

SUBJECT RAISING FROM TENSED CLAUSES: EVIDENCE FROM BELLA COOLA COMPLEX 'ay CONSTRUCTIONS

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1.0 INTRODUCTION

Early analyses of subject-to-subject raising focus primarily on evidence gathered from languages which do not permit raising from tensed complement clauses, the Joseph and Perlmutter (1979) and Soames and Perlmutter (1979) treatments of Modern Greek serving as notable exceptions. In fact, in an analysis of the Null Subject parameter, Rizzi (1982) claims that "the subject of a tensed clause cannot be extracted via raising" in any language (p. 144). Subsequently, Grosu and Horvath (1984), Rivero (1987a, 1987b), Moore (1988) and Déprez (1992) have documented the facts of raising from tensed complement clauses in Romanian, Modern Greek, Turkish and Haitian Creole. Bella Coola provides additional evidence that such raising is a fact of natural language.

This paper describes the behavior of those complex sentences of Bella Coola which incorporate the Bella Coola root 'ay *do, happen* as a matrix predicate. These constructions often exhibit a dependent relation between the non-thematic subject position of the matrix clause and the thematic subject position of a subordinate finite-clause. In accounting for this fact, the main predicate 'ay, lacking a thematic external argument, is identified in this paper as a raising verb. As such, it triggers certain processes: the raising of the subject of the embedded clause to matrix subject position or the insertion of a dummy to serve as matrix subject.

Section 2.0 provides a brief sketch of the morphosyntax of Bella Coola. Section 3.0 presents the facts of complex 'ay constructions. Section 4.0 identifies the properties which characterize raising 'ay. Section 5.0 highlights certain theoretical considerations.

2.0 AN OVERVIEW OF THE RELEVANT BELLA COOLA MORPHOSYNTAX

Bella Coola, a Salishan Language spoken on the central coast of British Columbia, can be characterized as a polysynthetic language.¹ Bella Coola words are built on root morphemes, the exact functions and meanings of which may vary depending upon their position in a sentence and upon the presence or absence of certain affixes. Like other Salishan languages, Bella Coola does not exhibit an inherent distinction among verbs, nouns, and adjectives. Consider the following three Bella Coola sentences² in which the root morpheme *ja* *good* functions in the first as a modifier, in the second as a predicate, and in the third as a substantive:

k'xic tija ti'imlktx 'I see the good man.'
ja cixnascx 'u't'imlktx 'The woman is good to the man.'
'a'k'jukit' tijatx 'We know the good one.'

In each case the root **ja** exhibits the morphology and position appropriate to its function. The meaning of a particular root may be altered by suffixation of certain lexical morphemes; compare the change in meaning of the bare root 'ay *do, happen*' to the root-plus-lexical-affix stems 'ay=uc *say, tell, instruct* and 'ay=a *walk, go by foot*.

Bella Coola does not formally indicate tense, context serving as a primary indicator of time reference. However, the language also lacks an infinitival form; consequently, all clauses have been interpreted as tensed by convention. Furthermore, matrix and subordinate verbs exhibit the same variety of pronominal inflection. Bella Coola utilizes eight distinct paradigms of person markers. In four of the paradigms, a clear morpheme break between subject and object suffixes is often difficult to ascertain.³ Possessive and intransitive subject markings are taken from the same paradigm.

Bella Coola is a language whose direct arguments may remain lexically unspecified. For example, in sentence (1a) below,⁴ agreement features which correspond in person and number to the features of the unspecified external-argument appear suffixed to the intransitive verb stem; in sentence (1b) agreement features which correspond to the features of ⁵both the unspecified external- and internal-arguments appear suffixed to the transitive verb stem.

(1a)
 nu-tk'ak'-m-āx-aw
 human-fall Redp-MP-bottom-they
 They fell over backwards.(1-110)

(1b)
 'ip'-is
 grab-he/it
 He grabbed it. (1-112)

Based on such facts, Bella Coola can be categorized as a pro-drop language; more specifically, Bella Coola permits phonologically null subjects and objects in tensed clauses. I assume that *pro* occupies such null argument positions.

Bella Coola also makes use of null expletives, as the following sentences confirm. These sentences contain verbs which express *nature* phenomena. In each case the verb bears the intransitive 3-singular subject agreement marking **-s**, despite the fact that there is no actual referent for that subject marking. This suggests that these verbs lack a thematic external argument and require the insertion of a null element to serve as dummy subject of the verb. As a consequence of this dummy insertion, the intransitive 3-singular agreement marking appears affixed to the verb stem.

(2a) 'ix-pq'^w-m-s
 Distb-blizzard-MP-it
 There was a blizzard.(5-20)

(2b) xim-s
 dawn-it
 It broke day.(10-124)

(2c) c'us-m-s-c'
 dark-MP-it-Perf
 It was dark.(16-102)

The person and number features of the direct arguments are usually morphologically encoded on the verb; however, on occasion main predicates may, in fact, lack the intransitive 3-singular subject marking **-s**. Davis and Saunders (1978) note that the occurrence of this affix "at one time appeared to be stylistically determined" for nonembedded predicates. They further explain that the Bella Coola speakers with whom they worked frequently did not employ the **-s** suffix on matrix predicates. These consultants commented that the use of **-s** was typical of old-style storytelling. This suggests that, whenever a matrix predicate is found lacking a subject marker, that subject marker can be assumed to be intransitive 3-singular.⁶

Constructions which comprise null subjects and null objects appear to be stylistically preferred; however, it is also possible for direct arguments to be expressed as lexical noun phrases, in which case the noun phrases cooccur with the agreement features encoded on the verb. In the presence of such noun phrases, the dominant word order follows a Verb-Subject-Object pattern in both matrix and subordinate clauses.

Subordination in Bella Coola takes a number of forms. For the purposes of this discussion we need only consider one type: a nominalized verb clause positioned to the right of the matrix verb clause. The nominalized verb exhibits the same variety of inflectional and derivational affixes that marks non-nominalized verbs; what is characteristic of the nominalized verb is the fact that it bears the derivational prefix **s-**, the same prefix which is found on many Bella Coola nouns. For ease of exposition, I will use V to refer to a verb which functions as a matrix predicate and which does not bear the **s-** nominalizing prefix and NV to refer to a nominalized verb which functions as an embedded predicate and bears the **s-** nominalizing prefix.

3.0 A SURVEY OF COMPLEX 'ay CONSTRUCTIONS

The data which follow represent a sample of the 133 sentences found in Davis and Saunders *Bella Coola Texts* which comprise an 'ay V followed by an NV. Noun phrases and/or prepositional phrases may intervene between a V and its corresponding NV. As Bella Coola lacks infinitival forms, all of the NVs under consideration have been given a finite interpretation. Three categories of V NV subject-marking patterns are evident from these sentences.

Most numerous are those cases in which V NV pairs bear subject markings which correspond in both person and number, suggesting a relation either of raising or of control between the two subjects. I argue on semantic grounds that it is raising. This view is supported by the fact that in another pattern the V of the V NV pair exhibits intransitive 3-singular subject marking while the NV shows a range of possible subject markings. I argue that the subject of the 'ay V in this case is an expletive, the subject which occurs in the absence of raising to fill the semantically empty subject position. The complementarity of overt subject NPs in matrix and embedded clauses also provides significant support for a raising analysis. I will argue that a third set of examples involves a distinct, but homophonous, lexical item 'ay whose semantic properties are quite different from those of raising 'ay.

3.1 Data which support an analysis of 'ay as a raising verb

The sentences examined in this section support an analysis of 'ay as a raising verb. In each case the 'ay V and its corresponding NV bear subject markings which agree in both person and number. The translations provided by Davis and Saunders indicate that the subject markings which appear on a V NV pair must have the same referent. These translations also suggest that the main predicate 'ay makes no appreciable semantic contribution to the sentence.

Consider sentences (3)-(7). The V NV pairs in (3) and (4) exhibit corresponding intransitive 3-plural subject markings. The Vs of (5) and (6) are marked for intransitive 3-plural, while their respective NVs are marked for transitive 3-plural/3-plural. In example (7) both the V and the NV bear intransitive 2-singular. In each of these sentences the semantic contribution of 'ay is negligible at best; in fact, the Vs in (4) and (5) contribute nothing to the English translations.

(3) 'aʔ-'ay-na-k^w-i-lu-c'i-k
 Res-do-they-Quot-Contr-Expv-Perf
 V

x-tʔ ^w	s-nic-m-aw
Prep-then	Der-live-MP-they
	NV

It's just as if they came alive.(2-94)

(4) 'ay-naw x-tʔ^w s-nax-liwa-nimut-aw-tu-c'
 do-they Prep-then Der-ready-Sim-LCRefl-they-Conf-Perf
 V NV

Then they made ready.(2-53)

(5) 'ay-naw x-tʔ^w s-'aʔ-ik^w-tit
 do-they Prep-then Der-Res-roast on open fire-they/them
 V NV

s-knix-tit
 Der-eat-they/them

They roasted/barbecued them and ate them.(5-39)

(15) 'ay-s x-tx^w ti-λ'msta s-wauslx-s
do-he Prep-then Prox-person Der-anxious-he
V NP NV

s-xʔaʔ-s
Der-hungry-he

The people were anxious and hungry. (5-40)

Like the sentences examined earlier, these sentences also illustrate that 'ay is contributing little, if anything, semantically. The 'ay V seems equally interpretable as some version of the English expression *it happened* or receives no interpretation. This suggests that in a complex 'ay construction, a NP which specifies the subject of the NV can take up a position as subject of the V or as subject of the NV without altering the contribution of the 'ay clause --- and, therefore, the meanings of the sentences --- in any significant way. This is the mark of a raising structure.

Sentences with 3-plural subjects marked on the NV indicate the same pattern: that is to say, intransitive marking appears on the V; the subject noun phrases may be positioned within the matrix V clause or the embedded NV clause without altering the contribution of the 'ay clause; and, the 'ay V seems to be contributing little semantically. Consider sentences (16)-(19). In (16) and (17), the embedded clause of each comprises a NV and a NP which specifies the subject of that NV. The Vs bear intransitive 3-singular marking, while their corresponding NVs are marked for 3-plural subjects.

(16) 'ay-s 'aʔ-tx^w s-q^wlx^w-cut-a-k^w-c'
happen-it Prep-then Der-gather-Refl-they-Quot-Perf
V NV

tu-xnas-uks-tx^w
NProx-woman-Pl-Dist
NP

It happened then that the women gathered....(17-13)

(17) 'ay-s-k^w-c' aʔ-tx^w
happen-it-Quot-Perf Prep-then
V

s-tix-'aʔ-ay-ak-m-it t'ax^w t'ax
Der-bring back-Res-do-hand-MP-they/him those ones that one
NV NP NP

It happened then that they managed to get him back....(17-46)

In sentences (18) and (19), the matrix clauses contain overt NPs which serve to specify the subjects of the Vs; conversely, the NVs lack overt subject NPs. Predictably, the Vs agree in person and number with their subject NPs and are marked with intransitive 3-plural. Just as importantly, however, we find that the NVs are also marked for 3-plural subject.

- (18) 'ay-na-k^w-c' t'ax^w s-'aɪps-aw
do-they-Quot-Perf those ones Der-eat-they
V NP NV

Then they ate. (3-56)

- (19) 'aɪ-'ay-na-k^w-i-lu-k t'ax^w
Res-do-they-Quot-Contr-Expv those ones
V NP
- s-'aɪ-'awɪ-tim 'aɪ-tx^w x-ta-wina-tx^w
Der-Res-follow-Pass Prep-then Prep-NProx-invade-Dist
NV

And they were followed by the invaders.(15-22)

The sentences with 3-plural NVs highlight one notable fact which is not obvious when the subject of the NV is 3-singular. Whereas the V NV pairs are invariably marked for 3-singular in sentences (12)-(15), this is not the case for (16)-(19). In the event that the 3-plural NP is positioned within the NV clause, the V bears intransitive 3-singular marking. On the other hand, if the the 3-plural NP is positioned within the matrix V clause, both the V and the NV show 3-plural subject agreement. This, coupled with the fact that 'ay contributes little to the meaning of the sentence, flags 'ay as an optional raising verb. Lacking a thematic external argument, 'ay triggers the raising of the subject of the embedded clause to matrix subject position or the insertion of a semantically empty element --- a null expletive --- to serve as matrix subject.

Given that raising must be viewed as an optional operation, the facts of certain complex 'ay constructions may be obscured. More specifically, the source of the intransitive 3-singular marking on the Vs in the sentences examined in section 3.1 remains ambiguous. It may be the case that the subject markings on the Vs correspond to a raised subject or to a null expletive. Sentences (20)-(21) serve as interesting examples. In each case the embedded NVs express *nature* phenomena and lack external arguments. There are two possible explanations for the presence of -s on the Vs: it may be the result of null expletive insertion applying both to the V and the NV; or it may be the result of null expletive insertion applying only to the NV and subsequent raising of that null expletive to serve as subject of the matrix clause.

- (20) 'ay-s-k^w-c' aɪ-tx^w
happen-it Quote-Perf Prep-then
V
- s-'a-suk'-s-k^w-c' aɪ-tx^w
Der-Loc-blow-it-Quot-Perf Prep-then
NV

It happened then that the wind was blowing.(17-65)

(21)	ʔay-s-tu	x-tx ^w	s-ʔax ^w	ʔamɪ-am-s
	do-it-Conf	Prep-then	Der-Neg	summer-CD-it
	V		NV	NV

It really happened that there was no summer.(5-25)

Of course, native-speaker confirmation of the facts discussed in this section would be preferable. Ideally, the interpretations for sentences (12)-(19) should be ascertained for both the raising and the expletive constructions. Even so, the structural ambiguity of many sentences --- most notably those whose V NV pairs are marked for intransitive 3-singular --- may serve to obscure the underlying structure of certain complex ʔay constructions.

3.3 Evidence for a non-raising ʔay

Based on the data examined in previous sections, we can make certain predictions about the behavior of a predicate built on the root ʔay. ʔay lacks a thematic external argument and, in order to fill that semantically empty position, it triggers raising or null expletive insertion. This requires that the subject marking on the V agree in person and number with the subject marking on the embedded predicate, or that the V be marked for intransitive 3-singular irrespective of the subject marking on the NV. If the subject marking on the V NV pair does agree in person and number, then the V has the same subject referent as the NV. Finally, ʔay does not contribute any appreciable semantic content to the sentence.

Data which indicate that ʔay V plus NV constructions may in fact exhibit behavior inconsistent with these facts fall into four categories: those whose V NV pairs lack subject markings which agree in person and number; those whose V NV pairs exhibit subject marking agreement, but whose NV clauses retain the NPs which specify their respective subjects; those whose Vs exhibit transitive marking; and, one sentence in which the ʔay V seems to contribute meaning as indicated by the English translation. Of the more than 133 Bella Coola sentences which meet the V NV structural description, only twenty-one sentences exhibit such non-conforming behavior.

Example (22) is representative of the four sentences in which the subject markings on the V and the NV do not match. In this case, the V bears intransitive 3-plural, while the NV bears transitive 3-singular/3-singular.

(22)	ʔay-na-k ^w -tu-c'	x-tx ^w
	do- <u>they</u> -Quot-Conf-Perf	Prep-then
	V	
	s-nuq' ^w -ik-am-nix-is-k ^w -c'	
	Der-divide-long horizontal axis-CD-LC- <u>she/it</u> -Quot-Perf	
	NV	
	ʔiɪ-λ'msta-yɪ	ti-sunx ^w -t'ayx
	NProx-person-Dist	Prox-world-Prox

They were doing that when a/the woman divided the world.(7-24)

Given these facts it seems reasonable to assume that there are two 'ay morphemes in Bella Coola, one raising and the other non-raising. Non-raising 'ay may prove to be a pro-form which obtains its semantic content contextually, not unlike the English pro-verb *do*. There is evidence to suggest that it obtains its argument structure in the same way. A discussion of non-raising 'ay is, however, beyond the scope of this paper. I take the view that the twenty-one anomalies are examples of non-raising 'ay , and as such they do not contradict the facts of raising 'ay .

4.0 THE PROPERTIES WHICH CHARACTERIZE RAISING 'ay

Certain properties distinguish raising 'ay from non-raising verbs. Raising 'ay can be characterized as an unaccusative verb; that is, one which lacks a thematic external argument and which fails to assign accusative case (Burzio (1986)). As such, it triggers certain processes: the raising of the subject of the embedded clause -- *pro* or a lexical NP -- to matrix subject position, or the insertion of a null expletive to serve as matrix subject. The data indicate that the only argument eligible for raising to the 'ay clause is the subject of the embedded clause. In no case is the object of the embedded NV raised. Evident also is the fact that the 'ay V contributes little, if any, appreciable semantic content to the sentence in which it occurs.

5.0 THEORETICAL CONSIDERATIONS

In order to adequately account for the facts of complex 'ay constructions, certain issues must be clarified. Most notably, the nature of the boundary between the matrix and embedded clauses must be identified. Rivero (1987a,b) argue that for Romanian and Modern Greek this is a CP boundary and propose a mechanism of morphological agreement to account for the transparency of C. These analyses also "preserve VP as a barrier for material it contains." This structural requirement is particularly relevant for complex 'ay constructions in Bella Coola since in no case does an object of an embedded clause raise to become the subject of the matrix clause. Objects which have already undergone passivization are, however, eligible for raising.

Another issue which requires clarification is that of case assignment. If raising is viewed as a movement operation, then an NP-trace must be understood to remain in subject position in the embedded clause. As NP-trace is unable to receive case, Rivero (1987b), following a suggestion in Rizzi (1982), proposes that Case Absorption operates in the lower clause of a raising structure much as it does in a passive structure.

Finally, the issue of optionality must be addressed. Given the fact that Bella Coola has a rule of null expletive insertion and that the case-marking requirements of the embedded subject NP have been met, it becomes necessary to ask why the option of raising is even available. I suspect that discourse factors figure significantly in the choice between the expletive insertion and raising options.

Table 1: Pronominal Inflection (Davis and Saunders (1980))

Intransitive

Agent		Singular	Plural
1		-c	-iʔ
2		-nu	-nap
3		-s / -0	-naw

Transitive-Active

Patient		Singular			Plural		
Agent		1	2	3	1	2	3
1	---	-cinu	-ic	-ic	---	-tuʔap	-tic
Sg 2	-cx ^w	---	-ix ^w	-ix ^w	-tuʔx ^w	---	-tix ^w
3	-cs	-ct	-is	-is	-tuʔs	-tap	-tis
1	---	-tuʔnu	-il	-il	---	-tuʔap	-tiʔ
Pl 2	-cap	---	-ip	-ip	-tuʔp	---	-tip
3	-cant	-ct	-it	-it	-tuʔt	-tap	-tit

Transitive-Passive

	Singular	Plural
1	-tinic	-tiniʔ
2	-ct	-tap
3	-im	-tim

Causative-Active

Patient		Singular			Plural		
Agent		1	2	3	1	2	3
1	---	-tuminu	-tuc	-tuc	---	-tumuʔap	-tu tic
Sg 2	-tumx ^w	---	-tux ^w	-tux ^w	-tumuʔx ^w	---	-tutix ^w
3	-tum	-tumt	-tus	-tus	-tumuʔs	-tutap	-tutis
1	---	-tumuʔnu	-tuʔ	-tuʔ	---	-tumuʔap	-tutiʔ
Pl 2	-tumanp	---	-tup	-tup	-tumuʔp	---	-tutip
3	-tumant	-tumt	-tut	-tut	-tumuʔt	-tutap	-tutit

Causative-Passive

	Singular	Plural
1	-tuminic	-tuminiʔ
2	-tumt	-tutap
3	-tum	-tutim

Table 2: Abbreviations

Abs	Absolute	LC	Limited Control
Att	Attemptive	LCDev	LC Developmental
Aux	Auxiliary	LCRes	LC Resultative
C	Causative	Loc	Location
CD	Controlled Developmental	MP	Mediopassive
CPass	Causative Passive	Mid	Middle
CREfl	Causative Reflexive	NContr	Noncontrastive
Conf	Confirmative		Conjunctive Particle
Cont	Continuative	NProx	Nonproximal
Contr	Contrastive Conjunctive	Neg	Negation
	Particle	Opt	Optative
DP	Distant Past	Part	Partitive
Der	Derivation	Pat	Patient
Dim	Diminutive	Perf	Perfective
Dir	Direction	Pers	Persistent
Dist	Distal	Pl	Plural
Distb	Distributive	Prep	Preposition
Dub	Dubiative	Prox	Proximal
Expb	Expectable	Quot	Quotative
Expv	Expectative	Recip	Reciprocal
IC	Indirect Control	Redp	Reduplicated
Impf	Imperfective	Refl	Reflexive
Impv	Imperative	Res	Resultative
Inch	Inchoative	Sim	Simulative
Incomp	Incomplete	Surp	Surprisative
Ind	Individuative	Tr	Transitivizer
InfDub	Inferential Dubiative	Unr	Unrealized
Inst	Instrument	Usit	Usitative
Intr	Intransitivizer		

NOTES

- 1 For a detailed grammatical description of Bella Coola, see Davis and Saunders (1978, 1980, 1984) and especially Nater (1984).
- 2 The source for these three Bella Coola sentences is Davis and Saunders (1978).
- 3 For a complete listing of the Bella Coola paradigms, see Davis and Saunders (1980). For a more detailed morpheme segmentation of the transitive suffixes, see Nater (1984).
- 4 See Table 1 for a detailed listing of the Bella Coola person markers mentioned in this paper. See Table 2 regarding gloss-line abbreviations.

- 5 The source for these and all subsequent sentences is Davis and Saunders (1980). The glosses and English translations are those of Davis and Saunders. The numbers placed after each translation correspond to the particular text and line in which that sentence appears.
- 6 For additional remarks regarding the stylistic importance of -s in nonembedded clauses, see Davis and Saunders (1978), footnote 5.

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