narrow syntax.

6.1 Agreement in non-local configurations

Non-local configurations involve two 3rd-person arguments: one proximate ([Pers, Prox]) and one obviative ([Pers]). In both the Independent and the Conjunct, non-local configurations allow inverse marking but disallow portmanteau agreement. This is the case because the two arguments in a non-local configuration are always asymmetrical with respect to the probe on \(\text{Infl}^\circ\): the proximate argument is a better match for the probe in both the Independent and the Conjunct. If the proximate argument is the object \(3' \rightarrow 3\), the outcome is a form in which both \(\text{Voice}^\circ\) and \(\text{Infl}^\circ\) agree with the object, as schematized in (43) for both the Independent and the Conjunct. This double-object-agreement configuration is what gives rise to inverse marking (§5.5).

(43) Agreement in non-local \(3' \rightarrow 3\) forms (\(\text{Infl}^\circ\) targets object)

<table>
<thead>
<tr>
<th></th>
<th>Independent</th>
<th>Conjunct</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>(\text{Infl}^\circ) (\text{Voice}^\circ)</td>
<td>(\text{Infl}^\circ) (\text{Voice}^\circ)</td>
</tr>
<tr>
<td></td>
<td>([u\text{Pers}, \text{Prox}, \text{Part}])</td>
<td>([u\text{Pers}, \text{Prox}])</td>
</tr>
<tr>
<td>SUBJ (3')</td>
<td>OBJ (3)</td>
<td>SUBJ (3')</td>
</tr>
<tr>
<td>([\text{Pers}])</td>
<td>([\text{Pers}, \text{Prox}])</td>
<td>([\text{Pers}])</td>
</tr>
</tbody>
</table>

Since \(\text{Infl}^\circ\) in a non-local form always agrees with the proximate argument, the central agreement inflection in a non-local form—which is determined by \(\text{Infl}^\circ\) (§5.4)—will always track the proximate argument. Portmanteau central agreement cannot occur in non-local forms because there are no non-local forms in which \(\text{Infl}^\circ\) agrees simultaneously with both arguments.

6.2 Agreement in local configurations

In local configurations, one argument is 1st-person and the other is 2nd-person. Both arguments are specified as [Person, Proximate, Participant], plus [Addressee] for the 2nd person (§5.2). In both the Independent and the Conjunct, local configurations allow portmanteau agreement but disallow inverse marking. This is the case because the two arguments in a
local configuration are always symmetrical with respect to the probe on Infl°. The probe seeks, at most, the features [Person, Proximate, Participant], and both arguments in a local configuration bear these features. In local configurations, then, the probe on Infl° is faced with a choice between two goals that are both equidistant and an equally good match. I propose that under such circumstances, the outcome is Multiple Agree (cf. van Koppen 2005, 2006, 2008): the probe agrees with both goals, as shown for a 2→1 form in (44).

(44) Agreement in local 2→1 forms (Infl° targets both arguments)

a. Independent

\[
\begin{array}{c}
\text{Infl}° \\
[\alpha \text{Pers}, \text{Prox}, \text{Part}] \\
\text{SUBJ (2)} \\
[\text{Pers}, \text{Prox}, \text{Part, Addr}] \\
\end{array} \quad \begin{array}{c}
\text{Voice}° \\
[\alpha \text{Pers}] \\
\text{OBJ (1)} \\
[\text{Pers, Prox, Part}] \\
\end{array}
\]

b. Conjunct

\[
\begin{array}{c}
\text{Infl}° \\
[\alpha \text{Pers}, \text{Prox}] \\
\text{SUBJ (2)} \\
[\text{Pers, Prox, Part, Addr}] \\
\end{array} \quad \begin{array}{c}
\text{Voice}° \\
[\alpha \text{Pers}] \\
\text{OBJ (1)} \\
[\text{Pers, Prox, Part}] \\
\end{array}
\]

Since the central agreement inflection is determined by Infl°, the possibility of portmanteau agreement in local forms follows from the agreement of Infl° with both arguments. This double agreement provides Infl° with two sets of person features, which makes it possible to spell out central agreement morphemes that are conditioned by both sets of features—i.e. portmanteau agreement.\(^\text{14}\)

The absence of inverse marking in local forms also follows from the agreement of Infl° with both arguments. Inverse marking arises when Voice° and Infl° end up with identical person specifications, an illicit configuration that is repaired by deleting the features of Voice° (§5.5). This illicit configuration cannot possibly arise in local forms. In a local form, Voice° agrees only with the object (as always, §5.2) while Infl° agrees with both arguments. The person features of Voice° and Infl° in a local form will thus never be identical. In (44), for example, Voice° will have the features [Pers, Prox, Part] due to agreement with the object while Infl° will have the features \{[Pers, Prox, Part, Addr], [Pers, Prox, Part]\} due to agreement with both arguments. Although these feature specifications 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.

### 6.3 Agreement in mixed configurations

Mixed configurations involve a 1st/2nd-person argument and a 3rd-person argument—that is, one argument that has the feature [Participant] and one that does not. Mixed configurations provide the crucial examples in which both portmanteau agreement and inverse marking differ between the Independent and Conjunct. Independent mixed forms allow inverse

\(^{14}\)Note that this analysis does not force all local forms to display portmanteau agreement. The presence of two sets of features on Infl° makes portmanteau agreement possible, but if the lexicon does not contain a portmanteau agreement morpheme for a given combination of feature sets, it remains possible to spell out a morpheme that is conditioned by only one of the two feature sets, as in the forms in (11) above.
marking but not portmanteau agreement while Conjunct mixed forms allow portmanteau agreement but not inverse marking.

There is a simple reason why mixed configurations exhibit this variation: the feature that distinguishes the two arguments in a mixed form—[Participant]—is also the feature that distinguishes the probe on Infl° in the Independent versus the Conjunct. In the Independent, the probe has the feature [Participant] and will thus prefer to agree with the argument that has this feature. The agreement of the probe with a single goal makes inverse marking possible (when the goal is the object) and portmanteau agreement impossible. In the Conjunct, on the other hand, the probe lacks the feature [Participant] and is thus matched equally well by both arguments. The agreement of the probe with two goals makes portmanteau agreement possible and rules out inverse marking.

To make this explanation more concrete, the derivation of a 3→1 form is schematized in (45). As always, Voice° invariably agrees with the object, causing the two arguments to become equidistant from Infl° (§5.3). In the Independent, Infl° has the feature [uParticipant], so its best match is the 1st-person object. Infl° thus agrees only with the object, triggering inverse marking and ruling out portmanteau agreement. In the Conjunct, on the other hand, Infl° lacks the feature [uParticipant], so both arguments are an equally good match. Infl° thus agrees with both arguments, making portmanteau agreement inflection possible and ruling out inverse marking.

(45) Agreement in mixed 3→1 forms (Infl° targets object in (a), both arg’ts in (b))

<table>
<thead>
<tr>
<th></th>
<th>a. Independent (inverse, no PM)</th>
<th>b. Conjunct (PM, no inverse)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Infl° [uPers, Prox, Part]</td>
<td>Voice° [uPers]</td>
</tr>
<tr>
<td></td>
<td>SUBJ (3) [Pers, Prox]</td>
<td>OBJ (1) [Pers, Prox, Part]</td>
</tr>
</tbody>
</table>

6.4 Summary: Deriving the variation

This section has shown that inverse marking and portmanteau agreement are both determined by the same underlying source: the articulated probe on Infl°. Inverse marking occurs when the object is the best match for the probe on Infl° while portmanteau agreement is possible when both arguments are an equally good match for the probe. The mutual exclusivity of these environments derives the complementary distribution of inverse marking and portmanteau agreement. Variation between the Independent and Conjunct can be captured by positing that Infl° bears the feature [uParticipant] in the Independent but not the Conjunct. Because of this difference, the number of forms in which the probe on Infl° is matched equally well by both arguments is greater in the Conjunct, which gives rise to a broader distribution of portmanteau agreement and a correspondingly narrower distribution of inverse marking.
The table in (46) summarizes the analysis by indicating which argument best matches the probe on Infl° in a local form (2→1), a mixed form (3→1), and a non-local form (3′→3) in the Independent and the Conjunct. Inverse marking (“INV”) occurs when the best match is the object; portmanteau agreement (“PM”) is enabled when both arguments are an equally good match.

(46) Which argument is the best match for Infl°?

<table>
<thead>
<tr>
<th>Probe on Infl°</th>
<th>Best match for the probe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>Independent</td>
<td>[uPers, Prox, Part]</td>
</tr>
<tr>
<td>Conjunct</td>
<td>[uPers, Prox]</td>
</tr>
</tbody>
</table>

Attributing the patterning of both inverse marking and portmanteau agreement to the probe on Infl° provides an elegant account of the complementarity of the two phenomena and their parallel variation.

7 Is portmanteau agreement syntactic?

The conclusion that inverse marking and portmanteau agreement have the same underlying source allows us to return to the question that opened this paper: is portmanteau agreement in Algonquin determined in the syntax? The preceding analysis has taken for granted that the answer is yes: I have formalized the agreement operation that underlies both inverse marking and portmanteau agreement as an instance of probe-goal Agree (Chomsky 2000, 2001) that takes place on the functional head Infl° in the narrow syntax. We might imagine an alternative approach in which the relevant agreement processes are 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 inverse marking and such unambiguously syntactic phenomena as word order, variable binding, quantifier scope, and crossover, as established most notably in the work of Bruening (2001, 2005, 2009) on the Eastern Algonquian language Passamaquoddy. The patterning of these phenomena indicates that the agreement operation that gives rise to inverse marking has syntactic consequences and must therefore take place in the narrow syntax. Since the same agreement operation also gives rise to portmanteau agreement, we must conclude that portmanteau agreement in Algonquian is also a phenomenon of the narrow syntax.

This section briefly describes two phenomena that illustrate the syntactic effects of inverse marking: word order (§7.1) and variable binding (§7.2). The data will be drawn from various Algonquian languages. In the preceding sections I have focused exclusively on data from Algonquin, a member of the Ojibwe language group, as it is a phonologically conservative language whose inflectional patterns remain mostly unobscured by morphophonemic alternations. However, as the syntax of Algonquian languages is much more
poorly documented than the morphology, it is necessary to cast a wider net in order to illustrate the syntactic effects of inverse marking. Below I refer to data from Ojibwe, East Cree, Passamaquoddy, and Blackfoot, all of which are Algonquian languages whose patterns of inverse marking match those of Algonquin in the relevant respects.

7.1 Basic word order

Word order in Algonquian languages is largely determined on a discourse-configurational basis, with most 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 a basic, pragmatically neutral word order, and in these cases an interesting finding has emerged: the basic order is conditioned by the person hierarchy rather than by grammatical functions. I consider here the findings from Ojibwe (Rhodes 1994); see Junker 2004 for comparable findings in East Cree.

Rhodes (1994:436–38) shows that the neutral word order in the Ottawa dialect of Ojibwe is VSO in direct clauses (3 → 3′) but VOS in inverse clauses (3′ → 3). This disjunctive statement is required if we express the word order in terms of grammatical functions, 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 neutral VSO order entails the order V+3+3′. Since an inverse form involves an obviative 3′ subject and a proximate 3 object, the neutral VOS order entails, again, the order V+3+3′. The neutral word order in Ottawa, then, is neither VSO nor VOS, but rather V+3+3′. That is, the higher-ranked person precedes the lower-ranked person, regardless of grammatical functions.¹⁵

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

a. Direct (3 → 3′, VSO): V + SUBJ(3) + OBJ(3′)
b. Inverse (3′ → 3, VOS): V + OBJ(3) + SUBJ(3′)
c. Unified statement: V + 3 + 3′

The neutral V+3+3′ order can be derived straightforwardly under the agreement analysis of inverse marking proposed above. In a form in which the arguments are 3 proximate and 3′ obviative, the probe on Infl° will target the more articulated person features of the 3 proximate argument. Let us assume that the probe on Infl° also triggers movement of its goal to the specifier of InflP (cf. Chomsky 2000, 2001). Since Infl+ always agrees with the 3 proximate argument regardless of its grammatical function, the result is that the 3 proximate argument always moves to InflP, leaving the 3′ obviative argument behind in VoiceP. Subsequent movement of the verb to a head higher than Infl° produces the attested

¹⁵Bruening (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).
V+3+3′ word order (cf. Bruening 2001, 2005). This analysis is sketched in (48) for direct and inverse forms. (At the stage shown in (48), object agreement on Voice◦ has already triggered movement of the object to the specifier of VoiceP (§5.3).)

(48) a. Direct 3→3′: Infl◦ attracts SUBJ(3), creating VSO order (V+3+3′)

```
InflP
    SUBJ(3)
      Infl
        OBJ(3′)
          SUBJ(3)
            [Pers]
            [Prox]
            [Part]
            [uPers]
            [uProx]
            [uPart]
```

b. Inverse 3′→3: Infl◦ attracts OBJ(3), creating VOS order (V+3′+3)

```
InflP
    OBJ(3)
      Infl
        SUBJ(3)
          OBJ(3′)
            SUBJ(3)
              [Pers]
              [Prox]
              [Part]
              [uPers]
              [uProx]
              [uPart]
```

The unmarked word order in Ottawa thus derives from the same agreement operation on Infl◦ that also underlies inverse marking and portmanteau agreement.

7.2 Variable binding

to the person hierarchy: the proximate 3 argument behaves as though it c-commands the obviative 3′ argument regardless of the grammatical functions of the arguments. This effect is illustrated for variable binding by the Passamaquoddy examples in (49) (Bruening 2005:13). In both examples, an object quantifier is intended to bind a variable in the subject. Such binding is not possible in the direct 3→3′ form in (49a), but it is possible in the inverse 3′→3 form in (49b).17

(49) a. [Skitap musqitaham-ac-il] 3-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, hates] will arrest [everyone].’
   (3→3′, object cannot bind into subject)

b. [Yatte wen pilsqehsis] 3-kis-cem-ku-l [w-ikuwoss-ol].
   each who girl 3-PERF-kiss-INV-3′ 3-mother-3′
   ‘[Her mother] kissed [each girl].’
   (3′→3, object can bind into subject)

The same pattern is reported for Ojibwe by Lochbihler (2012:99–101) and Blackfoot by Bliss (2013:298): the object can bind into the subject in inverse 3′→3 forms but not in direct 3→3′ forms. The ability of the inverse object to bind into the subject follows from the same A-movement operation that was proposed to account for basic word order above (see diagrams in (48)). In an inverse 3′→3 form, the probe on Infl° agrees with the 3 proximate object and triggers A-movement of the object to the specifier of InflP, a position from which it c-commands the subject. The inverted binding relations in inverse forms are thus another effect of the same agreement operation on Infl° that underlies basic word order, inverse marking, and portmanteau agreement.

8 Conclusion and implications

This paper has shown that the complementary distribution of portmanteau subject/object agreement and inverse marking in Algonquin can be accounted for by attributing the patterning of both phenomena to an articulated probe on Infl°. In a configuration in which both arguments are equidistant from Infl°, the outcome of Agree is determined not by locality but rather by the relationship between the features of Infl° and those of the potential goals. When both goals are an equally good match for the probe on Infl°, the result is Multiple Agree, which enables the spell-out of portmanteau subject/object 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°. Under this analysis, the complementary distribution of portmanteau agreement and inverse marking 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 portmanteau agreement and inverse marking:

17The abbreviations in the glosses are those of Bruening (2005), except his “OBV” is replaced by 3′.
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, with consequent variation in whether or not Multiple Agree takes place.

The most direct theoretical consequence of this analysis involves the status of portmanteau agreement. The articulated probe on Infl\(^{°}\) in Algonquin gives rise to a person-hierarchy effect that is responsible for the patterning of a host of phenomena: portmanteau agreement, inverse marking, basic word order, and quantifier scope. That some of these phenomena are clearly syntactic indicates that the agreement operation on Infl\(^{°}\) must indeed take place in the narrow syntax. The Algonquin facts thus provide clear evidence that it is possible for portmanteau agreement to be a purely syntactic phenomenon (cf. Georgi 2012, 2013).

The analysis has broader theoretical implications as well. I have proposed that portmanteau subject/object 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 locality 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 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 2013). 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 true 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 this is the case, and if subject/object equidistance results from true object agreement, as I have proposed, then the typological markedness of subject/object equidistance is simply a reflection of the typological markedness of true object agreement.

Ultimately, then, we gain more from the Algonquin case study than just an argument that portmanteau agreement can be purely syntactic. The Algonquin facts suggest that portmanteau agreement, inverse marking, 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.

Acknowledgments

This paper has benefited from discussions with Bethany Lochbihler, Jonathan Bobaljik, and Brandon Fry, as well as audiences at WCCFL 32 (USC), WSCLA 19 (Memorial), the University of Manitoba, and the University of Ottawa.

References


Appendix: Algonquin agreement paradigms

This appendix displays the agreement paradigms for 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 /dɔ/ is written as <j> instead of Jones’s <dj> (cf. Valentine 2001) and long vowels are marked by a colon. All instances of inverse marking and portmanteau agreement are indicated by grey shading of the cells containing the relevant morphemes.
(50) **Independent and Conjunct intransitive forms (Jones 1977:60)**

<table>
<thead>
<tr>
<th>Independent</th>
<th>Conjunct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfx</td>
<td>Stem</td>
</tr>
<tr>
<td>1s</td>
<td>ni-</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2s</td>
<td>gi-</td>
</tr>
<tr>
<td></td>
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(51) **Independent transitive mixed forms (Jones 1977:76,80), inverse marking shaded**

Note: add peripheral suffix **-ag** 3p to pluralize the 3rd-person argument

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<tr>
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<td></td>
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</tbody>
</table>

| 3→1s | ni- | wa:bam | -igo | ‘She sees me’ |
| | | see | -INV | |
| 3→2s | gi- | wa:bam | -igo | ‘She sees you’ |
| | | see | -INV | |
| 3→1p | ni- | wa:bam | -igo | -na:n | ‘She sees us (excl.)’ |
| | | see | -INV | -1p |
| 3→21 | gi- | wa:bam | -igo | -na:n | ‘She sees us (incl.)’ |
| | | see | -INV | -1p |
| 3→2p | gi- | wa:bam | -igo | -wa:a | ‘She sees you (pl.)’ |
| | | see | -INV | -2p |
Conjunct transitive mixed forms (Jones 1977:76,80), portmanteau agreement shaded. Note: add peripheral suffix -wa: 3p to pluralize the 3rd-person argument

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<td>-Ø</td>
<td>-angw</td>
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<td>-3OBJ</td>
<td>-2p</td>
<td></td>
</tr>
</tbody>
</table>

| 3→1s | wa:bam | -i | -j | ‘She sees me’ |
| see | -1OBJ | -3 |
| 3→1p | wa:bam | -i | -yaminj | ‘She sees us (excl.)’ |
| see | -1OBJ | -3→1p |
| 3→2s | wa:bam | -in | -g | ‘She sees you (sg.)’ |
| see | -2OBJ | -3 |
| 3→21 | wa:bam | -in | -angw | ‘She sees us (incl.)’ |
| see | -2OBJ | -21 |
| 3→2p | wa:bam | -in | -ak | ‘She sees you (pl.)’ |
| see | -2OBJ | -3→2p |

Independent transitive local forms (Jones 1977:89), portmanteau agreement shaded

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Conjunct transitive local forms (Jones 1977:89), portmanteau agreement shaded

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<tr>
<td>see</td>
<td>-1OBJ</td>
<td>-1p</td>
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</tbody>
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1s→2s | wa:bam | -in       | -a:n | ‘I see you (sg.)’ |
| see  | -2OBJ | -1s       |       |               |
| 1s→2p | wa:bam | -in       | -agogw | ‘I see you (pl.)’ |
| see  | -2OBJ | -1s→2p | -1s       |               |
| 1p→2 | wa:bam | -in       | -a:ng | ‘We (excl.) see you’ |
| see  | -2OBJ | -1p       |       |               |

Independent transitive non-local forms (Jones 1977:76,80), inverse marking shaded

<table>
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<tr>
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<td>‘She sees the other(s)’</td>
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<td>-3OBJ</td>
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<td>-a:</td>
<td>-wa:</td>
<td>‘They see the other(s)’</td>
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<tr>
<td>3- see</td>
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<td>-3′</td>
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<td>‘The other(s) see her’</td>
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<td>-3′</td>
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Conjunct transitive non-local forms (Jones 1977:76,80), inverse marking shaded

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