

Toward a Detailed Plains Cree VAI Paradigm

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Algonquian languages, and North American indigenous languages in general, have lacked substantial development of technological applications such as intelligent electronic dictionaries (I-DICTs), which are able to recognize and generate any inflected word forms, and intelligent computer-aided language learning (ICALL) applications, which allow for the extension of exercise templates to cover any inflected word form types using a computational model. Such applications could be useful in supporting revitalization efforts. However, Plains Cree, unlike some other Algonquian languages, does have a substantial number of printed dictionaries, grammars, and teaching materials. The language already also has an online dictionary that allows users to search from Cree-to-English as well as from English-to-Cree. This dictionary, the Online Cree Dictionary,¹ conglomerates multiple dictionaries (LeClaire et al. 1998; Wolvengrey 2001; *Maskwacis Cree Dictionary* n.d.) into a single resource.

Although useful, this online resource is limited in its simplicity. Since no morphological analysis is implemented, searches only return results that match the search input string. Thus, search strings need to be in the form of the item lemma (or lexical entry—not necessarily exactly the same as lemma). Verbal lemmata are mostly in the third person singular, independent, present form, so looking up other

inflected forms requires sufficient knowledge about the morphological composition of words that one may come up with the appropriate lemma corresponding to the inflected form. As a result, a user coming across the imperative form *nâs* ('fetch someone!') must actually have sufficient linguistic knowledge to know to search for *nâtêw* ('s/he fetches someone') in order to retrieve the relevant definition, and even then the definition given will only be for the lexical entry *nâtêw*. This can prove difficult for a language learner, especially at the beginner level, and is further complicated by the need to exclude all preverbal morphology.

In order to help address this problem, we are developing an I-DICT based in terms of its lexical content on Wolvengrey's (2001) Cree dictionary (Arppe et al. 2015; Arppe et al. 2016). The dictionary, *itwêwina*,² incorporates a computational morphological model of Plains Cree (Snoek et al. 2014; Harrigan et al. 2016), which allows for the morphological analysis of any Cree word, e.g., to (1) enable users to search with the imperative form *nâs* and receive a definition matching the lemma of this inflected form, alongside information about its morphological features, as well as (2) generate inflected forms as paradigms of various compositions. In order to develop this computational model, we need as extensive as possible descriptions of the (contemporary) morphology of Plains Cree. To be able to deal with morphologically complex forms such as *ni-nôhtê-nitawi-nîmihito-n* ('I want to go and dance'), we require descriptions that cover person circumfixes (*ni-* -*n*), preverbal morphemes (*nôhtê-* and *nitawi-*), and the stem *nîmihito-*. Ideally the combined use of these different morpheme types, not just individually. While there is no single, unified, comprehensive reference, various resources collectively do contain the necessary information. Focusing on the verb, the aim of this paper is to begin work toward a complete template, as far as is practically possible, of the Plains Cree verb. As a preliminary outcome, we present a detailed paradigm of the Plains Cree animate intransitive verbs (VAIs).

Background

Plains Cree Paradigms

Descriptions of the Plains Cree verb have come in various forms of completeness. One must bear in mind that none of these sources was necessarily attempting to provide full or complete paradigms in any way. Rather, each source provided those forms deemed necessary and comprehensive enough for each audience or research

FIGURE 1. Native studies VAI paradigm sample (2012:31)

INDEPENDENT MODE			
PERSON	PERSON INDICATOR	VERB STEM +	SUFFIX
1s	nî		n
2s	ki		n
3s			w or n
1p	nî		nân
21	ki		naw
2p	ki		nâwâw
3p			wak
3'			yiwa

CONJUNCT MODE			
PERSON	PERSON INDICATOR	VERB STEM +	SUFFIX
1s	ê		yân
2s	ê		yan
3s	ê		t
1p	ê		yâhk
21	ê		yahk
2p	ê		yêk
3p	ê		cik
3'	ê		yit

question. Resources range from language learning tools (such as Native Studies 2012 and Okimâsis 2004), as well as grammatical descriptions (including Wolfart 1973 and Wolvengrey 2011). Looking at language learning materials we see a basic template for the Plains Cree verb. Teaching materials, such as those from the Cree courses offered at the University of Alberta (Native Studies 2012), provide paradigms composed of independent, conjunct, and imperative forms for first through third persons in both singular and plural, as well as obviative person unspecified for number (3'). Preverbs are considered separate, optional morphemes, and are not included in the paradigms. Similarly, unspecified actor, benefactive, and other such forms are not given as part of main paradigms, but rather as separate forms with verb class allomorphy. In any case, such suffixes are not included in canonical forms of verbal paradigms. Separate paradigms are given for subjunctive/future conditional.³ Various terms have been used to describe these forms. Some sources use the term “subjunctive” as the form is cited as expressing an irrealis meaning

FIGURE 2. Okimāsis's VAI paradigm sample (2004:152)*

INDEPENDENT MODE			
PERSON	PERSON INDICATOR	VERB STEM	SUFFIX
1s	nī		n
2s	ki		n
3s			w or n
3's			yiwa
1p	ni		nân
2l	ki		naw
2p	ki		nâwâw
3p			wak
3'p			yiwa

CONJUNCT MODE			
PERSON	CONJUNCT PREVERB	VERB STEM	SUFFIX
1s	ê-		yân
2s	ê-		yan
3s	ê-		t
3's	ê-		yit
1p	ê-		yâhk
2l	ê-		yahk
2p	ê-		yêk
3p	ê-		cik
3'p	ê-		yit

*For orthographic consistency, all vowel length marks have been regularized to the use of the circumflex (e.g. â, ê, î, ô) even where the source material (e.g. Okimāsis 2004) utilizes macrons.

(translating to *if* or *when* forms of verbs in Native Studies 2012), while Bellegarde (Okimāsis) (1984), Okimāsis and Ratt (1999), and Okimāsis (2004), using similar translations, call this form the “future conditional.”

Okimāsis's (2004) description of the Plains Cree verb provides a very similar picture to the instructional materials discussed above. Notably different is how the unspecified actor suffixes are dealt with. While previous materials treated the unspecified actor suffix as a separate, sometimes derivational, morpheme, Okimāsis (2004) includes the unspecified actor forms as a part of her unified paradigms, presented in the summary of the grammar, though only for the Transitive Animate (VTA) paradigm. For VAI paradigms, the unspecified actor form is treated derivationally as above.

FIGURE 3. Wolfart's VAI paradigm sample (1973:43)

	INDEPENDENT INDICATIVE	CONJUNCT SIMPLE AND CHANGED	CONJUNCT SUBJUNCTIVE/ ITERATIVE
Indf*		-hk	-hki
1	ni- -n	-yân	-yâni
2	ki- -n	-yan	-yani
1p	ni- -nân	-yâhk	-yâhki
21	ki- -naw, nânaw	-yahk	-yahko
2p	ki- -nâwâw	-yêk	-yêko
3	-w -ø	-t, -k	-ci, -ki
3p	-wak	-cik, -kik	-twâwi, -kwâwi
3'	-yiwa	-yit	-yici

*As was common at the time, and still may be to some extent, the unspecified actors were referred to as 'indefinite actor' (indf) forms, though the originator of this term later recanted its use (cf. Hockett 1996). For this paper, we will use <X> to mark the Unspecified Actor.

Finally, in dealing with obviative participant marking on verbs, Okimâsis diverges from Native Studies (2012). Most noticeable is her inclusion of both singular and plural forms of obviative participants, which are formally syncretic, but apparently provided to illustrate to students both singular and plural reference.

While clearly divergent, the two sources presented above are similar, particularly in their audiences. Both sources are aimed mainly at second language learners, particularly those with minimal linguistic knowledge. It makes sense then that their presentation and philosophies regarding paradigm makeup would be similar. Shifting to publications less focused on language learning and rather on academic audiences, we find differences in description. Wolfart's (1973) seminal grammar of Plains Cree describes additional modalities not found in Native Studies (2012) and Okimâsis's (2004) materials. Unlike the previous sources, Wolfart (1973) describes as part of main paradigm sets the preterit and dubitative forms. These forms are preserved in some varieties of East Cree and other Algonquian languages such as Ojibwe; however, such forms are all but gone from recently attested forms of Plains Cree. Wolfart's description represents thus, from the current perspective, a historical, though recent, form of Plains Cree.

As in Okimâsis (2004) and Native Studies (2012), the subjunctive (which also, according to Wolfart, shares the same endings as an "iterative" form) is given as a separate paradigm. The changed conjunct and unspecified actor forms are described separately as additional morphemes/processes (Wolfart 1973:42). Further described are the relational forms (created through the addition of a -w suffix), and diminutive

FIGURE 4. EastCree.org's Northern East Cree VAI Paradigm Sample (2016)

Verb Class: vai vai+o vii vta vti

Conjugations: 01 02 03 05 06 09 10 11 12a 12b 14 15 16 17a 17b

Stems: aa i ii n u wi

mishikaau

		Relational	
	2	chimishikaan	chimishikaawaan
	2p	chimishikaanaawaau	chimishikaawaanaawaau
	21p	chimishikaanaaniu	chimishikaawaanaaniu
	1	nimishikaan	nimishikaawaan
	1p	nimishikaanaan	nimishikaawaanaan
	3	mishikaau	mishikaawaau
	3p	mishikaawich	mishikaawaawich
	4	mishikaayiu	
unspecified actor	X	mishikaaniu	
	X'	mishikaanaaniwiyiu	

verb forms (derivationally created through the use of the *-si* suffix), both of which are in continued use in contemporary Plains Cree (cf. Cenerini (2014)), but lack widespread description in contemporary materials such as those described above.

Finally, Wolvengrey's (2011) thesis provides the reader with specific paradigms of verbal inflection used to help argue points unrelated to the documentation of a full verbal paradigm. The paradigms presented cover the basic independent, conjunct, and imperative orders for all classes. Wolvengrey does not include future conditional forms, nor does he include the now defunct dubitative, preterit, or changed conjunct forms, and while he does discuss unspecified actor forms, they are not included in his paradigms.

Verb Paradigms in other Algonquian Languages

While there are similarities in the general structure of verbal paradigms in Algonquian languages, (e.g., the four-way division into conjugation classes according to transitivity and the animacy of the main participant[s]), they also differ from each other in various ways, and there are differences in how the composition of paradigms is represented. Looking toward East Cree/Innu, we see a very different

organization of verbal paradigm data. Through the East Cree website,⁴ we are presented with a comprehensive set of verbal paradigms for both the Northern and Southern Dialects of East Cree.⁵ The paradigm for each verb class is split into 15 potential conjugations (which are not realized for all classes), the first seven of which map to the independent order (for VAI stems, all seven found in the Northern dialect but only four in the Southern), the next six (all for Northern, five for Southern) representing the conjunct order, and the final two conjugations representing the imperative order. Unspecified actor forms are presented within the conjunct and independent conjugations. Furthermore, these conjugations cover the dubitative, habitual, preterit, and changed conjunct forms (cf. Wolfart 1973) (see Figure 4). Where applicable, relational forms are presented alongside regular forms. Similarly for Ojibwe, Valentine's (2001) verbal paradigms contain a variety of features not found in contemporary Plains Cree, including preterit, dubitative, positive and negative, iterative, and participial forms. These forms are presented as a unified, singular, extensive paradigm.

Preliminary Proposed Paradigms

So far we have seen a variety of choices on which parts of the Plains Cree verbal paradigm should be presented. For the purposes of creating a computational model that can analyze and generate the possible, attested verbal forms, none of these sources alone is sufficient. None provides a complete set of paradigms including the independent, conjunct, and imperative orders, the unspecified actors, and the relational forms (in all their possible combinations). Therefore, the paradigms we present will cover all the aforementioned inflected forms, as well as providing for a more comprehensive subdivision of the conjunct not documented for Plains Cree since Wolfart (1973). In addition to the most common (changed) conjunct (as marked by preverbs such as *ê-* *kâ-*), we include the unchanged conjunct (as now usually marked by the preverb *ka-/ta-*) as a separate form, under a title suggested for it through the work of Cook (2008), the SUBJUNCTIVE.⁶ In addition to the (unchanged) future conditional, the (changed) iterative (cf. Wolfart 1973) (or “timeless conditional”) must also be included, based on recent fieldwork. In contrast, the dubitative forms cited by Wolfart (1973) no longer seem to be productive in contemporary Plains Cree, essentially superseded in part by the free use of the particle *étokwê*. Moreover, the inclusion of preterit forms remains

debatable as speakers in some regions at least seem to recognize them; however, there are few (or no) sources of recent data confirming their productive use. As a result, we have opted not to include the preterit forms in our paradigms, but this is clearly an area for future research.

Derivation and Inflection

In creating an inflectional paradigm, we must differentiate between inflection and derivation. In compiling a full paradigm, by convention we would limit ourselves to inflectional morphology. Derivational morphology, unlike inflection, is responsible for lexeme creation (Booij 2007) and changes in word class (Stump 2001). Furthermore, derivation does not rule out further derivation, though inflection often does (e.g., when speaking of the extent to which one can speak another language, one could derive *speaker-ness* from the already derived *speaker*, while you could not add further inflection or derivation on *speaker-s*) (Stump 2001). Moreover, derivation is often seen to produce less regular changes than inflection (Stump 2001; Booij 2006): the third person inflection always indicates that a verbal action is being performed by a third person, while the denominal verbalizing suffix *-ize* has different meanings in *specialize* (to focus on something) than in *prioritize* (to make something a priority) (Stump 2001). Similarly, although inflection is often more productive than derivation, this is not a universal rule (Booij 2006). While the above criteria attempt to demarcate inflection and derivation, it is perhaps better to think of the two processes as opposite ends of a continuum. Stump (2001) argues that context is perhaps the best way to define the type of morphological process, and that a single process may be of an inflectional nature in one case, but a derivational nature in another.

Derivational morphology, in contrast to inflection, is responsible for lexeme creation (Booij 2007). Using this definition, we might reasonably treat benefactives, which create VTA constructions (e.g., *atoskêstamawêw* 'He works for him/her [3']') from VAI stems⁷ (e.g., *atoskêw* 'He works'), as derivational. However, there is some trepidation in labeling these processes as purely derivational: In the case of Plains Cree, we find the formation of benefactives to be neatly regular. Second, derivation is supposedly less semantically regular, producing forms such as *cooker* (which does not primarily refer to any person who cooks as we might expect from the suffixation of an agentive suffix *-er* onto *cook* [as the term may be used for items like a slow cooker].) (Booij 2006). Conversely, a Plains Cree benefactive derivation will (nearly)

always mean that one is doing something for someone (e.g., *nîmihitôstamawêw* 'he dances for someone [3]', from the VAI *nîmihitow* 'He dances'). It therefore seems that Plains Cree does not strictly demarcate inflection as compared to derivation. There exist multiple approaches that attempt to address this, in practice, noncategorical nature of derivation and inflection. For our purposes, we will cover (1) distinguishing between lexical and syntactic derivation, (2) derivation as understood in Functional Discourse Grammar (FDG), and (3) Lexical Functions.

Lexical and syntactic derivation is a proposed differentiation within morphological derivation. According to Kuryłowicz (1936, as cited in Haspelmath et al. 2001), lexical derivation is a process wherein only a lexical change occurs while syntactic derivation is a process wherein syntactic function is altered. Haspelmath et al. (2001) further add that syntactic derivation changes syntactic roles without affecting semantics greatly, while lexical derivation can effect semantic change. Such definitions are particularly apt in differentiating Plains Cree inflection and derivation: a reflexive form retains the verbal meaning of its stem lexeme, but decreases the syntactic valency of the verb (i.e., syntactic derivation of VTA to VAI). The approach taken in FDG is essentially in agreement with this. While derivation proper remains a lexical process (achieved in the lexicon), both inflection proper and "word-class changing inflection" (cf. Haspelmath 2002) are morphosyntactic processes required to be productive and regular (Hengeveld and MacKenzie 2008:229). This middle ground between derivation and inflection is broadly defined as a process by which lexemes are adapted to a formal environment they would not normally be able to occupy. Hengeveld and MacKenzie (2008:229) further state, "For example, if a basically transitive lexeme is inserted into a one-place predication frame, it will in some languages have to be adapted [in its form] so as to show its intransitive use." This explanation describes precisely the creation of reflexives from VTA verbs in Plains Cree. Benefactives, which turn VAIs into "new" stems that follow the VTA paradigm (through the addition of *-stamaw*), adapting the verb to show this alternative usage, are thus also in this in-between world of syntactic derivation. This nevertheless leaves open the best way to account for these changes within our computational model.

Finally, we turn to the concept of lexical functions to help explain the opacity of the derivation/inflection divide. Lexical functions act as a bridge between categorical derivation and inflection. In describing the organization of a Portuguese lexical database, Janssen (2005) describes lexical functions as links between separate lexemes. In our Plains Cree examples, the lexemes *atoskêw* ('s/he works') and the

third person benefactive *atoskêstamawêw* ('s/he does another's work for him/her [3']') would be treated as separate elements in the lexicon, each with their own inflectional paradigm (the former following the VAI; the latter following the VTA). These lexemes, however, would be linked through a function of benefactivization. This function would allow derived lexemes to stand separate from the stem lexeme, while still encoding a (non-inflectional) path through which one word is derived from another.

Based on the previous discussion, we can synthesize an appropriate definition of inflectional and derivational morphology to best fit paradigm creation: we can consider derivation to be those processes that redirect to another paradigm, but do not fundamentally change how the new paradigm marks actors and goals. The unspecified actor (which creates a VII form that may not always take every form that we expect of a regular VII [e.g., the plural]) seems to restrict the paradigm of the newly created VII, and so we can consider it nonderivational, and thus include it in our VAI paradigm; on the other hand, a VTA derived from a VAI can take ANY form that a regular VTA can, and is thus classified as fully derivational and not included in this paradigm.

Preverbs

Perhaps one of the most striking features of Plains Cree is its extensive usage of preverbal morphemes to encode tense, aspect, and modal characteristics on verbs. Preverbs can express desire, attempts at something, strength in action, and more. Preverbs may also be used to mark tense, through *kî-*, *ka-*, and *wî-* (which encode past tense, future tense, and prospective aspect, respectively; cf. Wolvengrey 2006, 2012). While some preverbs may occur less in some orders, the restrictions of preverbal use and stacking is currently understudied. One could apply the concept of lexical function to link commonly used preverb-verb stem combination (e.g., *pê-mîcîso* 'come eat!'). However, as preverb combinations do not affect person inflection, and because the theoretical combinations of these morphemes are far too great to contain in a single paradigm table, the following paradigms will not include preverbs.

Conclusion

The Plains Cree verbal paradigm has been described to various extents, but not comprehensively, in several sources. While most sources cover basic paradigmatic features, such as person, number, and order, additional components such as the future conditional, iterative (or “timeless conditional”), and relational forms are often if not regularly left out. This paper has summarized various philosophies as to paradigmatic construction through an attempt to create a justified paradigm for the VAI class. Various derivational forms, such as the diminutive, reflexive, or benefactive, etc., have been left out for reasons of parsimony and an attempt to restrict these paradigms to what we consider primarily inflectional forms. What follows is the resulting basic inflectional VAI paradigm for Plains Cree.⁸

FIGURE 5. V-final VAI independent order—indicative (e.g., *nipâw* ‘s/he sleeps’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	ni(t)-		-n	ninipân
2s	ki(t)-		-n	kinipân
1p	ni(t)-		-nân	ninipânân
21	ki(t)-		-(nâ)naw	kinipâ(nâ)naw
2p	ki(t)-		-nâwâw	kinipânâwâw
3s			-w	nipâw
3p			-wak	nipâwak
3'			-ýiwa	nipâýiwa
X			-(nâ)niwan	nipâniwan

FIGURE 6. V-final VAI Independent Order—Indicative—Relational (e.g., *nipâwêw* ‘S/he sleeps in relation to him/her’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	ni(t)-		-wân	ninipâwân
2s	ki(t)-		-wân	kinipâwân
1p	ni(t)-		-wânân	ninipâwânân
21	ki(t)-		-wâ(nâ)naw	kinipâwâ(nâ)naw
2p	ki(t)-		-wânâwâw	kinipâwânâwâw
3s			-wêw	nipâwêw
3p			-wêwak	nipâwêwak
3'				
X			-wân	nipâwân

FIGURE 7. V-final VAI conjunct order—indicative (changed)
(e.g., *ê-nipât* ‘s/he is sleeping’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	ê-		-yân	ê-nipâyân
2s	ê-		-yan	ê-nipâyan
1p	ê-		-yâhk	ê-nipâyâhk
21	ê-		-yahk	ê-nipâyahk
2p	ê-		-yêk	ê-nipâyêk
3s	ê-		-t	ê-nipât
3p	ê-		-cik	ê-nipâcik
3'	ê-		-ýit	ê-nipâyít
X	ê-		-hk*	ê-nipâhk

*In dialects other than Plains Cree, this archaic ending is replaced by *-(nâ)nivahk* or a variant.

FIGURE 8. V-final VAI conjunct order—indicative (changed)—relational
(e.g., *ênipâwât* ‘s/he is sleeping in relation to him/her’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	ê-		-wak	ê-nipâwak
2s	ê-		-wat	ê-nipâwat
1p	ê-		-wâhk	ê-nipâwâhk
21	ê-		-wahk	ê-nipâwahk
2p	ê-		-wêk	ê-nipâwêk
3s	ê-		-wât	ê-nipâwât
3p	ê-		-wâcik	ê-nipâwâcik
3'				
X	ê-		-wiht	ê-nipâwiht

FIGURE 9. V-final VAI conjunct order—subjunctive (unchanged)
(e.g., *ta-nipât* ‘(for him/her) to sleep . . .’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	(ta-)		-yân	(ta-)nipâyân
2s	(ta-)		-yan	(ta-)nipâyan
1p	(ta-)		-yâhk	(ta-)nipâyâhk
21	(ta-)		-yahk	(ta-)nipâyahk
2p	(ta-)		-yêk	(ta-)nipâyêk
3s	(ta-)		-t	(ta-)nipât
3p	(ta-)		-cik	(ta-)nipâcik
3'	(ta-)		-ýit	(ta-)nipâyít
X	(ta-)		-hk*	(ta-)nipâhk

*In dialects other than Plains Cree, this archaic ending is replaced by *-(nâ)nivahk* or a variant.

FIGURE 10. V-final VAI conjunct order—subjunctive (unchanged)—relational (e.g., *ta-nipâwât* ‘(for him/her) to sleep in relation to him/her . . .’)

ABBR	PREFIX	VAI STEM	ENDINGS	EXAMPLE
1s	(ta-)		-wak	(ta-)nipâwak
2s	(ta-)		-wat	(ta-)nipâwat
1p	(ta-)		-wâhk	(ta-)nipâwâhk
21	(ta-)		-wahk	(ta-)nipâwahk
2p	(ta-)		-wêk	(ta-)nipâwêk
3s	(ta-)		-wât	(ta-)nipâwât
3p	(ta-)		-wâcîk	(ta-)nipâwâcîk
3'				
X	(ta-)		-wiht	(ta-)nipâwiht

FIGURE 11. V-final VAI conjunct order—future conditional (unchanged) (e.g., *nipâci* ‘if s/he sleeps . . .’)

ABBR	VAI STEM	ENDINGS	EXAMPLE
1s		-yâni	nipâyâni
2s		-yani	nipâyani
1p		-yâhki	nipâyâhki
21		-yahko	nipâyahko
2p		-yêko	nipâyêko
3s		-ci	nipâci
3p		-twâwi	nipâtâwâwi
3'		-yici	nipâyîci
X		-h	nipâhki

*In dialects other than Plains Cree, this archaic ending is replaced by *(nâ)nîwahk* ant.

FIGURE 12. V-final VAI conjunct order—future conditional (unchanged)—relational (e.g., *nipâwâci* ‘if s/he sleeps in relation to him/her . . .’)

ABBR	VAI STEM	ENDINGS	EXAMPLE
1s		-waki	nipâwaki
2s		-waci	nipâwaci
1p		-wâhki	nipâwâhki
21		-wahko	nipâwahko
2p		-wêko	nipâwêko
3s		-wâci	nipâwâci
3p		-wâtâwâwi	nipâwâtâwâwi
3'			
X		-wihci	nipâwihci

FIGURE 13. V-final VAI conjunct order—timeless conditional (changed)
(e.g., *nêpâci* ‘whenever s/he sleeps . . .’)

ABBR	IC*	VAI STEM	ENDINGS	EXAMPLE
1s	(i→ê)		-yâni	nêpâyâni
2s	(i→ê)		-yani	nêpâyani
1p	(i→ê)		-yâhki	nêpâyâhki
21	(i→ê)		-yahko	nêpâyahko
2p	(i→ê)		-yêko	nêpâyêko
3s	(i→ê)		-ci	nêpâci
3p	(i→ê)		-twâwi	nêpâtâwi
3'	(i→ê)		-ýici	nêpâyíci
X	(i→ê)		-hki†	nêpâhki

*IC = Initial Change, which is becoming archaic in Plains Cree but retained at least in this paradigm. (a→ê, i→ê, o→wê; i→â/iyí; â→iyâ; ê→iyé; ô→iyó).


†In dialects other than Plains Cree, this archaic ending is replaced by *(nâ)nâwahk*  ant.

FIGURE 14. V-final vai conjunct order—timeless conditional (changed)—relational
(e.g., *nêpâwâci* ‘whenever s/he sleeps in relation to him/her . . .’)

ABBR	IC	VAI STEM	ENDINGS	EXAMPLE
1s	(i→ê)		-waki	nêpâwaki
2s	(i→ê)		-waci	nêpâwaci
1p	(i→ê)		-wâhki	nêpâwâhki
21	(i→ê)		-wahko	nêpâwahko
2p	(i→ê)		-wêko	nêpâwêko
3s	(i→ê)		-wâci	nêpâwâci
3p	(i→ê)		-wâtâwi	nêpâwâtâwi
3'				
X	(i→ê)		-wihci	nêpâwihci

FIGURE 15. V-Final VAI imperative order—immediate and delayed
(e.g., *nipâ* ‘(you) sleep!’)

ABBR	VAI STEM	ENDINGS	EXAMPLE
2s			nipâ
2p		-k	nipâk
21		-tân	nipâtân
2s		-hkan	nipâhkan
2p		-hkék	nipâhkék
21		-hkahk	nipâhkahk

FIGURE 16. V-Final VAI imperative order—immediate (and delayed)—relational (e.g., *nipâ* ‘(you) sleep in relation to him/her!’)

ABBR	VAI STEM	ENDINGS	EXAMPLE
2s		-wa	nipâwa
2p		-wâ(h)k	nipâwâ(h)k
21		-wâtân	nipâwâtân
2s			
2p			
21			

NOTES

1. www.creedictionary.com.
2. <http://altlab.ualberta.ca/itwewina>.
3. Though “subjunctive” is certainly loaded with Standard Average European baggage, it is primarily problematic as it implies a situation that does not necessarily refer to the future. To the contrary, the term “future conditional” (cf. Okimâsis 2004) seems less loaded, and DOES implies a future setting, which is, in fact, closer to how these Cree “subjunctive” forms (generally derived by adding *-i* to the conjunct ending of the respective verb class) behave. Thus, a construction like *kihç-ôkimâwiyâni* cannot be used to mean ‘if I were king’ in a past or present hypothetical sense, but can only refer to a future or not yet realized occurrence. For these reasons, we will not use the term “subjunctive” to refer to these forms (cf. also Cook 2008).
4. <http://www.eastcree.org/cree/en/>.
5. <http://verbs.eastcree.org/>.
6. We recognize that this is not an ideal choice since, as already mentioned (see note 3), this term is loaded with intellectual baggage. However, Cook (2008) argues that the Plains Cree unchanged conjunct seems to function quite similarly to the Romanian subjunctive, both languages completely lacking an infinitival form. “Infinitive” would be another, not necessarily ideal but more readily understood, possible choice.
7. Although benefactives can also derive a VTA from a VTI, this article focuses only on Animate Intransitive verbs.
8. In addition to the vowel-final (V-final) paradigms listed here (which encompass all stems that end in /i, o, â, ê, î, ô/ (i.e., all Plains Cree vowels except /a/), small modifications are required to account for a second major VAI subtype, the /n/-final stems. Additionally,

there are a few exceptional intransitive verbs which inflect identically to VTI class 1 stems (i.e., with the theme sign /-am/ and its variants). These have generally been grouped as VTI stems, but could be classified as a third subtype of VAI (cf. Wolvengrey 2011), depending on whether morphology or syntax are taken to be determinative of class membership.

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