Algonquian

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Abstract. This chapter outlines the members of the Algonquian family and sketches their phonology, syntax, and morphology. The phonology section surveys consonant and vowel inventories, phonotactic constraints, phonological processes, and stress patterns. The syntax section discusses the typological status of Algonquian syntax, including the issue of non-configurationality, and outlines the basic grammatical categories and grammatical functions. The morphology section describes the major patterns of stem formation, noun inflection, and verb inflection as well as the features that are encoded morphologically, such as animacy and obviation. Illustrative examples are provided from a variety of Algonquian languages.

The Algonquian family consists of a large number of closely-related languages spoken over a broad area stretching from the Great Plains to the Great Lakes and the eastern seaboard. Because they were the first languages of North America encountered by French and English colonists, many Algonquian languages have a long history of written documentation and have been the source of numerous English loanwords (e.g. *caribou, moose, pecan, toboggan, moccasin, wigwam*) and placenames (e.g. *Mississippi, Illinois, Quebec, Saskatchewan, Winnipeg, Manhattan*). This chapter outlines the members of the Algonquian family (§1) and sketches their phonology (§2), syntax (§3), and morphology (§4).

1. The Algonquian family

Algonquian languages are often divided into Central, Eastern, and Plains groups, but only the Eastern group is a genetic unit (Goddard 1980). The areal Central and Plains groupings do correlate to a degree with linguistic differences, however, as the Central languages are generally more conservative than the Plains languages. Approximate historical locations of the languages are shown in Figure 1, based on Goddard 1996. The following paragraphs outline the languages in each group (Goddard 1996; Mithun 1999).

The Central Algonquian languages, spoken in a large area centered on the Great Lakes, fall into six groups: (1) Meskwaki-Sauk-Kickapoo, (2) Miami-Illinois, (3) Shawnee, (4) Menominee, (5) Ojibwe-Potawatomi, and (6) Cree-Innu-Naskapi. The latter two groups are large and internally diverse (Rhodes & Todd 1981). The Ojibwe-Potawatomi group consists of the Potawatomi language and several Ojibwe (Anishinaabemowin) varieties, including Southwestern Ojibwe, Saulteaux, Oji-Cree, Nishnaabemwin (Odawa and Eastern Ojibwe), and Algonquin. The Cree-Innu-Naskapi group is a language continuum whose members, from west to east, are Plains Cree, Woods Cree, Swampy Cree, Moose Cree, Atikamekw, East Cree, Innu, and Naskapi; also related is Michif, a Cree-French mixed language. Current speakers number in the tens of thousands for Ojibwe and Cree-Innu-Naskapi and in the hundreds for Meskwaki-Sauk-Kickapoo, Shawnee, and Michif. Only a handful of native speakers of Menominee and Potawatomi remain. Miami-Illinois has been without native speakers since the 1960s.

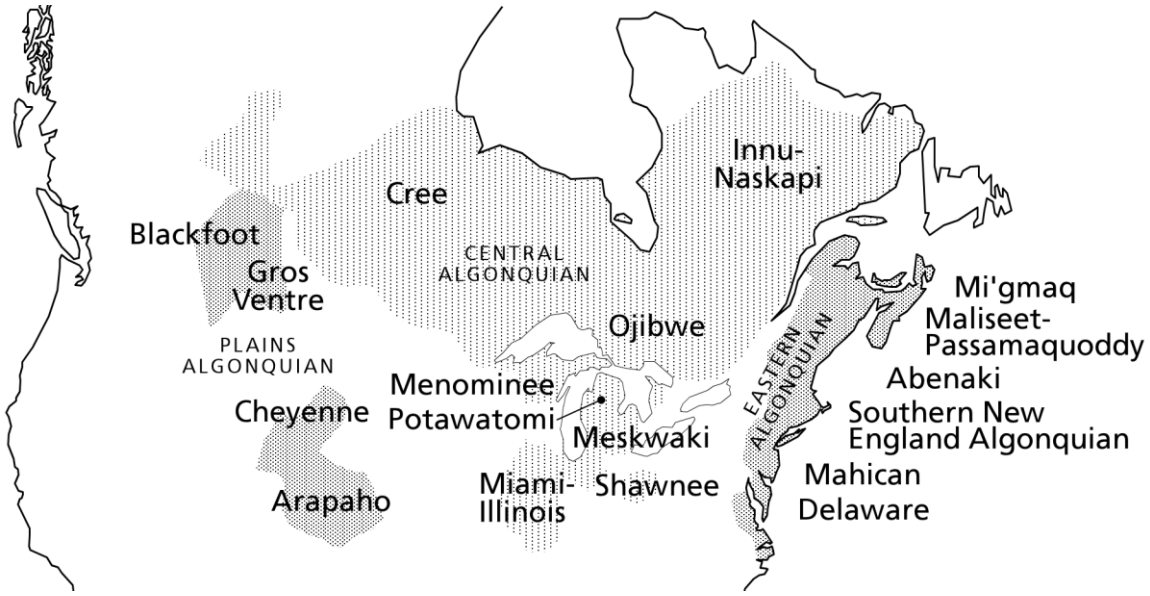

Figure 1. Historical distribution of major Algonquian languages

The Eastern Algonquian languages were historically spoken along much of the eastern seaboard. The best-documented Eastern language groups are (1) Mi'gmaq (Micmac); (2) Maliseet-Passamaquoddy; (3) Abenaki, consisting of Western and Eastern branches; (4) Southern New England Algonquian, a language continuum whose members include Massachusett (Wampanoag), Narragansett, Mohegan-Pequot-Montauk, and Quiripi; (5) Mahican; and (6) the Delaware (Lenape) languages Munsee and Unami. Several other poorly-attested Eastern languages existed, including Etchemin, Nanticoke, Powhatan, and Pamlico. Current speakers number in the thousands for Mi'gmaq and the hundreds for Maliseet-Passamaquoddy. All other Eastern languages have become extinct, recently in some cases (Delaware) and centuries ago in others (Powhatan).

The three Plains Algonquian language groups are (1) Blackfoot, (2) Cheyenne, and (3) the Arapahoan languages, which include Arapaho, Gros Ventre (Atsina), and Nawathinehena. Current speakers number in the low thousands for Blackfoot and Cheyenne and in the hundreds for Arapaho. No native speakers of Gros Ventre or Nawathinehena remain.

The genetic relationships of the Algonquian languages are illustrated in Figure 2. Proto-Algonquian is distantly related to the Wiyot and Yurok languages spoken in California, forming a larger Algic family (Haas 1958). It is thought that Proto-Algonquian was spoken c. 1000–500 BCE (Pentland 1979: 329), most likely in the area immediately west of Lake Superior (Goddard 1994a: 207). Within the Algonquian family, the deepest division is between Blackfoot and the remaining languages, to the extent that Blackfoot is likely a sister rather than a daughter of Proto-Algonquian (Goddard 2015). Among the daughters of Proto-Algonquian, the only large genetic subgroup is Eastern Algonquian (Goddard 1980). Among the (non-Blackfoot) Plains and Central languages there are no large genetic subgroups, but evidence from shared archaisms suggests that Cree-Innu-Naskapi and Arapahoan were the first of these languages to split off from the Proto-Algonquian core, followed by Cheyenne and Menominee, and followed later by a split between the "Core Central" languages (Meskwaki-Sauk-Kickapoo, Miami-Illinois, Shawnee, Ojibwe-Potawatomi) and Proto-Eastern-Algonquian (Goddard 1994a). The fact that

the oldest splits are in the west while the most recent splits are in the east is consistent with a west-to-east migration of Algonquian peoples (Goddard 1994a: 203).

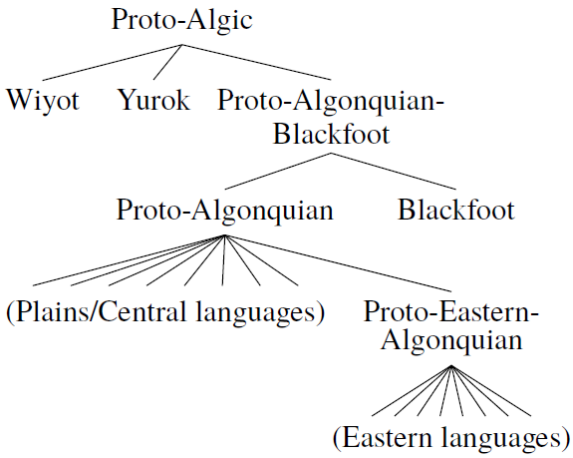

Figure 2. Algonquian genetic relationships

2. Phonology

This section surveys vowel inventories (§2.1), consonant inventories (§2.2), phonotactics (§2.3), processes (§2.4), and suprasegmental phonology (§2.5).

2.1 Vowel inventories

Proto-Algonquian (PA) had four vowel qualities plus a length contrast (marked with a middle dot), giving the symmetrical eight-vowel system in Figure 3 (Bloomfield 1946: 86).

i, i·	o, o·
e, e·	a, a·

Figure 3. Proto-Algonquian vowels

The vowel systems of most Central languages resemble that of PA. Cree-Innu-Naskapi and Ojibwe-Potawatomi merged short **e* with **i*, creating an asymmetrical seven-vowel system; further mergers have occurred in some varieties. The most dramatic vowel change in the Central languages took place in Menominee, which lowered PA **e·* to /æ·/ and split PA **i·* and **o·* into /i·, e·/ and /u·, o·/, respectively. Proto-Eastern-Algonquian lost the length contrast in the high vowels and shifted short **e* to **ə*, creating an asymmetrical system of four long vowels **i· *e· *a· *o·* and two short vowels **ə *a* (Goddard 1980: 149) which has undergone further changes in most Eastern languages, including the chain shift of **a· > ã·* and **e· > a·* in the Southern New England languages and Mahican (Goddard 1971). The Plains languages Cheyenne and Arapaho merged **o(·)* with **i(·)* (Goddard 1974a, 1988), creating an unusual inventory of vowel qualities (**i, *e, *a*) that was resolved in Cheyenne by rotating the three qualities into a more prototypical arrangement (**i, *e, *a > e, a, o*) and in Arapaho by adding a fourth quality, high back *u*.

2.2 Consonant inventories

The consonant phonemes of Proto-Algonquian are shown in Figure 4 (Bloomfield 1946: 87; Goddard 1979: 71). Note the absence of a voicing contrast among obstruents and the lack of a labial fricative. Two protophonemes are of marginal status: **ʔ* occurred only as the first member of a consonant cluster and **č* was mostly in complementary distribution with **t*. PA **r* was symbolized as **l* by Bloomfield (1946) but its most likely phonetic value was a trill or tap (Pentland 1979: 351; Goddard 1994a: 204–5).

p		t	č	k	ʔ
	θ	s	š		h
m		n			
w		r	y		

Figure 4. Proto-Algonquian consonants (*č, š, y* = IPA [tʃ, ʃ, j])

The consonant that changes most often in the daughter languages is **θ*, which is retained as /θ/ only in Arapaho. The other languages merge **θ* with either **t* (Cree, Gros Ventre) or **r* (all other languages). The next most frequently changed consonant is **r*, which often merges with either **n* (Meskwaki, Menominee, Ojibwe, Swampy Cree, Massachusett, Proto-Arapaho-Gros Ventre), **t* (Cheyenne, Nawathinehena), or **y* (Plains Cree, Mohegan-Pequot-Montauk). Among the languages that retain **r* as a distinct phoneme, many shift it phonetically to [l], but Woods Cree unusually has [ð]. Also susceptible to change is **š*, which merges with **s* in Menominee, some Cree dialects, and many Eastern languages. The Plains languages Cheyenne and Arapaho have both undergone rapid sequences of dramatic sound changes, such as, in Arapaho, the merger of initial **s* with **n* and the shift of **p* to *k* after original **k* was lost without a trace (Goddard 1974a). The resulting phonological system shares little with that of PA.

2.3 Phonotactics

The Proto-Algonquian syllable template is (C)(G)V(ː)(C), where C is a non-glide consonant and G is a glide. Coda consonants occur only word-medially, where they are always followed by an onset consonant; word-final syllables are always open (Bloomfield 1946: 93). Table 1 exemplifies the 16 possible PA syllable types using vocabulary from Hewson 1993.

Table 1. Proto-Algonquian syllable types

V	**e.wa*	‘s/he says’	CV	**ma.či*	‘bad’
V·	**e·.he*	‘yes’	CV·	**ma·.ma.wi*	‘together’
VC	**eh.kwa*	‘louse’	CVC	**maθ.kwa*	‘bear’
V·C	**e·h.sa*	‘clam’	CV·C	**ma·n.θeh.si*	‘flint’
GV	**wa.to·.wa*	‘clot’	CGV	**kwe.či*	‘try to’
GV·	**wa·.ši*	‘den’	CGV·	**kwi·.θa.wi*	‘impatiently’
GVC	**waʔ.šaš.kwa*	‘muskrat’	CGVC	**kweʔ.ta.mwa*	‘s/he fears it’
GV·C	**wa·ʔ.se·.ya·.wi*	‘there is light’	CGV·C	**kwe·θ.ki*	‘other side’

Many languages retain the (C)(G)V(:)(C) template. Changes in syllable structure are most often driven by syncope of unstressed short vowels, which, when phonologized, can create new types of consonant clusters such as *mk* and *zn* in Odawa *mkiznan* ‘shoes’; cf. non-syncopated Southwestern Ojibwe *makizinan* (Rhodes & Todd 1981: 58). Another common change involves word-final syllables, which always ended with a vowel in PA. Final vowels have been lost in all languages except Meskwaki-Sauk-Kickapoo, Miami-Illinois, Shawnee, and Blackfoot, creating many words with a final consonant (PA **mesesa·hk**a*** ‘horsefly’ > Cree *misisa·**hk***). Two-syllable words with short vowels are typically exempt from final vowel deletion (PA **nexk**a*** ‘goose’ > Cree *nisk**a***), although some languages delete final vowels even here (Innu ***nišk***).

As stated above, a PA coda consonant is always followed by an onset consonant, creating a C_1C_2 cluster. The composition of such clusters is restricted: only the combinations in Table 2 are permitted (Goddard 1979: 71).[1] Particularly striking is the limited range of contrasts that can be expressed in C_1 (coda) position, which is never occupied by a plosive, affricate, or *s*.

Table 2. Proto-Algonquian clusters

C_1 (Coda)	C_2 (Onset)								
	k	p	t	č	s	š	θ	r	m
ʔ~x	xk	xp	ʔt	ʔč	ʔs	ʔš	ʔθ	ʔr	Hm
h	hk	hp	ht	hč	hs	hš	hθ	(hr)	
m~n	nk	mp	nt	nč	ns	nš	nθ	nr	
š	šk	šp	(št)						
θ	θk	θp							
ç	çk								

Coda consonants (C_1) have been highly susceptible to change in the daughter languages and the changes that affect a given consonant in coda position often differ from its treatment

[1] **H* represents the neutralization of **h* and **ʔ*. The symbols **x* and **ç* are placeholders for segments whose phonemic identity is obscure (Bloomfield 1946:88) and should not be read with their IPA values. The reconstruction of the two clusters in parentheses is tenuous.

elsewhere (e.g. Miami-Illinois *θ > *l* but *θk > *hk*). Particularly common changes include merger of *ʔ and *h (PA *ʔt, *ht > Delaware *ht*), debuccalization of nasals (PA *nt > Cheyenne *ht*), and complete loss of particular coda consonants (PA *nt > Massachusett *t*). Because of such changes, the set of possible clusters in many daughter languages is even smaller than that of PA. Meskwaki, for example, only has clusters of the form *h*C or *š*C.

In many Ojibwe dialects, the contrast between a single obstruent C and an *h*C cluster (e.g. *p* vs. *hp*) has shifted to a lenis-fortis contrast (*p* vs. *pp*) or even a voicing contrast (*b* vs. *p*) (Rhodes & Todd 1981: 58), thereby adding a new series of obstruents to the inventory.

2.4 Phonological processes

The most prominent phonological process in Proto-Algonquian is the palatalization of *t→*č and *θ→*š before *i, *i·, *y, a phonologically regular process that has been morphologized in various ways in the daughter languages due to independent phonological changes (Goddard 1977; see analyses in Kaye & Piggott 1973 and Russell 1992). All other regular processes in PA involve sandhi in CC, VV, and (V)GV sequences that arise at morpheme boundaries. Some languages have developed new processes such as the palatalization of *k* in Innu-Naskapi and Southern New England Algonquian. The vowel shift that took place in Menominee (§2.1) created a vowel harmony alternation that has attracted theoretical attention (e.g. Archangeli & Pulleyblank 1994) due to its interesting conditioning: the raising of /e, o/ to /i, u/ is blocked by an intervening /æ/ but not by an intervening /a/. The dramatic sound changes that occurred in Cheyenne and Arapaho created a complex synchronic phonology (Goddard 1974a) that is not yet fully understood.

2.5 Stress and tone

Many of the languages have alternating stress patterns. According to Rhodes (1985), stress in Proto-Algonquian falls on even-numbered syllables counting from left to right; syllables with long vowels, however, are always stressed, with the alternating pattern restarting to their right. In terms of metrical stress theory (Hayes 1995), this is a quantity-sensitive left-to-right iambic pattern. Similar left-to-right iambic patterns are found in Menominee, Ojibwe, Potawatomi, and Delaware, and right-to-left iambic patterns are reported for Meskwaki and Cree; the languages vary in whether heavy syllables must be stressed, whether a coda consonant makes a syllable heavy, and whether final material is extrametrical (Hayes 1995: 211–221; Milligan 2005). Trochaic patterns are reported for Passamaquoddy (LeSourd 1993: 101ff) and Mi'gmaq (Olson 2012).

Contrastive tone has developed in Cheyenne, Kickapoo, and Western Innu; pitch accent systems, sometimes described as tonal, have developed in Blackfoot, Arapaho, Maliseet-Passamaquoddy, and Penobscot.

3. Syntax

This section describes the typological status of Algonquian syntax (§3.1) as well as the grammatical categories (§3.2) and grammatical functions (§3.3) that are typically distinguished.

3.1 Syntactic type

Algonquian syntax can be described as non-configurational: word order is flexible, null anaphora is common, and constituents may be discontinuous. This section illustrates these properties and discusses evidence that the underlying syntax may nevertheless be configurational.

Word order. Most or all possible orders of S, V, and O are typically grammatical, with pragmatic factors determining which order is used. Dahlstrom (1995: 3) proposes that Meskwaki word order follows the template in (1), with dedicated preverbal positions for Topic, Focus, and Oblique; the verb may be followed by one or more other phrases (indicated by "XP*").

(1) [$_{S'}$ (Topic) [$_{S}$ (Neg) (Focus) (Oblique) V (XP*)]]

Although this template has not been shown to hold for the entire family, the association of preverbal positions with topical or focal constituents is widespread. In the East Cree sentences in (2) (Junker 2004: 354), SVO order is used when S is the focus while OVS order is used when O is the focus.[2]

(2) a. ***Awaash*** *miyeyim-eu* *atim-h.* (SVO order)
child like-3SG>3OBV dog-OBV
'The **CHILD** likes dogs.' (as answer to 'Who likes dogs?')

b. ***Atim-h*** *miyeyim-eu* *uu awaash.* (OVS order)
dog-OBV like-3SG>3OBV this child
'This child likes **DOGS**.' (as answer to 'What does this child like?')

In the absence of a topic or focus, the unmarked order is verb-initial in Ojibwe (Rhodes 1994: 436-438) and East Cree (Junker 2004: 349), as predicted by the template in (1).

Pronominal arguments. A verb's arguments are usually identified by rich agreement inflection (§4), which allows subject and object nominals to be freely omitted. The sentence in (3), for example, consists simply of two verb forms.

(3) *Ni-tshissenim-âu* *menuât-ât.*
1-know-1SG>3SG IC.like-3SG>3OBV
'I know he likes her.' (Innu; Clarke 1982: 138)

The argument-indexing affixes on Algonquian verbs are sometimes regarded as bound pronominal arguments rather than agreement markers (e.g. Mithun 1999: 339). However, LeSourd (2006) provides several arguments against a pronominal argument analysis of Passamaquoddy, most of which are applicable across the family.

Constituency. Evidence for a VP constituent is elusive, but most languages have clear NP/DP constituents (Kathol & Rhodes 1999; LeSourd 2004), illustrated for Passamaquoddy in (4); some languages also have PP constituents (Oxford 2011; LeSourd 2014).

[2] Abbreviations in glosses follow the Leipzig Glossing Rules, with the following additions: 0 = inanimate third person, 3 = animate proximate third person, 3′ = animate obviative third person, AN = animate, DIM = diminutive, DIR = direct, DUB = dubitative, EMPH = emphatic, IC = initial change, INAN = inanimate, INV = inverse, OBV = obviative, PX = proximate, X = impersonal actor. Derivational suffixes are not segmented out in glosses. In some examples a string of inflectional suffixes is given a single combined gloss, such as '3SG>3OBV' for the *-eu* ending in (2a), which could be more exhaustively segmented as *-e* 'DIR' + *-u* '3' + -Ø 'AN.SG'.

(4) *Nopal* **[NP *yùt* [N′ *pilèy layyektákon*]]** *milkiyàn*.
if.only **this new toy** give.X>1SG
'I wish I would be given this new toy.' (LeSourd 2004: 261)

NPs and PPs can surface discontinuously. Many languages have a construction in which the initial element of a phrase immediately precedes the verb while the remainder of the phrase follows the verb (Kathol & Rhodes 1999; Reinholtz 1999; LeSourd 2004, 2014). The Passmaquoddy NP in (4), for example, can alternatively straddle the verb as in (5).

(5) *Nopal* ***yùt*** *milkiyàn* **[*pilèy layyektákon*]**.
if.only **this** give.X>1SG **new toy**
'I wish I would be given this new toy.' (LeSourd 2004: 261)

The Passamaquoddy examples in (4) and (5) appear to have the same meaning, but in Swampy Cree, the construction equivalent to (5) focuses the preverbal element (Reinholtz 1999: 208).

Underlying configurationality. Although the properties described above have been considered hallmarks of non-configurationality (Hale 1983), many specialists now reject a non-configurational analysis of Algonquian syntax due to the discovery of structural asymmetries akin to those in configurational languages. Russell & Reinholtz (1995: 434), for example, show that in Swampy Cree, preverbal NPs c-command postverbal NPs: a preverbal negative NP licenses the polarity-sensitive reading of *kêkwân* 'something' as 'anything', as in (6a), but when the order is reversed, the polarity-sensitive reading is not licensed, as in (6b).

(6) a. [*Namôna awiyak*] *ta-wâpaht-am* ***kêkwân-iniw***.
not anyone FUT-see-3SG>INAN **anything-OBV.INAN**
'Nobody will see **anything**.'

b. ?***Kêkwân-iniw*** *ta-wâpaht-am* [*namôna awiyak*].
something-OBV.INAN FUT-see.it.3SG>INAN not anyone
'There is **something** that nobody will see.' (* 'Nobody will see **anything**.')

Similarly, Bruening (2001: 31) shows that in Passamaquoddy, a subject quantifier can bind a pronominal variable within an object, as in (7a), but an object quantifier cannot bind a pronominal variable within a subject, as shown in (7b).

(7) a. *Katolu* ***psi=te*** ***wen*** *'-koselom-al* *wikuwoss-ol.*
of.course **all=EMPH** **someone** 3-love-3SG>3OBV 3.mother-OBV
'Of course **everyone**$_i$ loves **his**$_i$ mother.'

b. *Skitap musqitaham-acil* *'-koti-tqon-al* ***psi=te*** ***wen-il***.
man hate-3SG>3OBV 3-FUT-arrest-3SG>3OBV **all=EMPH** **someone-OBV**
'A man that **he**$_{*i}$ hates will arrest **everyone**$_i$.'

3.2 Grammatical categories

Four broad parts of speech are traditionally distinguished: nouns, pronouns, verbs, and particles, the latter a cover term for all items that do not inflect (Bloomfield 1946).

Nouns fall into two syntactic classes: dependent nouns, which must occur with a possessor, and independent nouns, which can occur with or without a possessor. Most dependent nouns denote kin (PA **-kwiʔs-* 'son') or body parts (PA **-te·h-* 'heart').

Pronouns come in various types. A typical language has an emphatic personal pronoun paradigm, a demonstrative paradigm, various indefinite and interrogative pronouns, and an inflecting noun substitute (e.g. Maliseet *iyok* 'the ones; what's-their-name'; LeSourd 2003).

Verbs fall into four morphological classes determined by the derivational FINAL suffix that ends the verb stem (§4.2). Morphologically intransitive stems end with a final that expresses the animacy of the actor (Animate Intransitive, Inanimate Intransitive) while morphologically transitive stems end with a final that expresses the animacy of the patient (Transitive Inanimate, Transitive Animate). These classes are exemplified in Table 3. The TA class includes ditransitive verbs that take a theme and an animate recipient, known as TA+O verbs (PA **mi·r-* 'give X to someone'); in such stems the final marks the animate recipient rather than the theme.

Table 3. Morphological verb classes

Verb class		Definition	PA example (root **pank-* 'fallen')
AI	Animate Intransitive	Final marks anim. actor	**pank-**ihšin*-** 'to fall (animate)'
II	Inanimate Intransitive	Final marks inan. actor	**pank-**ihθen*-** 'to fall (inanimate)'
TI	Transitive Inanimate	Final marks inan. patient	**pank-**ihšim*-** 'to drop an animate'
TA	Transitive Animate	Final marks anim. patient	**pank-**ihθet*-** 'to drop an inanimate'

The morphological verb classes align only roughly with syntactic patterning, as illustrated by the following examples from Delaware (O'Meara 1990). AI verbs are prototypically intransitive, but a subclass of "AI+O" verbs can appear with an object, either optionally (*mәne·-* 'drink (it)') or obligatorily (*awe·he-* 'use it'). Conversely, TI verbs are prototypically transitive, but some, known as OBJECTLESS TI VERBS, can appear without an object, either optionally (*ni·ske·lәnt-* 'be angry (about it)') or obligatorily (*wiiniht-* 'be annoying').

Particles, a heterogeneous class, includes items that function as quantifiers, numerals, adjectives, adverbs, prepositions, and conjunctions. Certain particles may immediately precede and modify a stem, as shown for Ojibwe in (8) (Nichols 1980: 101, 264); particles in this position are known as PREVERBS or PRENOUNS.

(8) a. *ni-**kii**= **nanta**= kikkentaan*
1- **PAST= seeking=** know.it.1SG
'I sought to know it'

b. ***kicci**= **misko**= waapooyaan*
big= red= blanket
'big red blanket'

Preverb meanings range from concrete (*nanta* 'seeking') to grammatical (*kii* 'past'). Prenouns such as *misko* 'red' may be the structural equivalent of attributive adjectives (Rosen 2016), which do not form a grammatically distinct part of speech in most Algonquian languages. Aside from prenouns, adjective-like meanings can also be expressed by intransitive verbs (Delaware *wәlәsi·-* 'be good, pretty', *kato·pi·-* 'be hungry').

3.3 Grammatical functions

There are three core grammatical functions for clausal arguments: (1) actor (Bloomfield 1962) or subject (Goddard 1969); (2) primary object; and (3) secondary object. All verbs take an actor/subject; transitive verbs additionally take a primary and/or secondary object. Table 4 shows the grammatical functions selected by each class of verbs and the thematic roles that correspond to each grammatical function.

Table 4. Core grammatical functions

Verb class	Functions	θ-roles
Intransitive (AI, II)	actor/subject	any role
Transitive (TA, TI)	actor/subject	agent/experiencer
	primary object	patient/theme
Ditransitive (TA+O)	actor/subject	agent/experiencer
	primary object	recipient
	secondary object	patient/theme
AI+O	actor/subject	agent/experiencer
	secondary object	patient/theme

The two types of objects differ in various ways (Rhodes 1990a): primary objects can be first, second, or third person while secondary objects can only be third (a Person-Case Constraint effect, as noted for Ojibwe in Lochbihler 2012: 118); the animacy of a primary object is selected by the verb stem while that of a secondary object is not; and primary objects are more likely than secondary objects to be indexed by verb inflection. The Delaware transitive forms in (9) (Goddard 1969) both involve a primary object 'them', which is obligatorily animate (selected by the stems *ne·w-* 'see someone', *mi·l-* 'give to someone') and is indexed inflectionally (*-ak* 3.AN.PL). The ditransitive form in (9b) also has a secondary object, 'something/someone', which can be animate or inanimate and is not indexed inflectionally.

(9) a. ***nə-****ne·w-a·-****w-****ak***
1-see-DIR-**1SG-**3.AN.PL
'**I** see them (anim.).'

b. ***nə-****mi·l-a·-****w-****ak***
1-give-DIR-**1SG-**3.AN.PL
'**I** give something/someone to them (anim.).'

Algonquian ditransitives show secundative rather than indirective alignment (Haspelmath 2005): monotransitive patients and ditransitive recipients pattern together (as primary objects) while ditransitive themes are treated distinctly (as secondary objects) (Dryer 1986).

Although most Algonquianists refer to the external argument of a transitive verb as the subject, the notion of subjecthood is complicated by the existence of an inverse construction. Compare, for example, the Menominee sentences in (10) (Bloomfield 1962: 39), which both involve a more topical PROXIMATE argument, 'the man', and a less topical OBVIATIVE argument, 'the woman' (see §4.3 for more on obviation). In DIRECT forms like (10a), proximate acts on obviative, while in INVERSE forms like (10b), obviative acts on proximate.

(10) a. *nɛ·w-ɛ·-**w*** [***enoh*** ***enɛ·niw***] [*anenoh metɛ·mohs-an*].
see-DIR-**3.PX** **that.PX** **man.PX** this.OBV woman-OBV
'**The man (PROX)** sees the woman (OBV).'

b. *nɛ·w-ek-**w***[3] [***enoh*** ***enɛ·niw***] [*anenoh metɛ·mohs-an*].
see-INV-**3.PX** **that.PX** **man.PX** this.OBV woman-OBV
'The woman (OBV) sees **the man (PROX)**.'

Despite the reversal of thematic relations, the proximate enjoys the same morphosyntactic prominence in both sentences: it consistently precedes the obviative and is agreed with by the verb (*-w* 3.PROX.SG). Rhodes (1994) and Bruening (2001) provide additional evidence that proximates occupy a more prominent structural position than obviatives. A possible conclusion is that the proximate is in fact the structural subject in both (10a) and (10b), as Bloomfield (1962: 45) suggests. The direct-inverse alternation can then be understood as a split-ergative pattern (Déchaine 1999: 50–51): direct forms like (10a) show accusative alignment, as the nominative/absolutive role is assigned to the actor, while inverse forms like (10b) show ergative alignment, as the nominative/absolutive role is assigned to the theme.

Nominals may appear in two additional non-core grammatical functions: RELATIVE ROOT COMPLEMENT and OBLIQUE (Rhodes 2010), exemplified for Ojibwe in (11). Both functions have oblique semantics, but a relative root complement is selected by a verb-internal lexical morpheme known as a RELATIVE ROOT (e.g. Ojibwe *in-~izh-* 'to, like', *ond-* 'from, because of') while an oblique is not selected. For example, in (11a), the relative root *izh-* 'to' selects the complement 'upstairs', while in (11b) nothing selects the oblique 'one year'.

(11) a. *Gii=* ***izh****-aa* ***ishpimisagong****.*
PAST= **to**-go.3SG **upstairs**
'He went (**to**) **upstairs**.' (relative root complement) (Rhodes 2006: 18)

b. ***Ningo=*** ***biboon*** *ni-gii= ayaa iwidi.*
one= **winter** 1-PAST= be.at.1SG there
'I was there **for one year**.' (oblique) (Rhodes 2010: 308)

4. Morphology

This section describes the typological status of Algonquian morphology (§4.1) and the basic properties of stem formation (§4.2), noun inflection (§4.3), and verb inflection (§4.4).

4.1 Morphological type

In terms of form, Algonquian morphology lies between agglutinative and fusional: nouns and verbs can appear with many affixes, some expressing a single feature (PA **ne-* 'first person') and others expressing multiple features (PA **-aki* 'animate proximate plural'); most affixes are suffixal. In terms of the locus of marking, Algonquian morphology is strongly head-marking: possessed nouns inflect to index their possessor (§4.3) and verbs inflect to index their subject and object (§4.4); nominals are not marked for structural case. In terms of function, Algonquian

[3] Underlying *nɛ·w-ek-w* surfaces as *niak* due to regular phonological rules (Bloomfield 1962:155).

morphology is polysynthetic: a single verb can express a richly descriptive sentence, as in the Cree example in (12).

(12) *Sâkihisosihkâsoskiw*.
sâkih -iso -isi -hkâso -iski -w
love -self -DIM -pretend -habitual -3SG
'He's in the habit of pretending to love himself a little bit.' (Dahlstrom 1991: 135)

4.2 Stem formation

As (12) illustrates, Algonquian stems are morphologically complex. Two types of stem derivation are distinguished: PRIMARY DERIVATION, in which a stem is formed from components that cannot stand alone as a stem, and SECONDARY DERIVATION, in which a stem is derived from an existing stem by the addition of a SECONDARY FINAL suffix (Bloomfield 1946: 104; Goddard 1990). Of these two types, it is secondary derivation that corresponds to what is known simply as "derivation" in Indo-European languages. Tables 5 and 6 exemplify the secondary derivation of noun and verb stems in Ojibwe (data from Nichols 1980). Secondary derivation is highly prominent in the lexicon: even many basic nouns are secondary derivatives of verb stems (e.g. Delaware *təmah-* 'to sever by tool', *təmah-i·kan-* 'axe', lit. 'tool for severing'; O'Meara 1990). Successive layers of secondary derivation may apply, producing a string of secondary finals as in (12) above.

Table 5. Secondary noun stem derivation in Ojibwe

Stem type	Example (primary stem, secondary noun stem)
diminutive	*makkw-* 'bear', *makkoo-**nss**-* 'bear cub'
instrument nominalization	*nipaa-* 'sleep', *nipaa-**kan**-* 'bed'
process nominalization	*nakamo-* 'sing', *nakamo-**win**-* 'singing'
product nominalization	*nakamo-* 'sing', *nakamo-**n**-* 'song'

Table 6. Secondary verb stem derivation in Ojibwe

Stem type	Example (primary stem, secondary verb stem)
verb of being	*ciipay-* ‘ghost’, *ciipay-**iwi**-* ‘be a ghost’
verb of making	*anaakkan-* ‘mat’, *anaakkan-**ikke**-* ‘make mats’
verb of possession	*šiišširip-* ‘duck’, ***o**-šiišširip-**imi**-* ‘have ducks’
causative	*mintito-* ‘be big (anim.)’, *mintito-**h**-* ‘enlarge someone’
benefactive of intrans.	*anokkii-* ‘work’, *anokkii-**taw**-* ‘work for someone’
benefactive of trans.	*naat-* ‘fetch it’, *naat-**amaw**-* ‘fetch it for someone’
reciprocal	*noontaw-* ‘hear someone’, *noontaa-**ti**-* ‘hear each other’
reflexive	*noontaw-* ‘hear someone’, *noontaa-**tiso**-* ‘hear oneself’
detransitive	*takkon-* ‘hold it’, *takkon-**ike**-* ‘hold things’
lexical passive	*piit-* ‘bring it’, *piic-**ikaate**-* ‘be brought’
mediopassive	*noontaw-* ‘hear someone’, *noontaa-**ikosi**-* ‘make noise’

In contrast to secondary derivation, primary derivation is an Algonquian-specific process. Primary stems are formed from three components, none of which can stand alone as a stem: an INITIAL, which expresses the core lexical meaning of the stem, an optional noun-like MEDIAL, and a FINAL, which marks the grammatical category of the stem. Verb finals usually also mark the animacy of one of the verb’s arguments, as discussed above (§3.2), and thus typically come in animate-inanimate pairs. On semantic grounds, two types of finals may be distinguished: ABSTRACT FINALS, which serve only to categorize the stem and mark animacy, and CONCRETE FINALS, which also make a tangible semantic contribution (though see Denny 1984 for an argument that even abstract finals have semantic import). Table 7 gives examples of primary verb stem derivation in Meskwaki (Bloomfield 1946).

Although the conventional description of primary derivation is Algonquian-specific, there is a striking similarity between the Initial+Final template and the Root+*v* structure posited in Distributed Morphology, and much recent work has investigated Algonquian stem structure from a syntactic perspective (e.g. Brittain 2003; Hirose 2003; Branigan et al. 2005; Mathieu 2007; Slavin 2012).

Stems undergo reduplication at their left edge to convey meanings such as repetition and distributivity: Menominee *a·čemow* ‘s/he narrates’, ***a·ya**·čemow* ‘s/he keeps narrating’; *ni·s* ‘two’, ***na·**ni·s* ‘two each’ (Bloomfield 1946: 122). Formal and semantic details vary across the family.

Table 7. Primary verb stem derivation in Meskwaki

Stem	Components
sanakesi- 'be difficult (anim.)'	Initial *sanak-* 'difficult' Abstract final *-esi* 'be', forms AI verb
sanakat- 'be difficult (inan.)'	Initial *sanak-* 'difficult' Abstract final *-at* 'be', forms II verb
išiki- 'grow in such a way (anim.)'	Initial *iši-* 'thus' Concrete final *-ki* 'grow', forms AI verb
išiken- 'grow in such a way (inan.)'	Initial *iši-* 'thus' Concrete final *-ken* 'grow', forms II verb
pi·tike·- 'enter a dwelling'	Initial *pi·t-* 'into' Medial *-wik-* 'dwelling' Abstract final *-e·*, forms AI verb
pema·hkwisen- 'lie lengthwise on/as a solid'	Initial *pem-* 'along' Medial *-a·hkw-* 'wood, solid' Concrete final *-isen* 'lie', forms II verb

4.3 Noun inflection

Two layers of inflection appear on nouns. All nouns take a word-final suffix that marks animacy, number, and obviation, exemplified for Meskwaki in Table 8 (Dahlstrom forthcoming). In most languages, the animate and inanimate singular suffixes have become null due to final vowel loss, and several languages have neutralized the number contrast for animate obviatives (e.g. Menominee *-an* 'AN.OBV.SG/PL'). The nominal suffix position may alternatively be occupied by a locative suffix, which converts the noun into an oblique expression of location. Some languages also have vocative nominal suffixes, as shown for Meskwaki in Table 8. The Eastern languages have a parallel paradigm of absentative nominal suffixes, which indicate absence or death: Munsee *nó·xw* 'my father', *nó·xw**aya*** 'my late father' (Goddard 1979: 100).

Table 8. Meskwaki nominal suffixes

Features	Example	
animate proximate singular	*ineniw-**a***	‘man’
animate proximate plural	*ineniw-**aki***	‘men’
animate obviative singular	*ineniw-**ani***	‘(other) man’
animate obviative plural	*ineniw-**ahi***	‘(other) men’
inanimate singular	*či·ma·n-**i***	‘canoe’
inanimate plural	*či·ma·n-**ani***	‘canoes’
locative	*či·ma·n-**eki***	‘in the canoe(s)’
vocative singular	*ni·hka·n-**e***	‘O friend!’
vocative plural	*ni·hka·n-**etike***	‘O friends!’

Possessed nouns, exemplified for Meskwaki in (13) (adapted from Dahlstrom forthcoming), add an inner layer of inflection that marks the person and number of the possessor using a prefix (for singular possessors, (13a)) or circumfix (for plural possessors, (13b)). Some noun stems must be augmented by a “possessed theme” suffix (Bloomfield 1946: 95) before possessor inflection can be added, as in (13c).

(13) a. ***ne**-ta·nes-aki*
1-daughter-AN.PL
‘my daughters’

b. ***ne**-ta·nes-**ena·n**-aki*
1-daughter-**1PL**-AN.PL
‘our daughters’

c. ***ne**-ši·ši·p-em-**ena·n**-aki*
1-duck-POSS-**1PL**-AN.PL
‘our ducks’

Freestanding personal pronouns strongly resemble possessed noun forms due to the diachronic origin of the former as a possessed noun meaning ‘one’s body’ (Goddard 2007: 218). Both paradigms distinguish exclusive (1PL) and inclusive (21PL) first-person plural, as shown for Meskwaki in Table 9 (Dahlstrom forthcoming).

Table 9. Meskwaki possessor inflection and personal pronoun

	Possessor inflection	Personal pronoun	
1SG	*ne-*	*ni·na*	‘I/me’
2SG	*ke-*	*ki·na*	‘you (sg.)’
3SG	*o-*	*wi·na*	‘s/he, him/her’
1PL	*ne-…-ena·n*	*ni·na·na*	‘we/us (excl.)’
21PL	*ke-…-ena·n*	*ki·na·na*	‘we/us (incl.)’
2PL	*ke-…-wa·w*	*ki·nwa·wa*	‘you (pl.)’
3PL	*o-…-wa·w*	*wi·nwa·wa*	‘they/them’

Two nominal features, animacy and obviation, warrant special comment. The division of nouns into animate and inanimate grammatical genders has a partial semantic basis, as all nouns that denote sentient beings are grammatically animate, but the animate gender also includes many nouns that denote non-living entities (Cree *cistêmâw* 'tobacco', *apoy* 'paddle'). The classification of such nouns is ultimately arbitrary. For some nouns, gender shift expresses semantic contrasts such as individuation: Meskwaki *šo·niya·h-**i*** IN.SG 'money', *šo·niya·h-**a*** AN.SG 'a coin, a bill' (Goddard 2002: 213).

When a clause contains multiple third-person referents, one, normally the most topical, is designated as proximate (notated **3** or PROX); any others must be obviative (notated **3′** or OBV) (for discussion and analysis see, among others, Thomason 2003; Quinn 2006; Muehlbauer 2012). Obviation is obligatory in transitive clauses with multiple third-person arguments, where either the agent or the patient may be marked obviative (see (10) above). Obviation is also obligatory when a noun has a third-person possessor; in such cases, the noun can only be obviative, while the possessor may be either proximate or obviative, as shown in (14) for Cree (Wolfart 1978: 257). The additional obviative morpheme *-iyi* in (14b) is sometimes said to mark a second degree of obviation (**3′′**) but is better understood simply as obviative possessor agreement (Wolfart 1978: 258–260).

(14) a. [*okimâw*] *o-têm-a*
chief.3 3-horse-3′
'[the chief's.PROX] horse.OBV'

b. [*okimâw* *o-kosis-a*] *o-têm-iyi-wa*
chief.3 3-son-3′ 3-horse-OBV.POSS-3′
'[the chief's.PROX son's.OBV] horse.OBV'

In addition to its pragmatic association with topicality, obviation marks disjoint reference. For example, in the Oji-Cree sentences in (15) (author's fieldwork), the proximate possessor in (15a) must be interpreted as coreferent with the proximate subject while the obviative possessor in (15b) must be disjoint.

(15) a. *Tepit* *o-waapam-aa-n* *o-tayihsh-an.*
David.3 3-see-DIR-3′ 3-dog-3′
'David.PROX sees **his.PROX** dog.OBV.' (his = David)

b. *Tepit* *o-waapam-aa-n* *o-tayihsh-ini-wan.*
David.3 3-see-DIR-3′ 3-dog-OBV.POSS-3′
'David.PROX sees **his.OBV** dog.OBV.' (his = not David)

Obviation is not marked in the inflection of inanimate nouns in most languages (see e.g. Table 8), but there is evidence that inanimate nouns are covertly obviative in the same contexts where animate nouns are overtly obviative (Wolfart 1978: 259; Rhodes 1990b: 103).

4.4 Verb inflection

There exist three parallel sets of verb inflection known as the INDEPENDENT, CONJUNCT and IMPERATIVE ORDERS, which express mostly the same contrasts but use different morphology, as shown by the Plains Cree 2PL>3SG forms in (16) (Wolfart 1973: 41–43).

(16) a. INDEPENDENT
ki-**wâpam-â-**wâw
2-see-DIR-**2PL**
'you (pl.) see him/her'

b. CONJUNCT
*wâpam-â-**yêk***
see-DIR-**2PL**
'you (pl.) see him/her'

c. IMPERATIVE
*wâpam-**ihk***
see-**2PL>3**
'look (pl.) at him/her!'

The independent and conjunct inflections are used canonically in main and subordinate clauses, respectively, although the details are subtle and variable (see e.g. Brittain 2001 and Cook 2014 for Cree-Innu-Naskapi). The conjunct is normally required in all wh-questions, whether subordinate or not; the traditional explanation is that wh-questions are clefts and thus the verb is always in a subordinate clause (Bloomfield 1946: 116). In some contexts, typically those involving wh-extraction, conjunct forms are affected by an ablaut process called INITIAL CHANGE, which alters the first vowel of the verb or a preceding preverb: Innu *p**i**mûtê-* 'walk' → *p**ê**mûtê-*; *u**î**-pimûtê-* 'want to walk' → *u**â**-pimûtê-* (Clarke 1982: 85).

Simplified independent and conjunct inflectional templates are given for Ojibwe in Figures 5 and 6 (Nichols 1980). The agreement slots in these templates pattern as follows:

- The innermost layer of agreement, the THEME SIGN, appears only in transitive forms. The theme sign normally marks person/animacy agreement with the logical object: *-i* '1OBJ', *-in* '2OBJ', *-aa* '3.AN.OBJ' (or 'DIRECT'), *-am* 'INAN.OBJ'.[4] However, a special INVERSE theme sign *-ikw* appears instead when the logical object outranks the logical subject on a construction-specific person hierarchy. In the independent, the hierarchy is 1/2>X>3>3'>0. Since 1 outranks 3 on this hierarchy, an independent 3-on-1 form such as 'they see us' will be marked with the inverse theme sign, as in Figure 5. In the conjunct, the hierarchy is just 3>3′> 0 (Rhodes 1994: 432). Since this hierarchy establishes no ranking between 1 and 3, a conjunct 3-on-1 form such as 'they see us' will not be marked as inverse and will instead show the default pattern of object agreement in the theme sign slot (*-i* '1OBJ'), as in Figure 6.
- The next layer is the CENTRAL AGREEMENT, which is a prefix-suffix combination in the independent (*ni-…-naa* '1PL', similar in form to nominal possessor agreement) and an entirely unrelated suffix in the conjunct (*-ankit* '3>1PL', here augmented by *-waaw* '3PL'). The central agreement indexes whichever argument ranks highest on the person hierarchies given above. When the relevant hierarchy does not establish a ranking between the arguments (as in a conjunct 3-on-1 form, for example), a portmanteau suffix indexing both arguments may be realized (*-ankit* '3>1PL' in Figure 6) or finer-grained morphological hierarchies may come into play, such as a 2>1 hierarchy for the prefix and a 1PL>2 hierarchy for the central suffix (Zúñiga 2008; Macaulay 2009).
- The outermost layer, present only in the independent, is the PERIPHERAL SUFFIX, which marks third persons only and is similar in form to the word-final suffix on nouns.

[4] The theme sign *-aa* may be analyzed as either an animate third-person object marker (e.g. Rhodes 1994) or a special DIRECT marker that contrasts minimally with the inverse marker, appearing when the logical subject outranks the logical object (e.g. Wolfart 1973).

prefix	stem	theme sign	negation	central suffix	mode	peripheral suffix
ni-	*waapam*	*-ikw*	*-ssii*	*-naa*	*-token*	*-ak*
1	see	INV	NEG	1PL	DUB	3PL

Figure 5. Ojibwe independent inflection template
(exemplified by *niwaapamikossiinaatokenak* 'they might not see us')

stem	theme sign	negation	central suffix	mode
waapam	*-i*	*-ssiiw*	*-ankit-waaw*	*-en*
see	1OBJ	NEG	-3>1PL-3PL	DUB

Figure 6. Ojibwe conjunct inflection template
(exemplified by *waapamissiiwankitwaawen* 'they might not see us')

Similar inflectional templates apply in most of the languages, although the functions of negative and modal suffixes are sometimes taken over by preverbs or particles and some languages have made the conjunct inverse hierarchy more like that of the independent (see e.g. Dahlstrom 1989 for Plains Cree).

In most languages the inflection of TA verbs distinguishes animate third-person actors, inanimate actors (notated **0** or INAN) and impersonal actors (notated **X** and functionally equivalent to a passive), as shown for Meskwaki in (17) (Goddard 1994b: 191).

(17) a. *ne-wa·pam-ekw-a*
1-see-INV-3.AN.SG
's/he sees me' (3>1)

b. *ne-wa·pam-ekwi*
1-see-INV.INAN
'it sees me' (0>1)

c. *ne-wa·pam-eko·-pi*
1-see-INV-X
'people see me' (X>1)

A verb that takes a clausal complement may show default inanimate object agreement, as in the Plains Cree sentence in (18a), or it may enter a long-distance agreement relationship with an argument in the complement clause, as in (18b) (Dahlstrom 1991: 67), a fact that has attracted much theoretical interest (e.g. Branigan & MacKenzie 2002).

(18) a. *Ni-kiskêyiht-ên* *ê=nôhtê-sipwêhtê-t.*
1-know.**TI**-1SG>**INAN** COMP=want-leave-3SG
'I know (**it**) that he wants to leave.'

b. *Ni-kiskêyim-âw* *ê=nôhtê-sipwêhtê-t.*
1-know.**TA**-1SG>**3.AN.SG** COMP=want-leave-3SG
'I know (**him**) that he wants to leave.'

Some Eastern languages distinguish parallel ABSOLUTE and OBJECTIVE independent forms. An absolute form leaves the features of some third-person argument unspecified while an objective form specifies them. The Delaware objective 3SG>3′ verb form in (19a), for example, inflects for both its 3SG subject and its 3′ object, while the parallel absolute 3SG>3′ verb form in (19b) inflects only for its 3SG subject (Goddard 1979: 88).

(19) a. ***wə*-*nihl-a·*-*w*-*al*** *máxkw-al*
3-kill-DIR-**3SG**-3′ bear-3′
‘He killed the bear.’

b. *máxkw-al* *nihl-e·*-***w***
bear-3′ kill-DIR-**3SG**
‘He killed a bear.’

Where this contrast is retained, it functions as a type of differential object marking conditioned by definiteness, as in (19). Most languages, however, have lost the contrast and uniformly use either an (19a)-type form (Ojibwe, Passamaquoddy) or an (19b)-type form (Cree, Menominee).

The independent inflection closely resembles the inflection of possessed nouns (see (13) above); compare the Plains Cree verb and noun forms in (20) (Wolfart 1973: 31, 41). This resemblance reflects the diachronic origin of the independent, which arose when possessed deverbal nouns were reanalyzed as full-fledged verbs (Goddard 1974b: 325–327).

(20) a. ***ni***-*wâpam-â*-***nân***-*ak*
1-see-DIR-**1PL**-3.AN.PL
‘we (excl.) see them’

b. ***ni***-*têm*-***inân***-*ak*
1-horse-**1PL**-3.AN.PL
‘our (excl.) horses’

Some languages have a special CONJUNCT PARTICIPLE form, which functions as a relative clause headed by an argument of the verb. Compare, for example, the Ojibwe conjunct form in (21a) with the conjunct participle in (21b) (Nichols 1980: 201). As its translation indicates, the participle functions syntactically as a 3PL noun. Its inflection resembles that of a 3PL noun as well: plurality is marked by a peripheral suffix *-ik* ‘AN.PL’, related to the nominal plural suffix *-ak* ‘AN.PL’ in (20b) above, rather than the usual conjunct central suffix pluralizer *-waa* in (21a).

(21) a. *waapamaawaat*
waapam -aa **-waa** **-t**
see -DIR **-PL** **-3**
‘**they (PROX)** see him/her (OBV)’

b. *wayaapamaacik*
wayaapam -aa **-t** **-ik**
IC.see -DIR **-3** **-AN.PL**
‘**they (PROX)** who see him/her (OBV)’

The conjunct participle form, bleached of its participial meaning, has been generalized to additional contexts in several languages. In Cree (Goddard 1995: 129), the conjunct participle has replaced the plain conjunct, while in Mi’gmaq, the conjunct participle has become the default main-clause verb form, completely replacing the independent indicative (Goddard 1967: 78).

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