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# Referential Hierarchies in Three-Participant Constructions in Blackfoot: The Effects of Animacy, Person, and Specificity<sup>1</sup>

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*This paper discusses alignment patterns in three-participant constructions in Blackfoot (Western Algonquian; Canada, USA). We demonstrate the effects of referential hierarchies relating to animacy, person and specificity. Blackfoot verbs stem are subcategorized for transitivity and the animacy of S (for intransitives) and P(atient), R(ecipient), T(heme), or B(eneficiary) (for (di)transitives), showing cross-reference with at most two participants. Non-specific participants are never cross-referenced, resulting in the possibility of constructions with three or even four participants, only one of which is cross-referenced on the verb. Even when all participants in a three-participant construction are specific, only two can be cross-referenced on the verb: the A and what is generally called the ‘primary object’ in Algonquian studies (T, R or B depending on the specific stem in question). Any remaining participants are not cross-referenced on the verb, irrespective of their specificity status. Whether T, R or B is chosen to be the primary object is lexically determined by the verbal stem, and more in particular by the so-called ‘final’, a derivational morpheme which closes every verb stem in Blackfoot. While Algonquian languages are often thought to display only secundative alignment, in line with the overwhelming importance of animacy in their grammars, we show that some stems require indirective alignment, while others allow for both configurations. Cross-referencing of A and B occurs as a result of applicativization with a benefactive final, which downgrades any potentially present T and/or R participants to non-cross-referenced objects. Finally, Blackfoot allows for a form of marking additional participants by a preverbal element called a ‘relative root’, which licenses a participant without influencing cross-referencing patterns and without indicating the specificity or animacy of the licensed participant.*

## 1. Introduction

Even a cursory glance at the grammatical sketch of any Algonquian language reveals the crucial role played in its fundamental structures by gender, person, and obviation.<sup>2</sup> The interplay between the direct/inverse opposition in transitive clauses and obviation status on the one hand and nominal hierarchies on the other has attracted sustained attention of both Algonquian studies and the typological literature. Nevertheless, ditransitive clauses (or, more generally, three-participant constructions) in Algonquian languages have been addressed from a typological point of view only comparatively recently (cf. e.g. Rhodes 2010a). Against this background, the

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<sup>2</sup>The animate/inanimate distinction in Algonquian languages is grammatical rather than purely notional. Nouns that refer to humans, animals, and spirits are of animate gender in Blackfoot, but so are many that refer to objects (e.g. *awanáán*- ‘rattle’, *sopokssi*- ‘dollar’, and *isttoán*- ‘knife’). Cf. Frantz (2009:9f) for more details.

present article makes a contribution to our knowledge of the effects of referential and lexical factors on the encoding of three-participant constructions in Blackfoot. As far as referential factors are concerned, it is particularly interesting to take into account the role of the specific/non-specific distinction, which is overtly marked in the language via a dedicated nominal suffix. In addition, we will show how lexical factors, i.e. the occurrence of specific verb stems, interact with referential factors in the encoding of Blackfoot three-participant constructions.

Some notes on the terminology employed in this paper are in order here. The term INDEX means ‘bound/dependent person marker’; Algonquian indexes in general, and Blackfoot indexes in particular, do not require the presence of an overt controller in the same construction and will be said to index or *cross-reference* their arguments.<sup>3</sup> With respect to grammatical relations, note that Rhodes (2010b) postulates *subject*, *primary object*, *secondary object*, and *relative root complement* as non-oblique arguments for the Algonquian language called Ojibwe, and we follow him here for Blackfoot. Unlike their Ojibwe counterparts, however, Blackfoot verbs do not cross-reference secondary objects (i.e., only subjects and primary objects, which we call *core arguments* here, are indexed on the verb). Lastly, following common Algonquianist practice, *transitivity* is mostly utilized here as a term referring to the indexing capacity of verb morphology, viz. intransitives cross-reference only one argument and transitives cross-reference two. Mismatches between morphological and syntactic transitivity are especially relevant in the context of this article, as will become apparent further down.<sup>4</sup>

All examples are from original data (elicitation and spontaneous narrative) contributed by the first author unless otherwise noted. Some surface form spellings from Frantz (2009) and Frantz and Russell (1995) have been corrected to align with the first author’s pronunciation; this does not affect the interpretation of the morphological structure of the examples. The first line corresponds to the surface form; the morphemes in the second line are basically underlying forms (but *tsi* [*<t-i*] and *ksi* [*<k-i*] are spelled thus when morpheme-medial).<sup>5</sup>

The paper is organized as follows. Section 2 outlines the basics of the relevant Blackfoot morphology and syntax in simple one-participant and two-participant constructions. Section 3 presents in detail how different slots of the Blackfoot verbal complex (so-called finals, theme signs, person markers, and relative roots) interact with syntactic arguments of the clause in three-participant constructions according to their values for the parameters of gender (i.e., the animate/inanimate opposition), person, topicality, and specificity. Section 4 closes the paper with the main conclusions to be drawn, as well as with suggestions for further research.

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<sup>3</sup>Frantz (2009) labels such indexes “agreement affixes”; Algonquian studies habitually use several terms for the overt morphological expression of person and related grammatical categories, including “person affixes,” “agreement markers,” “gender markers,” and “obviative forms.” Blackfoot person markers are clear cases of what Siewierska (2004: 120f) calls “ambiguous agreement markers.”

<sup>4</sup>Frantz (2009: 41) uses the term “paratransitive” to refer to cases where morphologically intransitive verbs take an object; analogously, “paraditransitive” refers to morphologically transitive verbs that take two objects. The relevance of such distinctions will become apparent in Section 3.

<sup>5</sup>Several morphophonemic rules apply, e.g. *C-wa* > *Ca*, *C-yi* > *Ci*, etc. The symbols *I*, *M*, and *S* represent underlying segments that differ morphophonologically from their counterparts *i*, *m*, and *s*. Cf. Frantz (2009: Appendix B) for details.

## 2. Background on Blackfoot

The westernmost Algonquian language is spoken by approximately 5,000 people on four reserves/reservations in Southern Alberta (Canada) and Northern Montana (USA). It has pitch accent and phonemic segment length, complex and numerous morphophonological regularities, and an intricate polysynthetic morphology (Frantz 1970, 2009; Taylor 1969; Uhlenbeck 1938). Since children no longer learn, and most adult speakers no longer use, Blackfoot as the basic means of everyday communication, the language is to be considered severely endangered (Russell and Genee 2006).

### 2.1 Nominal inflection

The grammatical categories overtly marked on nouns, pronouns, and nominalized verbs are gender (animate vs. inanimate) and number (singular vs. plural). Animate singular nominals are further marked as either proximate or obviative, and nouns of either gender can also appear in a non-specific form.<sup>6</sup> In addition, possession is marked on nouns by means of person prefixes and person/number suffixes that also appear on verbs. (Since possession does not appear to interact in any special way with the phenomena at the center of attention here, it will not be detailed any further.) An overview of nominal marking is given in Table 1.

		Singular	Plural
Animate	Proximate	<i>ponokáwa</i> <i>ponoká-wa</i> elk-PROX.SG	<i>ponokáiksi</i> <i>ponoká-iksi</i> elk-ANIM.PL
	Obviative	<i>ponokáyi</i> <i>ponoká-yi</i> elk-OBV.SG	
Inanimate		<i>i'ksisakoyi</i> <i>i'ksisako-yi</i> meat-INAN.SG	<i>i'ksisakoistsi</i> <i>i'ksisako-istsi</i> meat-INAN.PL

Table 1: Gender, number, and obviation with specific nouns

Example (1) illustrates the specific/non-specific opposition, as well as the inanimate singular marking on the demonstrative stem *om-* and the noun stem *i'ksisako-* ‘meat’. The other oppositions mentioned in Table 1 will be addressed further down.

- (1) a. Specific      *Kókkit omi i'ksisakoyi!*  
*ohkot-oki-t*                      *om-yi*                      *i'ksisako-yi*  
 give<sub>i</sub>(TA)-2→1-2SG.IMPER      DEM-INAN.SG                      meat-INAN.SG  
 ‘Give (SG) me that meat (INAN)!’

<sup>6</sup>The term “non-specific” for this form—whose occurrence among Algonquian languages is remarkably rare—is Taylor’s (1969:192); Frantz (2009:11f) uses “non-particular” and “non-referring.” Proulx (2005:15) identifies Blackfoot non-specific *-i* as cognate of the Fox suffix *-i* appearing on animate nouns and even postulates a Proto-Central-Algonquian non-specific morpheme *\*-ī*.

- b. Non-specific *Kókkit í'ksisakoi!*  
*ohkot-oki-t*                      *i'ksisako-i!*  
 give<sub>1</sub>(TA)-2→1-2SG.IMPER    meat-NSPEC  
 'Give (SG) me (some) meat (INAN)!'

## 2.2 Verb derivation and inflection

Algonquian verb morphology is comparatively more complex than its nominal counterpart. A discussion of three-participant constructions presupposes some familiarity with the derivational suffixes called finals and the inflectional morphology marking person, gender, and number of core syntactic arguments; we will briefly outline these areas for Blackfoot in turn in what follows. Verb stems consist of a verb root and a (largely lexicalized) suffix (called “final” in Algonquian studies) that encodes both transitivity and gender of the subject (with intransitives) or primary object (with transitives). Thus, Algonquian verb stems come in four different forms, customarily labeled Inanimate Intransitive (II), Animate Intransitive (AI), Transitive Inanimate (TI), and Transitive Animate (TA); the examples in (2) illustrate the former two for the meaning ‘be good’ and the latter two for the meanings ‘take down’ and ‘love’ respectively:

- (2) Four verb stem types (Frantz 2009: ch. 7, 8, 17)
- |                                                                                                                                                                                 |                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a. I[nanimate] I[ntransitive]<br/> <i>Soká'piiwa.</i><br/> <i>Ø-soka'pii-wa</i><br/>       3-be.good(II)-3SG<sup>7</sup><br/>       'It (INAN) is good.'</p>                 | <p>b. A[nimate] I[ntransitive]<br/> <i>Soká'pssiwa.</i><br/> <i>Ø-soka'pssi-wa</i><br/>       3-be.good(AI)-PROX<br/>       'S/he / it (ANIM) is good.'</p>                               |
| <p>c. T[ransitive] I[nanimate]<br/> <i>Nitsíikooniihpa.</i><br/> <i>nit-ikooni-hp-wa</i><br/>       1-take.down(TI)-DIR<sub>3</sub>-3SG<br/>       'I take it (INAN) down.'</p> | <p>d. T[ransitive] A[nimate]<br/> <i>Nitsikákomimmawa.</i><br/> <i>nit-iik-waakomimm-aa-wa</i><br/>       1-very-love(TA)-DIR<sub>1</sub>-PROX<br/>       'I love him/her/it (ANIM).'</p> |

Even though not all verb roots appear in all four stem classes, it is not uncommon to find roots as building blocks of two or even three different stems, as Examples (2a-b) indicate. Example (3) shows AI, TI and TA stems derived from the root *waan-* ‘say’. Observe that (morphological) transitivity, rather than semantic valency, is crucial; the AI stem *waan-ii-* is morphologically intransitive, although semantically there are arguably both a sayer and something being said:

<sup>7</sup>The suffix *-wa* is glossed differently depending on the stem with which it combines. As a nominal suffix, *-wa* unambiguously marks animate 3<sup>rd</sup> person singular proximate, glossed as PROX; it does not combine with inanimate nouns. As a verbal suffix, *-wa* may combine with both inanimate stems, as in (2a,c) and animate stems, as in (2b,d), resulting in different interpretations depending on the transitivity and gender of the verb stem. In (2a,c) *-wa* cross-references an inanimate 3<sup>rd</sup> person singular entity, which is glossed as 3SG; in (2a) this entity is the subject, in (2c) it is the object. In (2b,d) *-wa* cross-references an animate 3<sup>rd</sup> person singular proximate entity, which is glossed as PROX; in (2b) this entity is the subject, in (2d) it is the object. See below section 2.3 for details on obviation.

## (3) Finals (Frantz 2009: ch. 17-18)

- |                                                                                             |                                                                                                                   |                                                                                                                     |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| a. <i>Nitáanii.</i><br><i>nit-waan-ii</i><br>1-say-AI<br>'I said (something).' <sup>8</sup> | b. <i>Nitáanistoo'pa.</i><br><i>nit-waan-istoo-'p-wa</i><br>1-say-TI-DIR <sub>3</sub> -3SG<br>'I said it (INAN).' | c. <i>Nitáanistawa.</i><br><i>nit-waan-ist-aa-wa</i><br>1-say-TA-DIR <sub>1</sub> -PROX<br>'I told him/her (ANIM).' |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|

These four stem types show different but related inflectional paradigms in all Algonquian languages.<sup>9</sup> Intransitive stems are conjugated via affixation for person (only 3rd for II; 1st vs. 2nd vs. 3rd for AI) and number (singular vs. plural) of their subject; in addition, the 1st person distinguishes between inclusive and exclusive, and the animate singular 3rd person distinguishes between proximate and obviative (addressed in more detail in §2.3 below). Transitive stems, by contrast, are conjugated via affixation for two arguments (subject and primary object).

TA verbs show a so-called theme suffix that expresses the direction in which the action proceeds, as illustrated in (4) below with forms from the independent order. So-called “local” forms (i.e., those depicting an interaction between speech act participants [henceforth SAPs]; 4a-b below) have specialized theme suffixes, viz. *-oo* ‘1→2’ and *-oki* ‘2→1’.<sup>10</sup> According to the nominal hierarchy [1/2 > 3 proximate > 3 obviative], if the action proceeds from left (higher) to right (lower), the verb is direct and takes a direct suffix. So-called “mixed” forms (i.e., those portraying a state of affairs in which a SAP acts on a 3rd person; 4c below) take the direct suffix *-aa*; so-called “non-local” forms (i.e., those corresponding to situations where a proximate 3rd person acts on an obviative 3rd person; 4e below) take *-ii*. These suffixes have been labeled *direct*<sub>1</sub> and *direct*<sub>2</sub> respectively here. If, by contrast, the action proceeds from right (lower) to left (higher), the verb is inverse and takes the suffix *-ok* (4d, 4f below), in both mixed and non-local scenarios.

## (4) Basic positions in the TA independent paradigm (Frantz 2009: ch. 10-11)

- |                                                                                                                             |                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| a. 1→2 local scenario<br><i>Kitsiikákomimmo.</i><br><i>kit-iik-waakomi-mm-o</i><br>2-very-love-TA-1→2<br>'I love you (SG).' | b. 2→1 local scenario<br><i>Kitsiikákomimmoki.</i><br><i>kit-iik-waakomi-mm-oki</i><br>2-very-love-TA-2→1<br>'You (SG) love me.' |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|

<sup>8</sup>Since Blackfoot verbs do not agree with non-specific arguments via suffixation, even if the thing being said were overtly expressed in the clause, the verb would still be intransitive. See Section 3.2 for more on this fact.

<sup>9</sup>Blackfoot argument inflection does not show sensitivity to tense/aspect (i.e., the relevant affixation does not influence the choice of person/number/gender morphology) but displays variation according to the so-called “order” (basically, different values of modality) in which the verb appears: independent, subjunctive, conjunctive, irrealis, and imperative all have characteristic argument inflection patterns. In this article, we will limit ourselves to illustrating patterns found in the independent order (roughly, the one occurring in matrix clauses).

<sup>10</sup>We are glossing over a number of analytical details here, viz. the fact that the ‘2→1’ suffix *-oki* is formally more similar to the inverse suffix than in the Plains Algonquian languages; theoretical and implications of the analysis of inversion sketched in the body of text; and typological questions. Cf. Zúñiga (2012) for details on the former issue and Zúñiga (2006) for the latter two.

## c. Direct (mixed scenario)

*Nitsiikákomimmawa nitána.*

*nit-iik-waakomi-mm-aa-wa n-itan-wa*  
 1-very-love-TA-DIR<sub>1</sub>-PROX      1-daughter-PROX  
 ‘I love my daughter.’

## d. Inverse (mixed scenario)

*Nitsiikákomimmoka nitána.*

*nit-iik-waakomi-mm-ok-wa n-itan-wa*  
 1-very-love-TA-INV-PROX      1-daughter-PROX  
 ‘My daughter loves me.’

## e. Direct (non-local scenario)

*Ikákomimmiwa.*

*Ø-iik-waakomi-mm-ii-wa.*  
 3-very-love-TA-DIR<sub>2</sub>-PROX  
 ‘S/he (PROX) loves him/her (OBV).’

## f. Inverse (non-local scenario)

*Otsiikákomimmoka.*

*ot-iik-waakomi-mm-ok-wa.*  
 OBV→PROX-very-love-TA-INV-PROX  
 ‘S/he (OBV) loves him/her (PROX).’

An overview of the essentials of the argument- and direction-marking morphology in independent TA forms is given below in Table 2. Note that the prefixes are the same when the same two persons are involved, irrespective of their role (e.g., forms corresponding to both ‘1→3’ and ‘3→1’ take a 1st person prefix *nit-*), with the exception of the *Ø-* vs. *ot-* alternation in nonlocal scenarios (4e-f above).

Prefix (ranked)	Theme suffix	Plural participant	SAP (ranked)	3rd person (ranked)
<i>kit-</i> 2 <i>nit-</i> 1 <i>ot-</i> OBV→PROX etc. <i>Ø-</i> 3 else/1PL.INCL	<i>-aa</i> mixed DIR <i>-(y)ii</i> non-local DIR <i>-ok</i> INV <i>-oo</i> 1st→2nd <i>-oki</i> 2nd→1st ( <i>-otssp</i> INV with unspecified A and PL.SAP O)	<i>-hp</i> local SAP <i>-oaa</i> O in non-local INV	<i>-(i)nnaan</i> 1PL.EXCL <i>-oaa(w)</i> 2PL ( <i>-oo</i> SG.SAP with unspecified A)	<i>-(w)a</i> PROX <i>-(y)i</i> PL <i>-(y)ini</i> OBV

Table 2: Selected Blackfoot affixes, independent TA forms (Frantz 2009:151)<sup>11</sup>

Lastly, TI verbs also have a theme suffix after the final. In the independent order, this suffix is *-hp* for SAP subjects and *-m* for 3rd person subjects.<sup>12</sup> Since the primary object is always an inanimate 3rd person, these suffixes are actually functionally parallel to direct<sub>1</sub> *-aa* and direct<sub>2</sub> *-ii* occurring in the TA independent paradigm with an animate 3rd person primary object and can be labeled (mixed) direct<sub>3</sub> and (non-local) direct<sub>4</sub> respectively. Examples follow:

<sup>11</sup>This is a simplified overview, particularly concerning the intricate morphophonology and the allomorphy of many of the affixes; cf. Genee (2009) and Zúñiga (2012) for details.

<sup>12</sup>The suffix *-hp* appears as *-p* in the 1st person plural inclusive.

## (5) Basic opposition in the TI independent paradigm (Frantz 2009:43-44)

a. *Nikáíkooniihpinnaani noyíistsi.*

<i>n-Ikáá-ikoon-i-hp-innaan-yi</i>	<i>n-oyís-istsi</i>
1-PERF-take.down-TI-DIR <sub>3</sub> -1PL.EXCL-3PL.OBJ	1-lodge-INAN.PL
‘We (EXCL) have taken down our lodges.’	

b. *Ikóónima nohkówa ómi niitóyisi.*

<i>Ø-ikoon-i-m-wa</i>	<i>n-ohkó-wa</i>	<i>om-yi</i>	<i>niitóyis-yi</i>
3-take.down-TI-DIR <sub>4</sub> -3SG.OBJ	1-son-PROX	DEM-INAN.SG	tipi-INAN.SG
‘My son took down that tipi.’			

**2.3 Obviation**

In mixed (SAP↔3) and local (SAP↔SAP) scenarios, there is no choice as to which form to use to portray a given state of affairs: unlike the grammar of English (which, at least in principle, provides both active and passive clause structures), the grammar of Blackfoot provides only one active form, either direct or inverse, depending of the person of both core syntactic arguments.<sup>13</sup> In non-local scenarios (3↔3), however, both a direct and an inverse verb form exist, and its usage is sanctioned by the rules governing obviation status in nominals. Basically, if there is an asymmetry between either the animacy or the possessor/possessum status of two 3rd person arguments, only animates and possessors can be proximate; inanimates do not participate in the obviation opposition, and animate possessums are obligatorily obviative. If both arguments are animate and non-possessed, the speaker can choose to grant proximate status to either one; the choice appears to be determined by pragmatic factors related to topicality. Therefore, (4e) above is used when the lover is topical, whereas (4f) is used when the loved one is topical. All these conditions are summarized in (6):

## (6) Obviation (Frantz 2009:13f, Genee 2009)

- a. Grammatical: possessors can be PROX or OBV; possessums of 3rd persons must be OBV
- b. Semantic: only animates can be PROX
- c. Pragmatic: if two animates cooccur in a clause, at most one (the topic) is PROX

**3. Three-Participant Clauses in Blackfoot****3.1 Introduction**

Blackfoot translational equivalents of clauses whose heads are predicates of giving, selling, buying, borrowing, lending, telling, teaching etc. are intransitive, monotransitive, or ditransitive constructions, depending on the verb stem employed. Verb stems can cross-reference at most two participants. AI stems are used with one argument indexed on the verb, and TI and TA stems

<sup>13</sup>To the extent that passive forms can be said to exist in Blackfoot, they are impersonal or unspecified agent forms (Frantz 2009: 53-4, 61-2), and therefore crucially different from English passives.



are used with two arguments indexed on the verb, differing as to the primary object's gender. (II stems are not relevant in the context of three-participant scenarios.) Moreover, depending on the lexical verb stem, the indexation of TA verbs can follow either a secundative or an indirective alignment pattern: some verbs index A and T (so that T is treated in the same way as the primary object of a monotransitive verb and R differently); others index A and R (so that R is treated in the same way as the primary object of a monotransitive verb and T differently).<sup>14</sup>

### 3.2 Finals

As described in Section 2.2 above, verb stems in Blackfoot consist of at least a root plus a final; the final is the syntactic head in that it determines which participant(s) in any given construction will be cross-referenced on the verb. Finals express transitivity and gender, but also some aspects of the semantic role of the cross-referenced argument. Traditionally, the Algonquianist literature distinguishes so-called concrete and abstract finals. Abstract finals are usually said to determine the syntactic category of the stem they create<sup>15</sup> but not otherwise to add any semantics (Frantz 2009: ch. 17).<sup>16</sup> Concrete finals combine with an existing stem consisting of at least a root and a final, and are said to change the syntactic category (i.e., II, AI, TI, and TA) as well as the meaning of the verb (Frantz 2009: ch. 18); this class includes causatives, benefactive applicatives, reflexives and reciprocals. While the distinction between concrete and abstract finals is not as clear cut as suggested here, we will nevertheless initially treat them separately, pointing out any overlaps and gray areas along the way.

#### “ABSTRACT” FINALS

Consider the root *waahkomá't-* ‘loan’. This root combines with abstract AI, TI, and TA finals to create stems meaning ‘borrow’ and ‘lend’, as shown in Table 3 and the examples in (7) below. In all the examples of Section 3.2, the final itself and the arguments it licenses are in boldface (the former in the gloss and the latter in the translation respectively).

<sup>14</sup>Cf. Haspelmath (2005, 2007), Siewierska (2003, 2004), and Malchukov et al. (2010) for data from a wide variety of languages showing such alignment patterns. Note also that this pattern differs markedly from what we find in Ojibwe, which is described by Rhodes (2010a) as exclusively displaying secundative alignment of indexation.

<sup>15</sup>But see Armoskaite (2010, 2011) for the argument that roots themselves are categorized and that so-called abstract finals come in two basic kinds: those that agree with the root category with respect to transitivity and those that modify its transitivity value.

<sup>16</sup>We will not here deal with so-called instrumental finals, which usually indicate the involvement of a body part in addition to the usual categorization in terms of transitivity and gender. See Frantz (2009:99).

Final	Stem class	Cross-referenced participants	Meaning	Example
-aa	AI	A <sup>17</sup>	‘borrow (something)’	(7a)
-atoo	TI	A and T	‘borrow an inanimate, specific T’	(7b)
-at	TA	A and T; A and R	‘borrow an animate, specific T’; ‘borrow (a T) from an animate, specific source’	(7c); (7d,e)
-ahkoo	TA	A and R	‘lend (a T) to an animate, specific recipient’	(7f)

Table 3: Finals combining with *waahkomá't-* ‘loan’

- (7) a. *Áahkomá'taawa isspiksísoka'si.*  
*Ø-wáahkomá't-aa-wa isspiksísoka'siM-i*  
 3-loan-AI-PROX coat-NSPEC  
 ‘S/he (PROX) borrowed a coat (NSPEC).’
- b. *Aahkomá'tatooma nisóka'simi.*  
*Ø-waahkomá't-atoo-m-wa ni-asóka'siM-yi*  
 3-loan-TI-DIR<sub>4</sub>-PROX 1-jacket-INAN.SG  
 ‘S/he (PROX) borrowed **my jacket** (INAN).’
- c. *Aahkomá'tatsiiwa nóta'si.*  
*Ø-waahkomá't-at-ii-wa n-óta's-yi*  
 3-loan-TA-DIR<sub>2</sub>-PROX 1-horse-OBV  
 ‘She (PROX) borrowed **my horse** (OBV).’
- d. *Nitáakahkomá'takkinnaana ámoyi ponokáomitaayi.*  
*nit-yáak-waahkomá't-at-ok-innaan-wa ámo-yi ponokáomitaay-i*  
 1-FUT-loan-TA-INV-1PL.EXCL-PROX DEM-OBV horse-OBV  
 ‘She (PROX) will borrow this horse (OBV) **from us** (EXCL).’
- e. *Nitáakahkomá'tatayaawa.*  
*nit-yáak-waahkomá't-at-a-yi = aawa*  
 1-FUT-loan-TA-DIR<sub>1</sub>-3PL=3PL  
 ‘I will borrow **from them**.’ (not: ‘I will borrow **them**’)

<sup>17</sup>It is uncontroversial that AI verbs cross-reference their subjects; what might be somewhat controversial is the fact that they take A and O arguments (instead of S and some sort of oblique). We have chosen an analysis according to which different O’s are treated differently (i.e., they are either secondary objects or primary objects).

- f. *Nítaahkomá'taahkooka ámoyi isspiksísoka'simi.*  
*nít-waahkomá't-**aahko**-ok-wa      ámo-yi      isspiksísoka'siM-yi*  
 1-loan-TA-INV-PROX                      DEM-INAN.SG      coat-INAN.SG  
 'She (PROX) lent me this coat (INAN).'

As shown in (7a), nonspecific participants are not cross-referenced on the verb (Frantz 2009: 41). As shown in (7c), the TA final *-at* licenses an agreement slot for an animate T, but only in the absence of an overtly expressed animate R (source): in (7d), with both an animate T and an overt R (source), *-at* corresponds to the R, and in (7e), which lacks overt NPs altogether, the interpretation must be for A and R rather than A and T. Finally, *-aahko* licenses an animate R (recipient).

The examples in (7c, d, e) suggest that the final *-at* is flexible in the sense that it may categorize the verb stem for both A+T or A+R indexation. It is not clear to us whether this flexibility is a property of the verb root, the final, or the construction in which the stem appears. What is certain, however, is that there are also verb stems that allow for only one pattern in the alignment of their indexation. For instance, the verb root *á'píhk-* 'sell, give away' never indexes an R argument, and only (specific) Ts can be primary objects. This is shown in table 4 and the examples in (8):

Final	Stem class	Cross-referenced participants	Meaning	Example
<i>-ahtaki</i>	AI	A	'sell, give away (something)'	(8a)
<i>-ahtoo</i>	TI	A and T	'sell, give away an inanimate T'	(8b), (9)
<i>-a</i>	TA	A and T	'sell, give away an animate T'	(8c)

Table 4: Finals combining with *á'píhk-* 'sell, give away'

- (8) a. *A'paihkahtakiwa onniki.*  
*Ø-á'píhk-ahtaki-wa      onnikiS-i*  
 3-sell-AI-PROX                      milk-NSPEC  
 'S/he (PROX) sells milk (NSPEC) (for a living).'
- b. *Áaka'píhkahtooma.*  
*Ø-áak-á'píhk-ahtoo-m-wa*  
 3-FUT-give.away-TI-DIR<sub>4</sub>-PROX  
 'S/he (PROX) will give it (INAN) away.' (Frantz and Russell 1995:18)
- c. *Á'píhkaiwa osí'kaanyi.*  
*Ø-á'píhk-a-ii-wa      o-sí'kaan-yi*  
 3-give.away-TA-DIR<sub>2</sub>-PROX      3-blanket(ANIM)-OBV  
 'He (PROX) gave away his blanket (OBV)' (Frantz and Russell 1995:18)

An animate R (recipient) can be added to such constructions, but, in contrast to the pattern observed above with *waahkomá't-* 'loan', this does not change the indexation pattern on the verb. Instead, a so-called relative root (RR) is added to the verb complex, which licenses the R syntactically but does not cause the verb to cross-reference it morphologically. An example is

given in (9): the general allative RR *itap-* licenses an NP expressing a recipient, but the indexing properties of such a verb stem are those of a run-of-the mill TI stem, viz. only A and T are cross-referenced on the verb (the RR and the participant it licenses are underlined to distinguish them clearly from cross-referenced participants). (The properties of RRs are discussed in more detail in Section 3.5 below.)

- (9) *Óma nínaawa nitsitapa'pihkahto'pa ómi asóka'simi.*  
*om-wa nínaa-wa nit-itap-á'pikh-ahtoo-hp-wa*  
 DEM-PROX man-PROX 1-RR.ALL-sell-TI-DIR<sub>3</sub>-PROX
- om-yi asóka'siM-yi*  
 DEM-INAN.SG jacket-INAN.SG  
 'I sold **that jacket** (INAN) to that man (PROX).'

Other verbs only allow for the indexation of R, rather than T. One of the most rigid verbs in this group is *ohko-t-* 'give<sub>1</sub>'.<sup>18</sup> The constructions in (10a, b) both contain A, T and R, but only A and R are cross-referenced on the verb.

- (10) a. *Nitsíppitáakiissini kítóhkoto.*  
*nit-ippita-aakii-hsiN-yi kit-ohko-t-o:*  
 1-old-woman-NMLZ-INAN.SG 2-give<sub>1</sub>-TA-1→2  
 'My old-woman's age (INAN) I give to **you** (SG).' (Matthew Manyguns, quoted in Genee 2009:938)
- b. *Nimáttayakiitohkokkinnaana ponokáómitai.*  
*ni-matt-ayak-iit-ohko-t-oki-innaan-wa ponokáómitaa-i*  
 1-also-both-RR.LOC-give<sub>1</sub>-TA-2→1-1PL.EXCL-PROX horse-NSPEC  
 'She (PROX) also gave **us** (EXCL) each a horse.'

Note that the verb *ohko-t-* requires an animate R; any scenario that does not include an animate R will be expressed with a different verb root. Thus, if the R is inanimate or there is no R, the root *omatska-* 'give' may be used, which can combine with the AI final *-htaki*, as shown in (11a, b), or with the TI final *-htoo*, as shown in (11c). Note that, with an overt specific R, the verb must include an RR (underlined in (11a, c)).

<sup>18</sup>We are not certain what the final is, since there are no alternative root-final combinations to compare it with. We are assuming a *-t* final suggested by some parallel dictionary entries that appear to be semantically related, including *ohko'tsima* VAI 'acquire' (Frantz & Russell 1995:144). It is also possible to assume a root *ohkot-* with a zero final (Frantz 2009:97-8 and n. 3, 5). This does not affect the argument with regard to the indexation alignment patterns of this verb.

- (11) a.
- Nitsitapomatskahtakihpinnaana sináákia'tsi omí itaissksinima'tstohkio'pi.*

*nit-itap-omatska-htaki-hpinnaana*      *sináákia'tsiS-i*  
 1-RR.ALL-give<sub>2</sub>-AI-1PL.EXCL      book-NSPEC

*om-yi*      *itaissksinima'tstohkio'p-yi*  
 DEM-INAN.SG      school-INAN.SG  
 'We (EXCL) gave (some) books to the school (INAN).'

- b.
- Aakiiksi aissksaomatskahtakiyi.*

*aakíi-iksi*      *Ø-aisskajs-a-omatska-htaki-yi*  
 woman-ANIM.PL      3-always-DUR-give<sub>2</sub>-AI-3PL  
 'Women are always giving.'

- c.
- Itapomatskahtoomayi.*

*Ø-itap-omatska-htoo-m-wa = áyi*  
 3-RR.ALL-give<sub>2</sub>-TI-DIR<sub>4</sub>-SG.OBJ=3SG  
 'S/he gave it (inanimate) to him/her.'

The examples in (12) exemplify the differences between these two verbs (*ohko-t-* and *omatska-*, both 'give') very clearly. (12a) has the TA stem *ohko-t-* with secundative alignment of indexation: R is the primary object and T is not indexed on the verb. (12b), on the other hand, has the TA stem *omatska-Ø-* with indirective alignment; T is the primary object and R is licensed by the RR *itap-* (underlined in (12b)) but is not cross-referenced on the verb. This shows that, whereas *ohko-t-* cannot occur without an animate R, *omatska-* can occur **with** it. So the two stems are not in complementary distributions in terms of the scenario types that they may express.

- (12) a.
- Nitohkotáwa ómi ponokáómitaayi.*

*nit-ohko-t-a-wa*      *om-yi*      *ponokáómitaa-yi*  
 1-give<sub>1</sub>-TA-DIR<sub>1</sub>-PROX      DEM-OBV      horse-OBV  
 'I gave **her** (PROX) that horse (OBV).'

- b.
- Nitsitapomatskaayini omi ponokáómitaayi.*

*nit-itap-omatska-Ø-a-yini*      *om-yi*      *ponokáómitaa-yi*  
 1-RR.ALL-give<sub>2</sub>-TA-DIR<sub>1</sub>-OBV      DEM-OBV      horse-OBV  
 'I gave **that horse** (OBV) to her/someone.'

The properties of these two verbs are summarized in Table 5:

Root	Final	Stem class	Cross-referenced participants	Meaning	Example
<i>ohkot-</i>	<i>-∅</i>	TA	A and R	‘give (a T) to an animate specific recipient’	(10a, b), (12a)
<i>omatska-</i>	<i>-htaki</i>	AI	A	‘give (a non-specific T) (to an R (→ +RR))’	(11a, b)
	<i>-htoo</i>	TI	A and T	‘give an inanimate, specific T (to an R (→ +RR))’	(11c)
	<i>-∅</i>	TA	A and T	‘give an animate T (to an R (→ +RR))’	(12b)

Table 5: Finals combining with *ohkot-* and *omatska-* ‘give’

### “CONCRETE” FINALS

So-called concrete finals are said to differ from abstract finals in three ways: first, they attach to a stem rather than to a root; second, they change the valency of the verb; and third, they carry more meaning than abstract finals (Frantz 2009: ch. 18). To this may be added as a fourth point their productivity: they do not seem to be restricted to a specific class of verbs in the same way that certain abstract finals must go with certain roots and are not interchangeable (Frantz 2009:97; Armoskaite 2010, 2011).

We will now take a closer look at the applicative final *-(o)mo*. According to Frantz (2009:102-3), this final usually attaches to an existing TA stem,<sup>19</sup> introducing a beneficiary to the clause as primary object—he calls *-(o)mo* a “benefactive suffix”—and simultaneously demoting the original primary object (which may have the semantic role of theme or recipient) to the status of secondary object. Compare (13a) with (13b). In (13a) we have the root *o't-* ‘take’ plus the TA final *-o* with A and T cross-referenced. In (13b) we have the same stem *o't-o-* followed by a further final *-(o)mo*, which shifts the cross-referencing to A and B (B is the applied object with beneficiary-like semantics, although, as shown by the alternative translation of (13b) below as by comparable examples presented in Bliss (2009), the semantic range is wider than that and includes the source in transfer-of-possession predicates); the T is no longer indexed on the verb. (13c, d) show that the requirement that the benefactive final is added to a TA stem is morphological rather than semantic: in (13c) the underlying T is inanimate, but the benefactive is nevertheless attached to the TA stem, rather than the expected TI stem; in (13d) the underlying T is non-specific, but, again, the benefactive is attached to the TA stem, rather than the expected AI stem.

<sup>19</sup>Frantz himself (2009:102-3) also gives some examples where *-(o)mo* is added to an AI stem or a stem of unclear category. Taylor (1969:255-7) gives many examples of this final added to TI stems (in fact, he does not mention the possibility of adding it to TA stems at all). Bliss (2009) suggests that *-(o)mo* can also attach to roots. We have not been able to replicate any of this. Our data consistently suggest that *-(o)mo* is added to a TA stem with a range of verbs, quite independent of whether the presumed input construction contained an animate T or R argument (but not independent of the alignment pattern).

- (13) a.
- Ito'toyiiwa omiksi aipaisstaamiinammiksi amíika itaohpommao'pika.*

*íit-o't-o-yii-wa*                      *om-iksi*                      *aipaisstaamiinamm-iksi*  
 PST.RR.LOC-take-TA-DIR<sub>2</sub>-PROX    DEM-ANIM.PL            apple-ANIM.PL

*am-yi-ka*                                  *itaohpommao'p-yi-ka*  
 DEM-INAN.SG-NSAT                      store-INAN.SG-NSAT  
 'S/he picked up **the apples** (ANIM) from (lit. at) the store.'

- b.
- Nitó'tomoawa anná ninnsta omiksi apaisstaamiinammiksi.*

*nit-ó't-o-mo-a-wa*                      *ann-wa*                      *n-innst-wa*  
 1-take-TA-APPL-DIR<sub>1</sub>-PROX            DEM-PROX                      1-older.sibling-PROX

*om-iksi*                      *apaisstaamiinamm-iksi*  
 DEM-ANIM.PL                      apple-ANIM.PL  
 'I picked up the apples (ANIM) **for my older sister** (PROX).' (also: 'I took the apples away from my older sister')

- c.
- Aako'tomoyiiwayi omistsi aissinni'pistsi.*

*Ø-aak-o't-o-mo-yii-wa = ayi*                      *om-istsi*                      *íssinnii'p-istsi*  
 3-FUT-take-TA-APPL-DIR<sub>2</sub>-PROX=3SG    DEM-INAN.PL                      macaroni-INAN.PL  
 'S/he (PROX) will pick up the macaroni (INAN) **for him/her** (OBV).'

- d.
- Aako'tomoyiiwa anní Tsáani aissinni'pi.*

*Ø-aak-o't-o-mo-yii-wa*                      *ann-yi*                      *Tsáan-yi*                      *áíssinnii'p-i*  
 3-FUT-take-TA-APPL-DIR<sub>2</sub>-PROX            DEM-OBV                      John-OBV                      macaroni-NSPEC  
 'S/he (PROX) will pick up (some) macaroni (NSPEC) **for John** (OBV).'

Addition of a beneficiary to a TA stem with secundative alignment (indexing A and R but not T) appears to be difficult, possibly for semantic reasons. The TA stem *ohko-t-* 'give<sub>1</sub>' cannot felicitously be combined with a beneficiary and must be expressed with a second clause instead, as shown in (14):

- (14)
- Kítohkoto ámoyi niitá'paisiksikimmi kaahkohkotahsi annááhka Fernando.*

*kit-ohko-t-o*                      *amo-yi*                      *niitá'paisiksikimm-yi*  
 2-give<sub>1</sub>-TA-1→2                      DEM-INAN.SG                      coffee-INAN.SG

*k-aahk-ohko-t-a-hs-yi*                      *ann-wa-hka*                      *Fernando*  
 2-might-give<sub>1</sub>-TA-DIR<sub>1</sub>-CNJ-CNJ            DEM-PROX-INV                      F.  
 'I gave you (SG) this coffee for Fernando (PROX).' (lit. 'I gave **you** this coffee so that **you** might give it **to Fernando**')

Now consider the TA stem *waan-ist-* 'say to, tell', with A+R indexation in (15). Applicativization is possible with this verb, but as the more literal translation of (16) suggests,

the applicativized construction does not contain an R at all: the R argument is not just demoted to secondary object status but is removed from the clause. This is confirmed by what happens when a full NP is added as R in (17): applicativization with *-(o)mo* and concurrent demotion of the R to secondary object is not possible, and the beneficiary is licensed instead by a relative root *omoht-* added to the stem that indexes A and R. Compare this with (13b) above, in which the applicativization of the TA stem *o't-o-* ‘pick up’, which in its underived form indexes A and T, does not disallow an overt specific NP in T function, but merely demotes it to a secondary object.

(15) *Nitáánistaawa.*

*nit-waan-ist-aa-wa*

1-say-TA-DIR<sub>1</sub>-PROX

‘I told **him.**’ (Frantz 2009:98)

(16) *Kitsííkaanistomo.*

*kit-íík-waan-ist-omo-o*

2-very-say-TA-APPL-1→2

‘I already told him **for you** (SG).’ (lit. ‘I already told someone **for you**’)

(17) *Kiistówa nímohtsííkaanistawa annááhka ní’sahka.*

*kiistó-wa n-omoht-íík-waan-ist-a-wa ann-wa-hka n-i’s-wa-hka*

2SG-PROX

1-RR-very-say-TA-DIR<sub>1</sub>-PROX

DEM-PROX-INV

1-older.brother-PROX-INV

‘I already told **my (older) brother** (PROX) for you (SG).’

### 3.3 Theme suffixes

As mentioned in section 2, both TI and TA stems are conjugated by taking a theme sign, i.e. a suffix that precedes the rest of the morphology encoding person, number and/or obviation. Such theme signs indicate features of the primary object (person and gender) and the subject (person and number). Since Blackfoot verbs index at most one syntactic argument in addition to the subject, what is especially relevant in the present context is what counts as a primary object in three-participant constructions. As shown above, whether the primary object will be T or R depends on the specific verb stem. The primary object can also be an argument introduced to the clause via applicativization, but not a relative root complement (cf. Sections 3.2 and 3.5).

TI theme signs are used with inanimate primary objects and show a SAP vs. 3rd person opposition for subjects; in the independent order, the corresponding suffixes are *-hp* ~ *-p* and *-m* respectively (cf. Example 5 above). TA theme signs are used with animate primary objects but come in more numerous forms (here we address only independent forms): *-aa* for SAP→3rd, *-ii* for PROX→OBV, *-oo* for 1st→2nd, *-oki* for 2nd→1st, *-otssp* for X→PL.SAP, and *-ok* for both 3rd→SAP and OBV→PROX (cf. Table 2 above). Although the matter is far from straightforward,



these theme signs may be grouped as follows: direct (*-hp*, *-m*, *-aa*, and *-ii*), inverse (*-ok*), and others (*-oo*, *-oki*, and *-otssp*).<sup>20</sup>

### 3.4 Indexation

We follow standard Algonquianist practice here in treating person, number and obviation affixes that appear on verbs separately from the theme signs. Except in the subjunctive and imperative orders, Blackfoot transitive verb forms take person prefixes: *ni(t)-* ‘1’, *ki(t)-* ‘2’, *Ø- ~ o(t)-* ‘3’,<sup>21</sup> and *Ø-* ‘1PL.INCL’. These prefixes correspond to a syntactic argument involved in the state of affairs irrespective of role, i.e., it can be a subject or a primary object, and their occurrence is governed by the person hierarchy [2 > 1 > 3].

Predicates based on TI stems are comparatively simple with respect to suffixation: in the independent order, they take one suffix from the set *-innaan* ‘1PL.EXCL’, *-aaa* ‘2PL’, *-wa* ‘3SG.PROX’, *-yini* ‘3SG.OBV’, and *-yi* ‘3PL’ in order to index their subject (1SG, 2SG and 1PL.INCL forms do not use person suffixes). In addition, SAP-subject forms take *-wa* or *-yi* after the subject marker to encode singular or plural primary objects respectively. The next example shows the TA verb stem *wai’stamáttsi-* ‘teach’ that undergoes secondary derivation via the (apparently plurimorphemic) final *-tohkatoo* to yield a TI stem, which then takes the 3rd person subject TI theme sign *-m* and the 3rd person plural subject suffix *-yi* (the element =*aawa* will be addressed in 3.4 below):

- (18) *Anniika naapiitapiiksi otao’toohsaawa iitomatapaii’stamattstohkatoomiaawa*  
*Naapi’powahsini.*
- |                |                                  |                              |
|----------------|----------------------------------|------------------------------|
| <i>Anniika</i> | <i>naapi-itapi-iksi</i>          | <i>ot-a-o’too-hsi = aawa</i> |
| Then           | non-native-be.person(AI)-ANIM.PL | 3-DUR-arrive(AI)-3PL=3PL     |
- 
- |                                                        |                             |
|--------------------------------------------------------|-----------------------------|
| <i>iit-omatap-wai’stamáttsi-tohkatoo-m-yi = aawa</i>   | <i>Naapi-i’powahsin-yi.</i> |
| RR.LOC-begin-instruct(TA)-TI-DIR <sub>4</sub> -3PL=3PL | non-native-language-INAN.SG |
- ‘Then, when the non-native people came, **they** began to teach **the English language**.’

Predicates based on TA stems take a suffix from the same set as TI stems to index their subject in the independent order, but the 3rd person primary object marker (either *-wa*, *-yini*, or *-yi*) always appears as well. As shown in Table 2 above, SAP suffixes and 3rd person suffixes are ranked as to their appearance when in conflict (1PL > 2PL and 3SG.PROX > 3PL > 3SG.OBV). In (19a), with the TA stem *ohkot-* ‘give<sub>1</sub>’, which indexes A and R, the 1st person plural exclusive recipient is marked via a prefix (*ni-*) and a suffix (*-innaan*); the 3rd person singular proximate agent is marked via the suffix *-wa*; T is not indexed on the verb. In (19b), by contrast, the TA stem *á’píhk-a-* ‘give away, sell’ indexes both the proximate A and the obviate T (the former

<sup>20</sup>A claim usually found, especially in the non-Algonquianist literature, is that *-oo* is an allomorph of the direct theme whereas *-oki* is an allomorph of the inverse theme; cf. Zúñiga (2006: ch. III, 2012) for details and some discussion.

<sup>21</sup>The allomorphy found in the 3rd person forms (there is also an *m-* allomorph) is far from trivial, both from the perspective of Blackfoot (Genee 2009) and from an Algonquian perspective, but this lies beyond the scope of the present study.

via  $\emptyset$ - and *-wa*, and the latter via the direct<sub>2</sub> theme *-ii*; recall that the TA final *-a* indicates an interaction between two animate entities as well); the unspecified recipient is absent from the clause and not indexed on the verb.

(19) a. *Nimáttayakiitohkokkinnaana ponokáómitai.*

*ni-matt-wayak-iit-ohko-t-ok-innaan-wa*                      *ponokáómitaa-i*  
 1-also-both-then-give-TA-INV-1PL.EXCL-3SG.PROX              horse-NSPEC  
 ‘She then also gave us (EXCL) each a horse.’

b. *Á’píhkaiwa osí’kaanyi.*

*Ø-á’píhk-a-ii-wa*                      *o-sí’kaan-yi*  
 3-give.away-TA-DIR<sub>2</sub>-3SG.PROX              3-blanket-OBV  
 ‘He (PROX) gave away his blanket (OBV).’ (Frantz and Russell 1995:18)

Lastly, it is in order to mention a number of 3rd person markers that occur under special circumstances. The element =*aawa* ‘3PL’, for example, occurs when a verb with a 3rd person plural argument does not immediately precede an NP corresponding to that argument; this is the case when such an NP precedes the verb, or when it is missing from the clause altogether:

(20) *Nitohpómματοo’piaawa.*

*nit-ohpomma-too-’p-yi=aawa*  
 1-buy-TI-DIR<sub>3</sub>-3PL.OBJ=3PL  
 ‘I bought them.’ (Frantz 2009:48)

By a related but different token, the elements =*áyi* ‘3SG’, =*aiksi* ‘3PL.ANIM’, and =*aistsi* ‘3PL.INAN’ occur when the corresponding syntactic argument of the verb (subject, object, or relative root complement) does not follow it and is not proximate. In (21), for example, the recipient relative root complement of the TI stem *omatska-htoo-* ‘give’, which indexes A and T, does not appear as a postverbal NP, thereby triggering the appearance of =*áyi*:

(21) *Itapomatskahtoomayi.*

*Ø-itap-omatska-htoo-m-wa = áyi*  
 3-RR.ALL-give<sub>2</sub>-TI-DIR<sub>4</sub>-3SG.OBJ=3SG  
 ‘S/he gave it (INAN) to him/her.’

Under specific (and intricate) conditions, two 3rd person markers can cooccur on a single verb form (cf. Frantz 2009:48f for details), as shown in (22) below with the A+R-indexing TA stem *ohko-t-* ‘give<sub>1</sub>’. The marker closest to the verb (= *aiksi*) corresponds to the (proximate) agent subject and the second one (= *áyi*) to the unnamed singular secondary object T; the verbal suffix *-yi* indexes a plural R here, i.e., it corresponds to the (obviative) postverbal NP *anníksiska Nínaikska* ‘the chiefs (=the band council)’:

(22) *Áókakihtsimaiksi iihkotsiyawaiksayi anníiksi Nínaiksi.*

*áókakihtsima-iksi*      *Ø-iihko-t-ii-yi = aawa = aiksi = áyi*  
 rule.maker-ANIM.PL      3-PST.give<sub>1</sub>-TA-DIR<sub>2</sub>-3PL=3PL=3PL.ANIM=3SG

*ann-iksi*      *Nínaa-iksi*  
 DEM-ANIM.PL      chief-ANIM.PL

‘**The government** gave it to the **band council**.’  
 (lit. the rule-makers gave it to the chiefs)

### 3.5 Relative roots

We saw in Section 3.2 that, when a participant is introduced to a clause by affixing a final to a root or stem, it has primary object status and is cross-referenced on the verb, thereby either increasing the latter’s morphological valency or rearranging its argument realization. It was mentioned in passing (esp. Subsections 3.2.1 and 3.2.2) that participants can also be added to a clause by means of an element that appears before the verbal root and is usually called a relative root (RR).<sup>22</sup> In this section we show in detail how this second option works.

Blackfoot relative roots include comitative *ohp-* (‘with’), substitutive *ohtahtsiwa-* (‘instead of’), locative *it-* (‘in, at’; it can be used in both spatial and temporal senses), two allatives—viz. the general allative *itap-* and cislocative (*I*)*poohsap-* (both meaning ‘to, toward’; the latter is employed with motion towards the speaker)—,<sup>23</sup> and broad-range *oht-* (used with instruments and sources, but also meaning ‘by, about, along’).<sup>24</sup> They can also occur without a corresponding overt NP in the clause, in which case they are translated as deictic adverbs (‘here’, ‘there’, etc.) or indefinite or anaphoric pronouns (‘instead of something/it’, ‘with someone/him/her’, etc.).

Relative roots may be seen as elements that license an additional participant without changing the indexation pattern on the verb. Compare (23a) with (23b) and (23c):

(23) a. *Nitsíitsiniki.*

*Nit-iitsinik-i*  
 1-PST.narrate-AI  
 ‘I told (a story)’

b. *Nímohtsitsiníiki annááhka Fernando.*

*n-imoht-itsinik-i*      *ann-wa-hka*      *Fernando*  
 1-RR-narrate-AI      DEM-PROX-INVS      F.  
 ‘I told (a story) about Fernando.’

<sup>22</sup>See Rhodes (2010b) for a presentation of relative roots and their complements in Ojibwe.

<sup>23</sup>There is a further element *miistap-* ~ *yllstap-* that means ‘away’ and stands, to some extent, in semantic opposition to cislocative (*I*)*pohsaap-*; see Frantz (2009: 93-95) for more details.

<sup>24</sup>Frantz (2009: 92f) labels these relative roots “linkers” (he calls the comitative “associative” but glosses the others with their English translational equivalent). The allomorphy rules are the following (we are glossing over idiolectal variation here). The locative RR is *ist-* in the imperative and *it-* elsewhere. The comitative RR is *iihp-* word-initially, *omohp-* ~ *imohp-* after a personal prefix, and *ohp-* elsewhere; analogously, the broad-range RR is *iiht-* word-initially, *omoht-* ~ *imoht-* after a personal prefix, and *oht-* elsewhere.

c. *Nitsíitsinikatawa annááhka Fernando.*

*nit-iitsinik-at-a-wa*                      *ann-wa-hka*                      *Fernando*  
 1-PST.narrate-TA-DIR<sub>1</sub>-PROX              DEM-PROX-INVS              F.  
 ‘I told (a story) **about Fernando.**’

(23a) has an intransitive verb in a one-participant clause. (23b) has an intransitive verb in a two-participant clause: the T (content of speech) is not cross-referenced on the verb. Instead, the T is licensed by the appropriate allomorph of broad-range *oht-*, which precedes the verb stem and does not affect its valency (as shown by the AI final *-i*, which is identical to the AI final in the one-participant clause in (23a)). Compare this with the construction in (23c), in which the T (content of speech) is indexed on a TA verb (cf. the singular proximate suffix *-wa*), which is made possible by the final *-at*. Some additional examples of frequently occurring relative roots are seen in (24): (24a) has the general allative RR *itap-*; (24b) has the cislocative RR *ipoohsap-*; and (24c) has the locative RR *it-* ‘there’.

(24) a. *Óma nínaawa nitsitapa’pihkahto’pa ómi asóka’simi.*

*om-wa*      *nínaa-wa*      *nit-itap-a’pihk-ahtoo-hp-wa*      *om-yi*      *asóka’sim-yi*  
 DEM-PROX      man-PROX      1-RR.ALL-sell-TI-DIR<sub>3</sub>-PROX      DEM-INAN.SG      jacket-INAN.SG  
 ‘I sold **that jacket to that man.**’

b. *Óma nínaawa iipoohsapa’pihkaiwa omi ponokáómitaayi.*

*om-wa*      *nínaa-wa*      *iipoohsap-a’pihk-a-yii-wa*      *om-yi*      *ponokáómitaa-yi*  
 DEM-PROX      man-PROX      PST.RR.CIS-sell-TA-DIR-PROX      DEM-OBV      horse-OBV  
 ‘**That man** sold **that horse to me**<sup>25</sup>.’

c. *Iitohpómatooma ómi sínaakia’tsisi amíi iitáohpommao’pi.*

*iit-ohpomma-atoom-wa*                      *om-yi*                      *sínaakia’tsiS-yi*  
 PST.RR.LOC-buy-TI-DIR<sub>4</sub>-PROX              DEM-INAN.SG              book-INAN.SG

*amí-yi*                                              *iitáohpommao’p-yi*  
 DEM-INAN.SG                                              store-INAN.SG  
 ‘**S/he** bought **that book from the store.**’

Example (25) shows that more than one RR may occur when the semantics of the clause calls for it. In our data we have not found examples with more than two RRs or with a combination of RRs different from the one shown in (25). We leave the question as to the maximum number and type of RRs allowed in a single verbal complex for future research.

<sup>25</sup>The cislocative RR means ‘towards the speaker’; the 1<sup>st</sup> person RR complement is not overtly expressed here. However, as can be seen in example (25), an overt SAP RR complement is possible. In (25) the overt specification of the RR complement is required to the extent that its referent is not evident from the semantics of the allative RR. Notably, Blackfoot differs from Ojibwe in allowing SAP RR complements (cf. Rhodes 2010b).

- (25) *Kiistówa nitáákohtsitapomatskahto'pinnaani ómistsi sináákia'tsiistsi amíí iitaissksinima'tstohkio'pi.*

*kiistówa nit-yáák-oh̄t-itap-omatska-htoo-'p-innaan-yi*  
2SG 1-FUT-RR-RR-ALL-give<sub>2</sub>-TI-DIR<sub>3</sub>-1 PL.EXCL-PL.OBJ

*om-istsi sináákia'tsiS-istsi am-yi iitaissksinima'tstohkio'p-yi*  
DEM-INAN.PL book-INAN.PL DEM-INAN.SG school-INAN.SG

'We (EXCL) will give **those books** to the school for you (SG).'

The examples in (23) above may suggest that at least some kinds of participant roles may be licensed by either a final or a relative root. However, there are very few cases where the choice is truly free. For instance, in (12a-b) above, repeated here as (26), expression of R licensed by a final is possible with the TA verb stem *ohko-t-*, based on the root *ohko-* 'give<sub>1</sub>', which indexes A and R, while expression of R licensed by a relative root is possible with the TA verb stem *omatska-Ø-*, based on the root *omatska-* 'give<sub>2</sub>', which indexes A and T; the two roots are not interchangeable.

- (26) a. *Nitohkotáwa ómi ponokáómitaayi.*

*nit-ohko-t-a-wa om-yi ponokáómitaa-yi*  
1-give<sub>1</sub>-TA-DIR<sub>1</sub>-PROX DEM-OBV horse-OBV  
'I gave **her** (PROX) that horse (OBV).'

- b. *Nitsitapomatskaayini omi ponokáómitaayi.*

*nit-itap-omatska-Ø-a-yini om-yi ponokáómitaa-yi*  
1-RR-ALL-give<sub>2</sub>-TA-DIR<sub>1</sub>-OBV DEM-OBV horse-OBV  
'I gave **that horse** (OBV) to her (PROX).'

## 4. Conclusion

Let us start by summarizing the findings on three-participant constructions presented in Section 3. As shown in Table 6, AI, TI and TA stems may all occur in three-participant constructions in Blackfoot. Depending on the particular stem, certain participant(s) will be marked on the verb via indexation, while others are licensed by a relative root or are secondary objects. A check mark (✓) indicates obligatory cross-referencing of the participant on the verb, in which case the participant is either a subject or a primary object. The symbol SOBJ indicates that the participant may, but need not, be overtly expressed as a secondary object (i.e., as an NP neither indexed nor licensed by a relative root). The symbol RRC indicates that the participant may, but need not, be overtly expressed as a relative root complement NP; irrespective of its overt occurrence, it is licensed by a relative root. A question mark indicates that we are not sure about the possibility of including this participant in the relevant construction. An X indicates that the participant in question cannot be expressed as an overt NP and is not indexed on the verb.

Note that TA stems are subdivided into three types: (1) those with A+T indexation, (2) those with A+R indexation, and (3) applicatives with A+B indexation. The latter accommodate the B argument as primary object while demoting the other non-subject argument to secondary object,

but they come in two forms, viz. (3a) stems like *o't-o-* ‘take, pick up’, which demote T, and (3b) stems like *waan-ist-* ‘say to, tell’, which delete R.

Participant type Verb stem	A	T	R	B	Example(s)
AI	✓	SOBJ	RRC	?	(11a)
TI	✓	✓	RRC	RRC	(9), (11c), (24a, c), (25a)
TA-1 (A+T)	✓	✓	RRC	?	(12b), (13a) (24b)
TA-2 (A+R)	✓	SOBJ	✓	RRC	(7d, f), (10a, b), (12a) (17)
TA-3a (A+B)	✓	SOBJ	X	✓	(13b, c, d)
TA-3b (A+B)	✓	X	X	✓	(16)

Table 6: Alignment patterns in Blackfoot verb stems in three-participant constructions

Let us now consider the Blackfoot data from a more general theoretical and typological perspective, focusing on the effects of referential hierarchies on construction choice in the encoding of three-participant events.

A first noteworthy property of Blackfoot is the significant role played by the referential factor of specificity—an overtly marked grammatical category of nominals. Subjects and primary objects must be specific, so non-specific Ts are not indexed on the verb. In other words, the specificity of the T argument governs the alternation between A+T- indexing TI/TA stems on the one hand and AI stems on the other. A+R-indexing TA verbs require a specific R argument.

It is hard to exaggerate the importance of the role of gender, i.e. the animate/inanimate distinction, in Blackfoot. Not only is gender overtly marked on nominals, but it is also marked several times on predicates, viz. via suffixes that mark person/number/gender/obviation values of the most prominent arguments, via theme signs that encode particular interactions between the agentive and non-agentive participants, and via finals that indicate presence or absence of a primary object and its gender, among other things. The alternation between TI and TA stems, occasionally with more than just one form in each category and targeting different semantic roles as primary objects, is basically governed by animacy.

Even though the category of person is important for inflectional prefixation and affixation, including the theme signs, it does not determine the alternation between stems—nor is it crucial, it seems, for the argument realization algorithm that determines which participants are assigned which grammatical functions in three-participant constructions. Put differently, restrictions like the Romance ban on clitics for 1st or 2nd person T arguments in the presence of 3rd person R arguments seem to be active at the level of usual discourse patterns rather than at the level of grammatical structure in Blackfoot.

In addition to referential factors, the Blackfoot data clearly show the influence of lexical factors on variation in three-participant constructions. In particular, the indexation patterns that are available for a specific verb stem are lexically determined: some can only ever index T (in addition to A), others only R, and again others can display both patterns. In the latter case, the possibility of indexing T on the verb is dependent on the presence and referential properties of the third participant (R). Furthermore, the effects of applicativization differ depending on the indexation pattern of specific verbal stems. While the present study does not describe lexical variation in detail, it nonetheless makes a contribution to existing accounts of three-participant constructions in Algonquian languages, in going beyond the presumably pervasive pattern of

secundative alignment of indexation (cf. Rhodes 2010a). Our data show that taking such ‘prototypical’ constructions as representative of a specific language’s alignment obscures variation that may be of typological and theoretical interest (cf. Bickel et al. 2010).

Another typologically relevant point is the following: The different types of grammatical relations displayed in Blackfoot morphosyntax underline the importance of referential properties in the determination of alignment patterns. Specifically, when we want to establish patterns of identical marking between the non-agent in a two-participant construction (O) and the non-agents in a three-participant construction (T and R), it is crucial to determine which referential type of O, T, and R we are considering in each case. While Malchukov et al. (2010: 7) are clearly aware of such construction-specificity, they argue that certain referential types of arguments are more ‘basic’ than others. As in the case of lexically determined variation, however, the potential danger of making such decisions is that the available range of variation is not adequately represented in description and consequently in typology.

This being said, we should mention that there are several areas of the lexicon and the grammar of Blackfoot that still need to be explored and analyzed in more detail in order to arrive at a comprehensive picture of how argument realization and construction alternation work in the language; in this respect, the results reported in the present paper are to be understood as a contribution to the attainment of a rather distant goal. The extant grammars (Uhlenbeck 1938, Taylor 1969, Frantz 2009) and some recent studies notwithstanding (Armoskaite 2010, 2011; Bliss 2005, 2009; Bliss, Ritter and Wiltschko 2010), a thorough description and account of the final suffixes is still a pending task that is far from trivial given the observed richness, complexity, and apparent opacity of many forms. A principled account of grammatical relations in Blackfoot, ideally explaining all the factors informing both the proximate/obviative distinction and the direct/inverse opposition, as well as their interplay, has not been provided by scholars to this day. Finally, it is worth emphasizing here that language theoreticians, typologists, Americanists, and Algonquianists would greatly benefit from in-depth analyses of Blackfoot discourse structure based on corpora that include prosodic, constituent-order, and morphosyntactic information. Such work remains to be done.

## Abbreviations

A agent-like argument of bivalent/trivalent predicate, AI animate intransitive (verb), ALL allative, ANIM animate, APPL applicative, B beneficiary, BEN benefactive, CIS cislocative, CNJ conjunct, DEM demonstrative, DIR direct, DUR durative, EVID evidential, EXCL exclusive (not including addressee), FOC focus, FUT future, II inanimate intransitive (verb), IMPERS impersonal, INAN inanimate, IND indicative, INV inverse, INVS invisible, IPFV imperfective, LOC locative, NMLZ nominalizer, NONAFF non-affirmative, NSAT non-speech-act time, NSPEC non-specific, O patient-like argument of bivalent predicate, OBJ object, OBV obviative, PROX proximate, REL relative, PST past, R recipient-like argument of trivalent predicate, RR relative root, RRC relative root complement, S single argument of monovalent predicate, SAP speech act participant, SBJ subject, SG singular, SOBJ secondary object, T theme-like argument of trivalent predicate, TA transitive animate (verb), TI transitive inanimate (verb), TITH transitive inanimate theme,  $x \rightarrow y$  ‘x acts on y’

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