

A Double-Person Feature Analysis of Algonquian First Person Plurals

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1. Introduction

This paper proposes a featural structure to Algonquian first person plurals (exclusive and inclusive) connecting the different patterning of two inflectional systems with the same underlying featural representations. The Algonquian “central agreement” (Goddard 1979), i.e. the primary person-number agreement, has been argued to exhibit the person hierarchy (PH) in which the 2nd person outranks the 1st person and the 3rd person (i.e. $2 > 1 > 3$, to name a few, Wolfart 1973; Goddard 1979; Valentine 2001). In the existing theoretical literature two lines of approaches, the syntactic approach (Béjar & Rezac 2009, hereafter abbreviated as B & R) and the morphological approach (McGinnis 2008), have correctly captured that Algonquian PH is an entailment of person feature specifications. However, they are insufficient in accounting for the problems when the plurality comes into play. After a closer examination of the inflectional patterning of ten Algonquian languages (Plains Cree, Menominee, Ojibwa, Kickapoo, Meskwaki, Miami-Illinois, Shawnee, Delaware, Massachusett, and Proto-Algonquian), the central agreement consistently shows a $1p > 2p > 3p$ plural hierarchy (PLH) when both arguments are plural. Now the immediate question arises—if the plural person features are simply the addition of a [group] or [plural] feature to the corresponding person features, why is the PLH ($1p > 2p$) the opposite of the PH ($2 > 1$)? In addition, the PH only holds true in the “independent inflection”, which occurs in the main clauses, but not in the “conjunct inflection”, which usually occurs in the subordinated clauses and is not considered by B & R and McGinnis. On the other hand, the fact that PLH systematically applies to both inflectional systems brings us to the second question—how to account for the cancellation of the PH in the conjunct inflection while maintaining the validity of the PLH in both inflectional systems?

I extend the dyadic analysis of the first person plural inclusive (Cowper & Hall 2004; McGinnis 2005) to the exclusive. I argue that Algonquian first person plural exclusive ($1p$) contains a double-person feature, namely, 1st person and 3rd person, whereas the non-first-person plurals do not contain such double-person features, but simply a [plural] feature. As a result, the PH no longer contradicts the PLH because $1p$ wins over $2p$ for the additional person feature, assuming person features outrank number features (Noyer 1997). As for the cancellation of the PH in the subordinated clause inflection, I contribute the answer to the Activity Condition related to different probe features. I will show that my proposal can i) best reveal the fine-grained spell-out of the person- and number-feature; ii) map the derivations of two different inflectional systems to the same underlying featural structure.

The outline of this paper is as follows: §2 describes the problems regarding the PH and the PLH. In specific, the contradiction between the PH and the PLH as well as the cancellation of the PH in the conjunct inflection. §3 presents the double-person feature analysis answering questions raised in §2. I

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will unify the contradiction to the same feature representations and I will account the PH cancellation to the Activity Condition. §4 concludes the paper and shows implications for cross-linguistic syncretism.

2. Problems on PH and PLH

This section details the problems centering on the PH and the PLH. I start to present the background regarding Algonquian alignment and the components of the central agreement in two inflectional systems (§2.1). Next, I illustrate the problems introduced in the beginning, i.e. the contradiction between the PH and the PLH (§2.2) and the cancellation of the PH in the conjunct inflectional system (§2.3).

2.1. Background: Voice⁰ and Infl⁰

The core grammatical relations in Algonquian are indicated collaboratively by the central agreement affix(es) and an object marker, a suffix occurring immediately after the verb stem, termed “theme sign” by Algonquianists. The central agreement is made up differently in the two inflectional systems. As demonstrated by Plains Cree, in the independent (1a), person and number are indicated discontinuously: respectively by a person prefix *ni-* and the central suffix, 1p pluralizer *-nân*; whereas in the conjunct counterpart (1b), person and number are manifested fusionaly by the central suffix *-(y)âhk*.

(1) Plains Cree central agreement marking in two inflectional systems (Wolfart 1973:41-42)

a. *Independent* *ni-wâpam-â-nân*
(main clause) **1** -see -3OBJ-**1p**
‘**We (excl)** saw him.’

b. *Conjunct* *ê-wâpam-â-yâhk¹*
(subordinated clause) SUB-see-3OBJ-**1p**
‘**We (excl)** saw him.’

The PH 2 > 1 > 3 is evidenced by the prefixes of the independent inflection, see (2) for an illustration in Ojibwa. Since the issue of the contradiction is centered on the hierarchies involving the Speech Act Participants (SAPs, i.e. the 1st person and the 2nd person), I omit to show the details of non-SAPs, see McGinnis (2008) for more. What Ojibwa has exemplified in (2) is that the prefix always targets the higher ranked person regardless of locality. For instance, the prefix in (2a-b) always targets the highest ranked 2nd person when both arguments are Speech Act Participants (SAPs). Similarly, the prefix in (2c-d) targets the higher ranked 1st person, regardless of it being the subject or the object.

(2) PH illustration by Ojibwa independent inflection (McGinnis 2008:173)

a. 2s —1s	b. 1s— 2s	c. 1s —3s	d. 3s— 1s
<i>g-biin-i</i>	<i>g-biin-ini</i>	<i>n-biin-aa</i>	<i>n-biin-igw</i>
2-bring-1OBJ	2 -bring-2OBJ	1-bring-3OBJ	1-bring-INV
‘ You bring me.’	‘I bring you .’	‘ I bring him.’	‘He brings me .’

Notice that I have glossed the theme signs, *-i*, *-ini*, and *-aa* in (2a-c) respectively as 1st, 2nd, and 3rd person object marker (cf. Rhodes 1976; Brittain 1999; Oxford 2014), and *-igw* in (2d) as an inverse marker. Distinct to the traditional direct-inverse alignment (Wolfart 1973), I follow Oxford (2014, 2017) to treat theme signs as Voice⁰ and the central agreement as Infl⁰. When Voice agrees with the object, theme signs usually are spelled out as the object marker. Infl is more flexible, when it also targets the object as in (2d), the object agreement on Voice then is replaced by the inverse marker due to feature impoverishment (Oxford 2017). Such impoverishment is parallel to Spanish spurious *se* effect (Nevins 2007), prohibiting features of the adjacent heads from being identical. The spell-out rule of Algonquian theme signs is summarized in (3):

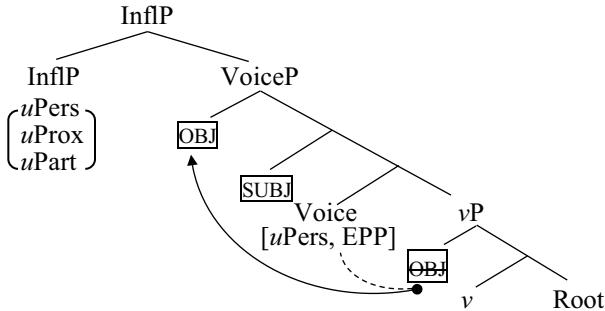
¹ To better show the paradigmatic differences, I omit the subordinator *-ê* in the conjunct forms hereafter.

- (3) Theme sign spell-out rule (Oxford 2014, 2017)

<i>-ini</i>	↔	[2]	= 2nd person
<i>-i</i>	↔	[1]	= 1st person
<i>-aa</i>	↔	[3]	= 3rd person
<i>-igw</i>		elsewhere	

What's significant about VoiceP argued in Oxford (2014, 2017) is that it creates an equidistance configuration, which clarifies that locality does not matter to Infl, as the object that has been valued undergoes movement to Specifier of VoiceP, equidistant to the subject, as illustrated in (4).

- (4) Equidistant configuration after valuing the object on Voice, Independent (Oxford 2014:101)



Oxford (2014) argued that the independent Infl contains the more articulated person probe [*uPerson*, *uProximate*, *uParticipant*] than the less articulated conjunct Infl [*uPerson*, *uProximate*]. As a result, the independent Infl targets the goal that better match the probe(s), which explains why the 2nd person is privileged over the 1st person because its featural representation is more specified. However, I will show in §2.3 that his claim for the conjunct probe is not entirely correct as it does not predict the patterning of the conjunct inflection.

2.2. The contradiction between PH and PLH

When it comes to the PLH, two empirical problems emerge. First, as introduced in the beginning, the PLH $1p > 2p$ is the reverse of the PH $2 > 1$. First of all, the mixed inflection (an SAP argument with a non-SAP argument) exemplified in (5-6) does not yet contradict the PH as the non-SAP plural (3p) is always outranked by the SAP plural. Note that the 3p agreement *-ak* appears in a different slot, known as “peripheral suffix”, not participating the central agreement at all, thus is beyond the scope of this paper.

- (5)
- $1p > 3p$
- , mixed inflection with 1p in Plains Cree, independent (Wolfart 1973:41)

a. 1p—3p form	b. 3p—1p form
<i>ni-wâpam-â-nân-ak</i>	<i>ni-wâpam-iko-nân-ak</i>
1- see -3OBJ-1p-3p	1- see -INV-1p -3p
‘ We (excl) saw them.’	‘They saw us (excl) .’

- (6)
- $2p > 3p$
- , mixed inflection with 2p in Plains Cree, independent (Wolfart 1973:41)

a. 2p—3p form	b. 3p—2p form
<i>ki-wâpam-â-wâw-ak</i>	<i>ki-wâpam-iko-wâw-ak</i>
2- see-3OBJ-NON1.pl-3p	2- see -INV- NON1.pl -3p
‘ You (pl) saw them.’	‘They saw you (pl) .’

The contradiction appears in the local forms (when both arguments are SAPs). The $1p > 2p$ hierarchy is evidenced by 1p pluralizer *-nân* in the independent inflection shown in (7). Note that *-nân* already occupies the central suffix slot signaling the plurality of the 1st person. The number of the 2nd person thus becomes ambiguous. It seems that 1p and 2p compete for the central suffix and 1p wins resulting in the ambiguous interpreting to the number of the 2nd person. The conjunct counterpart forms exhibit

the same PLH by the central suffix, see (8-10) in §2.3. It is worth pointing out that Algonquian languages prohibit the 1st person inclusive plural argument from occurring in the local forms as it is illogical to say ‘we (including you) saw you’.

(7) 1p > 2p, local inflection in Plains Cree, independent (Wolfart 1973:41-2)

a. 2—1p form

\boxed{ki} -wâpam-i-nân

2- see -1OBJ-1p

‘ $\boxed{\text{You}}$ saw **us (excl)**.’

b. 1p—2 form

\boxed{ki} -wâpam-iti-nân

2- see -2OBJ-1p

‘**We (excl)** saw $\boxed{\text{you}}$.’

The 1p > 2p examples above in the meantime pose the second empirical problem: different from the makeup of the discontinuous central agreement of the independent inflection (cf. (1a) and (5) *ni-* + *-nân* for 1p), the discontinuous morphemes in (7) no longer index the same argument. The boxed prefix *ki-* indexes the 2nd person, while the pluralizer *-nân* indicates the plurality of the 1st person.

Above all, we face two empirical problems arisen from the independent local forms: why is PLH the opposite of PH? Why is the prefix of the discontinuous agreement in the local inflection indexing the 2nd person while the central suffix indexing the 1st person? We also face a theoretical problem: how to maintain the PLH without overthrowing the PH as an entailment of person feature specifications argued in the B & R’s approach or McGinnis’ approach?

2.3. The cancellation of PH in Conjunct

As I have mentioned in the introduction section, the PLH stays invariant in both inflectional systems. The appearance of the 1p suffix *-(y)âhk* in (8) proves that 1p outranks 2p in the conjunct local forms.

(8) 1p > 2p, local inflection in Plains Cree, conjunct (Wolfart 1973:42)

a. 2—1p form

wâpam-i-yâhk

see -1OBJ-1p

‘You saw **us (excl)**.’

b. 1p—2 form

wâpam-it-âhk

see -2OBJ-1p

‘**We (excl)** saw you.’

Examples in (9-10) further support that the PLH is maintained in the conjunct forms, as the plural SAPs outrank the non-SAP plural argument, same as the independent counterparts shown in (5-6).

(9) 1p > 3p, mixed inflection with 1p in Plains Cree, conjunct (Wolfart 1973:42)

a. 1p—3p form

wâpam-â-yâhk-ik

see -3OBJ-1p -3p

‘**We (excl)** saw them.’

b. 3p—1p form

wâpam-iko-yâhk-ik

see -INV-1p -3p

‘They saw **us (excl)**.’

(10) 2p > 3p, mixed inflection with 2p in Plains Cree, conjunct (Wolfart 1973:42)

a. 2p—3p form

wâpam-â-yêk-ok

see -3OBJ-2p -3p

‘**You (pl)** saw them.’

b. 3p—2p form

wâpam-iko-yêk-ok

see -INV -2p -3p

‘They saw **you (pl)**.’

However, the 2 > 1 > 3 PH is not supported by the conjunct inflection. Recall that in the independent inflection, the prefix always targets the higher ranked argument. The conjunct counterpart forms seen in (11) instead exhibit a preference of targeting the subject (cf. Bhatia et al 2016; Xu 2016). For convenience, I focus on showing the violations to the 2 > 1 > 3 hierarchy thus omit the forms of 1s—3s and 2s—3s. Contra the 2 > 1 hierarchy shown in the independent inflection (cf. (2a-b)), the examples in (11a-b) demonstrate the subject agreement; similarly, (10c) and (10d) apparently violates the SAP > 3 hierarchy as the 3rd person subject is indexed in the conjunct forms, rather than the higher ranked SAP arguments unlike their independent counterparts.

(11) Subject preference by Plains Cree conjunct inflection (Wolfart 1973:42)

a. $\boxed{2s}$ —1s	b. $\boxed{1s}$ —2s	c. $\boxed{3s}$ —1s	d. $\boxed{3s}$ —2s
<i>wâpam-i-yan</i>	<i>wâpam-it-ân</i>	<i>wâpam-i-t</i>	<i>wâpam-is-k</i>
see -1OBJ-2s	see -2OBJ-1s	see -1OBJ-3s	see -2OBJ-3s
‘ You saw me.’	‘ I saw you.’	‘ He saw me.’	‘ He saw you.’

Now that the PLH is held invariant in both inflectional systems. It seems counterintuitive to speculate that the PH is valid in one inflection system while invalid in the other. What’s more, why can the PLH apply equally to both inflectional systems?

3. Analysis

I argue that i) the questions regarding the contradictions between the PH and the PLH can be resolved by the same underlying feature representations; and ii) the exception of the PH in the conjunct is motivated rather than caused by the less articulated probe. In this section, I begin to detail the fine-grained spell-out of the phi-features in each animate nominal category (§3.1). I show that the post-syntactic operation *fission* profoundly affects the independent inflection in two ways: first, it shapes the discontinuous morphology of the central agreement (§3.2); second, it leads two competitions happening at the discontinuous nodes (§3.3). That is, the person feature competition at the prefix node and the remaining feature competition at the central suffix node. In terms of the cancellation of the PH in the conjunct, I show in §3.4 that it can be captured by the Activity Condition.

3.1. The double-person feature structure

I agree with B & R and McGinnis to treat the Algonquian PH demonstrated by the independent central agreement as an entailment of person feature specifications. Other than 1st, 2nd, and 3rd persons, Algonquian also has a “4th person” known as obviative, which specifies the less important third animate person. I adopt the privative feature proposed in Harley & Ritter (2002) to keep the analysis in a more restrictive sense. I use [Proximate] feature proposed in Lochbihler (2012) to distinguish the animate non-obviative persons (i.e. 1st, 2nd, and 3rd person) from the obviative person. I maintain that the $2 > 1 > 3$ hierarchy is superficial. In fact, as (12) shows, what it really reflects is, the 2nd person has the most specified person features as [Person, Proximate, Participant, Addressee], and the 1st person has the less specified features, i.e. [Person, Proximate, Participant], while the 3rd person has [Person, Proximate], slightly more specified than the least specified 4th (obviative) person [Person].

(12) Person feature of Algonquian animate nominals (based on Béjar & Rezac 2009; Lochbihler 2012)

2 nd person	1 st person	3 rd person	obv. person (4)
[Pers]	[Pers]	[Pers]	[Pers]
[Prox]	[Prox]	[Prox]	
[Part]	[Part]		
[Addr]			

Regarding the flexibility of the independent central agreement seen in (2) (here repeated as (13)), being able to target the subject or the object, it has been accounted to the person feature specifications in previous analyses. Aside from different stances, whether syntactic (B & R) or morphological (McGinnis), they unexceptionally acknowledge that the 2nd person contains the more specified features than the 1st person. In specific, the Cyclic Agree model (B & R) argued if the object does not fully satisfy the probe seen in (13a) and (13c), the probe then can search upward to target the more specified EA. On the other hand, the vocabulary insertion model (McGinnis 2008) posited that the more specified vocabulary item is inserted. She explained that the 2nd person vocabulary item is privileged over the 1st

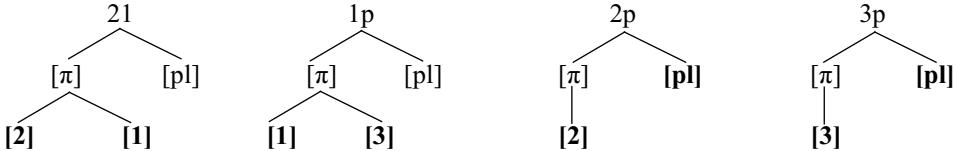
person vocabulary item, thus *g-* in (13a-b) is inserted; in the same vein, since the 1st person vocabulary item is privileged over the 3rd person's, *n-* is inserted in (13c-d).

(13) PH illustration by Ojibwa independent inflection (McGinnis 2008:173)

a. $\boxed{2s}$ —1s	b. 1s— $\boxed{2s}$	c. $\boxed{1s}$ —3s	d. 3s— $\boxed{1s}$
<i>g-biin-i</i>	<i>g-biin-ini</i>	<i>n-biin-aa</i>	<i>n-biin-igw</i>
2 -bring -1OBJ	2 -bring-2OBJ	1 -bring-3OBJ	1 -bring-INV
' You bring me.'	'I bring you .'	' I bring him.'	'He brings me .'

However, both approaches run into problems once it comes to the plurality. I argue that Algonquian plurals cannot simply involve the addition of a [group]/[plural] feature to the specifications shown in (12) because this would not explain why PLH (1p > 2p) is the opposite of PH (2 > 1). Since the inclusive has been argued to contain both 1st person features (abbreviated as [1] hereafter) and 2nd person features (abbreviated as [2] hereafter) (Cowper & Hall 2004; McGinnis 2005), I propose that this approach can be extended to the 1st person plural exclusive as well. I thus modify the 1p representation to contain the two-person feature, parallel to 21 representations. As the feature geometry in (14) reveals, Algonquian first person plurals both contain the dyadic π -features in addition to a [plural] feature, whereas the non-first-person plurals, 2p and 3p, contain only the [plural] feature other than the according π -features.

(14) Feature geometry of Algonquian plural persons



This double-person feature proposal is motivated by the inherent associative nature of first person plurals (cf. Mühlhäusler 2001). That is, while 2p/3p denotes multiple 2nd/3rd persons, 1p does not denote multiple speakers, but the speaker and some 3rd person(s). In the following, I show that the double-person proposal is significant for resolving the empirical problems and the theoretical problem described previously in §2. In addition, it reveals the fine-grained spell-outs of the person and number features in the two inflectional systems, also accounts for the behaviors of the PLH while maintaining the PH.

3.2. Fission and the discontinuous agreement

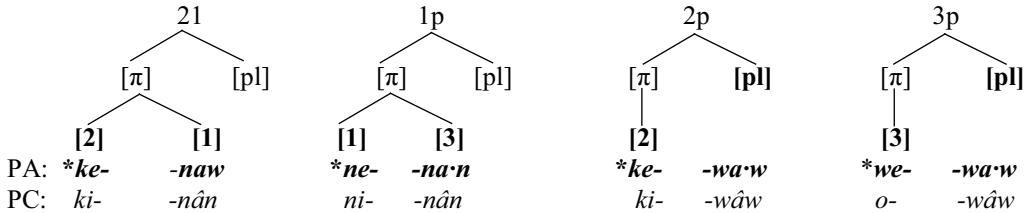
I argue that the different makeup of the central agreement can be made clear by the post-syntactic operation *fission*. The discontinuous independent inflection applies fission. As a result, the central agreement is split to two slots/nodes—the prefix slot and the central suffix slot; whereas the fusional conjunct inflection does not apply fission, therefore the central suffix is the only slot available for vocabulary insertion. Fission results the insertion in the independent inflection to take place twice, in which the prefix discharges the person feature and the central suffix discharges the remaining features such as number. As (15) illustrates, the person features are spelled out as the prefix in the independent inflection while as the suffix in the conjunct inflection. For the purpose of better illustrating the fine-grained details, I provide Proto-Algonquian (PA) spell-outs indicated by an asterisk preceding the data. The spell-outs in parenthesis are Plains Cree which is shown throughout this paper.

(15) Spell-out rule for Algonquian singular persons

Person	Feature	Independent	Conjunct
2nd person	[Pers, Prox, Part, Addr] = [2]	↔ * <i>ke-</i> (<i>ki-</i>)	↔ * <i>-a-n</i> (<i>-ân</i>)
1st person	[Pers, Prox, Part] = [1]	↔ * <i>ne-</i> (<i>ni-</i>)	↔ * <i>-an</i> (<i>-an</i>)
3rd person	[Pers, Prox] = [3]	↔ * <i>we-</i> (<i>o-</i>)	↔ * <i>-t/k</i> (<i>-t/k</i>)

As for the spell-out of the plural persons, the independent inflection provides the straightforward evidence for the double-person feature of first person plurals. According to McGinnis (2013), the node that has undergone fission allows the additional insertion of a lower-ranked item to discharge features that were not discharged by the first item inserted. Consequently, as for the spell-out of 21 as (16) demonstrates, the higher ranked [2] is spelled out by the prefix as **ke-*, then the lower-ranked [1] is spelled out by the central suffix as **-naw*. Similarly, in 1p, the more specified [1] is spelled out by the prefix **ne-*, and the less specified [3] is spelled out by the central suffix **-na·n*. In 2p/3p, the respective person features are spelled out by the prefix **ke-* for the 2nd person and **we-* for the 3rd person, and the remaining [plural] feature is spelled out by the central suffix, which exactly explains why both 2p and 3p share the same number suffix **-wa·w* in Algonquian languages.

(16) The exponents of the plural person features (The PA data are from Goddard 2007)



The Proto-Algonquian spell-outs can support the fine-grained details by directly reflecting the differences of the additional π -feature contained in 21 and 1p. Notice that in Plains Cree the additional π -feature of 21 and 1p share the same exponent *-nân*. Even though Plains Cree conflates the spell-outs of the additional person features, the double-person feature is still maintained, as *-nân* differs from the spell-out of the simple [plural] feature *-wâw* in 2p and 3p. If such double-person feature does not exist, we would expect that all plural persons share *-wâw* suffix as it is the spell-out of the [plural] feature.

The summary of the spell-out for Algonquian plural persons of both inflections is listed below in (17). As we can see, by contrast, fission is not relevant to the conjunct, therefore person and number features must be discharged simultaneously by the central suffix.

(17) Spell-out rule for Algonquian plural persons

Person	Feature	Independent	Conjunct
21	[2] + [1]	↔ <i>*ke-</i> <i>-naw</i> (<i>ki-</i> <i>-nân</i>)	↔ <i>*-ankw</i> (<i>-ahk</i>)
1p	[1] + [3]	↔ <i>*ne-</i> <i>-na·n</i> (<i>ni-</i> <i>-nân</i>)	↔ <i>*-ank</i> (<i>-âhk</i>)
2p	[2] + [pl]	↔ <i>*ke-</i> <i>-wa·w</i> (<i>ki-</i> <i>-wâw</i>)	↔ <i>*-ekw</i> (<i>-êk</i>)
3p	[3] + [pl]	↔ <i>*we-</i> <i>-wa·w</i> (<i>o-</i> <i>-wâw</i>)	↔ <i>*-twa·w</i> (<i>-cik</i>) ²

Except accounting for the fine-grained details of the spell-outs, the double-person feature analysis is also helpful to resolve the theoretical problem. Since the underlying structure of 1p contains an additional π -feature that is not present in 2p, it follows that the spell-out of this additional π -feature will take priority in forms that involve both 1p and 2p (assuming a hierarchy of person > number as in Noyer 1997), thus deriving the 1p > 2p PLH while leaving the 2 > 1 PH intact. In comparison, the conjunct spell-outs shown in (17) are not as explicit as the independent counterparts, but the inflectional patterning 1p > 2p (cf. (8)) indirectly strengthens the double person feature for 1p, because the additional [3] is more specified than the [plural] in 2p.

² The conjunct 3p spell-out is bimorphemic composed by **-t* ([3]) and **-wa·w* ([pl]), differing from the rest of fusional plural persons. As for why the [pl] of the 3rd person (PA **-wa·w* or PC *-ik*) is discharged at the peripheral slot is beyond the scope of this paper. I leave this question for future research.

3.3. Feature competition

In addition to allowing vocabulary insertion to take place twice, fission also has a profound consequence resulting two competitions happening at each slot, namely, the π -feature competition in the prefix slot and the number feature (or the remaining feature) competition in the central suffix slot. Each competition is significant in that it tackles the mismatch of the discontinuous agreement in the local independent forms seen in (7). It also deepens our understanding to the nature of the Algonquian inclusive person. That is, unlike treating the Algonquian inclusive uniquely as 2nd person (Harley & Ritter 2002), I regard Algonquian inclusive 21 as a by-product of feature competition resulted by *fission*.

Recall the mismatches of the discontinuous agreement in the illustration of 1p > 2p hierarchy, here repeated as (18), the discontinuous prefix + central suffix are not indexing the same argument unlike the mixed inflection, *ni-* + *-nân* for 1p argument, or *ki-* + *-wâw* for 2p argument (cf. (5-6)). According to Distributed Morphology framework, features conditioning the insertion of a vocabulary item comes in two types (Noyer 1997). I argue that the prefix slot is contributed to *primary* vocabulary items while the central suffix slot is devoted to *secondary* vocabulary items (cf. *primary and secondary exponence*, see Carstairs 1987). Simply speaking, the primary vocabulary item can be inserted without depending on other vocabulary items, whereas the secondary vocabulary item can only be inserted on the premise that a certain primary vocabulary item has already been attached to the root. In other words, the spell-out in the prefix slot can occur independently, but the spell-out in the central suffix, *-nân* for instance, can never occur without the presence of the person prefix *ni-* or *ki-*.

(18) 1p > 2p, local inflection in Plains Cree, independent (Wolfart 1973:41-2)

- | | |
|---|---|
| <p>a. 2—1p form
 \boxed{ki}-wâpam-i-nân
 2- see -1OBJ-1p
 ‘\boxed{You} saw us (excl).’</p> | <p>b. 1p—2 form
 \boxed{ki}-wâpam-iti-nân
 2- see -2OBJ-1p
 ‘We (excl) saw \boxed{you}.’</p> |
|---|---|

As for the derivation of this mismatch, 1p and 2p vocabulary items are both good candidates for the Infl probe because they equally satisfy the probe features [*uPerson*, *uProximate*, *uParticipant*] (Oxford 2014). Now that the prefix primarily discharges π -features, the vocabulary item for the 2nd person is more specified than the 1st person thus is spelled out yielding *ki-* in (18). As for “number” competition, as I showed earlier, [1p] is more specified than [2p] due to the additional [3] feature. Since the central suffix slot regulates that only the secondary vocabulary items can be inserted, the exponent *-nân* is derived.

Moreover, feature competition is illuminating for deepening our understanding to the nature of 21. The Algonquian inclusive person has been argued to be 2nd person as counterevidence to the universal 1st person inclusive (Harley & Ritter 2002), based on the uses of the 2nd person prefix **ke-* and the 2nd person theme sign **-eθ*, see Proto-Algonquian in (19) for illustrations.

- | | |
|--|--|
| <p>(19) a. 21 subject, Independent (Goddard 2007:265)
 <i>*ke-pankihšîn-ehm-ena</i>
 2- fall -FTV-21
 ‘We (incl) fall.’</p> | <p>b. 21 object, Conjunct (Goddard 2000:111)
 <i>*wa-pam-eθ-ankw-e-</i>
 see -2OBJ-21-mode
 ‘He saw us (incl).’</p> |
|--|--|

I argue that Algonquian 21 is not so unique. The reason why 21 is spelled out as 2nd person is determined by feature competition at the fissioned nodes. Since the inclusive person consists of [1] and [2] as I have argued above, the prefix discharges the higher ranked person and the central suffix discharges the remaining features. The 2nd person feature is more specified than the 1st person feature as shown in (12), consequently, [2] is spelled out firstly as **ke-* (or *ki-* in PC), and [1] is spelled out secondly as **-naw* (or *-nân* in PC). Similarly, the spell-out of the theme sign for 21 is also 2nd person because [2] is privileged over [1] for insertion due to the more specified [Addressee]. I claim that the linear order of [1] and [2] in the geometry does not matter, as in Algonquian the 2nd person always wins considering the spell-out for theme signs and for person prefixes. McGinnis (2008) following Halle & Marantz (1993) attributed the mismatch also to feature competition, however, her analysis overlooked

the diachronic variations of the number suffix. My analysis advances her proposal accounting for the different spell-outs of **-naw* and **-na-n* in languages such as Proto-Algonquian.

3.4. Activity Condition (AC)

Previously in §3.4, the PH effect in the conjunct inflection is dismissed by the subject agreement pattern. The analysis by Béjar & Rezac (2009) or McGinnis (2008) cannot be extended to the conjunct as they exclusively focus on the independent inflection which obeys the PH effect. Oxford (2014) suggested that the conjunct Infl should contain a less articulated probe as [*u*Person, *u*Proximate] and Infl selects the goal that best matches its probe. In the following, I propose that the subject preference is by default and is due to the Activity Condition (AC, Chomsky 2000, 2001) closely related to the less articulated probe. I show that the less articulated conjunct Infl is not sufficient in predicting the subject preference pattern demonstrated in (11), here repeated as (20). According to the person feature specificity (cf. (12)), the 2nd person argument is considered as a better goal than the 1st person argument, and the 2nd person argument is considered as a better match to the probe than the 3rd person argument. Thus, we would expect that the central agreement in (20) also display the same patterning insensitive to locality like their independent counterparts. However, the conjunct forms in (20) do not follow Oxford's prediction, i.e. the PH patterning ($2 > 1 > 3$), instead, exhibits the subject agreement.

(20) Subject preference by Plains Cree conjunct inflection (Wolfart 1973:42)

a. $\boxed{2s}$ —1s	b. $\boxed{1s}$ —2s	c. $\boxed{3s}$ —1s	d. $\boxed{3s}$ —2s
<i>wâpam-i-yan</i>	<i>wâpam-it-ân</i>	<i>wâpam-i-t</i>	<i>wâpam-is-k</i>
see -1OBJ-2s	see -2OBJ-1s	see -1OBJ-3s	see -2OBJ-3s
' You saw me.'	' I saw you.'	' He saw me.'	' He saw you.'

I argue that the subject agreement in the conjunct is by default (cf. Bhatia et al. 2016; Xu 2016). And I contribute the cancellation of the PH to the AC, which prevents a probe from targeting an inactive goal that has already been valued. Recall that Voice has already agreed with the object, the AC thus should prevent Infl from agreeing with the object. The reason why AC only applies to the conjunct inflection is closely related to the less articulated probe. Since the conjunct Infl is less articulated, the proximate animate arguments (1, 2, 3) equally match the [*u*Person, *u*Proximate] features of the probe. Consequently, the subject agreement is by default as Infl prefers the active goal over the inactive one.

I regard AC as a parameter, and it can be overridden once the features of the object better match the probe than that of the subject, see Xu (2016) for details. The reason why the PLH remains invariant in the conjunct, as I have explained in §3.2, is because 1p contains the double-person feature while 2p does not. As a result, the AC can be relaxed and Infl is attracted to target to the better-matched goal. Furthermore, the independent Infl contains a more articulated person probe [*u*Person, *u*Proximate, *u*Participant] (Oxford 2014), Infl then is attracted to select the SAP argument over the non-SAP argument for matching the [*u*Participant] feature that the non-SAP lacks.

4. Conclusion and implication

To sum up, the double-person feature proposal for Algonquian first person plurals maintains the PLH $1p > 2p$ without overthrowing the PH $2 > 1$. The morphological differences between the two inflectional systems (discontinuous vs fusional) as well as the mismatches appearing in the independent central agreement are accounted by use of post-syntactic operation of fission. The shared properties such as PH and PLH are forced by the same underlying featural structure. In addition, the articulation of the probe conditions if the AC applies, which is finally responsible for (in)validity of the PH effect in the two inflectional systems.

The feature representations of first person plurals and non-first-person plurals also have implications for the cross-linguistic syncretism. As we have seen in (17), summarized in (21a), languages such as Plains Cree and Ojibwa neutralize 1p and 2p in the central suffix due to shared double-person feature structure, i.e. sharing [Participant] and the additional [π] feature. While languages such as Cheyenne and

Arapaho instead neutralize 1p and 2p, which suggests that the central suffix spells out the [Participant, Plural] features in these languages.

- (21) Cross-linguistic syncretism on Independent central suffix
 a. Plains Cree, Ojibwa 1p/21 *-nân* ↔ [Participant, π]
 b. Cheyenne, Arapaho 1p/2p *-mè* ↔ [Participant, Plural]

Above all, the close examination of the Algonquian person and number features shows a deep understanding to Algonquian person-number agreement. In two inflectional systems, the post-syntactic operations (i.e. fission) can be different, the degree of the articulation of the probe can be different, but the features remain invariant.

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