The Algonquian Inverse is Syntactic: Binding in Passamaquoddy*

Benjamin Bruening, University of Delaware

July 21, 2005

Abstract

Treatments of the obviation and direct-inverse systems of Algonquian languages commonly invoke a participant hierarchy and re-linking of grammatical roles according to that hierarchy, or agreement that indexes that hierarchy directly. I show that positing this hierarchy is unnecessary: obviation depends on c-command, and the direct-inverse opposition is one of syntactic movement. I outline a theory that depends only on grammatical roles, c-command, and movement. This theory accounts straightforwardly for variable binding in Passamaquoddy, given the commonly invoked c-command condition on variable binding, where other theories make the wrong predictions. Moreover, in a complete theory of agreement in Algonquian, reference to syntactically encoded grammatical roles cannot be avoided. Since it is *necessary* to refer to syntax, both for agreement and for variable binding, the most parsimonious theory is one that refers *only* to syntax, and eschews a hierarchy of dubious status in the grammar, or the interaction of constraints on the alignment of such hierarchies.

1 Introduction

The Algonquian languages, which have a voice system encoding a *direct-inverse* opposition rather than an *active-passive* opposition, have posed problems for theorists wanting to unify all languages under a single universal syntax (and morphology built off the syntax). On the other hand, they have provided ample fodder for theorists seeking discourse- or functional-based explanations for grammatical phenomena, who do not necessarily believe that all languages should have the same underlying formal structures and mechanisms.

The pair of examples from Passamaquoddy in (1) illustrate the direct-inverse opposition. In this system, the equivalent of subject agreement (here a prefix) actually marks the most "prominent" argument. If that argument is the grammatical subject, the verb is marked as direct ("Dir" in the glosses); if that argument is the grammatical object, it is marked as inverse ("Inv"):[1]

(1) a. K-ucem-a-k.
   2-kiss-**Dir**-3P
   'You kissed them.'

   b. K-ucem-ku-k.
   2-kiss-**Inv**-3P
   'They kissed you.'

Note that in (1), the agreement marking—for both subject and object—is the same; it is the direct or inverse morpheme that indicates grammatical relations.

---

*This paper is a substantially revised version of chapter 2 of Bruening (2001).

[1]The transcription uses the orthography in use in the Passamaquoddy community. Letters have their usual values except that o = schwa, q = [k^w], c = alveopalatal affricate, ' = initial *h* (phonetic effect is aspiration of the following stop or devoicing of *s*). Obstruents are voiced in many environments.

"Prominence" is believed to follow a sort of participant hierarchy. Algonquian languages are usually described as grammatically encoding a hierarchy of the following form (this version is from Goddard and Bragdon 1988):

(2)   Participant Hierarchy: 1,2 > 3 > Obv > Inan

First and second persons outrank third person proximates ("3"), which outrank third person obviatives ("Obv"), which outrank inanimates. Hence the second person argument in (1) is the most prominent argument.

   The proximate-obviative distinction is one that is made only for animate third persons. In any syntactic context (usually coextensive with the clause) one third person is distinguished as proximate (glossed just "3" here), while all others must be obviative, marked as such by a suffix ("Obv"; or a pitch-accent plus suppression of final truncation in the obviative plural). The following pair of Passamaquoddy examples illustrate the phenomenon, and how the direct-inverse opposition in morphology interacts with obviation— if the grammatical subject is the proximate one, the form is direct; if the object is, it is inverse:[2]

(3)   a.   Pesq muwin '-toli-nuhsuphoqal-**a**   mahtoqehsu.
             one bear   3-Prog-chase-**Dir**.ObvP rabbit.ObvP
             'One bear (Prox) was chasing some rabbits (Obv).'
       b.   Mahtoqehs '-toli-nuhsuphoqal-**ku**-l muwinuw-ol.
             rabbit   3-Prog-chase-**Inv**-Obv   bear-Obv
             'A rabbit (Prox) was being chased by a bear (Obv).'

I have glossed the inverse example as a passive to bring out the reversal of prominence, and will occasionally do so below in discussions of quantifier scope, but it is important to note that this is *not* a passive. There is no loss of an external argument here, and no change in valence. This verb is still transitive and still takes two arguments obligatorily; they have just been reversed.

   This reversal is the crux of the problem, and various accounts have been proposed for it. There are basically three approaches. The first says that the arguments are projected into the syntax in the reverse order (the *inverse linking* approach). That is, the initial linking of arguments to predicates in the syntax follows the participant hierarchy, and does not follow grammatical roles. The morphology is then straightforward: the higher argument always agrees in a particular slot—the prefix in these examples—, and the lower in a different slot—the final suffix. (Rhodes (1976, 1994; Perlmutter and Rhodes 1988) presents a theory much like this, considering the inverse morphology to be derivational morphology that reverses the subject and object.) This approach flies in the face of much work in the Principles and Parameters framework (Chomsky 1981), which claims to have found overwhelming support for a configurational approach to grammatical and thematic relations, such as that represented by the Universal Thematic Alignment Hypothesis (Baker 1988).

   The second approach says that the arguments of a verb are always projected into the syntax in a particular order (subject higher than object), but the verbal morphology ignores this and indexes the participant hierarchy instead (the *morphological inverse* approach). Aissen (1997) presents a theory of this form. She proposes that a *relational hierarchy* exists alongside the participant hierarchy:

(4)   Relational Hierarchy: Subject > primary object

The direct form of the verb is then used when the two hierarchies are aligned, meaning that an argument that outranks a co-argument on one hierarchy outranks it on the other as well. The inverse is used when the two

---

[2]The obviative plural, as stated, is marked by a pitch accent (on the final syllable of the verb—*'tolinuhsuphoqalà*—and on the final syllable of the noun—*mahtoqehsù*). This is reflected in the morpheme-by-morpheme gloss, but the accent itself is not marked, following the convention in use in the Passamaquoddy community.

hierarchies are not aligned: an argument outranks a co-argument on one hierarchy but is outranked by it on the other.[3]

These two approaches have in common the grammatical encoding of the participant hierarchy. That is, they think that the participant hierarchy has some kind of grammatical status, and works to constrain grammatical operations: either initial projection into the syntax, or morphological agreement. It is this that I wish to deny: there is no participant hierarchy, hence it can have no grammatical effects. It is simply an epiphenomenon of the syntax of Algonquian languages.

I will motivate this claim while arguing for the third type of approach, a *syntactic movement* approach to the inverse. This approach says that arguments are always projected into the syntax in a uniform way (subject higher than object), *and* that the agreement morphology is based solely on syntactic position. What is different about the inverse is that it involves a step of *movement* in the syntax, such that the object rather than the subject ends up in the highest position, in which it agrees as the most prominent argument, where prominence refers to hierarchical position in the syntax.

The evidence for this step of movement comes from scope and variable binding (including weak crossover) in Passamaquoddy, which reveal a hierarchy of A(rgument)-positions. There are exactly three A-positions in a simple transitive, as follows:[4]

(5) a. Direct
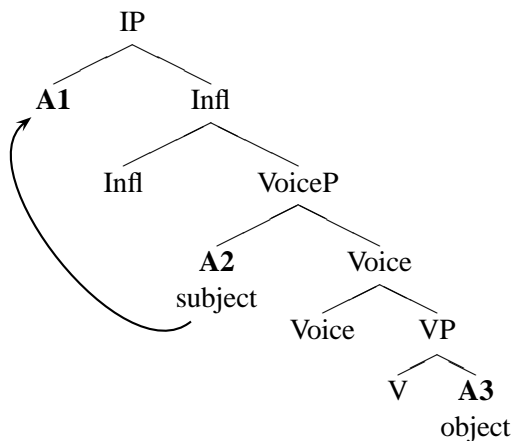
b. Inverse

---
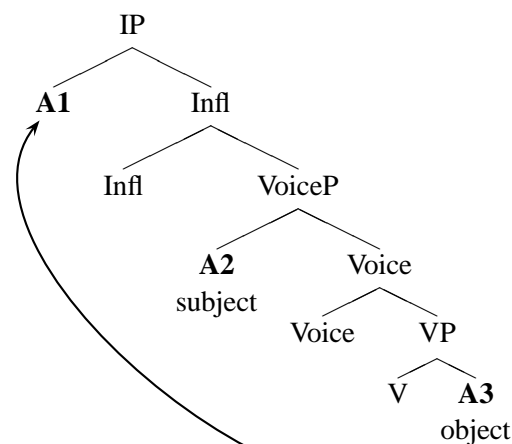
[3]Aissen's theory is much more complicated than this. Her paper actually brings together much data from possessed nouns and various other grammatical contexts to argue for its claims, and it involves violable constraints that determine the optimal ranking of arguments for obviation. However, it is the assumptions that underly this theory that are being criticized here.

[4]These positions and projections are explained below. Briefly, VP is the traditional verb phrase, where the verb and the object are projected. Voice is a head that projects the external argument. See section 4 for details.

The simplest theory of scope and variable binding is that c-command is what determines scope, and c-command is read off the hierarchy of A-positions (A1 c-commands A2 and A3, and A2 c-commands A3). Agreement and obviation (and the direct-inverse opposition) are also determined by this hierarchy of A-positions: If the subject moves to the higher position (A1), the clause is direct; if the object moves, it is inverse. Agreement uniformly indexes syntactic position, with no role for a participant hierarchy.

Furthermore, once we make this hypothesis, it turns out that obviation is determined strictly by c-command. That is, all elements of the system are purely formal, and make reference to syntactic notions familiar from English and other languages. However, there is some room for flexibility, which allows discourse notions to come into play in determining obviation and the direct-inverse contrast; but there is no room for a participant hierarchy of uncertain grammatical status. The conclusion we end up with is that only purely formal notions matter to the core syntactic system; discourse notions and ideas about relative rankings of noun phrases may play a role in speakers' choices of which grammatical structures to use, but they play no role in the syntax of those structures themselves.[5]

The argument that I will make in detail in this paper has the following form. First, the agreement needs to make reference to grammatical roles as well as the participant hierarchy. That is, grammatical roles are *necessary* in an account of the Algonquian morphological system (section 2). Second, variable binding in Passamaquoddy shows that the inverse morphology interacts with syntactic hierarchy, meaning that reference to syntactic structure is necessary in an account of the morphology (section 3). Third, syntactic structure (which encodes grammatical roles) is *sufficient* to account for agreement in Algonquian. This is shown in section 4, where I outline such an account of agreement and obviation. This discussion leads to the collowing conclusion: since syntactic structure is necessary in an account of the Algonquian inverse, and it is sufficient, the most parsimonious account is one that relies only on grammatical roles and syntactic structure and eschews any notion of a participant hierarchy (whose status in the grammar would be unclear, at best).

2   The Necessity of Grammatical Roles

The two approaches to the inverse that I am arguing against have in common the claim that Algonquian morphology uniformly indexes the participant hierarchy. In the inverse linking approach, morphological agreement slots take their values from syntactic positions, but these positions are filled by NPs according to the participant hierarchy. In the morphological inverse approach, the agreement slots take their values directly from the participant hierarchy: in (1), the prefix agrees with the most prominent argument, while the final suffix agrees with the less prominent.

However, it is simply not true that verbal agreement only indexes prominence. What are known as the *finals* agree in animacy with the logical object of a transitive or the subject of an intransitive. It does not matter where this argument is on the participant hierarchy; its animacy value strictly determines the form of the verb.

Transitive verbs, for instance, commonly come in pairs. One is called the TA form, for transitive animate; it is used when the object is animate. The other is the TI—transitive inanimate—form, used when the object is inanimate. Some common pairings are shown below, with the final segmented out for ease of comparison (this is not done in the glosses elsewhere):[6]

---

[5]I say "the core syntactic system," by which I mean the system of A-positions that figure in binding and agreement, because it appears that more "peripheral" phenomena, such as topicalization and A-bar scrambling (which I believe plays a large role in the surface word order of Passamaquoddy), may well depend upon discourse notions.

[6]The morpheme glossed "N," underlying /-one-/, has numerous uses, so I do not attempt to give it a gloss. One place it appears is with inanimate objects. It also appears in the Subordinative Mode of the Independent Order, in ditransitives, and with AI+O verbs (see below). The prefix, historically /w-/ for third person (/wt-/ before vowels), is now only visible in its effect on the following consonant (devoicing or aspiration). It generally has no effect if the following consonant is a sonorant, so I put it in parentheses in

(6)

3-stem-**TA.Final**-Dir-Obv	3-stem-**TI.Final**-N
'-kospa-hl-a-l	'-kospa-ht-un
's/he washes him/her/it(an)'	's/he washes it'
'-kisi-y-a-l	'-kisi-ht-un
's/he made it (animate); s/he can make it (animate)'	's/he made it; s/he can make it'
(')-noka-l-a-l	(')-noka-tom-on
's/he fears him/her'	's/he fears it'
'-cikso-tuw-a-l	'-cikso-tom-on
's/he listens to him/her'	's/he listens to it'
't-oliwi-y-a-l	't-oliwi-htom-on
's/he calls him/her by name; s/he names him/her'	's/he calls it by name; s/he names it'
'-qolopip-h-a-l	'-qolopip-t-un
's/he turns him/her over quickly'	's/he turns it over quickly'
'-cis-h-a-l	'-cis-hom-on
's/he scrapes him/her'	's/he scrapes it'

The inverse linking approach to the inverse makes a prediction regarding the form of the verb—TA or TI—in the inverse. In this theory, the grammatical object is projected directly into the higher argument position, in the opposite linking from the direct voice:

(7) *Inverse Linking*

    a.   Direct: [subject [V object]]

    b.   Inverse: [object [V subject]]

Now, suppose one has a clause with an animate object and an inanimate subject. The inverse will have to be used, because the object outranks the subject on the participant hierarchy. Then, if agreement goes along with syntactic position, the grammatical subject should determine the form of the verb, as the grammatical object does in the direct, and it should appear as a TI. This is absolutely incorrect, however. An inanimate subject acting on an animate object always uses the TA form of the verb:[7]

(8)   Inverse: Inanimate Subject

    a.   N-ikuwoss siki mociki-t-s-opon,   nit te=hp   nit   (')-**nehpuh**-uku-n
                1-mother hard be.evil-3Conj-Dub-Pret, then Emph=would that.Inan 3-kill.TA-Inv-N
                Mali Pokomk '-sisoq.
                Mary Pokomk 3-eye
                'If my mother had been really wicked, Mary Pokomk's eye would have killed her.' (Newell 1979, line 32)

    b.   . . . kenuk   olu   't-ol-sonuw-akon   anqoc   (')-**nokol**-ok-un.
                however Emph 3-thus-strong-Nom sometimes 3-leave.TA-Inv-N
                '. . . but his strength would sometimes leave him.' (Francis and Leavitt 1995, 232)

The TI and TA direct forms of these verbs are shown below for comparison; note that the form used above in the inverse is the same as that used in the TA direct, and is different from the TI:[8]

---

those cases to indicate its abstract presence.

    [7]Abbreviations not explained in the text: AI = animate intransitive; C = complementizer; Conj = conjunct inflection; Dim = diminutive; Dub = dubitative; Emph = emphatic particle; Fut = future; II = inanimate intransitive; Loc = locative; Neg = negative; Nom = nominalizer; ObvS = obviative subject; Part = participle agreement; Perf = preverb with a past or perfective interpretation; Poss = possessed theme; Pret = preterite; TAN = quantifier over certain verbal elements, appears in wh-questions, free relatives.

    [8]The change in the stem-final vowel in 'kill' is irrelevant; it is simply harmonizing to the vowel of the suffix in (8a).

(9) TI:

    a.   '-Toqecimul-a-ni-ya tan   ehte-k   **nehpaht**-aq.
        3-ask-Dir-N-3P   TAN be.there-IIConj kill.TI-3Conj

        'They ask him where his kill [the thing (inan.) he killed] is.' (Mitchell 1921/1976f, line 7)

    b.   Mesq **nokotom**-uw-an   yut   utene-hsis, nt-ol-luhka-n=c   nit.
        not.yet leave.TI-Neg-1Conj this.Inan town-Dim 1-thus-work-N=Fut that

        'Before I leave this little village, I will do that.' (Mitchell 1921/1976e, line 30)

(10) TA:

    a.   (')-**Nehpah**-a-wa-l   tan   wot   meson-a-t.
        3-kill.TA-Dir-3P-Obv TAN this.An IC.catch-Dir-3Conj

        'They'll kill the one that wins her.' (Mitchell 1921/1976e, line 40)

    b.   Nekom teh=na   mace-he; (')-**nokol**-a-n   lampeqinu-sqe-hsis   qotuhkayiw.
        3   Emph=also start-go.3 3-leave.TA-Dir-N water.sprite-Fem-Dim.ObvP alone

        'And he goes off, too, leaving the underwater-women all alone.' (Francis and Leavitt 1995, line 152)

If the inverse involved generating the logical object higher than logical subject, an inverse with an inanimate subject should be in the TI form. But it is actually a TA. Hence, the verb final (TA vs. TI) is strictly determined by grammatical role: its form is based on the logical object.[9]

This fact by itself is enough to show that the inverse linking approach is incorrect. The morphology has to take into account both the participant hierarchy and grammatical role. It does not show that the morphological inverse approach is incorrect, however. For instance, Aissen (1997) posits two hierarchies, one the participant hierarchy and the other a relational hierarchy. Within that theory she could claim that the finals reflect the relational hierarchy, but other agreement morphemes reflect the participant hierarchy.

To argue against the morphological inverse approach, then, we need to show either that grammatical relations are sufficient to account for agreement, or that a more complicated syntactic structure that includes an encoding of grammatical relations is necessary and sufficient. The next two sections argue that the latter is correct, and that the participant hierarchy is neither necessary nor sufficient. Investigating scope and binding indicates that the agreement aligns perfectly with a hierarchy of syntactic positions that includes an encoding of grammatical role. That is, syntactic hierarchy is both necessary—to account for scope and binding—and sufficient. Hence, the morphological inverse theory is unduly complicated, by invoking an unnecessary participant hierarchy.

Let me spell out what this alternative theory is. The morphological inverse theory needs two hierarchies in the grammar: the hierarchy of grammatical relations, which determines the agreement of the finals, and the hierarchy of participants, which determines the rest of the agreement morphology. The alternative is a syntactic movement theory that relies only on a structural hierarchy. In this theory objects are projected in a uniformly low position, subjects in a higher position, and there is a third position that is higher still (i.e., we need some version of the VP-internal subject hypothesis, which says that the surface subject position is a derived position; Sportiche 1988, Koopman and Sportiche 1991):

(11)   [_____ [Subject [Verb Object]]]

The final will agree with the object in its low position. Whatever moves to the higher position will control agreement in the prefix. That is, agreement is structurally determined. In the direct voice, it will be the subject that moves, as shown. In the inverse, the object will move instead, resulting in it controlling agreement:

---

[9]In section 4 I will identify the final as an agreement marker on V.

(12) [_____ [Subject [Verb Object]]]

This theory has no need for a participant hierarchy. If the structural positions above can be motivated by other structural phenomena, using them to account for the agreement is justified on conceptual grounds.

The next section investigates scope and binding and shows that they are just the structural phenomenon to look at. As I will show, scope and binding depend crucially on hierarchy, namely c-command. We can then use them to investigate the syntactic properties of the inverse. The two remaining theories make different predictions here: The morphological inverse theory predicts that in the inverse, the subject will c-command the object and not vice-versa, since it is only the morphology that indexes the participant hierarchy. In the syntax, the relational hierarchy always determines that the subject is higher than the object. In contrast, the movement theory predicts that the inverse will reverse hierarchical relations, and should result in a reversal of scope and binding. As I will show, this is correct.

Moreover, once we have discovered the hierarchy of arguments, a very simple generalization concerning obviation emerges: proximate NPs always c-command obviative NPs. That is, obviation also follows syntactic position. The syntax of obviation and inversion is therefore a very simple, structure-based one. There is no need for a participant hierarchy.

3 Scope and Binding

One reason that the Algonquian inverse has given rise to so many different analyses is that there are not clear tests for hierarchy among arguments as there are in languages like English. The binding conditions, for instance, are not helpful at all. Algonquian languages generally do not have anything like NP anaphors; reflexivity and reciprocality are expressed through verbal morphology (detransitivization):[10]

(13) a. (')-Macaha-n kcihku-k   (')-naci-nehpuh-**usi**-n.
          3-leave-N   forest-Loc 3-go.do-kill.TA-**Refl**-N
          'He goes away into the woods to kill himself.' (Mitchell 1921/1976d, line 117)

      b. Nit te   na '-kotunol-**oti**-ni-ya.
          then Emph also 3-hunt.TA-**Recip**-N-3P
          'So they go after each other.' (Francis and Leavitt 1995, line 68)

Additionally, Condition C of Chomsky's (1981) Binding Theory simply appears not to apply. An NP can be coreferent with a pronoun in the same clause, or even across clauses, even when we have reason to think the pronoun c-commands the NP. In fact, in the absence of another NP in the discourse, the default interpretation of the pronouns (visible as agreement[11]) in the following Passamaquoddy sentences is exactly the coreference indicated:[12]

(14) a. Nekom (')-nokka-tekat-un   sakom   (w)-mani-m.
          3   3-completely-hide-N governor 3-money-Poss
          'He$_1$ hid all of the governor$_1$'s money.'

---

[10]Some languages do have a form of the noun meaning 'body' that is used as an anaphor (e.g., Massachusett; Goddard and Bragdon 1988); Passamaquoddy allows this in some cases when there is no other way to express a reflexive meaning, but it appears to be quite marked.

[11]The third person prefix /'-/ is historically /w-/ (parallel to *n-* and *k-*). The informant who produced (14a) is one of the oldest living speakers, and he occasionally pronounces the third person prefix as a voiceless /w/ before sonorants, as in 'his money' here. Younger speakers do not pronounce any reflex of this prefix before sonorants; it is placed in parentheses to indicate that it is there abstractly.

[12]On Condition C in the Algonquian language Cree see Russell and Reinholtz 1997. On the significance of Condition C in Passamaquoddy in the context of the Polysynthesis Parameter (Baker 1996), see Bruening 2001, ch.1.

b. Litahasu [CP '-tahcuwi-tqon-ku-l   Susehp (')-hesis-ol   not   nucitqonket] .
   think.3   3-must-arrest-Inv-Obv S.   3-older.bro-Obv this.An policeman

   'He$_1$ thinks that Joseph$_1$'s older brother the policeman has to arrest him$_1$.'

The failure of these kinds of tests means that there is not clear evidence for hierarchy among A-positions. Thus, it is difficult to establish whether the grammatical subject c-commands the grammatical object in the inverse, or vice-versa.

Nevertheless there *is* clear evidence from a different phenomenon: scope and variable binding (which goes right along with the scope of a quantifier). This phenomenon shows a remarkably consistent pattern that indicates a clear hierarchy among argument positions, a hierarchy that is reversed in the inverse.

3.1 Scope and Variable Binding are Structural

Passamaquoddy, like most languages, has various ways to express quantification. I will mostly talk about quantifiers that have the distribution of NPs—Partee, Bach, and Kratzer's (1987) "D-quantifiers." These are quantifiers that combine with an NP or a wh-pronoun to form a quantificational noun phrase, as in the following text examples:

(15) a. Kenoq   olu   **yatte**=hc **wen** 't-uwehkah-a-l 't-epeskom-akonu-m-ol.
      however Emph each=Fut who 3-use-Dir-Obv 3-play.ball-Nom-Poss-Obv

      'But each one$_1$ will use his$_1$ own ball.' (Mitchell 1921/1976b, line 55)

   b. **Msi**=**te**   **wen** ksep-huwe-(w) w-ik-ok,   '-taskuwahtu-n (')-mehcina-n.
      all=Emph who in-run-3   3-house-Loc 3-wait-N   3-die-N

      'Everyone$_1$ goes into his$_1$ house [pro$_1$] to wait for [pro$_1$] death.' (Mitchell 1921/1976c, line 77)

These examples also illustrate the ability of these quantifiers to bind pronouns (as indicated by the agreement morphology) as variables.

Passamaquoddy variable binding obeys standard conditions. In particular, it is grammatical where the quantifier c-commands the pronoun to be bound as a variable. This is easiest to see across clause boundaries. A quantifier in a higher clause can bind a pronoun as a variable in an embedded clause:

(16) a. **Psi**=**te**   **wen** litahasu [CP eli w-itapi   woli-pomawsuwin-uw-ulti-htit] .
      all=Emph who think.3   C 3-friend.ObvP good-person-be-Plural-3PConj

      'Everyone$_1$ thinks his$_1$ friends are good people.'

   b. **Ma**=**te**   **wen** litahasi-w   [CP eli kisi-komutonom-uk *pro*] .
      Neg=Emph who think.3-Neg   C Perf-rob-1ConjDir

      'No one$_1$ thinks that I robbed him$_1$.'

   c. Tama 't-iy-a-l   **psi**=**te** **wen-il** [CP '-tli-koti-nomiy-a-l   *pro*] ?
      where 3-say.to-Dir-Obv all=Emph who   3-there-Fut-see-Dir-Obv

      'Where did he tell everyone$_1$ he would meet him$_1$?'

   d. **Ma**=**te**   **wen**   litahasi-w   [CP *nekom* mahtoqehs] .
      Neg=Emph someone think.3-Neg   3   rabbit

      'No one$_1$ thinks he$_1$'s a rabbit.'

But it is ungrammatical when the quantifier is in an embedded clause and the pronoun is in a higher clause:[13]

---

[13]This sentence is grammatical without the variable binding, even though the verb 'think' does not have obviative agreement. I have found that speakers do not require obviative agreement when the obviative NP is the only argument of a verb.

(17) * W-itapih-il   litahasu [$_{CP}$ **ma=te**   **wen** olomi-ye-w   ].
        3-friend-Obv think.3   Neg=Emph who away-go.3-Neg
        'His$_1$ friend thinks no one$_1$ left.'

Similarly, a quantifier contained within an adjunct clause may not bind a pronoun in the matrix clause:[14]

(18) a. * [Kesq te   pemi-qasqi-t   **psi=te**   **wen**] on *pro* '-qastehsin-on.
            while Emph IC.along-run-3Conj all=Emph who then   3-stumble-N
            'While everyone$_1$ was running he$_1$ stumbled.'

      b. * [Ipocol **psi=te**   **wen Sipayik** k-nacitaham-oq] , *pro* kt-oqeci=hc nehpuh-uk.
            because all=Emph who S.   2-hate-Inv   2-try=Fut   kill-Inv
            'Because [everyone at Sipayik]$_1$ hates you, he$_1$ will try to kill you.'

It appears, therefore, that variable binding obeys the same c-command condition in Passamaquoddy that it does in better-studied languages (Chomsky 1976, Higginbotham 1980, Hornstein and Weinberg 1990). We can then use it, along with weak crossover in questions, as a diagnostic of hierarchical structure.

3.1.1   Weak Crossover

Weak crossover (Postal 1971, Wasow 1972) arises when an operator that should be able to take scope over and hence bind a pronoun as a variable is unable to, due (in a purely descriptive sense) to the fact that it has crossed over the pronoun in its scope-taking movement. For example, in English wh-phrases take scope over the entire clause, but an object wh-phrase nevertheless cannot bind a variable contained in the subject; in contrast, a subject wh-phrase can bind a variable contained in the object:

(19) a. * [$_{CP}$ Who$_1$ does his$_1$ mother love t] ?

      b.   [$_{CP}$ Who$_1$ t loves his$_1$ mother] ?

This asymmetry is usually ascribed to some principle or principles with the following descriptive force:

(20) Weak Crossover: A pronoun interpreted as a variable bound by an operator *Op* must be c-commanded by the trace of *Op*.

Or, a quantifier must A-bind a pronoun in order to bind it as a variable; wh-movement is A-bar movement, to an A-bar position, a position which does not enable new A-binding possibilities. Thus, in the examples above, the trace of a subject wh-phrase (in an A-position) c-commands the object, but the trace of an object wh-phrase (in an A-position) does not c-command the subject.

   In Passamaquoddy, it is easy to see the effects of weak crossover in long-distance wh-movement, just as it was easy to see the ungrammaticality of upwards variable binding across clause boundaries. A wh-phrase that moves out of an embedded clause to take matrix scope is unable to bind a variable in the matrix clause (note again that the verb 'think' does not need to have obviative agreement):

(21) a.   Litahasu Piyel w-ikuwoss-ol eli Mali kselm-a-t.
           think.3   Peter 3-mother-Obv C Mary love-Dir-3Conj
           'Peter$_1$'s mother thinks Mary loves him$_1$.'

---

[14]Corresponding sentences with lexical NPs instead of quantifiers are fine with coreference. Similarly, replacing the singular in the main clause with a plural renders (18b) grammatical, but with a group reading only.

b. Wen-il elitahasi-t w-ikuwoss-ol eli Mali kselm-a-c-il?
who-Obv IC.think-3Conj 3-mother-Obv C Mary love-Dir-3Conj-PartObv

'Who$_1$ does his$_{*1}$ mother think Mary loves?'

But a wh-phrase that moves out of a higher clause may bind a variable in a lower clause (this is an example of an embedded question, but the principle is the same):

(22) Ma=te n-wewitaham-a-w wen ito-k kisi-maton-a-c-il muwin.
Neg=Emph 1-remember.TA-Dir-Neg who say-3Conj Perf-fight-Dir-3Conj-PartObv bear

'I don't remember who$_1$ said the bear attacked him$_1$.'

Now that we have established variable binding and weak crossover as diagnostics of hierarchical structure, we can use them to discover the hierarchical relations between arguments within a single clause. I will first show how intra-clausal variable binding works with clauses that have no possibility of an inverse, and then we will turn to the construction of interest.

There are several types of verbs that do not have an inverse. The first is the transitive inanimate (TI) class described above.

3.1.2 TI Verbs

The subjects of TI verbs may not be inanimate in Passamaquoddy, so the subject (animate) will always outrank the object (inanimate) on the participant hierarchy. Morphologically, there is simply no possibility of an inverse.

Subjects of TI verbs easily take scope over objects:

(23) Katolu psi=te wen (')-wikahtom-on keqsey piluwey.
of.course all=Emph who 3-like.taste.TI-N what different

'Of course everyone likes something different.' (every>something)

The subject may also bind a variable contained within the object, as the following text example shows:[15]

(24) Nit=te msiw (')-wici-qenom-oni-ya na nekomaw.
then=Emph all 3-together.with-roll.TI-N-3P also 3P

'So [all of them]$_1$ roll theirs$_1$ in the ashes too.' (Mitchell 1921/1976a, line 84)

In contrast, the inanimate object may not take scope over the subject or bind a variable contained within the subject. I have found no text examples with such a character, and in elicitation, weak crossover appears when the object is extracted across the subject:

(25) a. [$_{NP}$ Not kis-uwikho-k] '-pott-aqosom-on 't-ahtwikhikon.
Dem Perf-write.TI-3Conj 3-accidentally-burn.TI-N 3-book

'The one who wrote it accidentally burned his book.'

b. * Keqsey pett-aqoso-k [$_{NP}$ not kis-uwikho-k] t?
what IC.accidentally-burn.TI-3Conj Dem Perf-write.TI-3Conj

'What$_1$ did the one who wrote it$_1$ accidentally burn?' (Echo question only)

Within TI clauses, then, we can conclude that the subject c-commands the object, and not vice versa.

---

[15]This example involves plurals, but it is clear in the context of the story that it has a distributive interpretation, where each person rolls his/her own thing in the ashes.

3.1.3 AI+O Verbs

The same conclusion is reached if we examine another case where there is no possibility of an inverse. This is the case of AI+O verbs, so-called because they are morphologically intransitive with animate subjects (AI, for animate intransitive), but syntactically they allow an object (+O). This object is restricted to being third person, although it can be animate or inanimate; importantly, this object does not participate in the inverse. Because it cannot be first or second person, the inverse cannot arise as 3/1 or 3/2; and it must always be outranked by the subject when they are both third persons (i.e., the object must always be obviative with respect to the subject).[16]

These verbs somewhat marginally allow the coreference possibility below, where the possessor of the subject is coreferent with the object, and the possessor of the object is the subject (both 'mother' and 'child' are obligatorily possessed in Passamaquoddy):

(26)   W-ikuwoss-ol 't-iyali-khasi-n   (')-nican-ol.
       3-mother-Obv 3-around-look.for.AI+O-N 3-child-Obv

       'His mother's looking around for her child.'

If one of the arguments is a wh-phrase, however, an asymmetry appears. The subject can bind the possessor of the object, but the object may not bind the possessor of the subject (weak crossover):[17]

(27)   a.   Wen ali-khasi-t   w-ikuwoss-ol?
            who around-look.for.AI+O-3Conj 3-mother-Obv

            'Who$_1$ is looking around for his$_1$ mother?'

       b.   * Wen-il   w-ikuwoss-ol ali-khasi-li-t?
              who-Obv 3-mother-Obv around-look.for.AI+O-ObvS-3Conj

              'Who$_1$ is his$_1$ mother looking around for?'

Weak crossover also appears with a pronoun contained in a relative clause modifying the subject:

(28)   a.   [$_{NP}$ Not kisi-ht-aq   ] napisqahma-n   't-oqtoput.
               Dem Perf-make.TI-3Conj   trip.over.AI+O-N 3-chair

            'The one who made it tripped over his chair.'

       b.   * Keqsey [$_{NP}$ not   kisi-ht-aq   ] napisqahma-t?
              what   Dem Perf-make.TI-3Conj   trip.over.AI+O-3Conj

              'What$_1$ did the one who made it$_1$ trip over?'

Just as with TIs, where there is no possibility of an inverse, we find an asymmetry between subjects and objects: subjects c-command objects, as shown by binding possibilities. The subject may bind a variable within the object, but the object may never bind a variable within the subject. There is a rigid syntactic hierarchy at work here, which in these cases aligns with the morphological and participant hierarchies.

---

[16]The object of an AI+O verb is usually grouped together with the second object of a ditransitive verb under the label "secondary object." Data from ditransitives—not presented here—indicate that the two types of objects do indeed pattern together in many ways; see Rhodes (1990) and Bruening (2001).

[17]Just like in English, the weak crossover question can be asked as the following:

(i)   Wen w-ikuwoss-ol ali-khasi-li-t?
      who 3-mother-Obv around-look.for.AI+O-ObvS-3Conj

      'Whose mother is looking around for him?'

3.2 The Direct and the Inverse

Based on the above, we can conclude the subject is hierarchically higher than the object in Passamaquoddy, just as it is in more familiar languages like English. So far this is consistent with both the morphological inverse theory and the movement theory. Let us remind ourselves of what these two theories say about syntactic hierarchy. The morphological inverse theory says that, alongside the participant hierarchy, there is a relational hierarchy of the following form:

(29)   Relational Hierarchy: Subject > primary object

Presumably it is this relational hierarchy where structural phenomena like variable binding are determined. Now, crucially, the morphological inverse theory says that the inverse is purely morphological, independent of the relational hierarchy. The morphology indexes a different hierarchy, the participant hierarchy. Therefore we expect that structural phenomena like variable binding will ignore the morphology and continue to indicate a hierarchy of subject over object.

In contrast, the movement theory says that the hierarchical relation between the subject and the object reverses in the inverse:

(30)   Syntactic Movement
    a.   Direct: Subject > Object
    b.   Inverse: Object > Subject ($> t_{Obj}$)

This theory therefore predicts that variable binding will reverse in the inverse, with the object now able to bind into the subject. As I will show, this is correct. (Moreover, we might expect the trace of the object's movement in the inverse to be relevant to variable binding, given additional assumptions. This will be relevant below.)

3.2.1 The Direct

Both theories say that the subject dominates the object in the direct voice. This is correct. The subject can bind a variable in the object, as in the following text examples:

(31)   a.   Kenoq   olu   yatte=hc wen 't-uwehkah-a-l 't-epeskom-akonu-m-ol.
             however Emph each=Fut who 3-use-Dir-Obv 3-play.ball-Nom-Poss-Obv

             'But each one$_1$ will use his$_1$ own ball.' (Mitchell 1921/1976b, line 55)
        b.   Nit msi=te   kehsi-htit   ehpic-ik   '-pun-a-ni-ya   (')-nican-sis-uwa
             then all=Emph be.many-3PConj woman-3P 3-put-Dir-N-3P 3-child-Dim-3P.ObvP

             sip-uk   apc   welaqiwik.
             river-Loc again in.evening

             'That night, every one of the women$_1$ puts her$_1$ child into the river.' (Mitchell 1921/1976a, line 70)

The following example provides a control for the ungrammatical example in (33), where the variable is a pronoun inside a relative clause:

(32)   Yatte wen (')-nomiy-a-l [$_{NP}$ skitapiy-il nenuw-a-c-il] .
        each who 3-see-Dir-Obv   man-Obv IC.know-Dir-3Conj-PartObv

        'Each person$_1$ saw the man he$_1$ knows.'

In contrast, an object quantifier cannot bind a variable in the subject:[18]

(33) [$_{\text{NP}}$ Skitap musqitaham-ac-il] '-koti-tqon-a-l   psi=te   wen-il.
      man   hate-3Conj-PartObv 3-Fut-arrest-Dir-Obv all=Emph someone-Obv
      'A man that he$_{*1}$ hates will arrest everyone$_1$.'

Similarly, weak crossover appears when the object is questioned:

(34) a. Tan wen welamsot-ok   mecimi=te   '-qosseyuw-a   wonakomehsu.
          TAN who IC.believe.in-3Conj always=Emph 3-respect-Dir.ObvP little.person.ObvP
          'Whoever believes in them$_1$ always respects the little people$_1$.'

      b. * Wen-ihi   tan wen welamsot-ok   micimi=te   qessey-a-htit?
            who-ObvP TAN who IC.believe.in-3Conj always=Emph IC.respect-Dir-3PConj
            'Who$_1$ does whoever believes in them$_1$ always respect?'

But a subject wh-phrase can bind into the object:

(35) Wen cel   kis-cem-a-t   '-tus-ol?
      who even Perf-kiss-Dir-3Conj 3-daughter-Obv
      'Who$_1$ kissed his$_1$ daughter?'

This asymmetry indicates that, as predicted by both theories, the subject dominates the object in the direct voice.

3.2.2 The Inverse

The two theories make different predictions about the inverse. The morphological inverse theory predicts that variable binding and weak crossover will continue to indicate a subject-over-object hierarchy, while the movement theory predicts that this hierarchy should reverse. The latter prediction is correct. Object quantifiers now bind variables in subjects:

(36) a. Kat=op   wen (')-nokol-oku-wihi-l w-oli-witapi-hil.
          Neg=would who 3-leave-Inv-Neg-Obv 3-good-friend-Obv
          'His$_1$ best friend would abandon no one$_1$.'

      b. Yatte wen pilsqehsis '-kis-cem-ku-l   w-ikuwoss-ol.
          each who girl   3-Perf-kiss-Inv-Obv 3-mother-Obv
          'Her$_1$ mother kissed each girl$_1$.'

      c. Psi=te   wen '-kosiciy-uku-l   w-ikuwoss-ol.
          all=Emph who 3-know-Inv-Obv 3-mother-Obv
          'His$_1$ mother knows everyone$_1$.'

(Note that the preferred word order also reverses, such that in both the direct and the inverse, the proximate NP is usually preverbal, and the obviative one post-. As I show below, however, it is not the word order that matters for variable binding.)

The inverse voice also gets around weak crossover:

---

[18]NPs do not have to maintain the same obviation value within a relative clause as without. In (33), 'man' is proximate in the matrix clause, but obviative in the relative clause. 'Everyone' is obviative in the matrix clause, but under the intended binding, the pronoun it binds would be proximate in the relative clause. This is independently possible without variable binding.

(37) a.   Wen pihce   w-itapihi-l   nekol-iht   kcihku-k?
          who long.ago 3-friend-Obv IC.leave-3ConjInv forest-Loc
          'Who$_1$ did his$_1$ friend abandon in the forest a long time ago?'

     b.   Wen pihce   wenitaham-iht   '-qoss-ol?
          who long.ago IC.forget.about-3ConjInv 3-son-Obv
          'Who$_1$ did his$_1$ son forget about long ago?'

In other words, the syntactic hierarchy has reversed in the inverse voice, such that the object now dominates the subject.

The conclusion for the two theories under discussion is that the movement theory is correct, and the morphological inverse theory is incorrect. The inverse is certainly syntactic in Passamaquoddy, and is not just morphological.

Note that the theory that was dismissed early in this paper, the inverse linking approach, would also predict that variable binding reverses in the inverse. Recall that in this theory, the projection of arguments into the syntax follows the participant hierarchy, ignoring grammatical roles. This theory, as was shown above, can not account for the fact that the finals continue to index the animacy of the logical object even in the inverse. Only the movement theory can account for that fact *and* the syntactic reversal of prominence. The object must be projected into a low position, the position reserved for logical objects, at which point it determines the final, and then it moves, to a position higher than the subject:

(38)
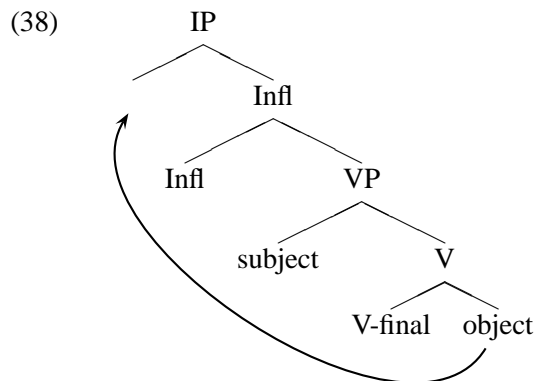
Moreover, yet another fact points to the correctness of a movement account, and argues against inverse linking.

3.2.3   Movement Vs. Linking: Ambiguity

This second argument against inverse linking is that the inverse does not just lead to inverse scope, it is actually ambiguous. The object can take scope over and bind a variable in the subject in the inverse, but the reverse is also possible:

(39) a.   Ma=te   keq utomeya-ku-w-on   [$_{NP}$ tepelto-k   ] .
          Neg=Emph what 3.bother-Inv-Neg-N   IC.own.TI-3Conj
          'Nothing$_1$ bothers the one who owns it$_1$.'

     b.   [$_{IP}$ [$_{VoiceP}$ nothing [$_{VP}$ bothers [$_{NP}$ the one who owns it]]]]

If the inverse were simply the base-generation of the reverse hierarchical order of arguments from the direct, then like the direct voice we would expect the inverse to be scopally rigid. The fact that it is not supports the movement hypothesis: the raised object can reconstruct to its base position, putting it within

the scope of the subject. Crucially, scopal reconstruction is only a property of movement chains; NPs may not lower where they have not previously raised (Hornstein 1984, Barss 1986).

The ambiguity of the inverse resembles findings from numerous languages, where scope is rigid unlesss movement takes place. For instance, in Japanese, an object cannot normally take scope over a subject. But if the object scrambles over the subject, then it can, but the reverse is also possible (Kuroda 1970, cited in Hoji 1985). There are various theories about why movement would allow freedom of quantifier scope; see, for instance, Aoun and Li 1993. Reconstruction in movement chains is one obvious hypothesis.

There is also a conceptual reason to reject anything like the inverse linking approach to the inverse, briefly alluded to above. This is that cross-linguistic findings have increasingly pointed to a uniform projection of arguments into the syntax based on thematic roles, such that themes or patients are uniformly projected low, as the sister to the verb, and agents are projected higher. This has been codified as the Universal Alignment Hypothesis of Perlmutter and Postal (1984), and the Universality of Thematic Alignment Hypothesis of Baker (1988). Given the strong support for some kind of universal principle like this, it would be conceptually undesirable to posit an Algonquian-specific projection rule without overwhelming empirical evidence in its favor.

Finally, note that the ambiguity of the inverse also argues against a modification of the morphological inverse theory that might otherwise have been able to account for the binding facts given above. This modification would be to say that the only thing the relational hierarchy determines in Algonquian is the finals. The participant hierarchy determines the morphology, and it also determines the syntax of variable binding, such that a quantifier can only bind into an NP that it outranks on the participant hierarchy. Such a theory could not account for the ambiguity of (39a). In that sentence, the quantifier is an inanimate, the very lowest rank on the hierarchy, but it can bind into an animate.

3.3   Surface Word Order

Before giving an account of the syntax and morphology of the inverse, it is important that we address a potential counterhypothesis for the variable binding facts above. I noted above that surface word order generally follows the participant hierarchy in Passamaquoddy, such that the proximate NP usually comes before the verb, and the obviative NP usually comes after the verb. This means that in the direct voice, the subject precedes the object, but in the inverse, the object precedes the subject. Now, one might hypothesize that it is actually the word order that matters for variable binding. This hypothesis would claim that a quantifier in Passamaquoddy can bind a variable that it precedes, and may not bind a variable that precedes it. This hypothesis would be consistent with most of the examples presented above, as the reader can verify.

However, further inspection shows that it is not surface word order that matters, but the hierarchy of arguments that is reversed in the inverse. For one thing, recall that in the cases of weak crossover, the wh-quantifier occurs in a sentence-initial position, but it still cannot bind a variable to its right. Weak crossover shows the relevance of a structural hierarchy and the irrelevance of surface word order.

One might argue, of course, that weak crossover is still too ill-understood to rule out a surface word-order constraint on variable binding. However, inspecting other word orders shows that word order is not the relevant factor. The order *proximate-verb-obviative* is only the most unmarked word order; basically any word order is permitted in Passamaquoddy, and others frequently occur. When the obviative is placed before the proximate, it does not disrupt variable binding:

(40)   W-ikuwoss-ol psi=te   wen '-koselom-a-l.
        3-mother-Obv all=Emph who 3-love-Dir-Obv

        'Everyone$_1$ loves his$_1$ mother.'

In addition, indefinites, particularly those that are also used as wh-phrases, prefer to immediately follow sentential negation when they co-occur, which puts them in a preverbal position. They can even occur

immediately after sentential negation in a matrix clause when they are an argument of a lower clause, as in example (41a). This dislocation does not give rise to new binding possibilities, however:
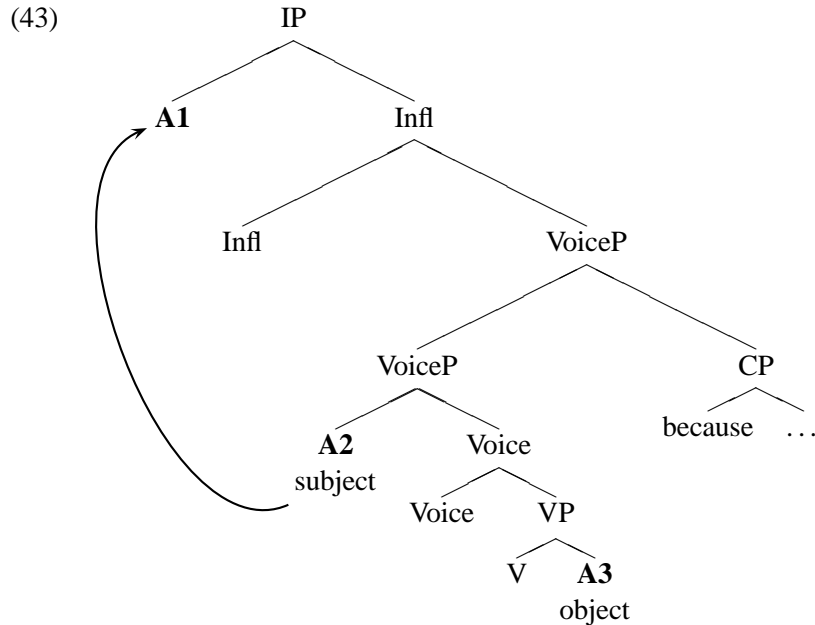
(41) a. Ma=te **wen-il** n-kisi-hcuwiy-a-w Piyel (')-naci-komutonom-a-n.
Neg=Emph who-Obv 1-Perf-hire-Dir-Neg Peter 3-go.do-rob-Dir-N

'I didn't hire Peter to rob anyone.'

b. Ma=te n-kisi-hcuwiy-a-w (')-hesis-ol [$_{CP}$ (')-wicuhkem-a-n **wen-il**] .
Neg=Emph 1-Perf-hire-Dir-Neg 3-older.bro-Obv 3-help-Dir-N who-Obv

'I didn't hire his$_{*1}$ brother to help anyone$_1$.'

c. Ma=te **wen-il** n-kisi-hcuwiy-a-w (')-hesis-ol [$_{CP}$ (')-wicuhkem-a-n] .
Neg=Emph who-Obv 1-Perf-hire-Dir-Neg 3-older.bro-Obv 3-help-Dir-N

'I didn't hire his$_{*1}$ brother to help anyone$_1$.'

In (41b), where the indefinite occurs after the verb it is an argument of, that indefinite may not bind a pronoun contained within the matrix object as a variable (as expected). In (41c), the indefinite occurs in the higher clause, to the left of the matrix object, but it still may not bind a variable in that object. The indefinite has only the binding possibilities that it had in its argument position.

Furthermore, an object quantifier cannot bind into an adjunct clause, but a subject quantifier can, even though both precede the adjunct clause:

(42) a. Psi=te wen macehe ['sami *pro* siktehsonu] .
all=Emph who leave.3 because be.tired.3

'Everyone$_1$ left because he$_1$ was tired.'

b. * N-kisi-ksomahk-a-n psi=te wen ['sami *pro* n-kisi-sasawim-oq] .
1-Perf-push.down-Dir-N all=Emph who because 1-Perf-insult-Inv

'I pushed everyone$_1$ down because he$_1$ insulted me.'

c. * Piyel naka Petak '-koti-komutonom-a-wa-l psi=te wen-il [qeni *pro* macaha-t] .
Peter and Petak 3-Fut-rob-Dir-3P-Obv all=Emph who-Obv during leave-3Conj

'Peter and Petak are going to rob everyone$_1$ while he$_1$'s away.'

Clearly, linear order is not at issue here, only hierarchical order could possibly explain the difference. It must be the case that an adjunct clause is below the higher argument position, but above the object position; adjoined to VoiceP, say:

(43)

```
                    IP
                   /  \
                  /    \
              A1       Infl
              /\      /    \
             /  \    /      \
            /   Infl       VoiceP
           /    /         /      \
          /    /      VoiceP      CP
         /    /       /    \     /  \
        /    /      A2    Voice because ...
        \   /      subject  /  \
         \ /            Voice   VP
                              /    \
                             V      A3
                                  object
```

(Given the theory developed below, where the object moves into the higher subject position in the inverse, we predict that the object in the inverse should be able to bind into an adjunct clause. I do not have any data checking this prediction at the moment.)

The conclusion must be that the syntactic hierarchy of arguments is what matters for variable binding. Surface word order does not.

3.4 Summary

In this section I have shown, first, that variable binding in Passamaquoddy requires c-command, and can be used to test for hierarchical relations in the syntax. Second, using this diagnostic, I have shown that the inverse voice involves a reversal of the usual hierarchical relation between the logical subject and the logical object. This finding supports only the movement analysis of the inverse and rules out the morphological inverse analysis. The inverse linking approach was ruled out in the previous section, and is further argued against by reconstruction effects in the inverse.

The overall conclusion from these two sections is that the morphology of Algonquian languages is entirely syntactic. The finals always index the grammatical object, regardless of its status on the participant hierarchy. Variable binding and weak crossover indicate that a syntactic reversal takes place in the inverse, meaning that there is no impediment to a purely syntactic theory of the morphology: the prefix always indexes the highest argument, and the final suffix the lowest. There is no need to refer to a participant hierarchy at all. We can dispense with this hierarchy entirely, deriving its effects as epiphenomenal of the syntax of Algonquian languages.

The next section sketches the beginnings of a syntactic theory of the inverse. The point is to show that there is no need to mention the participant hierarchy at all.
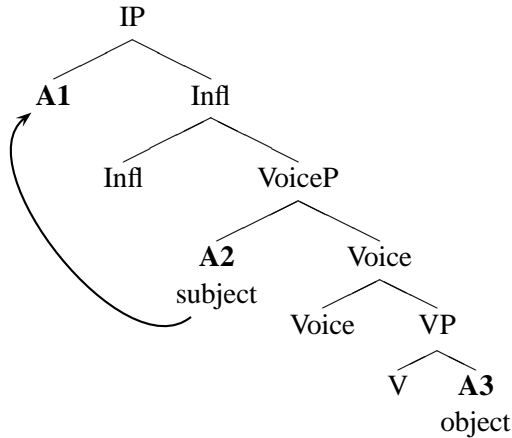
4 A Syntactic Account of Agreement and Obviation

It is easy to say that one agreement morpheme indexes the highest NP and the other the lowest, but once one attempts to spell out how this would work in a specific theory it becomes quite difficult. Since my goal here is simply to show that such a theory does not require reference to the participant hierarchy, I will try to keep things as simple as possible and will ignore many issues that arise in the rather complicated morphology of
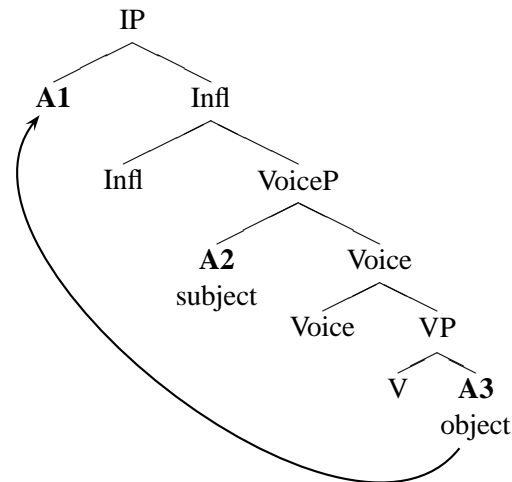
17

Algonquian languages. None of these issues are resolved by a participant hierarchy, so they can be safely ignored.[19]

I stated at the outset that the kind of theory that the variable binding data point to is the following, where subjects and objects are projected into designated positions, and then one of them moves to a higher argument position:

(44)   a. Direct

```
                IP
              /    \
           A1       Infl
          (↗)      /    \
                Infl      VoiceP
                        /      \
                      A2        Voice
                    subject    /     \
                            Voice      VP
                                      /  \
                                     V    A3
                                        object
```

   b. Inverse

```
                IP
              /    \
           A1       Infl
          (↗)      /    \
                Infl      VoiceP
                        /      \
                      A2        Voice
                    subject    /     \
                            Voice      VP
                                      /  \
                                     V    A3
                                        object
```
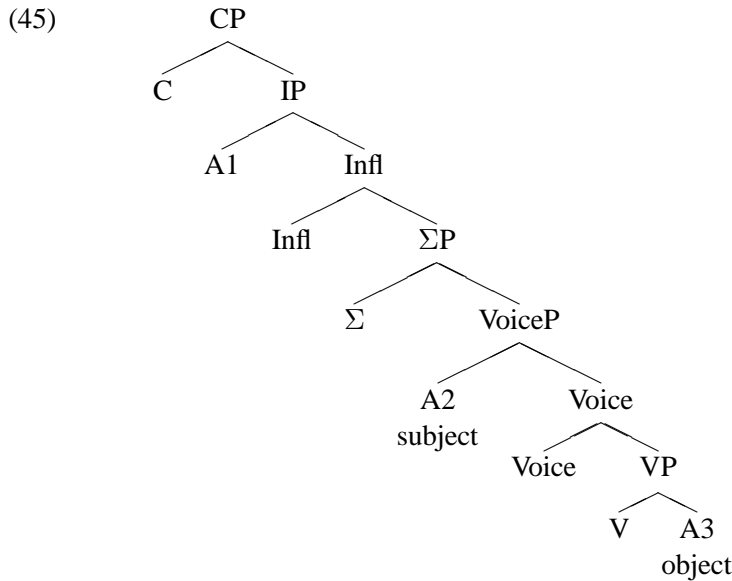
In the direct voice, it is the subject that moves, and in the inverse, it is the object.

There is no problem here with the prefix: we can simply say that it appears on the head Infl, and takes its value from the NP that moves to Spec-IP, the highest A-position. The problem is with the final suffix: in the direct, it will agree with the object in A3, but in the inverse, it will agree with the subject in A2. In the participant hierarchy theory, the suffix simply agrees with the NP that is lowest on the participant hierarchy. We could posit a syntactic hierarchy, similar to the relational hierarchy of Aissen (1997), and say that the suffix agrees with whatever is lowest on that hierarchy, but that would be dissatisfying. We want to be able to locate the suffix within a specific syntactic theory of the language. We also want to explain, without reference to a participant hierarchy, why proximate NPs move to A1 but obviative NPs do not.

Here is one way to approach both issues. Suppose, following Halle and Marantz (1993), that agreement affixes are heads that are added to syntactic heads at a post-syntactic level of morphology. Suppose further that these agreement (Agr) heads receive their values through the operation of Agree (Chomsky 2000), a

---

[19]Among these issues are the difference between the Independent Order morphology and the Conjunct Order morphology (the theory here only treats the Independent); how AI+O and ditransitive verbs work; the difference between transitive and intransitive verbs; and why intransitive verbs are inflected like transitives in the Subordinative Mode.

relation between a head and an NP that it c-commands. This means that all agreement takes place under c-command; there is no Spec-Head agreement. Following this path, I will further elaborate the structure of the Algonquian clause from that above to the following:
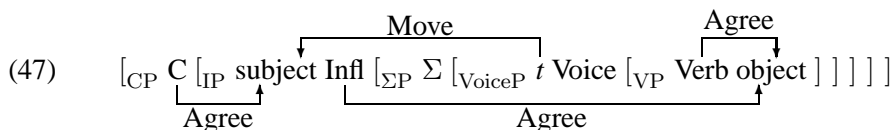
(45)

```
              CP
             /  \
            C    IP
                /  \
              A1    Infl
                   /    \
                 Infl    ΣP
                        /  \
                       Σ    VoiceP
                           /    \
                         A2      Voice
                      subject    /    \
                              Voice    VP
                                      /  \
                                     V    A3
                                       object
```

The verb projects its argument, the object. Voice is the head that projects the subject (Kratzer 1996). The head Σ is where negation is located, but it also appears in affirmative clauses, though it is null there (Laka Mugarza 1990, 1993). Infl is where tense is located. I assume that there are additional heads between Infl and C where modals and other elements occur (preverbs; see below).

The verb will move, in the syntax, through Voice to Σ and on to Infl, creating the complex head Verb-Voice-Σ-Infl. Prior to head movement, the verb, Infl, and C will all Agree with an NP in their c-command domain, and the features from those NPs that are copied onto the heads will be spelled out as Agr nodes adjoined to the heads in the morphological level. At that level, where Agr heads are adjoined, we will have the following complex head:

(46)   [[[[verb+Agr] Voice] Σ] Infl+Agr]

The Agr node adjoined to the verb will take the features of the object; this suffix is the final from above. It agrees in animacy with the object. Voice is spelled out as the direct or the inverse suffix, depending on what happens in the syntax (see below). Σ is null if the clause is affirmative, the suffix /-wi/ if the clause is negative. Infl will agree with whatever NP is left in VoiceP (its c-command domain) after one of the subject or object has moved to Spec-IP. This will be the final suffix.

The Agr node adjoined to C will agree with whatever NP has moved to Spec-IP; this node is spelled out as the prefix, which will cliticize to the left of the verbal complex (or to one of various preverbs that occur between C and Infl). These Agree relations are indicated below for a direct clause, where the subject has moved to Spec-IP:[20]

(47)   [_CP C [_IP subject Infl [_ΣP Σ [_VoiceP *t* Voice [_VP Verb object]]]]]

with labels: Move, Agree, Agree, Agree

---

[20]Contra Chomsky, I do not think that VoiceP constitutes an opaque domain for Agree (a *phase*). Infl can Agree with the object even though it is buried within VoiceP. (Cf. Fox and Pesetsky (2005), who try to derive phasehood from linearization, with the result that phases are not actually opaque.)

In such a case, we will end up with a prefix on C, leaning onto the verbal complex to its right, or onto a preverb between C and Infl, which will also attach loosely to the left side of the verbal complex in Infl.[21] This will end up with a linear configuration like that in (48), resulting in a complex word like that in (49):

(48)   [$_{CP}$ Agr- [preverb- [$_{IP}$ [$_{Infl}$ verb-Agr-Voice-Σ-Infl-Agr]]]]

(49)   '-kisi-   nomi-y-a-wi-pon-il
        3-Perf- see-An-Dir-Neg-Pret-Obv
        'he/she (prox) didn't see him/her (obv)'

This gives us the correct morpheme order, and the correct Agree relations. (See Halle and Marantz 1993 for further discussion of Algonquian morphology, and for justification for treating the prefix as different from the suffixes; but note that I do not adopt their theory that the prefix is a pronoun.)

The question now is what happens in the inverse voice, and how obviation works. Following the system of Chomsky (2000), I propose that the head Voice can optionally be given a feature that will drive movement of the object to a second specifier of VoiceP, above the subject. Chomsky calls this feature, whose sole purpose is to drive movement, an [EPP] feature:

(50)
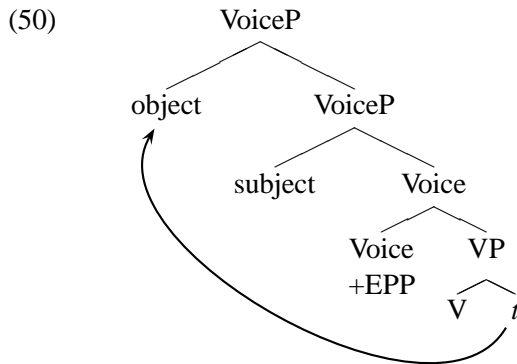
This movement takes the object to a position c-commanding the subject. Now when a similar feature on Infl drives movement of an NP to Spec-IP, it will be the object that moves rather than the subject, since the object is now the closest NP to Infl. It will also now be the object in Spec-IP that Agrees with C, and the subject with Infl, since the subject is now the only NP in the c-command domain of Infl.[22] So, the direct-inverse opposition is simply a matter of a feature on Voice that forces movement of the object. If the feature is present, the clause ends up being inverse; if it is absent, direct.

Now we can explain where the direct or inverse morphology comes from. This morpheme, I am claiming, is the head Voice, it is not agreement. The form it takes depends on whether it has the [EPP] feature or not. With the [EPP] feature, Voice is spelled out as the inverse theme sign, /-oq-/; without, it is spelled out as the direct theme sign, /-a-/.

---

[21]Material can intervene between the prefix+preverb and the verbal word, as in the following example where a quotative particle appears between them:

(i)   'T-ali   yaq qecimul-a-wa   psi=te Skicinu   . . .
        3-around Quot ask-Dir-3P.ObvP all   Indian.ObvP
        'They're going around asking all the Indians. . . ' (Newell 1974, 6)

[22]Unlike Chomsky, I do not assume that Agree is a prerequisite for movement; I assume that movement and agreement are fundamentally different operations. Moreover, it is crucial here that movement takes place prior to Agree, such that a head that has a feature driving movement may not actually Agree with the NP that it causes to move. Movement will take the NP out of the c-command domain of the head. This will require a small reworking of Chomsky's account of expletive constructions in languages like English. A head below T must host subject agreement, and Agree with the subject before it moves. The higher head will then attract the subject to its specifier (or the subject will stay in place and an expletive will be inserted).

This explains the agreement, the direct/inverse morphology, and the reversal of syntactic prominence in the inverse. What about obviation?

4.1 Obviation

One interesting result of the findings reported here is that a striking generalization emerges: proximate NPs always c-command obviative NPs. We saw this through the diagnostic of variable binding. In the direct voice, the subject is proximate and can bind into and hence c-commands the object, which is obviative. In the inverse voice, the object, which is proximate, binds into the subject, which is obviative. With AI+O verbs, the object is always obviative, and the subject, which is proximate, binds into it. In ditransitives, not shown here, the second object is always obviative if either the subject or the first object is third person, and those bind into it. In other words, the proximate NP always c-commands (and is able to bind into) obviative NPs.

One final context where this generalization holds is within NPs. Possessors are always proximate while the possessed noun is always obviative. Given usual assumptions about possessors, occupying Spec-NP (or Spec-DP), they c-command the head noun (and there is no possibility of a syntactic reversal like the inverse within an NP).

What this means is that obviation, like the morphology, is syntactic. All we have to say is that, in a certain domain where two third person NPs are present, the higher one obviates the lower one. Hence, in the direct, the subject becomes proximate and the object becomes obviative; while in the inverse, where the object has crossed over the subject, the object, being highest, will become proximate, and the subject obviative. In contexts where no such crossover is possible, such as inside NPs, with AI+O verbs, and between the two objects of a ditransitive, one NP is doomed to always being obviative—the lower one.

There are numerous complications, of course, but the basic conclusion will stand: obviation (where it is obligatory) is determined by the syntax.

4.2 Non-Syntactic Factors

This conclusion will undoubtedly be received quite skeptically by Algonquianists, who have found numerous ways that the obviation system is used in discourse and to track coreference (e.g., Goddard 1984, 1990). However, I do not think that the two are incompatible. For instance, note that there was one piece of the account above that was optional: giving Voice an [EPP] feature to drive movement of the object. Once we have something optional like this, it is natural to suppose that it could be exploited for purposes outside of the narrow syntax. For instance, suppose that in a discourse the object is going to be more prominent in some sense than the subject. In such a case the [EPP] feature might be added to Voice in the syntax, with the result that the object ends up in the syntactically most prominent position. This is quite similar to the use of the passive in English, which is a syntactic operation with particular syntactic properties that are logically independent of its discourse uses (prominence of the object, non-prominence of the subject, e.g.). Regardless of how it is *used*, however, the syntax works in a very narrow way, using purely syntactic mechanisms and having syntactic results.

I should also say at this point that the system of agreement and obviation that I have just proposed is limited to A-positions. This is a hierarchy of A-positions that determines agreement and obviation. As we saw above, wh-movement, for instance, does not change the agreement relations or the binding possibilities. Similarly, surface word order variations do not change them, either. I assume that there are operations, like wh-movement, that move NPs from A-positions to A-bar positions, without changing the morphology or obviation. It is quite likely that there are numerous such A-bar positions related to discourse roles of topic and focus, and therefore that the surface word order is largely determined by, or at least interacts with, these discourse roles. Hence, discourse notions *do* play a role in Algonquian syntax, but they are outside of the system of morphology and obviation. (And again, as far as I can tell, there is no need to invoke a participant

hierarchy even for such discourse roles: inanimates can be topic and focus as well as first and second persons can.)

What this means is that discourse roles and speaker choices really play no role in the computational system of A-positions that determines morphology and obviation. The morphology is completely grammatical, as is obviation (where it is grammatically fixed). Discourse may play a role in surface word order, and it may play a role in deciding whether to use the [EPP] feature that drives movement, but it plays no role in the syntax of A-positions.

4.3   Other Levels of the Hierarchy

The theory given above explains the morphology of direct and inverse clauses involving third person animates. However, the participant hierarchy, repeated below, involves more rankings than those:

(51)   Participant Hierarchy: 1,2 > 3 > Obv > Inan

To truly do without the participant hierarchy, we need to explain why first and second persons are treated differently (and like third person proximates, when they are opposed to obviatives), and why inanimates are treated differently. In the interest of space, I will provide only the sketchiest of approaches to this issue here.

It is simply a fact that numerous languages treat animates and inanimates differently. There is no escaping this fact, which must be grammaticaly encoded. What is not true is that the only way to capture it is to posit a hierarchy (of animacy, or of participants). Within the system of Chomsky (2000) that was made use of above, features of lexical items play a large role in the syntax. For instance, when a head induces an NP to move, it can only affect NPs with particular features: a wh-feature, in the case of wh-movement, for instance. If the heads that induce movement in the theory above, Voice and Infl, only affect NPs with the feature [animate], we explain why inanimates are always the lowest syntactically: if the inanimate is the object, it may not move to VoiceP and hence may not move on to IP; if it is the subject, it may not move to IP, and, given that something has to move to IP in a transitive clause, the only derivation that will result in a grammatical output is one where Voice is given the [EPP] feature, the object moves to VoiceP, and then moves on to IP. It is simply ungrammatical in Passamaquoddy to have a clause where both the subject and the object are inanimate, which we explain by the constraint that *something* has to move to Spec-IP in a transitive clause. Given that Infl can only cause animates to move, there would be nothing that could move in such a case.

First and second persons are a little more complicated. Given the way the morphology works when both subject and object are first and second person, both of them must move to Spec-IP and Agree with C. Consider the first/second person Independent Subordinative paradigm of the TA verb meaning 'to listen to' below:

(52)

Subject	Object	
	1	1P
2	k-ciksotuw-i-n	k-ciksotuw-i-ne-n
2P	k-ciksotuw-i-ni-ya	k-ciksotuw-i-ne-n
	2	2P
1	k-ciksotu-l-on	k-ciksotu-l-oni-ya
1P	k-ciksotu-l-one-n	k-ciksotu-l-one-n

The suffix /-one-/, which occurs between the theme sign (in this theory, the spellout of Voice) /-i-/ or /-l-/ and the marker of plurality, is a marker of the subordinative mode, and should be ignored (the schwa regularly deletes after a vowel, and the /e/ deletes when it is final, or changes to /i/ before /y/). The thing to note about this paradigm is that the first person plural suffix /-n/ always overrules any other suffix, and the second

person prefix overrules any other prefix. That is, first person always triggers the prefix /n-/, *unless* a second person is also present, in which case the /k-/ always appears. But if first person plural is present, the suffix is always /-n/, leaving no room to distinguish between second person singular and plural. Only if first person is singular and the suffix is not present can the second person suffix /-ya/ appear. The simplest way to capture these two facts is to say that both arguments are competing for the same agreement slots.

What this means in the above theory is that first and second persons, when they are subject and object, will both always move together to Spec-IP, where they agree with C and compete for the prefix.[23] To explain this, we must consider the function of the Agree operation in Chomsky's theory. For Chomsky, features of NPs (and of heads) must be *checked* by Agree with a head; this checking licenses the NP. Different persons are distinguished by different features; I assume that first and second persons have in common a feature [Participant] that distinguishes them from third persons (both animate and inanimate). We can now hypothesize that the only Agree relation that checks and licenses a [Participant] feature is Agree with C. Only the head C checks [Participant]. An NP with a [Participant] feature can participate in other Agree relations, but none of them will satisfy its requirements.

Consider now a derivation where the subject and object are both first and second person. Voice will have to be given an [EPP] feature so that the object can move to Spec-VoiceP, which in Chomsky's system is a prerequisite for movement further. Both NPs are now in specifiers of VoiceP. (At this point Σ will Agree with both of them but will license neither; see footnote 23.) Infl requires that an animate NP move to its specifier, as stated above. In principle, we can suppose, it will allow any number of animate NPs to move to multiple specifiers, but in general only one is permitted, by some kind of economy principle. When both NPs have the [Participant] feature, however, they can only be licensed by C, and so both must move to multiple Spec-IPs. The licensing requirement overcomes the economy principle. C will Agree with both of them. Both have left the c-command domain of Infl, so Infl will agree with neither of them (the final suffix only indicates third persons).[24]

As for third persons, which do not have the [Participant] feature, they are licensed by any Agree relation: with C, or with Infl. Thus they may move or may not move, depending on the presence of the [EPP] feature on Voice, or the presence of another NP that does have a [Participant] feature.

Besides the direct and the inverse suffixes, Voice is also spelled out as two other suffixes in the presence of both first and second person arguments, which require complicating the theory slightly. It will be necessary to have the spellout of the Voice head depend on features of the subject that it projects as well as the [EPP] feature. The direct and the inverse morphemes have the same specification, [–EPP] and [+EPP], respectively; the theme sign /-i-/ will appear if Voice is [+EPP] and projects a second person subject, and the theme sign /-l-/ will appear if Voice is [+EPP] and projects a first person subject. The morphemes /-i-/ and /-l-/ will always take precedence over /-oq-/, given that more specified elements are always inserted preferentially over less specified elements (see Halle and Marantz 1993).

The above is only the sketchiest approach to the animate versus inanimate and first and second versus third person distinctions in Algonquian languages. For a slightly more worked-out account, see chapter 2 of Bruening 2001 (but note that the theory presented here differs in several important respects from the one there).

---

[23]The two will also compete for the plural suffix, which I did not include in the exposition above. This suffix follows the negative suffix and precedes the preterite suffix, as in *k-tokom-a-wi-**nu**-hpon*, 2-hit.TA-Dir-Neg-1P-Pret, 'we (Incl.) didn't hit him/her', so I locate it on the head Σ. Σ will Agree with either the highest NP in Spec-VoiceP, or with both arguments in Spec-VoiceP if they are first and second person. I hypothesize that it works this way because Σ has to Agree with all [Participant] features; in the absence of one, it does the minimal Agree it can, which is Agree with the NP closest to it. This Agree relation does not license the NP by checking [Participant] (see the text); any NP with the [Participant] feature will still have to move to Spec-IP and Agree with C.

[24]Alternatively, Infl only Agrees with NPs that are [–Participant]; it is then conceivable that only one of the subject or object move to Spec-IP, but C can still Agree with both of them, one locally in Spec-IP and the other long-distance in Spec-VoiceP.

4.4   Summary

The theory given above is by no means a complete theory of the agreement and obviation systems of Algonquian languages. However, it is meant as a starting point, the beginnings of a syntactic theory that does not refer to a participant hierarchy in any way, but only to features of lexical items that are needed in any theory. Since it is possible to construct such a theory, there is no need for a participant hierarchy.

5   Conclusion

The preceding section has shown that it is possible to construct a syntactic theory of the agreement morphology and obviation systems of Algonquian languages, using only a hierarchy of argument positions and eschewing reference to a participant hierarchy. This same hierarchy of argument positions is also necessary to account for variable binding in Passamaquoddy. It also accounts for that part of the morphology that indexes grammatical roles, ignoring the putative participant hierarchy (the finals). Since this syntactic system is sufficient to account for all of the facts, and it is necessary (the finals, variable binding), the simplest theory is one that makes reference only to syntax and dispenses with the participant hierarchy.

This should be a welcome result, as the status of the participant hierarchy in the grammar was unclear, at best. It also unifies the clausal structure and syntactic mechanisms of Algonquian languages with other languages of the world, which use similar mechanisms. There is no impediment to a universal system of argument projection (something like the UTAH), and no reason to think that inverse systems are wildly different from other systems.

In fact, numerous other languages have constructions that are strikingly similar to the Passamaquoddy inverse, but have never been considered to be inverse constructions. A-scrambling in Japanese, mentioned above, is one: the object crosses over the subject, changing scope and binding relations and relative prominence. Miyagawa (2001) argues for a theory of Japanese A-scrambling that is very much like the theory here: normally the subject moves into the higher argument position (Spec-IP or the equivalent), but in A-scrambling the object moves there instead. Another case is what has been called the "second passive" in Indonesian (e.g., Guilfoyle, Hung, and Travis 1992). Indonesian has one passive that has the properties of the English passive—agent demotion, promotion of object—, but it has a second construction that lacks demotion. The agent is still present, usually as a pronoun immediately before the bare verb stem, while the object fronts to what appears to be the normal subject position. Again, this is exactly like what I am suggesting the Passamaquoddy inverse is. Only there is no complicated agreement in Indonesian, so the construction has never been called an "inverse." If the conclusions of this paper are correct, there is no Algonquian-specific "inverse" construction; there is only a widespread object movement over an undemoted subject, which may or may not interact with morphology, depending on the language.

Finally, a word must be said about other Algonquian languages. The syntactic status of the inverse has been quite controversial. My purpose here has been to argue against any need for a grammatically encoded participant hierarchy, and to show the necessity of syntax. I would argue that there is no need for the participant hierarchy in any Algonquian language (or any language of the world, for that matter), but I am not necessarily claiming that all Algonquian languages will have precisely the same syntactic analysis of the inverse, although I would expect that they would, all other things being equal. Dahlstrom (forthcoming) summarizes some of the main arguments from individual languages on this subject. She cites arguments that there is a syntactic reversal of subject and object in Ojibwa (from Rhodes 1994), but that there is not in Cree (from Dahlstrom 1991). She also gives arguments against syntactic reversal in Meskwaki (Fox). However, her arguments from Meskwaki only argue against treating the inverse as a derivational change in the initial projection of arguments. They do not argue against a syntactic inversion as in the theory here. I am also not completely convinced by the arguments from Cree. In Cree, only thematic agents may raise to object position of a higher verb, even in the inverse; and only thematic patients allow quantifier float. The latter can

be handled by limiting quantifier float to the lowest argument position in a transitive clause, complement of the verb. The raising to object argument is more problematic, but it is contradicted by data from variable binding. Dahlstrom (1986, 56–57) showed that the inverse enables the object to bind into the subject and gets around weak crossover in Cree, just as it does in Passamaquoddy:

(53)   a.   namo·ya awiyak wanikiskisitota·k   otawa·simisa
             no one   forget.Obv/3[**Inverse**] his.child.Obv

             'His$_1$ (Prox) children (Obv) forget no one$_1$ (Prox)'

       b.   awi·na e··sa·kihikot   oma·ma·wa?
             who   love.Obv/3[**Inverse**] his.mother.Obv

             'Who$_1$ (Prox) does his$_1$ (Prox) mother (Obv) love?'

(See also Brittain 1999 on Western Naskapi.)

    I take the weak crossover facts to indicate that there is, in fact, syntactic inversion in Cree. As for the raising to object restriction, we might be able to explain it by pointing to the fact that there are other cross-clausal constructions where the grammatical agent is targeted. In Passamaquoddy, for instance, the object of verbs like 'help' and 'forbid' must be the agent of the lower verb. The lower verb can be inverse (with 'forbid' but not with 'help', interestingly), but it is the agent that is coreferential with the higher object. So, even if we do not understand *why* certain processes target embedded agents rather than the syntactically highest argument, the fact is that they do, and hence there might be some other reason for the restriction in Cree besides a lack of reversal in the inverse. If so, the way is clear to a syntactic theory of cross-Algonquian applicability.

References

Aissen, Judith (1997), "On the Syntax of Obviation." *Language* 73: 705–750.

Aoun, Joseph, and Yen-Hui Audrey Li (1993), *Syntax of Scope*. Cambridge, MA: MIT Press.

Baker, Mark C. (1988), *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.

Baker, Mark C. (1996), *The Polysynthesis Parameter*. New York and Oxford: Oxford University Press.

Barss, Andrew (1986), *Chains and Anaphoric Dependence: On Reconstruction and Its Implications*. Ph.D. thesis, Massachusetts Institute of Technology.

Brittain, Julie (1999), *The Distribution of the Conjunct Verb Form in Western Naskapi and Related Morpho-Syntactic Issues*. Ph.D. thesis, Memorial University of Newfoundland.

Bruening, Benjamin (2001), *Syntax at the Edge: Cross-Clausal Phenomena and The Syntax of Passamaquoddy*. Ph.D. thesis, Massachusetts Institute of Technology. Distributed by MIT Working Papers in Linguistics, Cambridge, Mass.

Chomsky, Noam (1976), "Conditions on Rules of Grammar." *Linguistic Analysis* 2: 303–351.

Chomsky, Noam (1981), *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam (2000), "Minimalist Inquiries: The Framework." In Roger Martin, David Michaels, and Juan Uriagereka, eds., *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, Cambridge, MA: MIT Press, pp. 89–155.

Dahlstrom, Amy (1986), "Weak Crossover and Obviation." In Vassiliki Nikiforidou *et al.*, eds., *Proceedings of the 12th Annual Meeting of the Berkeley Linguistics Society*, pp. 234–253.

Dahlstrom, Amy (1991), *Plains Cree Morphosyntax*. New York: Garland.

Dahlstrom, Amy (forthcoming), *Morphology and Syntax of the Fox (Mesquakie) Language*. Cambridge: Cambridge University Press.

Fox, Danny, and David Pesetsky (2005), "Cyclic Linearization of Syntactic Structure." *Theoretical Linguistics* 31: 1–45.

Francis, David A., and Robert M. Leavitt (1995), "The Indian Devil, Mischief-Maker." In Brian Swann, ed., *Coming to Light: Contemporary Translations of the Native Literatures of North America*, New York: Random House, pp. 503–518.

Goddard, Ives (1984), "The Obviative in Fox Narrative Discourse." In William Cowan, ed., *Papers of the Fifteenth Algonquian Conference*, Ottawa: Carleton University, pp. 273–286.

Goddard, Ives (1990), "Aspects of the Topic Structure of Fox Narratives: Proximate Shifts and the Use of Overt and Inflectional NPs." *International Journal of American Linguistics* 56: 317–340.

Goddard, Ives, and Kathleen J. Bragdon (1988), *Native Writings in Massachusett*. Philadelphia: The American Philosophical Society.

Guilfoyle, Eithne, Henrietta Hung, and Lisa Travis (1992), "Spec of IP and Spec of VP: Two Subjects in Austronesian Languages." *Natural Language and Linguistic Theory* 10: 375–414.

Halle, Morris, and Alec Marantz (1993), "Distributed Morphology and the Pieces of Inflection." In Kenneth Hale and Samuel Jay Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, Cambridge, MA: MIT Press.

Higginbotham, James (1980), "Pronouns and Bound Variables." *Linguistic Inquiry* 11: 679–708.

Hoji, Hajime (1985), *Logical Form Constraints and Configurational Structures in Japanese*. Ph.D. thesis, University of Washington.

Hornstein, Norbert (1984), *Logic as Grammar*. Cambridge, MA: MIT Press.

Hornstein, Norbert, and Amy Weinberg (1990), "On the Necessity of LF." *The Linguistic Review* 7: 129–167.

Koopman, Hilda, and Dominique Sportiche (1991), "The Position of Subjects." *Lingua* 85: 211–258.

Kratzer, Angelika (1996), "Severing the External Argument from Its Verb." In John Rooryck and Laurie Zaring, eds., *Phrase Structure and the Lexicon*, Dordrecht: Kluwer, pp. 109–137.

Kuroda, S.-Y. (1970), "Remarks on the Notion of Subject with Reference to Words Like *Also, Even,* or *Only*, Part II." In *Annual Bulletin*, Tokyo: Logopedics and Phoniatrics Research Institute, Tokyo University, vol. 4.

Laka Mugarza, Itziar (1990), *Negation in Syntax: On the Nature of Functional Categories and Projections*. Ph.D. thesis, MIT. Distributed by MIT Working Papers in Linguistics, Cambridge, MA.

Laka Mugarza, Itziar (1993), "Negative Fronting in Romance: Movement to Σ." In William J. Ashby, Marianne Mithun, Giorgio Perissinotto, and Eduardo Raposo, eds., *Linguistic Perspectives on the Romance languages. Selected papers from the 21st linguistic symposium on Romance languages (LSRL XXI)*, Amsterdam: John Benjamins, pp. 315–33.

Mitchell, Lewis (1921/1976a), *Espons ('Raccoon')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Mitchell, Lewis (1921/1976b), *Kiwahqiyik ('The Giants')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Mitchell, Lewis (1921/1976c), *Koluskap naka 'Siwiyi/Oqim/Wocawson ('Koluskap and His Relatives/Loon/Wind')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Mitchell, Lewis (1921/1976d), *Koluskap Nekotok Skitkomiq ('When Koluskap Left the Earth')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Mitchell, Lewis (1921/1976e), *Mikcic ('Turtle')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Mitchell, Lewis (1921/1976f), *Pukcinsqehs ('The Tree-Stump Woman')*. Indian Township, Maine: Wabnaki Bilingual Education Program. Edited and updated version of text in J. D. Prince (1921), "Passamaquoddy Texts," Volume X of the Publications of the American Ethnological Society.

Miyagawa, Shigeru (2001), "The EPP, Scrambling, and *Wh*-in-Situ." In Michael Kenstowicz, ed., *Ken Hale: A Life in Language*, Cambridge, MA: MIT Press, pp. 293–338.

Newell, Irene (1979), *Kehtaqs ('Ghost Stories')*. Indian Township, Maine: Wabnaki Bilingual Education Program.

Newell, Wayne (1974), *Kukec*. Indian Township, Maine: Wabnaki Bilingual Education Program.

Partee, Barbara, Emmon Bach, and Angelika Kratzer (1987), "Quantification, A Cross-Linguistic Perspective." NSF Grant Proposal, UMass, Amherst.

Perlmutter, David, and Paul M. Postal (1984), "The 1-Advancement Exclusiveness Law." In David M. Perlmutter and Carol Rosen, eds., *Studies in Relational Grammar 2*, Chicago: University of Chicago Press, pp. 81–125.

Perlmutter, David, and Richard A. Rhodes (1988), "Syntactic-Thematic Alignments in Ojibwe." Paper presented at the annual meeting of the Linguistic Society of America, New Orleans.

Postal, Paul M. (1971), *Cross-Over Phenomena*. New York: Holt, Rinehart, and Winston.

Rhodes, Richard A. (1976), *The Morphosyntax of the Central Ojibwa Verb*. Ph.D. thesis, University of Michigan.

Rhodes, Richard A. (1990), "Ojibwa Secondary Objects." In Katarzyna Dziwirek, Patrick Farrell, and Errapel Mejías-Bikandi, eds., *Grammatical Relations: A Cross-Theoretical Perspective*, Stanford: CSLI Publications, pp. 401–414.

Rhodes, Richard A. (1994), "Agency, Inversion, and Thematic Alignment in Ojibwe." *Berkeley Linguistics Society* 20: 431–446.

Russell, Kevin, and Charlotte Reinholtz (1997), "Nonconfigurationality and the Syntax-Phonology Interface." In *Proceedings of the Fifteenth West Coast Conference on Formal Linguistics (WCCFL 15)*, Stanford: CSLI, pp. 441–455.

Sportiche, Dominique (1988), "A Theory of Floating Quantifiers and Its Corollaries for Constituent Structure." *Linguistic Inquiry* 19: 425–449.

Wasow, Thomas (1972), *Anaphoric Relations in English*. Ph.D. thesis, Massachusetts Institute of Technology. Distributed by MIT Working Papers in Linguistics, Cambridge, Mass.

Department of Linguistics
University of Delaware
Newark, DE 19716
(302) 831-4096
bruening@udel.edu