Covert A-Scrambling in Tlingit

Seth Cable
University of British Columbia
University of Massachusetts, Amherst

1. Introduction

General Claim: The grammar of Tlingit (Na-Dene; Alaska, British Columbia, Yukon) includes a covert variant of the operation of ‘A-scrambling,’ well-known from languages such as Hindi (Mahajan 1990, 1997).

Specific Claims:

• Tlingit possesses a configurational clausal structure, where subjects asymmetrically c-command objects (contra Leer 1991).

• Despite the evidence indicating a configurational structure, objects in Tlingit display properties suggesting that they c-command into subjects, even in canonical SOV order.

• These two sets of data can be reconciled if we assume that objects in Tlingit can covertly scramble to A-positions above subjects.

Outline:

Section 2: Basic background on Tlingit language and its grammar.

Section 3: Evidence that Tlingit clause is configurational.

Section 4: Evidence that Tlingit objects can c-command into subjects, even under SOV order

Section 5: An analysis of the facts from Section 4 in terms of ‘covert A-scrambling’

Section 6: Resolving certain residual issues in the analysis

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2. Basic Background Regarding the Tlingit Language

Genetic Affiliation:
- Sole member of ‘Tlingit’ language family
- Grouped with Eyak and Athabaskan in the Na-Dene (AET) Language Phylum

Areas Spoken:
Southeast Alaska, Northwest British Columbia, Southwest Yukon Territory

Internal Variation:
Very little dialectical diversity; dialectical differences are strictly phonetic / phonological
- All data in this talk come from two speakers of the Greater Northern dialect, living in Juneau, AK.

Status in the Community:
- At most 800 native speakers [more likely ~300 speakers]
- Youngest native speakers are in early 50s
- Youngest fluent L2 speakers in late-twenties
- Some in L2 community raising children in the language
- Language has very positive image in the community; youths take pride in L2 knowledge
Major Linguistic Features:

Phonology: ejective fricatives; contrast between 5 laterals (none voiced)

Morphology: Head-marking (extensive use of null anaphora)
Complex (templatic) verbal prefix string, as in Athabaskan-Eyak relatives

Note: In this talk I will be ignoring the complex morpho-syntactic structure of the verb, glossing it only with its ‘lexical content’, and adding inflectional information only where relevant.

Syntax: Largely head-final alignment:
post-positions;
possessors precede possesa;
adjectives precede nouns;
auxiliaries follow main verbs;
SOV is most highly frequent (Dryer 1985)

Free word-order; any permutation of S, V and O is (in principle) well-formed (cf. Hupa and Koyukon; Thompson 2000).

(1) Word Order Freedom in Tlingit

a. SOV Wé shaawátch xóots awsiteen.
that woman.erg bear saw
The woman saw the bear.

b. SVO Wé shaawátch wusiteen xóots.²
that woman.erg saw bear
(= The woman saw the bear.)

c. OVS Xóots awsiteen wé shaawátch.
bear saw that woman.erg
(= The woman saw the bear.)

d. OSV Xóots wé shaawátch wusiteen.
bear that woman.erg saw
(= The woman saw the bear.)

e. VSO Awsiteen wé shaawátch xóots.
saw that woman.erg bear
(= The woman saw the bear.)

f. VOS Awsiteen xóots wé shaawátch.
saw bear that woman.erg
(= The woman saw the bear.)

² The reader may note that the verbal form in (1b) differs from that in (1a). This is due to a morpho-phonological rule that deletes 3rd obviative object agreement when the verb is directly preceded by an NP marked by the optional ergative post-position. The effect of this rule appears in many of the examples throughout this handout.
3. The Configurational Structure of the Tlingit Clause

Claim: Tlingit possesses a configurational clausal structure, where subjects asymmetrically c-command objects.

This claim runs counter to the analysis by Leer (1991), the only other treatment of clausal syntax in this language.

(2) Leer’s (1991) Analysis of Tlingit Sentence Structure

Major Claim of the Leerian Analysis:

There are no hierarchical asymmetries between Subject and Object.

‘…there is no independent evidence for positing a VP in Tlingit’ (Leer 1991: 27).

Contrary to the claim embodied by (2), there is evidence that subjects in Tlingit occupy a structurally higher position than objects (i.e., the Tlingit clause contains a VP).

3.1 Evidence from Principle C Effects

As shown by (3), a pronoun within an object in Tlingit can co-refer with a name in subject position.

(3) Permissible (Intra-Clausal) Anaphora

Bill₁ [ du₁ tláa ] asixán.
Bill  his mother   loves
Bill₁ loves his₁ mother.

3 The main subject of Leer 1991 is the inflectional system of Tlingit, which it documents in unprecedented and remarkable detail. Only seven pages of an introductory grammar sketch is given to clause-level syntax.
Similarly, as shown in (4), a pronominal object can co-refer with a name inside the subject.

(4)  **Permissible (Intra-Clausal) Anaphora**

\[
\begin{array}{l}
[ \text{Bill}_1 \text{ tláach } ] \ \emptyset_1 \ \text{sixán} \\
\text{Bill} \ \text{mother.erg} \ \text{pro} \ \text{loves} \\
\text{Bill}_1 \,'s \ \text{mother} \ \text{loves} \ \text{him}_1.
\end{array}
\]

*However, as shown by (5), a pronominal subject cannot co-refer with a name inside the object.*

(5)  **Principle C Effect in Tlingit (Intra-Clausal)**

\[
\begin{array}{l}
* \emptyset_1 [ \text{Bill}_1 \text{ tlá } ] \ \text{asixán}. \\
\text{pro} \ \text{Bill} \ \text{mother} \ \text{loves} \\
* \text{He}_1 \ \text{loves} \ \text{Bill}_1 \,'s \ \text{mother}. \\
\end{array}
\]

*(speaker comment: ‘it has to be somebody else that loves Bill’s mom’)*

Thus, unlike Nuu-chah-nulth (Davis et al. 2007), Tlingit exhibits Condition C effects intra-clausally.

\[Q:\] *How do we know that the impossibility of (5) isn't due to a linearity condition on co-reference (i.e., Perhaps cataphora is generally not possible in Tlingit?)*

\[A:\] *Sentences like the following show that cataphora is generally possible in Tlingit*

(6)  **Possibility of Cataphora in Tlingit**

\[
\begin{array}{l}
a. \text{Du}_1 \text{ tláach sixán Bill}_1. \\
\text{his mother.erg loves Bill} \\
\text{Bill}_1 \,'s \ \text{mother} \ \text{loves} \ \text{him}_1.
\end{array}
\]

\[
\begin{array}{l}
b. \text{Du}_1 \text{ tláach yéi uwajée [ Lindach Tom}_1 \text{ asixání }]. \\
\text{his mother.erg thinks Linda.erg Tom} \ \text{loves} \\
\text{His}_1 \ \text{mother} \ \text{thinks} \ \text{that} \ \text{Linda} \ \text{loves} \ \text{Tom}_1.
\end{array}
\]

*The facts above are easily covered by the following assumptions:*

(7)  **Configurational Theory of the Preceding Co-Reference Data**

\[
\begin{array}{l}
a. \text{A pronoun cannot be co-referent with an NP that it c-commands (Principle C)} \\
b. \text{Subjects c-command objects, but not vice versa.}
\end{array}
\]
Additional Relevant Data:
Furthermore, unlike some Salish languages, such as St’át’imcets (Matthewson et al. 1993) and Thomspson River Salish (Koch 2006), Tlingit exhibits condition C effects cross-clauasally.

(8) Principle C Effects in Tlingit (Cross-Clausal)
   a. Tom₁ yéi shkalneek [ Linda ash₁ een aawal'eix ].
      Tom said Linda him with danced
      Tom₁ said that Linda danced with him₁.
   b. ∅₁ Yéi shkalneek [ Linda Tom₁ een aawal'eix ].
      pro said Linda Tom with danced
      * He₁ said that Linda danced with Tom₁.

(9) Principle C Effects in Tlingit (Cross-Clausal)
   a. Tom Bill₁ yéi ayawsiₖaa [ Lindach ∅₁ sixán. ]
      Tom Bill told Linda.erg pro loves
      Tom told Bill₁ that Linda loves him₁.
   b. * Tom ∅₁ yéi ayawsiₖaa [ Lindach Bill₁ asixán ].
      Tom pro told Linda.erg Bill loves
      * Tom told him₁ that Linda loves Bill₁.

3.2 Evidence from Superiority Effects in Wh-Questions

Although Tlingit in principle allows for OSV order (cf. (1d)), there is one interesting circumstance where it is ruled out. As discussed by Cable (2007), if both the subject and the object are wh-words in a multiple wh-question, then the subject must precede the object.

(10) Superiority Effects in Tlingit Multiple Wh-Questions
   a. Aa sá daa sá aawaxáa?
      who Q what Q ate
      Who ate what?
   b. * Daa sá aa sá aawaxáa?
      what Q who Q ate

(11) Superiority Effects in Tlingit Multiple Wh-Questions
   a. Aa sá waa sá kuyawsikaa?
      who Q how Q said
      Who said what?
   b. * Waa sá aa sá kuyawsikaa?
      how Q who Q said

This pattern is attested across many languages of the world. While there are numerous conflicting theories of it (Kuno & Robinson 1972, Chomsky 1973, Pesetsky 1982, Aoun & Li 1993, Richards 1997), they all share the assumption that subjects asymmetrically c-command objects,
3.3 Evidence from Scopal Interactions with Negation

A post-verbal, indefinite object can have scope below negation.

(12) **Indefinite Object and Negation**

a. Tlél daa sá xwaxá.  
   not what Q I.ate  
   * I didn’t eat anything.

b. Tlél xwaxá daa sá.  
   not I.ate. what Q  
   * I didn’t eat anything.

(13) **Indefinite Object and Negation**

a. Tlél daa sá xwatéen.  
   not what I.saw  
   * I didn't see anything.

b. Tlél xwatéen daa sá.  
   not I.saw what  
   * I didn't see anything.

On the other hand, a post-verbal indefinite subject cannot have scope below negation.

(14) **Indefinite Subject and Negation**

a. Tlél aadóoch sá awuxá.  
   not who.erg ate  
   * Nobody ate it.

b. * Tlél awuxá aadóoch sá.  
   not ate who.erg

(15) **Indefinite Subject and Negation**

a. Hél aa sá wudaxwétl.  
   not who is.tired  
   * Nobody is tired.

b. * Hél wudaxwétl aa sá.  
   not is.tired who

(16) **Indefinite Subject and Negation**

a. Tlél aa sá awul'eix.  
   not who danced  
   Nobody danced.

b. * Tlél awul'eix aa sá.  
   not danced who

Thus, it seems that post-verbal subjects must be located above negation, while post-verbal objects can be located below negation, further indicating that subjects generally occupy a higher position than objects.

Moreover, it is possible to develop a precise account of these facts, one which necessarily assumes that subjects asymmetrically c-command (are structurally superior to) objects.
An Account of the Scopal Facts Above

(17) The Underlying Positions of Subject, Object, Verb and Negation

\[
\text{NegP} \\
\text{NEG} \text{ VP} \\
\text{SUBJ} \text{ VP} \\
\text{OBJ} \text{VERB}
\]

Since the object is in COMP-VP, no principles would prevent it from scrambling to a rightward specifier of VP, a position below negation.

(18) Licit Rightward Scrambling of Object to Position Below Negation

\[
\text{NegP} \\
\text{NEG} \text{ VP} \\
\text{VP} \\
\text{OBJ}_1 \text{ Rightward Scrambling}
\]

However, because the subject is already in Spec-VP, locality principles would prevent it from scrambling to a higher Spec-VP (Grohmann 2003). Thus, any rightward scrambling of the subject must be to a position higher than negation.

(19) Licit and Illicit Rightward Scrambling of Subject

\[
\text{NegP} \\
\text{NEG} \text{ VP} \\
\text{VP} \\
\text{OBJ} \text{VERB}
\]

Licit Rightward Scrambling

Illicit Rightward Scrambling
3.4 Evidence from Coordination

One striking argument in support of the existence of a VP in Tlingit concerns co-ordination. Consider the sentence below:

(20) VP-Co-ordination in Tlingit

\[
\text{Tlél aadóoch sá kóox awuxá } \text{ka ch’u cháayu awdaná }.
\]
\[
\text{not who.erg rice ate.irrealis or tea drank.irrealis}
\]

Nobody ate rice or drank tea.

Speakers confirm that this sentence, like its English gloss, describes a scenario where there are no rice-eaters and no tea-drinkers.

**QUESTION:** What is the conjunction \( \text{ka ch’u} \) ‘or’ coordinating in this sentence? ...It's clearly a structure larger than a word....

Could it be coordinating two full clauses? After all, Tlingit does allow null subjects. So perhaps the structure of (20) is as follows:

(21) The Sentence in (20) as Clausal Coordination

\[
\begin{align*}
&\text{[}_S \text{Tlél aadóoch sá kóox awuxá ] } \text{ka ch’u [}_S \text{∅ cháayu awdaná ].} \\
&\text{not who.erg rice ate.irrealis or pro tea drank.irrealis}
\end{align*}
\]

**ANSWER:** The structure in (21) can't be the right analysis of the co-ordination in (20)

(i) Under the simplest assumptions regarding compositional semantics, the very meaning of (20) requires that the indefinite subject have scope over the second VP, as well as the disjunction \( \text{ka ch’u} \). Note that the English sentence under (22b) cannot mean the same as that under (22a).

(22) The Semantics of (20) are Inconsistent with Clausal Coordination

a. Nobody \( [_{VP} \text{ ate rice } ] \) or \( [_{VP} \text{ drank tea } ] \).

b. \( [_{S} \text{ Nobody ate rice } ] \) or \( [_{S} \text{ they drank tea } ] \).

(ii) The verb in the second VP under (20) \( (\text{awdaná ‘drink’}) \) bears ‘irrealis’ morphology, which in Tlingit can only be licensed if the verb is in the scope of negation (Leer 1991).

These facts together provide strong evidence that the second verb in (20) is within the scope of the initial, overt subject. Thus, they provide strong evidence against the clausal coordination analysis in (21).
So what is the disjunction in (20) coordinating?
Well... given that the second verb must be within the scope of the subject, the most natural answer is that:

*The sentence in (20) exhibits VP-coordination!!*

(23) **The Sentence in (20) as VP-Coordination**

\[
\begin{align*}
[S & \text{Tlél aadóoch sá } [\text{VP } [\text{VP } \text{kóox awuxá }] \text{ ka ch’u } [\text{VP } \text{cháayu awdaná } ] ]]. \\
\text{not} & \text{ who.erg} \quad \text{rice ate.irrealis} \quad \text{or} \quad \text{tea drank.irrealis}
\end{align*}
\]

- This analysis would straightforwardly predict the observed meaning of (20) (cf. (22a))
- It would also correctly predict that the verb *awdaná* is in the scope of negation.

**Therefore:**

- The verb of a Tlingit sentence groups together with the object to form a VP
- Subjects asymmetrically c-command objects in the language
- *Tlingit is a configurational language*

(24) **Summary of the Evidence that Tlingit has a Configurational Clausal Structure**

(i.e, that subjects asymmetrically c-command objects).

- Classic Principle C effects
- Classic Superiority effects in multiple wh-questions
- Only post-verbal objects, but not post-verbal subjects, can occupy a position within the scope of negation.
- Co-ordination reveals that the object and the verb can together form a constituent (to the exclusion of the subject)
4. Some Surprising Parallels between Subjects and Objects in Tlingit

The preceding section presented facts that univocally point to a structural asymmetry between subjects and objects in Tlingit.

Curiously, however, there are nevertheless several phenomena in the language where subjects and objects behave as if they were structurally parallel. These phenomena appear to challenge a configurational analysis like (17), and to actually support the 'flat', non-configurational structure in (2).

After these puzzling cases are presented, I will propose an analysis that can reconcile them with the earlier data showing that subjects are structurally superior to objects in Tlingit.

4.1 Binding of Pronouns

As would be expected under any analysis, subjects in Tlingit can bind pronouns inside of objects.

(25) **Subject can Bind Pronoun inside of Object**

\[ \text{Ch’al dáktát} \quad \text{[ has } \text{ du1 tláa } \quad \text{ has asixán.} \]

\[ \text{just all their mother love} \]

\[ \text{Everyone1 loves their1 mom.} \]

More surprisingly, however, objects in Tlingit are also able to bind pronouns inside of subjects, even in canonical SOV order.

(26) **Object can Bind Pronoun inside of Subject, Even in SOV Sentences**

\[ \text{[ Has du1 tláach ] Idáktát has asixán.} \]

\[ \text{their mother.erg everyone love} \]

\[ \text{Everybody1’s mother loves them1.} \]

(Lit. 'Their1 mother loves everybody1.‘)

(27) **Object can Bind Pronoun inside of Subject, Even in SOV Sentences**

\[ \text{[ Du1 ééshch ] tléil at k’ásku awustín.} \]

\[ \text{his father.erg not boy saw} \]

\[ \text{No boy1’s father saw him1.} \]

(Lit. 'His1 father saw [no boy1].‘)

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4 These phenomena are not discussed by Leer (1991), who bases his adoption of the flat structure in (2) purely on the lack of any known arguments for a VP in Tlingit.
(28) **Standard Assumption Regarding Binding**

A phrase X can bind a pronoun/reciprocal Y *if and only if* X c-commands Y.

Under the standard assumption above, the facts in (26) and (27) are entirely unexpected by a configurational analysis like (17).

*Note, however, that they would follow from a non-configurational analysis like (2), where both the subject and the object c-command each other.*

(29) **C-Command Relations Predicted by Flat Structure**

$$
\begin{array}{c}
S \\
\text{Subject} & \text{Object} & \text{V} \\
(a) & \text{Subject c-commands Object} \\
(b) & \text{Object c-commands Subject}
\end{array}
$$

(4.2) **Binding of Reciprocals**

As would be expected under any account, subjects in Tlingit can bind reciprocals inside of objects.

(30) **Subject can Bind Reciprocal inside of Object**

a. [Tom ka Lindach]₁ [wooch₁ shagóni] has asixán.

   Tom and Linda.erg each.other parents love

   *Tom and Linda love each other’s parents.*

b. [Tom ka Lindach]₁ [wooch₁ shagóni] has awsiteen.

   Tom and Linda.erg each.other parents saw

   *Tom and Linda saw each other’s parents.*

More surprisingly, however, objects in Tlingit are also able to bind reciprocals inside of subjects, *even in canonical SOV order.*

(31) **Object can Bind Reciprocal inside of Subject, Even in SOV Sentences**

a. Wooch₁ shagóonich [Tom ka Linda]₁ has asixán

   each.other parents.erg Tom and Linda love

   *Tom and Linda are loved by each other’s parents.*

   (Lit. 'Each other's parents love [Tom and Linda]₁.’)

b. Wooch₁ shagóonich tsû [Tom ka Linda]₁ has awsiteen.

   each.other parents.erg also Tom and Linda they.saw

   *Tom and Linda were seen by each other's parents.*

   (Lit. 'Each other's parents saw [Tom and Linda]₁.’)
Again, under the standard assumption in (28), the facts in (31) are entirely unexpected by a configurational analysis like (17).

However, they would follow from a non-configurational analysis like (2), where both the subject and the object c-command each other.

4.3 Relative Scope

In many other predominately SOV languages, objects cannot take scope above subjects in SOV sentences. Rather, under canonical SOV order, subjects necessarily take widest scope.

(32) Subject / Object Scope in Hindi SOV Sentences

Sab tiin ciize khariide ge.
everyone three things will.buy
Everyone will buy three things. \[\forall > 3 ; * 3 > \forall\] (Mahajan 1997)

Facts such as these are often taken as evidence that subjects are structurally superior to objects (in default, underlying SOV order).

In contrast to the pattern seen above for Hindi, Tlingit readily permits objects to have scope above subjects, even in canonical SOV sentences.

(33) Scope in SOV Sentences of Tlingit

a. Ax kaa yátx’i déi̲x̲ xáat has aawashaat.
   my sons two fish caught
   My sons caught two fish. \[\forall > 2 ; 2 > \forall\]

b. Ax kaa yátx’i déi̲x̲ x’úx’ s aawa.óo.
   my sons two book bought
   My sons bought two books. \[\forall > 2 ; 2 > \forall\]

If scope is assumed to be determined by c-command (as is standardly done), then the Tlingit data in (33) are not expected under a configurational analysis (particularly in light of the Hindi data in (32)).

However, the facts in (33) might be taken to follow from a flat, non-configurational analysis like (2), where there is no structural asymmetry between subjects and objects in Tlingit!

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5 Given the abstractness of the data in (33), I feel that a brief word is warranted regarding the manner in which these judgments were elicited. Basically, I followed a standard truth value judgment task. I presented the speakers with pictures depicting scenarios under which only one of the two targeted readings were true. I then asked them whether the sentence in question would be an allowable way of describing the scenario. This is also essentially the technique I used to obtain the data in Sections 4.1 and 4.2.
5. Reconciling the Data: Covert A-Scrambling in Tlingit

What we've seen thus far:

- Section 3 presented data best explained under a configurational analysis of the Tlingit clause.
- Section 4 presented data which are unexpected under a configurational analysis, and which seem to be predicted by the flat, non-configurational analysis in (2).

How do we reconcile these data under a single, univocal analysis?

(34) The Proposed Analysis: Covert A-Scrambling in Tlingit

- As shown by the data in Section 3, the subject in Tlingit asymmetrically c-commands the object at D-structure (initial Merger).
- Crucially, however, Tlingit also has a covert version of the (optional) A-scrambling operation seen in languages such as Hindi and Japanese (Mahajan 1990, 1997)
- Given the independently observable properties of A-scrambling, we predict the pattern of data in Section 4, without sacrificing the data from Section 3 (or the overarching configurational analysis)

5.1 Overt A-Scrambling (in Hindi)

What is this 'A-scrambling'?
In many canonical SOV languages, it is possible for objects to invert - or 'scramble' - to so-called 'A-positions' above the subject.

(35) Overt A-Scrambling in Hindi

a. Canonical (non-scrambled) SOV Order
   Sab tiin ciize khariide ge.
   everyone three things will.buy
   Everyone will buy three things. (Mahajan 1997)

b. Non-canonical (scrambled) OSV Order
   Tiin ciize sab khariide ge.
   three things everyone will.buy
   Everyone will buy three things. (Mahajan 1997)
Importantly, this 'A-scrambling' has a number of syntactic and semantic effects:

(36) Some Core Properties of A-Scrambling (Mahajan 1990, 1997)

(i) Allows Object to Bind Pronoun inside Subject

a. * [ Uske₃ bhaai-ne ] [ har ek aadmii-kO ]ₙ maaraa.
   his brother-ERG every man-ACC hit
   * His₃ brother hit everyoneₙ.

b. [ Har ek aadmii-kO ]ₙ [ uske₃ bhaai-ne ] maaraa.
   every man-ACC his brother-ERG hit
   * Everyoneₙ was hit by his₃ brother.
   (Lit. 'His₃ brother hit everyoneₙ.')

(ii) Allows Object to Bind Reciprocal inside Subject

c. * [ Ek duusre kO ke parivaaro-ne ] [ Siita or Raam-kO ]ₙ khaane le liye bulaayaa.
   each other’s parents.erg Sita and Ram.acc for.dinner called
   * Each otherₙ’s parents invited [Sita and Ram]ₙ for dinner.

d. [ Siita or Raam-kO ]ₙ [ ek duusre kO ke parivaaro-ne ] khaane le liye bulaayaa.
   Sita and Ram.acc each other’s parents.erg for.dinner called
   [Sita and Ram]ₙ were invited for dinner by each otherₙ’s parents.
   (Lit. 'Each otherₙ’s parents invited [Sita and Ram]ₙ for dinner.')

(iii) Allows Object to Have Scope Over Subject

e. Sab tiin ciize khariide ge.
   everyone three things will.buy
   * Everyone will buy three things. (∀ > 3 ; * 3 > ∀)

f. Tiin ciize sab khariide ge.
   three things everyone will.buy
   * Everyone will buy three things. (‘∀ > 3’ and ‘3 > ∀’)

The Main Idea:
Exactly the same 'scrambling' process takes place in Tlingit, but it's not overtly pronounced.

Given the properties observed above for overt A-scrambling, we predict exactly the puzzling pattern of data seen in Section 4.
5.2 Covert A-Scrambling in Tlingit

First, recall that overt A-scrambling allows an object to bind a pronoun inside of the subject (36i):

(37) Overt A-Scrambling in Hindi Allows Objects to Bind into Subjects

\[
\begin{array}{c}
\text{[ Har ek aadmi-kọ ]}_1 [ \text{uske}_1 \text{bhai-ne } ] [ \text{har ek aadmi-kọ } ]_2 \text{maaraa.} \\
\text{every man-ACC his brother-ERG hit}
\end{array}
\]

If we assume that this same process happens covertly in Tlingit, then we predict that even canonical SOV sentences in the language will display the exceptional properties of overtly 'scrambled' sentences like (37). (since SOV sentences with covert scrambling will have the same LF form as overt scrambling sentences.)

**Thus, we correctly predict that objects in SOV sentences in Tlingit should be able to bind pronouns inside of Subjects!**

(38) Covert A-Scrambling in Tlingit Allows Objects to Bind into Subjects

\[
\begin{array}{c}
\text{ldakát}_1 [ \text{has du₁ tláach } ] [ \text{ldakát}_1 \text{has asixán}.] \\
\text{their mother.erg everyone love}
\end{array}
\]

Similarly, recall that overt A-scrambling allows an object to bind a reciprocal inside of the subject (36ii).

(39) Overt A-Scrambling in Hindi Allows Objects to Bind into Subjects

\[
\begin{array}{c}
\text{[ Siita or Raam-ko ]}_1 [ \text{ek duusre₁ ke parivaaro-ne } ] [ \text{S. or R. ko } ]_2 \text{khaane le liye bulaayaa.} \\
\text{Sita and Ram.acc each other’s parents.erg for.dinner called}
\end{array}
\]

Again, if we assume that this same scrambling process can take place covertly in Tlingit, then we predict that even SOV sentences in Tlingit should display the exceptional properties of overtly scrambled sentences like (39).

**Thus, we correctly predict that objects in SOV sentences in Tlingit should be able to bind reciprocals inside of subjects!**

(40) Covert A-Scrambling in Tlingit Allows Objects to Bind into Subjects

\[
\begin{array}{c}
\text{[.-Tom-ka-Linda-]}_1 [ \text{wooch₁ shagóonich } ] [ \text{Tom ka Linda } ]_1 \text{has asixán} \\
\text{each.other parents.erg Tom and Linda love}
\end{array}
\]
Finally, recall that overt A-scrambling in Hindi allows objects to take scope over subjects (36iii).

(41)  **Overt A-Scrambling in Hindi Allows Object to Scope over Subject**

\[
\begin{array}{c}
\texttt{[ Tiin ciize ] sab [tiin ciize] khariide ge.} \\
\text{three things everyone will.buy (‘∀ > 3’ and ‘3 > ∀’)}
\end{array}
\]

*Thus, we correctly predict that objects in SOV sentences in Tlingit are able to scope over subjects!!*

(42)  **Covert A-Scrambling in Tlingit Allows Object to Scope over Subject**

\[
\begin{array}{c}
\texttt{[ Déix xáat ] [ ax kaa yátx’i ] [ déix xáat ] has aawashaat.} \\
\text{my sons two fish caught (‘∀ > 2’ and ‘2 > ∀’)}
\end{array}
\]

**GENERAL CONCLUSION:**

The hypothesis that Tlingit grammar contains a covert version of the operation of A-scrambling is able to capture the puzzling data from Section 4, while keeping to a thoroughly configurational analysis of the language's clausal structure.

6. **Addressing Some Potential Problems**

In the preceding section, we saw that those properties of Tlingit objects that seem to support a flat, non-configurational analysis (over a configurational one) can be accounted for if we assume that the language possesses a covert version of the well-known operation of 'A-scrambling'.

*But does the analysis affect any of the core empirical results of Section 3?*  
That is, does the introduction of covert A-scrambling into our theory potentially impact our earlier, configurational treatments of the data from Section 3?

**No Potential Consequences for:**

- Data from Section 3.3, on Scopal Interactions between Post-Verbal DPs and Negation  
  *the account depends entirely on differences in the underlying position of S and O*

- Data from Section 3.4, on the Ability for V and O to be Co-ordinated  
  *the account depends entirely on the simple existence of a VP in the language*

  However....
6.1 Principle C Effects Again

One of our main arguments for a configurational analysis of the Tlingit clause was the existence of 'classic Principle C effects' in the language: in Tlingit, a pronominal subject cannot be co-referent with a phrase inside the object (cf. (3)-(9)).

...however...

(43) The Core Empirical Consequence of the "Covert A-Scrambling Analysis"

Even in canonical SOV order, objects in Tlingit should display the special properties of overtly A-scrambled objects in languages like Hindi.

PROBLEM: phrases inside overtly A-scrambled objects can co-refer with pronominal subjects...

That is, overt A-scrambling obviates Principle C effects


   he-ERG Sita-DAT your Ram-DAT written be letter showed
   * He$1$ showed to Sita a letter written by you to Ram$1$.

   your Ram-DAT written be letter he-ERG Sita-DAT showed
   (Lit. 'He$1$ showed to Sita a letter written by you to Ram$1$.' )

Thus, our 'Covert A-scrambling' analysis seems to incorrectly predict an absence of classic Principle C effects in Tlingit.

After all, the illicit c-command configuration in (45a) could presumably be eliminated at LF via covert A-scrambling of the object as in (45b):

(45) Covert A-scrambling (in Tlingit) Should also Obviate Principle C Effects

   pro Bill mother loves
   * He$1$ loves Bill$1$'s mother.

b. [ [ Bill$1$ tlāa ] ∅ [ Bill$1$ tlāa ] asixān. ]
   ↑ pro Bill mother loves

In other words, given the central prediction in (43) - crucial to the success of our 'covert A-scrambling analysis' - why doesn't the object in (45a) display the special property of the overtly A-scrambled object in (44b) [i.e., the ability to co-refer with a pronominal subject]?
The Proposal
Independent principles rule out the covert A-scrambling in (45b). Thus, covert A-scrambling - unlike overt A-scrambling - will be unable to obviate Condition C Effects.

Movement can only occur if it affects the semantic interpretation assigned to the LF structure.

Observation 1:
The covert A-scrambling postulated earlier for Tlingit (Section 5.2) all satisfies the condition in (46). Such A-scrambling affects the semantics of the clause by either:
- creating an otherwise unavailable binding relationship ((38), (40))
- creating an otherwise unavailable scopal relationship (42)

Observation 2: (Crucial)
The covert A-scrambling illustrated in (45b) would not satisfy the condition in (46).

- Since the A-scrambled phrase is a referential expression, its movement is semantically vacuous (Heim & Kratzer 1998).
- Both the LFs in (45a) and (45b) are assigned the meaning 'loves( Bill , mother(Bill) )'

Thus, we predict that the covert A-scrambling of a purely referential expression will be ruled out by the Have an Effect on Output Condition in (46)!

Thus, we predict that covert A-scrambling will be unable to obviate Principle C effects, and so we correctly predict that Tlingit will continue to exhibit classic Principle C effects!

Side Issue:
Is our account perhaps too strong? Wouldn't it seem to also incorrectly rule out the overt A-scrambling in (44b)? After all, (44b) would also be assigned the same interpretation as the non-scrambled (44a).

Answer:
Not necessarily. Precisely because the A-scrambling in (44b) is overt, it has effects upon the intonational structure assigned to the sentence.

If we assume that the difference in intonational structure resulting from such overt A-movement licenses differences in the discourse-structural properties of the clause (Arregi 2002, Rienhart 2006), then it follows that the overt A-scrambling in (44) will – unlike the covert A-scrambling in (45) – result in the clause being assigned a different (range of) interpretation(s).

CONCLUSION:
The postulation of covert A-scrambling in Tlingit does not necessarily undermine our prediction that Tlingit should exhibit classic Principle C effects.
6.2 Superiority Effects Again

One of our arguments for a configurational analysis of the Tlingit clause was the existence of 'classic Superiority effects' in the language (cf. (10)-(11)).

However, a rather prominent claim in the literature concerning Superiority effects is that the existence of A-scrambling in a language should entail that the language fails to show Superiority Effects (Fanselow 1991, 1997).

Proposed Solution to the Problem

Despite the relative prominence of the claim, the existence of A-scrambling does not entail that a language should fail to exhibit Superiority Effects.

(i) Pesetsky (2000) provides a battery of German-specific arguments against the notion that German’s failure to exhibit Superiority Effects is because of its having A-scrambling.

(ii) Pesetsky (2000) and Cable (2007) account for the absence of Superiority Effects in German without appeal to the language’s process of A-scrambling.

(iii) There are many languages which, like Yoruba (Adesola 2006), fail to exhibit Superiority Effects but which do not have A-scrambling.

(iv) There are many languages which, like Bulgarian (Rudin 1986), exhibit Superiority Effects despite their having a process of A-scrambling.

CONCLUSION:
The postulation of covert A-scrambling in Tlingit does not necessarily undermine our prediction that Tlingit should exhibit classic Superiority effects.

GENERAL CONCLUSION:
The introduction of covert A-scrambling into our theory of Tlingit grammar does not upset any of the earlier predictions of a configurational clausal structure.
7. Conclusion

In summary, we have seen that:

- There are syntactic phenomena in Tlingit which strongly suggest that the language possesses a configurational clausal structure, where subjects asymmetrically c-command objects:
  - Classic Principle C Effects
  - Classic Superiority Effects
  - Interactions between Post-Verbal DPs and Negation
  - Existence of VP Co-ordination

- Despite the evidence indicating a configurational structure, objects in Tlingit display properties suggesting that they c-command into subjects, even in canonical SOV order.

- These two sets of data can be reconciled if we assume that Tlingit grammar includes a covert variant of the operation of ‘A-scrambling,’ well-known from languages such as Hindi (Mahajan 1990, 1997).

References


Cable, Seth. 2007. The Grammar of Q: Q-Particles and the Nature of Wh-Fronting, as Revealed by the Wh Questions of Tlingit. Doctoral Dissertation. MIT.


