

Covert A-Scrambling in Tlingit¹

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

¹ Special thanks are due first and foremost to David Katzeek and John Marks, the Tlingit language consultants for this project. Their generosity, patience and energy are truly exceptional, and I thank them for all the time and help they have provided me in my study of their language. Most of the Tlingit data presented here were gathered from interviews conducted at the Sealaska Heritage Institute (SHI) in December 2007 and May 2008. Special thanks are owed to Richard Dauenhauer, Nora Marks Dauenhauer, Keri Edwards, Yarrow Vaara, Rosita Worl, and everyone else at SHI. *Aatlein gunalchéesh!*

I would also like to thank Henry Davis, Lisa Matthewson and the audience at the UBC Linguistics Research Seminar, for their helpful comments upon earlier versions of this work.

Finally, I gratefully acknowledge the support of the Killam Trusts, as this research has been supported through a Killam Postdoctoral Research Fellowship.

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

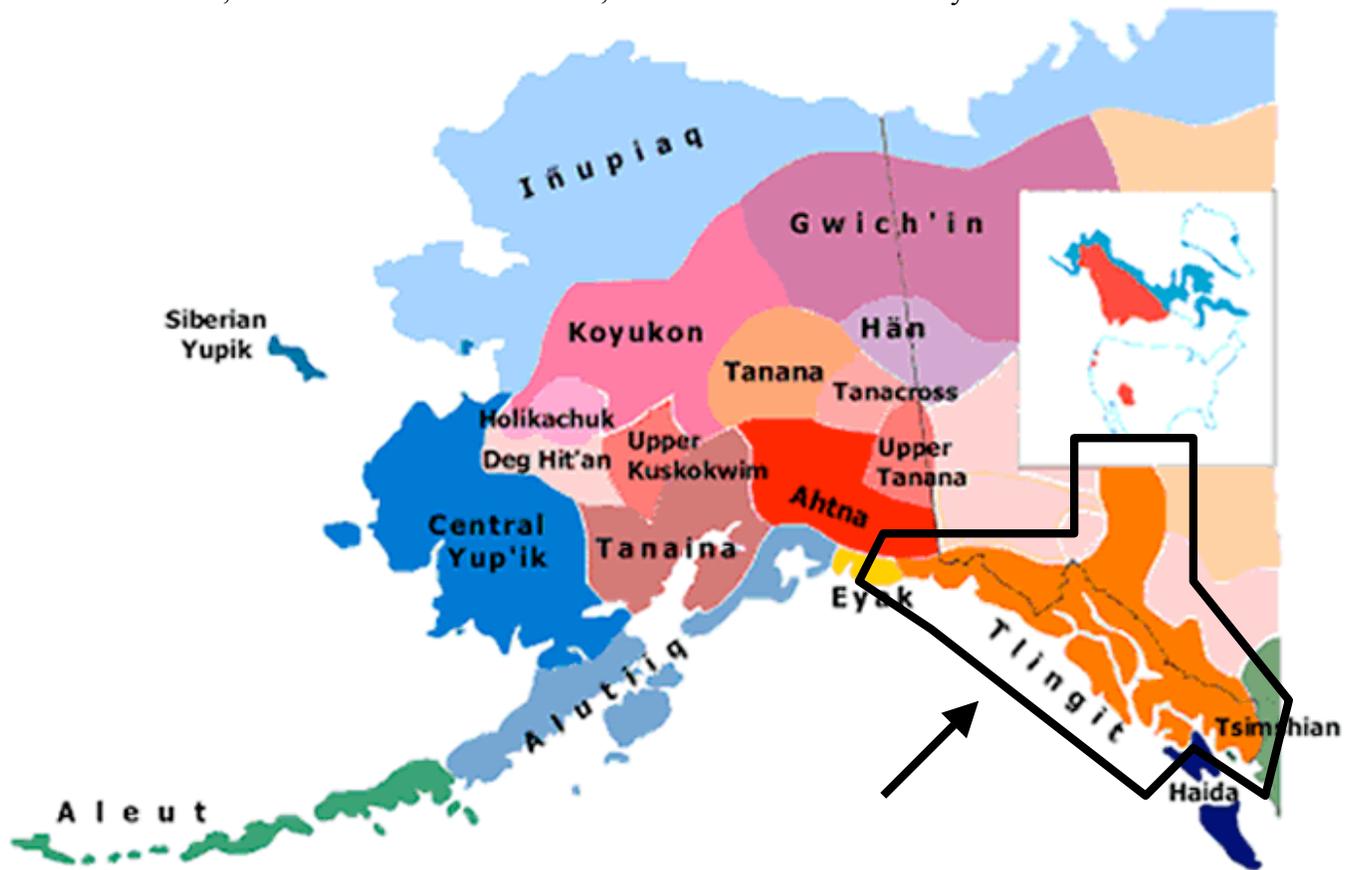


Image taken from Alaskool website: <http://www.alaskool.org/language/languageindex.htm>

Internal Variation:

Very little dialectal diversity; dialectal 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 possessa;
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 shaawátxh xóots awsiteen. that woman.erg bear saw <i>The woman saw the bear.</i> | |
| b. | SVO | Wé shaawátxh wusiteen xóots. ² that woman.erg saw bear | (= <i>The woman saw the bear.</i>) |
| c. | OVS | Xóots awsiteen wé shaawátxh. bear saw that woman.erg | (= <i>The woman saw the bear.</i>) |
| d. | OSV | Xóots wé shaawátxh wusiteen. bear that woman.erg saw | (= <i>The woman saw the bear.</i>) |
| e. | VSO | Awsiteen wé shaawátxh xóots. saw that woman.erg bear | (= <i>The woman saw the bear.</i>) |
| f. | VOS | Awsiteen xóots wé shaawátxh. saw bear that woman.erg | (= <i>The woman saw the bear.</i>) |

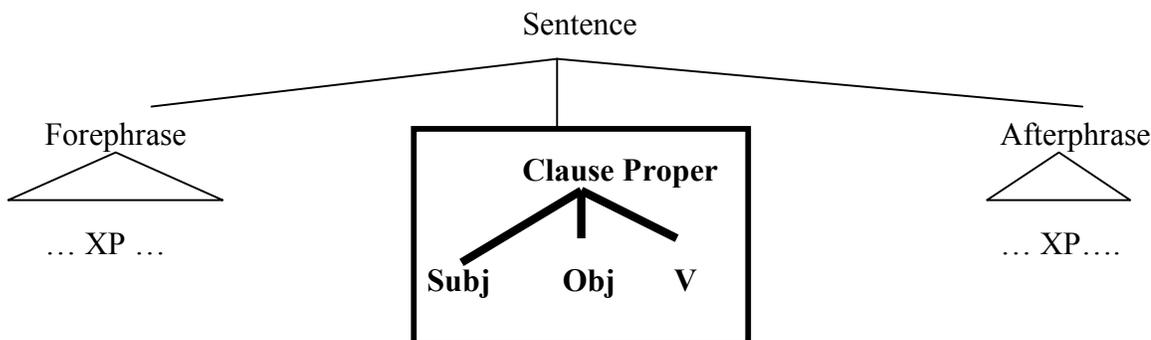
² The reader may note that the verbal form in (1b) differs from that in (1a). This is due to a morpho-phonological rule that deletes 3rd obviative object agreement when the verb is directly preceded by an NP marked by the optional ergative post-position. The effect of this rule appears in many of the 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 Structure³



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**

[Bill₁ tláach] Ø₁ sixán
Bill mother.erg *pro* loves
Bill₁'s mother loves him₁.

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)**

* Ø₁ [Bill₁ tláa] asixán.
pro Bill mother loves
* *He₁ loves Bill₁'s mother.*
(speaker comment: 'it has to be somebody else that loves Bill's mom')

Thus, unlike Nuuchahnulth (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**

- a. Du₁ tláach sixán Bill₁.
his mother.erg loves Bill
Bill₁'s mother loves him₁.
- b. Du₁ tláach yéi uwajée [Lindach Tom₁ asixáni].
his mother.erg thinks Linda.erg Tom loves
His₁ mother thinks that Linda loves Tom₁.

The facts above are easily covered by the following assumptions:

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

- a. **A pronoun cannot be co-referent with an NP that it c-commands (Principle C)**
- b. **Subjects c-command objects, *but not vice versa.***

Additional Relevant Data:

Furthermore, unlike some Salish languages, such as St'át'imcets (Matthewson *et al.* 1993) and Thompson River Salish (Koch 2006), Tlingit exhibits condition C effects *cross-clausally*.

(8) **Principle C Effects in Tlingit (Cross-Clausal)**

- a. Tom₁ yéi shkalneek [Linda ash₁ een aawal'eix̄].
Tom said Linda him with danced
Tom₁ said that Linda danced with him₁.
- b. * Ø₁ Yéi shkalneek [Linda Tom₁ een aawal'eix̄].
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 Ø₁ six̄án.]
Tom Bill told Linda.erg *pro* loves
Tom told Bill₁ that Linda loves him₁.
- b. * Tom Ø₁ yéi ayawsikaa [Lindach Bill₁ asix̄án].
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. b. Tlél xwaxá **daa** **sá**.
not what Q I.ate not I.ate. what Q
I didn't eat anything. *I didn't eat anything.*

(13) Indefinite Object and Negation

- a. Tlél **daa** **sá** xwatéen. b. Tlél xwatéen **daa** **sá**.
not what I.saw not I.saw what
I didn't see anything. *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. b. * Tlél awuxá **aadóoch** **sá**.
not who.erg ate not ate who.erg
Nobody ate it.

(15) Indefinite Subject and Negation

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

(16) Indefinite Subject and Negation

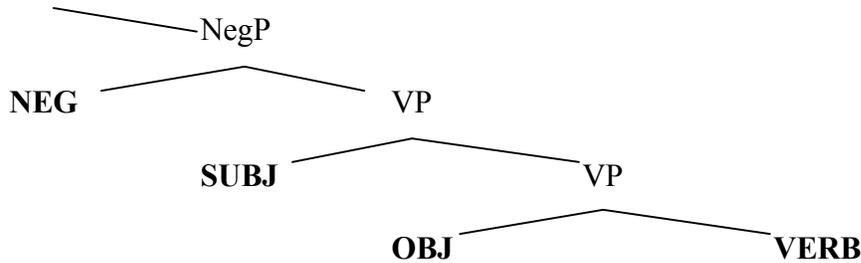
- a. Tlél **aa** **sá** awul'eix. b. * Tlél awul'eix **aa** **sá**.
not who danced not danced who
Nobody danced.

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.

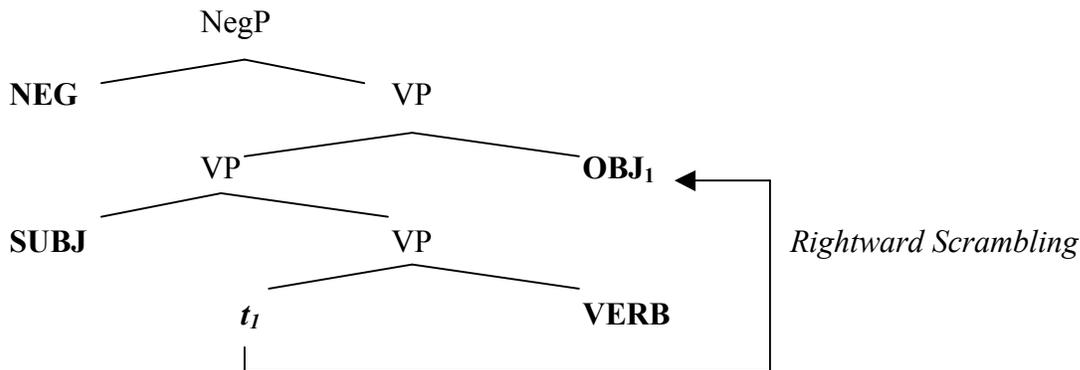
An Account of the Scopal Facts Above

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



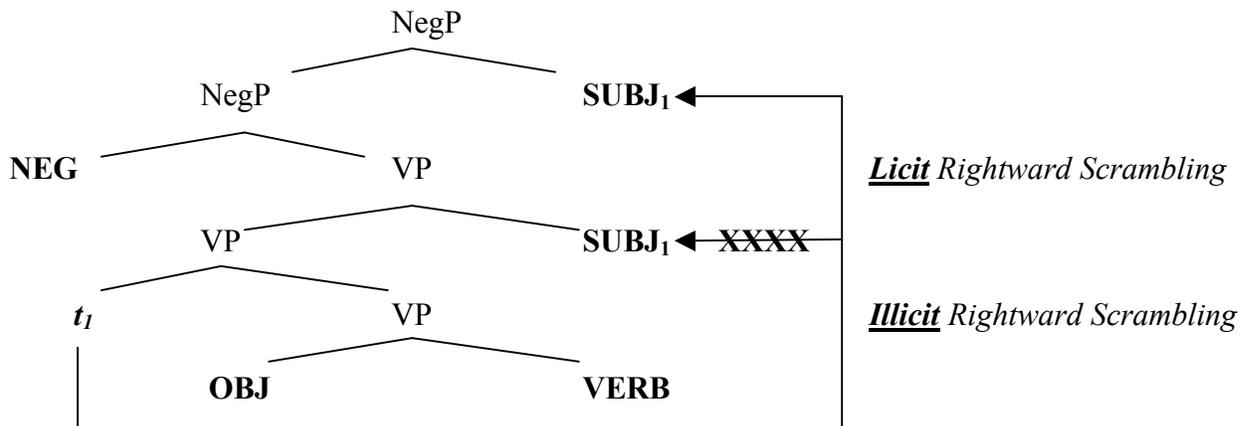
Since the object is in COMP-VP, no principles would prevent it from scrambling to a rightward specifier of VP, a position below negation.

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



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



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-Coordination in Tlingit

Tlél aadóoch sá kóox awuxá ka ch'u cháayu awdaná .
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 *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

[_S Tlél aadóoch sá kóox awuxá] ka ch'u [_S ∅ cháayu awdaná].
not who.erg rice ate.irrealis or *pro* tea drank.irrealis

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 *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} [_{VP} ate rice] or [_{VP} drank tea]].
- b. [_S [_S Nobody ate rice] or [_S they drank tea]].

(ii) The verb in the second VP under (20) (*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**

[_S Tlél aadóoch sá [_{VP} [_{VP} kóox awuxá] ka ch'u [_{VP} cháayu awdaná]]].
not who.erg rice ate.irrealis or tea drank.irrealis

- 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).⁴

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

Ch'a ldakát₁ [has du₁ tláa] has asixán.
just all their mother love
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

[Has du₁ tláach] ldakát₁ has asixán.
their mother.erg everyone love
Everybody₁'s mother loves them₁.
(Lit. 'Their₁ mother loves everybody₁.')

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

[Du₁ éeshch] tléil at k'átsk'u awustín.
his father.erg not boy saw
No boy₁'s father saw him₁.
(Lit. 'His₁ father saw [no boy]₁.')

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.

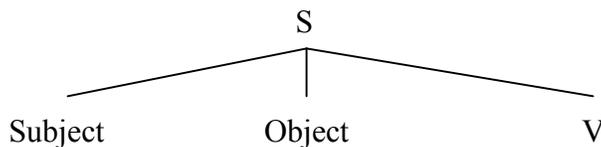
(28) **Standard Assumption Regarding Binding**

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**



- (a) Subject c-commands Object
- (b) **Object c-commands Subject**

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 shagóoni] has asixán.
Tom and Linda.erg each.other parents love
Tom and Linda love each other's parents.
- b. [Tom ka Lindach]₁ [wooch₁ shagóoni] 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 other₁'s parents love [Tom and Linda]₁.')
- b. [Wooch₁ shagóonich] tsú [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 other₁'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 ⁵

- a. Ax kaa yátx'i déix xáat has aawashaat.
 my sons two fish caught
My sons caught two fish. ($\forall > 2 ; 2 > \forall$)
- b. Ax kaa yátx'i déix 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!

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. * [Uske₁ bhaai-ne] [har ek aadmii-ko]₁ maaraa.
 his brother-ERG every man-ACC hit
 * *His₁ brother hit everyone₁.*

b. [Har ek aadmii-ko]₁ [uske₁ bhaai-ne] maaraa.
 every man-ACC his brother-ERG hit
Everyone₁ was hit by his₁ brother.
 (Lit. 'His₁ brother hit everyone₁.')

(ii) Allows Object to Bind Reciprocal inside Subject

c. * [Ek duusre₁ ke parivaaro-ne] [Siita or Raam-ko]₁ khaane le liye bulaayaa.
 each other's parents.erg Sita and Ram.acc for.dinner called
 * *Each other₁'s parents invited [Sita and Ram]₁ for dinner.*

d. [Siita or Raam-ko]₁ [ek duusre₁ ke parivaaro-ne] khaane le liye bulaayaa.
 Sita and Ram.acc each other's parents.erg for.dinner called
[Sita and Ram]₁ were invited for dinner by each other₁'s parents.
 (Lit. 'Each other₁'s parents invited [Sita and Ram]₁ 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. ($\forall > 3$; * $3 > \forall$)

f. Tiin ciize sab khariide ge.
 three things everyone will.buy
Everyone will buy three things. ($\forall > 3$ and $3 > \forall$)

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

[**Har ek aadmii-ko**]₁ [**uske₁ bhaai-ne**] [~~har ek aadmii-ko~~]_± **maaraa.**
 every man-ACC his brother-ERG hit

A binding arrow starts from the pronoun 'uske₁' in the second bracket and points to the pronoun 'har' in the first bracket. A vertical line connects the end of the arrow to the first bracket, and another vertical line connects the start of the arrow to the second bracket.

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

~~Idakát_±~~ [**has du₁ tláach**] **Idakát₁ has asixán.**
 their mother.erg everyone love

A binding arrow starts from the pronoun 'has du₁' in the first bracket and points to the pronoun 'Idakát₁' in the second bracket. A vertical line connects the end of the arrow to the second bracket, and another vertical line connects the start of the arrow to the first bracket.

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

[**Siita or Raam-ko**]₁ [**ek duusre₁ ke parivaaro-ne**] [~~S. or R. ko~~]_± **khaane le liye bulaayaa.**
 Sita and Ram.acc each other's parents.erg for.dinner called

A binding arrow starts from the phrase 'ek duusre₁ ke' in the second bracket and points to the phrase 'Siita or Raam-ko' in the first bracket. A vertical line connects the end of the arrow to the first bracket, and another vertical line connects the start of the arrow to the second bracket.

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

[~~Tom ka Linda~~]_± [**wooch₁ shagóonich**] [**Tom ka Linda**]₁ **has asixán**
 each.other parents.erg Tom and Linda love

A binding arrow starts from the pronoun 'wooch₁' in the second bracket and points to the phrase 'Tom ka Linda' in the third bracket. A vertical line connects the end of the arrow to the third bracket, and another vertical line connects the start of the arrow to the second bracket.

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**

[**Tiin ciize**] sab [tiin-ciize] **khariide ge.**
 three things everyone will.buy (‘ $\forall > 3$ ’ and ‘ $3 > \forall$ ’)

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**

[Déix ~~xáat~~] [ax **kaa yátx'i**] [**déix** ~~xáat~~] **has aawashaat.**
 my sons two fish caught (‘ $\forall > 2$ ’ and ‘ $2 > \forall$ ’)

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

(44) Overt A-Scrambling (in Hindi) Obviates Principle C Effects (Mahajan 1990, 1997)

- a. * Us₁-ne Siitaa-ko [tumhaaraa Raam₁-ko likhaa hua petr] dikhaayaa.
 he-ERG Sita-DAT your Ram-DAT written be letter showed
 * He₁ showed to Sita a letter written by you to Ram₁.
- b. [Tumhaaraa Raam₁-ko likhaa hua petr] us₁-ne Siitaa-ko dikhaayaa.
 your Ram-DAT written be letter he-ERG Sita-DAT showed
 (Lit. 'He₁ showed to Sita a letter written by you to Ram₁.')

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

- a. * Ø₁ [Bill₁ tláa] asixán.
 pro Bill mother loves
 * He₁ loves Bill₁'s mother.
- b. [~~Bill₁-tláa~~] Ø₁ [Bill₁ tláa] asixán.
 ↑ 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.

- (46) **The 'Have an Effect on Output Condition' (Chomsky 1995, Fox 1999, Reinhart 2006)**
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, Reinhart 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).

(47) **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

- Adesola, Oluseye. 2006. “On the Absence of Superiority and Weak Crossover Effects in Yoruba.” *Linguistic Inquiry* 37:2.
- Aoun, Joseph and Audrey Li. 1993. *The Syntax of Scope*. MIT Press. Cambridge, MA.
- Arregi, Karlos. 2002. *Focus on Basque Movements*. PhD Dissertation. MIT. Cambridge, MA.
- 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.
- Chomsky, Noam. 1973. “Conditions on Transformations.” In Anderson, Stephen and Paul Kiparsky (eds) *A Festschrift for Morris Halle*. Holt, Reinhart & Winston. New York.
- Chomsky, Noam. 1995. *The Minimalist Program*. MIT Press. Cambridge, MA.
- Davis, Henry. 2005. “Constituency and Coordination in St’át’imcets (Lillooet Salish).” In Carnie, Andrew, Sheila Anne Dooley, and Heidi Harley (eds.) *Verb First: On the Syntax of Verb Initial Languages*. John Benjamins. Amsterdam.
- Davis, Henry, Ryan Waldie, and Rachel Wojdak. 2007. “Condition C Effects in Nuu-chah-nulth.” *Canadian Journal of Linguistics* 52.
- Dryer, M. 1985. “Tlingit: An Object-Initial Language?” *Canadian Journal of Linguistics* 30.
- Fanselow, Gisbert. 1991. *Minimale Syntax*. Habilitation Thesis. University of Passau.
- Fanselow, Gisbert. 1997. “Minimal Link Effects in German (and Other Languages).” Manuscript. University of Potsdam.
- Fox, Danny. 1999. *Economy and Semantic Interpretation*. MIT Press. Cambridge, MA.
- Grohmann, Kleanthes. 2003. *Prolific Domains: On the Anti-Locality of Movement Dependencies*. John Benjamins. Amsterdam.
- Heim, Irene and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Blackwell. Oxford.
- Koch, Karsten. 2006. “Transitive Word Order in Nle7kepmxin (Thompson River Salish).” In *Papers for the 41st International Conference on Salish and Neighboring Languages*. UBCWPL. Vancouver.

- Kuno, Susumu and Jane J. Robinson. 1972. "Multiple Wh-Questions." *Linguistic Inquiry* 3.
- Lasnik, Howard and Tim Stowell. 1991. "Weakest Crossover." *Linguistic Inquiry* 22.
- Leer, Jeff. 1991. *The Schetic Categories of the Tlingit Verb*. PhD Dissertation. University of Chicago.
- Mahajan, Anoop. 1990. *The A/A-bar Distinction and Movement Theory*. Doctoral Dissertation. MIT. Cambridge, MA.
- Mahajan, Anoop. 1997. "Rightward Scrambling." In Beerman, Dorothee, David Leblanc, and Henk van Riemsdijk (eds.) *Rightward Movement*. John Benjamins. Amsterdam.
- Matthewson, Lisa, Dwight Gardiner and Henry Davis. 1993. "Coreference in Northern Interior Salish. In *Papers for the 28th International Conference on Salish and Neighboring Languages*. University of Washington.
- Pesetsky, David. 1982. *Paths and Categories*. Doctoral Dissertation. MIT. Cambridge, MA.
- Pesetsky, David. 2000. *Phrasal Movement and Its Kin*. MIT Press. Cambridge, MA.
- Reinhart, Tanya. 2006. *Interface Strategies*. MIT Press. Cambridge, MA.
- Richards, Norvin. 1997. *What Moves Where in Which Language?* Doctoral Dissertation. MIT. Cambridge, MA.
- Rudin, Catherine. 1986. *Aspects of Bulgarian Syntax: Complementizers and Wh Constructions*. Slavica Publishers, Inc. Columbus, OH.
- Thompson, Chad L. 2000. "Iconicity and Word Order in Koyukon Athabaskan." In Fernald, Theodore B. and Paul R. Platero (eds.) *The Athabaskan Languages: Perspectives on a Native American Language Family*. Oxford University Press.