

**Raising and Long Distance Agreement in Passamaquoddy:**

**A Unified Analysis<sup>1</sup>**

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ABSTRACT. This article presents an analysis of two constructions in the Eastern Algonquian language Passamaquoddy in which the position of the object of a verb of cognition ('know', 'believe', 'remember', 'wonder about', 'suspect') is linked, either by apparent raising or by apparent long-distance agreement, to a position within a clausal complement to the verb. The latter position may be arbitrarily deeply embedded. The analysis developed here, formulated in the framework of Head-Driven Phrase Structure Grammar, demonstrates that the two constructions in fact represent alternative realizations of identical argument structures for the verbs in question and that the apparent long-distance dependencies involved can be accounted for in terms of a purely local principle of argument selection.

## 1. INTRODUCTION

The focus of this article is a pair of constructions in Passamaquoddy (ISO code: pqm), an Eastern Algonquian language of Maine (U.S.), in which the position of the object of a verb of cognition like ‘know’, ‘believe’, ‘remember’, ‘wonder about’, or ‘suspect’ is linked, either by apparent raising or by apparent long-distance agreement, to a position within an additional clausal complement of the verb, a position that may be arbitrarily deeply embedded.<sup>2</sup> The analysis presented here, formulated in the framework of Head-Driven Phrase Structure Grammar (HPSG; see Pollard and Sag 1994; Ginzburg and Sag 2000; Sag, Wasow, and Bender 2003), demonstrates that these two constructions in fact represent alternative realizations of the same argument structure for a verb of cognition and that the potentially long-distance dependency that they display can be accounted for in terms of a purely local principle of argument selection.<sup>3</sup>

An example from a Passamaquoddy text illustrating the raising of a complement subject is given in (1). A likely position within the complement clause to which the raised NP may be related is indicated by *e*. Since the word order of Passamaquoddy is highly flexible, however, it is difficult to establish a basic order for the constituents of sentences. There are accordingly a number of other possible locations that might be considered for the position of the complement subject here.<sup>4</sup>

- (1) 'Kosicíy-**a-l**=yaq                      **uhsimís-oli**  
 (3)-know-DIR-OBV.SG=REPORT    (3)-younger.sibling-OBV.SG  
 [eli- kéka eí -peciyá-li-t].  
 thus- almost                      -arrive-OBV-3AN

'She knew that her younger brother had almost arrived.' (Gabriel 1979: 7;  
 cited by Bruening 2001: 255)

In (1), *uhsimísol* 'her younger brother (obv.)' is understood as the subject of the (discontinuously expressed) preverb-verb complex *eli—peciyálit* 'that he (obv.) arrived' in the complement clause,<sup>5</sup> but this NP apparently occupies a position in the matrix, since it triggers object agreement there on the verb *'kosicíy-a-l* 'she knew him'. Agreement is reflected in this case by the so-called direct suffix *-a*, which indicates that the subject outranks the object on a participant hierarchy, and by the suffix *-l*, which indicates that the agreeing nominal is not only third-person and singular but also obviative, meaning that its referent has a status in discourse that is secondary to that of another third person in the context.

Raising constructions analogous to that of Passamaquoddy have been reported for a number of other Algonquian languages, including Cree (Dahlstrom 1991), Innu-aimûn (Branigan and MacKenzie 2002), Meskwaki (Dahlstrom 1996), Mi'gmaq (Fry and Hamilton 2014), and Ojibwe (Fry and Hamilton 2014).<sup>6</sup> Passamaquoddy raising is unusual, however, in the range of positions within the

complement clause that it may target. While raising in most other Algonquian languages either just targets complement subjects or targets both complement subjects and complement objects, raising in Passamaquoddy may target any complement argument, the possessor of a complement argument, or even a dependent of a clause embedded within the complement clause.

Bruening (2001, 2009) has proposed a movement analysis of raising in Passamaquoddy, while suggesting an analysis of long-distance agreement (henceforth LDA) that postulates covert movement. The HPSG analysis that I adopt provides a lexical solution instead to the problems raised by these constructions and has no recourse to movement operations, overt or covert. The results that I establish are of interest for linguistic theory, since Algonquian raising phenomena have been used to motivate both a notion of ‘altruistic’ verb agreement, which would permit the establishment of otherwise excluded structures through optional feature checking (Branigan and MacKenzie 2002), and an account of verb agreement with non-argument (A-bar) positions (Ritter and Rosen 2005). If, as I argue, the raising construction in Passamaquoddy does not actually involve raising, and LDA in this language does not actually involve agreement across clause boundaries, these proposals, which are based on phenomena that largely parallel those of Passamaquoddy, are called into question.

Although I argue against a movement analysis of raising, it is convenient to discuss the phenomena of Passamaquoddy in terms of this metaphor. Making

use of this terminology, then, we can illustrate some of the possible configurations that obtain in raising sentences in the language with the examples in (2)–(4): An NP is raised from complement object position in (2), from possessor position within the complement subject in (3), and from a deeply embedded position in (4).

- (2) N-wewitahám-a-k            **skinuhsís-ok<sub>i</sub>** [eli—peciptúw-a-t  
 1-remember-DIR-PROX.PL boy-PROX.PL    thus—bring-DIR-3AN  
           n-hésis            **ei** akòm].  
           1-older.brother    snowshoe-(OBV.PL)  
 ‘I remember that my older brother brought snowshoes for the boys.’
- (3) Asséloma ’kocicíy-a-l            **Piyél-ol<sub>i</sub>**    toké  
 Samuel    (3)-know-DIR-OBV.SG    Peter-OBV.SG    now  
           [eli—ksinuhká-li-t            [<sub>NP</sub> **ei** **hesís-ol**]  
           thus—be.sick-OBV-3AN            (3)-older.brother-OBV.SG  
           wolakù].  
           yesterday  
 ‘Samuel knows now that Peter’s older brother was sick yesterday.’

- (4) N-kosicíy-a-k            **nìkt**            **ehpíc-ik<sub>i</sub>**            [eli- Píyel  
 1-know-DIR-PROX.PL those.PROX    woman-PROX.PL    thus- Peter

-litahási-t      [eli—kis-ankum-í-hti-t      eɪ  
 -think-3AN      thus—past-sell-3/1-PROX.PL-3AN  
 posonúti-yil]].  
 basket-IN.PL

‘I know about those women that Peter thinks that they sold me the  
 baskets.’

Note that the raised NP *skinuhsísok* ‘boys’ in (2) is interpreted as the primary (benefactive) object of the embedded verb *peciptúwat* ‘he brought them for them’. This NP is proximate (that is, not marked as secondary to another third person) and triggers proximate plural marking on the matrix verb, reflected by the suffix *-k*. In (3), the raised NP *Piyélol* ‘Peter (obv.)’ is the possessor of *hesísol* ‘his older brother (obv.)’, the subject of the embedded clause. In (4), the NP that controls matrix object agreement, *nìkt ehpícik* ‘those women (prox.)’ is interpreted as the subject of *eli—kisankumíhtit* ‘that they sold them to me’, within a clause embedded in the complement to ‘know’.

The second construction we are concerned with here appears to involve agreement between the matrix verb and an NP within the complement clause. Once again, the NP that triggers agreement may occupy any of a wide range of positions within the complement. Consider (5), for example, which is like the raising sentence in (4), except that now the NP that the matrix verb agrees with as

its object is located two clauses down into the complement, in the position corresponding to the raising site indicated in (4).

- (5) N-kosicíy-a-k [eli- Píyel -litahási-t  
 1-know-DIR-PROX.PL thus- Peter -think-3AN  
 [eli—kis-ankum-í-hti-t nìkt ehpíc-ik  
 thus—past-sell-3/1-PROX.PL-3AN those.PROX woman-PROX.PL  
 posonúti-yil]].  
 basket-IN.PL

‘I know that Peter thinks that those women sold me the baskets.’

As this example suggests, the raising and LDA constructions match each other point for point. Clearly, then, a unified analysis of these two constructions is called for.

## 2. SKETCH OF AN ANALYSIS

The examples in (6a, b) illustrate once again the parallelism of raising and LDA. In (6a) *nicàn* ‘his children (obv.)’ is the logical object of the complement verb, but appears in the raised position within the matrix clause. In (6b) this NP occupies a position in the complement clause that is appropriate for an object in this clause. Regardless of the location of this nominal, it triggers obviative plural



agreement on the matrix verb *wolamsotuwà* ‘he believes them (obv.)’, agreement that is realized as a low-pitched accent on the final syllable of this verb.

- (6) (a) *Súsehþ wolamsotuw-à nicàni*  
 Joseph (3)-believe-DIR-(OBV.PL) (3)-child-(OBV.PL)  
 [eli—koti—kséhl-a-t ei Mali].  
 thus—going.to—hurt-DIR-3AN Mary  
 ‘Joseph believes that Mary is going to hurt his children.’
- (6) (b) *Súsehþ wolamsotuw-à ei [eli—koti—kséhl-a-t*  
 Joseph (3)-believe-DIR-(OBV.PL) thus—going.to—hurt-DIR-3AN  
*nicàni Máli].*  
 (3)-child-(OBV.PL) Mary  
 ‘Joseph believes that Mary is going to hurt his children.’

The account of these sentences developed here, which has an antecedent in the analysis that Dahlstrom (1991: 67–76) proposes for raising in Cree, is based on the proposition that they truly are parallel in structure, in the sense that NPs in two positions instantiate the trigger of matrix object agreement in (6): One NP occurs in the matrix object position itself, while a second, coreferent NP occupies a position in the complement clause, where it is assigned a semantic role. In the apparent raising structure in (6a), the matrix member of this pair of NPs is overtly

expressed, while the second member in the complement is a null pronoun. In the apparent LDA structure in (6b), the matrix NP is a null pronoun, while the NP within the complement is overt.

Coreference between an overt NP in the matrix and a null NP in a complement clause, as in (6a), is unproblematic on any theory of binding. On the other hand, standard versions of binding theory would predict that coreference between a matrix pronominal and a non-pronominal in the complement, as in (6b), would be excluded as a Condition C violation. As it turns out, however, Condition C does not hold in Passamaquoddy, independently of the LDA construction. This is demonstrated below in 5.3. Thus, both relationships of coreference indicated in (6a, b) are equally sanctioned by the principles of binding that apply in Passamaquoddy.

I should note here, as a side issue, that we do not actually need to postulate null pronouns in the positions indicated by *e* in (6). If we adopt the standard HPSG theory of pro-drop (Bouma 1997, Miller and Sag 1997), these null NPs will have representations on the Argument-Structure (ARG-ST) lists of the relevant predicates, but will lack representations on the corresponding valence lists, SUBJECT (SUBJ) or COMPLEMENTS (COMPS). This will mean that they are not realized in any form in syntactic structures. Since nothing hinges on this matter here, however, I will continue to treat null pronouns as entities in syntactic structures simply for expository convenience.

The structures envisioned here for sentences with raising and LDA can readily be generated if we suppose that verbs of cognition take two complements: an NP that represents the object of cognition and a clause that represents the content of what is known, believed, etc., about this entity. A preliminary statement of the ARG-ST of *kociciy*- ‘know’ might then look like (7), where NP<sub>i</sub> corresponds to the subject of the verb and NP<sub>j</sub> to the object.<sup>7</sup>

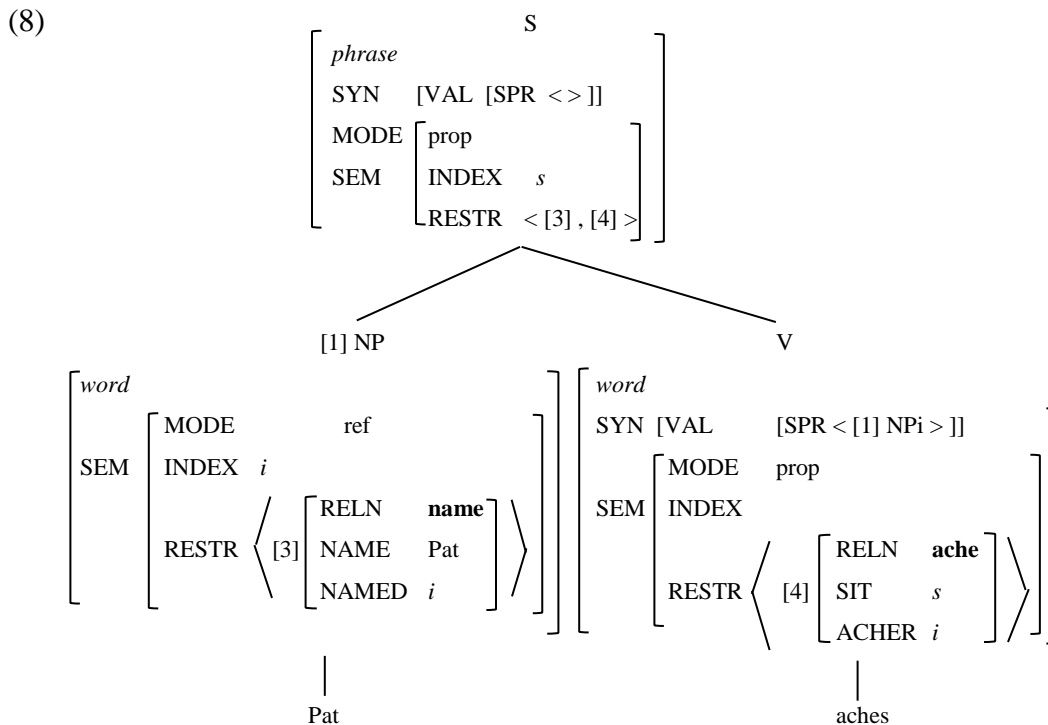
(7) *kociciy*- ‘know’: ARG-ST < NP<sub>i</sub>, NP<sub>j</sub>, S >

This statement is clearly inadequate, however, since the complement clause for which ‘know’ subcategorizes in the constructions in question cannot express simply any statement. It must generally include a second mention of the NP object of the verb. We might seek to account for this fact by imposing a constraint on the complement S in (7) that would require this clause to contain an NP coreferent with NP<sub>j</sub>. But since this coreferent NP may be located in a position arbitrarily far embedded in S, stating this restriction would appear to require a non-local constraint on the selection of S.

Consider, however, what this requirement for a second mention of the object of cognition actually means. In essence, what we are saying is that the clausal complement of a verb like ‘know’ must be ABOUT the NP object of the verb. This aboutness relation can be formalized in HPSG terms, I suggest, as a

constraint stating that the complement clause must include in its semantic representation a RESTRICTION on the INDEX that the nominal object of the verb introduces into the interpretation of the main clause.

In the theory of semantic interpretation sketched by Sag, Wasow, and Bender (2003: 131–155), a simplified version of Minimal Recursion Semantics (Copestake *et al.* 2005), every nominal expression in a sentence is associated with an INDEX that specifies its identity and a RESTRICTION (RESTR) that specifies its semantic content. The restriction may include semantic functions of one or more indices. In particular, a noun's restriction includes a function of its own index, while the restriction of a predicate includes a function of the index or indices of the arguments of the predicate. A (simplified) representation of the sentence *Pat aches* given in (8) (Sag, Wasow, and Bender 2003: 144) may serve to illustrate these relationships.<sup>8</sup>



A few words of explanation are in order here for readers who may not be familiar with the notation used in (8). Categories of both of the types *phrase* and *word* are specified for features that indicate their syntactic (SYN) and semantic (SEM) properties. Among the former are the valence properties (VAL), specifying the categories with which the item combines in phrase structure. As an intransitive verb, the word *aches* in (8) has a valence to combine with a specifier (SPR), its subject *Pat*.<sup>9</sup> Since the combination of these expressions satisfies this valence requirement for *aches*, the corresponding SPR requirement of the phrase headed by this verb is satisfied, a fact indicated by angled brackets with no contents, [SPR <>]. The semantic information given in representations includes

indications of MODE, i.e., the semantic type of a verb or clause, here *proposition* (*prop*), or the referential type of an NP, here *referential* (*ref*). The INDEX of an NP indicates its reference. A RESTRICTION (RESTR) specifies a RELATION (RELN) that is a function of one or more bearers of this RELN (via their indices). Associated with the relation is a SITUATION (SIT), with its own index (*s*); this represents a Davidsonian event variable. Note, finally, that bracketed integers (e.g., [1]) represent identity: Two items marked with the same integer are in a single location in the formal representation. This notation makes it possible to simplify displays of these representations by not repeating corresponding information.

The Semantic Compositionality Principle (SCP) constrains any well-formed phrase structure such that ‘the mother’s RESTR value is the sum of the RESTR values of the daughters’, where ‘the sum of the RESTR values of the daughters is the list whose members are those values, taken in order’ (Sag, Wasow, and Bender 2003: 143–144). Each of the members of such a list is called a PREDICATION STRUCTURE.<sup>10</sup> In (8), the SCP insures that the predication structures labeled 3 and 4 are inherited by the S node from the RESTR values of its daughter nodes. Each such predication structure is a function of a semantic argument which is of a type specified by a RELN, which is in turn a function of a particular index. We can use the notation  $PAT_i$  and  $ACHE_i$  for predication structures 3 and 4 in (8), both of which are members of the RESTR of S. More

generally, let  $PRD_i$  stand for a predication structure that includes a function of the index  $i$ .

The SCP collects information from throughout a clause and makes it available at the clausal node. In this way, the SCP provides a key for the analysis of raising and LDA in Passamaquoddy: It makes it possible to state the relationship between the nominal object of a verb of cognition and an NP position arbitrarily far away within the complement clause in terms of a local process of selection that holds between the NP object position and the S node that dominates the clausal complement.

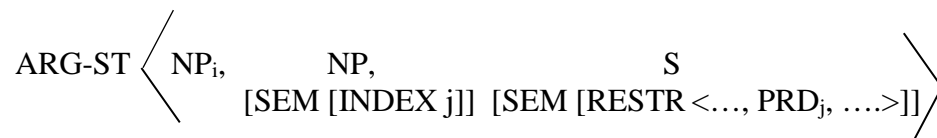
Here is how this works in Passamaquoddy LDA and raising constructions. The S node of the complement clause inherits predication structures from all of its subconstituents. In the case of the LDA construction, a full  $NP_x$  in the complement clause shares its index  $x$  with the matrix object. This  $NP_x$  contributes a predication structure PRD with  $x$  as one of its arguments. For example, in (6b) the NP *nicàn<sub>i</sub>* ‘his children’ contributes a PRD restricting the index  $i$  referring to his children.

In the raising construction, the matrix object is matched by a so-called ‘null pronoun’ in the complement clause. As we have noted, a null NP in HPSG terms is an NP that appears on the ARG-ST list of the predicate that selects it, but not in the phrase structure. In this case the selecting predicate still contributes a predication structure restricting the index of the null argument. For example, in

(6a) the verb *kséhlat* ‘hurt’ contributes a PRD restricting its argument *i* to someone who was hurt (by Mary). Thus the index *i* of the argument coindexed with the matrix object will always be restricted by some predication structure in the RESTR set of the complement clause, whether or not there in an overt NP<sub>*i*</sub>.

The apparent problem of non-local selection that we encountered above now disappears. We need not require directly that the complement clause that follows NP<sub>*j*</sub> in (7) include another NP with the same reference. All we need to do is to require that the clause node S includes a predication structure as an element of its RESTR that constrains the same index as that of NP<sub>*j*</sub>, as shown in (9).

(9) *kociciy*- ‘know’:



What this statement says, in effect, is that S must be about NP<sub>*i*</sub> in the particular sense that its own semantic representation includes a restriction on the anchoring of the index of the NP. Given that the SCP ensures that the restrictions of all of the daughters of S are collected together at S, any S that is suitable to occur in the raising or LDA construction is guaranteed to include at least one predication structure in its own RESTR that is a function of the index of some (overt or null) NP whose index matches that of the matrix object. Thus, (9) can



operate as a local principle of selection, no matter where the relevant NP may be located within S.

Note that this analysis of raising and LDA in Passamaquoddy has the consequence that all instances of these constructions include both a matrix object and a corresponding argument in the complement clause (represented either by an overt NP or by a ‘null pronoun’). It is not enough for the complement clause to be ‘about’ the matrix object in some looser sense, such as a relation of implicature or relevance. This predication is correct. Thus, examples like (10), in which the matrix object has no coreferent correspondent in the complement, are excluded.

- (10) \*Píyel ’kociciy-à                      **k-pomawsuwinu-m-onù**  
 Peter (3)-know-DIR-(OBV.PL) 2-person-POSS-1PL-(OBV.PL)  
 eli-    **nihìht**                      **skitapì**        skàt -komutonom-á-li-hq  
 thus- those-(OBV.PL) man-OBV.PL not -rob-DIR-OBV-3AN.NEG  
 pahtoliyás-ol.  
 priest-OBV.SG

‘Peter knows about our people that those men did not rob the priest.’

This example is not acceptable even in a context in which ‘those men’ are among ‘our people’ and knowing our people means knowing that the men in question would not rob a priest.

Two final questions remain to be addressed in this preliminary sketch of the proposal of this article. The first has to do with the thematic status of the object of the matrix verb in the constructions that we have been considering. Some of my translations may seem to suggest that sentences with raising or LDA are simply statements of a mental attitude on the part of the matrix subject to a claim represented by the complement clause. But consultants consistently maintain otherwise. For example, they insist that (5) means not only 'I know that Peter thinks that those women sold me the baskets', but also that I 'know those women', in some sense. At the same time, consultants reject translations like the one I have given for (4), the raising version of (5), which I have rendered with 'know about the women', although it is difficult to find a more appropriate English version.

I suggest that the reason for speakers' reactions to my translations is that the matrix object in raising and LDA structures is a semantic argument of the matrix verb, as well as a syntactic argument. In other words, the matrix object in these constructions is assigned a thematic role in the usual manner of a verbal argument. This role is something like 'object of subject's cognition' or 'entity about which subject possesses information'. Thus, speakers really attribute knowledge of the object of 'know' to the subject of the verb. The content of this knowledge is what the complement sentence in the structure states. More

precisely, the semantic representation of the complement clause includes a predication structure that restricts the index of the complement object.

A second point about the semantic role of the matrix object in a raising or LDA sentence is worth noting. The matrix object is what the complement clause is ABOUT. Thus, the target of raising or LDA typically constitutes a topic for the complement clause. On the other hand, the target of LDA may be a question word, as in (11). Question words, on standard analyses, cannot be topics; they are instead focused expressions (Lambrecht 1994: 283).

- (11) Máli wewitahám-a-l ei [wèn;  
 Mary (3)-remember-DIR-OBV.SG who  
 kisi—nis-kám-ot].  
 past—together-dance.with-2SG/3  
 ‘Mary remembers who you (sg.) danced with.’

Here *wèn* ‘who’ must be located within the complement clause, since this nominal would have to be obviative if it were a clausemate of the proximate form *Máli* ‘Mary’ in the matrix: At most one argument of a predicate may be proximate. Thus, while considerations of discourse function are clearly relevant to an understanding of the semantics of raising and LDA in Passamaquoddy, the status of the matrix object as a topic is not a defining feature of these constructions.

The analysis of raising and LDA outlined above is developed in the remainder of this article with respect to a broad range of data. The variety of structures that are found in the raising and LDA constructions is set out in section 3. Section 4 summarizes the movement analysis of these constructions proposed in Bruening 2001, 2009. Section 5 argues that a non-movement analysis of the kind presented here is superior to Bruening's proposal. Section 6 considers certain additional arguments that Bruening has advanced in favor of a movement solution. Section 7 deals with raising and LDA sentences with interrogative complements. Section 8 sets out an analysis of a class of raising and LDA sentences in which the referent of the matrix object represents only a subset of the referents of the corresponding NP in the complement clause. Section 9 summarizes the conclusions of this study.

### 3. MORE ON RAISING AND LDA

Both the raising construction and its LDA correspondent occur in several variants. The verb of the main clause may belong to either of the two gender-selection classes to which transitive verbs in Passamaquoddy belong: those that take grammatically animate objects and those that take grammatically inanimate objects. The verb in the complement clause may bear various types of inflection. The complement clause may be declarative or interrogative.

### 3.1 *Verb classes and verb inflection*

Each noun in Passamaquoddy belongs to one of two grammatical genders, animate or inanimate, with membership determined only partly on a semantic basis. Verb stems are specialized for use with one argument of a particular gender. For intransitive verbs, the subject argument is restricted: Animate Intransitive (AI) verbs require a grammatically animate subject; Inanimate Intransitive (II) verbs require a grammatically inanimate subject. For transitive verbs, the (primary) object is restricted: Transitive Animate (TA) verbs require a grammatically animate (primary) object; Transitive Inanimate (TI) verbs require a grammatically inanimate object. (Only TA verbs occur with more than one nominal object.)

Both TA and TI verbs of cognition may subcategorize for a single NP complement, as is the case for *kociciy*- TA ‘know’ in (12a) and *kociciht*- TI ‘know’ in (12b).

(12) (a) **Nòt**=kahk      **n-kocicíy-a**.      Ésp<sup>h</sup>ons    nòt.

that.an=CONT    1-know.TA-DIR    raccoon    that.AN

‘I know that one. That’s Raccoon.’ (Mitchell 1976: 14)

(12) (b) kénoq    ma=yaq=ote                      ksikhaha-wolotí-wi-yik,

but            not=REPORT=EMPH    get.lost-MPL-NEG-PROX.PL

'sami    **woli—ksiciht-ú-ni-ya**                    **kcíhq**

because (3)-good—know.TI-TH-N-PROX.PL forest

‘but they didn’t get lost, because they knew the woods well’ (Francis  
and Leavitt 2008: 500)

The TI members of such verb pairs may also be used with a sentential  
complement that represents a fact as the object of cognition, as shown in (13).

(13) **N-ksiciht-u-n** [eli- skinúhsis -nomíht-a-q mahsúsi-yil].

1-know.TI-TH-N thus- boy -see-TH-3AN fiddlehead-IN.PL

‘I know that the boy saw the fiddlehead ferns.’

Here the matrix verb is inflected for an inanimate singular object (suffix zero);  
this argument is presumably the clausal complement itself.

Both TA and TI verbs of cognition also participate in the raising and long  
distance agreement constructions. In (14a), for example, TA ‘know’ agrees with  
*skinúhsis* ‘boy (an.)’ within the complement clause, as reflected by the direct  
suffix *-a*. In (14b), TI ‘know’ agrees with *mahsúsiyil* ‘fiddlehead ferns (in.)’  
within the complement, as reflected by the inanimate plural suffix *-ol* on the  
matrix verb.

- (14) (a) N-kosicíy-a     e<sub>i</sub> [eli-   **skinúhsis**<sub>i</sub> -nomíht-a-q mahsúsi-yil].  
 1-know.TA-DIR     thus- boy           -see-TH-3AN fiddlehead-IN.PL  
 ‘I know that the boy saw the fiddlehead ferns.’
- (14) (b) N-kosiciht-ú-n-**ol**     e<sub>i</sub> [eli-   skinúhsis -nomíht-a-q  
 1-know.TI-TH-N-IN.PL     thus- boy           -see-TH-3AN  
                                   **mahsúsi-yili**].  
                                   fiddlehead-IN.PL  
 ‘I know that the boy saw the fiddlehead ferns.’

Following the proposal outlined in the preceding section, we can take agreement in both examples to be mediated by a null pronoun in object position in the matrix, as shown.

Each Passamaquoddy verb is inflected in several sets of paradigms, known to Algonquianists as ORDERS. In the examples of the raising and LDA constructions that have been cited up to this point, the complement clause verbs have all been drawn from the CONJUNCT ORDER, which includes several types of forms that are primarily used in subordinate clauses. The matrix verbs are forms drawn from a paradigm of the INDEPENDENT ORDER, the most common type of inflected forms used in independent clauses.

Forms of the independent order may also occur, however, in the complements to verbs of cognition in the raising and LDA constructions (as well

as in a number of other embedded contexts). The independent paradigms are distinguished by the use of prefixes as inflectional elements in most forms; conjunct inflection is by suffixes alone. An example with an independent indicative form in the complement to a raising verb is given in (15). (The verb in the subordinate clause here bears the third-person prefix /w-/, but this is phonologically reduced to *h-*, written as an apostrophe.)

- (15) N-kosicíy-a-k                      wewikuwoss-í-c-ik  
 1-know-DIR-PROX.PL    mother-be-3AN-PROX.PL
- [psí=te    **'kis-cem-a-wà**  
 all=EMPH (3)-past-kiss-DIR-PROX.PL-(OBV.PL)  
 'tus-uwà].  
 (3)-daughter-3PL-(OBV.PL)
- 'I know that the mothers kissed all of their daughters.'

### 3.2 *Interrogative complements*

The complement clause in the raising or LDA construction may be interrogative. Thus, complement questions are not islands for (apparent) raising or cross-clausal agreement. The type of inflection that the verb in the complement clause receives depends on the type of question involved in the structure. The verbs in most questions made with forms of *kèq* 'what' or *wèn* 'who' are inflected in the



conjunct order. Questions with *tamà* ‘where’ or *taywè* ‘when’ take independent indicative forms. Questions with *tàn* ‘how’ use forms from the independent subordinative paradigm.

The examples in (16) show interrogative complements with ‘what’, ‘who’, and ‘how’ in sentences with raising. The conjunct verb forms in the complements in (16a, b) are bolded, as is the independent form in the complement in (16c). As before, raised nominals are shown as coindexed with an empty position within the complement clause.

(16) (a) N-kosicíy-a-k            muwinú-wok<sub>i</sub> [**kèq**    e<sub>i</sub>

1-know-DIR-PROX.PL    bear-PROX.PL    what

**kis-ot-om-úhti-t**].

past-eat-TH-PROX.PL-3AN

‘I know what the bears ate.’

(16) (b) Píl    ’kosiciy-à                            w-itapì<sub>i</sub>

Bill (3)-know-DIR-(OBV.PL)    3-friend-(OBV.PL)

[**wèn etol-ewestuwám-a-t**    e<sub>i</sub>].

who    ongoing-talk.to-DIR-3AN

‘Bill knows who was talking to his friends.’

(16) (c) N-mihqitahám-a    kehtàqs<sub>i</sub> toké

1-recall-DIR            ghost    now

[tàn e<sub>i</sub> 't-oli—kisi—'tomeyúw-a-n n-uhkomóss-ol].

how 3-thus—past—bother-DIR-N 1-grandmother-OBV.SG

'I recall now how the ghost bothered my grandmother (e.g., by moving furniture around).'

The example in (17) illustrates long-distance object agreement between a verb of cognition and an NP located within an embedded question. Since the question word here is *tamà* 'where', the verb of the interrogative complement is an independent indicative form.

(17) N-mihqitahám-a-k e<sub>i</sub> [tamà n-toli—kisi—péskh-a-k

1-recall-DIR-PROX.PL where 1-location—past—shoot-DIR-PROX.PL

otúhk-ok<sub>i</sub>].

deer-PROX.PL

'I recall where I shot the deer (pl).'

A nominal question word may itself be a trigger of LDA; see 7.1.

### 3.3 *The role of clause-initial eli 'thus'*

Declarative complement clauses in Passamaquoddy raising and LDA

constructions that have verbs with conjunct inflection frequently, though not

invariably, begin with the particle *eli*, which I gloss ‘thus’. A brief consideration of the status of this particle is in order, since Bruening (2001: 165–167) suggests that it should be analyzed as a complementizer. I argue here that this analysis is inappropriate. In fact, there do not appear to be any complementizers in Passamaquoddy, at least in the sense of particles whose primary function is to introduce subordinate clauses. For this reason, it is not clear that any clauses in Passamaquoddy are appropriately analyzed as CPs, an observation that may cast doubt on Bruening’s approach to raising phenomena in the language, which postulates that raised nominals are stationed in Spec of CP.

The particle *eli* occurs in a variety of constructions other than raising and LDA, such as the complement to ‘be sorry’ shown in (18).

- (18) N-moskéyi-n        [eli-    skàt    -ciksot-om-ù].  
       1-be.sorry.about-N    thus-   not    -listen-TH-NEG-(1SG)

‘I’m sorry that I didn’t listen.’ (Francis and Leavitt 2008: 299)

As Sherwood (1986: 138) observes, *eli* makes little or no semantic contribution in examples of this kind. Bruening’s analysis of *eli* as a complementizer would, of course, account for this fact, and for the frequent clause-initial position of the particle.

Not all uses of *eli* conform to this pattern, however. From a formal point of view, in fact, *eli* is a preverb, the initial member in a compound verb. Because *eli* is a preverb, it need not be separated from the verb with which it is associated, as we see in (19).

- (19) N-kosicíht-u-n [n-míhtaqs **eli**—wolitahási-t].  
 1-know.TI-TH-N 1-father thus—be.happy-3AN  
 ‘I know that my father is happy.’

The verb in the matrix clause here is a transitive inanimate form, which cannot take the animate noun *nmíhtaqs* ‘my father’ as its object. Thus, (19) does not involve raising, and *nmíhtaqs* can only be a constituent of the complement clause in this sentence; *eli* is not clause-initial in (19).

The morphological unity of the preverb-verb complex is revealed by the workings of an ablaut process known as INITIAL CHANGE. Ablaut is most commonly realized as a shift from *o* (schwa) to *e* in the first syllable of the compound: the first syllable of the first preverb if one occurs, otherwise the first syllable of the verb stem. Most vowels other than *o* are not affected, but there are some irregular formations. *Eli* is the changed form of the preverb *oli* ‘thus’; compare (16c) above for the basic form.

To see how ablaut works, compare the sites at which change is realized in the examples in (20).

(20) (a) N-wewitahám-a Núwel [etol-íht-a-q tomhikon-átk-ul].

1-remember-DIR Newell ongoing-make-TH-3AN axe-stick-IN.PL

‘I remember Newell making axe handles.’ (Francis and Leavitt 2008:

556)

(20) (b) K-piluwitahám-a Súséhp [keti—macáha-t

2-suspect-DIR Joseph going.to—leave-3AN

[eli- kíl -sakh-iph-úki-yin]].

thus- you.SG -into.view-carry-UNSPEC/2-2SG

‘You suspect that Joseph wants to leave because you drove up.’

(20) (c) Cèl ma=te n-kociciy-à-w

plus not=EMPH 1-know-DIR-NEG

[eli—koti—sakh-iyà-t-s].

thus—going.to—into.view-go-3AN-DUBIT

‘I didn’t even know she would show up.’ (Francis and Leavitt 2008:

481)

In (20a), the initial component of the stem *tol-íht-* ‘be making’ undergoes ablaut (irregularly), becoming *etol-*. In (20b), ablaut is realized on the preverb *koti*, as it

is the first element in the preverb-verb complex here. In (20c), *koti* remains unaffected by ablaut, since here it is preceded by *oli* ‘thus’, which undergoes ablaut instead. The fact that *eli* realizes ablaut in this fashion demonstrates that it is indeed a preverb. Even when it is separated from the verb and appears in clause-initial position, *eli* realizes ablaut for the preverb-verb complex as a whole.

Passamaquoddy preverbs vary in terms of how readily they may be separated from the verbs with which they are construed by material from outside the preverb-verb complex. Several other preverbs are like *eli* in their distributional freedom. The changed forms of these preverbs, like *eli*, typically occupy clause-initial position. A typical example is *weci* ‘from, for (that) reason’, the changed form of *’ci* ‘from, for’, which is illustrated in (21).

(21) ’Kakawalomím-a-l            nicán-ol

(3)-scold.harshly-DIR-3AN    (3)-child-OBV.SG

[**weci-** skàt àpc    nìt    -ol-lúhke-t].

so.that- not    again    that.IN    -thus-do-3AN

‘She scolds her child harshly so he won’t do it again.’ (Francis and Leavitt 2008: 149)

In the end, there appears to be little to recommend an analysis of *eli* as a complementizer. The fact that *eli* realizes ablaut for the verbal complex is

explained if it is a preverb, and its syntactic distribution is typical for one class of preverbs.<sup>11</sup> For these reasons, I do not adopt Bruening's analysis of *eli* as a complementizer. I nonetheless represent this preverb as a complementizer in discussing Bruening's proposals concerning the structure of raising and LDA sentences in the following section.

#### 4. A MOVEMENT ANALYSIS

Bruening (2001, 2009) proposes an analysis of Passamaquoddy raising in the Minimalist framework, adapting a Government-Binding approach to apparent raising phenomena in several languages developed by Massam (1985), who takes the observed effects to reflect exceptional case marking. His central hypothesis is that while Passamaquoddy raising does involve movement in a core class of cases, the relevant examples are not derived via extraction of the raised NP into the matrix clause. Rather, movement in these cases is only to the left edge of the clausal complement of the verb of cognition in the construction. LDA is then analyzed in terms of covert movement to this clause-peripheral position. These movements, it is claimed, are driven by the need to check certain features borne by the moving NPs.

#### 4.1 *Bruening's proposal*

Raising does not always involve extraction from the complement to a raising verb under Bruening's proposal. Whether extraction takes place depends on the inflection of the matrix verb. In particular it depends on whether the matrix verb form is direct (with suffix *-a*) or inverse (with suffix *-ku* or a variant of this). The choice between direct and inverse inflection depends on the relative position of the subject and object of a verb on the participant hierarchy in (22), which involves person, animacy, and obviation: First and second persons outrank third, animates outrank inanimates, and proximates outrank obviatives.

#### (22) The Participant Hierarchy

1, 2 > 3 proximate animate > 3 obviative animate > 3 inanimate

If the subject outranks the object, the form is direct; if the object outranks the subject, the form is inverse. (I set aside here the analysis of forms involving first or second persons as both subject and object, which are neither direct nor inverse.)

For Bruening, the contrast between direct and inverse forms reflects argument-movement (A-movement) in the derivation of clauses with inverse forms: In these clauses, the object moves to a functional head above the subject. This movement of the object in a raising sentence poses a potential problem for



Bruening's assumption that the NP in question has undergone non-argument (A-bar) movement within the complement clause. For an NP to undergo first A-bar movement (raising, in the complement) and then A-movement (forming the inverse, in the matrix) would mean that it was subject to the kind of 'improper movement' that Chomsky (1973) and May (1979) have argued to be universally excluded. Bruening's solution is to suppose that the apparently raised NP in a sentence with an inverse verb in the matrix does not in fact undergo raising: Instead, it is directly generated in a specifier (Spec) position at the left edge of the complement clause. It is assumed that this peripheral position in the complement clause is close enough to matrix elements that an NP in this location can undergo matrix operations, since it is at the edge of a projection that constitutes a PHASE, which places bounds on accessibility to syntactic operations (Chomsky 2000).

Consider first, however, cases in which the matrix verb in a raising construction is a direct form. On Bruening's account, the raised NP in such a sentence is extracted from the interior of the complement clause. But the extracted NP does not move to matrix object position. Instead, it shifts into the position of a specifier of Comp, or sometimes into a second such specifier position, and thus remains within the complement clause. Its position is again assumed to be close enough to the matrix verb to permit the establishment of relations with matrix elements. In particular, it can establish an Agree relation with the matrix verb.

Thus, the matrix verb shows object agreement with the raised NP, even though the two are not clausemates.

An example of the structure of a raising clause on Bruening's analysis is given in (23). In this example, the complement of the raising verb is an interrogative clause.

- (23) N-kosicíy-a-k                    [CP [SPEC2 **nuhúw-ok**    **muwinúw-ok**]  
       1-know-DIR-PROX.PL                                    three-PROX.PL bear-PROX.PL  
     [C Ø] **ti** kis-ot-om-úhti-t].  
     what                                    past-eat-TH-PROX.PL-3AN

'I know what the three bears ate.' (after Bruening 2001: 259, example 668)

We can see here why Bruening sometimes postulates a second Spec of Comp as the landing site for raising: Since the fronted *wh*-word *kèq* 'what' is assumed to occupy the first Spec of Comp in a raising sentence with a *wh*-complement, the raised NP (if it is in Spec in the complement and not in object position in the matrix) must be located in a second Spec position.

The case in which apparent raising does not involve extraction from within the complement clause on Bruening's account is illustrated in (24).

(24) *Mihtaqs-ol*            *'kociciy-úku-l*            *skinúhsis* [CP [SPEC *t<sub>i</sub>* ]

(3)-father-OBV.SG (3)-know-INV-OBV.SG boy

[C *eli* ]    *e<sub>i</sub>*    *pecípt-a-q*        *micuwákon*].

COMP        bring-TH-3AN food

'His<sub>*i*</sub> father (obv.) knows about the boy<sub>*i*</sub> (prox.) that he<sub>*i*</sub> brought food.'

Here the matrix subject *mihtaqsol* 'his father' is obviative, but the raised NP *skinúhsis* 'boy' is proximate. Obviatives rank below proximates on the participant hierarchy, so the matrix verb is inverse. By hypothesis, inverse formation involves A-movement. But this movement cannot be fed by raising, if raising is A-bar movement: Moving an NP first by A-bar movement and then by A-movement is improper movement (Bruening 2001: 275). So the seemingly raised NP *skinúhsis* 'boy' in (24) must not have been raised after all, but must instead have been directly generated in Spec of Comp. The NP in this Spec position is simply coindexed with a null pronoun within the complement clause (Bruening 2001: 284). Since this NP has not reached Spec position by A-bar movement, it is free to undergo the A-movement process involved in deriving the inverse, which moves it into the matrix clause.<sup>12</sup> (An NP in Spec of Comp is assumed to be accessible to inverse formation, just an NP in this position is accessible to object agreement.)

#### 4.2 *Problems for the raising analysis*

Bruening offers a number of arguments in favor of his analysis of raising. I focus in this section on two of his central claims; see section 6 for additional discussion. First, he maintains that a raised NP always occupies a position at the periphery of the embedded clause, apart from cases involving inverse forms in the matrix. Second, he asserts that raising respects island constraints in the class of cases where his analysis postulates raising by extraction, which again excludes examples with inverse forms in the matrix. I argue that neither of these claims finds empirical support.

Consider first the assertion that a raised NP can only occupy a position at the left periphery of the complement, so that it necessarily follows all matrix material: Bruening (2001: 270–271) claims that examples in which the raised NP comes between the matrix verb and another matrix constituent are ungrammatical. He notes that his analysis would account for this alleged fact. However, my consultants find examples that violate this restriction, like those in (25), to be fully acceptable.

- (25) (a) 'Kosic'íy-a-l                      **Piyél-oli**                      **Asséloma**  
           (3)-know-DIR-OBV.SG   Peter-OBV.SG   Samuel  
           [eli-    ei   -kisi—'pakotúw-ih].  
           thus-        -past—lie.to-OBV/PROX

‘Samuel knows that Peter (obv.) lied to him.’

- (25) (b) N-wewitahám-a-k            **ákom-ok<sub>i</sub>**            **toké**  
 1-remember-DIR-PROX.PL   snowshoe-PROX.PL   now  
 [eli- Píyel -kis-onuhmuwéw-a-t   skinuhsìs   **e<sub>i</sub>**].  
 thus- Peter -past-buy.for-DIR-3AN   boy-(OBV.PL)

‘I remember now that Peter bought snowshoes for the boys.’

In both of these examples, the matrix verb is a direct form, so the raised NP cannot have been extracted from the complement, on Bruening’s analysis. Nonetheless, the raised NP *Piyélol* ‘Peter (obv.)’ comes between the matrix verb and its subject, *Asséloma* ‘Samuel’ in (25a). In (25b), the raised NP *ákomok* ‘snowshoes’ comes between the matrix verb and an adverb *toké* ‘now’ that is construed with it. It seems clear, then, that the predictions of Bruening’s analysis of the structure of sentences with raising are not borne out.

Bruening (2001: 265–267) also presents examples that suggest that raising respects island constraints in just the class of cases that he takes to involve extraction, those involving direct forms in the matrix. He takes this situation to confirm his analysis of raising as A-bar movement. For my consultants, however, raising in the relevant class of cases is permitted to violate many of the usual islands, including complex NPs, *wh*-islands, and adjunct islands. There appears to

be no difference in this regard between sentences with direct verbs in the matrix and corresponding sentences with inverse forms.

I focus here on examples involving complex NPs. Violations of the Complex NP Constraint generally result in sentences that speakers find thoroughly unacceptable, even unintelligible. An example is given in (26). This represents an attempt to question ‘(which) children’ in a Passamaquoddy sentence rendering ‘I shot the bear that bit two children at Grand Lake Stream’ (the latter a settlement near one of the Passamaquoddy communities).<sup>13</sup>

- (26) \*{Wen-ihì<sub>i</sub> / Weni—wasì<sub>s</sub>} kisi—péskh-ot  
 who-OBV.PL which—child-(OBV.PL) past—shoot-2SG/3  
 [NP muwìn [S kisi—pokéhl-a-t (nihìht<sub>i</sub>) Utoqehkik]].  
 bear past—bite-DIR-3AN those.OBV  
 Grand.Lake.Stream.LOC  
 ‘Who<sub>i</sub> (obv. pl.) / which children<sub>i</sub> (obv.) did you (sg.) shoot the bear that  
 bit (them<sub>i</sub>) at Grand Lake Stream?’

In contrast to Wh-Movement, raising out of a complex NP does not in general produce unacceptable results. It is quite easy to find examples that consultants consider well formed. These may have a direct form in the matrix, as

in (27a), or an inverse form, as in (27b). The contrast in acceptability between these examples that Bruening's analysis would predict is not confirmed.

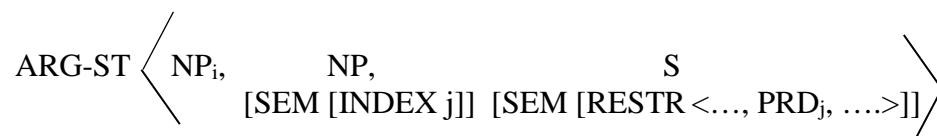
- (27) (a) N-kosicý-a-k                      [CP [SPEC **nikihk-únnu-ki**]  
 1-know-DIR-PROX.PL                      (1)-parent-1PL-PROX.PL  
 [C eli] Píyel mèc álk-o-k  
 thus Peter still drive.around-TH-3AN  
 [NP utapákon [CP **ti** kis-onuhmuwew-a-htí-t-pon]]].  
 (3)-vehicle                      past-buy.for-DIR-PROX.PL-3AN-PRET  
 'I know about our (exc.) parents<sub>i</sub> that Peter is still driving the car they<sub>i</sub>  
 bought for him.'
- (27) (b) **Píyel<sub>i</sub>** 'kosicij-ukù                      w-itapi-hì  
 Peter (3)-know-INV-(OBV.PL) 3-friend-OBV.PL  
 [CP [SPEC **ti**] [C eli] Mali kis-ankuwéht-a-q  
 thus Mary past-sell-TH-3AN  
 [NP nahsahqehtákon [CP **ei** mil-á-t-pon]]].  
 ring                      give-DIR-3AN-PRET  
 'His<sub>i</sub> friends know about Peter<sub>i</sub> that Mary sold the ring that he<sub>i</sub> had given  
 her.'

We see, then, that Wh-Movement is subject to the Complex NP Constraint, but raising is not. This fact argues strongly that raising structures are NOT formed by a process of A-bar movement. All of the available evidence is in fact consistent with an analysis of the raised NP as a directly generated constituent of the matrix clause, namely the matrix object. Such an analysis explains without stipulation (i) why the raised NP triggers object agreement, (ii) why the raised NP participates in the direct-inverse alternation like any other object, and (iii) why the raised NP can be permuted with matrix material.

#### 5. A LEXICAL ALTERNATIVE

The analysis of raising and LDA outlined in section 2 is based on the hypothesis that a relationship is established in these constructions between (the indices of) NPs in two positions: an NP in object position in the matrix and an NP within a further clausal complement to the matrix verb. The second NP may be located anywhere within this complement. The connection between the two NP positions is regulated by the lexical entries of particular verbs of cognition, such as the (partial) entry for *kociciy*- TA ‘know’ shown in (28), repeated from (9).

(28) *kociciy*- ‘know’:





We may take lexical entries like (28) to be derived by a lexical rule from the entries of the corresponding single-object verbs of cognition.<sup>14</sup> Suppose that *cognitive-transitive-verb-lexeme* (*cogtv-lexeme*) is a subtype of *transitive-verb-lexeme* (*tv-lexeme*). The rule in (29) will then derive verbs of another type of *tv-lexeme*, which we may call *raising-lexeme*: the verbs that appear in the raising and LDA constructions. The bracketed integers in (29) correspond to the form of the items undergoing the rule, which remains unchanged.<sup>15</sup>

(29) Raising and Long Distance Agreement Lexical Rule

$$\left[ \begin{array}{l} \textit{derivational-rule} \\ \text{INPUT} \left\langle [1], \left[ \begin{array}{l} \textit{cogtv-lexeme} \\ \text{ARG-ST} \langle \text{NP}_i, \text{NP}_j \rangle \end{array} \right] \right\rangle \\ \text{OUTPUT} \left\langle [1], \left[ \begin{array}{l} \textit{raising-lexeme} \\ \text{ARG-ST} \langle \text{NP}_i, \text{NP}_j, \\ \text{S} \\ \text{[RESTR} \langle [\dots, \text{PRD}_j, \dots] \rangle \end{array} \right] \right\rangle \end{array} \right]$$

This proposal makes two central claims about raising and LDA: (i) that both constructions involve a relationship between two arguments, one in the matrix and one in the complement; and (ii) that this relationship is fundamentally a matter of predicating a semantic restriction associated with a complement clause NP of the referent of the matrix object.

Note, however, that a full statement of the lexical rule in (29) would need to specify the semantic role that the matrix verb assigns to the matrix object in a raising or LDA structure, the role of ‘object of cognition’ discussed in section 2. We cannot simply take this information to be inherited from the base verb, since the semantics of the object of a basic verb of cognition is typically rather different from that of the matrix object in a raising or LDA sentence. Compare, for example, the senses of the verbs in (30a, b).

(30) (a) **N-wewitaham-á-hpon** nòt      mecimìw; nekòm=ote=hc      tòmk

1-remember-DIR-PRET    that.AN    always      he/she=EMPH=FUT    first

tuhkíya-t.

wake.up-3AN

‘I always remembered him; he was the one who would wake up first (in the morning).’

(Francis and Leavitt 2008: 566)

(30) (b) **K-wewitahám-ol** eli—kisi—péskh-ot      otúhk-ok.

2-remember-1/2    thus—past—shoot-2SG/3    deer-PROX.PL

‘I remember that you (sg.) shot the deer (pl.); I remember you shooting the deer (pl).’

Example (30a) indicates that the subject has a continuing mental representation of the referent of the object; the second clause in this sentence specifies an aspect of their acquaintance that anchors that representation. Example (30b) indicates that the subject continues to recall a fact about the referent of the matrix object. To be sure, in continuing to recall this fact, the subject also continues to recall the individual that the fact is about. (For this reason, the consultant who provided example (30b) glossed it as, ‘I remembered you when you shoot the deer’.) But the import of this sentence is not that the speaker remembers her addressee, which is presupposed in an ordinary context of use of this example: The semantic relationship between the verb and the matrix object in (30b) is different from that between the verb and its object in (30a). Evidently, then, the statement of the Raising and Long Distance Agreement Lexical Rule given in (29) will ultimately need to be fleshed out with additional semantic information. I leave this issue for future research.

### 5.1 *Evidence for two NP positions: Overt pronouns*

In the examples of raising and LDA that we have looked at up to this point, one or the other of the two postulated NP positions in these constructions has been empty. But in fact either position in which a null pronoun is possible may also be occupied by an overt pronominal. This is shown by sentences like those in (31).

- (31) (a) N-kosicý-a **Píyeli** [eli- (**nekòm**i) -koti—nat-húl-a-t  
 1-know-DIR Peter thus- he/she -going.to—go-ferry-DIR-3AN  
 Suséhp-ol].  
 Jospéh-OBV.SG  
 ‘I know that Peter is going to pick up Joseph in a boat.’

- (31) (b) N-kosicý-a (**nekòm**i) [eli- **Píyeli**  
 1-know-DIR he/she thus- Peter  
 -koti—nat-húl-a-t Suséhp-ol].  
 -going.to—go-ferry-DIR-3AN Jospéh-OBV.SG  
 ‘I know that Peter is going to pick up Joseph in a boat.’

In (31a) we have an example of the raising construction. The raised NP *Píyel* ‘Peter’ is matched in the clausal complement of ‘know’ by an (optional) overt pronominal *nekòm* ‘he, she’. In (31b), the positions of these two NPs are reversed. The result is an instance of the LDA construction. But now it is clear that no agreement at a distance is involved here: The trigger of object agreement on the matrix verb is a pronominal in the matrix clause that may be overt. Examples like (31a, b) provide clear evidence that raising and LDA involve a relationship between two NPs (or their indices), one in the matrix and a second within the complement clause.<sup>16</sup>

## 5.2 *The raising construction with two full NPs*

Further confirmation for the claim that the constructions we have been considering involve a relationship between two NP positions (more precisely, between two referential indices) comes from sentences in which there is not only a full NP in matrix object position, but also a second non-pronominal NP, coreferent with the matrix object, within the complement clause. These sentences make a secondary assertion about the referent of the matrix object in addition to the central claim expressed by the complement clause. Two examples are given in (32).

- (32) (a) N-uli—wewitahám-a    **Máli**<sub>i</sub> [eli-    **nòt**    **woli—éhpit**<sub>i</sub>  
 1-good—remember-DIR    Mary    thus-    that.AN    good—woman  
    -wisoki—sik-oluhké-w-a-t                            nicàn].  
    -extremely—hard-work-TA-DIR-3AN (3)-child-(OBV.PL)  
 ‘I remember well that Mary, that good woman, worked really hard for  
 her children.’

- (32) (b) Mèc=ote    n-wewitahám-a    **Asséloma**<sub>i</sub> toké  
 still=EMPH    1-remember-DIR    Samuel    now  
    [eli-    **nòt**    **mec-íki-t**                            **skitàp**<sub>i</sub> -maton-á-t-pon  
    thus-    that.AN    evil-be.a.kind-3AN    man    -beat-DIR-3AN-PRET

't-ehpité-m-ol naka nicàn].

3-wife-POSS-OBV.SG and (3)-child-(OBV.PL)

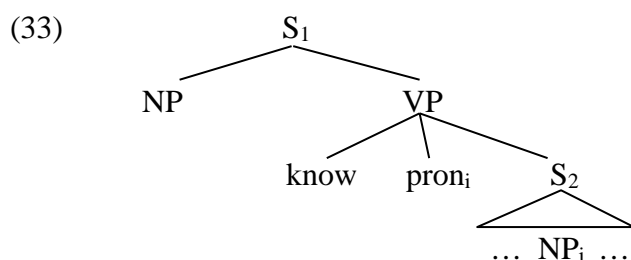
'I still remember now that Samuel, that evil-natured man, beat his wife and children.'

Examples like these are reminiscent of English sentences in which an epithet like *the bastard* plays a role like that of a pronoun. Note, however, that the complement clause NP in (32b) includes both the demonstrative *nòt* 'that (an.)' and the relative clause *mecíkit* 'he who is evil-natured' in addition to the head noun *skitàp* 'man'. An analysis of this NP as a pronoun-like epithet is not attractive. The conclusion thus seems inescapable that two full NPs may be related in the raising construction, not just an NP and a (null or overt) pronoun. This situation is expected under the lexical analysis of raising advanced here. The argument structure of a raising verb simply requires its S complement to include some predication structure in its RESTR that (i) can be predicated of the matrix object and (ii) is a function of a semantic argument with the same index as that object. This predication structure may be contributed by any type of NP within the complement clause.

### 5.3 *The absence of Condition C effects*

In section 2, we observed that Passamaquoddy sentences with LDA systematically violate Condition C. As it turns out, Condition C violations are freely permitted in Passamaquoddy. Thus, no special provision is required in the present analysis to accommodate binding in LDA structures.

Consider (33), a schematic representation of an LDA sentence, in which ‘know’ takes a pronominal object  $pron_i$  that is coreferent with  $NP_i$  in the complement.



Here  $pron_i$  c-commands and binds  $NP_i$ . This configuration is ruled out on standard formulations of Condition C (and by the HPSG binding theory of Pollard and Sag 1994).

Violations of Condition C in LDA structures present a problem for the analysis proposed here, however, only if this constraint is operative in the language. There is ample evidence that it is not, a point made also by Bruening (2001: 26–29). Consider the examples in (35).

(35) (a) **Súsehpi** 1-itahásu [n-kisi—messunomúw-a-n **nekòm**  
 Joseph thus-think-(3) 1-past—show-DIR-N he/she  
 n-mihqotákon].  
 1-knife

‘Joseph<sub>i</sub> thinks that I showed him<sub>i</sub> my knife.’

(35) (b) **Nekòm** 1-itahásu [n-kisi—messunomúw-a-n **Súsehpi**  
 he/she thus-think-(3) 1-past—show-DIR-N Joseph  
 n-mihqotákon].  
 1-knife

‘He<sub>i</sub> thinks that I showed Joseph<sub>i</sub> my knife.’ (ungrammatical in English)

The acceptability of (35a) is expected. But (35b) is also acceptable, while its English counterpart is not, since *he<sub>i</sub>* in the matrix binds and c-commands *Joseph<sub>i</sub>* in the complement. Quite generally, Condition C violations are grammatical in Passamaquoddy, and present no special problem for the analysis of LDA.<sup>17</sup>

## 6. CHALLENGES TO THE LEXICAL ANALYSIS

Bruening (2001) cites several properties of raising structures in Passamaquoddy beyond those that we have already considered in support of his movement analysis, including conditions on binding and quantifier scope and aspects of the



morphosyntax of questions. Four challenges that his data pose for the lexical analysis advanced above are discussed in this section.

### 6.1 *Does raising affect binding?*

A quantified expression like *psí=te wèn* ‘everyone’ located within the complement clause in a Passamaquoddy raising sentence can bind a variable in the matrix.

Thus, ‘everyone’ in the complement of the raising verb *nmihqitahámak* ‘I remember them’ binds the possessor of the matrix object *’tolonapèm* ‘his relatives’ in the raising structure in (36). Note that on Bruening’s account of raising, the latter nominal must have been displaced from a position within the complement clause.

(36) N-mihqitahám-a-k    **’t-olonapèm**            pemkískahk

1-recall-DIR-PROX.PL    3-relative-(OBV.PL)    today

[s eli-    **psí=te**    **wèn**            mecimìw    -wicuhkém-iht].

thus all=EMPH someone always    help-OBV/PROX

‘I recall today that everyone’s<sub>i</sub> relatives used to help them<sub>i</sub>.’

(literally, ‘I recall his<sub>i</sub> relatives today that they used to help everyone<sub>i</sub>.’)

Bruening (2001: 264) assumes that binding requires c-command: The binding quantifier must c-command the bound variable. Since the required c-

command relationship does not obtain in the surface form in (36), he proposes that it is established at the abstract level of Logical Form, where binding relations are checked, through reconstruction: This operation will move the raised NP *'tolonapèm* back into its original position within the complement clause, thus placing the possessor of this nominal in a position where it is c-commanded by *psí=te wèn*.

Bruening argues that the role of reconstruction in such examples is revealed by the blocking of binding in cases in which a negative element intervenes in surface structure between a variable in the matrix and a quantifier within the complement that could potentially bind it. The presence of this negative element, he asserts, prevents reconstruction from taking place and establishing the c-command relationship that must hold for binding to take place.

The blocking effect in question is revealed, Bruening maintains, by the absence of the second reading indicated for example (37b).

(37) (a) N-kosicíy-a [eli- **skàt wèn** -musqitahám-a-hq

1-know-DIR thus- not someone -hate-DIR-3NEG

**nisuwihtíc-il**].

(3)-spouse-OBV.SG

'I know that no one<sub>1</sub> hates his/her<sub>1</sub> spouse.' (after Bruening 2001: 264,

example 686a)

(37) (b) N-kosicíy-a **nisuwihític-il** [eli- **skàt wèn**  
 1-know-DIR (3)-spouse-OBV.SG thus- not someone  
 -musqitahám-a-hq].  
 -hate-DIR-3NEG

‘I know that his/her<sub>1</sub> spouse doesn’t hate anyone/someone<sub>2</sub>.’

NOT: ‘I know that no one<sub>1</sub> hates his/her<sub>1</sub> spouse.’

(after Bruening 2001: 264, example 686b)

In (37a), *skàt wèn* ‘no one’ binds the possessor of *nisuwihíticil* ‘his/her spouse’.<sup>18</sup> But to establish the same binding relationship in (37b), *nisuwihíticil* would have to be lowered by reconstruction into its source position within the complement clause so that *skàt wèn* can c-command it. Reconstruction across a negative element is blocked, so the second reading suggested above for (37b) is excluded. Since this account relies on the premise that reconstruction sets the stage for binding in raising sentences, its success in predicting the readings found for examples like (37b) provides evidence that raising involves movement.

In fact, however, I have been unable to confirm the judgments that Bruening reports for examples like (37b). My consultants have sometimes found this and comparable sentences to be confusing, but once they understand them, they consistently find readings of both indicated types to be fully acceptable. I



‘Every girl<sub>i</sub> told me that you (sg.) showed her<sub>i</sub> the new baby.’

(literally, ‘She<sub>i</sub> told me that you (sg.) showed every girl<sub>i</sub> the new baby.’)

In (38a), *psí=te wèn* ‘everyone’ in the complement of ‘say’ binds but does not c-command the possessor of the matrix subject ‘his mother’. Likewise, *psí=te pilsqéhsis* ‘every girl’ in the complement of ‘tell’ binds but does not c-command *nékom* ‘she’, the matrix subject in (38b). Yet my consultants judge both of these examples to be entirely acceptable on the indicated readings. Note further that such examples cannot be accounted for, as a reviewer has suggested, by supposing that such cases of binding without c-command actually involve quantifiers that refer to sets, rather than true instances of variable binding. In (38b), in particular, the singular bound pronoun in the matrix can only represent a variable.

I conclude that Bruening’s argument that reconstruction plays a role in determining variable binding in raising sentences in Passamaquoddy does not go through. There is no evidence for movement as the mechanism of raising from this domain of facts.

## 6.2 *Raising and scope relations*

Bruening (2001: 280; 2009: 443) presents a second argument from binding relationships in favor of his movement theory of raising, citing examples (39a, b).



As it happens, however, (39a, b) are excluded not for binding reasons, but because they involve impermissible obviation relations. When obviation is properly adjusted, examples parallel in form to these are found to be fully acceptable. To see this, however, we must briefly consider the conditions that determine the distribution of proximate and obviative nominals within clauses.

Obviation is fundamentally a matter of the relative prominence of third-person referents in discourse, but the expression of these prominence relations is subject to certain restrictions. Prominence relationships may be analyzed in terms of pairs of referents within a context. Call the more prominent member of a pair, usually the more topical referent, the CONTROLLER of obviation for the less prominent member. Two central restrictions come into play: (i) the possessor of a noun is always a controller of obviation for the possessed noun itself; (ii) if a nominal A is located above a nominal B on the relational hierarchy Subject > Primary Object > Secondary Object, then A is a controller of obviation for B. (An extra provision is needed for clauses with inverse verb forms, although I will not explore this issue here. These are treated for the purpose of (ii) as if the grammatical relations of the Subject and Primary Object have been reversed.)

The primary object is the sole object of a single-object transitive verb, but the goal or benefactive object of a ditransitive verb. The object of a ditransitive verb that bears the theme relation is the secondary object. (The primary object of a ditransitive verb, like the sole object of a simple transitive verb, is involved in

determining whether the verb form is direct or inverse.) Consider, then, the examples in (40). (A variety of other words orders are possible in each case.)

- (40) (a) N-kisi—messunomuw-á-n-ol wásis olomuss-ís-ol.  
 1-past—show.to-DIR-N-OBV.SG child dog-DIM-OBV.SG  
 ‘I showed the child (prox., primary object) the puppy (obv., secondary object).’
- (40) (b) Nkisi—messunomuw-á-n-ol olomúss-is wasís-ol.  
 1-past—show.to-DIR-N-OBV.SG dog-DIM child-OBV.SG  
 ‘I showed the puppy (prox., primary object) the child (obv., secondary object).’
- (40) (c) Nkisi—messunomuw-á-n-ol {skinúhsis / \*skinuhsís-ol}  
 1-past—show.to-DIR-N-OBV.SG boy boy-OBV.SG  
 piléyal ’temísol.  
 new-OBV.SG (3)-dog-OBV.SG  
 ‘I showed the boy (prox. / \*obv., primary object) his new dog (obv., secondary object).’
- (40) (d) ’Kisi—messunomuw-á-n-ol skinuhsís-ol piléya-l  
 (3)-past—show.to-DIR-N-OBV.SG boy-OBV.SG new-OBV.SG  
 ’temís-ol.  
 (3)-dog-OBV.SG



‘He (prox.) showed the boy (obv., primary object) his new dog (obv., secondary object).’

Since the primary object *wásis* ‘child’ in (40a) outranks the secondary object *olomussisol* ‘puppy’, ‘child’ must be the controller of obviation for ‘puppy’ here. Accordingly, ‘child’ is proximate, while ‘puppy’ is obviative. In (40b), the grammatical relations of these two nominals are reversed, so ‘puppy’ is now the controller of obviation for ‘child’; the former is now proximate and the latter obviative. In (40c), the primary object *skinúhsis* ‘boy’ outranks the secondary object *piléyal ’temisol* ‘his new dog’, so ‘boy’ controls obviation for ‘dog’. This relationship is also guaranteed by the fact that ‘boy’ is coreferent with the possessor of ‘dog’: The possessor controls obviation for the possessed head. Note that ‘boy’ cannot be marked obviative in this example: ‘Boy’ cannot be secondary to ‘dog’, and there is no other third-person referent in the context that could control obviation for ‘boy’. In (40d), by contrast, there is a (null) third-person subject, which is proximate. This subject controls obviation for the primary object ‘boy’, which is therefore obviative. Marking ‘boy’ as obviative does not conflict with its status as coreferent with the possessor of ‘dog’: Nothing prevents an obviative referent from serving as a controller of obviation for another obviative referent.



‘Everyone’<sub>s<sub>i</sub></sub> mother hid her<sub>i</sub> doll from me.’

(literally, ‘Her<sub>i</sub> mother hid everyone’<sub>s<sub>i</sub></sub> doll from me.’)

- (41) (b) N-kosicíy-a **psí=te** **wèn** [s tamà **w-ikuwóss-ol**  
 1-know-DIR all=EMPH someone where 3-mother-OBV.SG  
 n-kisi—kata-kú-n-ol ’t-amsqocephkán-ol].  
 1-past—hide.from-INV-N-OBV.SG 3-doll-OBV.SG  
 ‘I know where everyone’<sub>s<sub>i</sub></sub> mother hid her<sub>i</sub> doll from me.’

All restrictions on obviation are met in (41a). As a noun with a third-person possessor, ‘her mother’ is obviative. This nominal is the subject of ‘hide’, so it outranks the secondary object ‘(everyone’s) doll’.<sup>20</sup> Thus, ‘her mother’ controls obviation for ‘doll’, and the latter must also be obviative. The possessor ‘everyone’ is a second controller of obviation for ‘doll’. Nothing requires ‘everyone’ to be obviative, however, and since ‘everyone’ is coreferent with the possessor of ‘mother (obv.)’, it is free to be proximate. (Typically, there is one proximate referent in any context; here ‘everyone’ is selected.) Contrary to Bruening’s assertions concerning binding and c-command, ‘everyone’ within the secondary object in (41a) is free to bind the possessor of the subject of ‘hide’ (‘mother’).

The same obviation relations obtain in (41b). The possessor ‘everyone’ controls obviation for ‘her mother’ and ‘her doll’; the subject ‘her mother’

controls obviation for the secondary object ‘her doll’. Once again ‘everyone’ is free to be proximate. Since all restrictions on obviation are met, the sentence is perfectly acceptable—with the reading that Bruening would exclude, on which the raised NP ‘everyone’ binds the possessor of the complement subject ‘her mother’.

I conclude that the argument that Bruening (2001, 2009) seeks to formulate on the basis of conditions on binding in raising structures is based on an erroneous understanding of the restrictions that govern the distribution of proximate and obviative nominals. Once these restrictions are clarified, Bruening’s proposed argument dissolves.

### 6.3 *Interrogative complements to inverse raising verbs*

On the account proposed in Bruening 2001, the way raising sentences are derived varies according to the type of inflection that the matrix verb receives; see the discussion in 4.1. In sentences with a direct verb form in the matrix clause (suffix *-a*), the raised nominal is extracted from a position within the complement and moved to a Spec position at the periphery of this clause. In sentences with an inverse verb form in the matrix (suffix *-ku-* or a variant), the seemingly raised nominal is instead directly generated in a complement Spec position, where it binds a null pronoun within the complement. Recall that, for Bruening, a verb receives inverse inflection when its object undergoes an A-movement operation

that shifts it into a position higher within the clause than the subject (although subsequent scrambling may reverse this order again). A nominal in Spec position in the complement of a raising verb may undergo inverse formation, thereby moving into the matrix, just in case it was directly generated in a peripheral location in the complement. (Since a nominal that is directly generated in a Spec position is interpreted as an argument of the complement predicate, it evidently occupies an A-position. Thus, moving such a nominal into the matrix clause does not involve improper movement, the movement of a nominal from an A-bar to an A-position.)

Bruening (2009: 442) argues that the postulated distinction between raising sentences with direct and inverse forms in the matrix finds support from a restriction on the distribution of *wh*-words: He claims that the matrix clause in a raising sentence must be direct and cannot be inverse when the agreeing nominal is a complement *wh*-phrase. He offers the example in (42) in illustration.

- (42) \*Piyél-ol        'kociciy-úku-l        wèn    kíl        kisi—tókom-ot.  
 Peter-OBV.SG (3)-know-INV-OBV.SG    who    you.SG    past—hit-2SG/3  
 'Peter knows who you (sg.) hit.' (after Bruening 2009: 442, example 29a)

Bruening reasons that (42) is excluded because *wèn*, as a *wh*-word, must have been shifted into an A-bar position in the complement. Moving this NP again into

the matrix via inverse formation would mean moving it into an A-position, a case of improper movement.

As it turns out, (42) is indeed unacceptable, but not for the reason that Bruening supposes. What is wrong with this sentence (at least in the absence of some appropriate discourse context) is again a matter of the conditions that govern obviation. As the matrix subject, ‘Peter’ is the most natural topic in (42), so this NP would be expected to be proximate. There is no discourse motivation for taking ‘someone’ to be topical here, and thus proximate, while taking ‘Peter’ to be secondary, and thus obviative.

We can adjust the expected obviation status of the subject and object in this sentence by instead choosing a possessed subject whose possessor is coreferent with *wèn*, such as *wikuwóssol* ‘his mother’, with ‘his’ referring to ‘someone’. As we have noted, a possessor always controls obviation for the possessed noun, so ‘his mother’ will now be obviative with respect to ‘someone’. With motivation supplied in this way for the appearance of an obviative subject, the conditions for the use of an inverse verb form obtain: An obviative subject *wikuwóssol* ‘his mother’ acts on a proximate object, the latter a null pronoun coreferent with the possessor of the subject and with *wèn* ‘someone’ in the complement. The raising sentence (43) that we obtain in this way is judged by my consultants to be entirely natural.

- (43) W-ikuwóss-ol      **'kosiciy-úku-l**      e<sub>i</sub> [s wèni      kíl  
 3-mother-OBV.SG (3)-know-INV-OBV.SG      who      you.SG  
 kisi—tókom-ot].  
 past—hit-2SG/3  
 'His<sub>i</sub> mother knows who<sub>i</sub> you hit.'

Note that the matrix verb here is inverse and that its inflection is determined by a *wh*-word in the complement: This is precisely the configuration that Bruening (2009: 442) claims is excluded. I conclude that the constraint on the distribution of *wh*-words that Bruening (2009) seeks to use as an argument for his movement analysis of raising dissolves upon closer examination.

#### 6.4 *A constraint on extraction from the complements of raising verbs*

Bruening (2001) observes that only certain positions in raising structures may be targets of extraction in *wh*-questions. He formulates the constraint involved as follows: 'it is possible to do *wh*-movement out of the complement of a raising to object verb, but in such a case the verb *must* agree with the *wh*-phrase that is extracted' (p. 304, emphasis in original). Essentially the same constraint is noted for Innu-aimûn by Branigan and MacKenzie (2002: 402). The examples in (44) illustrate the effect in question:

(44) (a) **Wèn** wewitahám-**ot** eli—apsakíy-uk?

who remember-2SG/3 thus—go.see-1/3

‘Who do you remember that I went to see?’

(44) (b) \***Wèn** wewitahám-**i-hin** eli—apsakíy-uk?

who remember-1-2SG thus—go.see-1/3

‘Who do you remember (about me) that I went to see?’

In (44a), the verb *wewitahámot* ‘you (sg.) remember him’ agrees with *wèn* ‘who’ as its object (conjunct order suffix *-ot* ‘second-person singular on third person’). Extraction of *wèn* is permitted: Per Bruening, *wèn* moves from object position in the complement clause, though the specifier position in this clause, and then into specifier position in the matrix. In (44b), the matrix verb has been inflected for first-person object (suffix *-i*) plus second-person singular subject (suffix *-hin*); compare *eli—kisi—tokom-í-hin* ‘that you (sg.) hit me’. This pattern of agreement would reflect raising of the first-person subject of the complement clause. As Bruening’s generalization would lead us to expect, (44b) is unacceptable: *Wèn* has been extracted from the complement, but the raising verb in the matrix does not agree with it.

Bruening’s explanation for the impossibility of extraction from the complement in cases like (44b), where the raising verb fails to agree with the moving *wh*-word, is based on the theory of PHASES advanced in Chomsky 2000,



together with a principle of ECONOMY derived from Pesetsky and Torrego 2001.<sup>21</sup> Bruening assumes Chomsky's theory of phrase structure, which postulates a projection  $\nu$ P that constitutes a layer of structure between VP and TP (= S). Features are assumed to 'drive' movement in the sense that certain heads bear features that must be 'checked' against the features of certain phrases by moving the phrases to designated positions with respect to the heads. Bruening assumes in particular that there is a feature [wh] that occurs on the  $\nu$  head of  $\nu$ P as well as on (matrix and complement) C. This feature 'draws the wh-phrase to the edge of the  $\nu$ P phase, since it must move on to matrix CP' (Bruening 2001: 305). This step in the derivation is necessary, since movement out of  $\nu$ P can only take place via the edge of this projection, given Chomsky's Phase-Impenetrability Condition (2000: 108), which limits extraction out of projections that are designated as phases to peripheral constituents. The head of  $\nu$ P is assumed to have not only the [wh] feature that needs checking, but also a set of argument features (A-features) that must be checked. The latter are involved in specifying relationships between a verb and its arguments. Feature checking takes place through various applications of the matching process known as Agree.

This is where economy comes in. Following Pesetsky and Torrego 2001, Bruening hypothesizes that 'one instance of Agree, checking more than one feature, is more economical than multiple instances of Agree, each checking only one feature' (Bruening 2001: 305). Since the head of  $\nu$ P must check both its [wh]

feature and its A-features, economy dictates that it should do so through an Agree operation with a nominal which will make it possible to accomplish both ends at the same time, if this is possible. Where a *wh*-expression is undergoing extraction, it functions as just such a nominal: As both a *wh*-expression and an argument, it can check both the [wh] feature and an A-feature of *v* by moving to the edge of *v*P. Thus, economy dictates that *v* should Agree just with the moving *wh*-expression and not also with a distinct raised NP. It follows that only the *wh*-expression may be raised into a position in which the matrix verb can agree with it, given that extraction takes place from the complement clause. No other argument of the complement verb may be raised if *wh*-movement into the matrix takes place.<sup>22</sup>

Consider, however, how Bruening's examples may be analyzed under the alternative proposal that we have been entertaining, according to which a raising structure actually involves a verb that takes two arguments: an NP object and a clausal complement that (typically) includes a null NP coreferent with the matrix object. The examples in (45) may serve to illustrate; compare Bruening (2001: 177, examples 435a, b).

- (45) (a) **Wènì** kíl      piluwitahám-ot tì [s eli—kisi—komutonóm-uk eì]?  
 who    you.SG    suspect-2SG/3                    thus—past—rob-1/3  
 'Who do you suspect (about him) that I robbed?'

- (45) (b) \***Wèn** kíl      piluwitahám-i-yin **e** [s eli—kisi—komutonóm-uk **t<sub>i</sub>**]?  
           who you.SG suspect-1-2SG                    thus—past—rob-1/3  
           ‘Who do you suspect (about me) that I robbed?’

On the non-movement account of raising that I have proposed, the verb ‘suspect’ in (45a) takes an NP object, plus a complement clause that includes a null pronoun *e* that is coindexed with the matrix object. There is no reason to suppose that *e* is the questioned constituent here. In fact, it seems reasonable to suppose that the questioned constituent is the matrix object, indicated in (45a) by *t*. In (45b), on the other hand, the matrix object must be a null first-person pronoun in the position marked *e*, since the matrix verb is inflected for first-person object. Thus, the *wh*-word *wèn* ‘who’ can only have been extracted from the complement position marked *t*. Note that extraction is blocked here.

A simple account of the blocking of extraction in (45b) now becomes available: Extraction is blocked from the sentential object of a verb of cognition. In particular, the clausal object of a raising verb is an island.<sup>23</sup> To see that this line of reasoning is on the right track, consider the examples in (46).

- (46) (a) **Wèn<sub>i</sub>** **wewitahám-ot**      **t<sub>i</sub>** [s **e<sub>i</sub>** kisi—komutonóm-a-t  
           who remember.TA-2SG/3                    past—rob-DIR-3AN

Piyél-ol]?

Peter-OBV.SG

‘Who do you remember (TA) robbed Peter?’

(46) (b) \***Wèn wewitahát**-om-on [s **t<sub>i</sub>** kisi—komutonóm-a-t

who remember.TI-TH-2SG past—rob-DIR-3AN

Piyél-ol].

Peter-OBV.SG

‘Who do you remember (TI) robbed Peter?’

(46) (c) **Wén-ili** Asséloma nút-o-k-il [s ’temís-ol

who-OBV.SG Samuel hear.TI-TH-3AN-OBV.SG (3)-dog-OBV.SG

etoli—tqatuwam-á-c-il **t<sub>i</sub>**]?

ongoing—climb.on-DIR-3AN-OBV.SG

‘Who<sub>i</sub> did Sam hear (TI) that his dog was climbing on t<sub>i</sub>?’

The matrix verb in (46a) is *wewitaham*- ‘remember’, an animate-object (TA) form. Bruening’s economy theory of extraction is compatible with this example: On his account, *wèn* is extracted from the position indicated by *e*, checking both the [wh] feature and an A-feature of the complement verb at the edge of the *vP* phase in the complement before undergoing further attraction to the matrix C. This example is also compatible with the alternative analysis that takes the clausal object of a raising verb to be an island: On the non-movement

account of raising, *wèn* has been extracted here from matrix object position, not from a site within the complement clause.

Consider next the fact that (46b) is not acceptable, even though no raising has taken place here and the matrix verb is an inanimate object (TI) form, which agrees with the clausal complement as its object. The crucial point is that *wèn* ‘who’ has been extracted from the complement. The unacceptable situation that results is one in which extraction takes place from within the complement without agreement between the matrix verb and the moving nominal. This situation can be ruled out on economy grounds if we assume (i) that matrix *v* must check its [wh] feature against the moving *wh*-word, (ii) that matrix *v* must enter into an Agree relation with a nominal in Spec of Comp regardless of how that nominal reaches this Spec position, and (iii) that it is preferable (because more economical) to achieve these two relations through an Agree operation that targets a single NP. These assumptions have the consequence that matrix ‘remember’ in (46b) must agree with ‘who’ (as it moves through Spec of Comp in the complement) and not with its clausal complement as its object, which in turn has the effect of excluding the TI verb form that appears in this example.

The problem with this account is that it will rule out ALL *wh*-movement from within the complement of a TI verb. A *wh*-word passing through Spec of Comp as it is extracted from such a complement will have exactly the same status as the moving *wh*-word in (46b). (Recall that no raising takes place in the latter

example.) As we see in (46c), extraction from the complement of a TI verb is NOT blocked in the general case: In this example, *wénil* ‘who (obv.)’ has been extracted from the sentential object of TI *nut-* ‘hear’, rather than from the complement of a verb of cognition. I conclude that Bruening’s economy theory does not correctly delimit the class of cases in which extraction can take place from a complement clause. What we need instead is a principle that blocks extraction from the clausal objects of verbs of cognition, which include but are not limited to raising verbs: The clausal objects of verbs of cognition are islands.<sup>24</sup>

Further evidence that economy considerations are not responsible for the blocking effects that Bruening points to comes from examples in which the extracted *wh*-word corresponds not to an argument of the complement verb, but rather to the possessor of such an argument. Consider the examples in (47) in this connection.

- (47) (a) **Wèni** kil piluwitahám-ot ti [s eli—kisi—miluwì  
 who you.SG suspect-2SG/3 thus—past—give.away-(1SG)  
 ei ’t-olayyektákon-ol]?  
 3-toy-IN.PL  
 ‘Whose toys did you suspect (about him) that I gave away?’  
 (literally, ‘Who<sub>i</sub> did you suspect about him that I gave away his<sub>i</sub> toys?’)



- (47) (b) \***Wèn<sub>i</sub>** kíl piluwitahám-i-yin e [s eli—kisi—miluwì  
 who you.SG suspect-1-2SG thus—past—give.away-(1SG)  
**t<sub>i</sub>** 't-olayyektákon-ol]?  
 3-toy-IN.PL  
 ‘Whose toys did you suspect (about me) that I gave away?’  
 (literally, ‘Who<sub>i</sub> did you suspect about me that I gave away his<sub>i</sub> toys?’)

Here as before, extraction of *wèn* is only possible when the matrix verb agrees with it: in (47a), but not in (47b). But *wèn* is not an argument of the complement verb ‘give away’ in (47b); it is the possessor of the object of this verb. Thus, the *v* head of *vP* does not bear any A-feature that indexes this possessor. Considerations of economy in the complement will therefore not block simultaneous extraction of *wèn* and raising of the first-person subject of ‘give way’ out of the complement clause in (47b). Nor can we say that economy considerations in the matrix will block extraction here by requiring that the matrix verb should agree with an NP that reaches Spec of Comp, regardless of how it gets there. We have already seen that such a principle would incorrectly exclude ALL *wh*-movement out of the complement of a TI verb.

On the other hand, the data in (47) are expected if (i) the extracted *wh*-word in (47a) is a matrix object and (ii) the clausal object of a verb of cognition is an island to extraction. Since nothing blocks extraction from matrix object



position, (47a) incurs no violation of the proposed island condition. In (47b), by contrast, *wèn* can only have been extracted from within the complement clause.

This is disallowed.

I conclude that Bruening's economy theory of the restrictions on extraction out of raising structures in Passamaquoddy fails to generalize to the full range of cases. An account formulated within the proposed non-movement theory of raising appears more promising. Of course, it remains to be explained just WHY the clausal object of a verb of cognition should be an island to extraction. The answer to this question must be left for further research.<sup>25</sup>

## 7. INTERROGATIVE COMPLEMENTS

We observed in 3.2 that interrogative complements occur in both the raising construction and its LDA counterpart. Additional examples illustrating these possibilities are given in (48).

- (48) (a) *Stíti=te*                      *n-sesomitahám-a-k*                      **nìkk**  
 constantly=EMPH    1-wonder.about-DIR-PROX.PL    those.PROX  
**skinuhsís-ok**<sub>i</sub>    toké    [kèq    mehsi-                      **e**<sub>i</sub>  
 boy-PROX.PL    now    what    for.reason  
 -komutonom-á-hti-t                      pahtoliyás-ol].  
 -steal.from-DIR-PROX.PL-3AN    priest-OBV.SG

‘I’m always wondering now why the boys stole from the priest.’

(48) (b) *Stíti=te*      *n-sesomitahám-a-k*      *e<sub>i</sub>* *toké*

Constantly    1-wonder.about-DIR-PROX.PL    now

[*kèq* *mehsi-*      *nìkk*      *skinuhsís-ok<sub>i</sub>*

what for.reason- those.PROX boy-PROX.PL

-komutonom-á-hti-t      *pahtoliyás-ol.*

-steal.from-DIR-PROX.PL-3AN priest-OBV.SG

‘I’m always wondering now why the boys stole from the priest.’

In (48a), the raised nominal *nìkk skinuhsísok* ‘the boys’ can only be a constituent of the matrix clause, since it is bracketed by matrix material: the verb ‘wonder about’ and an adverb ‘now’ that modifies this verb. In (48b), ‘the boys’ occupies a position within the complement clause, but controls proximate plural object agreement (suffix *-k*) on the matrix verb.

What is particularly striking is the fact that a nominal question word may trigger LDA. A typical example is shown (49), repeated from (11) in section 2.

(49) *Máli* *wewitahám-a-l*      *e<sub>i</sub>* [*wèni*

*Mary* (3)-remember-DIR-OBV.SG      who

*kisi—nis-kám-ot*].

past—together-dance.with-2SG/3

‘Mary (prox.) remembers who (prox.) you (sg.) danced with.’

Here the question word *wèn* ‘who (prox.)’ can only be a constituent of the complement clause, since general principles insure that only one of the co-arguments of a predicate can be proximate. The question word must be located within the complement clause, since it is located in a distinct obviation domain from the matrix subject.

Note that *wewitahámal* appears to agree with *wèn* in (49), a case of LDA. But in fact it is its null object that the verb agrees with, rather than the question word itself: The verb is marked for obviative object agreement, while the question word is proximate. Since the matrix object and the complement NP it is coindexed with occur in different domains for the assignment of obviative status, the former is free to be obviative while the latter is proximate. Conclusive evidence that there are two related NP positions in sentences like (49) is presented below in 7.1.

I conclude that a question word can trigger LDA in the same way that any other NP can: via coindexation with an object NP in the matrix. But what about raising? Can a question word play the role of a raised NP? Examples like (50) would seem to suggest that this is possible.

- (50) Píl ’kocicý-a-l [NP<sub>a</sub> wén-ili] toké  
 Bill (3)-know-DIR-OBV.SG someone-OBV.SG now



Bill knows the answer to an IMPLICIT question about Peter's activities. This fact accounts for consultants' willingness to accept an English translation that includes a complement question. I conclude that a *wh*-expression may occur in the complement of a raising verb and trigger apparent LDA, but it is not possible for a *wh*-expression to appear as the object of a raising verb and take scope in the verb's complement clause.

### 7.1 *Question words in long-distance agreement structures*

Branigan and MacKenzie (2002: 394) discuss a phenomenon they call cross-clausal agreement (CCA) in Innu-aimûn, a Central Algonquian language of Quebec and Labrador (Canada), which parallels Passamaquoddy LDA in certain respects. They argue against an analysis of CCA that would postulate a matrix object (which they term a PROTHETIC object) distinct from the complement NP that appears to govern matrix object agreement in the construction. One argument they present is based on the observation that Innu-aimûn CCA, like Passamaquoddy LDA, may involve agreement with a question word that takes scope in the complement, as in the Innu-aimûn example in (51).

- (51) Nîn apu tshissît-ak auen uieueshtât utshîmâua utâpânnu.  
 I not remember-1/3 who fixed boss truck

‘I don’t remember who fixed the boss’s truck.’ (Branigan and MacKenzie 2002: 394, example 24c)

Branigan and MacKenzie (2002: 394) suggest that there can be ‘no coherent interpretation for a prothetic pronoun’ in the matrix object position of such a sentence, since this would require coindexation between a (null) pronoun and a question word. They compare the unacceptable English example in (52).

(52) \*I don’t remember about **him<sub>i</sub>** **who<sub>i</sub>** fixed the boss’s truck.

Bruening (2001: 270) makes the same argument in discussing the following Passamaquoddy example:

(53) Píyel ma=te wewitaham-á-wi-yil  
 Peter not=EMPH (3)-remember-DIR-NEG-OBV.SG  
 wén-il kisi—míl-uk atomúpil.  
 who-OBV.SG past—give-1/3 car

‘Peter doesn’t remember who I gave a car to.’ (after Bruening 2001: 270, example 705)

He comments that ‘there is no coherent two-argument interpretation in such cases’; compare English \*‘Piyel doesn’t remember about him<sub>1</sub> who<sub>1</sub> I gave a car to’ (p. 270).

The problem with this argument is that there indeed ARE two NP positions that may be occupied by a pronoun and a coindexed question word in a sentence like (53). To see this, consider (54). Here both positions are filled: The matrix verb of cognition takes an overt object (either an indefinite pronoun or a demonstrative) that is coindexed with the question word that introduces the complement question.

- (54) Máli {**wén-ili** / **níhtoli**}                      wewitahám-a-l  
 Mary someone-OBV.SG / that.OBV.SG (3)-remember-DIR-OBV.SG  
 [**wèni** elitahási-yin      kisi—nis-kám-uk                      **ti**].  
 who think.thus-2SG past—together-dance.with-1/3

‘Mary remembers who you (sg.) thought I danced with.’

Here *wénil* in the matrix is presumably an indefinite pronoun rather than an interrogative form, since it may be replaced by the non-interrogative (demonstrative) pronoun *níhtol* ‘that one (obv. sg.)’. On the other hand, *wèn* can only be an interrogative pronoun in the complement, since it is involved in a long-distance dependency: It is interpreted in the position indicated by *t*, as the object of ‘dance with’. In any case, it seems clear that we are forced to a two-argument

analysis of LDA with question words by examples such as this, despite Bruening's (and Branigan and MacKenzie's) misgivings.

## 7.2 *Semantic interpretation*

So how can we account for the interpretation of examples in which a question word appears to trigger LDA? To answer this question, we need to place it in the larger context of the interpretation of raising and LDA structures.

On the analysis of these constructions that I have been pursuing, a verb of cognition takes two complements, an NP and a clause. The verb assigns a thematic role to its NP object that we may characterize as 'object of the subject's cognition' or 'entity about which the subject possesses information'. The complement clause specifies the information in question. Consider the examples in (55).

- (55) (a) N-kocicíy-a Súshep [s eli—tol-okehkím-ut  
 2-know-DIR Joseph thus—ongoing-teach-UNSPEC/3  
 Muselènk.  
 Moose.Island.LOC  
 'I know that Susehp is going to school in Eastport, ME.'

- (55) (b) N-kocicíy-a-k muwinúw-ok [s kèq  
 1-know-DIR-PROX.PL bear-PROX.PL what



kis-ot-om-úhti-t.

past-eat-TH-PROX.PL-3AN

‘I know what the bears ate.’

The declarative complement in (55a) makes a statement that specifies the information that the subject knows about Joseph: (55a) means, ‘I possess information about Joseph, namely that he is going to school in Eastport.’ In (55b), the information that the subject is described as knowing is instead the answer to an indirect question: (55b) means, ‘I possess information about the bears, namely the answer to the question of what they ate.’ So here it is the answer to a question that is about the referent of the matrix object.

The matrix verb may agree with a question word in the complement, as in (56), although agreement in a case of this type is indirect.

- (56) Tihtíyas ma=te wewitaham-á-wi-yil ei [s wén-ili  
 Tihtiyas not=EMPH remember-DIR-NEG-OBV.SG who-OBV.SG  
 ámsqahs kisaqosómuw-iht kiwhosù].  
 First cooked.for-OBV/PROX muskrat-(OBV.PL)

‘Tihtiyas does not remember who first cooked muskrats for her.’ (after

Bruening 2001: 177, example 434)

On the account of LDA proposed in section 5, matrix object agreement in (56) is actually with the null complement NP indicated by *e*. The indirect question ‘who first cooked muskrats for her (= Tihtiyas)’ is about the referent of this null object in the sense that answering this question serves to identify the person *x* that the speaker is saying that Tihtiyas does not remember—Tihtiyas’s object of cognition. Thus, the example as a whole means, ‘Tihtiyas does not remember information about some person *x*, namely the answer to the question, which person *x* first cooked muskrats for her’.

In the case of either a declarative or an interrogative complement in the raising or LDA construction, what it means for the complement clause to specify information about the matrix object is simply that the RESTRICTION associated with the complement S includes a PRD that in turn includes a function of the index of the matrix object.

#### 8. THE RAISED NP MAY REPRESENT A SUBSET OF ITS CORRESPONDENT

In typical examples of the raising and LDA constructions, the matrix object and the corresponding NP (or null argument) in the complement clause are identical in reference. This is not always the case, however. It is also possible for these two expressions to refer to distinct sets of individuals, with the matrix NP representing a subset of the referents of the argument in the complement clause (Bruening 2001: 268–270). Examples of this type pose a serious challenge to any movement

theory of raising, as Bruening has in fact noted (2001: 268). I argue here that his proposed solution to this problem is not viable.

Attested examples of the type in question involve a pronoun, overt or null, as the NP in the complement clause. Consider (57) in this connection.

(57) Kosićy-ul (kìl) [eli—toli—nomiy-úti-yeq (kiluwàw)

(2)-know-1/2 you.SG thus—location—see-RECIP-2PL you.PL

Utoqehkìk].

Grand.Lake.Stream.LOC

‘I know about you (sg.) that you (pl.) are seeing each other (romantically)

in Grand Lake Stream.’

Here the matrix verb is inflected for a second-person singular object, which need not be overtly expressed. Meanwhile the corresponding NP in the complement clause, which is also optional, is plural. The referent of the matrix object is one member of the set of referents of the corresponding complement NP.

### 8.1 *Apparent raising of a subset of the target NP: An analysis*

We can understand examples like (57), I suggest, in the following terms. In a raising or LDA construction, the complement clause must be ABOUT the referent of the matrix object NP. Formally this means that the RESTRICTION set of the

complement S must include a PRD that is predicated of the index of the object NP. If the S includes an NP that denotes a set of entities, one of which is the referent of the object NP, then the S is about this referent. The object NP's index has been restricted by a predication in the RESTR set of S, as required. But if the object NP has a plural referent and nothing in the S's RESTR set is predicated of that plural referent, then the requirements on this RESTR set are not met. S is not about the object NP in the sense in question.

In developing this analysis, it is useful to consider examples that involve what Schwartz (1988) calls the PLURAL PRONOUN CONSTRUCTION. In formations of this type in various languages, a plural pronoun is used together with a prepositional phrase or another NP that partly specifies its reference. In Passamaquoddy the construction takes the form of an NP juxtaposed to a plural pronoun: *kiluwàw kitàp* ~ *kitàp kiluwàw* 'you (sg. or pl.) and your (sg.) friend', with *kiluwàw* 'you (pl.)' and *kitàp* 'your (sg.) friend'. The modifying NP is presumably an adjunct to the pronoun, since it can either precede or follow it.

In (58), we have a raising sentence with *kil* 'you (sg.)' as the raised NP and the plural pronoun construction *kiluwàw kmóssis*, literally 'you (pl.) your older sister', but understood here as 'you (sg.) and your older sister', as the related NP in the complement clause.

- (58) Mèc=ote k-wewitahám-ol (**kìl**) pemkískahk  
 still=EMPH 2-remember-1/2 you.SG today  
 [s eli- **kiluwàw k-móssis** mecimí=te -wicuhkém-eq  
 thus- you.PL 2-older.sister always=EMPH -help-2PL  
 n-íkuwoss túci ewasisuwi-yàn].  
 1-mother then be.child-1SG-(PERF)  
 ‘I still remember about you (sg.) today that you (sg.) and your (sg.) older  
 sister always helped my mother when I was a child.’

Here *kiluwàw k-móssis* ‘you and your older sister’ in the complement S refers to a set that includes the referent of the matrix object *kìl* ‘you (sg.)’. The index of *kìl* is restricted by the PRD introduced in S by the plural pronoun construction, so the raising structure in (58) is licensed.

A second example may serve to indicate that this account is on the right track. In (59), a third-person raised nominal is interpreted as representing a subset of a second-person plural pronoun in the complement clause. I represent this interpretation here by writing the index of ‘this man’ as *i* and that of ‘you (pl.)’ as *i+2*, with ‘2’ indicating reference to the addressee.

- (59) N-kosicý-a **wòt skitàp<sub>i</sub>** [s eli—toli—nomiy-úti-yeq  
 1-know-DIR this.AN man thus—location—see-RECIP-2PL

(**kiluwàw**<sub>i+2j</sub>) Utoqehkìk].

you.PL            Grand.Lake.Stream.LOC

‘I know about this man that you and he are seeing each other  
(romantically) in Grand Lake Stream.’ (after Bruening 2001: 269,  
example 700c)

The second-person plural pronoun *kiluwàw* ‘you (pl.)’, under the indicated interpretation, introduces a PRD in S that restricts the index of the matrix object *wòt skitàp* ‘this man’. Thus, S counts as being about ‘this man’, and raising is licensed.

If the relationship between the matrix object and the corresponding argument in the complement is reversed, so that the complement NP represents a subset of the matrix NP, raising is not licensed. This is the situation in (60).

(60) \*Kosiciy-úl-pa    (**kiluwàw**) [s eli-    (**kìl**)    -macahá-yin].

(2)-know-1/2-2PL    you.PL            thus-    you.SG    -leave-2SG

‘I know about you (pl.) that you (sg.) are leaving.’

Since ‘you (sg.)’ in the complement S does not introduce a PRD on the index of ‘you (pl.)’ in the matrix, S is not about the matrix object as required.

## 8.2 *Can the movement theory handle the facts?*

Up to this point I have considered the facts introduced in this section only from the point of view of the analysis of raising and LDA developed in section 5. What about the alternative analysis that postulates movement as the mechanism of raising?

In fact, it is quite difficult to imagine how a movement analysis can accommodate examples like (57), repeated here as (61). The essential assumption of Bruening's proposal is that an NP that is initially located within the complement clause in such an example is shifted into a peripheral position, where it can trigger matrix object agreement. But in a case of the type under consideration, the agreeing nominal in the matrix co-occurs with a distinct expression (overt or null) in the complement, and the two are distinct in reference. Not only does the occurrence of one not preclude the occurrence of the other, but the first cannot be analyzed as a simple copy of the second, as some kind of copy theory of movement might postulate.

(61) Kosićy-ul (kìl) [eli—toli—nomiy-úti-yeq (kiluwàw)

(2)-know-1/2 you.SG thus—location—see-RECIP-2PL you.PL

Utoqehkìk].

Grand.Lake.Stream.LOC

‘I know about you (sg.) that you (pl.) are seeing each other (romantically)  
in Grand Lake Stream.’

Noting this problem for his account, Bruening (2001: 269) offers two observations. First, he takes note of the Plural Pronoun Construction, in which, as we have seen, a type of conjunction may be expressed by stationing a nominal as an adjunct to a pronoun. While this construction does indeed involve a relation between a pronoun and an adjunct that expresses a subset of its referents, it is hard to see how this fact contributes to a solution of the problem for the movement theory that is posed by examples like (61). There is simply no position for *kil* to have raised from in this example, since the expression we would need to postulate to provide such a source is *\*kiluwàw kil* ‘you (pl.) including you (sg.)’, which is not a felicitous plural pronoun construction. Similarly, the “raised” nominal *kil* ‘you (sg.)’ in (58) above corresponds to the plural pronoun construction *kiluwàw k-móssis* ‘you and your older sister’ in the complement, which does not include *kil* as a constituent. Again, there is no source in the complement from which the ‘raised’ nominal could have been copied.

Bruening (2001: 269) takes a different tack. He notes a typologically unusual type of agreement in certain relative clauses in Passamaquoddy which he takes to suggest that ‘movement’ in this language may target just a subset of the REFERENTS of the ‘moved’ NP, rather than a pronoun as such. Naturally, if such a



subset-movement operation can be shown to be available, we will have license to suppose that the matrix object *kil* ‘you (sg.)’ in (61) is derived by copying just a subset of the referents of *kiluwàw* ‘you (pl.)’.

The type of relative clause agreement that Bruening (2001) points to in this connection is illustrated in (62); compare Bruening’s example (702) (p. 269).

- (62) N-itàp ’kisi—maton-óku-l níhtol skitápi-yil  
 1-friend (3)-past—attack-INV-OBV.SG that.OBV.SG man-OBV.SG  
 mecimí=te **nacitaham-ti-htí-c-il.**  
 always=EMPH hate-RECIP-PROX.PL-3AN-OBV.SG

‘My friend was attacked by that man he was always enemies with  
 (literally, that he and (that man) always hated each other).’

Here the verb *nacitaham-ti-htí-c-il* ‘the one that he and someone hate each other’ is a reciprocal form (suffix *-ti-*) which is inflected for third-person proximate plural subject (suffix *-hti-*), but which is also inflected in agreement with the relativized constituent (suffix *-il* ‘obviative singular’), the latter representing one member of the set of participants reflected by subject agreement. The obviative participant (‘that man’) is one of a pair of referents (‘that man’ and his enemy) who are said to have always hated each other. Thus, Bruening reasons,

relativization functions in this case to extract just a subset of the referents of a plural subject.

In fact, however, the obviative singular referent in (62) is a syntactic argument distinct from the syntactic subject of the verb. Both are singular; only subject agreement is plural, reflecting the whole set of participants in the action that the verb describes. There is a class of verbs in Passamaquoddy that have argument structures and agreement with just these properties. They select a subject that represents a subset of a group of individuals who are involved in a joint activity, but also select an object that represents a distinct subset of this group. Subject inflection is then for the combined person and number of the subject and object (the whole set of participants in the activity named by the verb), while object inflection indexes only the properties of the object. This construction is known as SPLIT COORDINATION (Bruening 2004, 2006; LeSourd 2013). Its function is to foreground certain participants in a joint activity, while backgrounding others.

In the independent indicative mode (used in main clauses), verb inflection in the split coordination construction reflects both the subject and the object arguments of a participating verb. The referent picked out by object inflection represents a subset of the set of referents picked out by subject inflection. Example (63) illustrates.

- (63) Mecimí=te nòt ktaqhómuhs **nacitaham-tí-ni-ya-l**  
 always=EMPH that.AN old.man (3)-hate-RECIP-N-PROX.PL-OBV.SG  
 nisuwihitíc-il w-ikuwóss-ol.  
 (3)-spouse-OBV.SG 3-mother-OBV.SG

‘That old man was always enemies with his wife’s mother.’

Here *nacitaham-tí-ni-ya-l* ‘they hate each other, he is enemies with him’ is a reciprocal form, as before. Inflection is for third person proximate plural subject (suffix *-ya-*), reflecting the combined features of the subject and the object (‘that old man (prox.)’ and ‘his wife’s mother (obv.)’), and for third-person obviative singular object (suffix *-l*), reflecting just the grammatical categories to which the object (‘his wife’s mother’) belongs.

Since there are two arguments in the split coordination construction, it is entirely possible for one to be relativized independently of the other. This is exactly what we find in examples like (62). The word-final suffix in a relative-clause form like *nacitaham-ti-htí-c-il* ‘the one that he and someone hate each other’ indexes the relativized constituent. But the target of relativization in this case is not a subset of the referents of the syntactic subject. Rather, the target is the object argument of the verb, syntactically independent from the subject argument. Only the agreement markers, not the syntactic arguments, overlap in reference. Nothing in such cases of relativization is comparable to what we find in

raising structures in which the raised NP represents a subset of the corresponding complement NP.

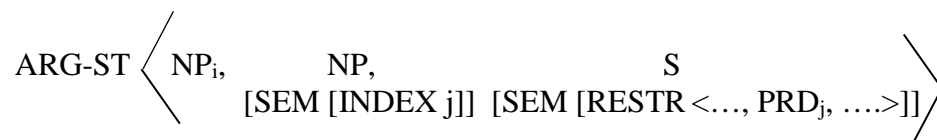
I conclude that the argument against the movement analysis of raising and LDA that was advanced in 8.1 stands. Bruening's proposed operation of subset movement, which would circumvent the problems identified here, finds no support. The lexical analysis of raising and LDA presented in section 5 can readily be extended to handle the cases we have encountered in this section, and must therefore be preferred to the movement alternative.

## 9. CONCLUSIONS

The raising and LDA constructions of Passamaquoddy pose several analytical challenges. In the raising construction, a verb of cognition takes an object whose thematic role appears to be assigned by the verb of its clausal complement. In LDA, the matrix verb appears to be inflected for object agreement with an NP within this complement clause. The apparent thematic position of the matrix object in the raising construction may be located arbitrarily far into the complement clause. The location of the NP that triggers matrix agreement in LDA may likewise be deeply embedded. The same matrix verbs appear in the two constructions, and indeed examples of the two types are closely parallel. Clearly a unified analysis of the two constructions is called for.

I have argued that these challenges can be met by an analysis that maintains the principle that selection works in a local syntactic domain. The basis for the analysis is an account of the argument structures of the verbs of cognition that appear in the two constructions. I have proposed that these verbs select two complements, an object NP and a clausal complement, as shown for *kociciy-* ‘know’ in (68), repeated from (9) in section 2.

(68) *kociciy-* ‘know’:



On this analysis, a ‘raised’ NP is a true object of the matrix verb. ‘Long-distance’ agreement is actually local, since it is mediated by the matrix object position.

Argument structures like (68) enforce a semantic requirement on any clause that is to occur as a complement in a raising or LDA structure: The S node must include a predication structure PRD in its RESTRICTION that includes a function of an index identical with that of the NP object of the matrix verb. This requirement insures that the complement clause either makes a statement about the matrix object or poses a question whose answer is about the matrix object.

On this analysis, all examples of the LDA construction violate Binding Condition C, since they include a null or overt pronoun in matrix object position

that c-commands and binds a full NP within the complement clause. Examples with full NPs in both matrix and complement positions likewise violate this condition. In fact, however, Condition C does not constrain syntactic structures in Passamaquoddy, as demonstrated in 5.3. The absence of Condition C effects in Passamaquoddy makes the LDA construction possible as an alternative to raising.

It is the Semantic Compositionality Principle (SCP) of HPSG, which insures that all of the semantic restrictions of the daughter nodes in a syntactic structure are shared with the mother node, that accounts for the potential of raising and LDA in Passamaquoddy to create unbounded dependencies. Because the complement clause either makes a statement or poses a question about the matrix object, it includes a PRD in its RESTR that is a function of the index of the matrix object, as (68) requires. Given the SCP, this predication structure may be inherited by the clause in one of two ways. Either there is an NP within the complement clause that co-refers with the matrix object and thus contributes a PRD to the clause that is a function of the same index as that of the object, or else there is a predicate in the complement clause that takes an argument that is coreferent with the matrix object and thus contributes a PRD to the clause which is a function that argument's index.

The constructions we have explored here involve a relation between two arguments: a matrix argument and a coreferential argument within the complement clause. Typically, though not necessarily, either the matrix argument

is expressed as the object NP while the other argument is null, giving the appearance of raising; or the matrix argument is null, giving the appearance of long-distance agreement. But neither movement nor agreement at a distance is actually at work in these constructions.

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## FOOTNOTES

<sup>1</sup> I owe a great debt to Passamaquoddy speakers Estelle Neptune, Wayne Newell, and especially the late Anna Harnois for their assistance with the research on which this article is based. An earlier version of this work was presented at the Twenty-First International Conference on Head-Driven Phrase Structure Grammar, Buffalo, NY, August 2014. I am grateful to the audience at that presentation for helpful comments. I have also profited from many useful suggestions by three reviewers for this journal.

<sup>2</sup> Passamaquoddy is mutually intelligible with the Maliseet language of New Brunswick, Canada. Both dialects are endangered. Leavitt (1996: 1) reports that about 500 fluent speakers of Passamaquoddy and Maliseet together remained at the turn of the century. Tribal leaders indicate that the number has since declined substantially.

<sup>3</sup> The terms Raising and Long Distance Agreement (LDA) are often used interchangeably in the literature on Algonquian syntax. Here I treat the two constructions at issue as distinct for analytical purposes, even though I argue that they should ultimately be seen as reflecting alternative realizations of the same argument structure for any particular verb.

<sup>4</sup> Passamaquoddy material not attributed to other sources is taken from my field notes. Examples are given in a uniform notation, and I have added accent marking if this was lacking in the source. The notation I have employed is a

modified version of a widely used standard orthography: *o* represents /ə/; *u* is /o/; *c* is /č/; *q* is /k<sup>w</sup>/. Phonemic /h/ before a consonant at the beginning of a word is written as an apostrophe. The acute accent indicates a distinctively high-pitched stressed vowel, the grave accent a distinctively low-pitched stressed vowel.

The following abbreviations are used in glosses: 1 first person; 2 second person; 3 third person; 1/2, etc., first-person subject with second-person object, etc.; AN animate; CONT contrast; DIM diminutive; DIR direct; DUBIT dubitative; EMPH emphatic; exc. exclusive; FUT future; IN inanimate; INV inverse; LOC locative; MPL multi-plural (indicates that subject refers to more than two individuals); N suffix *-(o)n(e)-*, with several functions; NEG negative; OBV obviative; PERF perfective; PL plural; POSS possessed; PRET preterite; PROX proximate; RECIP reciprocal; REPORT reportative; SG singular; TA transitive animate; TA+O transitive animate with additional secondary object; TH thematic suffix of transitive inanimate verb; TI transitive inanimate; UNSPEC unspecified subject. Glosses are given in parentheses for morphemes that have no surface segmental shape.

<sup>5</sup> A preverb-verb complex is a type of verbal compound, inflected as a unit (Bloomfield 1962: 202, 214). Such compounds may be discontinuously expressed in Passamaquoddy, as in several other Algonquian languages (see Dahlstrom 1987 on Meskwaki). The components of preverb-verb complexes (and comparable prenoun-noun complexes) are joined by a dash (—) when they are

contiguous. When the complex is discontinuous, the first segment is written with a trailing hyphen and the second segment with a leading hyphen.

<sup>6</sup> A similar construction is found in Blackfoot (Frantz 1978), where a verb meaning ‘want’ may take object inflection in agreement with an NP located within its sentential complement.

<sup>7</sup> The stem *kocicy-* ‘know’ has an alternate form *kosicy-*, used primarily by Passamaquoddy speakers from Indian Township, ME. Related stems vary in the same fashion.

<sup>8</sup> The following abbreviations are used for HPSG terms: ARG-STR Argument Structure; COMPS complements; prop proposition; ref referential; RELN relation; RESTR restriction; s situation; SCP Semantic Compositionality Principle; SEM semantics; SPR specifier, SUBJ subject; SYN syntax; VAL valence. PRD<sub>*i*</sub> abbreviates a predication structure that includes a function of the index *i*.

<sup>9</sup> In this simplified discussion, specifiers are not distinguished from subjects. Recent versions of HPSG distinguish these.

<sup>10</sup> Sag, Wasow, and Bender (2003: 138) use the term ‘predication’ for this concept, but I use ‘predication structure’ to avoid confusion with other senses of the term.

<sup>11</sup> A reviewer points out that one might suppose that a preverb like *eli* and *weci* has been moved into complementizer position when it is stationed at the left

margin of a clause. Such an analysis probably cannot be excluded, but there would seem to be little to recommend it, since there are otherwise no complementizers that occur in the position in question.

<sup>12</sup> Inverse formation, on Bruening's analysis, would place the object in (23) in a position to the left of the subject. To derive the surface order of words in this example on such an account, one or more additional movement operations must be postulated.

<sup>13</sup> An ending is optionally added to the verb(s) in a *wh*-question formed with 'who' or 'what' that indexes the questioned participant. Adding the obviative plural ending *-ihi* to either or both of the verbs in the present example does not improve it, however.

<sup>14</sup> A reviewer suggests that analyzing raising as a lexical process in Passamaquoddy might lead us to expect a reflection of this process in verbal morphology, since many derivational processes are registered in stem morphology. But the absence of a morphological reflection of raising actually comports well with the system of the language. Derivation that changes the status of the primary object of a verb is reflected in stem morphology. For example, possessor raising promotes the possessor of a primary object to primary object status, and a suffix is added to the underlying transitive stem: *tokot-* TI 'hit X' (*'tokotómon* 'he hits it'), but *tokot-omuw-* TA+O 'hit X's Y' (*'tokotómuwan* 'he hits something of the other's'). But when the grammatical relation of the primary



object is not altered in derivation, there is no modification of the stem. Thus, adding an instrumental secondary object to *tokom-* TA ‘hit X’ (*’tókomal* ‘he hits him’) yields an unchanged stem *tokom-* TA+O ‘hit X with Y’ (*’tókoman* ‘he hits him with it’). Deriving a raising verb leaves the grammatical relation of the primary object of the underlying verb unchanged, so no change in stem morphology is expected.

<sup>15</sup> As a reviewer points out, an alternative to formulating the relationship between ordinary transitive verbs of cognition and the corresponding raising verbs as a derivational rule would be to provide lexical entries for verbs of the type *cognitive-transitive-verb-lexeme* that allow for an optional S complement: ARG-ST < NP<sub>i</sub>, NP<sub>j</sub> (, S) >, with S specified as in (29). I have not pursued this approach here since the semantic properties of the nominal complements of raising verbs diverge from those of the objects of the corresponding simple transitive verbs, as discussed below.

<sup>16</sup> Dahlstrom (1995: 9) cites a raising example in Meskwaki in which the raised NP serves as a topic for the complement of a verb of cognition (‘know’), but there is no reference to this NP within the complement clause. An example of this type need not pose a problem for an analysis of raising in Meskwaki along the lines suggested here for Passamaquoddy. Since the topic contributes to the interpretation of the complement clause, we may assume that it likewise contributes a predication structure to the RESTR of this clause. The complement

clause will then satisfy the ‘aboutness’ requirement imposed by the lexical entry of the raising verb ‘know’.

<sup>17</sup> Passamaquoddy is not unusual in this respect. See Lasnik 1989 on acceptable Condition C violations in Thai and Vietnamese; Demirdache 1997 on St’át’imcets (Salishan); and Davis, Waldie, and Wojdak 2007 on Nuuchahnulth (Wakashan).

<sup>18</sup>The form *nisuwihtícil* ‘his or her spouse’ is historically a relative clause: ‘the one who he or she and another are married’. It has been reanalyzed as a noun, but takes both nominal and verbal inflection at the same time: *k-nisuwí-yeq* ‘your (sg.) spouse’ has the second-person possessive prefix *k-* (nominal inflection) and the second-person plural suffix *-yeq* (verbal inflection).

<sup>19</sup> The data reported in this section reflect consultation with three fluent elders over a period of many years. These speakers (one now deceased) also worked with Bruening. Where I report speakers’ judgments that differ from those that he cites, my data reflect rechecking of his published examples, together with additional elicitation.

<sup>20</sup> The verb here is inverse, so its subject figures into the calculation of obviation relations as if it were the primary object, but this fact has no consequences, since the nominal in question still outranks the secondary object.

<sup>21</sup> Although I focus here on particular problems that arise for Bruening’s theory of the observed restrictions on raising constructions in Passamaquoddy, it



‘His<sub>i</sub> older brother skinned the deer that every boy<sub>i</sub> killed yesterday.’

(i.e., ‘Every boy’<sub>s</sub><sub>i</sub> older brother skinned the deer that he<sub>i</sub> killed  
yesterday.’)

Here ‘every boy’ binds the possessor of ‘his older brother’ from within a complex NP island.

<sup>24</sup> Certain verbs that are intransitive in form nonetheless take clausal complements, which I interpret as obliques rather than objects. Extraction is permitted from such oblique sentential complements of verbs of cognition, as shown in (i), where *wénil* ‘who (obv.)’ is extracted from the complement of *litahásu* ‘he thinks thus’.

(i) **Wén-il<sub>i</sub>**    l-itahásu    Píyel [s nemiy-á-c-il            **t<sub>i</sub>]**?  
who-OBV.SG thus-think-(3) Peter    see-DIR-3AN-OBV.SG

‘Who did Peter think that he saw \_\_\_?’

<sup>25</sup> Branigan and MacKenzie (2002: 402) propose deriving restrictions on extraction in Innu-aimûn parallel to those observed in Passamaquoddy raising constructions directly from Chomsky’s (2000) Phase-Impenetrability Constraint. Their solution would limit LDA to targeting NPs embedded at most one clause below the agreeing verb, a correct result for Innu-aimûn, but not for Passamaquoddy; compare example (5).