WORD ORDER AND CONFIGURATIONALITY IN ST'AT'IMCETS

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This paper reports on the relation between word order and hierarchical structure in St'at'imcets (Lillooet Salish: henceforth ST'). I will concentrate on the ordering of overt (DP) arguments with respect to each other and to predicative elements, and will thus have nothing to say here about clitics and affixes. Moreover, I will focus on 'direct arguments' - that is DP(s) which are directly licensed by (in)transitivizing morphology on the predicate. This means that two important classes of overt DP will be excluded from consideration: they are (a) the objects of formally intransitive predicates ('with objects', in van Eijk's 1997 terminology) and (b) the second objects of ditransitive predicates. In addition, I will not discuss clausal complements, even though they act in some ways like DP arguments (for example, they sometimes count as nominals for the purposes of the One Nominal Interpretation effect). A fuller treatment of the issues discussed here would necessitate their inclusion of these cases.

The paper is organized as follows. After reviewing previous work on word order in ST' and closely related Salish languages in section 1, I will turn in section 2 to a systematic examination of permitted word orders in both the Upper ('Fountain') and Lower ('Mount Currie') dialects of ST'.

Sections 3-4 will examine the structural correlates of word order variation: in section 3, I will focus on arguments in pre-predicate positions, while in section 4 I will examine post-predicate positions. Section 5 concludes.

1. Previous work on word order in St'at'imcets and its neighbours


Van Eijk's extensive and excellent descriptive grammar of St'at'imcets (1985; revised and published 1997) has little to say about word order, mostly for methodological reasons: the data on which Van Eijk bases his grammar are overwhelmingly textual, and it is rare to find sentences with more than one overt DP constituent in texts.

It is important to emphasize from the outset that this is not because such sentences are in any way deviant in ST'; on the contrary, they are easy to elicit and are readily produced spontaneously, as long as the right discourse conditions have been established. 3 The trouble is, such conditions are rarely met in narratives, which constitute the overwhelming majority of textual materials collected by Van Eijk (and others in the neo-Bloomfieldian tradition). Van Eijk himself is quite aware of this, and observes (1997: 267, footnote 35):

The relative rarity of sentences with both a subject and an object complement is not surprising: an analytic language usually only uses a personal pronounal element to indicate the person that is already in focus (as in 'where is your father?' - 'he is fixing the car'). In Lillooet such pronounal elements are expressed through the subject and object suffixes.

The upshot of a text-based approach, then, is that Van Eijk has very few sentences on which to base word order generalizations. He observes that in his textual materials, there is a 4.1 ratio of Predicate-Subject-Object (PSO) to Predicate-Object-Subject (POS) sentences, but the actual number of sentences is so low (four in some sixty-odd pages of text in the collection edited by Van Eijk and Williams (1981), for example) that this generalization is hardly robust.

Van Eijk (1995, 1997) supplements his previous observations on word order with remarks based on sample sentences prepared by Upper ST' speakers for an English-St'at'imcets Primary Dictionary. As he observes, these sample sentences show almost exclusively POS order (at a ratio of 11:1). He speculates that ST' is in the process of innovating an unmarked POS order in order to resolve the ambiguity created by the relatively recent emergence - under English influence - of sentences with two overt DP arguments.

In fact, as I shall argue below, POS order is not an innovation: it is simply the unmarked word order for the Upper dialect, which contrasts with the unmarked PSO order of the Lower dialect. In fact, even in the Van Eijk and Williams text collection, word order in transitive sentences with two overt DP arguments generally reflects the provenance of the story teller: (1-2 below), which both show PSO order, are from Upper ST' speakers Bill Edwards (Ts'k'w'ayl ac/Pavilion) and Sam Mitchell (Cal'dep/Fountain) respectively, while (3), with PSO order, is from Rosie Joseph, a Lil'wat/fur / Mount Currie (Lower ST') speaker. 5

(1) tli'g'w'-ts'at'-as
open-mouth-CUT-3TR
DET=broken-rock=EXIS
DET=black.bear=EXIS
"the bear opened the cave..." (van Eijk and Williams 1981: 57)

In other words, I am taking issue here with Larry Thompson's often-cited claim that sentences with two overt DPs are "one of the ways bilingual speakers tend to modify the tradition of their Indian languages in adaptation to the English model to please assiduous linguists" (Thompson 1974: 741). There is much evidence against this claim in ST'; including: (i) the existence of sentences with two overt DPs in very early textual materials, before English influence could have had a great deal of influence (see Davis 1999); (ii) the mysteriously differential 'influence of English' on ST' dialects (since word order possibilities differ in Lower ST' and Upper ST'); (iii) the unexplained selectivity of 'English influence' on ST' syntax which has not, for example, altered basic (non-English) predicate-initial word order. In fact, the fluent speakers I know do not consider sentences with two overt DPs to be the result of English influence, though they disapprove of excessive use of overt DPs in inappropriate contexts (where, for example, null anaphora would be more appropriate).

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5 Abbreviations are as follows: AUTO = autonomous intransitivizer, CAU = causative (non-control) transitivizer, CMPL = complete enclitic, CNJ = conjunctive subject clitic, DEI = (locative) deictic, DEM = demonstrative pronoun, DET = determiner, DIR = directive (full control) transitivizer, EXIS = existential enclitic, FOC = focus marker, LOC = locative prefix, MID = middle intransitivizer, NOM = nominalizer, OBJ = object suffix, PRF = particle, PL = plural, PASS = passive, POSS = possessive affix/clitic, PROG = progressive, QUOT = quotative enclitic, REDUP = replication, SG = singular, SUB = (indicative) subject clitic, TOP = topic maintenance suffix, TR = transitive subject suffix, TRA = transitivizer. A dash (-) indicates an affix boundary and an equals sign (=) a clitic boundary. Examples are given in the Van Eijk Practical Orthography (St'At'imcets) and the Kuipers Practical Orthography (Secwepemcits). A conversion chart is given in the Appendices.
(2) Ats’-n-á:ku7 t7-ti=chw’k’-ten=a ti=skame7=a...
see-DIR-3TR DET=DET=cut-thing=EXIS DET=white-man=EXIS
"The white man saw that knife."
(van Eijk and Williams 1981: 83)

(3) Kwán-as=ku7 ayih ni=n-st7=a i=quwh?it7=a...
take(DIR)=QUOT then DET=1SG.POSS-aunt=EXIS PL.DET=shoes=EXIS
"Then my aunt took the shoes..."
(van Eijk and Williams 1981: 92)

The only exception to this generalization (from a corpus of four sentences!) is a PSO sentence from a story told by Martina LaRochelle, an Upper ST' speaker from T’it’q’et / Lillooet:

(4) ...’p’am-an-as=ku7 ti=skicez7=f=ha nelh=exq=7-its’7-f=ha.
put in.fire-DIR-3TR=NML PL.DET=dog-skin=3POSS=EXIS
"...their further had burnt their dog skins."
(van Eijk and Williams 1981: 40)

Further support for this contention comes from an examination of the Káydm narrative, recorded by Charles Hill-Tout in the early nineteen hundreds from a Lower ST' speaker (Hill-Tout 1905, Davis 1999). All three sentences with two overt DPs in Káydm show the expected PSO order:

(5) Nih=t’s7=ku7 aylh kwán-as ti=skel7-ámc=a ti=negwáten=a...
FOC=50 then take(DIR)-3TR DET=younger=EXIS DET=water.basket=EXIS
"So then the older sister took the water-basket..."

(6) Nih=t’s7=ku7 aylh kwán-as ti=skel7-ámc=a ti=negwáten=a...
FOC=50 then take(DIR)-3TR DET=younger=EXIS DET=water.basket=EXIS
"Then the younger sister saw the roots..."

(7) Kwán-as ayih ti=skel7-ámc=a ku=’f’4qw7en=.
take(DIR)-3TR DET=older=EXIS DET=rope
"Next the older sister took some rope..."

The number of sentences under consideration here is of course far too low to support any significant word order generalization. Nevertheless, it is worth making the point that once dialect differences are taken into account, the discrepancy between word order preferences in texts and the example sentences in the Upper ST’f’mc Primary Dictionary almost entirely disappears.6

1.2. Gardiner, Mathewson, and Davis (1993)

This article is the first serious attempt to examine the order of overt DPs in ST', as well as in its Northern Interior Salish (NIS) neighbours Secwepemctsin (Shuswap) and Né?kpmx?:fn (Thompson). While the generalizations on ST' word order which it contains are incomplete (since the authors were working exclusively with speakers of Upper ST', and were unaware of crucial dialect differences), it does provide a foundation for subsequent work, both on ST' and within a comparative Salishan context.

Gardiner, Mathewson and Davis (henceforth GMD) adduce the following principle generalizations concerning ST:

6 There is another point worth making here (though, again, on the basis of inadequate data): If we look at individual speakers, their word order is internally consistent; thus, including sentences containing 'with objects', Martina LaRochelle consistently produces PSO order (4/4 relevant sentences). This indicates that there may be systematic sub-dialectal/dialectal variation at work even below the dialectal generalizations presented here.

(i) ST' word order is strictly predicate initial:

(8a) qwatsáts ta=smálíhats=a left DET=woman=EXIS
"The woman left."

b. *ta=smálíhats=a qwatsáts DET=woman=EXIS left

(In contrast, both Secwepemctsín and Né?kpmx?:fn allow pre-predicate subject DPs, freely and Secwepemctsín also tolerates pre-predicate object DPs: see 1.3. below for details.)

(ii) ST' word order is free in post-predicate position, up to ambiguity:

(9a) ts’áqw-an’-as i=saq’wél-ia ta=ask’ik’wmi7=ia i=nátcw=as
eat-DIR-3TR PL.DET=berry=EXIS DET=child=EXJS when.past=day=3CNJ
"The child ate the berries yesterday."

(b, c, d, e, f) below for details.

(ii) ST' word order is free in post-predicate position, up to ambiguity:

(9a) ts’áqw-an’-as i=saq’wél=ia ta=ask’ik’wmi7=ia
eat-DIR-3TR PL.DET=berry=EXIS DET=child=EXIS

"The child ate the berries yesterday."

(b, c, d, e, f) below for details.

(iii) A preference for POS order in ST' asserts itself in potentially ambiguous contexts:

(10) Ats’s-en-as ta=smálíhats=a ta=saq’ycw=as
see-DIR-3TR DET=woman=EXIS DET=man=EXIS
"The man saw the woman."
(unmarked)
"The woman saw the man."
(marked)

(BF, RW, GN)

(Comparative information is difficult to come by to the other two NIS languages, possibly because in potentially ambiguous contexts, they both tend to resort to SPO order, an option unavailable in Upper ST'; see 1.3. below.)


Gardiner’s work on Secwepemctsin word order is important in that it is the first detailed exploration of the behaviour of pre-predicative DPs in Salish. Preverbal subjects are very frequent in Secwepemctsín. Here are three examples, taken more or less at random from the text collection compiled by the SCES Language Department (Jules et al. 1994):
Secwepemctsín. First, in limited circumstances, objects as well as subjects may occur in a post-focus constituent?

given in (17) and (18), respectively (note that in both cases, a temporal adjunct occupies the clause-pre-predicative position. Examples of pre-predicative object between a pre-predicative focused element and a coindexed gap in a subordinate clause. The focused subordinating determiner. These properties are illustrated in (14-16), from Gardiner (1994); as (11-13)

(17) le:pxeyewtes lu7 re:spaqepq m=7ill-en-sa re:sk'wimén'mlet
DET=yesterday FOC DET=berry CMPL=eat-DIR-3TR DET=children
"It was yesterday that the children ate the berries."

This pattern is an exception to the general tendency for non-focused pre-predicative DPs in Salish to be interpreted as subjects. In fact, though Salish is usually described as having predicate initial order, a large number of Salish languages (probably the majority) permit pre-predicative subjects: these include, besides Secwepemctsín, Hé'x̱w̱x̱swəcn (GMD 1993). Lower ST (see below), Okanagan (Baptiste, in preparation). Upriver Halkomelem (Martina Wiltschko, p.c.), and Squamish (Peter Jacobs, p.c.; see also Gillon 1998). On the other hand, pre-predicative objects are very rare: only Secwepemctsín and Okanagan permit them, as far as I am aware. Moreover, in both these languages, pre-predicative objects appear to be 'parasitic' on the prior fronting of some other constituent, as in (17) and (18). In contrast, Gardiner (1993: 129) points out that the pre-predicative nominal in (19) can only be interpreted as the subject, in spite of the fact that the pragmatics have been weighted towards an object interpretation:

(19) re:spaqqepq m=7ill-en-sa le:sk'wimén'mlet le:pxeyewtes
DET=berry CMPL=eat-DIR-3TR DET=children DET=yesterday
(i) "The children ate the berries yesterday."
(ii) "The berries ate the children yesterday."

Further research is clearly required to establish the exact circumstances under which pre-predicative objects are permitted.

Gardiner's second additional important observation is that non-focused pre-predicative subjects are permitted in embedded contexts in Secwepemctsín (in contrast, as we will see, to their equivalents in ST). An example is given below in (20) (Gardiner 1993: 151); see also (16) above. Note that the pre-predicative subordinate subject DP precedes the determiner which introduces the subordinate clause.

(20) le:xxwye7-x-t-seem-x re:john k=sk'xwi'wet
DET=redup-IND-DIR-TR DET=Mary DET=Mary
"You told me that John saw the woman."

2. A systematic description of word order variation in St'át'ımcs

In this section, I will lay out all attested word orders in ST, supplementing and refining the basic generalizations discovered by GMD. I will begin with pre-predicative DPs, and then turn to post-predicative orders.

2.1. Pre-predicative DPs in St'át'ımcs

Recall GMD's generalization (i):

(i) ST word order is strictly predicate initial
There are two cases which this generalization fails to account for. In contrast, non-quantified pre-predicative subjects are possible in both main and subordinate clauses, in contrast to pre-predicative subjects in Lower ST'.

2.2. Post-predicative word order in ST'

Here, recall GMD had two principle generalizations:

(ii) ST' word order is free in post-predicative position.

(iii) A preference for POS order arises itself in potentially ambiguous contexts.

As far as (ii) is concerned, nothing additional need be said. However, two modifications must be made to the generalization in (iii):

The first is again dialect-related. In Lower ST', the unmarked word order for transitive clauses with two overt DP arguments is PSO, not POS:

(i) "The Indian went hunting." (marked) (LT)

(ii) "A white guy punched John." (marked) (BF)

The second modification to generalization (iii) is forced by the exceptional behaviour of possessive DPs. The unmarked word order of both dialects is confounded in possessive contexts by a competing preference for a possessor DP to act as subject when coindexed with a possessed DP in the same clause, no matter in which order the two occur:

(i) "The man / John saw his aunt." (preferred in both cases)
3. Poss-existence

The judgements in (28) are those of Upper ST speakers. In the Lower dialect, the Upper ST preference for reading (i) becomes absolute, reading (ii) cannot be expressed at all by post-verbal DPs. Instead, Lower speakers resort to SPO order, with a possessor inside the pre-predicative subject bound by an object in post-predicative position.9

The table in (30) summarizes word order possibilities in the two principle ST dialects.

<table>
<thead>
<tr>
<th>Order</th>
<th>UPPER</th>
<th>LOWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-O-S</td>
<td>u</td>
<td>m</td>
</tr>
<tr>
<td>P-S-O</td>
<td>m</td>
<td>u</td>
</tr>
<tr>
<td>AUX-S-P-O</td>
<td>v</td>
<td>v</td>
</tr>
</tbody>
</table>

The patterns shown in (30) raise a number of questions with respect to word order variation both within and between the two dialects. In particular, is there a unique underlying word order for ST? If so, what is it, and how are the other orders derived? And if not, how are the impossible orders constrained?

In order to attempt to answer these questions, we need to move beyond an inspection of surface word order patterns towards a more thorough investigation of the relationship between linear precedence and hierarchical structure. The next two sections represent first steps towards such an investigation: section 3 is concerned with the structure of sentences containing pre-predicative subjects, section 4 with those containing post-predicative subjects.

3. The nature of the pre-predicative subject

Recall the two types of pre-predicative subject:

(a) S-P-(O) (Lower ST' only)

(b) AUX-S-P-(O) (Upper and lower ST')

In this section we will investigate the structural configurations underlying these two word orders. There is an obvious issue as to whether the two should be related, and if so, how, we will set this question aside for the moment, analyzing each order separately, before returning to the relation between them.

3.1. S-P-(O)

Discounting more implausible options (such as massive rightward movement), there are three ways to generate S-P-(O) in ST:

(a) By base-generating a subject DP in a pre-predicative position, and coinindexing it with an empty pronoun in argument position (the dislocation analysis).

(b) By raising a post-predicative subject DP into a pre-predicative position (the topicalization analysis).

(c) By leaving the subject in its base-generated position (the base-generated subject analysis).

We can cross-classify these analyses along the following dimensions:

(i) Grammatical function: restricted (e.g. subject only) versus unrestricted

(ii) Discourse sensitivity: dependent on a prior discourse referent versus discourse-independent

(iii) Locality: sensitive versus insensitive to locality constraints

(iv) A vs A': shows A-type properties versus A'-type properties

Here are the predictions of each of the hypotheses in (a-c) with respect to the diagnostic properties in (i-iv):

<table>
<thead>
<tr>
<th>function</th>
<th>(a) dislocation</th>
<th>(b) topicalization</th>
<th>(c) base-generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>discourse sensitive?</td>
<td>unrestricted</td>
<td>unrestricted</td>
<td>subject</td>
</tr>
<tr>
<td>local?</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>A versus A' tests</td>
<td>A'</td>
<td>A / A</td>
<td>A</td>
</tr>
</tbody>
</table>

Now we are ready to apply these diagnostics to the Lower ST' SP(O) structure.

Both diagnostic (i) (grammatical function) and (iii) (locality) rule out the dislocation analysis (a): the pre-predicative DP in Lower ST' can only be a subject, as we have seen, and moreover it can only be the subject of the immediately following predicate, indicating that the dependency obeys strict locality constraints. In fact, attempts to front a non-local subject result in a genuine left dislocation structure, with all the properties predicted by (a), as well as a characteristic heavy intonation break between the dislocated constituent and the following clause. An example is given in (32); compare (24) above.10

10Left dislocation structures are quite easy to find in texts. In the following example, from Kusahaan, the position of the subject outside the introductory predicate-particle combination is diagnostic of dislocation:

(i) s=

Now we are ready to apply these diagnostics to the Lower ST' SP(O) structure.
(32) t'i=nk'ya7=a, bāt=kan kw=es=t'ak=eu7 kāI7
DET=coyote=EXIS say=1SG:SUB DET=NOM=go=PRF around there
"The coyote, I said was going around there."
(Only possible with heavy intonation break.) (LT)

The base-generation hypothesis (c), on the other hand, is ruled out by diagnostic (iii), discourse sensitivity. As we have already seen (in (26)), SP(O) structures are impossible in subordinate clauses, which is one indication that they must be locally linked to some sentence-external discourse referent. An even stronger indication is that they are infelicitous in discourse-initial contexts, as shown by the contrast in (33):11

(33a) (ni=spāl=a7=au=au)
DET=NOM=one=3POSS=EXIS
t'ak kāI7 ti=nk'ypā=a
DET=coyote=EXIS go around there
"(Once upon a time) a coyote was going around."

b. (ni=spāl=a7=au=au)
DET=NOM=one=3POSS=EXIS
ti=nk'ya7=a t'ak kāI7
DET=coyote=EXIS go around there
"(Once upon a time) a coyote was going around."

The base-generation hypothesis makes a further obvious set of predictions: since the position of SP and PS subjects is identical (the difference in word order being derived by movement of the predicate), they should show identical syntactic behaviour. But we have already seen that this is not the case: in particular, the contrast in binding behaviour between pre-predicative and post-predicative subjects (cf. 28-29) is inexplicable on this analysis.

Accordingly, we reject the base-generation option for pre-predicative subjects. This leaves us with (b), the topicalization hypothesis. However, since topicalization embraces a number of possible different structures (as indicated in the table in (31)), we still need to ascertain what kind of topicalization we are dealing with. In particular, we need to know whether SP(O) structures result from A-type or A'-type movement.

An immediate clue is provided by the fact that only subjects may be topicalized in the SP(O) construction. This kind of restriction is characteristic of A-type movement, as exemplified by familiar constructions like subject-to-subject movement (as indicated in the table in (31)), and is atypical of A'-movement, as exemplified by English topicalization. (In fact, the only constituents that can't usually topicalize in English (at least locally) are subjects.)12

Two other tests in ST confirm that a Lower ST' topicalized subject must be in an A- rather than an A'-position. The first employs the One Nominal Interpretation (ONI) effect (Gerdts 1988), which applies only to A-positions. In a transitive clause, a single post-verbal DP in ST is invariably interpreted as object, rather than subject (Roberts 1994, Davis 1994). This is shown in (34b), where (34a) is used to set up a discourse referent for the empty pronoun. Passive is used to circumvent this restriction by demoting the subject, as shown in (34c):

(34a) t'ak kāI7 ti=nk'ya7=a
DET=coyote=EXIS go around there DET=rabbit=EXIS
"There was a rabbit, going along."

b. atu'x-en-as ti=nk'ya7=a
see-DIR-STR DET=coyote=EXIS
"He saw a coyote."
"A coyote saw him."

(34c) t'ak kāI7 ti=nk'ya7=a
DET=coyote=EXIS go around there DET=rabbit=EXIS
"He was seen by a coyote."

A'-extraction (here via focus-movement) generally voids the ONI (leading at times to confusion):

(35) nih ta=sk'ip7=au=au
DET=mother=3POSS=EXIS
"It's his mother that he saw." OR "It's his mother that saw him."
(GN)

Fronted subjects of transitive predicates without an overt object, however, are simply ungrammatical, with or without context:

(36a) t'ak kāI7 ti=nk'ya7=a
DET=coyote=EXIS go around there DET=rabbit=EXIS
"There was a rabbit, going along."

b. * ti=nk'ya7=a atu'x-en-as / atu'x-en-em
DET=coyote=EXIS see-DIR-STR see-DIR-PASS

The reason for the ungrammaticality of (36b) is that the preverbal DP must be interpreted as a subject, but this will violate the ONI. This means preverbal subjects must be subject to the ONI, like post-verbal argument DPs, but unlike A'-extracted DPs: which in turn means the fronted subject is in an A-position, since the ONI is a diagnostic for A-position status.

The second test is based on the distribution of the topic-maintenance suffix -tali (Roberts 1994, Davis 1994). A'-extracted subjects of transitive predicates with third person objects typically trigger -tali-suffixation (37a). However, pre-predicative subjects in Lower ST' do not (37b-c), by hypothesis, they are not in A'-positions.

(37a) nih ti=nk'ya7=a atu'x-en-tali ti=nk'ya7=a
DET=coyote=DET see-DIR-TOP DET=coyote=EXIS
"It was the coyote that saw the rabbit."

b. * ti=nk'ya7=a atu'x-en-as ti=nk'ya7=a
DET=coyote=DET see-DIR-STR DET=coyote=EXIS
"The coyote saw the rabbit."

It is particularly instructive to compare quantificational preverbal subjects in Lower ST' with those in Upper ST'. In Upper ST', quantificated subjects - and only quantificated subjects - may occur pre-predicatively (see footnote 8). If the predicate is transitive, then it is suffixed with -tali, showing that this is a case of A'-movement. Lower ST' speakers, on the other hand, treat pre-predicative quantified
subjects simply as cases of A-type topicalization, and therefore reject -tali suffixation. This leads to minimal contrasts such as that in (38): (a) is from a Lower speaker, (b) from an Upper:

(38a. takem =wa7 pix-em' ats'x-en-itas i=mixalh=a PL.DET=PROG hunt-MID see-DIR-3PL.TR PDET=bear=EXIS
   "Everyone who went hunting saw the bears." (LT)

b. takem =wa7 pix-em' ats'x-en-tali i=mixalh=a PL.DET=PROG hunt-MID see-DIR-TOP PDET=bear=EXIS
   "Everyone who went hunting saw the bears." (RW)

We have now reached the following conclusion:

The pre-predicative subject in Lower ST is a topIALIZED constituent, generated in a lower thematic subject position and raised to a non-thematic A-position.

3.2. AUX-S-P(O)

The AUX-S-P(O) structure, grammatical in both dialects of ST, shares some of the characteristics of the Lower ST pre-predicate subject construction. In particular, it is restricted to subjects (see (25), and) never induces -tali-suffixation.13

(39a. plan ti=nk'yáp=a ats'x-en-as ti=sqwytis=a AUX-S-P(-O)
   already DET=coyote=DET see-DIR-3TR DET=rabbit=EXIS
   "The coyote already saw the rabbit." (GN)

b * plan ti=nk'yáp=a ats'x-en-tali ti=sqwytis=a AUX-S-P(-O)
   already DET=coyote=DET see-DIR-TOP DET=rabbit=EXIS

On the other hand, post-auxiliary subjects fail to show the discourse-sensitivity of topics. As shown in (26), they are perfectly grammatical in embedded clauses. Moreover, there is apparently no difference between AUX-P-S and AUX-S-P in discourse-initial contexts:

(40a. (ni=s=päl=7=sm=a) wa7=tu7 pix-em' ti=ucwalnicw=a
   PL.DET=PROG =bear=EXIS
   "(Once upon a time) an Indian was hunting." (LT)

13 With respect to ONI effects, the AUX-S-P construction behaves differently from the SPO construction, however. This is shown in (i), below:

(i) nás=kan ats'x=en n-skást=a
   go=ISG.SUB see-DIR n-offsp=EXIS PDET=person=EXIS
   (LT)

The italicized post-auxiliary subject in the second clause violates the ONI. I have no explanation for the grammaticality of this example, particularly as the ONI effect holds in minimally contrasting example (ii), with a post-predicative subject:

(ii) nás=kan ats'x=en xi=mixán
   go=ISG.SUB see-DIR PDET=bear=EXIS
   (LT)

(41)

In this structure, the external argument DP in introduced in the specifier position of VP (I assume an S-P order, though nothing hinges on this). The auxiliary verb AUX is treated as a raising predicate, with a non-thematic specifier position into which the external argument has raised. (I leave aside details as to what forces raising; presumably, it is some 'strong' feature of AUX, either an 'EPP' feature, as suggested by Chomsky 1995, or a Case or agreement feature).
The results of the elicitation are schematized below in (48). There are two distinct patterns: Pattern A represents the judgements of three speakers, two Upper and one Lower (the subject-initial judgements are those of the Lower speaker); Pattern B represents the judgements of the other Upper ST speaker. Judgments were checked over a period of several months, and were found to be internally consistent.

<table>
<thead>
<tr>
<th>Pattern A</th>
<th>Pattern B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSO (SQ)</td>
<td>no bv reading</td>
</tr>
<tr>
<td>POS (SQ)</td>
<td>no bv reading</td>
</tr>
<tr>
<td>POS (OQ)</td>
<td>no bv reading</td>
</tr>
<tr>
<td>SPO (SQ)</td>
<td>no bv reading</td>
</tr>
<tr>
<td>SPO (OQ)</td>
<td>no bv reading</td>
</tr>
</tbody>
</table>

Let us continue to assume (as standardly) that in order for bound variable anaphora to be licensed, the quantified DP must c-command the bound pronoun at some level of the grammar prior to LF.

This means that in Pattern A, the subject must c-command the object in both PSO and POS structures, and conversely O must fail to c-command S in either PSO or POS structures. Note that this (dominant) pattern is consistent with the tendency for binders of possessive pronouns to be interpreted as subjects even in non-quantificational environments (cf. (28-9) above). Note also that though - as might be expected - Pattern A includes the Lower ST speaker, it also includes two out of three Upper speakers. This indicates that the structural correlates of word order do not necessarily line up neatly with surface variation, since Pattern A includes speakers with both unmarked PSO and unmarked POS word orders.18

Pattern B shows a very different profile. Here, quantificational S and O both c-command a bound possessor in POS structures, and neither c-commands a bound possessor in PSO structures.

In the next section, we will examine the configurational implications of these results in terms of two leading theories of predicate-initial languages.

4.2. Quantifier binding and configurationality

It is beyond the scope of this paper to investigate all possible structural approaches to predicate-initial languages. Instead, we will focus on two hypotheses: an analysis based on Kayne’s (1994) theory of antisymmetry, and a ‘subject-adjunction analysis’ based on that of Chung (1990). These two analyses are particularly appropriate for the investigation of predicate-initial systems, because they assume different base-configurations: SPO for the Kaynean analysis, and POS for the subject-adjunction analysis.19 Let us then briefly go over the main assumptions of these two approaches.

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18 In fact, one of these two Upper speakers also employs Pattern B, and thus appears, at least for the purposes of this test, to be ‘bi-dialectal’: it is noteworthy that this is the only within-speaker variation I found in eliciting these delicate and difficult judgements.

19 I reject the possibility of a PSO base structure on both universalist and particularist grounds: universalist, because I assume that the VP constituent is universal; particularist, because there is much evidence for a constituent consisting of verb and object in ST’ (see e.g. Davis 1997b).
Under a Kayneian analysis, base word order is (universally) SPO, with the subject asymmetrically c-commanding the object. This assumption derives from the Linear Correspondance Algorithm, which puts linear order and c-command into a one-to-one correspondence. All other word orders are derived by leftward adjunction to higher projections. Thus PSO will be derived (minimally) by leftward movement of the predicate, and POS (minimally) by leftward movement of the predicate phrase, or less minimally, by separate movement of both the predicate and object.

A basic Kayneian configuration is given in (49); 'F' stands for a functional projection which is necessary in a Kayneian analysis to host a raised element.

\[
\begin{align*}
F & \rightarrow \ldots \rightarrow \text{PredP} \\
F & \rightarrow \ldots \rightarrow \text{Pred'} \\
S & \rightarrow \ldots \rightarrow \text{Pred} \\
\text{Pred} & \rightarrow \ldots \rightarrow \text{S-Q} \\
\text{Pred} & \rightarrow \ldots \rightarrow \text{O}
\end{align*}
\]

In contrast, under a subject-adjunction analysis, base-word order is POS, with the subject asymmetrically c-commanding the object. PSO order is derived via a rule which adjoins S leftward (and downward!) to some projection of F. SPO order is derived quite differently, via movement of the subject to a higher pre-predicative position. The underlying structure for the subject adjunction analysis is as in (50).

\[
\begin{align*}
\text{IP} & \rightarrow \ldots \rightarrow F \\
F & \rightarrow \ldots \rightarrow \text{PredP} \\
F & \rightarrow \ldots \rightarrow \text{Pred'} \\
\text{Pred} & \rightarrow \ldots \rightarrow O
\end{align*}
\]

We are now ready to see how these two approaches handle the quantifier binding data presented in 4.1. above. We will begin with the Kayneian approach (in 4.1.2.) and then turn to the subject adjunction approach (in 4.1.3).

4.2.2 St'át'imcets meets antisymmetry

We will begin with Pattern A, where, recall, S-Q always binds O, and O-Q never binds S, irrespective of word order. We can account for binding in the PSO (S-Q) order simply via predicate-movement to F, as shown in (51).

\[
\begin{align*}
\text{F} & \rightarrow \ldots \rightarrow \text{Pred} \\
\text{F} & \rightarrow \ldots \rightarrow \text{PredP} \\
\text{S-Q} & \rightarrow \ldots \rightarrow \text{Pred'} \\
\text{Pred} & \rightarrow \ldots \rightarrow \text{O}
\end{align*}
\]

What about POS (S-Q)? Here, recall, there are two options: movement of the constituent containing V and O to a higher functional projection, or separate movement of V and O to two different functional projections. Consider the former possibility: if V' moves to F, O won't c-command S, because it will still be embedded inside V' - but S won't c-command O, either, contrary to Pattern A. This is shown in (52):

\[
\begin{align*}
\text{F} & \rightarrow \ldots \rightarrow \text{PredP} \\
\text{F} & \rightarrow \ldots \rightarrow \text{Pred'} \\
\text{F} & \rightarrow \ldots \rightarrow \text{O} \\
\text{S-Q} & \rightarrow \ldots \rightarrow \text{e}
\end{align*}
\]

Now consider the latter possibility. O will still end up higher than S, but this time it will c-command it as well, leading to two sets of wrong predictions, as shown in (53):

\[
\begin{align*}
\text{F} & \rightarrow \ldots \rightarrow \text{PredP} \\
\text{F} & \rightarrow \ldots \rightarrow \text{Pred'} \\
\text{O} & \rightarrow \ldots \rightarrow \text{F1} \\
\text{S-Q} & \rightarrow \ldots \rightarrow \text{F1'} \\
\text{Pred} & \rightarrow \ldots \rightarrow \text{e}
\end{align*}
\]

It should by now be obvious that there is simply no way to derive the right word order together with the right c-command relations.

Is there any way out for the Kayneian analysis? Well, yes. Suppose we were to assume that bound possessors always reconstruct. In that case, the object would always end up in its original base position, c-commanded by the subject, and we would then get exactly the right results for Pattern A.

Note that we still have to block O-Q binding S in POS order; this suggests that for Pattern A, we need structure (52), with V'-movement, rather than (53), with O-movement.
Now, what about Pattern B? Here, recall, both a quantified subject and object c-command a bound variable in POS order, but neither does in PSO order.

Under the assumption that bound possessors reconstruct, we can account for Pattern B binding with POS order rather naturally; the relevant structure will be as in (53). The failure of quantifier-binding with O-Q in the PSO order also follows straightforwardly, since here O remains in its base-position.

This leaves us only with the failure of binding for Pattern B in PSO (S-Q) structures. Here, there is no easy way out: continuing to assume that the bound possessor reconstructs, it is difficult to see how to block binding in this case.20

4.2.3. St'át'imcets meets subject adjunction

Recall the basic assumptions of the subject adjunction analysis (50): the base-structure is POS, with the subject c-commanding object; S subsequently adjoins to some projection of V to derive PSO order.

For Pattern A, where only quantified subjects may bind a possessive pronoun, we can account for binding in the POS (S-Q) configuration with no additional assumptions at all: order and hierarchy both reflect the base-structure. For PSO (O-Q), however, we must make the additional assumption that quantifier binding takes place prior to subject adjunction, since subject adjunction is a lowering rule and will eliminate the required c-command relation. (This is not unreasonable: the most plausible place to locate a rule like subject adjunction is post-syntactically.) In short, binding relations for Pattern A simply reflect the base-configuration assumed by the subject adjunction analysis.

Turning to Pattern B, where quantifier binding is possible from both subject and object in POS configurations and impossible elsewhere, the subject adjunction analysis encounters more problems. To start with, the failure of binding in the PSO (S-Q) configuration means we will have to reverse the order of application of subject adjunction and binding, in order to get the subject into a position where it cannot bind the object, as in (54):

Worse, however, is the ability of O-Q to bind S in POS order in Pattern B. There is simply no way to derive this binding configuration on the subject adjunction analysis, since POS order with S c-commanding O is basic, and lowering the subject below the object can only derive PSO order.

To conclude: though neither the Kayneian nor the subject-adjunction hypothesis is unproblematic, data from quantifier binding in ST' seem to favour the Kayneian analysis, with basic SPO word order, over a subject-adjunction analysis, with basic POS order.

5. Conclusion

In this paper, I have given a progress report on an ongoing investigation into word order variation in ST’ and its structural correlates. While many issues remain unresolved, the following points should be clear:

(i) far from being a peripheral phenomenon mostly attributable to English influence - word order is central to a proper understanding of ST’ syntax. The paucity of textual examples of sentences with two overt DPs is a reflection of the structure of texts, not of the grammar.

(ii) word order variation, whether between dialects or speakers, is systematic and principled. Speaker intuitions are clear and internally consistent.

(iii) there are two significant types of word order variation in ST’ (and I suspect, across the rest of Salish). The first concerns pre-predicative DPs (either none, subject, or object and object); the second concerns post-predicative DPs (which may either show unmarked PSO or POS order).

(iv) While it is clear that pre-predicative DPs occupy a structurally superior position to post-predicative DPs, the structural relation between post-predicative DPs is not as clear; it seems likely that dialects (and speakers) may differ as to whether subjects always c-command objects, or objects may raise under certain circumstances to c-command subjects.

It is my hope that this work will stimulate investigation of these issues in other Salish languages, while fluent native speakers are still available and willing to share their knowledge with us.

---

20 I can find one way to derive the correct facts in conformity with a Kayneian approach, but it's baroque:

(a) starting with SVO, we first scramble the object to yield [O S [V I]] order.
(b) next we raise the constituent now containing S and V (but not O) over O, to yield [S [V I] O [I]]. At this point, S will no longer c-command O, since it is contained inside the (remnant) constituent consisting of S and V.
(c) finally, we raise V, to yield [V [S [I I] O [I I]]. Now, whether O reconstructs or not, binding will still fail, as required. Note that object scrambling and V-raising are independently necessary in Pattern B, so the only really dubious movement here is the 'remnant topicalization' in (b).

21
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Appendix

Conversion chart for American Phonemic and van Eijk St'át'imcets Practical Orthography

<table>
<thead>
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<th>orthography</th>
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<th>orthography</th>
<th>phonemic</th>
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<td>~w</td>
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