

Decomposing Blackfoot Proclitics*

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1 Introduction

In Blackfoot (Plains Algonquian: Southern Alberta), person proclitics mark the possessor on nouns and the grammatical subject on verbs:¹

- | | | | |
|-----|---|---|--|
| (1) | a. nitáákiikoama
<i>nit-aakiikoama</i>
1-girlfriend
'my girlfriend' | b. kitáákiikoama
<i>kit-aakiikoama</i>
2-girlfriend
'your girlfriend' | c. otáákiikoami
<i>ot-aakiikoami</i>
3-girlfriend
'his/her girlfriend' |
| (2) | a. nítsspiyi
<i>nit-ihpiyi</i>
1-dance
'I danced.' | b. kítsspiyi
<i>kit-ihpiyi</i>
2-dance
'You danced.' | c. . . otsspíyi'si
<i>ot-ihpiyihsi</i>
3-dance
'... when s/he danced.' |

In certain contexts, the proclitics appear in a truncated form:

- | | | | |
|-----|---|---|---|
| (3) | a. nínssta
<i>n-inssta</i>
1-sister
'my sister' | b. kínssta
<i>k-inssta</i>
2-sister
'your sister' | c. ónssti
<i>w-inssti</i>
3-sister
'his/her sister' |
|-----|---|---|---|

1.1 The Puzzle

- (4) **2 series of Blackfoot proclitics I** (to be revised)

	first person	second person	third person
long forms	nit-	kit-	ot- (/w+it-/)²
short forms	n-	k-	w-

1.2 The Proposal

The two series of proclitics differ with respect to their internal syntax, their semantics and their external syntax:

- (5) **Internal Syntax**
- short forms are pro- ϕ Ps
 - long forms are morphosyntactically complex pro-DPs

[cf. Déchaine and Wiltschko 2002]

*Many thanks to Rachel Ermineskin, Beatrice Bullshields, Noreen Breaker, and Louis Soop for sharing their language with us. *Nitsikóhtahsi'taki*. We also thank Lobke Aelbrecht, Sjeff Barbiers, Norbert Corver, Rose-Marie Déchaine, Alexis Dimitriadis, Marjo van Koppen, Martina Wiltschko, and audiences at the UBC Wednesday research seminar and the Syntax-UiL-OTS-Interface meeting for feedback on this project. All errors are ours.

¹Unless otherwise stated, all data are from Heather Bliss' own fieldwork. For the sake of clarity, we restrict glosses to morphemes which are relevant for the discussion. Abbreviations: 1/2/3: first/second/third person, APPL: applicative, CONJ: conjunction, DEM: demonstrative, DIR: direct, FUT: future, IMPF: imperfective, INAN: inanimate, INV: inverse, LOC: locative, MOD: modal, NEG: negative, NONAFF: nonaffirmative, OBV: obviative, PREP: preposition, PROX: proximate, POSS: possessive, PERF: perfect, PL: plural.

²3rd person is subject to a phonological rule of Blackfoot: w + i(:) → o (Frantz 2009:72).

- (6) **Semantics**
 - a. short forms spell out phi-features (i.e. person)
 - b. long forms introduce domain restriction along with phi-features
- (7) **External Syntax**
 - a. short forms are restricted to core argument positions (*vP/nP*-internal)
 - b. long forms occupy core or non-core argument positions (*vP/nP*-external)

1.3 Roadmap

Section 2: Brief **Background** on Blackfoot

Section 3: The **Puzzle**

Section 4: The **Internal Syntax** of Blackfoot Proclitics

Section 5: The **Semantics** of Blackfoot Proclitics

Section 6: The **External Syntax** of Blackfoot Proclitics

Section 7: Overview of the **Syntax and Semantics** of Blackfoot Proclitics

Section 8: **Summary** and **Outlook**

2 Brief Background on Blackfoot

- i. Plains Algonquian (Algic)
- ii. 3 dialects in Alberta (CA): *Siksiká*, *Kainaa*, *Aapátohsipíikani*, 1 dialect in Montana (US): *Aamskáápipíikani* (our consultants: from *Siksiká* and *Kainaa*)
- iii. Population: <10.000 (decreasing), few (if any) first language learners, few monolingual speakers (Russell and Genee 2006)

2.1 General Linguistic Characteristics

- (8)
 - a. polysynthetic language
 - b. overt argument expression is not required
 - c. if arguments are expressed overtly, word order is relatively free, no case marking
 - d. obviation marking on nouns functions as discourse-driven reference-tracking system
 - e. argument roles are attributed via direct/inverse marking on the verb
- (9) **Proclitic properties:**
 - a. person proclitics encode event participation, i.e. individual denoted by the proclitic is one of the arguments of the verb which is not necessarily the subject
 - b. one morphological slot for proclitics: *kit/k* > *nit/n* > *ot/w*
 - c. 3rd person proclitics on verbs appear only under certain conditions: in subordinate clauses, and when the 3rd person actor in transitive matrix clauses is obviative (cf. Frantz 2009).
- (10)
 - a. Nitsikákomimmawa nitána.
nit-ikákomimm-a-wa n-itana.
1-love-DIR-PROX 1-daughter
'I love my daughter.'
 - b. Nitsikákomimmoka nitána.
nit-ikákomimm-ok-(w)a n-itana.
1-love-INV-PROX 1-daughter
'My daughter loves me.'

[Frantz 1991:55ff; glosses modified by authors]

3 The Puzzle

(4) **2 series of Blackfoot proclitics I** (to be revised)

	first person	second person	third person
long forms	nit-	kit-	ot- (/w+it-/)
short forms	n-	k-	w-

Historically, short forms were restricted to inalienably possessed nouns (Proulx 1989). Synchronically, short forms have a wider distribution:

- (11) a. Nikááihpiyi
n-ikaa-ihpiyi
 1-PERF-dance
 ‘I have danced.’
- b. * Nitsikááihpiyi
nit-ikaa-ihpiyi
 1-PERF-dance
intended: ‘I have danced.’
- (12) a. Tsá kaanistaopíhpa?
tsa k-aanist-a-opii-hpa
what 2-MANNER-IMPF-stay-NONAFF
 ‘How are you?’
- b. * Tsá kitaanistaopíhpa?
tsa kit-aanist-a-opii-hpa
what 2-MANNER-IMPF-stay-NONAFF
intended: ‘How are you?’
- (13) a. Omohtó’toohsi Mohkínsstsis.
w-omoht-o’too-hsi Mohkínsstsis
 3-SOURCE-arrive-CONJ Calgary
 ‘... when s/he came from Calgary.’
- b. * Otomohtó’tooyini Mohkínsstsis.
ot-omoht-o’too-hsi Mohkínsstsis
 3-SOURCE-arrive-OBV Calgary
intended: ‘... when s/he came from Calgary.’

Question: What conditions the alternation between long and short proclitic forms synchronically?

Short forms are typically assumed to be either allophonic or lexically-specified variants of the long forms (Taylor 1969; Frantz 2009), but the distribution is inconsistent with either a phonological or lexical account.

3.1 Discarding Alternative Accounts

3.1.1 The Alternation is Not Lexical

The standard claim for Blackfoot is that the selection of proclitic forms is lexically conditioned (Taylor 1969; Frantz 2009):

Prediction: A lexical item (stem or prefix) should consistently select one proclitic form or another, or permit free variation of forms without systematic differences in meaning.

This is **not** borne out:

- (14) a. Amo no’tokáán
amo n-o’tokaan
 DEM 1-hair
 ‘This is my (own) hair.’
- b. Amo nito’tokáán
amo nit-o’tokaan
 DEM 1-hair
 ‘This is my (clipping of) hair (of his).’
- (15) a. Nááhksipaisska
n-aahk-ipaisskaa
 1-MOD-dance
 ‘I might dance.’
- b. Nitááhksipaisska
nit-aahk-ipaisskaa
 1-MOD-dance
 ‘I would dance.’

3.1.2 The Alternation is Not Phonological

Other Algonquian languages that distinguish between long and short form proclitics exhibit a phonological alternation: long forms attach to vowel-initial stems and short forms attach elsewhere (cf. Junker 2010 for East Cree; Valentine 2001 for Ojibwe³; Wolfart 1973 for Plains Cree.)

Prediction: phonetically identical (or near-identical) stems should invariably select one proclitic form or another.

This is **not** borne out:

- | | | |
|------|---|--|
| (16) | a. Nikáítsiniki
<i>n-ikaa-itsiniki</i>
1-PERF- <i>relate.story</i>
'I have told a story.' | b. Nitsikáítsiniki
<i>nít-ika-a-itsiniki</i>
1-ancient-IMPf- <i>relate.story</i>
'I am telling an ancient story.' |
| (17) | a. Kikáípaisskaa
<i>k-ikaa-ipaisskaa</i>
2-PERF- <i>dance</i>
'You have danced (at a dance).' | b. Kitsikáápaisskaa
<i>kit-ikaap-ipaisskaa</i>
2-frequently- <i>dance</i>
'You often danced (at a dance).' |
| (18) | a. Ááhkoyimmiiyiniiksi
<i>w-aahk-oyimm-ii-yini-iksi</i>
3-MOD- <i>mourn-DIR-OBV-PL</i>
'S/he might have mourned them.' | b. Otááhkóyinnimaanistsi
<i>ot-aahkoyinnimaan-istsi</i>
3- <i>pipe-PL</i>
'his pipes' [Frantz and Russell 1995:1] |

3.2 Interim Summary

The alternation between the long and short form proclitics in Blackfoot

- i. is *not* lexical
- ii. is *not* phonological.

Instead:

Claim: The alternation between long and short form proclitics is conditioned by their different syntax and semantics.

4 The Internal Syntax of Blackfoot Proclitics

We argue that the long form proclitics are complex consisting of two meaningful parts:

- (19) a. **Blackfoot proclitics II**

	first person	second person	third person
long forms	n-it-	k-it-	w-it-
short forms	n-	k-	w-

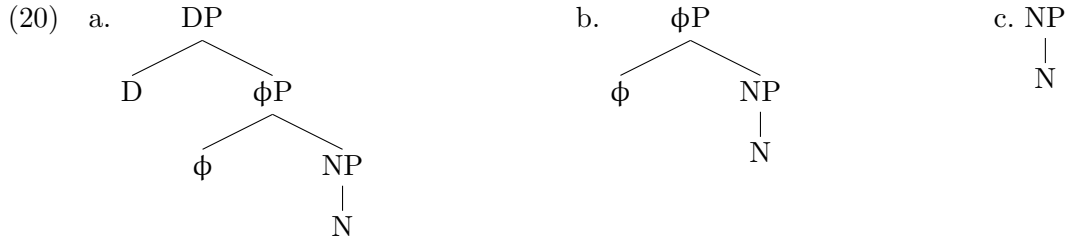
- b. The short forms solely consist of a person marker (ϕ -features).
- c. The long forms consist of the person marker and the morpheme *-it-*.

³Valentine (2001:200) notes that the alternation is not entirely conditioned by phonological factors. As in Proto-Algonquian (and Blackfoot), dependent nouns in Ojibwe invariably select the short forms.

4.1 Background Assumptions: the Syntax of Pronouns

We adopt Déchaine and Wiltschko's (2002) analysis of nominal proforms:

- i. Proforms are internally complex, and can vary in their categorial status.
- ii. There are three categories of proforms, each with their own syntactic projection.



These types can be distinguished on basis of their morphosyntactic properties, binding theoretic status and argument status:⁴

(21) **Syntactic criteria for the distinction**

	pro- ϕ P	pro-DP
Morphosyntax	simplex ⁵	complex
Binding properties	variable	R-expression
Argument status	Condition B: can be bound argument or predicate	Condition C: cannot be bound argument

[adapted from Déchaine and Wiltschko 2002:410]

4.2 Long and Short Form Proclitics Differ in their Internal Syntax

We propose that the Blackfoot proclitics map onto these structures as follows:



- (23) a. In both the long and short forms, the person marker *n-/k-/w-* is merged as a ϕ -head.
 b. In the long forms, *it-* is merged as D head. *n-/k-/w-* is linearized to precede *it-*.⁶

4.3 Evidence for Internal Syntax of Proclitics

- (24) Our proposal correctly predicts that proclitics differ with respect to their
- i. morphosyntactic properties
 - ii. binding theoretic status
 - iii. argument status

⁴From now on, we will abstract away from the third type, pro-NP, as it is not relevant to our discussion.

⁵We acknowledge that pro- ϕ P's could be complex, consisting of isolable ϕ and N morphemes, but crucially, they won't have an isolable D morpheme.

⁶It is still unclear what mechanism accounts for the linearization of long forms. A possible solution is local dislocation at PF in the sense of Embick and Noyer (2001).

4.3.1 Morphosyntactic Properties

Prediction: if the long forms proclitics are compositional, we should find independent evidence of both morphemes in the grammar.

This prediction is borne out:

- (25) long form proclitics: *n-/k-/w-* + *it-*
 (26) a. *n-/k-/w-* = short form proclitics
 b. *it-* = locational prefix

In the verbal domain: *it-* is required to license DPs that express spatial and/or temporal location of the event denoted by the predicate:

- (27) a. *Ááksitsipsstsooyiwa omi ksikóókooyiss.*
aak-it-ipsst-iooyi-wa om-yi ksikookooyiss.
 FUT-LOC-*inside-eat*-PROX DEM tent
 ‘S/he will eat in that tent.’
 b. **Ááksipsstsooyiwa omi ksikóókooyiss.*
- (28) a. *Matónni nitsítsinoowaw kiksíssta.*
matonni nit-it-inoow-a-wa k-iksisst-wa
yesterday 1-LOC-see-DIR-PROX 2-mother-PROX
 ‘Yesterday I saw your mother.’
 b. **Matónni nitsinoowaw kiksíssta.*

In the absence of an overt antecedent, *it-* is translated as “then/there” and refers to a contextually determined discourse time/place:

- (29) Na Leo itsápiipommaawa písátssaisski.
na Leo it-sapiipommaa-wa písatssaisski
 DEM Leo LOC-*plant*-PROX flower
 ‘Leo planted flowers over there.’

Proclitic *it-* is derived from the verbal prefix *it-*.

Conclusion: Both morphological components of the proclitics can be found independently in the grammar of Blackfoot.

4.3.2 Binding Theoretic Status

Prediction: if the long and short form proclitics differ syntactically, we should observe differences in their binding theoretic properties. Specifically, consistent with Déchaine and Wiltschko’s (2002) model, we predict that pro- ϕ Ps can function as bound variables, but pro-DPs cannot.⁷

This prediction is borne out:

- (30) a. bound readings are **possible** with **short form proclitic possessors**
 b. bound readings are **impossible** with **long form proclitic possessor**

⁷E-type readings of full DPs (i.e. donkey anaphora) may appear to pose a challenge to the claim that DPs cannot function as bound variables. However, if, following Evans (1980), we treat E-type pronouns as hidden definite descriptions that by definition are not bound variables, then E-type readings of full DPs are similarly not bound. See Wiltschko (1998) for evidence from German that E-type readings are not bound variables.

- (31) Nitsikáákomimma niksíssta ki ana Apánii ni'tóyi.
nit-ikaakomimm-a n-iksisst-wa ki ana Apanii ni'toyi
1-love-DIR 1-mother-PROX CONJ DEM butterfly be.same
 'I love my mother and Apanii does too.'

✓ STRICT → Apanii loves **my** mother.

✓ SLOPPY → Apanii loves **her own** mother.

- (32) Nitsikááhsi'tsi'p nitsipisátsskitaani ki ana Apánii ni'tóyi.
nit-ikkahsi'tsi-p nit-ipsisatsskitaan-yi ki ana Apanii ni'toyi
1-find.pleasing-DIR 1-cake-INAN CONJ DEM butterfly be.same
 'I like my cake and Apanii does too.'

✓ STRICT → Apanii likes **my** cake.

* SLOPPY → **cannot** mean: Apanii likes **her own** cake.

4.4 Interim Summary

- (33) **Internal Syntax of of Blackfoot proclitics**

	short forms <i>n-/k-/w-</i>	long forms <i>nit-/kit-/ot-</i>
Syntactic category	pro- ϕ P	pro-DP
Morphological complexity	✗	✓
Bound variable	✓	✗

5 The Semantics of the Blackfoot Proclitics

Question: If the long form proclitics are morphologically complex consisting of two meaningful parts, what is the contribution of each part?

- (34) a. *n-/k-/w* is located in pro- ϕ P and denote 1st, 2nd, and 3rd respectively
 b. *it-* is located in D: contributes D-semantics

Prediction: If the long form proclitics are pro-DPs, we predict them

- i. to have the semantic properties of DPs
- ii. to appear in (morpho-)syntactic contexts that are compatible with DP semantics

Both predictions are borne out. The long form proclitics

- (35) a. encode the core semantic property of D, namely **domain restriction**
 b. are ungrammatical in contexts that do not permit domain restriction

5.1 Background Assumptions: D Introduces Domain Restriction

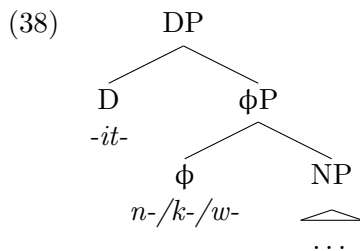
Following Gillon (2006, 2009), we assume that D universally provides **domain restriction**:

D-determiners always introduce domain restriction over their NP, regardless of what other properties they may have. Their function is to constrain the set introduced by the NP to a set of contextually salient individuals. (Gillon 2006:53)

DPs do not (typically) refer to all the individuals in the world that match the NP description, but rather a contextually salient subset:

- (36) a. The dogs were barking.
 b. Typically does not refer to all dogs in the world, but to a contextually salient set.
- (37) a. Determiners restrict the domain of individuals (D_e) to a contextually salient set (C).
 b. C is determined by the discourse context and/or by immediate linguistic context.
 c. Domain restriction can interact with other semantic features (e.g. assertion of uniqueness, familiarity) to derive properties such as definiteness.

5.1.1 The Semantics of the Determiner *it-*



Prediction: *it-* has the semantic properties of a determiner, i.e. it restricts the domain of the ϕP it quantifies over:

- (39) *it-* restricts D_e to C
 D_e = the person(s) denoted in ϕP (first, second, or third)

However: personal pronouns (especially first and second person) already refer to contextually salient individuals.

Question: How does *it-* introduce domain restriction to an already restricted domain?

Musan (1995, 1999): D_e contains both individuals and stages of individuals:

[D]eterminer quantification is not quantification over individuals in their whole temporal extendedness but quantification over STAGES OF INDIVIDUALS. (Musan 1995:94)

Stage = temporal slice of an individual, an individual at a given time (to be distinguished from an individual in its maximal temporal extendedness) (Musan 1995; cf. also Carlson 1980)

Claim: *it-* restricts the domain to the contextually relevant stage(s) of the individual(s).⁸

- (40) **Consequences:**
- Short form proclitics (ϕP s) are temporally unrestricted.
 - Long form proclitics (DPs) are temporally restricted; they refer to a stage of a person, i.e. a person at a contextually salient point in time.

5.2 Evidence for Domain Restriction

Prediction: long forms are ungrammatical in contexts of temporally unbounded predicate-argument relations.

⁸As for the question whether domain restriction as restriction to stages is a semantic primitive, or is derived by a combination of domain restriction and deictic features related to temporality see Gruber (in preparation).

5.2.2 The Perfect

- (51) Perfect is expressed
- by means of the verbal prefix *ikaa*-⁹
 - which obligatorily selects the short form proclitics
- (52) a. *nikaáyo'kaa*
n-ikaa-yo'kaa
 1-PERF-*sleep*
 'I have slept.'
- b. * *nitsikaáyo'kaa*
nit-ikaa-yo'kaa
 1-PERF-*sleep*
intended: 'I have slept.'
- (53) a. *kikaáyo'kaa*
k-ikaa-yo'kaa
 2-PERF-*sleep*
 'You have slept.'
- b. * *kitsikaáyo'kaa*
kit-ikaa-yo'kaa
 2-PERF-*sleep*
intended: 'You have slept.'

Question: How is the relation of the subject to a perfect predicate temporally unbounded?

We adopt an Extended Now (XN) theory of the perfect (McCoard 1978), in which the eventuality denoted by the predicate has current relevance to the subject:

- (54) a. The perfect asserts the existence of a time interval (the perfect time span) in which an eventuality occurs. (cf. von Stechow 1999; Iatridou et al. 2002)
- b. The left and right boundaries (LB and RB) of the perfect time span are determined by elements in the linguistic and/or discourse context.

(55) **Perfect time span**

[LB	RB]
(overt or covert) perfect level adverb	Reference time (R)
existence of subject (e.g. life-time effects')	Reference time (R)
	[adapted from Iatridou et al. 2002]

- (56) *Nikaísamaihpiyi.*
n-ikaa-isam-a-ihpiyi
 1-PERF-*long.time*-IMPF-*dance*
 'I have danced for a long time.'
- (57) (At least) two potential readings:
- LB = perfect level adverb:** There is a time interval (the perfect time span) whose LB is *a long time ago* and whose RB is R (now) and throughout that time interval, I danced (continuously).
 - LB = existence of subject:** There is a time interval (the perfect time span) whose LB is when I was born, and whose RB is R (now) and in that time interval, there is at least one eventuality of me having danced for a long time.

Claim: The boundaries of the perfect time span demarcate the eventuality denoted by the predicate, yielding an interpretation of the predicate as a property.

⁹Frantz (2009) identifies this morpheme as a perfective marker. However, we analyse it as a perfect rather than a perfective: (i) It can co-occur with an imperfective marker. (ii) It expresses the meaning of the English adverb *already*. (iii) Like the English perfect, it cannot occur with the adverbial *yesterday*.

- (58) This property denoted by the perfect predicate is
- a. relevant to the individual's experience over their lifetime or over an extended period
 - b. permanently attributed to the individual
 - c. in a temporally unbounded relation with the individual

The relation of the subject to the perfect predicate mirrors that of the possessor to the inalienably possessed noun.

5.2.3 Summary

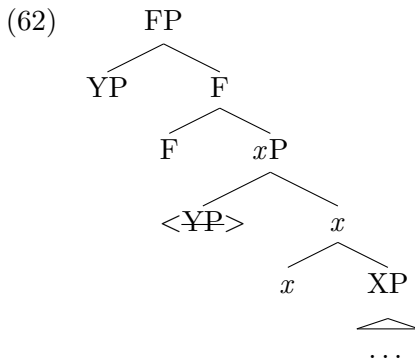
Inalienable possession and perfect predicate-argument relations require a pro- ϕ P argument as they do not contain domain restriction.

6 The External Syntax

- (59) a. The internal syntax of the proclitics restricts their external syntax.
 b. pro-DPs and pro- ϕ Ps can be distinguished on the basis of their argument status.
 (cf. Déchaine and Wiltschko 2002)

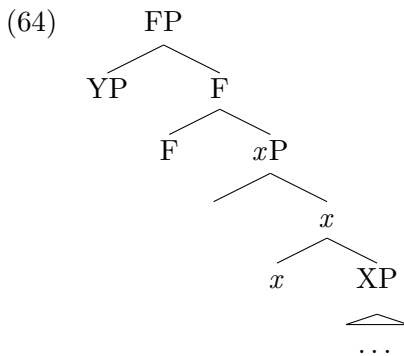
6.1 Background Assumptions

- (60) a. Lexical roots encode information about their argument structure.¹⁰
 b. External arguments are licensed by light heads v and n . (Kratzer 1996; Chomsky 1995)
- (61) **Core Arguments:**
- a. Nominal expressions that are merged in the v P/ n P or VP/NP.
 - b. They may move to a functional layer outside the x P domain (e.g. for case-checking).



¹⁰With respect to Blackfoot our assumption that argument structure is lexically encoded is in line with recent proposals by Ritter and Rosen (2010a); Armoskaite (2011). Beyond that, we abstract away from specific models concerning the precise nature of how this information is lexically encoded.

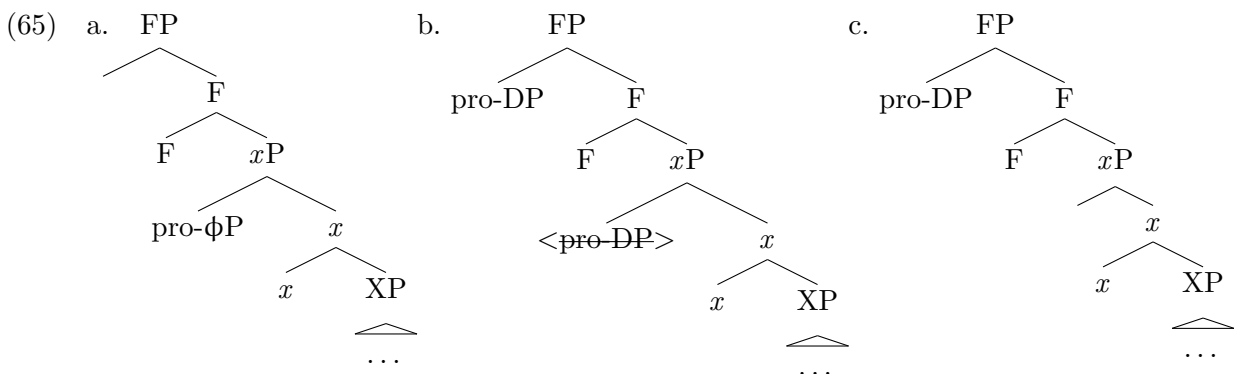
- (63) **Non-core arguments:**
Nominal expressions that are *not* merged *xP*-internally.



Claim:

- i. **short form** proclitics (pro- ϕ P) are restricted to **core argument** positions
- ii. **long form** proclitics (pro-DP) may be merged as **core or non-core** arguments, but must be case-licensed in a functional projection¹¹

Prediction: The external syntax of short and long form proclitics should conform to the following structural configurations:



This prediction is borne out in the nominal and the verbal domain.

6.2 External Syntax in the Nominal Domain

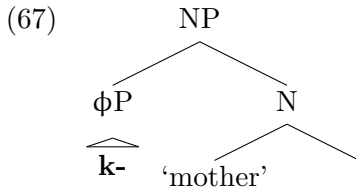
6.2.1 Inalienable Nouns

In Blackfoot, inalienable nouns obligatorily require a proclitic possessor:

- (66) a. niksíssta b. kiksíssta c. oksíssti d. * iksíssti
n-iksíssta *k-iksíssta* *w-iksíssti* *iksíssti*
1-mother *2-mother* *3-mother* *mother*
‘my mother’ ‘your mother’ ‘her/his mother’ ‘a mother’¹²

¹¹Although our proposal is framed differently, if we assume that case-licensing defines syntactic arguments, then our claim is consistent with the widely held view that DPs must occupy argument positions (e.g. Longobardi 1994). Further, it is consistent with Déchaine and Wiltschko’s (2002) proposal that, although pro- ϕ P) can be arguments or predicates, in pronominal systems in which there are both pro-DPs and pro- ϕ P) (such as Halkomelem, and arguably Blackfoot), pro-DPs block pro- ϕ P) from occupying argument positions.

¹²To express English sentences such as “I am a mother.”, consultants consistently provide translations along the lines of the verbalized noun *Nitsíiko’si* “I have children.”



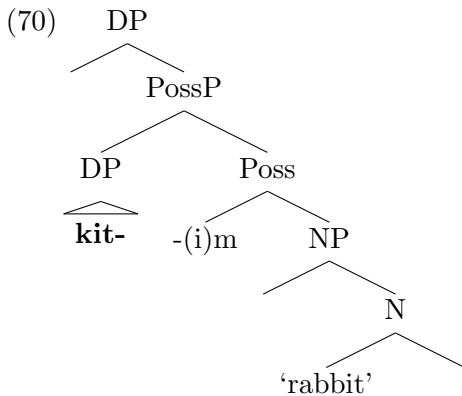
Claim: pro- ϕ P is merged as an NP-internal core argument.

6.2.2 Alienable Nouns

Unlike inalienable nouns, alienable nouns do not require a possessor.

- (68)
- | | | | |
|-----------------------------|-----------------------------|----------------------------|-----------------------|
| a. nitááattsistaama | b. kitááattsistaama | c. otááattsistaami | a. ááattsistaawa |
| <i>nit-aaattsistaa-m-wa</i> | <i>kit-aaattsistaa-m-wa</i> | <i>ot-aaattsistaa-m-yi</i> | <i>aaattsistaa-wa</i> |
| 1-rabbit-POSS-PROX | 2-rabbit-POSS-PROX | 3-rabbit-POSS-OBV | rabbit-PROX |
| ‘my rabbit’ | ‘your rabbit’ | ‘his/her rabbit’ | ‘a rabbit’ |

- (69)
- The alienable possessor is merged in a higher functional possessor projection.
(cf. Alexiadou 2003)
 - This functional head is overtly expressed by the suffix *-im*.¹³
(cf. Ritter and Rosen 2010b)



Claim: pro-DP is merged as an NP-external non-core argument.

6.2.3 Two Positions: Evidence from Possessor Stacking

Prediction: Both possessor positions can be filled simultaneously, with an NP-internal pro- ϕ P and an NP-external pro-DP.

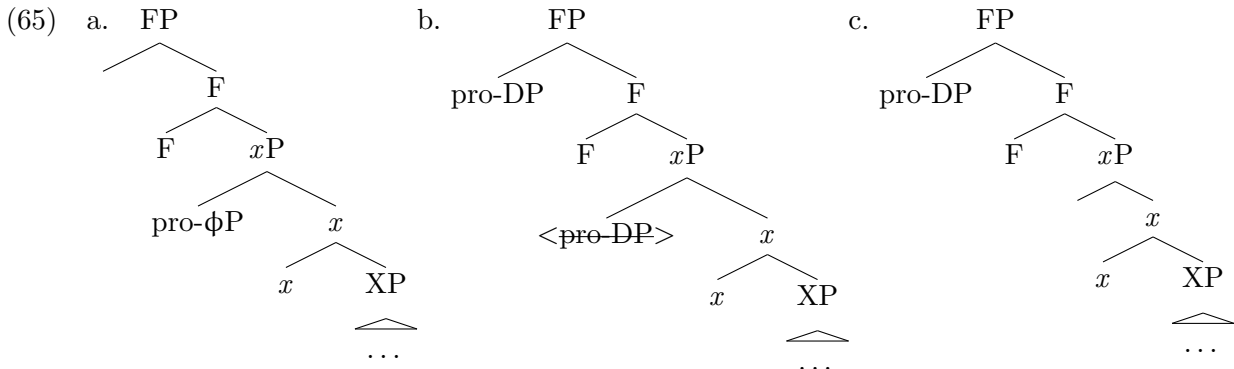
This prediction is borne out:

- (71)
- | | | |
|-----------------------------|---------------------------|-------------------------------|
| a. nitsikóóksissta | b.* nitsikóóksissta | c. * nikoó(tsi)ksissta |
| <i>nit-iko-w-iksisst-wa</i> | <i>nit-iko-iksisst-wa</i> | <i>n-iko-w(it)-iksisst-wa</i> |
| 1-old-3-mother-PROX | 1-old-mother-PROX | 1-old-3-mother-PROX |
| ‘my former mother’ | | |

¹³There is a null counterpart to the possessive suffix *-im*. The distribution of the overt and covert possessive marker is yet unclear.

6.3 External Syntax in the Verbal Domain

Recall our predicted structures:

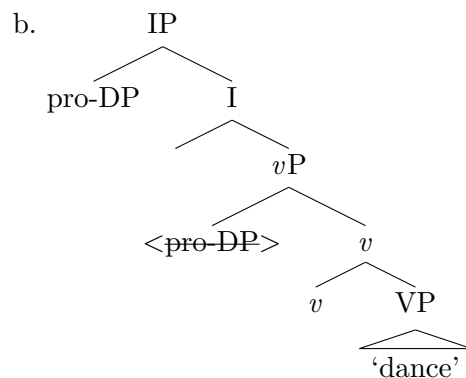


- (72) a. (65a) is exemplified by inalienable nouns
 b. (65c) is exemplified by alienable nouns

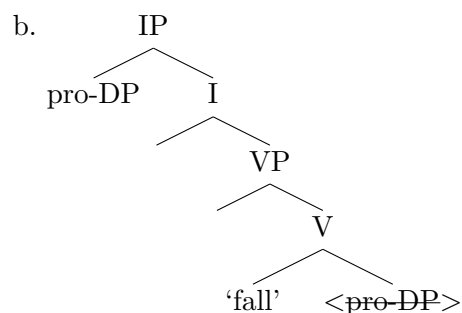
We argue that (65b) is instantiated in simple predicates¹⁴ in the verbal domain:

- (73) a. Unergative verbs require an external argument and unaccusative verbs require an internal argument.
 b. In both cases, pro-DP occupies a core position and moves to Spec-IP¹⁵ for case. (cf. Déchaine and Wiltschko 2011)

- (74) a. Nítsspiyi (*nihpiyi)
nit-ihpiyi
 1-dance
 ‘I danced.’



- (75) a. Nitsinnisi (*ninnisi)
nit-innisi
 1-fall
 ‘I fell.’



Claim: pro-DP is merged as a core argument and moves to IP to check case.

¹⁴For ease of exposition we are concentrating here on intransitive verbs. The same, however, applies to transitive predicates. See Bliss (2005) for a feature-based account of argument licensing with transitive verbs.

¹⁵For purposes of clarity, we have omitted Asp-heads from the clausal spine. However, see Bliss et al. (2010) for discussion of Inner and Outer Aspect in Blackfoot clause structure.

6.4 Summary

Claim:

- i. **Short form** proclitics (pro- ϕ P) are restricted to **core argument** positions.
- ii. **Long form** proclitics (pro-DPs) may be merged as **core or non-core** arguments.

(76) The distribution of Blackfoot proclitics

	core arguments	non-core arguments
pro- ϕ P	inalienable possessor	–
pro-DP	lexical argument of verb	alienable possessor

7 Overview of the Syntax and Semantics of Blackfoot Proclitics

Summary

		short form proclitics	long form proclitics
internal syntax	<i>category</i>	pro- ϕ P	pro-DP
	<i>morphology</i>	simplex	complex
	<i>binding properties</i>	bound variable	R-expression
semantics	<i>content</i>	person features	+ domain restriction
	<i>relation to predicate</i>	temporally unbounded	temporally bounded
	<i>nominals</i>	inalienable possession	alienable possession
	<i>verbs</i>	perfect	PREDICTION A
external syntax	<i>argument status</i>	core argument	core or non-core
	<i>nominals</i>	merged NP-internally	merged NP-externally
	<i>selected by</i>	nominal head	possessor head
	<i>verbs</i>	PREDICTION B	merged <i>v</i> P-in- or externally

(77) **Prediction A:** In the verbal domain, long form proclitics combine with temporally bounded predicates.

(78) **Prediction B:** In the verbal domain, short form proclitics are merged *v*P-internally.

Here, we draw attention to some additional data that provides preliminary support for these predictions, as well as speaks to the wider distribution of the proclitic forms.

7.1 Long Form Proclitics in the Verbal Domain: Semantics

(77) **Prediction A:** In the verbal domain, long form proclitics combine with temporally bounded predicates.

Short forms, on the other hand, may never combine with bounded predicates.

An asymmetry observed in the context of modality lends preliminary support to this prediction:

- (79) The modal prefix *aahk-* selects¹⁶
- a. a short form proclitic when it is interpreted as epistemic modal (80a)
 - b. a long form proclitic when it is interpreted as a marker of counterfactuality (80b)
- (80) a. Nááhksikkamihpiyi
n-aahk-ikkam-ihpiyi
 1-MOD-*if-dance*
 ‘I might dance.’
- b. Nitááhksikkamihpiyihtopi (... nikatáássiiksinaasstopi)
nit-aahk-ikkam-ihpiyi-htopi (...)
 1-MOD-*if-dance-UNREAL (...)*
 ‘I would dance (... if I hadn’t hurt myself.)’

Preliminary claim: Counterfactual predicates are temporally bounded by a (covert or overt) conditional antecedent. Hence they require the long form proclitic.

- (81) **Support:** Izvorski (1997) draws parallels between the semantics of
- a. past tense and counterfactuality
 - b. present perfect and epistemic modality
- (82) These parallels are reflected in Blackfoot in the selection of proclitics:
- a. past tense and counterfactuality select the long form proclitic
 - b. (present) perfect and epistemic modality select the short form proclitic

For Izvorski (1997), the present perfect and epistemic modality encode a notion of consequence or current relevance, which we argued to result in temporal unboundedness.

7.2 Short Form Proclitics in the Verbal Domain: The External Syntax

- (78) **Prediction B:** In the verbal domain, short form proclitics are merged *vP*-internally and do not move to IP to check case.

7.2.1 *vP*-internal Merge

- (83) Additional arguments in Blackfoot may be introduced via
- a. applicative suffixes¹⁷
 - b. prepositional prefixes¹⁸
- (84) With respect to their selection of proclitics
- a. applicative suffixes select the long form proclitics (85)
 - b. prepositional prefixes select the short form proclitics¹⁹ (86)

¹⁶Frantz (2009:109, ft. 3) describes the distribution of the long and short forms with modal *aahk-* as conditioned by variation between speakers. Our consultants consistently allow both the long and short forms, but only permit the long forms in the context of counterfactuals.

¹⁷In Algonquianist terms these are referred to as *concrete finals*. (Bloomfield 1946; Frantz 2009)

¹⁸In Algonquianist terms these are referred to as *relative roots* or *linkers*. (Frantz 2009)

¹⁹The facts are somewhat more complex than presented here. There are (at least) three types of prepositional prefixes: (i) prefixes that do not co-occur with applicative suffixes, (ii) prefixes that do co-occur with them, and (iii) locative prefixes. Only (i) occurs with the short form proclitics, and is discussed here (cf. Bliss (2007); Louie (2009); Meadows (2010) for additional discussion and analyses of the different prepositional prefixes in Blackfoot.

- (85) a. Nítsspiyioawa nitána
nít-ihpiyi-omo-a-wa n-itana
1-dance-APPL-DIR-PROX 1-daughter
 ‘I danced for my daughter.’
- b. * Nihpiyioawa nitána
n-ihpiyi-omo-a-wa n-itan-wa
- (86) a. Nómohtááhkaniaaki oma atonáóksisa
n-omoht-waahkaniaaki oma atonaoksisa
1-PREP-sew DEM needle
 ‘I sewed with the needle.’
- b. * Nitomohtaahkaniaaki ...
nít-omoht-waahkaniaaki ...
- (87) a. applicative suffixes can introduce the referent denoted by the proclitic (88a)
 b. prepositional prefixes cannot introduce the referent denoted by the proclitic (88b)
- (88) a. Nítsspiyiomooka
nít-ihpiyi-omo-ok-wa
1-dance-APPL-INV-PROX
 ‘S/he danced for me.’
- b. Nómohtsitsinikooka kiistóyi
n-omoht-itsiniko-ok-wa kiistoyi
1-PREP-relate-INV-PROX 2SG
 ‘He told me about you.’
- * ‘He told you about me.’

[Frantz 2009:93]

(89) **Proclitics and additional arguments**

		short form proclitics	long form proclitics
applicative suffix	<i>selects</i>	✗	✓
	<i>can reference</i>	–	✗
prepositional prefix	<i>selects</i>	✓	✗
	<i>can reference</i>	✓	–

(90) **Consequences:**

- a. If the prepositional prefixes cannot select a proclitic argument
 b. the proclitic must refer to a core-argument.
 c. Conclusion: it must be selected by the lexical head.

Preliminary claim: Short form proclitics are merged *vP*-internally.

It remains an open question why the proclitic **must** be the short form then.

7.3 The Distribution of Long and Short Form Proclitics

In both their semantics and their external syntax, we observe that short forms are restricted:

- (91) a. **semantics:** short forms restricted to unbounded relations
 b. **external syntax:** short forms restricted to core arguments

This is consistent with the wider distribution of short and long forms; short forms are used in a narrower range of morphosyntactic environments than the long forms:

(92) **Distribution of long and short form proclitics**

	Short Form <i>n-</i> , <i>k-</i> , <i>w-</i>	Long Form <i>nit-</i> , <i>kit-</i> , <i>ot-</i>
Nouns	inalienable possession	elsewhere (alienable possession)
Verbs: tense & aspect	perfect	elsewhere (past, future, imperfective)
Verbs: modality	epistemic modal	elsewhere (counterfactual, deontic)
Verbs: argument structure	prepositional prefixes	elsewhere (applicatives, causatives)

8 Summary and Outlook

8.1 Main Claims

Claim I: The internal syntax of the Blackfoot proclitics and the semantics associated with them determine their distribution in the external syntax.

(93) **The Proposal in a Nutshell**

	short form proclitics	long form proclitics
internal syntax	pro- ϕ P	pro-DP
semantics	person features	+ domain restriction
external syntax	core argument	core or non-core

Claim II: There is a direct mapping from the syntactic structure to the semantics.

(94) **Syntax-Semantics mapping**

	short form proclitics	long form proclitics
	<i>person features</i>	<i>+ domain restriction</i>
temporally unbounded predicates	inalienable possession perfect epistemic modality	– – –
temporally bounded predicates	–	alienable possession applicatives counterfactuals

8.2 Outlook

Further directions:

(95) **Regarding Blackfoot:**

Explore the parallel of the prefix *it-* that licenses spatiotemporal arguments and proclitic *-it-*:

- i. both provide (spatiotemporal) restriction and are required for licensing certain nominal expressions
- ii. The pervasiveness of *it-* in Blackfoot morphosyntax raises questions about:
 - i. the role of spatiotemporal restriction in nominal licensing
 - ii. the relation between spatiotemporality and person in a purportedly tenseless language (cf. Ritter and Wiltschko 2009)

(96) **Regarding cross-linguistic variation:**

Embed this research in the analysis of the structure of indexicals put forward in Gruber (to appear):

- i. The category *person* is analysed as being complex and
- ii. as consisting of layers linked to spatial and temporal deixes.
- iii. The analysis of Blackfoot proclitic *it-* as a domain restrictor linked to temporality lends support to this analysis.

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