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# How many hierarchies, really? Evidence from several Algonquian languages

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# How many hierarchies, really?
# Evidence from several Algonquian languages

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**Abstract**
The present paper presents in some detail evidence from selected Algonquian languages (Cree, Ojibwa, Micmac, Blackfoot and Arapaho) that strengthens the case against a putative "Algonquian person hierarchy" and shows that, at least at some levels of description, there are multiple nominal hierarchies to be taken into account. In addition, I sketch a tentative way to resolve the problem of multiple hierarchies in Plains Cree, a language that is often at the center of attention in studies dealing with hierarchical alignment and/or personal hierarchies.

## 1. Introduction

Textbook examples dealing with hierarchical alignment or other notions that make reference to some version of what is called "empathy hierarchy", "nominal hierarchy" or "Silverstein hierarchy" in the literature are often taken from the Algonquian languages of North America in general and Plains Cree in particular. Specifically, it is often said that Algonquian constitutes one of the most solid counterexamples to the claim that a person ranking like 1st > 2nd > 3rd is universal because the behavior of the verbal proclitics/prefixes in Algonquian languages show a clearly different ranking, viz. 2nd > 1st > 3rd. The argument frequently includes the morphology of other verbal affixes and the syntax of Plains Cree clauses in order to strengthen the case against the universality of the 1st > 2nd > 3rd ordering —which, needless to say, is attested in other languages, cf. the behavior of deictic motion verbs in Japanese (Shibatani 2003).

However, the situation in Algonquian is much more complex than what most textbook examples suggest. Some recent studies have emphasized two important facts well-known to Algonquianists: there is variation among different Algonquian languages, and a more detailed analysis of Plains Cree leads to a less straightforward picture. Zúñiga (2006) argued for at least two different and possibly incompatible hierarchies governing the behavior of prefixes and affixes in Plains Cree, and Macaulay (2005) targeted the issue of conflicting hierarchies based upon data from several Algonquian languages.

The purpose of the present paper is to present in some detail additional evidence taken from descriptive studies on Algonquian that strengthen the case against a unique "Algonquian person hierarchy" at a phenomenological, albeit not necessarily analytical, level. Section 2 presents and discusses some person-marking affixes on selected verb forms and possessed nouns in different varieties of Cree and Ojibwa, but also in Micmac, Blackfoot and Arapaho. Section 3 summarizes the findings and addresses their significance; in addition, I sketch a tentative, admittedly hyper-structuralist, way to resolve the problem of multiple hierarchies in Plains Cree.

## 2.    Different person and number hierarchies in Algonquian languages

2.1. The two hierarchies of Plains Cree

The data in (1) from Plains Cree show a fundamental isomorphism in person making between the encoding of possessors with nominal stems on the one hand (a,c) and the encoding of the argument in S function with intransitive predicates in the independent order (b,d):[1] a 2nd person is marked by an element *k(i)-*, a 1st person by *n(i)-* and a 3rd person by *o(t)-* ~ *Ø-*. (The formative *o(t)-* occurs with nominals and with some forms of the verbs; see Wolfart 1996 for more details on this allomorphy.) Intransitive verbs with singular S's have a suffix *-n* for 1st or 2nd person and a suffix *-w* for 3rd person. In addition, plural S[peech] A[ct] P[articipants] take a suffix *-wāw* '23', *-naw* '12' or *-nān* '13' with both nominals and verbs:[2,3]

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[1]For the sake of simplicity, only A[nimate] I[ntransitive] stems in the independent order have been given here.

[2]I am glossing over some details here (e.g., epenthetic *i* and the intervening element *nā*) that do not invalidate the overall argument.

(1)     Plains Cree (Wolfart 1996:417-421)

|   | | | |
|---|---|---|---|
| a. | *ki-tēm* | *ni-tēm* | *o-tēm-a* |
|    | 2-horse | 1-horse | 3-horse-OBV |
|    | 'your (SG) horse' | 'my horse' | 'his/her horse' |
| b. | *ki-tapi-n* | *ni-tapi-n* | *Ø-tapi-w* |
|    | 2-sit-1/2 | 1-sit-1/2 | 3-sit-3 |
|    | 'you (SG) sit' | 'I sit' | 's/he sits' |
| c. | *ki-tēm-iwāw* | *ki-tēm-inaw* | *ni-tēm-inān* |
|    | 2-horse-23 | 2-horse-12 | 1-horse-13 |
|    | 'your (PL) horse' | 'our (INCL) horse' | 'our (EXCL) horse' |
| d. | *ki-tapi-nāwāw* | *ki-tapi-nānaw* | *ni-tapi-nān* |
|    | 2-sit-23 | 2-sit-12 | 1-sit-13 |
|    | 'you (PL) sit' | 'we (INCL) sit' | 'we (EXCL) sit' |

The behavior of the prefixes introduced in (1) above when there are two participants is seen in the independent T[ransitive] A[nimate] paradigm of Plains Cree from which the forms in (2) are taken. Whenever a 2nd person is one of these participants, it is marked (*ki-*); whenever there is a 1st person participant and no 2nd person participant, it is marked (*ni-*); a 3rd person can be marked (*Ø-*) only if there are no SAPs present. The suffixes are similar to the ones already shown in (1) ―a formative *-w* for 3rd person and *-n* for singular SAPs―, but transitive verb forms also include a so-called "theme" suffix that expresses direction: *-ā ~ -ē* 'direct' (i.e., a SAP in A function and a 3rd person in O function, or proximate A and obviative O) vs. *-ikw ~ -iko* 'inverse' (i.e., the other way round).[4] Along related lines, the suffixes *-i* and *-iti* in the same slot express whether a 2nd person acts on a 1st person or vice versa, respectively. Since most prefixes and suffixes indicate only person, but not role, of the participants they encode, the theme suffix is often the only formative conveying the information as to who does what to whom.

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[3]The abbreviations used in this paper are the following: 1 first person singular, 12 first person plural inclusive, 13 first person plural exclusive, 2 second person singular, 23 second person plural, 3 third person singular, 33 third person plural, AI animate intransitive, ANIM animate, DIR direct, EXCL exclusive, IC initial change, INCL inclusive, INV inverse, OBV obviative, PL plural, Q question, SAP speech act participant, SG singular, TA transitive animate.

[4]Algonquian languages are known for overtly coding the obviation status of 3rd persons. See Aissen (1997) for details; roughly, possessors, topics and animates are proximate whereas possessees, nontopics and inanimates are obviative.

(2)    Plains Cree (Dahlstrom 1986:69-70)

    a.   *ki-sēkih-ā-w*                      *ki-sēkih-ikw-w*
        2-frighten-DIR-3              2-frighten-INV-3
        'you (SG) frighten him'       'he frightens you (SG)'

    b.   *ki-sēkih-i-n*                     *ki-sēkih-iti-n*
        2-frighten-2→1-1/2         2-frighten-1→2-1/2
        'you (SG) frighten me'        'I frighten you (SG)'

    c.   *ni-sēkih-ā-w*                    *ni-sēkih-ikw-w*
        1-frighten-DIR-3              1-frighten-INV-3
        'I frighten him'              'he frightens me'

    d.   *Ø-sēkih-ē-w*                     *Ø-sēkih-ikw-w*
        3-frighten-DIR-3              1-frighten-INV-3
        'he (PROX) frightens him (OBV)'   'he (OBV) frightens him (PROX)'

Taking only these data into account, we could actually come to the conclusion that is often found in the literature not dealing with Algonquian in detail: the 2nd person outranks the 1st, which in turn outranks the 3rd, as evidenced by the behavior of the prefixes. Consequently, the *-i* and *-iti* theme suffixes can also be integrated into the direction-marking picture in a straightforward way: since 2nd outranks 1st, *-i* '2(3)→1(3)' and *-iti* '1(3)→2(3)' are simply the "local" allomorphs of direct and inverse, respectively.

    However, in order to obtain a full picture it is crucial to consider the data in (3) below, where plural SAPs interact with each other and with a 3rd person. The same personal prefixes of (1) and (2) are used, according to a related but slightly different logic: whenever a 2nd person plural is present, use *-ki*; whenever a 1st person plural is a participant, use *-ki* if it is inclusive but *-ni* if it is exclusive (a fact that has lead many Algonquian studies to treat the inclusive person as a subtype of 2nd, not of 1st, person). The person-marking suffixes appear according to the following rules: whenever there is a 1st person exclusive or inclusive, mark it (*-nān* / *-naw*); whenever there is a 2nd person plural and no 1st person plural, mark it (*-wāw*); other persons (singular SAPs and 3rd) can be marked only if there are no plural SAP participants. The behavior of these prefixes and suffixes is summarized in Table 1.

(3)  Plains Cree (Dahlstrom 1986:69-70)

a.  *ni-sēkih-ā-nān*                     *ni-sēkih-iko-nān*
    1-frighten-DIR-13                    1-frighten-INV-13
    'we (EXCL) frighten him'             'he frightens us (EXCL)'

b.  *ki-sēkih-i-nān*                     *ki-sēkih-iti-nān*
    2-frighten-2→1-13                    2-frighten-1→2-13
    'you (SG/PL) frighten us (EXCL)'     'we (EXCL) frighten you (SG/PL)'

c.  *ki-sēkih-ā-naw*                     *ki-sēkih-iko-naw*
    2-frighten-DIR-12                    2-frighten-INV-12
    'we (INCL) frighten him'             'he frightens us (INCL)'

d.  *ki-sēkih-i-nāwāw*                   *ki-sēkih-iti-nāwāw*
    2-frighten-2→1-23                    2-frighten-1→2-23
    'you (PL) frighten me/us'            'I/we frighten you (PL)'

*Table 1:* Selected affixes on Plains Cree TA independent verbs

| Prefix (ranked) | | Theme (complementary) | | Suffix (ranked) | |
|---|---|---|---|---|---|
| *k(i)-* | '2(3)'/'12' | *-ā ~ -ē* | 'DIR' | *-nān* | '13' |
| *n(i)-* | '1(3)' | *-ikw ~ -iko* | 'INV' | *-naw* | '12' |
| *o(t)-~Ø-* | '3(3)' | *-i* | '2(3)→1(3)' | *-wāw* | '23' |
| | | *-iti* | '1(3)→2(3)' | *-w* | '3ANIM' |
| | | | | *-n* | '1/2' |

There is one further slot related to person and number marking after the one hosting the SAP plural markers and the other formatives in Plains Cree, which I have glossed over here: the slot where plural of proximate and inanimate 3rd person participants are marked, as well as obviative arguments (cf. the 3rd proximate plural suffix *-ak* in Example 9). This slot is not at the center of attention in the present context but is obviously relevant in the light of what I will sketch further down concerning the slots in Blackfoot and Arapaho.


2.2. Variation in Cree

As far as suffixal morphology is concerned, not all varieties of Cree behave exactly alike. Some dialects (I have grouped them here as "Type A"), viz.

Atikamekw, James Bay or Eastern Cree, Betsiamites Innu and Moisie, are like Plains Cree in that 1st person plural exclusive ranks highest, followed by 2nd person plural, which in turn outranks singular SAPs. A second group ("Type B"), viz. Moose Cree, Swampy Cree and Davis Inlet Naskapi, are the mirror image of Type A in that 2nd person plural outranks 1st person plural exclusive (MacKenzie 1980:154 in Macaulay 2005:25; see also Ellis 1971 and Dahlstrom 1986:68f). (Further observe that these two groups do not simply correspond to western and eastern varieties, since Type A dialects appear to the west and to the east of Type B varieties.) If we take the behavior of verb affixes in several Cree dialects into account, the picture in Table 2 emerges.

*Table 2:* Suffixes on Cree TA independent verbs, different dialects

|  | Type A | Type B |
|---|---|---|
| *-i-n* | 2→1 | |
| *-i-nān* | 2(3)→13 | 2→13 |
| *-i-nāwāw* | 23→1 | 23→1(3) |
| *-iti-n* | 1→2 | |
| *-iti-nān* | 13→2(3) | 13→2 |
| *-iti-nāwāw* | 1→2(3) | 1(3)→23 |

## 2.3. Variation in Ojibwa

There is one further source of variation in the way the plural SAP suffixes behave in Algonquian (perhaps especially widespread in Central and Eastern Algonquian languages), which can be illustrated here with data from Ojibwa. The Central Ojibwa forms slightly differ from those found in Parry Island and Walpole Island (cf. Rhodes 1976): the Parry Island variety shows a different 1st person plural marker (*-min* instead of *-naan*) and neutralize not only the inclusive/exclusive distinction but also those forms with a 3rd person (singular/plural) participant. The Walpole Island variety is like Plains Cree in that the 13→2 ('we … thee') and 13→23 ('we … you all') scenarios are not distinguished on the independent verb.

(4)   Ojibwa (Valentine 2001:287)

|  |  | Parry I. | Walpole I. |
|---|---|---|---|
| 13→2 | *-igoo* |  | *-inimin* |
| 13→23 | *-igoom* |  | *-inimin* |
| 1(2/3)→3 | *-aanaan* | *-aamin* |  |
| 1(2/3)→33 | *-aanaanig* | *-aamin* |  |
| 3→1(2/3) | *-igonaan* | *-igomin* |  |
| 33→1(2/3) | *-igonaanig* | *-igomin* |  |

## 2.4. A nominal split in Micmac

A much more intriguing and problematic kind of variation is found in the behavior of nominal person marking in Micmac (briefly noted in Macaulay 2005). While plural SAP arguments are marked on independent verbs just like in Plains Cree (i.e., the 1st person plural exclusive outranks the 2nd person plural), there is a split with possessive marking on nouns: some nouns like *-ig* 'house' ("Class I", a) behave like Cree nouns in that the 1st person inclusive takes a 2nd person prefix, but other nouns like *awgti* 'road' ("Class II", b) treat the inclusive plural SAP as though it were a 1st person rather than a 2nd:

(5)   Micmac (Fidelholtz 1968:321f)

    a.  *g-ig-uow*          *g-ig-nu*            *n-ig-nen*

        2-home-23       2-home-12        1-home-13

        'your (PL) home'   'our (INCL) home'  'our (EXCL) home'

    b.  *ëgt-awgti-wow*   *n't-awgti-nu*     *n't-awgti-nen*

        2-road-23        1-road-12         1-road-13

        'your (PL) road'    'our (INCL) road'   'our (EXCL) road'

Fidelholtz (1968:320f) describes the first pattern as "historically more conservative, and, as might be expected, the more infrequent of the two." Class I nominal stems are vowel-initial and obligatorily possessed. The second pattern, in contrast, is found with Class II stems, which are consonant-initial obligatorily possessed stems on the one hand and most alienable stems on the other.

    Interestingly enough, this split is not the only feature of Micmac possessive marking that deviates from most other Algonquian languages: some (unpredictable) stems take a suffix *-m* and do not take prefixes when

possessed by a plural person, and there is at least one stem (*nū* 'Indian') that lacks prefixes with all persons, e.g. *nūm* 'my Indian'. This behavior, uncharacteristic from a broad Algonquian perspective, suggests that person marking prefixes appearing on nominals have become somewhat independent of their verbal counterparts in Micmac. It goes without saying that in-depth research is needed here in order to properly understand these phenomena against a general Algonquian background.

## 2.5. The 1st person plural inclusive in Blackfoot

Blackfoot nouns are analogous to their Plains Cree counterparts: there is a prefix *k(it)-* appearing with both 1st plural inclusive and 2nd person plural possessors, and the suffix *-(i)nnoon* (cf. Cree *-naw*) clearly marks 1st person inclusive. This can be seen with the relational stem *-itan* 'daughter' in (6) (non-relational stems behave alike):

(6)     Blackfoot (Frantz 1991:73)
  a.  *k-itán-oaawa(wa)*      b.  *k-itán-innoona*
      2-daughter-23               2-daugher-12
      'your (PL) daughter'        'our (INCL) daughter'
  c.  *n-itán-innaana*
      1-daughter-13
      'our (EXCL) daughter'

In Blackfoot independent verbs, the cognates of the Cree prefixes (*kit-*, *nit-* and *Ø-*) are ranked in a similar way, but not all of them mean the same thing as in the eastern languages: *kit-* marks 2nd person (singular or plural), *nit-* marks 1st person (singular or plural exclusive), and *Ø-* marks 3rd person and 1st person plural inclusive. Also note that there are two suffix slots for plural participants instead of only one. 1st person plural exclusive *-nnaan* and 2nd person plural *-oaaw* (cf. Cree *-nānān* and *-nāwāw*) appear in the first slot, with the former suffix outranking the latter when they compete. 3rd person markers occur in the second slot: *-wa* for singular and *-yi* for plural. Observe that there is no 1st person inclusive suffix for independent verbs.[5] Another feature of the 1st person inclusive forms that deserves

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[5] The exception to this rule is when the subject is unspecified: *Ø-ikákomimm-oti-hpa* 'we (INCL) are loved'; see Frantz (1991:61) and Footnote 7 for more details on this form.

mention here is the fact that they can also be used with generic participants ('one', 'you', 'people').

(7)    Blackfoot (Frantz 1991:59-61,53)[6]
    a.  *kits-ikákomimm-oki*          *kits-ikákomimm-o*
        2-love-2→1                    2-love-1→2
        'you (SG) love me'            'I love you (SG)'
    b.  *kits-ikákomimm-oki-hp-oaawa*  *kits-ikákomimm-o-hp-oaawa*
        2-love-2→1-SAP-23             2-love-1→2-SAP-23
        'you (PL) love me'            'I love you (PL)'
    c.  *kits-ikákomimm-oki-hp-innaana*  *kits-ikákomimm-o-hp-*
                                        *innaana*
        2-love-2→1-SAP-13             2-love-1→2-SAP-13
        'you (SG/PL) love us (EXCL)'  'we (EXCL) love you (SG/PL)'
    d.  *Ø-Ikákomimm-a-wa  k-itána.*
        12-love-DIR-3      2-daughter
        'We (INCL) love your (SG) daughter.'

*Table 3:* Selected Blackfoot affixes on TA independent verbs

| Prefix (ranked) | Theme (complementary) | | Suffix 1 (ranked) | Suffix 2 (ranked) |
|---|---|---|---|---|
| *kit-* '2(3)' | *-a(a)* | 'DIRECT' | *-nnaan* '13' | *-wa* '3 PROX' |
| *nit-* '1(3)' | *-Ok* | 'INVERSE' | *-oaaw* '23' | *-yi* '33 PROX' |
| *Ø-* '3(3)' / '12' | *-Oki* | '2(3)→1(3)' | | |
| | *-o(o)* | '1(3)→2(3)' | | |

2.6. The 1st person plural in Arapaho

Arapaho displays a number of peculiarities that distinguish it from other Algonquian languages. First, it has vowel harmony and phonemic tone (the latter, according to Francis 2006, still not fully understood). More important for our purposes, those verbs forms that are functionally comparable to the one we have seen for Plains Cree and Blackfoot (i.e., the ones from the independent order in the realis mode) are formally like those in the conjunct

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[6]The segment *a* at the end of verb forms and nouns is phonologically predictable and carries no meaning. The prefixes *kit-* and *nit-* appear as *kits-* and *nits-* before *i*. The formative *-hp* marks SAPs except 1PL inclusive in the independent order; the latter person takes *-ʼp* in the AI and TI paradigms.

order of other Algonquian languages (as well as Arapaho conjunct forms) and etymologically related to them (cf. Cowell and Moss 2002 for more on Arapaho verbs, nouns and participles); in particular, independent realis forms in Arapaho mark persons only via suffixes. Furthermore, independent realis forms without prefixes undergo "initial change" (roughly, vowel lengthening in the first syllable or the insertion of an *<En>* infix after the first consonant). The forms that are directly comparable to the ones we have mentioned in the preceding sections are the independent irrealis forms (basically used in Y/N-questions, negatives and reportatives). I will address only the bare essentials here in order to make a general point; the interested reader is referred to Francis (2006) for details.

Arapaho nouns mark their possessor according to the following system. Prefixes are straightforward: *hE(t)-* encodes 2nd person and works like *ki-* in Plains Cree, i.e. it outranks the other persons; *nE(t)-* enconces 1st person (cf. Plains Cree *ni-*), and 3rd person is marked by *hi(t)-* (cf. Plains Cree *o(t)- ~ Ø-*).[7] In addition, some nominal roots take a non-personal lexical suffix when possessed (e.g., *hé3* 'dog' appears as *net-é3-ebííb* 'my dog'). Plural suffixes, however, come in only two forms: *-in* for 1st person inclusive and *-ínoo* for all other persons (I have labeled these suffixes PLI and PLII here). Moreover, nouns are no longer distinguished for number when possessed by a plural person; observe that this is different from what happens in Plains Cree (9) and Blackfoot (10).

(8)    Arapaho (Francis 2006:141f)

    a.  *het-é3ebiib-ínoo*    *het-é3ebííb-in*    *net-é3ebiib-ínoo*
        2-dog-PLII           2-dog-PLI         1-dog-PLII
        'your (PL) dog(s)'    'our (INCL) dog(s)'   'our (EXCL) dog(s)'

    b.  *hit-é3ebíí-w*       *hit-é3ebíí-w-o*    *hit-é3ebiib-ínoo*
        3-dog-OBV          3-dog-OBV-PL   3-dog-PLII
        'his/her dog'       'his/her dogs'    'their dog(s)'

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[7] The Arapaho cognate of Plains Cree indefinite possessor *mi(t)-* (*mi-tēm* 'someone's horse') is *be(t)- ~ wo-* (*bé-nes* 'someone's arm', *wo-nót* 'someone's belly') and is obligatory with relational nouns (called "dependent nouns" in Algonquian studies), but I have not dealt with these formatives in this paper. In addition, there are some allomorphy rules (e.g., the 3rd person possessor marker of nouns beginning with *i*: *hiníí-ci3* 'her tooth', from *-ici3* 'tooth') I have simply glossed over here.

(9) Plains Cree (Wolfart 1996:421)

| *ni-tēm* | *ni-tēm-ak* | *ni-tēm-inān* | *ni-tēm-inān-ak* |
|---|---|---|---|
| 1-horse | 1-horse-PL | 1-horse-13 | 1-horse-13-PL |
| 'my horse' | 'my horses' | 'our (EXCL) horse' | 'our (EXCL) horses' |

(10) Blackfoot (Frantz 1991:73)

| *n-itána* | *n-itán-iksi* | *n-itán-innaana* |
|---|---|---|
| 1-daughter | 1-daughter-PL | 1-daughter-13 |
| 'my daughter' | 'my daughters' | 'our (EXCL) daughter' |

*n-itán-innaan-iksi*
1-daughter-13-PL
'our (EXCL) daughters'

There are two suffix slots on independent verbs in the TA paradigm, but the formatives that can occur therein differ from their Blackfoot and their eastern Algonquian counterparts. A 1st person plural exclusive marker *-ee* appears in the first slot, which is otherwise simply empty; in the irrealis mode, this formative only appears with 13→2(3) interactions. The second slot hosts a variety of markers, many of which differ in the realis and irrealis modes. Some examples follow in (11), and an overview of the relevant (i.e., person and number marking) affixal morphology is given in Tables 4 to 6.[8]

(11) Arapaho (Francis 2006:237,179)

a. *nonóóhow-ú-n*          *heet-nóóhow-ú-nee*
   see.IC-2→1-2            FUT-see-2→1-23
   'you (SG) see me'       'you (PL) will see me'          (realis)

b. *nenííton-éi'-éé-n*      *nonóóhob-éi'-ee-nee*
   hear.IC-2(3)→13-13-2    see.IC-2(3)→13-13-23
   'you (SG) hear us (EXCL)'   'you (PL) see us (EXCL)'     (realis)

c. *Koo-héi-bíín-oo-no'*    *nówou'-ú?*
   Q-2-eat-SAP→3-33         fish-PL
   'Do you (SG) eat fish?'                                (irrealis)

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[8] I have omitted tone in the tables because, as far as I can see, its behavior does not bear direct relationship with my argument here; some allomorphy / morphophonemic rules apply.

*Table 4:* Arapaho AI independent morphology (based on Francis 2006: 316-317)

|  | Realis | Irrealis | |
|---|---|---|---|
|  | Suffix (complementary) | Prefix (complementary) | Suffix (complementary) |
| 1 | *-noo* | *nE(t)-* |  |
| 13 | *-(ni)'* | *nE(t)-* | *-be* |
| 12 | *-no'* | *hE(t)-* | *-n* |
| 2 | *-n* | *hE(t)-* |  |
| 23 | *-nee* | *hE(t)-* | *-be* |
| 3 PROX | *-t* | *(hi-)* |  |
| 33 PROX | *-3i'* | *(hi-)* | *-no'* |
| 3 OBV | *-ní3* | *Ø-* | *-n* |
| 33 OBV | *-ní3i* | *Ø-* | *-nínoo* |

*Table 5:* Arapaho TA independent realis morphology (based on Francis 2007:318)

| Theme suffix (complementary) | | Suffix 1 | Suffix 2 (ranked) | |
|---|---|---|---|---|
| *-o(o)* | 'SAP→3(3)' | *-ee* '13' | *-no'* | '12' |
| *-ei* | '3(3)→SAP'/ '2(3)→13' |  | *-nee* | '23' |
| *-Ø* | '13→2(3)' |  | *-t* | '3 PROX' |
| *-e3e* | '1→2(3)' |  | *-3i' ~ -tii* | '33 PROX' |
| *-i ~ -u* | '2(3)→1'/ '3→1(2/3)' |  | *-n* | '2' |

*Table 6:* Arapaho TA independent irrealis morphology (based on Francis 2006:320)

| Prefix (ranked) | | Theme (complementary) | | Suffix 1 only 13↔2(3) | Suffix 2 (ranked) | |
|---|---|---|---|---|---|---|
| *hE(t)-* | '2(3)'/ '12' | *-o(o)* | 'SAP→3(3)' | *-ee* '13' | *-n* | '12' |
| *nE(t)-* | '1(3)' | *-ei* | '3(3)→PL.SAP'/ '2(3)→13' |  | *-be* | '23' '13' with 3(3) |
| *Ø-* | '3(3)' | *-e'* | '3(3)→SG.SAP' |  | *-no'* | '33PROX' |
|  |  | *-Ø* | '13→2(3)' / '2→1' |  |  |  |
|  |  | *-e3e* | '1→2(3)' |  |  |  |
|  |  | *-u* | '23→1' |  |  |  |

The Arapaho data given in tables 4 to 6 are significant on several grounds. First, the 1st person exclusive does not merely rank highest, like in Cree and Blackfoot, but it has an exclusive slot in the TA paradigm. Second, plural SAPs markers display the same pattern in the AI paradigm as with nouns, i.e. the 1st person inclusive has one form and there is a marker for 1st person exclusive and 2nd person plural —but observe that the forms are not identical: nominal/verbal *-(i)n* '12' stands in opposition to nominal *-inoo* '13/23'on the one hand and to verbal *-be* '13/23' on the other. Third, the picture is more complex in the TA paradigm: *-ee* '13' stands in opposition to *-no'* '12' and *-nee* '23' in the realis mode but to *-n* '12' and *-be* '13/23' in the irrealis, and in the latter, as already noted, it appears only with 13↔2(3) interactions, whereas *-be* appears as 13 marker in 13↔3(3) interactions. Finally, observe the special role played by the 1st person plural exclusive in the theme slot. When a 2nd person acts upon it, the theme is the same as the one used for 3(3)→SAP interactions ("inverse") in the realis and 3(3)→SG.SAP in the irrealis. When a 1st person exclusive acts on a 2nd person, the theme is *-Ø*, which in the irrealis is the same as the one used for 2→1 interactions. (Needless to say, only a thorough analysis of all verb forms and participles in the language would allow us to ascertain what kind of direction marking is at work. See Zúñiga 2006:ch.2 for a theoretical discussion of the issues involved here.)

## 3.  Discussion

The data given in the preceding section represent but a small subset of all the relevant data that can be found in the literature on Algonquian languages. The complete nominal, verbal and participial paradigms of all Cree and Ojibwa varieties, Micmac, Blackfoot and Arapaho should be contrasted with those of Menominee, Miami-Illinois, Shawnee, Delaware and Cheyenne, to name only some of the languages for which information is readily available, in order to arrive at a comprehensive picture.

Nevertheless, even with the fragmentary and limited data shown in the present paper, at least one important conclusion can be drawn: variation with respect both to the form and to the behavior of 1st and 2nd person markers cannot be seen as minor in Algonquian. Some languages consistently use three plural SAP markers (Cree, Blackfoot) while others have only two (Ojibwa, Miami-Illinois) and yet others show both two and three (Arapaho). If 1st and 2nd person markers compete for a given prefix

slot, 2nd person almost invariably outranks 1st, with the notable exception of the nominal split in Micmac. If 1st and 2nd person markers compete for a given suffix slot, number is crucial: plural SAPs invariably outrank singular SAPs, and 1st person plural almost invariably outranks 2nd, with the exception found in some (non-neighboring) Cree varieties. Some languages have one slot for all SAP suffixes (Cree, Ojibwa) while at least one has two (Arapaho), with the 1st person exclusive being privileged in this respect; Blackfoot, on the other hand, has no special 1st person inclusive marker for independent verbs. Supposing we ignore all this variation and limit ourselves to analyzing the independent verbs of Plains Cree, we are left we two conflicting hierarchies, viz. one for the prefixes (2nd > 1st > 3rd) and one for the suffixes (1st plural > 2 plural > 3 animate > 1st/2nd singular > 3 inanimate).

There are a number of ways in which such variation as to the role played by SAP markers in Algonquian can be addressed in order for the global picture to make sense. First, the situation found in present-day languages might be explained on the basis of phonological changes, analogical leveling, neutralization and similar processes that affected the inflectional paradigms of Proto-Algonquian in such a way that some processes can be meaningfully said to have been functionally motivated, at least in part, while others turn out to be epiphenomenal or accidental. Unfortunately, such a thorough study of Algonquian historical morphology is, to my knowledge, still an incomplete task. Even though Algonquianists have made considerable progress since Boomfield's reconstruction of Proto-Algonquian (1946) and much more information is available nowadays on many more languages (cf. e.g. Goddard 1967, 1974, 1994, 1996), numerous details on how the present-day systems evolved remain somewhat speculative or are simply pending.

A second, quite different approach, is the one proposed by some scholars who see participant hierarchies as epiphenomenal. A notable example in the context of Algonquian is Bruening (2001, 2005, forthcoming), who deals with Passamaquoddy verbs and claims that direction and person-marking morphology (as well as, of course, the functioning of grammatical relations) in the language can be explained resorting exclusively to notions like c-command and syntactic movement. Such a parsimonious analysis, even if tailored for Passamaquoddy, faces a number of difficulties when all possible participants and all paradigms are taken into account —some of which I believe to be insurmountable—, but I cannot possibly do justice to them in the present paper. The reader is

referred to Bruening's studies, but also to Lochbihler (this volume) for a recent account of Ojibwa that is fairly close to Bruening's in many details but integrates a participant hierarchy (2nd > 1st > 3rd proximate > 3rd obviative > 3rd inanimate) into the machinery rather than dispensing with it altogether.

The far-reaching question of the epiphenomenality of the Algonquian hierarchies —and, in fact, of person hierarchies in general— raises several issues that lie beyond the scope of the present paper, and much more research on hierarchical symptoms in the morphosyntax of the world's languages is needed in order to address them in a satisfactory way. While we wait for Algonquianists to provide us with a more complete picture of how the different languages have evolved, I would like to suggest one possible way in which at least the two conflicting hierarchies of Plains Cree independent verbs might be reconciled —or, to be more precise, distributed among two different levels of representation.

One the one hand we have the MEANING of the person markers, which can be defined in a somewhat abstract way based upon the features [±speaker], [±addressee], and [±other]. Observe that it is not enough to define 3rd person as [–speaker, –adressee], for reasons that will become apparent shortly. The prefixes are thus defined as in (12):

(12)    Person prefixes in Plains Cree

|  | [other] | [speaker] | [addressee] |
|---|---|---|---|
| *ki-* | ± | ± | + |
| *ni-* | ± | + | – |
| *Ø-* | + | – | – |

Recall that *ki-* covers all persons that include the addressee, while *ni-* covers all persons that include the speaker if there is no addressee involved, and *Ø-* covers persons when there is neither addressee nor speaker. Observe that, in terms of potentially present features (i.e., + or at least ±), the familiar prefix ranking obtains without having to resort to the familiar person categories.

By a similar token, the suffixes that have been at the center of attention in this paper are defined as in (13):

(13)    Person and number suffixes in Plains Cree

|        | [other] | [speaker] | [addressee] |
|--------|:-------:|:---------:|:-----------:|
| *-naw* | ±       | +         | +           |
| *-nān* | +       | +         | −           |
| *-wāw* | +       | −         | +           |
| *-w*   | +       | −         | −           |
| *-n*   | −       | (+)       | (+)         |

In other words, '12' includes the speaker, the addressee and possibly, albeit not necessarily, an "other"; '13' includes the speaker and an "other"; '23' includes the addressee and an "other", and '3(3)' is merely the "other" (note than [other] is unspecified for number). With singular SAPS, exactly one of the features [speaker] and [addressee] has a positive value, and [other] is specified as absent.

We further need a way to determine the CHOICE between the person markers defined in (12) and (13). Faced with a particular state of affairs that has to be depicted by the predicate and some given configuration of persons, I tentatively propose the following sequential algorithm here, valid for both the prefixal and the suffixal slot:

(14)    a.    choose the marker with as few specified – features as possible
        b.    choose the marker with the specified value [+speaker] if available and [other] is either + or ±
        c.    choose the marker with the specified value [+other] if available

This simple algorithm yields acceptable forms for Plains Cree TA independent verbs. For instance, a 12↔3 configuration requires a *ki-* prefix (chosen by 14a) and a *-naw* suffix (chosen by 14a as well) (Example 3c above); a 13↔2 configuration also requires a *ki-* prefix (chosen by 14a) but a *-nān* suffix (chosen by 14b, since *-naw* does not qualify but both *-nān* and *-wāw* do), which is correct (cf. Example 3b above); a 1↔23 configuration requires a *ki-* prefix and a *-wāw* suffix (both chosen by 14a). Finally consider a 1↔2 and a 1↔3 configuration; the former requires a *ki-* prefix and an *-n* suffix (both chosen by 14a), and the latter requires a *ni-* prefix (chosen by 14a) and a *-w* suffix (chosen by 14c).

Two issues immediately arise in this context. First, what is the underlying rationale of the choice algorithm? It is arguably intuitive to target those markers without negative values first, and possibly even to privilege the [speaker] feature (cf. Heath's 2004 "consciousness" model of

person), but the nature of the [other] feature needs to be worked out in detail. Second, and much more importantly, such two-piece explanation is tailored for Plains Cree; the choice algorithm has to be adapted for Type B Cree varieties, let alone for Blackfoot and Arapaho, which also require different definitions of the markers and even more slots.

The added value of such a tentative two-component account of Plains Cree independent verb morphology resides in dispensing with the conflict between the two hierarchies: the 2nd > 1st > 3rd hierarchy can be seen as a consequence of the definitions of the markers, and the 1st plural > 2nd plural > 3 animate > 1st/2nd singular > 3 inanimate hierarchy arises due to the interplay between the definitions and the choice algorithm. However, even though this account may eventually prove to be descriptively adequate —to be sure, a matter to be settled by further research—, its explanatory adequacy is less than uncertain at the present stage. Hopefully, more principled explorations in this area will help refine this account or show its inadequacy in such a way that alternative, non-exclusively syntactic analyses become viable.

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