Deriving full repetition in Blackfoot with additive focus[*]

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Abstract I argue that Blackfoot's method of marking repetition, *mattsista'-* consists of two morphemes, *matt-* and *ista'-*. While both encode an additional event, *matt-*'s event is restricted only to being a focus alternative to the asserted event, leaving predicate identity and temporal precedence to be encoded by *ista'-*. I propose that *ista'-*'s event variable requires a linguistically encoded antecedent which *matt-*'s event acts as, deriving the fact that *mattsista'-* has a focus-sensitive interpretation.

Keywords: semantics, pragmatics, repetition, focus, Blackfoot

1   Introduction

In this paper I investigate how Blackfoot (Plains Algonquian) encodes repetition. By "repetition," I refer to the meaning encoded by English words like *again*, as in (1). Where the prejacent in (1) "I ran" indicates a running event, e, by the speaker, "again" indicates that there was some other event, e', which temporally preceded the asserted event, where both e and e' have the property of being running events by the speaker (cf. Dowty 1979; Fabricius-Hansen 2001; von Stechow 1996; Beck 2006).

(1)   I ran **again**

The way Blackfoot encodes this sort of meaning is illustrated in (2). Like English, the Blackfoot utterance has a prejacent part *nit-okska'si* which means "I ran", and repetition (i.e., temporal precedence and an identical property condition between e' and e) is encoded by what Frantz & Russell (1989) gloss as a single morpheme meaning "again", *mattsista'-*.

(2) *ni**máttsistá**ó'kska'si*
     nit-**mattsista'**-okska'si
     1-**again**-run.vai

     'I ran again.'[1]

At first glance *mattsista'*- and *again* appear parallel, but whereas English *again* is felicitous in either a repetitive or restitutive context, restitutive readings for Blackfoot *mattsista'*- are strongly focus-sensitive, only being available in agent-focus contexts.

My main claim is that *mattsista'*- consists of two morphemes: *matt*- and *ista'*-, where the markedness of the restitutive reading can be compositionally derived. I show that *matt*- is typically interpreted as additive VP-focus,[2] presupposing that the agent of the asserted event also participated as agent of another salient event, and suggest that *ista'*- encodes the temporal precedence and identity condition associated with English *again*. I propose that *ista'*- has stricter requirements than *again*, however, as to how its anaphoric dependency must be satisfied: while the event referred to by *again* may be extralinguistically supplied via context, the denotation of *ista'*- includes an event variable that must obtain its reference from a linguistically encoded event. I suggest that the event associated with *matt*- satisfies this local dependency, such that the events presupposed by *matt*- and *ista'*- are identified as the same event, and then show how this, along with default VP-focus, derives the consequence that *matt*- and *ista'*- together require a fully repetitive interpretation. In the remainder of section 1, I provide background on the repetitive/restitutive ambiguity, then show that Blackfoot *mattsista'*- appears to lack this ambiguity. In section 2, I provide evidence that *mattsista'*- is morphologically complex. In section 3, I propose denotations for *matt*- and *ista'*-, and show how these compositionally combine to derive the lack of ambiguity seen in section section 1. In section 4, I address consequences for analysis, regarding non-default focal contexts. In section 5, I conclude.

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1 Glosses: vai/vii= (in)animate intransitive verb, vta/vti=transitive (in)animate verb, 1,2=1st/2nd person, 3=3rd proximate, 3'=3rd obviative, 0=inanimate, loc=local person (1st or 2nd), X>Y= X acts on Y, inv=inverse(X acts on Y, Y outranks X on person-animacy hierarchy: 2,1 >3>3'>0), rl=relative root, sbj=subjunctive, cj=conjunctive, conj="and/but", impf=imperfective, perf=perfect, fut=future, caus=causative, ints=intensifier, neg=negation, nonaff=non-affirmative, recip=reciprocal, n.fact=non-factive, dtp=distinct third person, y/n= yes/no Q, dem=demonstrative, pl=plural, sg=singular, exp=expletive, ic=initial change (morphononological process). Blackfoot data, unless otherwise marked, is from author's fieldwork notes, organized/marked by (Consultant:YYYY-MM-DD)

2 Note that when I use the term "VP," I do so under the assumption that agents are introduced VP-externally, in the sense of Kratzer 1996

1.1   The repetitive/restitutive ambiguity

English *again* is a presuppositional element requiring some event, which matches the asserted event's properties, to have temporally preceded the asserted event. The presupposition is often characterized as ambiguous, however, in that it may be satisfied in more than one way - either repetitively, or restitutively (cf. Dowty 1979; Fabricius-Hansen 2001; von Stechow 1996; Beck 2006). The readings are illustrated below, where the utterance in (3) can either presuppose (a) that I opened the door before (the fully repetitive reading), or (b) that the door was open before (the restitutive reading).

(3)   I opened the door again

a. Repetitive: I opened that door when I came in, but the wind blew it shut. *So I opened the door **again***

b. Restitutive: That door was already open when I came in, but the wind blew it shut. *So I opened the door **again***

The distinction thus corresponds to whether the entire asserted event is a repetition of the presupposed event (the repetitive reading), or whether it is just the the result state of the asserted event that is a repetition of the presupposed event (the restitutive reading).

There are two main approaches to capturing this ambiguity theoretically. The structural account (cf. von Stechow 1996) argues that there is one lexical entry for *again*, but that predicates like *open* are syntactically decomposable into an empty agentive *v*, and a result state. When *again* adjoins to a phrase structure encoding just the result state, prior to the merge of *v*, the restitutive meaning is derived. When *again* adjoins after *v* has merged, i.e., when it adjoins to a phrase structure that encodes an event corresponding to [cause [result state]], the fully repetitive meaning is derived.

[cause   [result state]   ]

again
(fully-repetitive)
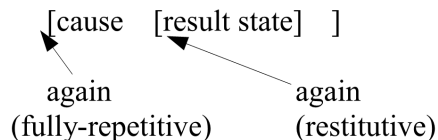
again
(restitutive)

The lexicalist account (cf. Dowty 1979) avoids positing syntactic decomposition and instead posits lexical ambiguity for *again*, such that it consists of two lexemes, *again1* and *again2*; one lexeme corresponds to the restitutive meaning, the other to the repetitive meaning.[3]

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3 See von Stechow 1996 for a criticism of Dowty's meanings for *again1* and *again2*, as well as a criticism of Fabricius-Hansen's (2001) repetitive and counter-directional *again*.

1.2 Blackfoot *mattsista'*- lacks restitutive readings

Unlike English *again*, Blackfoot *mattsista'*- at first appears incompatible with restitutive readings. (4a) shows its felicity in a fully-repetitive context. (4b) shows its infelicity in a restitutive context. [4]

(4) *nimáttsistá'kowai'piksí'p* (I opened it again)

a. *Repetitive: omi   kitsím   nitsíkowai'piksí'p,   nitáitsipissi*
           omi   kitsim   nit-ikowai'piksi-'p   nit-á-it-ipi-ssi
           dem   door   1-open-loc>0   1-impf-rl-enter-cj
*itsohkohpápoka.   ki   ni**matts(it)sista**i'kowai'piksí'p*
it-yohkohpápoka   ki   ni-**matt-(it)-ista'**-ikowai'piksi-'p
rl-blow.shut   conj   1-**add-(rl)-again**-open.vti-loc>0
'I opened that door when I went in, but then it blew shut.
And (then) I opened it **again**.'   (BB:2010-04-16)

b. *Restitutive: omi   kitsím   ííkaikowaistsii,   nitáitsipissi*
           omi   kitsim   iikaa-ikowaistsii   nit-á-it-ipi-ssi
           dem   door   perf-open.vii   1-impf-rl-enter-cj
*itsohkohpápoka.   #ki   ni**matts(it)sista**i'kowai'piksí'p*
it-yohkohpápoka   ki   ni-**matt-(it)-ista'**-ikowai'piksi-'p
rl-blow.shut   conj   1-**add-(rl)-again**-open-loc>0
'That door was already open when I went in, then it blew shut.
And (then) I opened it again.'   (BB:2010-04-16)

This generalisation is robust; (5) shows a context where a restitutive presupposition is satisfied, but a *mattsista'*-marked utterance is nonetheless rejected.

(5) **Context:** Last year, Solveiga caught Abigail, a criminal. Then she escaped prison, but yesterday, I caught her again.

*#ni**máttsistá**yinimata*   *ana   Abigail*
ni-**matt-ista'-**yinniM-at-a   an-wa   Abigail
1-**add-again-**catch.vta-?-loc>3   dem-3   abigail
'I caught Abigail **again**.'   (BB:2009-03-10)
BB comment: That means YOU caught her before, you caught her twice.

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4 Note that in anticipation of my analysis, I will gloss *matt-* as "add(itive)," and *ista'-* as "again.' Except in cases where I am entertaining the possibility that *mattsista'*- is a single morpheme, in order to argue against it.

The question is how to account for this generalisation. Adopting a structural account, we could stipulate that *mattsista'-* is unable to merge in a position where it only scopes over a result state. Adopting a lexical view, we could assume that Blackfoot *mattsista'-* corresponds to the English repetitive *again*, and that Blackfoot lacks a lexical item corresponding to restitutive *again*. I argue that neither of these possibilities account for the full-picture, as both fail to acknowledge my main empirical claim– the claim that *mattsista'-* is compositionally complex, consisting of two morphemes *matt-* and *ista'-*. In the following section, I provide morphological evidence for this claim.

2 Evidence for *mattsista'-*'s complexity

2.1 Other morphemes can intervene between *matt-* and *ista'-*

The first piece of evidence for the proposed decomposition is shown in (6)-(8), where we see that other morphemes can occur inside *mattsista'-* intervening between *matt-* and *ista'-*. In (6) the ability modal *ohkott-* intervenes, in (7), the imperfective *á-* intervenes, in (8), the "means" linker *ooht-* intervenes. [5]

(6) *nitáákattohkottsista'sai'notok*
     nit-áák-**matt-**<u>ohkott</u>-**ista'-**áásei'n-oto-k
     1-fut-**add-**<u>able-</u>**again**-cry.vai-caus-inv
     'She will be <u>able</u> to make me cry **again**.'   (BB:2008-11-03)

(7) *annohk nimattáistáóyi   áápastaaminaam(iksi)*
     annohk   ni-**matt-**<u>á</u>-**ista'-**ooyi   áápastaaminaam-(iksi)
     now   1-**add-**<u>impf</u>-**again**-eat.vai   apple-pl
     'Right now I'<u>'m</u> eating apples **again**.'   (BB:2009-02-19)

(8) *nimáttoohtsistayistsini'p   isttowan*
     ni-**matt-**<u>ooht</u>-**ista'-**yistsini-'p   isttowan
     1-**add-**<u>means</u>-**again**-cut.vti-loc>0   knife
     'I cut it **again** <u>with</u> a knife.'   (BB:2009-02-23)

2.2 *matt-* can appear independently

The second piece of evidence for *mattsista'-*'s complexity is that *matt-* can occur independently, which is what we predict if *mattsista'-* is indeed composed

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5 Recall also, that the relative root *it-* "then" intervenes between *matt-* and *ista'-*, as seen in example (4).

of separate morphemes. Frantz & Russell's (1989) dictionary glosses *matt-* as "again/additionally"; in my fieldwork I find that *matt-* most consistently corresponds to an additive VP-focusing "also/too", being used in contexts where the agent of the event is presupposed to be participating (or have participated) as the agent of some other event (9).

(9)   *ni**matt**áókska'si*
      ni-**matt-**á-okska'si
      1-**add-**impf-run.vai
      'I run **also**.' e.g. I ride horses, I also run   (BB:2009-03-10)

2.3   *matt-* and *mattsista'-* are in complementary distribution

The third piece of evidence indicating that *mattsista'-* contains the morpheme *matt-* is that the two forms cannot co-occur. This is shown in (10-11), where the consultant was given a felicitous English utterance with both *also* and *again*, and asked to translate into Blackfoot. In all cases, the consultant offered the (a) examples, containing only *matt(s-)ista'-*. The elicitor then offered the constructed examples in (b), with *matt-* to contribute the meaning of *also* and a full-form *mattsista'-* to contribute the meaning of *again*, however these constructed utterances were categorically rejected.

(10)   Target: I ran again, and I also jumped again.

a.   *nimáttsistókska'si*   *ki*   *ni**mattsistá'**sspohpai'pi*
     ni-matt-ista'-okska'si   ki   ni-**matt-ista'-**ssp-ohpai'pi
     1-add-again-run.vai   conj   1-**add-again-**up-jump.vai
     'I ran again, and I jumped **again**.'

b.   **nimáttsistókska'si*   *ki*   *ni**mattattsistá'**sspohpai'pi*
     ni-matt-ista'-okska'si   ki   ni-**matt-mattsista'-**ssp-ohpai'pi
     1-add-again-run.vai   conj   1-**add-again-**up-jump.vai
     Target: I ran again, and I **also** jumped **again**.   (BB:2010-04-01)

(11)   Target: She will dance again, and she will also sing again

a.   *áákattsistaiíhpiyi*   *ki*   *áák**attsistai'**inihki*
     áák-matt-ista'-ihpiyi   ki   áák-**matt-ista'-**inihki
     fut-add-again-dance.vai   conj   fut-**add-again-**sing.vai
     'She is gonna dance again, and she is gonna sing **again**

b. *áákattsistaiíhpiyi   ki   áák**attattsistai'**inihki
    áák-matt-ista'-ihpiyi   ki   áák-**matt-mattsista'-**inihki
    fut-add-again-dance.vai   conj   fut-**add-again-**sing.vai
    Target: She will dance again, and she will **also** sing **again**.   (BB:2010-04-01)

This complementary distribution is expected if *mattsista'*- consists of *matt*- and *ista'*-; it would require a separate explanation if *matt*- and *mattsista'*- were unrelated. Note that while *matt*- is sometimes compatible with a translation as "again," as suggested by Frantz & Russell's (1989) gloss, *matt*- is not merely a short-form, or fast-speech variant of *mattsista'*-, as they have different semantic properties: while *mattsista'*- necessarily imposes a temporal ordering on the presupposed and asserted event, as shown in (12), this is not the case for *matt*-. This is shown in (13), where the *matt*- marked asserted event need not temporally follow the presupposed event.

(12) #anihk   nitsspiyi   ki   matonni   ni**mattsistai'**hpiyi
      anihk   nit-ihpiyi   ki   matonni   ni-**matt-ista'-**ihpiyi
      earlier.today   1-dance.vai   and   yesterday   1-**add-again-**dance.vai

      `I danced today, and I danced yesterday also/ # again.'   (BB:2009-05-05)

(13) **Context:** In the morning, I[S2] made cookies (*e*). In the afternoon, I baked a pie (*e'*). My neighbour[S1] visits and asks:

S1:   "Did you bake that pie?"

S2:   áá,   ki   omistsi   pisatskiitaanists   ni**matt**sskiitatoopyaa
      áá,   ki   om-istsi   pisat-ihkiitaan-istsi   ni-**matt-**ihkiitaatoo-'p-yaa
      yes, conj   dem-pl   fancy-bake-0pl   1-**add-**bake.vti-loc>0-3pl
      "Yes, and I also baked those cookies."   (BB:2010-03-15)

Recall too that the repetitive meaning associated with English *again* consisted not only of a temporal precedence requirement, but also an identical property condition. The data below shows that while *mattsista'*-, like *again*, encodes an identical property condition (as indicated by the consultant's comments in (14)), *matt*- does not (as shown by *matt*-'s felicity in example (15)).

(14) P = freezing, P' = freezing, freezing = freezing

> *matonni* ***mattsista'**kokoto*   *omi*   *isstonnikis*
> matonni   **matt-ista'-**iko'koto-wa om-yi   isstonniki-s
> day.before **add-again-**freeze.vii-3 dem-0   ice-cream-?
> 'Yesterday the ice-cream froze **again**.'   (BB:2009-03-10)
> **BB Comment:** It's like the ice-cream froze before, melted, and then now it's freezing again

(15) P = singing, P' = dancing, singing $\neq$ dancing

> *ana Heather kámínihkisi*   *áák**att**sspiyi*
> ana   Heather kam-inihki-si   áák-**matt-**ihpiyi
> dem   Heather if-sing.vai-sbj:3 fut-**add-**dance.vai
> 'If Heather sings, she will **also** dance.'   (BB:2010-03-24)

With these observations, in the following section I posit denotations for *matt-* and *ista'-*. I then show how these denotations combine to derive *mattsista'-*'s apparent incompatibility with restitutive contexts.

3   Composing *mattsista'-*

3.1   A semantics for Blackfoot *matt-*

Recall that Frantz & Russell (1989) gloss *matt-* as "again" or "additionally," and that in my fieldwork, *matt-* most often corresponds to an additive VP-focusing "also" or "too." The basic analyses for English "again" and the additive focus particles "also" and "too" are given in (16) and (17). (16) states that *again* presupposes that in addition to the asserted event, e, there exists a previous event, e', where the event predicate, P, which is being asserted of e, also holds for e'.

(16) **Lexical Entry for *again***

> Let P be a property of eventualities and let e be an eventuality.
> $[\![again]\!](P)(e)$ is defined only if $\exists e'[[\![MAX]\!](P)(e) = 1 \wedge e' <_t e]$.
> Where defined, $[\![again]\!](P)(e) = 1$ iff $P(e) = 1$.
> (cf. von Stechow 1996: 95)[6]

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6 The inclusion of a MAX operator in the denotation ensures that we do not just indicate a continuing event, i.e., cases where we would use *still*. $[\![MAX]\!](P)(e) = 1$ iff $P(e)$ and there is no e' such that e is a proper subpart of e' and $P(e') = 1$. (von Stechow 1996).

(17) **Lexical Entry for *also/too***

Let $[\![\alpha]\!]^o = p$, $C =$ the context
$[\![also]\!](p)$ only defined if C provides $p, p' \in [\![\alpha]\!]^F$, $p' \neq [\![\alpha]\!]^o$, & $p'(w) = 1$
Where defined, $[\![also]\!](p)(w) = 1$ iff $p(w) = 1$
(cf. Rooth 1992; Karttunen & Peters 1979)

As focus alternatives describe events which match the asserted event's proper-
ties, taking into account abstraction over focus-marked elements, *also*, like *again*,
presupposes that there exists some event which matches the asserted event according
to some property. For *again*, this is the property of events attributed to the asserted
event; for *also* this is the focus-abstracted property that all of the focus-alternatives
have in common. Since *matt-* is most often translated as *also* or *again*; this sug-
gests that *matt-*'s core semantics indicates that in addition to the asserted event, e,
a presupposed event e', occurred (or occurs), where e and e' share some property.
Note, however, that *matt-* is not always translated as *also* or *again*. In many cases,
matt- is not translated at all. Consider the minimal pair in (18); (18a) is marked
with the additive agent-focus marker *noohkatt-*[7]; its offered English translation
correspondingly contains an "also." In contrast, (18b) is only marked with *matt-*;
its offered English translation lacks an overt element encoding whatever semantic
import *matt-* may contribute.

(18)

a. *oma imitaa ííkohpokimi, ki oma poos iik**oohkatt**ohpokimi*
    oma imitaa iik-ohpokimi   ki oma poos iik-**noohkatt**-ohpokimi
    dem dog   ints-small.vai and dem cat ints-**also**-small.vai
    'That dog is small, and that cat is small **also**.'

b. *oma imitaa ííkohpokimi   ki oma poos iik**att**ohpokimi*
    oma imitaa iik-ohpokimi   ki oma poos iik-**matt**-ohpokimi
    dem dog   ints-small.vai and dem cat ints-**add**-small.vai
    'That dog is small, and that cat is small.'

    BB comment:"[This one is] without the 'also' - *ikoohkatt-* is 'also'. It's like you're
    looking at a cat and you're looking at a bowl, and they're both small, without the
    'also'"   (BB:2010-02-08)

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7 Whereas *matt-* is generally used for additive VP-focus, *noohkatt-* is generally used for additive
agent-focus. There is evidence that *noohkatt*, like *mattsista'-*, is complex, consisting of a morpheme
noohk- as well as additive *matt-*. I leave this for further research.

Consider also the data provided by the exchange between elicitor (ML) and consultant (BB) in (19). When produced out-of-the-blue, utterances with *matt-* are infelicitous, shown in (19a), unless *matt-* is purposely used to flout Grice's Maxim of Quantity,[8] in order to shock the addressee into asking clarifying questions and thus open up a conversation. This is suggested by the consultant's comments in (19b), and the exchange of comments between elicitor and consultant in (19c).

(19)

a.   ML: *#ni**mátt**sistohkohpi*
          ni-**matt-**istokohpi
          1-**add-**fall.down.vai
          Target: I **also** fell down

     BB: That's not good. Well, that's like if you're telling a story, e.g. telling your friend (19b)

b.   BB: *kei   má,   ni**mátt**sistohkohpi*
          kei   ma,   ni-**matt-**istohkohpi
          exp   exp, 1-**add-**fall.down.vai
          "Holy, I fell down!"

     BB: Like an opening for a conversation, so the person you're talking to will ask you "what happened to you? How did you fall?" So you can tell more about what happened.

c.   ML: *And if I say   kei   má,   nitsistohkohpi   ?*
                         kei   ma,   nit-istohkohpi
                         exp   exp, 1-fall.down.vai
          BB: "Holy, I fell down"

     BB: "Holy, I fell down." You know what happened to me? I fell. I went and fell.

     ML: So if you just say *nitsistohkohpi* it doesn't open up the conversation like *ni**mátt**sistohkohpi*?

     BB: Yeah.   (BB:2010-01-27)

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8 This can be viewed as a violation of Grice's Maxim of Quantity. *matt-* presupposes that both SAPs are aware of some event, e', that is somehow related to the asserted event. Uttering a *matt-* marked utterance out-of-the-blue is thus less informative than is required for the purposes of the conversation, as the Addressee will be left unaware of what event, e', the asserted event is meant to stand in relation to. Pat Littell suggested this interpretation of the exchange in (19) to me.

This use of *matt-* indicates that the asserted event is part of a set of events, however the members of this set may be connected in terms of their temporal precedence, or their contribution to a story, and need not be characterized as a set of events which are connected because each member shares a common property.[9] Taking these data into account, I propose that *matt-* has a broader meaning than either *again* or *also*, such that it merely presupposes that the asserted event is a member of a (non-singleton) partially-ordered set of events, the identity of which is contextually resolved. This is in (20):

(20) **Lexical Entry for *matt-***

Let e be the asserted event, E be a set of partially ordered events (available in the context), and e'' be a contextually-salient event. Then,

$[\![matt-]\!]^{e'',E} =$
$$\lambda P_{<l,<s,t>>}\lambda e\lambda w\colon [e \in E \& e'' \in E \& e'' \neq e \& e'' \leq_p w].P(e)(w)$$

So *matt-* presupposes that the asserted event, e, is a member of a poset of events, E, where at least one member of E, call it e'', is a part of the actual world. In the basic case, where *matt-* is interpreted as additive VP-focus *also/too*, E is taken to be the set derived by applying the sum operation over the set of events in which the Agent of the asserted event, e, participated as agent. I suggest that this resolution of E is an artifact of basic pragmatic principles, i.e., that in default elicitation contexts, with no previous information structure present, one assumes that the agent of the asserted event maps onto the topic/protagonist of discourse, whose adventures we follow. This sets up a context where the discourse is expected to consist of utterances describing different actions by the agent– the set of events which exemplify a VP-focus p-set. Assuming an algebraic view of events (cf. Bach 1986; Bonomi & Casalegno 1993; Krifka 1989), this set of events can then be extended by the sum relation to create a superset which is partially ordered by the part-of relation. In the cases where *matt-* is interpreted as *again*, E corresponds to the poset of events derived by applying the sum operation over the set of events exemplifying the VP-denotation. In the broadest case, such as in (18) and (19), E can be taken as a set of events described in a temporally ordered discourse/narrative.

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9 Although perhaps the use in (19) could be construed of as referring to a set of events with the abstract property "contributing-to-story-X." I leave for further speculation the issue of whether the all of the events in the set that *matt-* makes reference to must be characterised by a common property. If so, the data in (19) would seem to indicate that the common property need not a linguistic representation, but can be purely pragmatic.

3.2   A semantics for Blackfoot *ista'-*

Recall the prediction that if *mattsista'-* consists of *matt-* and *ista'-*, then *matt-* and *ista'-* should occur independently. This was the case for *matt-*, however (21) shows that *ista'-* always requires *matt-* in order to be used grammatically:

(21)

a.   **nits**istá´**oyi*
     nit-**ista'-**ooyi
     1-**again**-eat.vai
     Target: I ate again   (BB:2009-02-19)
     BB Comment: short form of *ni**mattsistá´**oyi*, but not good Blackfoot. You're leaving bits out

b.   *anahk   Amelia   **ista'**ihpiyi*
     anahk   Amelia   **ista'-**ihpiyi-wa
     dem   Amelia   **again-**dance.vai-3
     Target: Amelia danced **again**   (BB:2009-03-23)

c.   **anáhk   amelia   **ista'**wáásai'ni*
     anahk   Amelia   **ista'-**waasai'ni-wa
     dem   Amelia   **again**-cry.vai-3
     Target: Amelia cried **again**   (BB:2009-03-23)

Recall, however, that the semantic properties of *matt-* and *mattsista'-* differ in two major ways. *mattsista'-* encodes a strict temporal precedence and an identical property requirement where *matt-* does not. I propose that *ista'-* is the component of *mattsista'-* encoding these properties, i.e., the basic meaning of *again*.

(22)   **Lexical Entry for *ista'-***

$\llbracket ista'-\rrbracket = \lambda P_{<l,<s,t>>}\lambda e: [\llbracket MAX\rrbracket (P)(e')=1 \ \& \ e' <_t e].\ P(e)$

As for the inability of *ista'-* to occur on its own, I propose that *ista'-* has stricter requirements than *again* as to how its anaphoric dependency must be satisfied: while the event variable referred to by *again*, e', may be contextually supplied, extra-linguistically, I propose that the event variable encoded by *ista'-*, e', is parallel to the individual variable associated with English reflexives like *himself*, in that the variables associated with *ista'-* and *himself* must be co-indexed with local linguistic antecedents. The event encoded by *matt-*, I suggest, acts to satisfy this dependency. I.e., *matt-*'s event, e'', is taken as *ista'-*'s antecedent. This is schematized in (23):

12

(23)

    a.   John$_i$ startled himself$_i$ a'.   *himself$_?$ startled

    b.   matt(e"$_i$)- ista'(e'$_i$)- waasai'ni   b'.   *ista'(e'$_?$)-waasai'ni
        add-again-cry again-cry

Just as *himself* must be co-indexed with with a referential expression like *John* in (23a), the event variable associated with *ista'*- must be co-indexed with the event variable introduced by *matt*-. The ungrammaticality of the bare *ista'*- examples is thus parallel to the ungrammaticality of the un-coindexed reflexive in (23a'). A consequence of the proposed analysis for *ista'*- is that the events introduced by *matt*- and *ista'*-, e'' and e' respectively, must be co-indexed. I.e., e'' and e' are taken to refer to the same event.[10] In the following section, I show how this derives *mattsista'*-'s lack of restitutive readings in default focal contexts.

3.3 Deriving full repetition

Consider a derivation where both *matt*- and *ista'*- attach to an expression approximating "I closed the door." With such a construction, three events are relevant. First, the asserted event, e, which must be an event of the speaker closing the door (24a). Second, the event presupposed by *matt*-, e'', which in default contexts, must belong to a poset of events, E, derived by applying the sum operation over the set of events exemplifying a VP-focus p-set, as in (24b). This event, e'', thus must have a form parallel to (24c). Third, the event presupposed by *ista'*-, e', which we may assume can be interpreted as either repetitive, or restitutive. The event e', then, may be as in (24d i), where e' is interpreted as an event of the speaker having previously closed the door (the repetitive reading), or e' may be as in (24d ii), where e' is interpreted as an event(uality) of the door having been previously closed.

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10 Notice that this is similar to Beck's (2006) account for blocking restitutive readings in specific focal contexts in English. Beck's analysis, however, is purely pragmatic, which while sufficient to account for the English data, would not be able to account for the more strictly restricted Blackfoot data shown above (i.e., the fact that *ista'*- cannot occur by itself).

(24)

a. e = [I closed the door]

b.   {I closed the door, I swam, I sang, I wrote a science-fiction novel...}

c. e'' = [I VP-ed]

d. e' =

   i)   [I closed the door before]   (Repetitive)

   ii) [The door was closed before]   (Restitutive)

If the events e' and e'' must be co-indexed, as proposed, *matt-*'s presupposed event e'' must then be interpreted as the same event as either the event in (24d i), or the event in (24d ii). Under a full-repetition interpretation, this amounts to the equation in (25a), i.e., equating an event of the speaker VP-ing, with an event of the speaker having closed the door before. This is pragmatically coherent; the repetitively interpreted event, e', of the speaker having closed the door before, is consistent with the requirement on e'' that e'' be of the form (24c). On the other hand, under a restitutive interpretation, this amounts to the equation in (25b), i.e., equating an event of the speaker VP-ing, with an event of the door having been closed before. This, I argue, is pragmatically incoherent, under the assumption that events must have the same argument structure and/or aspectual type, in order to be identified as the same event. I propose that this pragmatic incoherency is what accounts for the original observation from section 1.2, i.e., the observation that Blackfoot *mattsista'-* appears to lack restitutive readings.

(25)

a. $e'' = e'$ [I VP-ed] = [I closed the door before]   (Repetitive)

b. $e'' = e'$ [I VP-ed] = [The door was closed before]   (Restitutive)

4   Restoring restitutive readings with agent focus

Here I address the consequences of my analysis; in particular, I address the fact that the account proposed crucially relies on default focus falling on the VP. The prediction is that in contexts forcing focus to be interpreted elsewhere, e.g., on the agent, the pragmatic incoherency ruling out restitutive readings may disappear. This appears to be the case, as shown by (26); when a preceding question overrides default focus so that focus is interpreted on the agent, *mattsista'-* is felicitous in a restitutive context:

(26) **Context:** We are in a room where the door is closed, but the wind blows it open. I
notice that it is starting to get cold, so I get up to go close it, but when I get to the
door, I realise that it's already closed. I (S1) ask, and S2 answers:

S1: "Who closed the door?"

S2: *Aná   Kánaisskinaa **mattsistá'**yookimayi*
an-wa kánaisskinaa **matt-ista'-**yookii-m-ayi
dem-3 mouse   **add-again-**close.vti-3>0-dtp
"Kanaisskinaa (Mouse) closed it again."

The sudden availability of a restitutive reading in different focal contexts can also
be seen in (27). First note that (27a) and (27b) were presented in the same restitutive
context. The initial utterance in (27a) questions the existence of an agent who caught
Abigail, i.e., making salient a set of catching-Abigail events, which vary over agents.
Here a felicitous use of *mattsista'*- is allowed. The initial utterance in (27b) merely
makes salient an event where Abigail was caught versus an event(uality) where she
was not, however, and the use of *mattsista'*- is infelicitous.

(27) **Context:** Last year, Solveiga caught Abigail, a criminal, for the first time. Now I'm
the new sheriff in town, and Abigail has escaped jail.

a.   **S1:** "Did anybody catch Abigail?"

   S2: *Aa,   nimattsistayissinototowa   anahk Abigail*
   Aa,   ni-matt-ista'-yissinoto-a   anahk Abigail
   Yes, 1-add-again-catch.vta-loc>3 dem   Abigail
   "Yes, I caught her again."   (BB: 2010-03-24)

b.   **S1:** "Did Abigail get caught?"

   S2: *#Aa, nimattsistayissinototowa   (anahk Abigail)*
   Aa,   ni-matt-ista'-yissinoto-a   (anahk Abigail)
   Yes, 1-add-again-catch.vta-loc>3 (dem   Abigail)
   "Yes, I caught her again."

   S2': *Aa,   nikayíssinotowa   (anahk Abigail)*
   aa,   ni-akaa-yissinoto-a   (anahk Abigail)
   Yes, 1-perfect-catch.vta-loc>3 (dem   Abigail)
   "Yes, I caught Abigail."   (BB: 2010-04-01)

The availability of restitutive readings in agent-focus contexts is not surprising
under the proposed account, although some explanation is required. With focus
on the subject, the *mattsista'*- marked utterance in (26) should have the following
properties:

Asserted event: $e =$ [Kanaisskinaa closed the door]
matt-event: $e'' =$ [AGENT closed the door]
ista'-event: $e' =$ [Kanaisskinaa closed the door before](repetitive) OR
                     $e' =$ [The door was closed before](restitutive)

Under the analysis provided here, the events presupposed by *matt-* and *ista'-* are identified as the same event. While the *matt-* event of someone else closing the door and a restitutively presupposed event of the door being closed before differ in their argument structure and aspectual type (disallowing identification), an event of the door being closed before is compatible with being identified as a part of, or sub-event of the *matt-* event, i.e., its result state sub-event. I suggest that this is what allows for the restitutive meanings in (26)-(27).

Coindexation

[AGENT CAUS [closed (the door)]]   [closed (the door)]

This requires that Blackfoot grammatically encodes sub-events for the predicates used in (26)-(27); recall that I have posited that *ista'-* necessarily take its reference from a grammatically encoded event. Compare the data in (28) to that of (27), where the contexts and focal-setting questions are parallel, however the predicate differs. In (28), unlike (27), the restitutive context with a agent-focus-setting question does not license the use of *mattsista'-*. This suggests that the lexical predicates differ as to whether they grammatically encode result-state sub-events[11].

(28)   **Context:** Joel and Jen are in class, but since Joel hasn't slept for ages, he falls asleep. I (S2) tell S1 about this, and S1 asks:

S1:   "Did anybody wake up Joel?"

S2:   *#Aa,   ana   Jen máttsistaiksikini   ani   Joel*
     aa,   ana   Jen matt-ista'-iksikin-yii   ani   Joel
     yes, dem.3 Jen add-again-wake.vta-3>3' dem.3' Joel
     "#Yes, Jen woke up Joel again"   (BB: 2010-03-24)
     BB comment: *mattsistai'* is *again*, so it doesn't work for that sentence

More significantly, this suggests that the event variables encoded in presuppositions may not be monolithic, but instead may have more internal structure than has been assumed.

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11 This reliance on lexical specification also accounts for why the example in 3.3 cannot be similarly analysed. The example in 3.3 involved a focus-abstracted VP, which does not lexically encode a result-state sub-event.

5   Conclusion and issues for further research

I have argued that Blackfoot's primary method of marking repetition, *mattsista'-* consists of two morphemes *matt-* and *ista'-*. I proposed separate denotations for each morpheme, in order to account for their separate distributional and semantic properties, as well as their combined semantic effect. The course of investigating *matt-* and *ista'-* has provided insight into how Blackfoot, and language in general, may grammatically encodes events. For instance, the availability of restitutive readings in agent-focus contexts follow from the given analysis only if the representation of presupposed events includes internal structure (i.e., sub-events) that the compositional system can access. While several researchers have posited internal structure with respect to the asserted event (cf. Ramchand 2008; Travis 2000; Tenny 1989, 1994), to my knowledge, internal structure is not usually attributed to the event variables lexically encoded in presuppositions. However if, as I have suggested for Blackfoot, the availability of internal structure is lexically specified for each predicate, this specification should hold for any event that the predicate is applied to, whether the event is asserted or presupposed.[12] Whether internal structure in presupposed entities is a mechanism available to every language, or whether languages differ as to how/whether they structure their presupposed entities, I leave for further research. A final thing to note is that I have implicitly assumed that while *matt-*'s presupposed event, e'', can act as an antecedent to *ista'-*'s presupposed event, e', the asserted event, e, may not. Similarly, I have assumed that an event quantifier (e.g. aspect, temporal modifiers) may not bind the event variable *ista'-* introduces. I suggest that this follows from the fact that the relevant event variables/binders are in different domains. I.e., that the events introduced by *matt-* and *ista'-* are confined to the presuppositional domain, that the asserted event and event quantifiers like aspect are confined to the domain of assertion, and that dependency relations like binding and co-indexation only operate domain-internally. Thus while the domain of assertion and the domain or presupposition may be more parallel than previously assumed, the two domains must nonetheless be separate.

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12 Whether this should be viewed as syntactic structure, or a lexical semantic decomposition, however, I leave up for debate.

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