Pseudo Scope Marking Constructions in Blackfoot[*]

Abstract: This paper discusses and analyzes a kind of scope marking construction in Blackfoot (Algonquian) and adds to the diversity of such constructions found in languages around the world. This construction has many properties in common with other scope marking constructions but differs in some crucial ways. Hence, I use the label pseudo scope marking construction to describe this phenomenon. I show that this construction is actually derived by canonical *wh*-movement with one small difference. What undergoes overt *wh*-movement is not an XP but rather a feature. Overt feature movement is licensed by the morphology of the question words in this language. Specifically, there is a free morpheme *tsa*, which I propose corresponds only to a [wh] feature. As a free morpheme, it is able to undergo overt movement. The discussion relies on Lasnik's Stray Affix Filter in addition to the particular morphological properties of question words in Blackfoot to account for these facts.

1   Introduction

Scope marking constructions have been described for numerous languages around the world (Beck & Berman 2000; Bruening 2004; 2006; Cole & Hermon 1998; 2000; Dayal 1994; McDaniel 1989; Sabel 2000; van Riemsdijk 1982). A scope marking construction typically consists of a long-distance question in which the *wh*-phrase appears in a different (lower) clause from where it is interpreted. At the left edge of the clause where the *wh*-phrase is interpreted a *wh*-expletive (usually cognate with *what*) is found. Consider the following German example.

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(1)   Was   denkst du [_{CP}wohin   er   gegangen   ist]?
        what   think   you   to.where   he   gone   is
        'Where do you think he went?'

The *wh*-phrase *wohin* ('to where') is interpreted in the matrix clause but is pronounced at the left edge of the embedded clause. A *wh*-expletive, *was*, appears at the left edge of the clause to indicate the scope of the *wh*-phrase.

The topic of this paper is scope marking constructions in Blackfoot, an Algonquian language spoken in southern Alberta and in Montana. As discussions of *wh*-movement in general are scanty for this language, I lay out some basic properties of *wh*-questions and then go on to discuss the structure of scope marking constructions. Scope marking constructions in this language will be shown to be limited to adverbial questions (the so-called *relative root* construction in Algonquianist terminology), as in the following example.

(2)   tsa áánii anná Mary anní John omaanistsíkkamiyoowatahpi aniskayi apastaminam
        tsa   aanii   ann-wa Mary   ann-yi John
        what   say   DET Mary   DET John
                om-**aanist-Ikkam**-iy-oowat-a-hp-yi   ann-yi-hka-yi apastaminamm
                3-**DEG-fast**-?-eat.VTA-EPEN-NZLR-INANIM.SG   DET apple
        'How quickly did Mary say that John ate that apple?' (embedded scope on 'how')

The relevant parts are in boldface. The scope marker, *tsa*, ('what') appears at the left edge of the clause where *wh*-scope is interpreted, just as in the German example above. In the in situ position, we find the restriction of the *wh*-phrase. In analyzing the Blackfoot SMC I will compare it to the scope marking construction in Passamaquoddy, the only other Algonquian language for which scope marking constructions have been described to my knowledge. There, I will go on to argue that scope marking constructions in Blackfoot are merely an illusion and that these constructions involve nothing more than standard *wh*-movement.

The analysis of scope marking constructions has been a matter of significant debate since its original description. There are two competing analyses for SMCs. First is the Direct-

Dependency analysis (McDaniel 1989) in which the scope marker is a *wh*-expletive and the embedded *wh*-phrase moves to scopal position at LF. Second is the Indirect-Dependency analysis (Dayal 1994) in which the scope marker is a *wh*-argument of matrix verb, and the embedded clause containing *wh*-phrase is associated with scope marker. I will show that neither of these analyses accounts for the construction in question in Blackfoot. Rather, I will show that, contrary to appearances, the scope marking construction in Blackfoot is simply a case of *wh*-movement, hence the monacher pseudo scope marking construction (PSMC). What raises, however, is just the [wh]-feature rather than a *wh*-phrase. This overt feature raising is made possible by virtue of the fact that [wh] lexicalizes a free morpheme.

The remainder of the paper is organized as follows. Section 2 presents some background information on Blackfoot. Section 3 presents the basic facts about *wh*-movement and pseudo scope marking constructions. Section 4 discusses standard approaches to SMCs, in particular the Direct Dependency and Indirect Dependency analyses, and discusses problems these two analyses pose for the Blackfoot data. Section 5 presents the current proposal, namely overt feature movement, and presents an analysis of the PSMC. Section 6 is a brief conclusion.

2 Background

2.1 Background on Blackfoot

Blackfoot is an Algonquian language spoken in southern Alberta, Canada and in Montana, United States with about 3000 speakers. Like most discourse-configurational languages (Hale 1983; Jelinek 1984), Blackfoot exhibits relatively free word order, (Frantz 1991). All six logically possible orders for S, V, and O are possible. Blackfoot is a typical polysynthetic

language, sporting a complex array of morphology on the verbal complex, as the template below and the following example show (Frantz 1991; Louie 2008).[1,2]

(3)   AGR-PREVERBS-INITIAL-MEDIAL-FINAL-THEME-MOOD-PERSON/NUMBER

STEM

(4)   nimaatsikakkomai'taikihpa
Ni-   maat- ikak- omai't   -aki   -hpa
1-   NEG-   just- believe   -VAI   -NONAFFIRM.LOCAL
'I can't believe [it].'

The first slot encodes person agreement. The preverbs generally indicate adverbial material (both manner and sentential) as well as modality (ability, desire). The aspectual and negative markers are grouped together with the preverbs. The aspectual markers include a progressive aspect marker labelled durative (DUR) and perfective aspect (PERF). Also, I take the adverbial preverbs to be incorporated (in the sense of Alexiadou 1997), although nothing hinges on how these adverbial elements come to appear in the verbal complex. The final (see footnote 2) indicates transitivity and animacy of the participants as well as marking causation and benefaction. Intransitive verbs encode the animacy of the subject, and transitive verbs encode the animacy of the object. The theme morpheme indicates the thematic relationship of the participants according

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[1] I use the term 'polysynthetic' in the broad sense and not in the narrow theoretical sense of Baker (1996). For general descriptions of morphology in Algonquian see Bloomfield (1946), Wolfart (1973), and Goddard (1990).

[2] abbreviations: ANIM – animate; CONJ – conjunct; DET – determiner; DEG – degree; DUR – durative; INANIM – inanimate; INVIS = invisible; LOC = locative; LOCAL = local (1st or 2nd person); NONAFFIRM = non-affirmative; NON.FACT = non-factive; NZLR – nominalizer; OBV – obviative; PROX – proximate; SG – singular; VAI – verb animate (subject) intransitive; VTA – verb transitive animate (object); VII – verb inanimate (subject) intransitive; VTI – verb transitive inanimate (object). Given the length of some the examples in this document, full glosses are not always given.

to the person hierarchy (2 > 1 > 3), a feature common across Algonquian languages. Specifically, the theme marker indicates whether the subject is higher or lower on the person hierarch than the object.

One of the most complex areas of Algonquian morphosyntax is the structure of the stem. Descriptively, the stem is traditionally described as consisting maximally of an initial, a medial, and a final (Dahlstrom 1991; Frantz 1991; Goddard 1990; Hirose 2003; Rhodes 1976; Wolfart 1973). The function of the initial, medial and final varies slightly from language to language and even within the same language. In general the initial is essentially the verbal root and the medial is a modifier of sorts. It is usually noun-like and acts as a modifier. The medial is typically optional. The final indicates transitivisty and animacy as described in the text above.

2.2   Structure of Adverbial Preverbs

As mentioned above, adverbs are expressed as preverbs in Blackfoot. In fact, VP-level adverbs tend to be obligatorily expressed as preverbs in Blackfoot (but not necessarily in other Algonquian languages). Here, I examine the structure of adverbial prefixes in more detail as it will be crucial for the subsequent discussion. The adverbial modifier can consist of a bare adverb or can additionally appear with modifiers. Consider the following examples.

(5)   kitsííyika'po'taki
        kit-   iiyik-   a'po't -aki
        2.SG-   hard-   work   -VAI
        'You worked hard.'   (Frantz, 1991: 92*ff*)

(6)   isstónnatsstoyiiwa
        isstonnat-   ssto   -yii-   wa
        extreme-   cold   -VII-   INANIM.SG
        'It is extremely cold.'   (Frantz, 1991: 92*ff*)

(7)   anná John iksstonatsikkamiyowatsi omi apastaminam
        ann-wa   John   iik-sstonnat-Ikkam-iy-owat-yii   om-yi apastaminamm
        DET-PROX   John   very-extreme-fast-?-eat.VAI-3.SG>3'.SG   DET apple
        'John ate that apple extremely fast.'   (Beatrice Bullshields, speaker)

These examples show adverbial forms *iiyik* ('hard') and *Ikkam* ('fast') in preverb position as well as degree markers, which can modify the verb directly, as in (6), or can modify the adverbial element, as in (7). Most importantly for the forthcoming discussion the form *niit/aanist* (glossed as DEG throughout) functions as a degree variable, which can either be free (as in the following example) or can be bound by a question operator (as we will see below).

(8)   kaanistáóoyihpi
        k-   aanist- á-   ooyi   -hp   -yi
        2-   DEG-   DUR-   eat.VAI   -NZLR -INANIM.SG
        'the way you eat'

This section has presented the fundamental aspects of Blackfoot grammar that are pertinent to the forthcoming discussion. I turn, now, to a discussion on content questions and *wh*-movement in Blackfoot.

3   *Wh*-Movement in Blackfoot

This section describes the basic properties of *wh*-movement in Blackfoot. I start by establishing that Blackfoot actually has canonical *wh*-movement to a dedicated specifier position in the left periphery (Cheng 1991; Rizzi 1997; 2001). Then I introduce what I call the Pseudo Scope Marking Construction (PSMC) and compare the properties of this construction to standard SMCs discussed in the literature.

3.1   Canonical Wh-Movement

Blackfoot exhibits several properties of canonical *wh*-movement. In particular, I discuss the following properties of *wh*-questions in Blackfoot: (i) The *wh*-phrase appears at the left edge of the clause, although there is some freedom with the exact placement of the *wh*-phrase; (ii) *wh*-movement is unbounded; and (iii) *wh*-movement exhibits standard, well-known island effects.

With regards to the first property, consider the following examples. The *wh*-phrase must appear at or near the left edge of the clause. Crucially, it cannot appear post-verbally. If more

than one element appears to the left of the *wh*-phrase, the sentence is judged as somewhat awkward. When another constituent does appear to the left of the *wh*-phrase, it is typically understood as a topic. When a *wh*-phrase does follow another constituent there is a pause between the two, a fact which is consistent with the constituent in question as a topic.

(9) (tsanistapi)   anná John   (tsanistapi)   matonni (?tsanistapi)   ihpommaa
     what   DET John   what   yesterday what   he.bought.it
     'What did John buy yesterday?'

(10) * anná John   matonni   ihpomma   tsanistapi
       DET John   yesterday   he.bought.it what
       ('What did John buy yesterday?')

(11) takáá anná John anistsi omááhkohpommaahsi apastaminam
      takaa   ann-wa John   anistsi   om-ááhk-ohpomm-aa-hsi   apastaminamm
      who   DET John   he.asked.him   3-NON.FACT-buy-TH-CONJ   apple
      'Who did John ask to buy an apple?'

The following examples show that Blackfoot has long-distance *wh*-movement. Again, the *wh*-phrase must appear at or near the left edge of the clause where it takes scope. The first two examples below, in particular, must have a long distance reading.

(12) (tsa)   anná Bill   (tsa)   aawani   (*tsa)
      (what) DET Bill   (what) he.said.it   (what)

      anní Susan   (*tsa)   ihpommatsi (*tsa)
      DET Susan   (what)   she.bought.it (what)

      'What did Bill say that Susan bought?'

(13)　tsimaa anná Mary ááni anní John itsowatsi anniskayi apastaminam. [3]

tsimaa	ann-wa	Mary	aani	ann-yi John
where	DET-PROX	Mary	said.3SG	DEM-OBV John

it-owat-yii	ann-yi-hka-yi	apastaminamm
LOC-eat-3>3'	DET-OBV-INVIS-INANIM.SG	apple

'Where did Mary say that John ate the apple in?'

(14)　tska iihtanistsikssim'sta anná Mary anní John oto'ohtsowatahpi anniskayi apastaminam

tska	iiht-anist-ikssim'sta	ann-wa Mary	ann-yi John
why	INSTR-DEG-think	DET-PROX Mary	DET-OBV John

ot-o'ohts-owat-a-hpi	ann-yi-hka-yi	apastaminamm
3-?-eat-EPEN-CONJ	DET-OBV-INVIS-INANIM.SG	apple

'Why does Mary think John ate that apple?'

Embedded questions are also permitted with verbs that take an interrogative complement.

In the following examples, *ssksini* ('know') and *aanist* ('tell') both optionally take an interrogative clausal complement, giving rise to an embedded question. As expected, the *wh-*phrase appears at the left edge of the clause where it takes scope.

(15)　nitssksinip tsiiáá apastaminam anná John ikkamiyowatsi
nit-ssksini-p	tsiiaa apastaminamm	ann-wa John	ikkam-iy-owat-si
1-think-TH	which apple	DET-PROX John	fast-?-eat.VTI-3.SUBJ

'I know which apple that John ate real fast.'

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[3] Note that this sentence is not ambiguous in Blackfoot. The locative morphology on the embedded verb indicates that the question is asking about the location of the eating. This is also suggested by the idiomatic translation the Blackfoot speaker offered, which is presented in the example.

(16) anná Susan aanistsii anní Bill tsimáá omááhkitohpommaatahsi apastaminammiks

ann-wa Susan   aanist-yii   ann-yi Bill
DET-PROX Susan   say-TH   DET-OBV Bill

tsimáá ot-m-aahk-it-ohpomm-aa-ta-hsi   apastaminamm-iks
where 3-3-NON.FACT-LOC-buy-TH-?-SUBJ   apple-PL

'Susan told Bill where to buy apples.'

Finally, I show that *wh*-movement also obeys several well-known island constraints (Huang 1982; Manzini 1992; Rizzi 1990; Ross 1967). Examples (17) and (18) show that relative clause islands and adjunct islands are both strong. Extraction out of these islands results in strong unacceptability. Examples (19) and (20) show that negative islands and factive islands are both active in Blackfoot, but are weak. This aligns quite closely with island effects observed in numerous other languages (Huang 1982; Manzini 1992; Rooryck 1992; Ross 1967).

(17) * takáá anná John iwatsi anniskayi apastaminam otohpommaan
       takaa ann-wa John i.owatsi   anniskayi   apastaminamm otohpommaa-n
       who   DET   John   he.ate.it   DET   apple   he.bought.it-NZLR
       ('Who did John eat the apple that bought?') – relative clause island

(18) * tsiáá apastaminam$_i$ anná Mary awasai'ni kimma John otsowatahpi t_i
       tsiáá   apastaminamm ann-wa M. awasai'ni kimma   J. ot-owat-a-hp-yi
       which apple   DET   M. she.cried while   J. he-ate-Ø-NZLR-IN.SG
       (*'Which apple did Mary cry while John ate t?') – adjunct island

(19) ? tsanistapi   anná John   maat-aaniwaatsiks anní Mary otsowatoo'pi?
       what   DET John   NEG-he.said   DET Mary   she.ate.it
       (?'What didn't John say that Mary ate?') – negative island

(20) ? tsanistapi   anná John   issksinim   anní Mary   otsowatoo'pi
       what   DET John   he.knows.it   DET Mary   she.ate.it
       (?'What does John know that Mary ate?') – factive island

Thus, *wh*-movement in Blackfoot has many of the canonical properties of *wh*-movement found in many other languages around the world: (i) the *wh*-phrase targets the left edge of the clause where it takes scope; (ii) the *wh*-phrase can undergo long-distance movement; and (iii)

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wh-movement obeys the same kind of island constraints found in other languages. I will assume a standard account in which the *wh*-phrase targets the specifier of a functional projection in the CP layer of the clause (Cheng 1991; Chomsky 1977; Rizzi 1997).

3.2   The Pseudo Scope Marking Constructions in Blackfoot

Having established that Blackfoot has canonical *wh*-movement, I move now to a discussion of PSMCs in Blackfoot. The earliest modern descriptions of SMCs looked at German (Van Riemsdijk 1983). In the following pair of sentences the second contains a SMC.

(21)   Mit wem   denkst du   dass   Peter   ins Kino gegangen ist?
        with whom   think   you   that   Peter   in.the cinema gone is
        'Who do you think Peter went to the movies with?'

(22)   Was denkst   du   mit wem   Peter   ins Kino gegangen ist?
        what think   you   with whom   Peter   in.the cinema gone is
        'Who do you think Peter went to the movies with?'

The sentence in (21) is derived by run-of-the-mill successive-cyclic *wh*-movement. The sentence in (22), however, is a SMC, in which the *wh*-phrase remains inside the clause in which it is first merged. Where the scope of the *wh*-phrase is interpreted, we find the default question marker *was* ('what'). This is schematized in (23).

(23)   a. $[_{CP}$ mit wem$_i$ … $[_{CP}$ t_i … V^0 $t_i]$
        b. $[_{CP}$ was^1 … $[_{CP}$ mit wem^1_i … V^0 $t_i]$

SMCs have been described for another Algonquian language, namely Passamaquoddy (Bruening 2004; 2006). The following data illustrate two kinds of SMCs in that language. The first kind, shown in (24) and, on the surface, resembles more closely the SMC in German. This form is argued to arise from an indirect dependency in Bruening (2004; 2006). The Passamaquoddy SMC in (25), again on the surface, more closely resembles the PSMC in Blackfoot. Originally argued to arise by a direct dependency (Bruening 2004), this form has been more recently argued to be a kind of *wh*-copy construction (Bruening 2006). I present a more in

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depth comparison between the Passamaquoddy SMC and the Blackfoot PSMC below. To

adumbrate the findings below, however, I will show that the PSCM, while morphosyntactically

similar to the *wh*-copy construction in (25), actually differs from it in a number of regards.

(24) **keq** ki-itom-ups **tayuwe** apc k-tol-i malsanikuwam-ok
     what 2-say-DUB **when** again 2-there-go store-LOC
     'When did you say you were going to the store?'

(25) **tan** kt-**oli**-wewitaham-a-n **tan** **tuci**-molihkikona-ne-ss
     WH 2-thus.remember-DIR-N WH extent-be.strong-N-DUB
     'How strong do you remember he was?'

     The PSMC in Blackfoot is only found on adverbial questions and never on core or non-

core argument questions (or *relative roots* in Algonquianist terms). As discussed in section 2.2,

manner adverbs in Blackfoot exclusively surface as prefixes on the verbal complex (preverbs in

Algonquianist terms). Consider the following examples.

(26) tsa áánii anná Mary anní John omaanistsíkkamiyoowatahpi aniskayi apastaminam

     tsa aanii ann-wa Mary ann-yi John
     what say DET Mary DET John

     om-aanist-Ikkam-iy-oowat-a-hp-yi ann-yi-hka-yi apastaminamm
     3-DEG-fast-?-eat.VTA-EPEN-NZLR-INANIM.SG DET apple

     'How quickly did Mary say that John ate that apple?' (embedded scope on 'how')

(27) tsa áánii anná Mary omaanístspitahpi anní John?
     tsa aanii ann-wa Mary om-aanist-sspita-hp-yi ann-yi John
     what say DEM-PROX Mary 3-DEG-tall-NZLR-INANIM.SG DEM-OBV John
     'How tall did Mary say John is?'

(28) tsa áánii anná Mary niitsskonátaasi anní John?
     tsa aanii ann-wa Mary niit-sskonat-aa-si ann-yi John
     what say DET-PROX Mary DEG-strong-TH-SUBJ DEM-OBV John
     'How strong does Mary think John is?'

The scope marker cannot be iterated at the left edge of any of the clauses embedded under the scopal position, unlike what is observed in SMCs in other languages, including Passamaquoddy, as shown in example (25) above (Beck & Berman 2000; Bruening 2004; McDaniel 1989).

(29) tsa anná John nitaikssim'sta (*tsa) anní Mary otanisssi anní Bill omaanistsíkkamiyoowatahpi annískayi apastaminam?

tsa   ann-wa John   niit-a-ikssim'sta   (*tsa) ann-yi Mary   otanisssi
what   DET-PROX John PREV-DUR-he.thinks (*what)DET-OBV Mary   say

ann-yi Bill   om-aanist-Ikkam-iy-oowat-a-hp-yi
DET-OBV Bill   3-DEG-FAST-?-eat.VTA-EPEN-NZLR-INANIM.SG

ann-yi-hka-yi   apastaminamm
DET-OBV-INVIS-INANIM.SG   apple

'How quickly does John think that Mary said that Bill ate that one apple?' (*how quickly* construed with *eat*)

Blackfoot PSCMs share many properties in common with standard *wh*-constructions. The following example shows that PSMCs are sensitive to *wh*-islands.

(30) * tsa nitáíksim'sta anná Mary tsiiáá apastaminam anní John omaanistsíkkamiyoowatahpi

tsa   nitaiksim'sta   ann-wa Mary
what   wonder   DET-PROX Mary

tsiiaa apastaminamm   ann-yi John
which apple   DET-OBV John

om-aanist-Ikkam-iy-oowat-a-hp-yi
3-DEG-fast-?-eat.VTA-EPEN-NZLR-INANIM.SG

('How quickly does Mary wonder which apple John ate?' (embedded scope on *how*))

Negative and factive islands give rise to strong ungrammaticality in Blackfoot PSMCs, as expected from their status as adjunct questions. This stands in contrast to the Passamaquoddy indirect dependency SMCs (examples shown after the immediately following Blackfoot

examples). Consider the following data. In the first example, *tsa* binds the degree variable across

matrix negation, and in the second example *tsa* binds the degree variable across a factive verb.

(31) * tsa anná John maataníwaatsiks anní Mary omaanistsíkkamiyoowatahpi aniskayi
      apastaminam?

        tsa   ann-wa John   maat-ani-waatsiks
        what   DET-PROX John   NEG-say-NON.AFFIRM

        ann-yi Mary   om-aanist-Ikkam-iy-oowat-a-hp-yi
        DET-OBV Mary   3-DEG-FAST-?-eat.VTA-EPEN-NZLR-INANIM.SG

        ann-yi-hka-yi   apastaminamm
        DET-OBV-INVIS-INANIM.SG   apple

        ('How fast didn't John say that Mary ate that one certain apple?')

(32) * tsa anná John issksinim anní Mary omaanistsíkkamiyoowatahpi annískayi apastaminam?

        tsa   ann-wa John   issksinim   ann-yi Mary
        what   DET-PROX John   he.knows   DET-OBV Mary

        om-aanist-Ikkam-iy-oowat-a-hp-yi
        3-DEG-FAST-?-eat.VTA-EPEN-NZLR-INANIM.SG

        ann-yi-ahk-yi   apastaminamm
        DET-OBV-INVIS-INANIM.SG   apple

        ('How fast does John know that Mary ate that one certain apple?')

As stated, SMCs in Passamaquoddy are not sensitive to negative and factive islands, while *wh-*

copy constructions are.

(33)   a.   Mihku 't-ikonewatomo-n   eli   kisi-komutonom-at   Piyel-ol
             Mihku 3-deny.TI-N   COMP   PERF-rob-3CONJ   Piyel.OBV
             'Mihku denied that he robbed Piyel.'

      b.   * Wen-il$_i$ Mihku   ikonewato-k eli   kisi-komutonom-at t_i
           who-OBV Mihku   deny.3CONJ COMP   PERF-rob-3CONJ
           'Who did Mihku deny that he robbed?'

      c.   Keq Mihku   ikonewato-k wen-il$_i$ kisi-komutonom-at t_i
           what Mihku   deny.3CONJ who-OBV   PERF-rob-3CONJ
           'Who did Mihku deny that he robbed?'

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(34) * Tan 't-oli-kis-ikonewatomo-n   tan kehson-ul atmupil-ol kisi-komutonato-k
     WH 3-THUS-PERF-deny.TI-N   WH X.many-INANP car-INANP PERF-steal-3.CONJ
     ('How many cars did he deny that he stole?')

Scope marking languages typically use a form meaning 'what' to mark scope, as the following German and Passamaquoddy examples show. Blackfoot marks scope with *tsa*, which means either 'what' or 'how'. Furthermore, the embedded element bound by the scope marker is typically a *wh*-phrase. The *wh*-marked elements are shown in bold-face in the following examples.

(35) a.   **Was** glaubst du   **wie** schnell   die Mariä   den Apfel   gegessen hat?
           what think you   **how** quickly   the Mary   the apple   eaten has
           'How quickly do you think Mary ate the apple?'

      b.   **Keq** itom **wen-**il   nemiy-ac-il
           what say   **who-**OBV   see-3CONJ-PART.OBV
           'Who did he say he saw?'

As mentioned, scope in Blackfoot is marked with *tsa,* a semantically reduced element. Departing from SMCs in other languages, however, there is no clear *wh*-marker in the bound element in the Blackfoot PSMC. Recall the following example repeated from above (irrelevant parts not glossed).

(36) **tsa** ááni anná Mary anní John om**aanist**síkkamiyoowatahpi anniskayi apastaminam?

      tsa … om-**aanist**-ikkam-iy-oowat-a-hp-yi
      Q   … 3-**DEG**-fast-?-eat.VTA-EPEN-NZLR-INANIM.SG

      'How quickly did Mary say that John ate that apple?' (embedded scope on 'how')

Recall that in the embedded clause the verbal complex contains *aanist* which is a variable bound by *tsa* found in non-interrogative environments (Frantz 1991). The relevant example is repeated below.

(37)   kaanistáóoyihpi
        k-aanist-á-ooyi-hp-yi
        2-DEG-DUR-eat.vai-NZLR-INANIM.SG
        'the way you eat'

This contrasts with prototypical SMCs, where a *wh*-element is present both in the scopal position and in the clause where the *wh*-phrase originates, as in (35) above. This observation is schematized below.

(38)   Passamaquoddy, German   *wh* … [*wh* restriction]
        Blackfoot   *wh* … [*e* restriction]

3.3   Interim Summary

I have shown that Blackfoot exhibits prototypical properties of *wh*-movement in standard *wh*-constructions. This includes moving to a dedicated position in the left periphery, long-distance movement, and island sensitivity. I then introduced the PSMC, illustrating that it has some properties in common with SMCs in oter languages, but also that it differs in some important ways. Specifically, we saw that the PSMC in Blackfoot is sensitive to factive, negative, and *wh*-islands. The scope marker cannot be iterated at the left edge of intervening clauses in Blackfoot, while it is typically obligatory in other languages with SMCs. Also, in Blackfoot the element bound by the scope marker is itself not a *wh*-phrase. This observation will be important in the forthcoming analysis.

4   The Derivation of Scope Marking Constructions

There are two competing analyses of SMCs in the literature, the Direct Dependency Analysis and the Indirect Dependency Analysis. I review these two analyses here and discuss how the Blackfoot facts fare under these analysis. These two approaches have been reviewed numerous times in the literature before so the discussion here is brief (Beck & Berman 2000).

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McDaniel (1989) was the first to offer an in depth analysis of SMCs. She proposed what is now referred to as the Direct Dependency Analysis. As mentioned above, the Direct Dependency analysis involves a *wh*-expletive, which is merged in the specifier of the CP where the *wh*-phrase is interpreted while the *wh*-phrase itself moves only as high as the specifier of an embedded CP.[4] At LF, the *wh*-phrase moves to the specifier of the CP where it takes scope. Consider the following German example again.

(39)   Was   denkst   du   [$_{CP}$ mit wem$_i$ wir t_i sprechen sollen]?
        what think   you   with whom we   speak should]
        'Who do you think we should speak with?'

As the example shows, the *wh*-scope marker, *was*, is externally merged in its surface position. The bound *wh*-phrase, *mit wem*, raises overtly to its surface position, then raises at LF to the matrix SpecCP.

Dayal (1994) proposes an alternative analysis of SMCs based on observations from Hindi called the Indirect Dependency Analysis. In this proposal, the scope marker is an argument of the verb where the *wh*-scope is interpreted. The clause containing bound *wh*-phrase is syntactically an associate of the scope marker. Semantically, it restricts the range of interpretation of the scope marker. Consider the same German example again.

(40)   Was$_j$ denkst   du t_j [$_{CP}$ mit wem$_i$ wir t_i sprechen sollen]?
        what think   you   with whom we   speak should]
        'Who do you think we should speak with?'

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[4] This short *wh*-movement takes place only in languages that otherwise have overt *wh*-movement. Hindi is argued not to have true *wh*-movement. Rather the *wh*-phrases move to some low focus position. Accordingly in the Hindi SMCs, the embedded *wh*-phrase does not move to the specifier of a subordinate CP. These facts are tangential to the current discussion so I do not discuss this point further.

As shown, the *wh*-scope marker, *was*, raises from argument position, undergoing canonical *wh*-movement. The clause containing the bound *wh*-phrase restricts the scope marker, and the *wh*-phrase contained in this clause undergoes *wh*-movement independently.

There has been much discussion on the proper analysis of SMCs in the literature, as already noted in the references throughout. It has also been suggested that SMCs do not comprise a unitary phenomenon and require more than one analysis. In this vein, the two analyses make different predictions. The following diagnostics are based largely on Bruening (2004), as they are to a large extent applicable to Algonquian languages. The indirect dependency analysis does not involve any kind of movement of the *wh*-phrase to its scopal position, while the direct dependency analysis does. Thus, SMCs formed by a direct dependency are expected to show island effects, while those formed by an indirect dependency are not. The next prediction is specific to Algonquian languages. In the direct dependency analysis the embedded clause is an argument of the matrix verb whereas in the indirect dependency approach it is not. Algonquian languages exhibit a phenomenon of cross-clausal agreement (CCA) in which an argument of the lower clause triggers agreement on the superordinate verb. Thus, it is expected that only under a direct dependency structure would CCA be available. Finally, differences in intervention effects are predicted to arise between the direct and independent dependency approaches. The indirect dependency approach clearly predicts the absence of intervention effects in the clause containing the embedded *wh*-phrase since there is no movement out of this clause. With the direct dependency approach the interaction with intervention effects are less clear, depending on the nature of the relationship between the scope marker and the embedded *wh*-phrase. Since I end up not adopting a direct dependency approach, I do not discuss the ramifications further. In this

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regard, there are various proposals for intervention effects in the literature, and these will be discussed with respect to the Blackfoot data below.

4.1   Island Effects

As mentioned, an indirect dependency is not expected to give rise to island effects. The following schematic shows the different predictions made by the two competing analyses. Since there is no movement across the *wh*-phrase in (41)a, no island violation is incurred.

(41)   a.   what$_i$ … V^0 [$_{DP}$ t_i [$_{CP}$ which apple …]]   indirect dependency
        no island violation

        b.   * what$_i$ … V^0 [$_{CP}$ which apple … t_i]   *wh*-movement
        island violation

        Consider the following example. The presence of island effects in (42) argues against an indirect dependency analysis.

(42)   * tsa nitaiksim'sta anná Mary tsiiáá apastaminam anní John omaanistsíkkamiyoowatahpi

        tsa   niit-a-ikssim'sta   ann-wa Mary   tsiiaa apastaminamm
        what   PREV-DUR-he.thinks   DEM-PROX Mary   which apple

        ann-yi John   om-aanist-ikkam-iy-oowat-a-hp-yi
        DEM-OBV John   3-DEG-fast-?-eat.VTI-EPEN-NZLR-INANIM.SG

        ('How quickly does Mary wonder which apple John ate (embedded scope on *how*)')

4.2   Cross-Clausal Agreement

As mentioned above many Algonquian languages exhibit a phenomenon known as cross-clausal agreement (CCA), in which an element in an embedded clause triggers agreement in the superordinate clause. The embedded clause is not an argument of the matrix verb under an indirect dependency analysis, rather, it restricts the *wh*-scope marker, assumedly a DP. Thus, there is no way for an argument of the embedded clause to enter into a CCA relation with it. This is shown in the following schematic.

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(43) a. $[\text{who}_i^1 \dots \text{V-AGR}^1 \ [_{\text{CP}} \ t_i \ [_{\text{TP}} \dots t_i \ ]]]$ – long-distance *wh*-movement
  b. $[\text{what}_i \dots \text{V-(*AGR}^1) \ [_{\text{DP}} \ t_i \ [_{\text{CP}} \ \text{who}_j^1 \ [_{\text{TP}} \dots t_j \ ]]]]$ – SMC

Bruening (2004) reports that CCA is absent in Passamaquoddy SMCs, but is obligatory in long-distance *wh*-questions. Specifically, in long-distance *wh*-questions, the matrix verb must agree with the *wh*-argument and cannot agree with any other element. Consider the following examples (Bruening 2004, ex (48a), (50)).[5]

(44) a. Wen$_i$ kil piluwitahamot kisi-komutonom-uk t_i
      who 2 suspect.TA-2CONJ PERF-rob-1CONJ
      'Who do you suspect that I robbed?

   b. * Keqsey piluwitaham-ot wen nemiy-at Piyel-ol?
      what suspect.TA-2CONJ who IC.see-3CONJ Piyel-OBV
      ('Who do you suspect saw Piyel?')

The following examples show that CCA is found in Blackfoot PSMCs, however. Note that CCA differs in Blackfoot in that there is no requirement for the verb to agree with the moved *wh*-phrase. In the following examples, CCA appears in boldface and the goal of agreement is underlined.

(45) a. tsa aaisstaa anná John anní Bill omááhkaanitsikkamiyowatahsi omi apastaminam

      tsa aa-i-sstaa ann-wa John ann-yi Bill
      what DUR-CONN-want DET-PROX John DET-OBV Bill

      om-aahk-aanit-Ikkam-iy-owat-a-hsi om-yi apastaminamm
      3-NON.FACE-DEG-fast-?-eat.VTA-EPEN-CONJ DET apple

      'How quickly does John want Bill to eat that apple?' – no CCA

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[5] A word is in order here concerning the agreement in (44). The 2CONJ marker is found because the verb in Algonquian agrees with the highest person in the person hierarchy (2 > 1 > 3 in Algonquian). Agreement with the moved *wh*-phrase is indicated the transitive animate marker (TA), which indicates that the verb is referencing two arguments (rather than just one, as when CCA is absent).

b.   tsa aaitatsi anná John anní Bill omaahkaanitsikkamiyowatahsi omi apastaminam

    tsa   aa-i-sstaa-t-**yi**   ann-wa John   <u>ann-yi Bill</u>
    what   DUR-CONN-want-?-3.**OBV**   DET-PROX John   <u>DET-OBV Bill</u>

    om-aahk-aanit-Ikkam-iy-owat-a-hsi om-yi apastaminamm
    3-IRR-DEG-fast-?-eat.VTA-EPEN-CONJ DET-OBV apple

    'How quickly does John want Bill to eat that apple?' –CCA present

c.   tsa nitaaistakah anná John ninaahkaanistikkamiyowatahsi omi apastaminam

    tsa   **nit**-aa-i-sstaa-ok-wa   ann-wa John   ann-yi Bill
    what   **1**-DUR-CONN-want-TH-3.PROXDET-PROX John   DET-OBV Bill

    <u>nin</u>-aahk-aanit-Ikkam-iy-owat-a-hsi   om-yi   apastaminamm
    <u>1</u>-NON.FACT-DEG-fast-?-eat.VTA-EPEN-CONJ DET-OBV   apple

    'How quickly does John want me to eat that apple?' –CCA present

These data strongly suggest that the embedded clause containing the underlined argument, the goal of CCA, is an argument of the superordinate verb. This is inconsistent with the indirect dependency analysis.

4.3   Intervention Effects

Bruening (2004) argues that the lack of island effects in Passamaquoddy SMCs supports the indirect dependency analysis (B2004(37)). A verb like *deny* presupposes the truth of its complement, so it creates the environment for a factive island. In fact, this is observed in (46)b. Recall that in (46)c, however, the SMC salvages the factive island violation.

(46) a.   Mihku 't-ikonewatomo-n   eli   kisi-komutonom-at   Piyel-ol
           Mihku 3-deny.TI-N   COMP   PERF-rob-3CONJ   Piyel.OBV
           'Mihku denied that he robbed Piyel.'

     b.   * Wen-il$_i$ Mihku   ikonewato-k eli   kisi-komutonom-at t_i
           who-OBV Mihku   deny.3CONJ COMP   PERF-rob-3CONJ
           'Who did Mihku deny that he robbed?'

     c.   Keq Mihku   ikonewato-k wen-il$_i$ kisi-komutonom-at t_i
           what Mihku   deny.3CONJ who-OBV   PERF-rob-3CONJ
           'Who did Mihku deny that he robbed?'

Since there is no relation between the scope marker and the embedded *wh*-phrase in the indirect

dependency analysis, intervention effects are not expected to arise. Thus, the Passamaquoddy

data above support an indirect dependency analysis.[6]

In Blackfoot, however, recall that negative and factive islands give rise to strong

intervention effects. Here are the data repeated below.

(47) * tsa anná John maataníwaatsiks anní Mary omaanistsíkkamiyoowatahpi aniskayi
       apastaminam?

       tsa   ann-wa John   maat-ani-waatsiks
       what   DET-PROX John   NEG-say-NON.AFFIRM

       ann-yi Mary   om-aanist-Ikkam-iy-oowat-a-hp-yi
       DET-OBV Mary   3-DEG-FAST-?-eat.VTA-EPEN-NZLR-INANIM.SG

       ann-yi-hka-yi   apastaminamm
       DET-OBV-INVIS-INANIM.SG   apple

       ('How fast didn't John say that Mary ate that one certain apple?')

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[6] Note that Bruening (2006) revises his analysis of the Passamaquoddy facts. This does not bear on the current

analysis since Bruening's original observations still hold. Amelioration of island effects supports an indirect

dependency over a direct dependency analysis.

(48) * tsa anná John issksinim anní Mary omaanistsíkkamiyoowatahpi annískayi apastaminam?

      tsa   ann-wa John   issksinim   ann-yi Mary
      what   DET-PROX John   he.knows   DET-OBV Mary

      om-aanist-Ikkam-iy-oowat-a-hp-yi
      3-DEG-FAST-?-eat.VTA-EPEN-NZLR-INANIM.SG

      ann-yi-ahk-yi   apastaminamm
      DET-OBV-INVIS-INANIM.SG   apple

      ('How fast does John know that Mary ate that one certain apple?')

In both examples negation and factivity give rise to intervention effects with the Blackfoot PSMC. This militates against an indirect dependency analysis. Note that this does not necessarily mean that a direct dependency analysis is favoured, however.

A word here is required on the notion of treating negation and factives as intervenors. Traditionally, intervention effects have been described in the context of quantificational elements. Yang (2012), based on Rizzi (2004) argues that negation is quantificational and hence can give rise to the same intervention effects as other quantifiers. Furthermore, Haegeman (2010) argues convincingly that factive predicates introduce an operator, which gives rise to intervention effects. Thus, treating negative and factive islands as quantificational intervention effects does not pose any problem. See footnote 8 for further discussion.

4.4   *Against a Direct Dependency Analysis*

The results of the diagnostics above clearly do not support an indirect dependency analysis. However, it appears that a direct dependency analysis does not seem to fit the facts either. Crucially, there is no *wh*-phrase in the embedded clause, so it is unclear what would move at LF in Blackfoot SMCs.

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4.5   Interim Summary

To conclude this section, I reviewed three lines of evidence that point away from an indirect dependency analysis, namely islands, lack of cross-clausal agreement, and intervention effects. Furthermore, it was argued that a direct dependency analysis is unlikely since there is no *wh*-phrase in the embedded clause for the *wh*-scope marker to bind. The conclusion here is in line with Bruening's (2006) suggestion that *wh*-constructions uniformly arise either by a SMC formed by an indirect dependency or by standard *wh*-movement. Taking Bruening's proposal to its extreme, the direct dependency SMC does not exist in natural language. Thus, theoretical parsimony behooves us to look for an analysis in one of the former two avenues. The presence of island effects also argues against any kind of plain unselective binding approach.[7] Rather, I argue that overt *wh*-movement takes place in Blackfoot PSMCs. The next section proposes just how that is done.

5   Proposal: Overt Feature Movement

If neither a direct dependency nor an indirect dependency can account for the PSMC in Blackfoot, then a solution must be sought elsewhere. It is perhaps unsurprising that neither of these well documented approaches works given the fundamental difference in the morphology of the PSMC. Specifically, there is no *wh*-element in the embedded position that the *wh*-marker *tsa* binds. I propose, then, that the PSMC in Blackfoot is more like a canonical *wh*-construction than it appears. Specifically, just the *wh*-feature raises, but does so overtly. I assume that the featural

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[7] To be specific, it might be suggested that the question particle (*tsa*) simply binds the variable (*aanist*) in the verbal complex at a distance without LF movement. This is essentially a kind of unselective binding (Pesetsky 1987). If so, then we wouldn't expect such strong island violations (see Aoun & Li 2003, for example).

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specification for the lexical item *tsa* is simply a *wh*-feature, (49). When the *wh*-feature raises to SpecCP, it is lexicalized by the lexical item *tsa* at PF.

(49)   *tsa* ⇔ [wh]

Feature movement is typically invoked in discussions of *wh* in situ languages (Cheng 2000; Huang 1982; Pesetsky 1987; 2000; Soh 2005; Watanabe 2001; Yang 2012). The core of the discussion is how an in situ *wh*-element comes to be associated with its respective C head. Among the proposals for how this occurs is unslective binding, covert feature movement, and covert phrasal movement. Yang (2012) presents an elucidating discussion on the interaction between *wh*-expressions and intervention effects. Intervention effects have been illustrated for a large number of languages in a wide variety of constructions. The following English minimal pair illustrates a typical intervention effect.

(50)   a.   Which book did which student read?
         b.   * Which book didn't which student read?

As Pesetsky (2000) discusses, superiority effects in English D-linked questions can be suspended, as long a there is no intervenor. Specifically, negation acts as an intervenor here, blocking *wh*-movement.

Yang argues, based on an idea by Rizzi, that intervention effects arise solely as a result of feature movement.[8] Let us review here the facts surrounding intervention effects in Blackfoot. Recall that the PSMC is highly sensitive both to negative and factive islands, while ordinary *wh*-

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[8] See Pesetsky (2000) for a discussion of the intervention effects observed in (50)b, where he concludes that non-superiority respecting D-linked questions arise from an initial instance of feature movement. Also, it has been argued that certain island effects, notably factive and negative islands, may actually have a semantic origin rather than a semantic one. I do not wish to delve into this discussion here and employ these facts as a diagnostic for the kind of movement taking place.

movement of an argument is only midly deviant in these environments. These facts, coupled with Yang's discussion strongly support the view that the PSMC arises by feature movement. The difference here is that this feature movement is overt rather than covert owing to the Blackfoot lexical item *tsa* which corresponds to a [wh] feature and nothing more.

The following schematic, then, shows the outline for the derivation of the Blackfoot PSMC in (26).

(51)   a. $[_{CP}$ C-[*u*wh] … $[_{CP}$ … $[_{VP}$ $[_{AdvP}$ **[wh]**-DEG-fast] …eat]]]]

        b. $[_{CP}$ C-[~~*u*wh~~]-**[wh]** … $[_{CP}$ $t_{[wh]}$ … $[_{VP}$ $[_{AdvP}$ $t_{[wh]}$-DEG-fast]…eat]]]]

(51)a shows the underlying structure, where the [wh] feature forms part of the adverbial component of the verbal complex. (51)b shows the structure after the [wh] raises to the matrix CP, where it takes scope, to check off the uninterpretable [*u*wh] feature on the C head. Note that the feature is represented as raising successive cyclically as per standard assmptions in phase theory (Chomsky 2001; 2008). Recall one of the differences between the Blackfoot PSMC and canonical SMCs is the lack of iteration of he scope marker in Blackfoot. Since I have argued that the PSMC is essentially an instance of canonical *wh*-movement (albeit movement of a feature rather than of an XP), the lack of iteration of the scope marker boils down to a general lack of *wh*-copy constructions in the language, as shown in the following example.

(52)   tsimáá anná Mary ááni (*tsimáá) anní John itsowatsi anniskayi apastaminam?

tsimáá	ann-wa Mary	anni	(*tsimáá)	ann-yi John
where	DET-PROX Mary	say	(*where)	DET-OBV John

it-owat-yi	ann-yi-hka-yi	apastaminamm
LOC-eat-OBV	DET-OBV-INVIS-INANIM.SG	apple

'Where did Mary say that John ate that apple?'

The above proposal rests on the assumption that the [wh] feature in Blackfoot corresponds to a single lexical item, *tsa*, which is also a free morpheme. Many languages, however, have identifiable morphemic components inside their question words. Thus, *what* in English is commonly decomposed as *wh-at*, where 'wh' has a [wh] feature and nothing more. So, what constrains feature movement as discussed in the proposal above? In other words, why don't we always get [wh] feature movement and let the morphological pieces fall where they may? This, of course, is not what is observed. Recall that non-adverbial questions appear to have the same kind of *wh*-movement found in English, as in examples (13) and (14) above. Both in English and in Blackfoot full *wh*-phrases raise to SpecCP. What forces movement of a larger category than required by the [*u*wh] feature on C?

First, I would like to point out that this is not a novel problem. Consider the following paradigm.

(53) a.   Whose book did you read?
      b.   * Who did you read 's book?
      c.   What did you read?
      d.   * Wh- did you read -at?

The ungrammaticality of (53)b was originally attributed to the Stray Affix Filter (Lasnik 1981; 1995). [9] Although 'who' constitutes the smallest category that can raise to check the

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[9] The status of the Stray Affix Filter is somewhat controversial given the look-ahead flavour of the mechanism. Nevertheless, Kandybowicz (2008) argues that it is fully compatible with Minimalist architecture and a DM approach to morphology. Consider also the following data from casual English that illustrate that *who* can raise by itself if the possessive marker has a resumptive pronoun to host it.

    i.   Whose book$_i$ is everyone saying these days that we should read t_i/it?

    ii.   Who$_i$ is everyone saying these days that we should read *t_i's/their book?

uninterpretable [*u*wh] feature, such a movement would leave the affixal possessive marker /'s/ stranded. The form *whose* (though orthographically a word) is not a constituent, so the larger category [DP whose book] must be pied-piped. The Stray Affix Filter can easily be extended to (53)d. Specifically, raising the affix /wh-/ alone would strand the affix /-at/, not to mention the affix /wh-/ itself. The same explanation can be extended to another problem raised by this analysis. Recall that the Blackfoot word for 'where' is *tsimaa*, which can be analyzed as *ts-imaa*. Again, *ts(a)* cannot raise alone stranding *-imaa* for the same reason— *-imaa* is an affix, which cannot be stranded.[10]

To be more concrete about the structures involved, consider the following feature compositions for the question words involved and the following structure for interrogative adverbials.
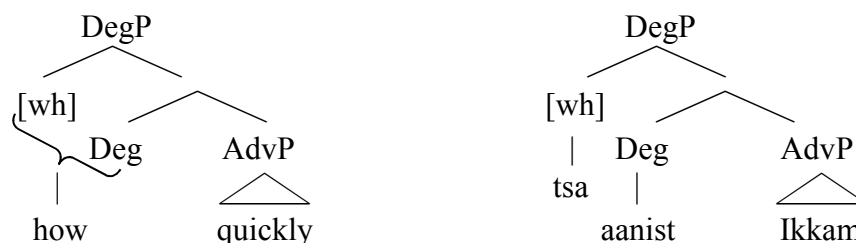
(54)   English   Blackfoot

       how   [WH, DEG]   tsa   [wh], aanist   [DEG]

(55)   DegP
            /   \
       [wh]   Deg'
                  /   \
               Deg   AdvP
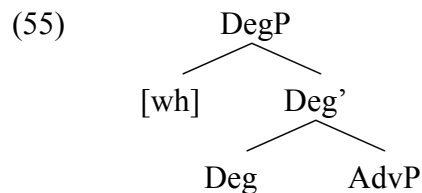
This pair clearly contrasts the raising possibilities of the *wh*-phrase based on the availability of a prosodic host for the possessive clitic.

[10] Question words in Blackfoot include *tsa* ('what' or 'how'), *tsimaa* ('where'), *tska* ('why'), *taka* ('who'), and *tsiyaa* ('which'). There is largely a consistent /ts/ morpheme (with a [t] allomorph in *taka*), which I posit surfaces as [tsa] in isolation.

Thus, when lexical insertion takes place we get the following. Observe that the English form *how* does not form a constituent, thus cannot raise on its own.[11]

(56)   a.   English   b.   Blackfoot

Thus, the Stray Affix Filter nicely accounts for the facts discussed above, showing that a range related phenomena all reduce to the same problem.

To conclude this section I have argued that the properties of the PSMC in Blackfoot can be thought of a run-of-the-mill *wh*-movement with one small twist. This twist is that *wh*-movement in Blackfoot can take place as overt *feature* movement. This type of movement is typically covert in most languages. It can be overt in Blackfoot because of the morphology of question words in that language. Specifically, an underspecified word, *tsa*, meaning 'how' or 'what' corresponds to only a [wh] feature. Crucially, *tsa* is a free morpheme so can be spelled out in the raised position independently of the rest of the structure. This feature can raise overtly since *tsa* is a free morpheme. This kind of overt feature movement takes place only with adverbial, *how X*, questions and not with other kinds of questions. Again, this is a result of the morphology of the question words involved. Other question words in Blackfoot contain a bound

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[11] The structure in (56)a raises obvious and crucial questions regarding lexical insertion. Notice that *how* does not form a constituent. This is akin to the discussion for *whose*. The difference, of coure, is that *whose* is a merger of *who* + *'s*, while *how* is not demonstrably composed of two morphemes, but is rather likely a suppletive form (although even this much is debatable). Assuming that *how* is a single morpheme, this proposal must assume that tree structures are linearized before lexical insertion.

morpheme in addition to *tsa*. Lasnik's Stray Affix Filter necessitates raising the entire question word as pieces of it cannot be left behind.

6   Conclusion

This paper has discussed a kind of scope marking sconstruction in Blackfoot (Algonquian), which I have called the pseudo scope marking construction (PSMC). Although this construction has some properties in common with SMCs in other languages, it differs in several important ways. Most importantly, unlike SMCs in other languages, the scope marker in Blackfoot does not bind another *wh*-phrase. Rather, it binds a degree variable. Thus, there is only one element that is marked morphologically with a [wh] feature. Also, unlike SMCs in other languages, the PSMC in Blackfoot is highly sensitive to islands of all types. I have proposed, then, that the PSMC in Blackfoot is simply a case of standard *wh*-movement; however, what moves is merely a [wh] feature, which is lexicalized by the vocabulary item, *tsa*, as this element corresponds to a bare [wh] feature. The pattern observed is due to the morphological properties of question words in Blackfoot. For instance, although *tsa* ('what'/ 'how') is a free form, other question words are morphologically complex and contain bound forms. Thus, only adverbial questions can be formed by overt feature movement. It was argued that these effects all fall under the rubric of the Stray Affix Filter.

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