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What Algonquian Morphology is Really Like: Hockett Revisited[*]

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Recent theoretical attention to Algonquian languages reflects new interest in how morphology connects with syntax. In different ways, Anderson (1992), Halle & Marantz (1993) and Steele (1995) analyze Algonquian morphology in terms of non-syntactic word-formation; all use data presented by Hockett (1939, 1948, 1966). While Hockett concentrated on Potawatomi, in later work he tried to construct a descriptive framework for Algonquian as a whole—notably in his 1966 paper "What Algonquian is really like". As he hints (1966:67 *fn.* 14a), Algonquian languages differ morphologically in some respects. This variation poses a test for the generality of particular analyses, and in this way helps us evaluate the need to postulate a morphological engine distinct from a syntax which is required independently.

Placing data from Blackfoot, Plains Cree and Ojibwe beside Hockett's Potawatomi, I argue that the range of morphological variation in Algonquian is amenable to a syntactic analysis, and that it poses problems for a-syntactic treatments. §1 reviews Hockett's notion of *entity*, and §2 motivates a syntax for certain *one-referent* forms—the independent pronouns. §3 draws implications for the representation of agreement, and §4 extends the account to complex inflected forms (possessed nouns and transitive verbs), arguing that they have three clitic-agreement positions. §5 concludes by comparing this analysis of Algonquian with a recent syntactically-based treatment of inflectional structure in Italian (Manzini & Savoia 1998).

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Abbreviations: 1=1st person, 2=2nd person, 3 or Ø=3rd person, ABSolutive, ACCusative, AI=animate intransitve, anim(ate), B(lackfoot), C(omplementizer), cl(itic), CONJunct, D(eterminer), DEPendent, DIRect, DUual, ERGative, excl(usive), FUTure, II=inanimate intransitive, imv=imperative, incl(usive), INVerse, LOCal, NEGative, NOMinative, Num(ber), obv(iative), O(jibwe), PARTicular, PC=Plains Cree, Pers(on), pl(ural), P(otawatomi), PRETerit, RELative, sg=singular, SPECifier, sjv=subjunctive, suf(fix), TA=transitive animate, THeme, TI=transitive inanimate, unspec(ified subject).

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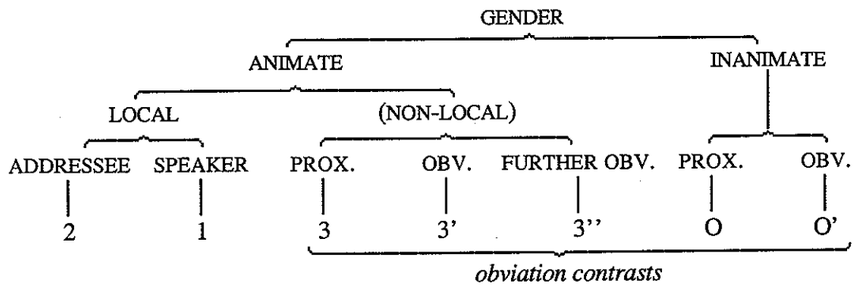
1. ENTITIES

Entities include nominal expressions like nouns, noun phrases, pronouns and personal affixes. Hockett proposes that three grammatical features cross-classify Algonquian entities: (i) gender (±ANIMATE); (ii) speech act participant status (±LOCAL); and (iii) obviation status (PROXIMATE, OBVIATIVE, FURTHER OBVIATIVE). He explicitly does not postulate a feature for person:

> Animate and inanimate are *genders*. Contrasts of *obviation* intersect those of gender, but with more contrasting points on the scale for animates than for inanimates. Speaker and addressee are not separated along the obviation scale; rather both are local, and the contrast between them establishes an additional dimension, for which we shall not need a label. Note that the traditional grammatical term 'person' does not appear at all. We could force it in somehow, but not without being either arbitrary or misleading or both.
> (Hockett 1966:60)

This yields the scheme in (1). For each contrast identified by Hockett, there is a traditional Algonquianist gloss: *2* is 2nd person; *1* is 1st person, *3* is 3rd person animate (proximate), *O* is 3rd person inanimate (proximate). A single quote marks obviation: *3'* is 3rd person animate obviative and *O'* is 3rd person inanimate obviative. A double quote (e.g. *3''*) marks further obviation; this is relevant only for animate 3rd persons.

(1)



Hockett's classification bears on theories of person-number systems. Specifically, the features in (1) can be ranked as in (2).

(2) a. GENDER : [+animate] > [–animate]

b. PARTICIPANT STATUS : (i) [+local] > [–local]
(ii) [+addressee] > [–addressee]

c. OBVIATION : PROXIMATE > OBVIATIVE > FURTHER OBVIATIVE

These rankings are empirically motivated in diverse ways. For example, the ranking [+animate] > [–animate] captures the fact that animate objects are marked for agreement, but inanimate objects aren't, cf. (3a) vs. (3b).

(3) *Plains Cree*

a. Ni-wâpam-â-nân-ak.
1-see.TA-TH-1pl-3pl
'We see them (anim)'

b. Ni-wâpaht-ê-nân-(*ak).
1-see.TI-TH-1pl-(*3pl)
'We see it/them (inanim)'

The ranking [+local] > [–local] recalls Benveniste's (1950) idea that "3rd person" contains no specification for the person category. The relation [+addressee] > [–addressee] is more problematic: although taken for granted by Algonquianists, it contradicts the [1>2] ranking which some morphologists posit as universal (Zwicky 1977, Noyer 1992). The issue boils down to the formal status of inclusive 'we' and the significance of the suppletive relation between 1st and 2nd person agreement. I will show that any attempt to downplay the [2>1] ranking loses an account of cross-Algonquian variation in 1st and 2nd person agreement.

Obviation contrasts are standardly viewed hierarchically, with proximate arguments ranked above obviative ones, and obviatives above further obviatives. There is general agreement that this ranking is determined by discourse factors such as maintaining topic-prominence (Wolfart 1973, Goddard 1990a, Dahlstrom 1991). However, obviation marking is also obligatory in some syntactic contexts, i.e. it is grammatically conditioned (Grafstein 1984, Aissen 1997). Given this duality, it is not surprising to observe that the discourse principles which determine obviation are uniform across Algonquian, but the morphological coding of obviation shows structurally determined variation—once again providing grist for a syntactic explanation.[1]

More generally, cross-Algonquian variation results from interaction of three feature sets—GENDER, PARTICIPANT STATUS and OBVIATION—and is determined by syntactic principles whose activity is apparent even in the simplest inflected forms, the independent pronouns. These are a good place to start.

2. "ONE-REFERENT FORMS"

For Hockett, *one-referent* forms include simple nouns, independent pronouns and possessed nouns, as well as intransitive verbs. Except for simple nouns, all one-referent forms inflect for person. The independent pronouns have the simplest morphology, and are the model for all Algonquian inflected forms. This means that a child acquiring an Algonquian language meets positive evidence about the structure of morphological objects in simple nominal expressions.

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[1] The relevance of obviation to the 1st and 2nd persons is not considered here. Most treatments—Hockett's included—assume that obviation is restricted to 3rd person, and Aissen (1997) adopts this view explicitly. But such a conclusion is unwarranted, as obviation contrasts are attested with Blackfoot 1st and 2nd person independent pronouns (Frantz 1991:75).

Consider examples of independent pronouns in the 1st and 3rd person across a range of Algonquian languages. Consistently, agreement is discontinuous: the suffix marks person and number (e.g. in Plains Cree, 1st person plural is *-nân*, while 3rd person plural is *-wâw*); and the prefix marks person (1st person *n-*, 3rd person *w-/o-*).

(4) *Potawatomi* (Hockett 1966:61)

a.	/nin/	'I'
b.	/ninan/	'we(excl)'
c.	/win/	'he, she, it'
d.	/winwa/	'they(anim)'

(5) *Ojibwe* (Southwestern Ojibwe, Mille Lacs Lake, central Minnesota; Nichols 1980:62)

a.	niin	'I'
b.	niinawint	'we(excl)'
c.	wiin	'he, she, it'
d.	wiinawaa	'they(anim)'

(6) *Plains Cree* (Wolfart 1973:38)

a.	nîya	'I'
b.	nîyanân	'we(excl)'
c.	wîya	'he, she, it'
d.	wîyawâw	'they(anim)'

(7) *Blackfoot* [2] (Frantz 1991:74)

a.	niistó-wa	'I'
b.	niistónnaan-a	'we(excl)'
c.	oostó-yi	'he, she, it'
d.	oostówaawa-yi	'they(anim)'

It is possible to formulate a syntactic analysis for this discontinuous agreement on the basis of three independent properties: pronouns are DPs (§2.1); suffixes but not prefixes trigger movement (§2.2); there is a position inside DP for person-sensitive agreement (§2.3).

2.1. Pronouns as DPs

Postal (1966) analyzes pronouns as determiners; in more recent terminology, Ritter (1995) treats them as DPs. Algonquian evidence supports this general line, e.g. independent pronouns are formally homologous to possessed nouns:

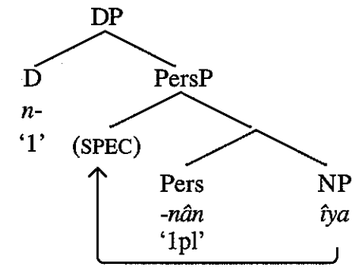
[2] In Blackfoot, the *-(w)a* appearing on the 1st person forms is a non-obviative suffix and the *-yi* on the 3rd person forms is an obviation suffix, cf. Frantz (1991).

Plains Cree

(8)	a.	n-îya	'I/me'
	b.	n-îya-nân	'we/us(excl)'
(9)	a.	ni-môhkoman	'my knife'
	b.	ni-môhkoman-inân	'our(excl) knife'

I argue that discontinuous affixation arises as in (10): independent pronouns, besides having a D position (which hosts proclitic agreement) and a nominal projection (which hosts the stem) have an additional functional layer between D and NP: call it PersP. As shown in (10), the [PREFIX-stem-SUFFIX] order is derived by raising the stem to [Spec, PersP].

(10)



(10) combines two distinct claims: independent pronouns (and all one-referent forms) involve movement to a higher Specifier; and D (the locus of person features) is distinct from Pers (the locus of person-sensitive features). Each claim can be motivated individually.

2.2. Affix attachment

The discontinuous agreement of Algonquian is puzzling if there is just one syntactic position available to host person/number agreement. If so, one would expect a single agreement affix, attaching to the stem either as a prefix (AGR-Z) or as a suffix (Z-AGR). One solution would be to split agreement into two distinct positions—one for PERSON and one for NUMBER. If affix order tracks semantic scope, we would expect prefixing and suffixing systems to show mirror-image ordering (Vennemann 1973, Bybee 1985, Baker 1985, Muysken 1988, Pesetsky 1995). And if number is more closely related to the lexical properties of a nominal stem (Bybee 1985), then it should be closer to the stem than person, yielding (11a) or (11b). But splitting person and number into two positions cannot account for the Algonquian pattern in (11c).

(11)	a.	*uniformly prefixing*	PERSON – NUMBER – Z
	b.	*uniformly suffixing*	Z – NUMBER – PERSON
	c.	*Algonquian mixed affixation*	PERSON – Z – PERSON/NUMBER

(11c) has two peculiarities as compared to the others: (i) affixation is 'mixed', in that agreement is marked by a combination of prefixes and suffixes; (ii) person marking is not localized to a single affix but is distributed across affixes, while number marking appears only on the suffix. To handle these two properties, I will relate the Algonquian pattern to the syntax of prefix/suffix combinations on the one hand, and to DP syntax on the other.

In assessing the syntax of affixal attachment, there are three cases to consider: uniform prefixation, uniform suffixation and mixed affixation. With uniform affixation, affixes closer to the stem attach before more peripheral ones, e.g. in (12a) and (12b) AFFIX$_a$ attaches before AFFIX$_b$. But with mixed affixation, either affix could attach first, (12c).

(12) a. PREFIX$_b$ – [PREFIX$_a$ – Z]

b. [Z – SUFFIX$_a$] – SUFFIX$_b$

c.i [PREFIX$_a$ – Z] – SUFFIX$_b$

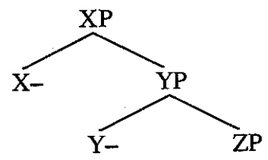
c.ii PREFIX$_b$ – [Z – SUFFIX$_a$]

This is a first difference between uniform and mixed affixation: order of attachment is transparent with the former, but not the latter. There are also structural differences in how prefixes and suffixes attach, so that uniform prefixation and suffixation are not isomorphic. One can see this by comparing how prefixes and suffixes are introduced in a head-initial structure.[3]

2.2.1. Uniform affixation

In (13a), a stem Z is associated with two higher heads X and Y—both prefixes. For this structure, head-movement is not a possible way to satisfy the stray affix filter, as movement of Z to Y would be string vacuous (Déchaine 1996, 1997); moreover, right-adjunction of Z to Y violates the Linear Correspondence Axiom (Kayne 1994) which enforces head movement by left-adjunction. The only way to save (13a) is for X and Y to cliticize onto their adjacent nodes: X- onto YP; Y- onto ZP, as in (13b). Thus, in a head-initial structure, prefixation reduces to phrasal cliticization, and does not create a complex syntactic word.

(13) a.

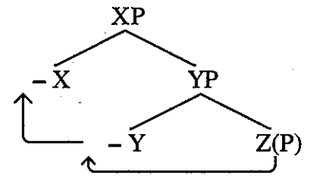


b. [$_{XP}$ **X**$_{cl}$– [$_{YP}$ **Y**$_{cl}$– [**ZP**]]]

[3] It is also possible for affix sequences to form a unit (a kind of 'compound affix') which attaches to the stem, e.g. [[PREFIX$_a$–PREFIX$_b$ –] Z] or [Z [–SUFFIX$_a$ –SUFFIX$_b$]]; see Fabb (1988).

Keeping the same structure, but with X and Y suffixes as in (14a), two derivations are possible. If Z raises to Y and the [$_Y$ Z-Y] complex raises to X by cyclic head movement, this yields the complex word [$_X$ Z-Y-X], (14b). It is also possible for ZP to raise successively to the Specs of Y and X, and for Y and X to attach as enclitics, (14c), deriving no syntactic word.

(14) a.



b. [$_{XP}$ [[$_Y$ **Z** –**Y**$_{suf}$] –**X**$_{suf}$] [$_{YP}$ t_Y [$_{ZP}$ t_Z]]]

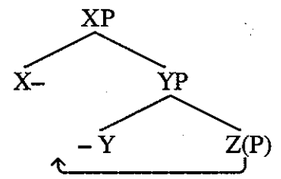
c. [$_{XP}$ **ZP** [–**X**$_{cl}$] [$_{YP}$ t_{ZP} [–**Y**$_{cl}$] [t_{ZP}]]]

The availability of two derivations for (14a) follows from bare phrase structure (Chomsky 1995:249): Z is indeterminate with respect to the head/phrase distinction. Linearization reflects the nature of the movement involved: if Z undergoes head-movement, [Z-Y-X] is derived; if ZP undergoes phrasal movement, the outcome is [ZP-X-Y]. In this way, suffix sequences are obtainable either by moving head-to-head (yielding a complex syntactic word) or else Spec-to-Spec (which satisfies the stray affix filter via phonological encliticization).

2.2.2. Mixed affixation

Now consider mixed affixation, where a stem has a prefix and a suffix. (15) gives a structure where the suffix attaches before the prefix. While a prefix may only attach as a proclitic, suffix attachment can be derived in one of two ways: Z may raise by head-movement (15b), deriving a syntactic word [[$_Y$ Z–Y]]; or ZP may raise to [Spec, YP], as in (15c).

(15) a.

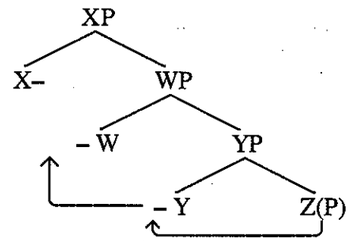


b. [$_{XP}$ **X**$_{cl}$– [$_{YP}$ [**Z** –**Y**$_{suf}$] [t_Z]]]

c. [$_{XP}$ **X**$_{cl}$– [$_{YP}$ **ZP** [–**Y**$_{cl}$] [t_{ZP}]]]

In (15) it is impossible to decide by inspection whether Y attaches to Z via syntactic word formation (head movement) or phonological encliticization: both derivations yield the same surface order, [X-Z-Y]. But this equivalence breaks down with a series of two suffixes, as in (16), where suffixation is consistent with two derivations: successive head-movement (16b); successive Spec-to-Spec movement (16c).

(16) a.

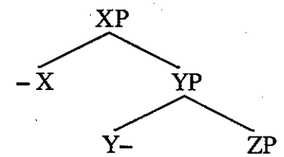


b. [XP **X**$_{cl}$– [WP [[Y **Z**–**Y**$_{suf}$] –**W**$_{suf}$] [YP t_Y [t_Z]]]]

c. [XP **X**$_{cl}$– [WP **ZP** [–**W**$_{cl}$] [YP t_{ZP} [–**Y**$_{cl}$] [t_{ZP}]]]]

The last case of mixed affixation to consider is where the prefix attaches before the suffix, as shown in (17). As a prefix, Y attaces by phrasal cliticization. This means that any further movement will be phrasal. Consequently, the only way to satisfy the stray affix filter for the suffix -X is to raise YP to [Spec, XP], (17b).[4]

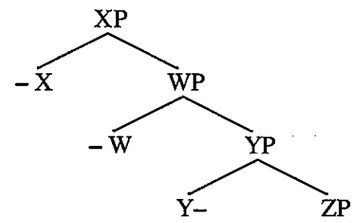
(17) a.



b. [XP [YP **Y**$_{cl}$– **ZP**] [–**X**$_{cl}$] [t_{YP}]]

If the same structure has two suffixes, this gives (18). Y procliticizes to Z, and YP moves to [Spec, WP] and on to [Spec, XP], (18b).

(18) a.



b. [XP [YP **Y**$_{cl}$– **ZP**] [–**X**$_{cl}$] [WP t_{YP} [–**W**$_{cl}$] [t_{YP}]]]

[4] Another way to derive [[PREFIX Z] SUFFIX] is to base-generate the prefix as a head-adjunct, as in (i-a). The [Z Y-Z] structure is essentially a compound which, as a complex head, can raise to X by head movement, yielding the syntactic word [Y-Z]-X], as in (i-b).

(i) a. [XP –X [Z Y–Z]]

b. [XP [[Z Y–Z]–X$_{suff}$] [t_Z]]

The preceding gives a syntax for discontinuous affixation and establishes three relevant configurations. Left and right attachment can occur via phrasal cliticization, and this may involve enclisis followed by proclisis (19a), or proclisis followed by enclisis (19b). Attachment may also arise by a combination of head-movement and procliticization, (19c). §4 shows that the placement of Algonquian agreement is consistent with (19a): (i) Algonquian ZP moves in a Spec-to-Spec fashion (and not by head movement); (ii) enclisis applies before proclisis. Before illustrating how Algonquian prefix/suffix combinations *can* be derived syntactically, it remains to be shown that they *must* be.

(19) a. [XP **X**$_{cl}$– [WP **ZP** [–**W**$_{cl}$] [YP t_{ZP} [–**Y**$_{cl}$] [t_{ZP}]]]]

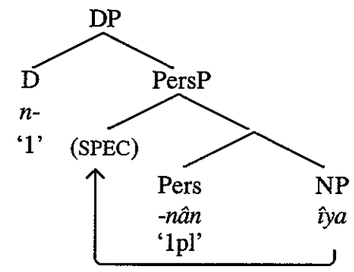
b. [XP [YP **Y**$_{cl}$– **ZP**] [–**X**$_{cl}$] [WP t_{YP} [–**W**$_{cl}$] [t_{YP}]]]

c. [XP **X**$_{cl}$– [WP [[Y **Z**–**Y**$_{suf}$] –**W**$_{suf}$] [YP t_Y [t_Z]]]]

2.3. D selects PersP

According to the DP analysis, D takes PersP as a complement, as in (10), repeated from above. This predicts that selectional restrictions will hold between prefixal D and suffixal Pers.

(10)



To see how D selects for Pers, consider the full set of independent pronouns in (20). Algonquian has seven pronominal forms: besides the usual singular/plural contrast for 1st, 2nd and 3rd person, there is an inclusive plural marked with a 2nd person prefix.

		Potawatomi	*Ojibwe*	*Plains Cree*	*Blackfoot*
(20) a.	'I'	/nin/	niin	nîya	niistówa
	'we(excl)'	/ninan/	niinawint	nîyanân	niistónnaana
b.	'you'	/kin/	kiin	kîya	kiistówa
	'we(incl.)'	/kinan/	kiinawint	kîyanaw	kiistónnoona
	'you(pl)	/kinwa/	kiinawaa	kîyawâw	kiistówaawa
c.	'he, she, it'	/win/	wiin	wîya	oostóyi
	'they'	/winwa/	wiinawaa	wîyawâw	oostówaawayi
		(Hockett 1966:61)	(Nichols 1980:62)	(Wolfart 1973:38)	(Frantz 1991:74)

Hockett's view of this paradigm is instructive:

> [The personal pronouns] clearly involve one or another of three prefixes and either or neither of two endings. The prefixes recur widely in the inflection of nouns and verbs, always with exactly the following meanings:
>
> /k-/ *addressee involved*
> /n-/ *addressee excluded but speaker involved*
> /w-/ *referent not local*
>
> The two endings recur less widely, but always with the following meanings:
>
> /-nan/ *I-ful plural*
> /-wa/ *I-less plural* (animate)
>
> [...] A careful consideration of the meanings of the three prefixes and two endings will show that the seven combinations found in the personal pronouns are just the seven that are semantically possible, and that the denotations of the combinations must be just those given. (Hockett 1966:61)

Potawatomi and Ojibwe (henceforth P/O) have two suffixes—Hockett's *I-ful* and *I-less* plural—while Plains Cree and Blackfoot (henceforth PC/B) have an additional third suffix for inclusive 'we'. Taking this into account, and translating Hockett's description into features, yields the following.

		Potawatomi	*Ojibwe*	*Plains Cree*	*Blackfoot*
(21) a.	D: [2]	/k-/	k-	k-	k-
	D: [1]	/n-/	n-	n-	n-
	D: [Ø]	/w-/	w-	w-	w-
b.	PERSON: [2, 1, pl]	—	—	-naw	-waawa
	PERSON: [1, pl]	/-nan/	-awint	-nân	-nnoona
	PERSON: [pl]	/-wa/	-awaa	-wâw	-waawa

While the specification of the *I-ful* suffixes in (21) conforms to Hockett's description, the other affixes deserve comment. Specification of *k-* as [2] corresponds to "addressee involved", while specification of *n-* as [1] captures "speaker involved". However, Hockett defines *n-* with an additional negative condition "addressee excluded"; in featural terms *n-* is [-2, +1]. The motivation for this comes from contexts where there are two local arguments (the *you&me* set, cf. §4); for the purposes of analyzing one-referent forms, it suffices to specify *n-* as [1]. A similar discrepancy arises for plural *-wa*, which Hockett defines as [-1, +pl], but is here simply specified as [pl]. As I will immediately show, its "*I-less*-ness" follows from output specifity. Also note that *w-* is defined as [Ø]; this is the equivalent of "referent non-local", cf. §3.

Given these specifications, we can ask if all logically possible prefix/suffix combinations are attested. For P/O, which have two suffixes along with three prefixes, there are six possibilities, two of which are unattested (Hockett 1966:61), (22). PC/B, with three suffixes and three prefixes, have nine possibilities, five of which fail to occur, (23). (Not shown are the singular pronouns with just a Pers prefix.)

(22)	D =	Pers =		*Potawatomi*		*Ojibwe*
	[2]	[1, pl]		/kinan/		kiinawint
	[2]	[pl]		/kinwa/		kiinawaa
	[1]	[1, pl]		/ninan/		kiinawint
	[1]	[pl]	1*	/ninwa/	1*	niinawaa
	[Ø]	[1, pl]	2*	/winan/	2*	wiinawint
	[Ø]	[pl]		/winwa/		wiinawaa

(23)	D =	Pers =		*Plains Cree*		*Blackfoot*
	[2]	[2, 1, pl]		kîyanaw		kiistónnoon-a
	[2]	[1, pl]	1*	kîyanân	1*	kiistónnaan-a
	[2]	[pl]		kîyawâw		kiistówaawa
	[1]	[2, 1, pl]	2*	nîyanaw	2*	niistónnoon-a
	[1]	[1, pl]		nîyanân		niistónnaan-a
	[1]	[pl]	3*	nîyawâw	3*	kiistówaawa
	[Ø]	[2, 1, pl]	4*	wîyanaw	4*	oostónnoon-a
	[Ø]	[1, pl]	5*	wîyanân	5*	oostónnaan-a
	[Ø]	[pl]		wîyawâw		oostówaawayi

The starred forms in (22) and (23) reflect the selectional relation between D and Pers. D (which hosts person proclitics) selects a compatible PersP, where compatibility is determined by the featural content of the Person suffix, defined in terms of output specificity.

(24) D c-selects a *compatible* PersP, where compatibility is determined by *output specificity*.

(25) *output specificity*: Wordforms that constrain the paradigmatic space more narrowly block those that allow for a wider space.[5]

(i) Wordforms with **more** feature specifications block those with fewer specifications.
(ii) Wordforms with **conjunctive** feature specifications block those with disjunctive specifications.
(iii) Wordforms with **higher-ranked** feature specifications block those with lower ranked specifications.

For Algonquian, output specificity is partly determined by the ranking of person features:

(26) *Algonquian D features* D: [2] [1] [Ø]

In (26), 2 is most highly ranked, followed by 1, then by 3=[Ø]. What determines the ranking of 2 and 1? I argue below that [2>1] is possible in a system where the primary contrast is 2/non-2. The ranking of 3 reflects universal markedness: a positive specification takes precedence over non-specification, so if 3=[Ø], it must be ranked lower than 2 or 1.

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[5] Adapted fromWunderlich (1996); this ranking procedure is shared by all feature-based analyses; for concreteness Wunderlich's version is used. I assume that blocking may be syntactically based (cf. Williams 1997).

Person suffixes are ranked by their defining features: for P/O, the *I-ful* plural is listed before the plain plural, (27a). For PC/B, the inclusive plural precedes the *I-ful* plural, which in turn precedes the plain plural, (27b).

(27) *Algonquian person-sensitive features*

a.	*Potawatomi/Ojibwe*	PERSON :	[1, pl] [pl]
b.	*Plains Cree/Blackfoot*	PERSON :	[2, 1, pl] [1, pl] [pl]

Output specificity determines which Pers is compatible with D, as illustrated in (28) for Potawatomi. The feature complexes relevant to D are [2], [1], and [∅]; those for Pers are [1, pl], and [pl]. The unattested forms are blocked by more specified forms: **ninwa* is blocked by *ninan*, whose suffix contains more features (*-nan* = [1, pl], *-wa* = [pl]; **winan* is blocked by *ninan*, because *n-* [1] is higher-ranked than *w-* [∅].

(28) *Potawatomi plural pronouns*

		D–	– Pers	Z		
a.i		[2] */k-/*	[1, pl] */-nan/*	*/in/*	→	*/kinan/*
a.ii		[2] */k-/*	[pl] */-wa/*	*/in/*	→	*/kinwa/*
b.i		[1] */n-/*	[1, pl] */-nan/*	*/in/*	→	*/ninan/*
b.ii	1*	[1] */n-/*	[pl] */-wa/*	*/in/*	→	*/ninwa/ blocked by */ninan/*
c.i	2*	[∅] */w-/*	[1, pl] */-nan/*	*/in/*	→	*/winan/ blocked by */ninan/*
c.ii		[∅] */w-/*	[pl] */-wa/*	*/in/*	→	*/winwa/*

This account extends to Plains Cree and Blackfoot, languages with three plural suffixes (inclusive, *I-ful* and plain plural). Combined with the three person prefixes, this generates nine plural pronouns, of which five are excluded by output specificity. This is illustrated in (29) for Plains Cree. For 2nd person, the existence of a [2, 1, pl] suffix (*-naw*) blocks the *I-ful* suffix (*-nân*) which has fewer features: [1,pl]). Thus *kîyanaw* blocks **kîyanân*. That this is blocking is confirmed by the fact that forms corresponding to **kîyanân* occur in languages that lack an inclusive suffix, e.g. P */kinan/* in (28a.i). And because the [2,1,pl] specification of the inclusive suffix *-naw* can only be interpreted as a 2, it can't occur with 1st person *n-*, i.e. **nîyanaw* is blocked by *kîyanaw*; (29bi). As for **nîyawâw*, it is blocked by the more specified *I-ful* plural, namely *nîyanân*, cf. (29biii). Finally, in (29c) **wîyanaw* and **wîyanân* are blocked by *kîyanaw* and *nîyanân* because the feature which defines *k-* [2] and *n-* [1] outranks that of *w-* [∅].

(29) *Plains Cree plural pronouns*

		D–	– Pers	Z		
a.i		[2] *k-*	[2, 1, pl] *-naw*	*îya*	→	*kîyanaw*
a.ii	1*	[2] *k-*	[1, pl] *-nân*	*îya*	→	**kîyanân* blocked by *kîyanaw*
a.iii		[2] *k-*	[pl] *-wâw*	*îya*	→	*kîyawâw*
b.i	2*	[1] *n-*	[2, 1, pl] *-naw*	*îya*	→	**nîyanaw* blocked by *kîyanaw*
b.ii		[1] *n-*	[1, pl] *-nân*	*îya*	→	*nîyanân*
b.iii	3*	[1] *n-*	[pl] *-wâw*	*îya*	→	**nîyawâw* blocked by *nîyanân*
c.i	4*	[∅] *w-*	[2, 1, pl] *-naw*	*îya*	→	**wîyanaw* blocked by *kîyanaw*
c.ii	5*	[∅] *w-*	[1, pl] *-nân*	*îya*	→	**wîyanân* blocked by *nîyanân*
c.iii		[∅] *w-*	[pl] *-wâw*	*îya*	→	*wîyawâw*

This section illustrated a syntactic analysis of independent pronouns as DPs with two functional projections: D (hosting proclitics) and Pers (hosting enclitics), with the stem raising to [Spec, PersP]. D c-selects a compatible PersP, where compatibility is determined by output specificity. This derives all and only the attested proclitic/enclitic combinations. It also explains why P/O may use the *I-ful* plural to form inclusive 'we' (P */kinan/*, O *kiinawint*); the corresponding forms are blocked in PC/B (PC **kîyanân*, B **kiistónnaana*) because the more specified inclusive plural exists (PC *kîyanaw*, B *kiistónnoona*). Next, consider how Algonquian fits in a typology of person systems.

3. Deriving the Algonquian Person System

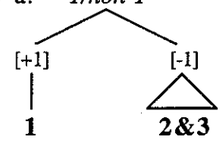
Hockett's pronoun meanings imply a hierarchical organization of person features (§3.1). When one considers how these features combine, a [2>1>3] ranking emerges as a logical possibility. The morphology of Algonquian inclusive 'we' supports a [2>1] ranking (§3.2), and the local/non-local distinction recalls Benveniste's view of '3rd person' as a non-person (§3.3). The pronoun denotations described by Hockett reflect the convergence of these factors (§3.4).

3.1. Person hierarchies

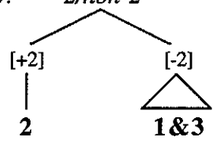
For Hockett, person features are discourse roles, with local speech act participants (speaker and addressee) distinguished from non-local participants (non-participants). This predicts three types of person systems: those where the primary distinction is 1/non-1, 2/non-2, and 3/non-3, cf.

(30). These types ought to also differ as to the unmarked member of the primary contrast: in a 1/non-1 system, 2&3 should go together; in a 2/non-2 system, 1&3 should go together; in a 3/non-3 system, it will be 1&2.

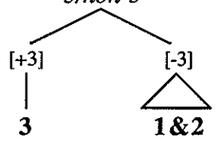
(30) a. *1/non-1*



b. *2/non-2*



c. *3/non-3*

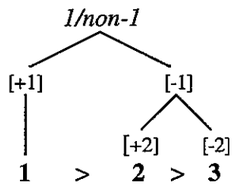


After the primary distinction, the unmarked value must be further distinguished. If there are three basic person features, the arrays in (30) should define two subsystems each; but the attested systems indicate that while [1] and [2] behave like person features, [3] does not.

In a 1/non-1 system, 2nd and 3rd must be distinguished by an additional feature: if [+2] marks 2nd, then [-2] will code 3rd; conversely if [+3] marks 3rd, [-3] will code 2nd, cf. (31). If a positive feature is marked, then these two ways of distinguishing 2nd and 3rd will correspond to distinct rankings, with some 1/non-1 systems having a [1>2>3] ranking, and others [1>3>2]. But only the former is attested (e.g. the Australian language Rembarnga, Blake (1994:121*ff.*)). This is a first clue that [+3] is not much of a person feature.

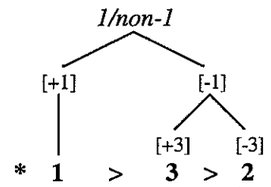
(31) a. *Rembarnga* [6]

1/non-1



b. [unattested]

1/non-1



If the primary contrast is 2/non-2, 1st and 3rd are distinguished by an additional feature, cf. (32). There could be a secondary distinction between 1/non-1, or between 3/non-3. The former—Hockett's view—predicts a [2>1>3] ranking (e.g. Algonquian); the latter is unattested. Again, [3] is not behaving on a par with [1] and [2].

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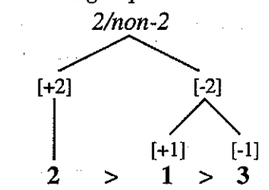
[6] (31a) corresponds to Noyer (1992), who supplements the [±I] and [±you] features (Ingram 1971/1978, Hale 1973) with a [±participant] feature (Farkas 1990), thereby defining 3 as a distinct role. Noyer views {1, 2} as a kind of 1st person, so the primary distinction is 1/non-1.

(i)	[±I]	[±you]	[±participant]	set of roles	name
	+	−	+	{ 1, (3) }	'1st exclusive'
	+	+	+	{ 1, 2, (3) }	'1st inclusive'
	−	+	+	{ 2, (3) }	'2nd'
	−	−	−	{ 3 }	'3rd'

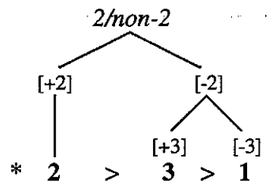
(32) a. *Algonquian* [7]

2/non-2



b. [unattested]

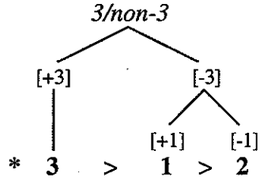
2/non-2



If the primary contrast may be 3/non-3, as in (33), a secondary feature is required to distinguish 1st from 2nd. If [+1] is selected for 1st, then [-1] will code 2nd; conversely if [+2] is selected for 2nd, [-2] will code 1st. These two options should correspond to different rankings, with some 3/non-3 systems having a [3>1>2] ranking; others [3>2>1]. That neither of these is attested points to the 'unmarked' status of [3] person relative to [1] and [2].[8]

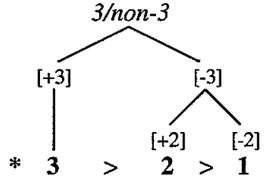
(33) a. [unattested]

3/non-3



b. [unattested]

3/non-3



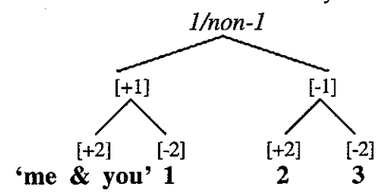
The Algonquian [2>1>3] ranking is one possibility generated if person features are organized hierarchically. The logic of person features also accounts for two other properties of Algonquian: inclusive 'we' (§3.2) and the local/non-local contrast (§3.3).

3.2. Inclusive 'we' and the [2>1] ranking

What is the formal status of 1st person inclusive? The existence of such 'you & me' forms is predicted if conjunctive specifications are permitted, in particular [1, 2] (Hale 1973, Zwicky 1977, Noyer 1992, Wunderlich 1996, Ritter 1997). This is seen in (34).

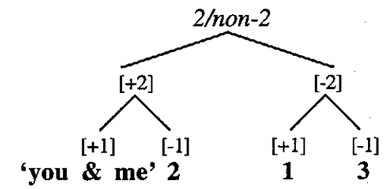
(34) a. *inclusive 'we' in a 1/non-1 system*

1/non-1



b. *inclusive 'we' in a 2/non-2 system*

2/non-2



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[7] Zwicky (1977) argues for {1>2>3} as a universal (semantically based) hierarchy, and maintains that 2/non-2 systems such as Algonquian are purely morphosyntactic. Jolley (1983) critiques Zwicky's distinction between morphosyntactic and semantic hierarchies of person.

[8] This calls into question Wunderlich's (1996) account of Georgian as displaying a 3/non-3 contrast.

The designation of inclusive 'we' as a subtype of 1st or 2nd person is determined by the primary person contrast: it is a 1st person in a 1/non-1 system, and a 2nd person in a 2/non-2 system.

If [2>1] is marked, a child acquiring it needs positive evidence, and the conjunctive [2, 1] specification of inclusive 'we' qualifies in this respect. Across Algonquian, inclusive 'we' appears with the 2nd person proclitic *k-*, (35). This is possible only if the 2 of a conjunctive [2, 1] specification outranks 1. This argument carries over to languages with inclusive [2, 1, pl] (PC *-naw* and B *-nnoon*) which take 2nd person *k-* to derive the inclusive.[9]

(35)

			Potawatomi	*Ojibwe*	*Plains Cree*	*Blackfoot*
a.	'you'	[2]	k-	k-	k-	k-
	'you(pl)'	[2, pl]	k...wa	k...awaa	k...wâw	k...waawa
	'we(incl)'	[2, 1, pl]	k...nan	k...awint	k...naw	k...nnoona
b.	'I'	[1]	n-	n-	n-	n-
	'we(excl)'	[1, pl]	n...nan	n...awint	n...nân	n...nnaana
	[we(incl)]	[2, 1, pl]	—	—	*n...naw	*n...nnoona

A similar argument can be made on the basis of the morphology of imperatives. Most Algonquian languages have three imperative forms, according to whether the subject is 2nd singular, 2nd plural or inclusive 'we', (36). Given that imperatives are restricted to 2nd person forms, the learner must analyze inclusive 'we' as a kind of 2nd person, entailing [2>1].

(36)

immediate imperative	*Ojibwe*	*Plains Cree*	*Blackfoot*
[2]	Niimi-n!	Nipâ!	Ooyí-t!
[2, pl]	Niimi-k(k)!	Nipâ-k!	Ooyí-k!
[2, 1, pl]	Niimi-taa!	Nipâ-tân!	— [10]
	'Dance (now)!'	'Sleep (now)!'	'Eat!'
	(Nichols 1980:332)	(Ahenakew 1987:49)	(Frantz 1991:133)

If [2>1], then the appearance of 2nd person morphology in inclusive plurals that specify the addressee and speaker is predicted, and provides an elegant acccount for the morphology of independent pronouns and imperatives in Algonquian.

3.3. The local/non-local distinction

In distinguishing local speech act participants (1, 2) from non-local ones (3), Hockett's classification of *entities* accords with the observation that agreement usually treats 1st and 2nd persons differently from 3rd (Benveniste 1950).

[9] If [1>2] is the default, children ought to go through a stage where 1 outranks 2 before converging on the correct Algonquian ranking where 2 outranks 1. Relevant data are not presently at hand.

[10] See §4.5.2 for discussion of the absence of inclusive agreement in Blackfoot verbal paradigms.

Morphology aside, the non-personhood of 3 is shown by the pronoun meanings that would be generated if a distinct 3rd person feature was assumed. If [1], [2] and [3] are all specified for person, and if conjunctive feature specification is possible, unattested meanings are predicted. In particular, we expect conjunctive specifications like [1, 3] ('me & him'), [2, 3] ('you & him') and [1, 2, 3], 'me, you & him'), but these are unattested, cf. (37a). On the contrary, if only [1] and [2] are person features, this generates all and only the observed meanings, cf. (37b).

(37)

	a. {1, 2, 3}	*attested?*	b. {1, 2}	*attested?*
'1st'	[1]	yes	[1]	yes
'2nd'	[2]	yes	[2]	yes
'3rd'	[3]	yes	[Ø]	yes
'you & me'	[1, 2]	yes	[1, 2]	yes
*['me & him']	[1, 3]	NO	—	
*['you & him']	[2, 3]	NO	—	
*['me, you & him']	[1, 2, 3]	NO	—	

If [3] is the absence of person, the universality of [2/1>3] is derived.[11] The unspecified nature of [3] is clear in Algonquian, e.g. the 3rd person independent pronoun functions as an emphatic (Hockett 1966:61*b*, Blain 1995), as illustrated in (39) for Plains Cree *wîya*:

(38) *Plains Cree* (from lectures by Sarah Whitecalf (1993))

a. ..., tâspwâw mâna wîya nîya nit-itwâ-n,...
as.a.matter.of.fact usually 3sg 1sg 1-say.so.AI-sg...
'..., as for myself, as a matter of fact I usually say,...' (SW:86)

b. Namôya wîya êwako n-ôh-pêhtaw-â-w wîhkâc,...
NEG 3sg that.one 1-PAST-hear.TA-DIR-3 ever

namôya wîhkâc êwako n-ôh-pêhtaw-â-w;...
NEG ever hat.one 1-PAST-hear.TA-DIR-3
'I did not ever hear her speak about that, I never heard her speak about that;...' (SW:30)

[11] This result conflicts with Goddard's treatment of Delaware (eastern Algonquian) person features:

> The personal pronominal categories are built up out of the three fundamental persons—first, second, and third—and a feature of pronominal pluralization; the singular persons each have one of these fundamental persons, while the plural persons each have basically two. The first plural exclusive has first and third, the inclusive has first and second, the second plural has second and third, and the third plural has third and third. (Goddard 1979:30)

This yields (i). [+3] by itself is '3rd person', but if combined with another feature is 'plural'. Combined with itself, [+3] is 3rd plural ([+3, +3]); such combinations are undefined for 1st and 2nd person (*[+1, +1], *[+2, +2]).

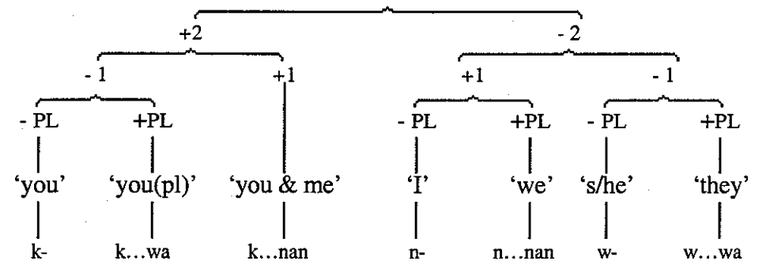
(i)

'1st'	[+1]	'1st plural'	[+1, +3]	(≠ 'me & him')
'2nd'	[+2]	'2nd plural'	[+2, +3]	(≠ 'you & him')
'3rd'	[+3]	'3rd plural'	[+3, +3]	(≠ 'him & him', i.e. 3rd person dual)
'you & me'	[+1, +2]			

3.3. Pronoun denotations (summary)

Algonquian person-marking follows from first principles. In Hockett's words: "the denotations of the combinations must be just those given" (1966:61). With ranked person features, we predict systems where 2/non-2 is the primary contrast, as in Algonquian. With conjunctive specifications, [2, 1] is generated. The alignment of inclusive 'we' reflects the primary contrast: it is 1 in a 1/non-1 system; 2 in a 2/non-2 system. Hockett's local/non-local distinction is a special case of the unmarked status of 3. Applying all this yields (39): the seven pronouns result from combining three features ([1], [2], [plural]) and allowing conjunctive specification.

(39)



Potawatomi	k-	k…wa	k…nan	n-	n…nan	w-	w…wa
Ojibwa	k-	k…awaa	k…awint	n-	n…awint	w-	w…awaa
Plains Cree	k-	k…wâw	k…naw	n-	n…nân	w-	w…wâw
Blackfoot	k-	k…waawa	k…nnoon-a	n-	n…nnaan-a	o-	o…waawa-yi

This pattern is pervasive in Algonquian: essentially the same set of prefixes and suffixes is used for agreement on nouns and independent mode verbs. (40) shows this for Plains Cree.

(40) *Plains Cree* (adapted from Ahenakew 1987:34, 47, 87, 96)

	NOMINAL PARADIGMS		VERBAL PARADIGMS (INDEPENDENT MODE) [12]		
	pronoun	*possessed N* 'x's sister'	*AI verb* 'x sleeps'	*TI verb* 'x finds y'	*TA verb* 'x looks after y'
[1]	nîya	nimis	ninipân	nimiskê-n	nipamihâw
[1, pl]	nîyanân	nimisinân	ninipânân	nimiskê-nân	nipamihânân
[2]	kîya	kimis	kinipân	kimiskê-n	kipamihâw
[2, pl]	kîyawâw	kimisiwâw	kinipânâwâw	kimiskê-nâwâw	kipamihâwâw
[2, 1, pl]	kîyanaw	kimisinaw	kinipânânaw	kimiskê-nânaw	kipamihânaw
[3]	wîya	omis-a	nipâw	miska-m	pamihêw
[3, pl]	wîyawâw	omisiwâw-a	nipâwak	miska-mwak	pamihêwak
[3, obv]	—	omisiyiwa	nipâyiwa	miska-myiwa	pamihêyiwa

The independent mode emerged from the nominal paradigm (Goddard 1974). Synchronically, Algonquian has a category-neutral functional superstructure, suggesting that

[12] On the presence of *-nâ* with *2-ful* plurals, see Goddard (1967:74) and Wolfart (1973:39a).

agreement checks *lexical* features (rather than N-or V-features).[13] Beside the parallels between inflected nouns and verbs, there are also differences, e.g. 3rd person forms in the noun series have prefixal agreement (*w-/o-*), but not with verbs. Note that the obviative suffix *-a* in the 3rd person forms of the possessed noun (e.g. *o-misi-wâw-a* 'their sister(obv)') shows there are two positions for suffixal agreement: Pers and another position, to which I now turn.

4. Three Agreement Positions

For nouns, possessor agreement is marked by a combination of proclitic and enclitic agreement. An additional suffix marks gender-sensitive agreement with the head noun, e.g. inanimate plural *-a*, animate plural *-ak* in (41). For verbs, proclitic agreement is with the higher-ranked argument, e.g. given [1>3], the proclitic codes 1, whether it is Agent/subject or Patient/object, (42). There is also number agreement with the non-local participant, at the right edge of the verb complex (here *-ak*). What is unexpected is that Person agreement precedes Number agreement.

Plains Cree

(41) a. ni-môhkoman-inân-a — 'our knives'
1-knife-1pl-pl.*inanim*

b. nit-asikan-inân-ak — 'our socks'
1-knife-1pl-pl.*anim*
(*-i-* before *-nân* is epenthetic, cf. Wolfart 1973:80*a*)

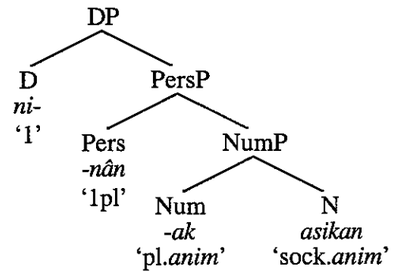
(42) a. ni-wâpam-â-nân-ak — 'we saw them'
1-see-DIR-1pl-3pl

b. ni-wâpam-iko-nân-ak — 'they saw us'
1-see-INV-1pl-3pl

4.1. An ordering problem and a solution

To see why the surface position of number agreement is surprising, consider the structure for the Plains Cree form *nitasikaninânak* 'our socks':

(43)



[13] Déchaine and Tremblay (1998) argue that the primary categorial distinction is between Lexical and Functional categories, and that traditional categorial distinctions (e.g. V, N, A, P) are contextually determined.

D hosts proclitics and selects a compatible PersP. The head noun inflects for gender-sensitive number, associated with the position Num (Ritter 1995). If N raises cyclically, first to Num and then to Pers, we expect (44a), which is ill-formed. Instead, Num agreement with the head noun occurs outside of Pers agreement with the possessor, (44b).

(44) *Plains Cree*

a. *ni-t-asikan-ak-inân — *[D-N-Num-Pers]
1-*t*-sock-pl.*anim*-1pl

b. ni-t-asikan-inân-ak — [D-N-Pers-Num]
1-*t*-sock-1pl-pl.*anim*
'our socks'

The ill-formedness of (44a) is not an artefact of the analysis. This is shown by comparable examples from Yup'ik Eskimo, where suffix ordering is consistent with successive head movement. *Angya* 'man' raises to Num *-g* ('3 dual absolutive') and derives a [N-Num] complex, which further raises to Pers, deriving [[N-Num]-Pers]:

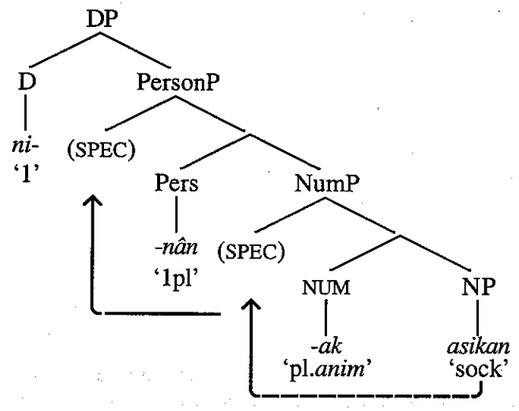
(45) *Yup'ik Eskimo* (Reed *et al.* 1977, as cited by Blake 1994:152)

a. angya-g-puk — [N-Num-Pers]
boat-3DU.ABS-1DU.ERG
'our (dual) boats (dual)'

b. *angya-puk-g — *[N-Pers-Num]
boat-1DU.ERG-3DU.ABS

[N-Num-Pers] order in Yup'ik Eskimo is expected if N undergoes head movement. By contrast, the Algonquian [N-Pers-Num] order implies that head movement has not applied. Recall that suffix sequences can arise by moving head-to-head or Spec-to-Spec; Algonquian suffix order conforms to the latter, as illustrated in (46).

(46)



(46) makes testable predictions: (i) a 'stem' that moves Spec-to-Spec should be phrasal; (ii) agreement morphology attaches by cliticization; (iii) if one argument is personful and the other not, both will be marked for agreement; (iv) two local (1 and 2) arguments compete for Pers; (v) two non-local arguments compete for Num. All these predictions depart from previous work. Analyzing the stem as phrasal contradicts Anderson (1992), Halle & Marantz (1993), and Steele (1995). Treating prefixal agreement as proclitic is compatible with Halle & Marantz (1993), but claiming that suffixal agreement is enclitic is at odds with their proposal. Finally, although Steele (1995:284*ff.*) distinguishes between personful and numberful arguments, the syntactic basis for this distinction is novel. Each of the cited analyses has used Algonquian to argue for a-syntactic morphology, so the contrary predictions are of general interest.

4.2. Movement from Spec to Spec

If the 'stem' moves Spec-to-Spec, it should be phrasal. This is supported by two types of evidence. The first involves the possibility of a "secondarily possessed form" (Wolfart 1973:29*a*) in which a dependent stem has two layers of possessor agreement. For example, *-stikwân* 'head' usually occurs with a single layer of possessor agreement, (47). If one refers to an alienably possessed head, then two agreement markers appear, (48).

Plains Cree

(47) a. ni-stikwân — 'my head'
1-head

b. o-stikwân — 'his/her head, a head'
3-head

(48) n-[ô-stikwân-im] — 'my (severed) head' (lit. 'my his head')
1-3-head-DEP — (adapted from Wolfart 1973:29*a*, Ahenakew 1987:36)

The possibility of two layers of possessor agreement follows if the lower nominal projection is a phrasal DP that can itself host possessor agreement:[14]

(49) $[_{DP}$ *n-* $[_{PersP}$ $[_{DP}$ *o-stikwânim* $]$ $[_{Pers}$ ∅ $]$ $[_{NumP}$ t_{DP} $[_{Num}$ ∅ $]$ $[$ t_{DP} $]]]]$

Another indication of phrasal movement comes from possessor constructions, which in Plains Cree are formed with the verbalizing suffix *-i*. In addition to the normal subject agreement (*-w*), the incorporated nominal is obligatorily inflected with prefixal possessor agreement

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[14] This analysis also accounts for the following data:

(i) *Menominee* (Goddard 1990b:455, (22))

a. o-se:t-a:h — 3-foot-wood — 'ax-handle'
b. net-o-set-a:h — 1-3-foot-wood — 'my ax-handle'

(ii) *Ojibwe* (Nichols 1980:41)

a. w-iiyaas — 3-flesh — 'meat'
b. ni-w-iiyass-im — 1-3-flesh-DEP — 'my (piece) of meat'

(***o-môhkomân*** 'his/her knife'), (50). The *o-* prefix must be attaching to the nominal stem, since 3rd person agreement is exclusively suffixal on Plains Cree verbs (***pimisini-w*** 's/he lies down').

Plains Cree

(50) a. [O-môhkomân]-i-w.
3-knife-have-3
'S/he has a knife'

b. *[Môhkomân]-i-w.
knife-have-3

This leads to the conclusion that the prefixal possessor inflection is part of the incorporated stem, implying in turn that the stem is a phrasal category:

(51) $[_{CP}\ \varnothing\ [_{PersP}\ [_{IP}\ o\text{-}môhkomân\text{-}i\ ]\ [_{Pers}\ \varnothing\ ]\ [_{NumP}\ t_{IP}\ [_{Num}\ \text{-}w\ ]\ [\ t_{IP}\ ]\ ]\ ]\ ]$

4.3. Prefixal and suffixal agreement as procliticization and encliticization

The claim that the constituent which bears agreement is phrasal and moves Spec-to-Spec entails that agreement is by cliticization. Now, Algonquian has a big inventory of bound morphemes, some prefixal, others suffixal. If attachment of bound morphemes is syntactic, this makes two predictions: (i) all prefixal elements are proclitics; (ii) some suffixal elements sshould attach by X^0-movement and others by encliticization (with corresponding structural differences).

The idea that prefixal agreement is proclitic is widely accepted. Prefixes are set off from the remainder of the inflected stem in several ways. In Plains Cree, vowel-vowel sequences invoke *t*-epenthesis only with prefixal agreement, (52a). In other positions, such sequences are resolved by deleting the second vowel, (52b). This contrast suggests that the boundary after a proclitic differs from what obtains in other contexts.

Plains Cree (adapted from Wolfart 1973:81*a*, 82*b*)

(52) a.	ni-t-asikan	*ni-sikan	'my sock'
	ni-t-astân	*ni-stân	'I put it'
b.	*ositiyi-t-ihk	ositiyi-hk	'on his/her foot'
	*nikamo-t-iyiwa	nikamo-yiwa	'the other sings'

Besides prefixal agreement, there is a large set of pre-stem elements. They too are expected to be clitic-like. One suggestive fact is that many adverbial modifiers occur in doublets, with a phonologically reduced form in the preverb position inside the verb complex, and the full form standing outside it, e.g. Plains Cree *mêkwâ-* vs. *mêkwac* 'during, while':

Plains Cree

(53) a. Ê-ka-kitâpam-ak kâ-mêkwâ-nikamo-t Bill.
CONJ-RED-look-1>3 REL-while-sing-3
'I kept on looking at him$_i$ while Bill$_i$ was singing'

b. Ê-ka-kitâpam-ak mêkwac kâ-nikamo-t Bill.
CONJ-RED-look-1>3 while REL-while-sing-3
'I kept on looking at him$_i$ while Bill$_i$ was singing' (E. Blain, p.c.)

Turning to suffixes, those attaching by head-to-head movement should differ from those attaching as enclitics: head-movement derives a complex word, cliticization does not. Phonological processes occurring at morpheme boundaries are a potential source of evidence. Here, the facts are suggestive at best. In Plains Cree, if a glide and vowel meet at a boundary, the sequence usually contracts, (54). In (54b), [w] is part of the stem and undergoes contraction. In (54c), contraction is blocked when it would remove structural information, so the agreement suffix *-w* doesn't delete, perhaps because of its enclitic status.[15]

Plains Cree contraction

(54) a. {Vw-e, Vy-e} → $\bar{V}$ (Wolfart 1973:80*a*)

b. *wīhtamawitō-wak wīhtamātō-wak > wīhtamaw + /eto/
(they tell it to e.o) (tell it to so.) (reciprocal)

c. ê-pimohtê-w-iht *ê-pimohtê-ht
conj-travel-REL-unspec
'they (unspec) traveled (with relation to him)' (Wolfart 1973:60*b*, *fn.* 76)

In Blackfoot, the rule of *s-connection* fails before agreement suffixes: at morpheme boundaries, an epenthetic *i* appears between V and *s* , unless *s* is part of a suffix (55). *S-connection* applies before the predicate *sok* 'good' (55b), but fails before *s*-initial agreement, e.g. the subjunctive 3rd person suffix *-si* , (55c).

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[15] Plains Cree contraction is blocked by verbalization (i), suggesting phrasal attachment: "it also seems…that contraction is mostly absent when morphemes are joined in derivation" (Wolfart 1973:82*a*). Contraction normally applies in noninals, (ii). (See Wolfart 1973:81*f.* for examples.)

(i)	a.	kahkiyawisi-w (he is entire)	*kahkiyāsi-w	kahkiyaw (all)	+ /esi/ (be VAI)
	b.	wīcēwiskwēwē-w (he has his wife along)	*wīcēskwēwē-w	wīcēw (have so along)	+ /eskwēwē/ (woman)
(ii)	a.	*ni=nāpēwim	ni=nāpēm (my husband)	nāpēw (man)	+ /em/ (possessed theme)
	b.	*ispatināwihk	ispatināhk (on a hill)	ispatināw (hill)	+ /ehk/ (locative)

Blackfoot s-connection

(55) a. ∅ → i / V(') + _ s, where s is not part of a suffix (Frantz 1991:86*ff.*, 150)

b. Isskáí'soka'piiwa.
sska'-sok-a'pii-wa
extra-good-be(II)-*inanim*.sg
'It's extraordinarily good' (Frantz 1991:92)

c. Áánistsisa ikkámáakaistoosi. cf. *ikkámáakaistooisi
wa:nIt-is ikkám-áak-waistoo-si
way-2s:3(imv) if-FUT-come-3(sjv)
'Ask him if he will come' (Frantz 1991:139)

Provisionally, it seems that some rules (Plains Cree *t*-epenthesis) apply only in the context of proclitic agreement while others (Plains Cree glide contraction, Blackfoot *s*-connection) fail with enclitic agreement. What is significant in both cases is that agreement (here analyzed as attaching via phrasal cliticization) behaves differently from stem-internal morphology.[16]

4.4. Matching arguments to agreement positions

The above predictions—Spec-to-Spec movement of the stem, and cliticization of agreement morphology—are concerned with how things get where they are. The remaining predictions pertain to the claim that there are three positions for agreement: D, Pers and Num, (56). As noted, Algonquian inflected nominals and certain verbal clauses show morphological parallels. If CPs have the same superstructure as DPs, this yields (57).

(56) [D D– [Pers –2/1 [Num –PL/OBV [NP …]]]]

(57) [C D– [Pers –2/1 [Num –PL/OBV [IP …]]]]

As with DPs, verbs have two enclitic positions, one person-sensitive (1st or 2nd person), the other number-sensitive (3rd 'person'). (58) shows this for Plains Cree *nitasikaninânak* 'our socks' and *niwâpamânânak* 'we see them'. In both, the extended stem (nominal NP or verbal IP) raises to [Spec, NumP] and onto [Spec, PersP]. Putting aside the question of what forces this movement, let us examine the agreement positions of Pers and Num more closely.

Plains Cree

(58) a. nit-[asikan]-inân-ak 'our socks'
1-sock-1pl-pl.*anim*
[DP *ni–* [PersP [SPEC] *–nân* [NumP [SPEC] *–ak* [NP *asikan*]]]]

b. ni-[wâpam-â]-nân-ak 'we see them'
1-see-DIR-1pl-3pl
[CP *ni–* [PersP [SPEC] *–nân* [NumP [SPEC] *–ak* [IP *wâpam-â*]]]]

16 See also Ellis (1983) on Swampy Cree, and Nichols (1980:129, 266*ff.*) on Ojibwe.

While the morphology of possessor DPs and transitive verbs shows many parallels, there are differences too. Transitive verbs have three subparadigms according to which argument controls person agreement: the 'mixed set' (one local and one non-local argument), the '*you&me* set' (two local arguments), and the '3rd person set' (two non-local arguments):

(59)	*sub-paradigm*	*Person agreement with:*	*Number agreement with:*
a.	mixed set	1 or 2	3
b.	*you&me* set	2	—
c.	3rd person set	—	3

This pattern is expected by an analysis which posits Pers and Num agreement. If Pers codes local arguments (1 or 2) and Num codes a non-local argument (3), then a local/non-local combination will register agreement for both arguments; this is the mixed set, (59a). But if both arguments are local (1 and 2), since there is only one position for Pers, only one argument will register agreement; it is 2 that triggers Pers agreement in the *you&me* set, (59b). If both arguments are non-local, and given that non-local arguments are personless, we expect Num to code at least one argument, (59c). Of interest is the fact that, across Algonquian, each subparadigm shows variation; in the mixed set, the morphology of the *I-ful* plural varies; in the *you&me* set, the ranking of 1 and 2 can be reversed; in the 3rd person set, the locus of 3rd person agreement shows structurally determined differences.

4.5. Pers & Num: the mixed set

In the mixed set, one argument is local (1 or 2), the other non-local (3). 'Direct' and 'inverse' affixes determine which argument controls person agreement: if the verb stem has the direct suffix (P *-a*, PC *-â*, B *-a*), the Agent/subject argument is personful; if the verb stem has the inverse suffix (P *-uk*, PC *-iko*, B *-ok*), the Patient/object is personful.

(60)	DIRECT	INVERSE
a.	*Potawatomi*	
	/k-[wapm-a]-wa-k/	/k-[wapm-uk]-wa-k/
	2-see-DIR-pl-3pl	2-see-INV-pl-3pl
	'you(pl) see them'	'they see you(pl)'
b.	*Plains Cree*	
	ki-[sêkih-â]-wâw-ak	ki-[sêkih-iko]-wâw-ak
	2-frighten-DIR-pl-3pl	2-frighten-INV-pl-3pl
	'you(pl) frighten them'	'they frighten you(pl)'
c.	*Blackfoot*	
	kits-[ikákomimm-a]-waa-yi	kits-[ikákomimm-ok]-oaa-yi
	2-love-DIR-pl-3pl	2-love-INV-pl-3pl
	'you(pl) love them'	'they love you(pl)'

The formal basis of direct/inverse morphology is much discussed (Piggott 1989, Dahlstrom 1991, Steele 1995). Déchaine & Reinholtz (1998) claim that direct verbs are accusative, inverse verbs are ergative and nominative controls person agreement.[17] Hence, direct(ACC) verbs have person agreement with the Agent/subject: this is the nominative argument of a NOM/ACC configuration, (61a). Furthermore, inverse(ERG) verbs have person agreement with the Patient/object: this is the nominative argument of an ERG/NOM configuration, (61b).

(61) a. $[_{CP}$ D– $[_{Pers}$ –2/1$_{NOM}$ $[_{Num}$ –PL/OBV $[_{IP}$ *pro*$_{NOM}$ $[_{vP}$ t_{DP} V-DIR *pro*$_{ACC}$]]]]]

b. $[_{CP}$ D– $[_{Pers}$ –2/1$_{NOM}$ $[_{Num}$ –PL/OBV $[_{IP}$ *pro*$_{NOM}$ $[_{vP}$ *pro*$_{ERG}$ V-INV t_{DP}]]]]]

In this analysis, *pro* argument positions are introduced in *v*P and their argument features are licensed by transitivity markers (which check animacy), as well as by direct/inverse affixes (which check case). Algonquian pro- and en-clitics do not themselves enter into checking relations with arguments (*contra* Manzini & Savoia's 1998 analysis of Italian). Rather, they restrict the denotational range of an argument. This captures the fact that a stem may be stripped of clitic agreement, as with the 'unspecified subject' construction, e.g. (62a). It is also consistent with the fact that in Blackfoot, for some verb forms, all three clitic positions restrict the same argument, e.g. (62b) where the nominative (Patient/object) argument is marked by a trio of affixes: *ots-* (D:∅), *-oaa* (Pers:pl) and *-yi* (Num:pl).

(62) a. *Ojibwe*
[waapam-aa]-∅
see-DIR-sg
'someone sees him' (from Nichols 1980:185)

b. *Blackfoot*
ots-[ikákomimm-ok]-oaa-yi
3.NOM-love-INV-pl.NOM-pl.NOM
'he/they love(s) them'

While the unspecified subject construction of (62a) has 'too little' agreement; the verb form of (62b) has 'too much'. The former observation indicates that a bare stem is enough to license argument positions. The latter—admittedly unusual in Algonquian (Goddard 1967:82)—shows that clitic agreement is not directly associated with argument positions; if it were, 'clitic tripling' would of course be uninterpretable.

[17] Halle & Marantz (1993:146*ff.*) treat Potawatomi direct/inverse suffixes as case-sensitive agreement (Agr$_1$) with a 3rd person *pro*. For them, the inverse suffix /-uko/ is introduced in transitive contexts and is specified for Nominative; the direct suffix /-a/ is introduced elsewhere (by default, it is the realization of Accusative.) They introduce direct/inverse suffixes into the same position—the [Agr$_1$ + Ind] node—but Déchaine & Reinholtz (1998) present evidence that direct and inverse morphology occupy distinct syntactic positions.

Having motivated the ideas that the direct/inverse distinction is an accusative/ergative case split, and that the stem is the domain of argument licensing, I now focus on the mixed set. As shown in (60) above, 2nd person agreement is stable in the mixed set. But 1st person agreement varies. This difference between 2 and 1 arguably reflects the primacy of the 2/non-2 contrasts. For verbal inflection, there are at least two areas of divergence: *I-ful* Pers agreement with a local argument blocks Num agreement with a non-local argument in Potawatomi; inclusive 'we' disappears in Blackfoot verb paradigms.

4.5.1. Potawatomi I-ful *agreement*: -mun *versus* -nan

In Potawatomi, direct(ACC) verbs with an *I-ful* plural lack agreement with the non-local argument. This contrasts with inverse(ERG) verbs, which maintain agreement with both the local and the non-local argument, (63). Correlated with this difference is the fact that *I-ful* Pers agreement with direct verbs is marked by *-mun*, and with inverse verbs by *-nan*. Also note that Potawatomi *I-ful* direct verbs minimally differ from their Ojibwe counterparts, which have Pers agreement with the local argument (*I-ful ni…naan*) and Num agreement with the non-local argument (3rd plural *-ik*), (64).[18]

(63) *Potawatomi*

	DIRECT	INVERSE
a.	/n-[wapm-a]-mun/ 1-see-DIR-1pl 'we(excl) see him/them/other'	/n-[wapm-uk]-nan-uk/ 1-see-INV-1pl-3pl 'they see us(excl)'
b.	/k-[wapm-a]-mun/ 2-see-DIR-1pl 'we(incl.) see him/them/other'	/k-[wapm-uk]-nan-uk/ 2-see-INV-pl-3pl 'they see us(incl)'

(64) *Ojibwe* (from Shwartz & Dunnigan 1986:308, *Table XII*)

	DIRECT	INVERSE
a.	ni-[waapam-aa]-naan-ik 1-see-DIR-1pl-3pl 'we(excl) see them'	ni-[waapam-iko]-naan-ik 1-see-INV-1pl-3pl 'they see us(excl)'
b.	ki-[waapam-aa]-naan-ik 2-see-DIR-1pl-3pl 'we(incl) see them'	ki-[waapam-iko]-naan-ik 2-see-INV-1pl-3pl 'they see us(incl)'

The selection of *-mun* versus *-nan* is determined by two intersecting factors (Halle & Marantz 1993:156). First, a nominative *I-ful* subject must be realized by *-mun*; this accounts for

[18] Goddard (1967) reconstructs two verbal paradigms, which he terms absolute and objective. The former "does not specify a grammatical object" (p. 71), but the latter does. He further observes that Potawatomi *-mun* (from the absolute paradigm) replaced *-nan* in the direct but not in the inverse.

the obligatoriness of *-mun* with direct verb forms, here analyzed as NOM/ACC, cf. (65a). Second, the preterit requires an *I-ful* subject to be realized as *-mun*, accounting for its presence with preterit-marked direct and inverse verbs, (65b).

(65) *Potawatomi* (adapted from H&M 1993:155, (40a)); 156, (41a))

	DIRECT	INVERSE
a.	*/n-[wapm-a]-mun-uk/ /n-[wapm-a]-mun/ 1-see-DIR-1pl-3pl 'we see them'	/n-[wapm-uk]-nan-uk/ */n-[wapm-uk]-mun/ 1-see-INV-1pl-3pl 'they see us'
b.	*/n-[wapm-a]-mn-(w)apunin-uk/ /n-[wapm-a]-mn-apun/ 1-see-DIR-1pl-PRET-3pl 'we saw them'	*/n-[wapm-uk]-nan-(w)apunin-uk/ /n-[wapm-uk]-mun-(w)apunin-uk/ 1-see-INV-1pl-PRET-3pl 'they saw us'

Selection of one form over another respects output specificity: a more specified form is preferred. Applying this to Potawatomi *I-ful* plurals, *-nan* must be less specified as it occurs with verbs and nouns, while *-mun* is restricted to verbal clauses with nominative subjects and the preterit. Suppose these two contexts have some abstract feature in common; call it D. Accordingly, Potawatomi Pers suffixes are specified as in (66).

(66) *Potawatomi*

PERSON:	[1, pl, D]	/-mun/
	[1, pl]	/-nan/
	[pl]	/-uk/

Three language-specific rules are required for the *I-ful* plural: nominative *I-ful* subjects need a D-feature; *I-ful* arguments need a D-feature in the context of the preterit; and an accusative Num is deleted in the context of an *I-ful* plural argument.

(67) *Potawatomi selection rules for I-ful plural*

a. *Nominative subject spell-out*: $[_{Pers}$ 1, pl$] \rightarrow [_{Pers}$ 1, pl, D] / NOM-subject

b. *Tensed Nominative spell-out*: $[_{Pers}$ 1, pl$] \rightarrow [_{Pers}$ 1, pl, D] / PRET

c. *Accusative number deletion*: $[_{Num}$ ACC$] \rightarrow \varnothing$ / governed by $[_{Pers}$ 1, pl, D]

(68) shows how selection works. With a nominative *I-ful* subject, *-mun* is selected, and an *I-ful* subject triggers deletion of accusative Num, (68a). (68b) shows that the D-specified *-mun* is not required in the inverse, which by hypothesis is an ERG/NOM configuration. The *I-ful* argument is a nominative object, and there is no preterit, so *-nan* is selected. As for Num, it is ergative, so doesn't delete. In (68c), the presence of *-mun* is forced by two considerations: the *I-ful* nominative subject and the preterit; as before, accusative Num deletes in the presence of an *I-ful* subject. Finally, (68d) shows that the presence of *-mun* is independent of the deletion of Num: the preterit requires a D-specified *-mun*, but ergative Num does not delete.

(68) *Potawatomi*

	D–	–Pers	–T	–Num	IP		
a.	$[1]_{NOM}$ *n-*	[1, pl, **D**] *-mun*		$[pl]_{ACC}$ [∅]	V-DIR V-*a*	*/n-V-a-mun/*	'we V 3pl'
b.	$[1]_{NOM}$ *n-*	[1, pl] *-nan*		$[pl]_{ERG}$ *-uk*	V-INV V-*uk*	*/n-V-uk-nanuk/*	'3pl V-s us'
c.	$[1]_{NOM}$ *n-*	[1, pl, **D**] *-mun*	$[Pret_D]$ *-apun*	$[pl]_{ACC}$ [∅]	V-DIR V-*a*	*/n-V-a-mnapun/*	'we V-ed 3pl'
d.	$[1]_{NOM}$ *n-*	[1, pl, **D**] *-mun*	$[Pret_D]$ *-apunin*	$[pl]_{ERG}$ *-uk*	V-INV V-*uk*	*/n-V-uk-munapuninuk/*	'3pl V-ed us'

The rules achieving selection of the *I-ful* suffixes *-mun* and *-nan* are specific to Potawatomi, as is Num deletion; but the structures to which these rules apply are general to Algonquian.[19]

4.5.2. The absence of inclusive 'we' with Blackfoot verbs

The exceptional behaviour of the *I-ful* plural crops up in other Algonquian languages as well. In nominal paradigms, Plains Cree and Blackfoot have an *I-ful* plural (PC *-nân* and B *-nnaan*) as well as an inclusive plural (PC *-naw*, B *-nnoon*). Plains Cree maintains this distinction in the verbal paradigm, (69). But Blackfoot does not, as the inclusive suffix *-nnoon* present in the nominal paradigm is not utilised in the verbal paradigm, (70).

(69) *Plains Cree*

	DIRECT	INVERSE
a.	ni-[sêkih-â]-nân-ak 1-frighten-DIR-1pl-3pl 'we(excl) frighten them'	ni-[sêkih-iko]-nân-ak 1-frighten-INV-1pl-3pl 'they frighten us(excl)'
b	ki-[sêkih-â]-naw-ak 2-frighten-DIR-21pl-3pl 'we(incl) frighten them'	ki-[sêkih-iko]-naw-ak 1-frighten-INV-21pl-3pl 'they frighten us(incl)'

19 (68) resembles Halle & Marantz's derivation (1993:154-159): (i) deletion of number features (Agr_3) in the presence of nominative *I-ful*; (ii) deletion of an accusative case feature in the presence of the preterit (preventing *-nan*, which H&M define as accusative, from appearing with the preterit); vocabulary entries as in (iii). The main difference between the two proposals is which *I-ful* plural is more specified: *-nan* for H&M, *-mun* for me.

(i) *Number Impoverishment* (H&M 1993:156, (43))
Agr_3(=Num) $\rightarrow \varnothing$ / governed by Agr_2(=Pers), Agr_2 = [+1, +pl, NOM]

(ii) *Accusative Impoverishment* (H&M 1993:157, (46)): [+1, ACC] $\rightarrow$ [+1] / [+preterit]

(iii) *Agr_2* (H&M 1993:151, (35))
a. [+1, +pl, {ACC, GEN}] $\leftrightarrow$ /-nan/ / ϕ _
b. [+1, +pl] $\leftrightarrow$ /-mun/ / Ind _
c. [-obv, +pl, case] $\leftrightarrow$ /-wa/ / ϕ _ (add /na/ before /-wa/ for verbal stems when ϕ includes [-anim])
d. [-obv, +pl] $\leftrightarrow$ /-m/ / Ind _
e. [-obv, -anim] $\leftrightarrow$ /-n/ / Ind _ (deletes before [+preterit])

(70) *Blackfoot*

a	nits-[ikákomimm-a]-nnaan-i 1-love-DIR-1pl-3pl 'we(excl) love them'	nits-[ikákomimm-ok]-innaan-i 1-love-INV-1pl-3pl 'they love us(excl)'
b	*kits-[ikákomimm-a]-nnoon-i 2-frighten-DIR-21pl-3pl [we(incl) love them]	*kits-[ikákomimm-ok]-nnoon-i 1-frighten-INV-21pl-3pl [they love us(incl)]

The disappearance of inclusive 'we' with transitive verbs is part of a larger split between nominal and verbal inflection in Blackfoot, (71). With nominal stems, inclusive 'we' is marked discontinuously by 2nd person *k-* in combination with inclusive *-nnoon*. With verbs, an impersonal subject form renders inclusive 'we'. (I return to this below.)

(71) *Blackfoot* (from Frantz 1991:43, 73, 74, 145, 147)

	NOMINAL PARADIGMS		VERBAL PARADIGMS (INDEPENDENT MODE)		
	pronoun	*possessed N* 'x's Nsg'	*AI verb* 'x verbs'	*TI verb* 'x verbs 3.inan'	*TA verb* 'x verbs 3.anim'
[1]	n...wa	n...wa	n(it)...	nit...hp-wa	nit...a:-wa
[2]	k...wa	k...wa	k(it)...	kit...hp-wa	kit...a:-wa
[1, pl]	n...nnaan-a	n...nnaan-a	n(it)...hpinnaan-a	nit...hpinnaan-wa	nit...a:-nnaan-a
[2, pl]	k...waaw-a	k...oaawa(wa)	k(it)...hpoaaw-a	kit...hpoaa-wa	kit...a:-waaw-a
[2, 1]	**k...nnoon-a**	**k...nnoon-a**	...o'p-a	...'p-wa	...a:-wa
[3, sg]	o...yi	w...yi	...wa	...mwa	...yii-wa
[3obv, sg]	—	w...(wa)yi	...yini	...myini	...yii-yini
[pl]	o...waawa-yi	w...oaawa-yi	...yi	...myi	...yii-yi

The absence of inclusive 'we' in Blackfoot verbal paradigms correlates with differences in the morphology of the *you&me* set, to which we now turn. Evidence from these two domains points to the same conclusion: in Blackfoot [1>2] is the person ranking in the verbal series.

4.6. Only one Pers: the *you&me* set

In the *you&me* set, both arguments are local (1 and 2). Since there is only one Pers position, only one local argument can be marked. A hierarchical organization of features sheds light on cross-Algonquian variation in how the local set aligns with the direct/inverse distinction (§4.6.1). The resolution of person agreement in the *you&me* set reflects the activity of Condition B of the binding theory, providing additional support for a syntactic analysis (§4.6.2). And the resolution of number agreement when both local arguments are plural reflects the effects of featural organization in conjunction with the condition B effect (§4.6.3).

4.6.1. Local arguments and the relative ranking of 2 and 1

If there is only one position for Person, and assuming [2>1], then when there are two local arguments one might expect only 2 to register agreement. This is indeed what happens if both local arguments are singular:

(72)

	DIRECT	INVERSE
a.	*Potawatomi* /k-[wapum-∅]/ 2-see-DIR 'you see me'	 /k-[wapm-**un**]/ 2-see-INV 'I see you'
b.	*Plains Cree* ki-[sêkih-**i**]-n 2-frighten-DIR-LOC 'you frighten me'	 ki-[sêkih-**iti**]-n 2-frighten-INV-LOC 'I frighten you'
c.	*Blackfoot* kits-[ikákomimm-**o**] 2-love-DIR 'I love you'	 kits-[ikákomimm-**oki**] 2-love-INV 'you love me'

The absence of 1 in the *you&me* set is sometimes blamed on the person hierarchy, but it is doubtful whether the [2>1] ranking is directly responsible for selecting 2. This can be seen by examining the direct and inverse suffixes in more detail. In particular, observe that in (72), compared to Potawatomi and Plains Cree, the Blackfoot *you&me* forms reverse the alignment of direct/inverse morphology with person features. Most notable is the fact that a verb with 2nd person Agent/subject and a 1st person Patient/object is marked with an inverse-like suffix *-oki*.[20]

In the present proposal, direct suffixes are associated with accusative syntax, inverse suffixes with ergative syntax. While direct suffixes impose a person/case restriction on the Patient/object; inverse suffixes do so on the Agent/subject (Piggott 1989:199).[21] For the mixed set—one local argument, one non-local argument—this gives the specifications in (73a), which are stable across Algonquian. But in the *you&me* set, Blackfoot diverges from other Algonquian languages in utilizing inverse-like morphology with verbs in which the Patient is 1st person, (73b). On this basis, Frantz (1991:58*f.*) concludes that, in Blackfoot, [1>2].

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[20] There is disagreement about whether the direct/inverse distinction also applies to the you&me set. Hockett (1966, 1992) and Goddard (1967:68) hold that it does not; Wolfart (1973) and Frantz (1991) maintain that it does.

[21] Steele (1995:282*f.*) makes a similar proposal. However, she departs from Piggott in defining the direct/inverse markers for the local series in terms of the 2nd person. For her, Potawatomi 'direct' *-y* is (x=2, y), and 'inverse' *-un* is (x, y=**2**). Steele's account does not generalize to the Blackfoot system, nor is it compatible with a case-based analysis of the direct/inverse distinction.

(73)

			direct(ACC)		inverse(ERG)	
a.	mixed set	*Potawatomi*	*-a*	(x, **y**=ACC)	*-uk*	(**x**=ERG, y)
		Plains Cree	*-â*	(x, **y**=ACC)	*-iko*	(**x**=ERG, y)
		Blackfoot	*-a*	(x, **y**=ACC)	*-ok*	(**x**=ERG, y)
b.	*you&me* set	*Potawatomi*	*-y*	(x, **y**=1.ACC)	*-un*	(**x**=1.ERG, y)
		Plains Cree	*-i*	(x, **y**=1.ACC)	*-iti*	(**x**=1.ERG, y)
		Blackfoot	*-o*	(x=1, **y**=ACC)	*-ok-i*	(**x**=ERG, y=1)

The reranking of 1 and 2 in Blackfoot has consequences for the organization of person features, which is determined by the primary person contrast. A primary 2/non-2 contrast yields the [2>1>3] hierarchy typical of most Algonquian languages, and also seen in the Blackfoot nominal paradigm, (74a). A primary 1/non-1 contrast yields a [1>2>3] hierarchy, (74b).

(74) a. *Potawatomi and Plains Cree also Blackfoot nominal paradigm* D: [2] [1] [∅]

b. *Blackfoot verbal paradigm* D: [1] [2] [∅]

I claim that, in Blackfoot, *nominal* paradigms still keep the [2>1] ranking, while *verbal* paradigms have [1>2]. In addition to accounting for the direct/inverse morphology of the *you&me* set, this explains why inclusive 'we' is absent with verbs. Inclusive 'we' is [2, 1], and in the nominal paradigm the classification of inclusive *-noon* as a 2 reflects [2>1]. If the Blackfoot verbal paradigm has a [1>2] ranking, inclusive 'we' morphology should be excluded, and it is. The only way to render its equivalent with verbal syntax is by means of an unspecified subject construction. An inclusive 'we' Agent/subject is rendered by means of a direct verb which only shows agreement with the ACC argument, (75). The substitution of a 3rd person form for the 2nd person inclusive is symptomatic of a with a 1/non-1 split, as "non-1" groups together 2&3.

Blackfoot unspecified subject construction: direct(ACC) (Frantz 1991:52)

(75) a. [Ikákomimm-a]-wa ki-tán-a.
love-DIR-3.ACC 2-daughter-sg
'Someone loves your daughter, We(incl) love your daughter'

b. [Ikákomimm-a]-yi ki-tán-iksi.
love-DIR-3pl.ACC 2-daughter-pl
'Someone loves your daughters, We(incl) love your daughters'

c. [Ikákomimm-a]-yini o-tán-i.
love-DIR-3obv.ACC 3-daughter-obv
'Someone loves her daughter(obv), We(incl) love her daughter'

As for an inclusive 'we' Patient/object, it is rendered by means of an inverse-like verb which is sensitive to the number of the object. If the local object is singular, the inverse suffix is *okoo-* (an extended form of the regular inverse *ok-*), (76). If the local object is plural, the inverse suffix is *oti*, which surfaces as *ots-* in (77). In addition, the plural enclitics (the *I-ful* plural *-nnaan* and the *you-ful* plural *-waaw*) are preceded by *-hp* (which surfaces as *-sp* in this context). This suffix, when it occurs by itself, codes the inclusive plural. Frantz (1991:60) remarks that "the marking of 21 by *-hpa* is unique in the TA independent paradigm".

Blackfoot unspecified subject construction: inverse(ERG) (Frantz 1991:59*f.*)

(76) a. Nits-[ikákomimm-okoo]-wa.
1-love-INV.unspec-3.ERG
'I am loved, someone loves me'

b. Kits-[ikákomimm-okoo]-wa.
2-love-INV.unspec-3.ERG
'you are loved, someone loves you'

(77) a. Nits-[ikákomimm-ots]-sp-innaana.
1-love-INV.unspec-LOC-1pl
'We(excl) are loved, someone loves us'

b. Kits-[ikákomimm-ots]-sp-oaawa.
2-love-INV.unspec-LOC-2pl
'You(pl) are loved, someone loves you(pl)'

c. [Ikákomimm]-ots-sp-a.
love-INV.unspec-LOC
'we(incl) are loved, someone loves us'

Taken together, (75) to (77) support the following inferences. First, given that inverse specifies an ergative Agent/subject—notated x=ERG in (78)—for Blackfoot, we need to recognize at least four inverse suffixes, from least to most specified: *-ok* (ERG subject), *-ok-oo* (unspecified subject), *-ok-i* (ERG subject with 1 object), , and *ot-i* (unspecified subject with local object). Second, the set of affixes which spell out Pers consists of *-hp*, which specifies the presence of local speech act participants (i.e. it is inherenly inclusive), and *-waa*, which specifies a plurality, and by the elsewhere condition denotes non-local speech act participants. Third, the *I-ful* and *you-ful* enclitics primarily code number: *-nnaan* is [pl, 1] and *-waaw* is [pl, 2].

(78) *Blackfoot verbal affixes*

INVERSE(ERG)		PERS		NUM	
-ot-i	(x=ERG.∃, y=LOCAL)	*-hp*	[LOC]	*-nnaan*	[pl, 1]
-ok-i	(x=ERG, y=1)	*-waa*	[pl]	*-waaw*	[pl, 2]
-ok-oo	(x=ERG.∃, y)			*-yini*	[obv]
-ok	(x=ERG, y)			*-yi*	[pl]
				-wa	[sg]

Specifying *-hp* as [LOCAL] captures the fact that inclusive is denoted by the omission of enclitics which specify person-ful number; i.e. inclusive marking is subtractive rather that additive. It also accounts for why the inclusive denotation blocks the appearance of the 1st and 2nd person proclitics: if not further specificied, [LOCAL] automatically includes speaker and addressee. This is illustrated in (79).

(79) *Blackfoot "local" inclusive*

	D–	–Pers	–Num	IP		
a.	[1] *nits-*	[LOCAL] *-hp*	[pl, 1] *-naan*	(x=ERG.∃, y=LOC) V–*ots*	*nits*-V-*ots-spinnaana*	'someone Vs us(excl)'
b.	[2] *kits-*	[LOCAL] *-hp*	[pl, 2] *-waaw*	(x=ERG.∃, y=LOC) V–ots	*kits*-V-*ots-spoaawa*	'someone Vs you(pl)
c.	∅	[LOCAL] *-hp*	∅	(x=ERG.∃, y=LOC) V–*ots*	V-*ots-spa*	'someone Vs us(incl)'

(79) departs from Frantz (1991), who treats *-hpinaan(a)* and *-hpwaaw(a)* as suffixes without internal structure. One consequence of the present analysis is that D, Pers and Num all code the same argument: in (79a) an *I-ful* plural, and in (79b) a *you-ful* plural. This is an example of 'clitic tripling' mentioned above in (62); we will see that this is typical of Blackfoot inverse constructions in the 3rd person set as well. Another result is that *I-ful* and *you-ful* plurals are structurally ambiguous: they are Pers in the nominal paradigm ([1, pl] and [2,pl]) but Num in the verbal paradigm ([pl,1] and [pl,2]). In Blackfoot, this restructuring is forced by the reranking of [1] relative to [2]. This featural ambiguity is not limited to Blackfoot however: it also accounts for plural neutralization with *I-ful* and *you-ful* arguments—a pan-Algonquian phenomenon. Before considering this, consider what happens with two local arguments.

4.6.2. The absence of 1 in the you&me *set: a binding-theoretic account*

Hockett defines 2nd person *k-* as "addressee involved" and 1st person *n-* as "addressee excluded but speaker involved", i.e. as [-2, +1]. This accounts for the absence of *2-less n-* in the context of a *2-ful* argument, cf. (80). Although Hockett's solution is efficient, it has the conceptual disadvantage of introducing a crucial negative feature specification.

Plains Cree

	DIRECT	INVERSE
(80) a.	ki-[sêkih-i]-n 2-frighten-DIR-LOC 'you frighten me'	ki-[sêkih-iti]-n 2-frighten-INV-LOC 'I frighten you'
b.	*ni-[sêkih-i]-n 1-frighten-DIR-LOC [≠you frighten me]	*ni-[sêkih-iti]-n 1-frighten-INV-LOC [≠I frighten you]

But binding theory offers another solution, one which doesn't need additional stipulations. Given that we are dealing with pronominal agreement, the relevant part of binding theory is Condition B, which requires a pronoun to be free in its local domain (e.g. *Mary*$_i$ *saw her*$_j$ versus *Mary*$_i$ *said that Bill saw her*$_{i/j}$). Condition B also accounts for the illformedness of **I*$_i$ *saw me*$_i$, **You*$_i$ *saw you*$_i$, **She*$_i$ *saw her*$_i$, etc. On independent grounds, I have argued that: (i) proclitic agreement is with the nominative argument; (ii) direct verbs are NOM/ACC, while inverse verbs are ERG/NOM; (iii) direct/inverse morphology imposes a person/case restriction on the marked structural case, e.g. for the Plains Cree *you&me* set, direct *-i* restricts the Patient/object to 1.ACC, while inverse *-iti* restricts the Agent/subject to 1.ERG.

All this together yields the structures in (81). If the NOM proclitic is 2, the two local arguments are disjoint in reference, so Condition B is satisfied, (81a). But if the NOM proclitic is 1, Condition B is violated, (81b): in a direct structure, 1.NOM binds 1.ACC (akin to English **I saw me*); in an inverse structure, 1.ERG binds 1.NOM.

(81)	D–	–Pers	–Num	IP		
a.i	[2]$_{NOM}$ *ki-*	[LOCAL] *-n*	∅	(x, **y=1**.ACC) V-*i*	*ki*-*sêkih-i-n*	'you frighten me'
a.ii	[2]$_{NOM}$ *ki-*	[LOCAL] *-n*	∅	(x=1.ERG, y) V-*iti*	*ki*-*sêkih-iti-n*	'you frighten me'
b.i	[1]$_{NOM}$ *ni-*	[LOCAL] *-n*	∅	(x, **y=1**.ACC) V-*i*	**ni*-*sêkih-i-n*	[=I frighten me]
b.ii	[1]$_{NOM}$ *ni-*	[LOCAL] *-n*	∅	(**x=1**.ERG, y) V-*iti*	**ni*-*sêkih-iti-n*	[=I frighten me]

Condition B accounts not only for the absence of 1 in the *you&me* set, but also for the absence of inclusive 'we' agreement in the *you&me* set:

Plains Cree

(82)	*ki-[sêkih]-i-nânaw 2-frighten-DIR-21pl [we(incl) frighten me]	*ki-[sêkih]-iti-nânaw 2-frighten-INV-21pl [I frighten us(incl)]

Inclusive 'we' is [2, 1], so it cannot occur with another 1st or 2nd person argument. To see this, look at (83). Direct local forms specify *y*=1.ACC, so the presence of inclusive 'we' results in a Condition B violation: a pronominal 1st person feature would be bound in its local domain, cf. (83a). This extends to the inverse *you&me* forms which specify *x*=1.ERG; again, the presence of inclusive 'we' would violate Condition B, (83b).

(83)	D–	–Pers	–Num	IP		
a.	[2]$_{NOM}$ *ki-*	[2, *1, pl] *-nânaw*	∅	(x, **y=1**.ACC) V-*i*	**ki*-V-*i-nânaw*	[we(incl) V me]
b.	[2]$_{NOM}$ *ki-*	[2, *1, pl] *-nânaw*	∅	(**x=1**.ERG, y) V-*iti*	**ki*-V-*iti-nânaw*	[I V us(incl)]

A binding-theoretic analysis accounts for two gaps in the *you&me* subparadigm: the absence of the nominative 1st person proclitic *n-*, and the absence of inclusive 'we' *-nânaw*. In both cases, their presence is blocked by the prohibition in Algonquian against co-indexing arguments (Hockett 1966:65), which itself reflects the activity of Condition B.[22]

4.6.3. When both local arguments are plural

When both local arguments are plural, as expected, only one Pers position is realized, but it can be filled either by the *I-ful* or the *you-ful* plural. In most of Algonquian, "*I-ful* pluralization takes precedence over *I-less* pluralization" (Hockett 1966:67, cf. Goddard 1967:94*ff.*). This is illustrated in (84) for Plains Cree.

(84) *Plains Cree*

a.	ki-[sêkih-i]-nâwâw	ki-[sêkih-iti]-nâwâw
	2-frighten-DIR-2pl	2-frighten-INV-2pl
	'you(pl) frighten me'	'I frighten you(pl)'
b.	&ki-[sêkih-i]-nân	&ki-[sêkih-iti]-nân
	2-frighten-DIR-1pl	2-frighten-INV-1pl
	'you(sg/pl) frighten us'	'we frighten you(sg/pl)'

This plural neutralization is sometimes taken to be evidence for an 'underlying' [1>2] ranking (Noyer 1992), but there are reasons to doubt this. In Blackfoot, where [1>2] does obtain with verbs, this results in a restructuring of the *you&me* set and also disrupts the participation of inclusive 'we' in the mixed set. None of these effects is discernible in Plains Cree (or in any of other Algonquian languages where *I-ful* plural takes precedence over *you-ful* plural). A second reason not to see plural neutralization as evidence for [1>2] is the fact that closely related dialects such as Plains and Swampy Cree differ in whether they neutralize *I-ful* or *you-ful* features, as seen by comparing (84) to (85). Since the paradigm structure of these two varieties is similar, this suggests that whatever accounts for plural neutralization, it is not attributable to the relative ranking of 1 and 2.[23]

(85) *Swampy Cree* (Ellis 1983:281)

a.	&ki-[wâpam-i]-nâwâw	&ki-[wâpam-iti]-nâwâw
	2-frighten-DIR-2pl	2-frighten-INV-2pl
	'you(pl) see me/us'	'I/we see you(pl)'
b.	ki-[wâpam-i]-nân	ki-[wâpam-iti]-nân
	2-frighten-DIR-1pl	2-frighten-INV-1pl
	'you(sg) see us'	'we see you(sg)'

[22] Reflexives and reciprocals are formed by detransitivizing suffixes.

[23] Anderson (1992:130) also discusses this contrast, citing Plains Cree data from Wolfart (1973) and Goddard (1967), and what is presumably Swampy Cree data from Howse (1844).

In the present analysis, the question is not what determines plural neutralization, but rather why *I-ful* plural marking is possible at all. Consider (86). With a *you-ful* plural, D is filled by the 2nd person proclitic, Pers by a compatible enclitic, and Num is null, (86a). But if the *I-ful* plural is present, it cannot occupy Pers for the same reason that an inclusive plural is blocked there: it would violate Condition B, since the *I-ful* NOM would bind the *I-ful* ACC, (86b). The other option is for the *I-ful* suffix to occupy Num, (86c). If this is indeed how *I-ful* plurals are introduced in the *you&me* set, this raises the question of what rules out (86d).

(86) *plural neutralization with local arguments*

	D–	–Pers	–Num	IP		
a.	[2]$_{NOM}$ *ki-*	[2, pl] *-nâwâw*	∅	(x, y=1.ACC) V–*i*	*ki*-V-*inâwâw*	'2pl V-s **1**'
b.	[2]$_{NOM}$ *ki-*	[**1**, pl] *-nân*		(x, y=**1**.ACC) V–*i*	**ki*-V-*inân*	['you&me V me']
c.	[2]$_{NOM}$ *ki-*	∅	[pl, 1]$_{ACC}$ *-nân*	(x, y=1.ACC) V–*i*	*ki*-V-*inân*	'**2** V-s 1pl'
d.	[2]$_{NOM}$ *ki-*	[2, pl] *-nâwâw*	[pl, 1]$_{ACC}$ *-nân*	(x, y=1.ACC) V–*i*	**ki*-V-*inâwâwinân*	[2pl V-s 1pl]

Although I have no principled account to offer, by the logic of output specificity it is the absence of (86d) that forces plural neutralization. In Plains Cree (and most of Algonquian), (86a) is ambiguous between a singular or plural denotation for 1; in Swampy Cree it is (86c) which is ambiguous between a singular or plural denotation for 2.

4.6.4. The syntax of local arguments (summary)

Variation in the morphosyntax of local arguments provides evidence for the organization of person features. **First**, direct/inverse marking leads to the conclusion that Blackfoot verbs have [1>2], versus the [2>1] of other Algonquian languages. This difference has consequences: (i) *you&me* forms with a 2nd person Agent/subject, and a 1st person Patient/object are marked inverse in Blackfoot, but other Algonquian languages use direct-like morphology; (ii) inclusive 'we' is absent with Blackfoot verbs because its status as a 2nd person contradicts the [1>2] ranking of the Blackfoot verbal paradigm; instead a [LOCAL] form is used, which subsumes speaker and addressee. **Second**, binding theory predicts the absence of the 1st person proclitic *n-* in the *you&me* set, and the absence of the inclusive 'we' suffix. **Third**, plural neutralization with local arguments does not correlate with the ranking of 1 and 2, and so cannot be taken as evidence for or against the relative ranking of person features (*contra* Noyer 1992).

4.7. Only one Num position: the 3rd person set

By hypothesis, 3 lacks person features and so reduces to Num agreement. Given the availability of two agreement positions, if there are two '3rd person' arguments one of two things should happen. If '3rd person' can occupy Pers in addition to Num, then both 3rd person arguments will be marked for agreement; this is the 'double agreement' pattern, (87a). Alternatively if Pers

requires *person* features, then 3rd person agreement will be restricted to Num, and only one 3rd person argument will register agreement; this is the 'single agreement' pattern, (87b).

(87) a. [$_C$ D- [$_{Pers}$ –3SG/PL [$_{NumP}$ –3SG/PL [IP]]]
b. [$_C$ ∅ [$_{Pers}$ ∅ [$_{Num}$ –3SG/PL [IP]]]

Both options are attested: 'double agreement' in Potawatomi (§4.7.1), 'single agreement' in Plains Cree (§4.7.2). Blackfoot presents a more complex situation, utilizing Num agreement with direct(ACC) verbs, but D/Pers/Num agreement with inverse(ERG) verbs (§4.7.3).[24]

4.7.1. 3rd person arguments in Potawatomi: 'double agreement'

The non-local (3) agreement of nominal stems also marks verbal stems, as seen below:

Potawatomi

	NOMINAL INFLECTION	VERBAL INFLECTION
(88) a.	[waposo]-∅ rabbit-sg 'rabbit'	[kaskumi]-∅ start.running-sg 'he starts running'
b.	[waposo]-k rabbit-pl 'rabbits'	[kaskumi]-k start.running-pl 'they start running'
c.	[waposo]-n rabbit-obv 'rabbit(s).obv'	[kaskumi]-n start.running-obv 'he/they.obv start running' (H&M1993:141)
d.	o-[waposo]-n 3-rabbit-obv 'his/her rabbit(s).obv'	w-[wapm-a]-n 3-see-DIR-obv 'he sees him/them.obv' (H&M1993:148)

(88) shows that an animate singular noun and 3rd singular intransitive verb both bear zero; a plural noun and a 3rd plural verb both take the suffix */-uk/*; an obviated noun and a obviative subject both bear */-un/*. Number and obviation marking are in complementary distribution: a stem may be marked for one or the other, but not both (Hockett 1966:52), suggesting they occupy the same position. In the present analysis: they are both possible realizations of Num:

(89) *Potawatomi*

	D–	–Num	XP		
a.	*o-*	*-n*OBV	*waposo*	*/owaposon/*	'his/her rabbit(s).obv'
b.	*w-*	*-n*OBV	*wapm-a*	*/wwapman/*	'he sees him/them.obv'

[24] The distinction between double and single agreement recalls Goddard's (1967) reconstruction of Algonquian verbs into the objective type (marking subject and object) and absolute type (not marking a grammatical object).

Accepting that number and obviation distinctions are both located in Num, now consider the full series of non-local arguments with transitive verbs:

Potawatomi 3rd person set

	DIRECT	INVERSE
(90) a.	/w-[wapm-a]-n/ 3-see-DIR-obv 's/he sees him/them.obv'	/w-[wapm-uko]-n/ 3-see-INV-obv 'he/them.obv sees him'
b.	/w-[wapm-a]-wa-n/ 3-see-DIR-pl-obv 'they see him/them.obv'	/w-[wapm-uk]-wa-n/ 3-see-INV-pl-obv 'he/them.obv see(s) them'

In Potawatomi, obviation agreement is obligatory and is located in Num. It shows agreement with the marked structural case: the ACC argument of a direct verb; the ERG argument of an inverse verb. NOM (non-obviative) agreement is distributed across D and Pers, showing agreement with the Agent of a direct verb, and the Patient of an inverse verb:

(91) *double agreement with transitive verbs: Potawatomi*

	D–	–Pers	–Num	IP		
a.	[∅]$_{NOM}$ *w-*	[pl]$_{NOM}$ *-wa*	[obv]$_{ACC}$ *-n*	(x, y=ACC) *wapm-a*	*w-wapma-wa-n*	'3pl see 3obv'
b.	[∅]$_{NOM}$ *w-*	[pl]$_{NOM}$ *-wa*	[obv]$_{ERG}$ *-n*	(x=ERG, y) *wapm-uk*	*w-wapm-uk-wa-n*	'3obv see(s) 3pl'

There is one exception to the generalization that the 3rd person set has double agreement. Though not discussed by Hockett, unspecified subject constructions surface without proclitic (NOM) agreement. This is illustrated in Ojibwe:

Ojibwe

(92) a	o-[waapam-aa]-n 3-see-DIR-obv 'he sees him/them.obv'	[waapam]-aa-∅ see-DIR-sg 'someone sees him, he is seen'
b	o-[waapam-aa]-waa-n 3-see-DIR-obv 'they see him/them.obv' (Shwartz & Dunnigan 1986:308)	[waapam]-aa-waak see-DIR-pl 'someone sees them, they are seen' (Shwartz & Dunnigan 1986:310)

The disappearance of proclitic agreement in the unspecified subject construction has structural consequences. With transitive verbs, obviation agreement is obligatory, and its presence neutralizes number on the obviative argument. With unspecified subject constructions, obviation agreement is absent and the ACC argument is marked for number, cf. (93).

(93) *single agreement with unspecified subject construction: Ojibwe*

	D–	–Pers	–Num	IP		
a.	∅	∅	[∅]ACC	(x=∃, y=ACC) V-aa	waapam-aa	'someone sees him'
b.	∅	∅	[pl]ACC -waak	(x=∃, y=ACC) V-aa	waapam-aa-waak	'someone sees them'

Unspecified subject constructions show that languages like Potawatomi and Ojibwe, which normally use double agreement, sometimes use single agreement. In addition, they reveal two descriptive generalizations: (i) absence of obviation agreement correlates with the presence of number agreement, i.e. they are complementary; (ii) obviation agreement is absent if proclitic agreement is absent. This is the general pattern in Plains Cree.

4.7.2. 3rd person arguments in Plains Cree: 'single agreement'

With the 3rd person set, Plains Cree verbs lack proclitic agreement; enclitic agreement is with the nominative argument (subject of a direct(ACC) verb, object of an inverse(ERG) verb):

Plains Cree 3rd person set

	DIRECT	INVERSE
(94) a.	[sêkih-ê]-w frighten-DIR-sg '3sg frightens 3(±obv)'	[sêkih-ik]-(w) frighten-INV-sg '3(±obv) frighten(s) 3sg'
b.	[sêkih-ê]-wak frighten-DIR-pl '3pl frighten 3(±obv)'	[sêkih-ik]-wak frighten-INV-pl '3(±obv) frighten(s) 3pl'

In a 'single agreement' system like Plains Cree, obviation agreement is optional and is introduced in one of two ways. It may be marked via NOM agreement, in the form of the enclitic *-yiwa*. The latter occurs with both direct and inverse verbs:

Plains Cree nominative obviation

(95)	[sékih-ê]-yiwa frighten-DIR-obv '3obv frighten(s) 3(±obv)'	[sêkih-iko]-yiwa frighten-INV-obv '3(±obv) frighten(s) 3obv'

Another way of introducing obviation agreement is via stem internal *-im*, which is restricted to direct/ACC verbs.[25] It appears in the mixed set, the 3rd person set, and the unspecified subject construction:

[25] I consider *-im* to be stem-internal because it precedes the direct suffix.

Plains Cree accusative obviation

(96) a.	ni-[sêkih-â]-wak 1-frighten-DIR-pl 'I frighten them'	ni-[sêkih-im-â]-wa 1-frighten-obv-DIR-obv 'I frighten 3obv'
b.	[sêkih-ê]-wak frighten-DIR-pl 'they frighten 3(±obv)	[sêkih-im-ê]-wak frighten-obv-DIR-pl 'they frighten 3obv'
c.	[sêkih-â]-wak frighten-DIR-pl 'someone frightens them(±obv)	[sêkih-im-â]-wa frighten-DIR-obv 'someone frightens 3obv'

The non-obligatoriness of obviation agreement in Plains Cree leads Wolfart (1973:16*b*) to conclude that "the obviation dimension functions within, rather than on a par with, the third-person category". Restated in terms of the proposed analysis, in a single agreement system, agreement is with the NOM argument, which may be marked for number or obviation, while the ACC/ERG argument does not register agreement:

(97) *NOM agreement: Plains Cree*

	D–	–Pers	–Num	IP		
a.i	∅	∅	[sg]NOM -*w*	(x, y=ACC) V-*ê*	*sêkihê-w*	'**3sg** frightens 3'
a.ii	∅	∅	[pl]NOM -*wak*	(x, y=ACC) V-*ê*	*sêkihê-wak*	'**3pl** frighten 3'
a.iii	∅	∅	[obv]NOM -*yiwa*	(x, y=ACC) *sêkih-ê*	*sêkihê-yiwa*	'**3obv** frighten(s) 3'
b.i	∅	∅	[sg]NOM -*w*	(x=ERG, y) V-*ik(o)*	*sêkihik-(w)*	'3 frighten(s) **3sg**'
b.ii	∅	∅	[pl]NOM -*wak*	(x=ERG, y) V-*ik(o)*	*sêkihik-wak*	'3 frighten(s) **3pl**'
b.iii	∅	∅	[obv]NOM -*yiwa*	(x=ERG, y) *sêkih-iko*	*sêkihiko-yiwa*	'3 frighten(s) **3obv**'

One consequence of aligning obviation marking with NOM agreement is that the argument which bears marked structural case—ACC of a direct verb, ERG of an inverse—is unspecified for either number or obviation in Plains Cree. The only way to code a non-nominative argument for obviation is via stem-internal obviation in the form of *-im*. As mentioned above, this type of obviation marking is restricted to direct verbs. Following Déchaine & Reinholtz (1998), I take this to indicate that *-im* is inherently accusative, cf. (98).

(98) *obviative ACC marking: Plains Cree*

	D–	–Pers	–Num	IP		
a.	[1]	∅	[obv]$_{ACC}$	(x, y=OBV.ACC)		
	ni-		*-wa*	V-*im-â*	*ni-sêkih-im-â-wa*	'I frighten **3obv**'
b.	∅	∅	[pl]$_{NOM}$	(x, y=OBV.ACC)		
			-wak	V-*im-ê*	*sêkih-im-ê-wak*	'they frighten **3obv**'
c.	∅	∅	[obv]$_{ACC}$	(x=∃, y=OBV.ACC)		
			-wa	V-*im-ê*	*sêkih-im-â-wa*	'someone frightens **3obv**'

In a single agreement language like Plains Cree, obviation agreement is optional. This contrasts with double agreement languages like Potawatomi and Ojibwe, where obviation agreement is obligatory, and is restricted to arguments which have marked structural case (ACC or ERG). This is a condition B effect: in double agreement systems, D/Pers agreement forces the other 3rd person agreement to be distinct, i.e. obviative. And if D/Pers is absent, as in PC, obviation is too. While P/O have only one way of marking obviation agreement, PC has two: obviative agreement with NOM (for direct and inverse verbs) or with an ACC argument (restricted to direct verbs). The latter requires the presence of the stem-internal suffix *-im*.[26]

4.7.3. 3rd person arguments in Blackfoot: a direct/inverse contrast

Like Plains Cree, Blackfoot has 'single agreement' with 3rd persons: there is agreement only with the NOM argument, i.e. Agent/subject of a direct(ACC) verb, Patient/object of an inverse(ERG) verb. In direct verbs agreement is marked by one enclitic, but in inverse verbs agreement is discontinuous, and involves all three clitic positions:

Blackfoot

(99) a. [ikákomimm-ii]-wa — ots-[ikákomimm-ok]-a
love-DIR-sg.NOM — 3.NOM-love-INV-sg.NOM
'he loves him/them' — 'he/they love(s) him'

b. [ikákomimm-ii]-yi — ots-[ikákomimm-ok]-oaa-yi
love-DIR-pl.NOM — 3.NOM-love-INV-pl.NOM-pl.NOM
'they love him/them' — 'he/they love(s) them'

I propose to identify the suffixal agreement of direct(ACC) verbs with Num, and the disconstinuous agreement of inverse(ERG) verbs with D/Pers/Num, as in (100a-b). What remains unclear is what determines the agreement strategy of Blackfoot direct and inverse verbs. What prevents a direct(ACC) verb from appearing with D, Pers and Num filled, i.e. with 'clitic tripling', as in (100c)? Conversely, what precents an inverse(ERG) verb from appearing only with Num, as in (100d)?

[26] It remains an open question whether the obviative *-im* which appears in verbal paradigms is related to the *-im* which marks possession in nominal paradigms, cf. Wolfart (1973: 28*f.*, 47).

Nominative agreement : Blackfoot

	D–	–Pers	–Num	IP	
(100)a.	∅	∅	[pl]$_{NOM}$	(x, y=ACC)	*ikákomimm-ii-yi*
			-yi	V-*ii*	'they love him/them'
b.	[∅]$_{NOM}$	[pl]$_{NOM}$	[pl]$_{NOM}$	(x=ERG, y)	*ots-ikákomimm-ok-oaa-yi*
	ots-	*-oaa*	*-yi*	V-*ok*	'he/they love(s) them'
c.	[∅]$_{NOM}$	[pl]$_{NOM}$	[pl]$_{NOM}$	(x, y=ACC)	**ots-ikákomimm-ii-oaa-yi*
	ots-	*-oaa*	*-yi*	V-*ii*	[they love him/them]
d.	∅	∅	[pl]$_{NOM}$	(x=ERG, y)	**ikákomimm-ok-(y)i*
			-yi	V-*ok*	[he/they love(s) them]

4.8. Agreement positions (summary)

I began by observing that the position of number marking in Algonquian possessor DPs is consistent with movement of the stem to [Spec, NumP] and onwards to [Spec, Pers]. This accounts for several kinds of facts: the discontinuity of agreement, the clitic properties of the agreement markers and the phrasal properties of the stem.

(101) [$_{DP/CP}$ D– [$_{Pers}$ –2/1 [$_{Num}$ –PL/OBV [$_{NP/IP}$ …]]]]

Generalizing this account from DP to CP gives some insight into how arguments of Algonquian transitive verbs are coded for agreement. The distribution of agreement motivates three positions, while the featural content of the morphemes is the basis for the labels D (person features proper), Person (person-sensitive features) and Num (number/obviation features).[27] This structure leads one to expect the selectional restrictions which hold between pro- and enclitics; it derives the Algonquianist subparadigms (the mixed set, the *you&me* set, the 3rd person set); it clarifies Algonquian-specific restrictions on the distribution of person and number marking (e.g. the exclusion of 1st person agreement from the *you&me* set, the exclusion of the inclusive plural from the *you&me* set); and it provides a syntactic basis for the distinction between 'double agreement' and 'single agreement' systems. Open questions include the whys and wherefores of stem movement, plural neutralization and obviation agreement.

5. Conclusion: Algonquian, Italian and "Polysynthesis"

I have shown that Algonquian agreement can be understood in terms of syntactic principles. This step opens glimpses of formal parallels between Algonquian and other, unrelated languages —parallels which are occluded by an a-syntactic morphology. In Italian, for example, Manzini and Savoia (1998) distinguish aspectually-licensed clitics (CL$_{origin}$, CL$_{del}$, CL$_{meas}$), associated with specific semantic roles and case properties, from clitics with no aspectual content (CL$_{Person}$, CL$_{D}$). The two sets are interspersed in the sentential projection, as in (102).

[27] This captures the distinction made by Goddard (1979) for Delaware and Nichols (1980) for Ojibwe between personal prefixes (D), central suffixes (Pers) and peripheral suffixes (Num).

(102)

	…	CL_{origin}	$CL_{P(D)}$	CL_{del}	CL_{D}	CL_{meas}	…
semantic roles		Agent	—	Goal	—	Theme	
case features		ERG	NOM	DAT	—	ACC	
discourse features		—	1, 2, (3)	—	3 ±definite		

Applying this schema to Algonquian, we see that agreement is aspectually undifferentiated, i.e. its content is determined not by semantic roles but rather by discourse features—just as Hockett's terms "local" and "non-local" lead us to expect. This is also consistent with Nichols' (1980:131) characterization of agreement: "No reference is made in the selection rules to the syntactic role of the participant, but merely to its presence as a participant." Moreover, aspectual/event structure information is always stem-internal in Algonquian (e.g. direct/inverse indicates case alignment; verb finals indicate animacy).

For Manzini and Savoia, the locus of definiteness is CL_D. This is consistent with the fact that in many Algonquian languages number marking is sensitive to specificity/definiteness, e.g. in Blackfoot a 'particular' object triggers agreement, but a 'non-particular' one does not:[28]

Blackfoot (Frantz 1991:40*f.*)

(103)a. Nít-ohpommaa náápioyii.
1-buy.INTRANS house.NON.PART
'I made a house-purchase'

b. Nisstówa, nit-ophómmatoohp-**a** amoyi náápioyis-i.
1sg 1-buy.TRANS-3s this house-PART
'I bought this house'

There remains a discrepancy between the two analyses. Manzini and Savoia identify two aspectually neutral clitic positions in Italian: CL_P and CL_D, while I find three Algonquian clitic positions: D, Pers, Num. Equating my Pers to their CL_P, and my Num to their CL_D, the residue is the Algonquian D proclitic. A hint concerning the structural basis for this proclitic comes from comparing the Algonquian Independent and Conjunct modes, cf. (104).

(104)a. D – (aspect) – … – V… – PERSON – PL/OBV INDEPENDENT MODE

b. C – (aspect) – … – V… – PERSON – PL/OBV CONJUNCT MODE

[28] This is comparable to the indefinite and finite conjugations of Abnaki (eastern Algonquian): "finite forms are used whenever there is no nominal object and are also used with an object to give the meaning of the English definite article. The indefinite forms are only used when the verb governs a nominal object and they convey the meaning of the English definite article." (Goddard 1967:76)

(i) a. w'namitonal kchi nebesal 'he sees the great lakes'

b. 'namito kchi nebesal 'he sees some great lakes'

The two paradigms differ in both morphology and syntax. Morphologically, the Independent mode has discontinuous agreement, while agreement in the Conjunct mode is limited to suffixes. Syntactically, the Conjunct mode has a prefixal Comp which is lacking in the Independent Mode. Generalizing, we can say that the D and C proclitics compete for the same syntactic position, i.e. that Algonquian D is introduced in [Spec, CP]. This captures the obligatory discourse-linking properties of these proclitics, both the D-elements (Déchaine & Reinholtz 1998) and the C-elements (Blain 1997).

In other respects, of course, Algonquian and Italian still differ substantively in the two analyses, e.g. with respect to the licensing of *pro* arguments and case features, and as to the encoding of semantic roles. But both accounts share a common hypothesis: clitic placement is structurally determined. It may thus encourage the syntactic project that we apparently converge on the same set of features as being grammatically relevant in two language families: in Hockett's terms, these are the local features of Pers and the non-local features of Num.

Finally, we can ask how the foregoing bears on the typology of polysynthetic languages. The analysis proposed here departs from proposals by Jelinek (1984) and Baker (1996), both of whom analyze agreement morphology as directly saturating argument positions ("the pronominal argument hypothesis"). Note that the proclitic and enclitic agreement positions of Algonquian lie outside the inflected stem; although they restrict the denotational range of arguments, they crucially do not saturate A-positions. To be sure, Algonquian does have certain morphemes which, at least intuitively, absorb A-positions: these include incorporated nominals, reflexive and reciprocal affixes, as well as "verb finals" which code the animacy of arguments.[29] It remains to be seen whether the properties of these elements are consistent with a syntactic analysis of the stem-internal domain.

More generally, the picture of Algonquian agreement presented here, if tenable, would lead us to deny that "polysynthesis" defines a language type in the way that Baker (1996), following a long tradition, intends. Rather, polysynthesis is at best a descriptive term for a constellation of surface properties which reflect the convergence of independent factors—some syntactic and some prosodic—whose net effect is to derive complex "words".[30] To the extent that this term obscures structural similarities across language families, its theoretical currency is burdensome.

[29] Goddard (1990b) gives a survey.

[30] See Russell (herein).

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