WORD ORDER AND CONFIGURATIONALITY IN ST'ÁT'IMCETS

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0. Introduction[1]

This paper reports on the relation between word order and hierarchical structure in St'át'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 DPs 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'.[2] 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'át'imcets and its neighbours

1.1. Van Eijk (1985/1997, 1995)

Van Eijk's extensive and excellent descriptive grammar of St'át'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 36.3):

> The relative rarity of sentences with both a subject and an object complement is not surprising: in natural language one mostly uses a personal pronominal element to indicate the person that is already in focus (as in 'where is your father?' - 'he is fixing the car'). In Lillooet such pronominal 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.[4]

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'át'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 POS order, are from Upper ST' speakers Bill Edwards (Ts'k'wáyl'acw/Pavilion) and Sam Mitchell (Cácl'ep / Fountain) respectively, while (3), with PSO order, is from Rosie Joseph, a Lil'wat7úl / Mount Currie (Lower ST') speaker:[5]

(1) ...lig'w-ts-án'-as   ti=sk'w-ál'ts=a   ti=míxalh=a
     open-mouth-DIR-3TR   DET=broken-rock=EXIS   DET=black.bear=EXIS
     "...the bear opened the cave..."   (van Eijk and Williams 1981: 57)

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[2] As is often the case, the boundary between the two dialects is not clear cut, and there is almost as much variation within as across dialects. Nevertheless, the division assumed here is relatively well-established in the literature, and is recognized by most speakers. I have adopted the terms 'Upper' and 'Lower' rather than 'Fountain' and 'Mount Currie' (van Eijk 1997) because the two dialects are by no means confined to those communities, but are spoken over much larger areas.

[3] 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 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 do disapprove of *excessive* use of overt DPs in inappropriate contexts (where, for example, null anaphora would be more appropriate).

[4] This number would be slightly higher (around eight) if 'with objects' were included.

[5] Abbreviations are as follows: AUT = autonomous intransitivizer, CAU = causative (non-control) transitivizer, CMPL = completive 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, PRT = particle, PL = plural, PASS = passive, POSS = possessive affix/clitic, PROG = progressive, QUOT = quotative enclitic, REDUP = reduplication, 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'át'imcets) and the Kuipers Practical Orthography (Secwepemctsín). A conversion chart is given in the Appendix.

(2) Ats'x-n-ás=ku7   ti7=ti=cwík'-ten=a   ti=sám7=a...
see-DIR-3TR=QUOT DEM=DET=cut-thing=EXIS DET=white.man=EXIS
"The white man saw that knife..."   (van Eijk and Williams 1981: 83)

(3) Kwán-as=ku7   aylh   ni=n-stá7=a   i=qwlhí7cen=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'ít'q'et / Lillooet:

(4) ...p'am-an-ás=tu7   ti=skicez7-í=ha   nelh=qex7-its'7-í=ha.
put.in.fire-DIR-3TR=CMPL DET=mother-3POSS=EXIS 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 *Kayám* 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 *Kayám* show the expected PSO order:

(5) Nilh=t'u7 aylh kwán-as   ti=skel7-ámc=a   ti=neqwáten=a...
FOC=so   then take(DIR)-3TR DET=first-person=EXIS DET=water.basket=EXIS
"So then the older sister took the water-basket..."

(6) Nilh=t'u7   s=7áts'x-en-as   ti=s7aléln7=a   i=sk'ám'ts=a;...
FOC=so   NOM=see-DIR-3TR DET=younger=EXIS PL.DET=root=EXIS
"Then the younger sister saw the roots..."

(7) Kwán-as   aylh   (ti=)skel74mc=a   ku=[t'él'qwten],...
take(DIR)-3TR   then (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'át'imc Primary Dictionary almost entirely disappears.[6]

1.2.   Gardiner, Matthewson, 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 Secwepemctsín (Shuswap) and Nłe?kepmxčín (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, Matthewson and Davis (henceforth GMD) adduce the following principle generalizations concerning ST':

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[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/idiolectal variation at work even below the dialectal generalizations presented here.

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

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

b.   *ta=smúlhats=a   qwatsáts
    DET=woman=EXIS left   (BF, RW, GN)

(In contrast, both Secwepemctsín and Nłe?kepmxčín allow pre-predicative subject DPs freely, and Secwepemctsín also tolerates pre-predicative object DPs: see 1.3. below for details.)

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

(9)a. ts'áqw-an'-as i=sq'wél=a   ta=sk'úk'wmi7t=a   i=nátcw=as
    eat-DIR-3TR PL.DET=berry=EXIS DET=child=EXIS when.past=day=3CNJ
    "The child ate the berries yesterday."   (RW, GN)

b. ts'áqw-an'-as i=sq'wél=a   i=nátcw=as   ta=sk'úk'wmi7t=a
    eat-DIR-3TR PL.DET=berry=EXIS when.past=day=3CNJ DET=child=EXIS

c. ts'áqw-an'-as i=nátcw=as   i=sq'wél=a   ta=sk'úk'wmi7t=a
    eat-DIR-3TR when.past=day=3CNJ PL.DET=berry=EXIS DET=child=EXIS

d. ts'áqw-an'-as ta=sk'úk'wmi7t=a   i=sq'wél=a   i=nátcw=as
    eat-DIR-3TR DET=child=EXIS PL.DET=berry=EXIS when.past=day=3CNJ

e. ts'áqw-an'-as ta=sk'úk'wmi7t=a   i=nátcw=as   i=sq'wél=a
    eat-DIR-3TR DET=child=EXIS when.past=day=3CNJ PL.DET=berry=EXIS

f. ts'áqw-an'-as i=nátcw=as   ta=sk'úk'wmi7t=a   i=sq'wél=a
    eat-DIR-3TR when.past=day=3CNJ DET=child=EXIS PL.DET=berry=EXIS

(Here, the generalization is identical for all three NIS languages.)

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

(10)   áts'x-en-as   ta=smúlhats=a   ta=sqáycw=a
    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 for 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.)

1.3.   Gardiner (1993, 1998)

Gardiner's work on Secwepemctsín 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):

(11) re=q'weyelqs   tsun-s   re=sintse7...
      DET=priest   tell(DIR)-3TR DET=altar .boy
      "The priest told the altar-boy..."   (Ida William)

(12) le=n-sís7se   kwen-t-sem-s...
      DET=1SG.POSS   take(DIR)-TRA-1SG.OBJ-3TR
      "My uncle took me..."   (Nels Michell)

(13) re=sek'lép t'i7 w7éc=ekwe tyen.yén-m=es   t'7éne ne=mút=es
      DET=coyote so   PROG=QUOT circle(REDUP)-MID=3CNJ DEIC   LOC=live=3CNJ
      "So the coyote was going round and round the place where he lived"   (Lily Harry)

Gardiner shows that these SP(O) structures must be distinguished from those with a focused DP constituent.[7] The latter, as often across Salish, involve a (potentially unbounded) dependency between a pre-predicative focused element and a coindexed gap in a subordinate clause. The focused element is often associated with a focus marker, and the subordinate clause is usually introduced by a subordinating determiner. These properties are illustrated in (14-16), from Gardiner (1994); as (11-13) above show, they are systematically absent from non-focused SP(O) structures. Moreover, when focused, third person transitive subjects in Secwepemctsín trigger special A'-extraction morphology on the predicate of the clause from which they have been extracted (see Kroeber 1991). This morphology (passive plus third person conjunctive subject) can be seen in (14); once again, there is no trace of it in non-focused SP(O) structures, as shown by (11) above.

(14) (te=)sqélemc   ri7   re=wík-t-m=es
      (OBL=)man   FOC   DET=see-TR-PAS=3CNJ
      "That's the man that saw her." (i.e., "That's the man she was seen by.")

(15) re=John   re=wí.wk-t-sem-s
      DET=John   DET=see(REDUP)-TR-1SG.OBJ-3TR
      "John's the one who saw me."

(16) re=sqélemc ri7   re=John   m=wik-t-s   re=Mary
      DET=man   FOC   DET=John   CMPL=see-TRA-3TR DET=Mary
      m=ts'úm'qs-en-s
      CMPL=kiss-DIR-3TR
      "It's the man that John saw Mary kiss."

Two more points of interest are worth mentioning with respect to pre-predicative DPs in Secwepectsín. First, in limited circumstances, objects as well as subjects may occur in a (post-focus) pre-predicative position. Examples of pre-predicative object DPs from GMD and Gardiner (1994) are given in (17) and (18), respectively (note that in both cases, a temporal adjunct occupies the clause-initial focus position, thus ensuring that the pre-predicative DPs occupy the relevant post-focus position):

(17)* le=pexyéwtes lu7   re=speqpéq m=7íll-en-s=es   re=sk'wimém'let
      DET=yesterday FOC   DET=berry   CMPL=eat-DIR-3TR=3CNJ   DET=children
      "It was yesterday that the children ate the berries."

bad or impossible

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[7] Somewhat confusingly, Gardiner (1993) refers to the pre-predicative constituent in SP(O) structures as a 'focus', and the focus position as a 'WH-position'. Neither of these terms is felicitous: Gardiner's 'focus' is a topic position, whereas his 'WH-' bears all the characteristics of a typical focus position. Accordingly, I have changed his original terminology.

(18) penhé7en   re=Mary   re=qé7tse-s   k=tsúm'-qs-en-s=es
      when   DET=Mary   DET=father-3POSS   DET=suck-nose-DIR-3TR=3CNJ
      "When did Mary kiss her father?"

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, Nłe?kepmxcín (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=speqpéq m=7íll-en-s   le=sk'wimém'let le=pexyéwtes
      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) lexé.xye7-x-t-sem-x   re=John   k=s=wik-t-s
      tell(REDUP)-IND-TRA-1SG.OBJ-2SG.TR   DET=John DET=NOM=see-TRA-3TR
      re=núxwenxw
      DET=woman
      "You told me that John saw the woman."

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

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'imcets

Recall GMD's generalization (i):

(i)   ST' word order is strictly predicate initial

There are two cases which this generalization fails to account for.[8]

Firstly, in the Lower dialect of ST', a subject DP (and only a subject DP) may precede the main predicate and any associated auxiliaries, as first reported in Davis (1996):

(21) i=ucwalmícw=a   wa7   k'wzús-em
      PL.DET=person=EXIS   PROG   work-MID
      "The people are working."   (LT)

(22) ti=n-skúz7=a   lan   t'iq   áts'x-en-ts-as
      DET=1SG.POSS-offspring=EXIS already   come   see-DIR-1SG.OBJ-3TR
      "My child already came to see me."   (LT)

(23) ti=n-snúk'w7=a   nas   áts'x-en-as   ti=skícza7-s=a
      DET=1SG.POSS-friend=EXIS   go   see-DIR-3TR   DET=mother=3POSS=EXIS
      "My friend is going to see his mother."   (AA, LT)

In contrast to Secwepemctsín, SP(O) structures in Lower ST' are ungrammatical in embedded contexts:

(24)a. tsút=kan   kw=s=t'ak   káti7   ti=nk'yáp=a
        say-1SG.SUB   DET=NOM=go   around.there DET=coyote=EXIS
        "I said the coyote was going along around there."   (LT)

   b. *tsút=kan   kw=s   ti=nk'yáp=a   t'ak   káti7
        say=1SG.SUB   DET=NOM DET=coyote=EXIS   go   around.there

   c. *tsút=kan   ti=nk'yáp=a   kw=s=t'ak   káti7
        say=1SG.SUB   DET=coyote=EXIS   DET=NOM=go   around.there

Second, in both Upper and Lower ST', a subject DP (and only a subject DP) may precede the main predicate, just in case it is itself preceded by an auxiliary:

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[8] In fact, there is a third case: a subject DP may precede the main predicate just in case it is associated with a strong quantifier (i.e., tákem "all", zí7zeg' "each and every"), or a weak quantifier with a strong reading (e.g., cw7it "many (of x)") (Demirdache, Gardiner, Jacobs and Matthewson 1994, Demirdache and Matthewson 1995, Matthewson 1998):

(i)   [tákem   i=spepzúz7=a]   zuqw
      [all   PL.DET=birds(REDUP)=EXIS] die
      "All the birds died."   (BF)

(ii) [cw7it   i=spepzúz7=a]   xzum
      [all   PL.DET=birds(REDUP)=EXIS] big
      "Many of the birds are big."   (RW, GN)

See Matthewson (1998) for arguments that the bracketed string is a DP constituent. There is evidence that this construction is quite distinct from the other two SP(O) constructions discussed in this section. In particular, it involves A'-movement: when the quantified subject of a transitive predicate with two third person arguments appears pre-predicatively, the topic-maintenance morpheme -tali, which is associated with A'-extraction (Roberts 1994, Davis 1994) appears on the predicate:

(iii) [cw7it / tákem   i=ucwalmícw=a]   ats'x-en-táli   ta=sqáx7=a
      [many /all   PL.DET=people=EXIS] see-DIR-TOP   DET=dog=EXIS
      "Many /all of the people saw the dog."   (BF)

In contrast, non-quantified pre-predicative subjects in Lower ST' never trigger -tali. Moreover, the two constructions show different behaviour in embedded contexts: pre-predicative quantified subjects are fine in subordinate clauses, in contrast to non-quantified SP(O) structures.

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(25)a. plan   qwatsáts   cwíl'-en-as   ti=míxalh=a   ti=ucwalmícw=a
         already   leave   seek-DIR-3TR   DET=bear=EXIS   DET=person=EXIS
     (i)   "The Indian has already left to look for the bear."
     (ii)   "The bear has already left to look for the Indian."   (RW, LT)

   b. plan qwatsáts cwíl'enas ti ucwalmícwa ti míxalha   (i) and (ii)

   c. plan qwatsáts ti ucwalmícwa cwíl'enas ti míxalha   (i) only

   d. plan ti ucwalmícwa qwatsáts cwíl'enas ti míxalha   (i) only

'Post-auxiliary' pre-predicative subjects are possible in both main and subordinate clauses, in contrast to pre-auxiliary subjects (cf. (24)):

(26)a. tsút=kan   kw=s=tsicw   píx-em'   ti=ucwalmícw=a
         say=1SG.SUB   DET=NOM=went   hunt-MID   DET=person=EXIS
         "I said the Indian went hunting."   (LT)

   b. tsút=kan   kw=s=tsicw   ti=ucwalmícw=a   píx-em'
         say=1SG.SUB   DET=NOM=went   DET=person=EXIS   hunt-MID
         "I said the Indian went hunting."

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 asserts 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 wth two overt DP arguments is PSO, not POS:

(27)   túp-un'-as   s=John   ti=sám7=a
         punch-DIR-3TR   NOM=John   DET=white.person=EXIS
         "John punched a white guy."   (unmarked)
         "A white guy punched John."   (marked)   (LT)

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:

(28)a. áts'x-en-as   ta=stá7-s=a   ta=sqáycw=a / kw=s=John
         see-DIR-3TR   DET=aunt-3POSS=EXIS   DET=man=EXIS /DET=NOM=John

   b. áts'x-en-as   ta=sqáycw=a / kw=s=John   ta=stá7-s=a
         see-DIR-3TR   DET=man=EXIS /DET=NOM=John   DET=aunt-3POSS=EXIS

   (i) "The man$_i$ /John$_i$ saw his$_i$ aunt."   (preferred in both cases)

(ii) "His$_i$ aunt saw the man$_j$ /John$_{*j}$."   (dispreferred in both cases)   (RW, GN)

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]

(29)   **ti=skícza7-s=a**   **áts'xenas**   **k=John**
      DET=mother-3POSS=EXIS   see-DIR-3TR   DET=John
      "His$_i$ mother saw John$_i$."   (only possible interpretation)   (LT)

2.3. Summary

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

(30)

	UPPER	LOWER
P-O-S	u	m
P-S-O	m	u
AUX-S-P-O	√	√
S-P-O	*	√

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)

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[9] Interestingly, no matter what the positions of the overt DPs are, reading (ii) ("His$_i$ mother saw John$_i$") is simply impossible in Secwepemctsín (Matthewson, Davis and Gardiner 1993, Gardiner 1993). This means that (i-vi) below all have reading (i). (Recall that both subjects and objects can occur pre-predicatively in Secwepemctsín, but also note that (iv) contradicts the generalization that objects may only occur pre-predicatively if some other constituent has been fronted.)

(i)   re=Mary   re=qé7tse-s   xwi-st-és
     DET=Mary   DET=father-3POSS   like-CAUS-3TR
     "Mary$_i$ likes her$_i$ father." (* "Her$_i$ father likes Mary$_i$.")
(ii)   re=qé7tse-s   re=Mary   xwi-st-és
(iii)   re=Mary   xwi-st-és   re=qé7tse-s
(iv)   re=qé7tse-s   xwi-st-és   re=Mary
(v)   xwi-st-és   re=qé7tse-s   re=Mary
(vi)   xwi-st-és   re=Mary   re=qé7tse-s
In order to express "Her father$_i$ loves Mary$_i$", Secwepemctsín must resort to passivization.

9

(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 seperately, 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 coindexing it with an empty pronominal 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):

(31)

	(a) dislocation	(b) topicalization	(c) base-generation
function	unrestricted	unrestricted/subject	subject
discourse sensitive?	yes	yes	no
local?	no	yes	yes
A versus A' tests	A'	A' / A	A

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]

---

[10] Left dislocation structures are quite easy to find in texts. In the following example, from *Kayám*, the position of the subject outside the introductory predicate-particle combination *nílh=t'u7* is diagnostic of dislocation:
(i)   s=Kwáskwaset   nilh=t'u7   s=tsún-as   ti=sem7ám-s=a...
     NOM=Kwáskwaset FOC=so   NOM=say(DIR)-3TR   DET=wife-3POSS=EXIS

10

(32) ? ti=nk'yáp=a,   tsút=kan   kw=s=t'ák=t'u7   káti7
    DET=coyote=EXIS   say=1SG.SUB   DET=NOM=go=PRT   around.there
    "The coyote, I said was going along 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]

(33)a. (ni=s=pála7=s=a)   t'ak   káti7   ti=nk'yáp=a
      (DET=NOM=one=3POSS=EXIS)   go   around.there   DET=coyote=EXIS
      "(Once upon a time) a coyote was going along."

   b. (#ni=s=pála7=s=a)   ti=nk'yáp=a   t'ak   káti7
      (DET=NOM=one=3POSS=EXIS)   DET=coyote=EXIS   go   around.there
      "(Once uon a time) a coyote was going along."   (LT)

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 raising, but 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 pronominal. Passive is used to circumvent this restriction by demoting the subject, as shown in (34c):

"So then Kwáskwaset, he told his wife..."
[11] There is one striking textual counter-example to this generalization, from *Kayám*, whose very first line has SP order:
(i) Kayám   wa7   s-7ístken,   nílh=t'u7   s=wa7=s...
    Kayám   PROG   STAT-pit.house   FOC=so   NOM=PROG=3POSS
    "Kayám had a pit-house, and there she lived..."
I have no explanation for this anomaly.
[12] The astute reader will have noticed, however, that the pre-predicative quantified DP construction discussed in footnote 8, which is an A'-movement rule, is also restricted to subjects.

(34)a. t'ak   káti7   ti=sqwyíts=a
      go   around.there   DET=rabbit=EXIS
      "There was a rabbit; going along."

   b. áts'x-en-as   ti=nk'yáp=a
      see-DIR-3TR   DET=coyote=EXIS
      "He; saw a coyote."
   * "A coyote saw him;."

   c. áts'x-en-em   (e=)ti=nk'yáp=a
      see-DIR-PASS   (OBL=)DET=coyote=EXIS
      "He; was seen by a coyote."   (LT)

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

(35) nilh   ta=skícza7-s=a   áts'xen-as
    FOC   DET=mother-3POSS=EXIS   see-DIR-3TR
    "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:

(36)a. t'ak   káti7   ti=sqwyíts=a
      go   around.there   DET=rabbit=EXIS
      "There was a rabbit; going along."

   b.* ti=nk'yáp=a   áts'x-en-as / áts'x-en-em
      DET=coyote=EXIS   see-DIR-3TR / 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.

(37)a. nilh   ti=nk'yáp=a   ats'x-en-táli   ti=sqwyíts=a
      FOC   DET=coyote=DET   see-DIR-TOP   DET=rabbit=EXIS
      "It was the coyote that saw the rabbit."

   b. ti=nk'yáp=a   áts'x-en-as   ti=sqwyíts=a
      DET=coyote=DET   see-DIR-3TR   DET=rabbit=EXIS
      "The coyote saw the rabbit."

   c. *ti=nk'yáp=a   ats'x-en-táli   ti=sqwyíts=a
      DET=coyote=DET   see-DIR-3TR   DET=rabbit=EXIS

It is particularly instructive to compare quantificational preverbal subjects in Lower ST' with those in Upper ST'. In Upper ST', quantified subjects - and only quantified 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:

(38)a.
tákem	i=wá7	píx-em'	ats'x-en-ítas	i=míxalh=a
all	PL.DET=PROG	hunt-MID	see-DIR-3PL.TR	PL.DET=bear=EXIS

"Everyone who went hunting saw the bears." (LT)

  b.
tákem	i=wá7	píx-em'	ats'x-en-táli	i=míxalh=a
all	PL.DET=PROG	hunt-MID	see-DIR-TOP	PL.DET=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 topicalized 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-predicative subject construction. In particular, it is restricted to subjects (see (25) above), and never induces -*tali*-suffixation.[13]

(39)a.
plan	ti=nk'yáp=a	áts'x-en-as	ti=sqwyíts=a
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-táli	ti=sqwyíts=a
already	DET=coyote=DET	see-DIR-3TR	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:

(40)a.
(ni=s=pála7=s=a)	wá7=tu7	píx-em'	ti=ucwalmícw=a
(DET=NOM=one=3POSS=EXIS)	PROG=CMPL	hunt-MID	DET=person=EXIS

"(Once upon a time) an Indian was hunting."

---

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

(i)
nás=kan	áts'x-en	n-skúz7=a	lh=nátcw=as,
go=1SG.SUB	see-DIR	1SG.POSS-offspring=EXIS	HYP=day=3CNJ

"I'm going to see my son tomorrow,

zapiw's	lh=nás=as	*n-sem7ám=a*	áts'x-en-as.
Sunday	HYP=go=3CNJ	1SG.POSS-wife=EXIS	see-DIR-3TR

Sunday is when my wife will go see him." (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 the minimally contrasting example (ii), with a post-predicative subject:

(ii)
nás=kan	áts'x-en	n-skúz7=a	lh=nátcw=as,
go=1SG.SUB	see-DIR	1SG.POSS-offspring=EXIS	HYP=day=3CNJ

"I'm going to see my son tomorrow,

zapiw's	lh=nás=as	áts'x-en-as	*n-sem7ám=a* .
Sunday	HYP=go=3CNJ	see-DIR-3TR	1SG.POSS-wife=EXIS

Sunday is when someone else will go see my wife." (LT)

13

---

(40) b.
(ni=s=pála7=s=a)	wá7=tu7	ti=ucwalmícw=a	píx-em'
(DET=NOM=one=3POSS=EXIS)	PROG=CMPL	DET=person=EXIS	hunt-MID

"(Once upon a time) an Indian was hunting." (LT)

This suggests that the AUX-S-P structure is a simple case of subject-to-subject raising, without attendant topicalization, as proposed in Davis (1996, 1997b).[14] We are thus led to the following conclusion for post-auxiliary subjects:

> *The post-auxiliary subject in ST' is generated in a lower thematic subject position and raised to a non-thematic A-position.*

Since the AUX-S-P structure is grammatical in both dialects of ST', while the SP(O) construction is only available in the Lower dialect, we can now locate the parametric difference between the two dialects in terms of the possibility of topicalizing an overt subject.

More concretely, let us assume the following structure for the AUX-S-P(-O) order:

(41)
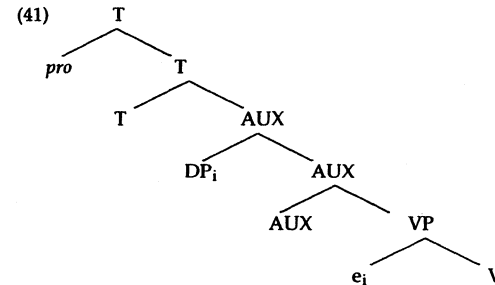
In this structure, the external argument DP_i is introduced in the specifier position of VP (I assume an S-P-O order, though nothing hinges on this). The auxiliary verb AUX is treated as a raising predicate, with a non-thematic specifier position into which the external argument has raised. (I leave 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).

---

[14] If so, auxiliaries must be raising predicates with non-thematic subject positions. In the case of aspectual auxiliaries like *wa7* "progressive", *plan* "already", *cuz'* "about to", this is a natural analysis. It is slightly more problematic for some of the motion predicates (all of which can also act as auxiliaries in ST'). Take, for example, *nq'áylec* "swim", or *matq* "walk", as in the following examples:

(i)
n-q'áy-lec=kan	n-wálh-en	ti=t'láz'=a
LOC-jump-AUT=1SG.SUB	LOC-meet-DIR	DET=canoe=EXIS

"I swam out to meet the canoe."

(ii)
cúz'=lhkan	matq	áts'x-en	ti=n-snúk'w7=a
gonna=1SG.SUB	walk	see-DIR	DET=friend=EXIS

"I'm gonna walk over to see my friend."

These predicates are generally taken to be unergative: that is, they assign a theta role to an external argument. But if so, they should not be able to function as raising verbs, which license A-movement via a *non-thematic* subject position. However, this problem is easily resolved if we assume that the unergative/unaccusative distinction is essentially aspectual in nature, and adopt one of several proposals for an aspectual type-shifting operation whic converts an atelic (unergative) predicate into a telic (unaccusative) predicate (see Pustejovsky 1995, van Hout 1996).

14

(42) rip-in'-ítas   i=n7án'was=a   kwékwa7
    raise-DIR-3PL.TR PL.DET=two(human)=EXIS grandmother
    i=em.7imats-í-ha
    PL.DET=grandchildren-3PL.POSS=EXIS

(42) can potentially mean either "Two grandmothers raised their grandchildren" with or without a bound variable reading (the S-Q PSO reading), or (absurdly) "Their grandchildren raised two grandmothers." In the latter case we will have a quantified object DP (O-Q) and POS word order.

Reversing the order of quantified and possessed DPs in (42) gives us (43), which either has a POS (S-Q) reading (pragmatically favoured) or a PSO (O-Q) reading (pragmatically disfavoured):

43.   ripin'ítas i em7imatsíha i n7án'wasa kwékwa7
      (i) "Two grandmothers raised their grandchildren."   (POS)
      (ii) "Their grandchildren raised two grandmothers."   (PSO)

Finally, (for Lower ST' speakers only) there is also an SPO variant, which only has an S-Q reading:

44.   i n7án'wasa kwékwa7 ripin'ítas i em7imatsíha
      "Two grandmothers raised their grandchildren."   (SPO)

The second type of test sentence involves a scenario which strongly favour san O-Q rather than an S-Q reading:

45.   rip-in'-ítas   i=nkekalhás=a   kúkwpi7 i=kwekw7-í=ha
      raise-DIR-3PL.TR PL.DET=three(human)=EXIS chief PL.DET=grandmother-3PL.POSS=EXIS

Like (42), this is potentially ambiguous, and could mean either "Their grandmothers raised three chiefs" (the O-Q POS reading), or (absurdly) "Three chiefs raised their grandmothers." (the S-Q PSO reading).

Just as with (42-43), we can reverse the order of (45), yielding either PSO with an O-Q reading (pragmatically favoured) or POS with an S-Q reading (pragmatically disfavoured):

(46)   ripin'ítas i kwekw7íha i nekálhasa kúkwpi7
       (i) "Their grandmothers raised three chiefs."   (PSO)
       (ii) "Three chiefs raised their grandmothers."   (POS)

Finally, for Lower ST', we can also construct an SPO order, this time with only an O-Q reading:[17]

(47)   i kekw7íha ripin'ítas i nekálhasa kúkwpi7
       "Their grandmothers raised three chiefs."   (SPO)

---

tákem "all" or *zi7zeg'* "each and every", yielding either SVO order (for Lower ST' speakers) or an A'-extraction structure (for Upper ST' speakers).

[17] (47) only has a non-coreferent reading, in contrast to possessor-binding in SPO structures with a non-quantificational antecedent (see (28-9) above). Thus, (47) can only mean "Their (someone else's) grandmothers raised the three chiefs." This contrast can be accounted for straightforwardly as a case of weak crossover, providing further evidence for a structural asymmetry between pre-predicative subjects and post-predicative objects.

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. Judgements were checked over a period of several months, and were found to be internally consistent.

(48)

	PATTERN A	PATTERN B
PSO (SQ)	bv reading	no bv reading
POS (SQ)	bv reading	bv reading
PSO (OQ)	no bv reading	no bv reading
POS (OQ)	no bv reading	bv reading
SPO (SQ)	bv reading	*
SPO (OQ)	no bv reading	*

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 exmine the configurational implications of these results in terms of two leading theories of predicate-initial languages.

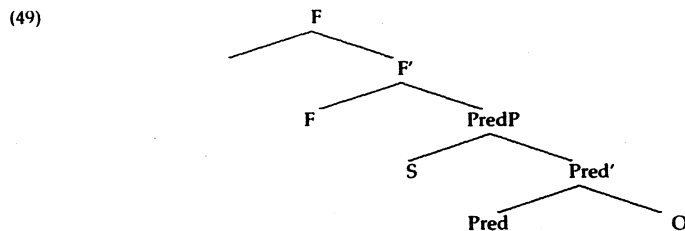### 4.2. Quantifier binding and configurationality

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 Kayneian analysis, and POS for the subject-adjunction analysis.[19] Let us then briefly go over the main assumptions of these two approaches.

---

[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.
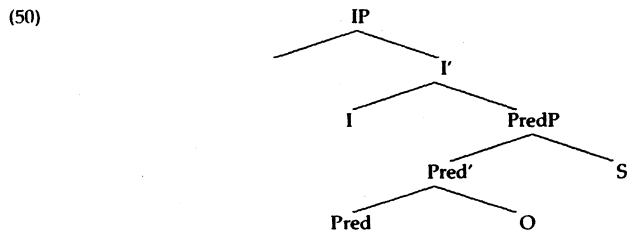
[19] I reject the possibility of a PSO base structure on both universalist and particularist grounds: universalist, because I assume that the VP consituent is universal; particularist, because there is much evidence for a constituent consisting of verb and object in ST' (see e.g. Davis 1997b).

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 correspondance. 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.
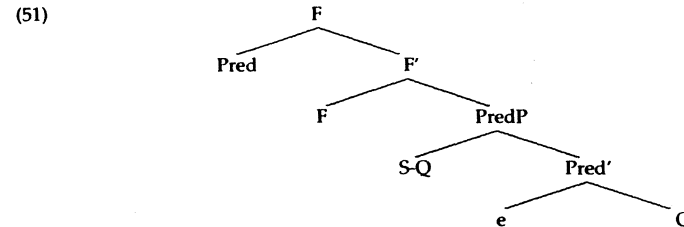
(49)

```
            F
           / \
          /   F'
         /   / \
        /   F   \
       /       PredP
      /       /  \
     /       S    Pred'
    /            /  \
                Pred  O
```

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 P. 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).

(50)

```
              IP
             /  \
            /    I'
           /    /  \
          /    I    PredP
         /         /    \
                Pred'    S
               /  \
            Pred    O
```
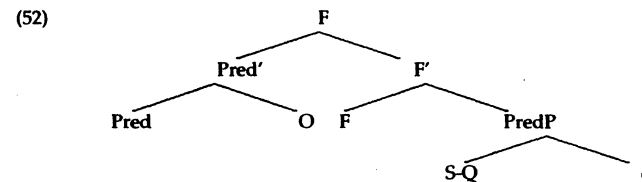
We are now ready to see how these two approaches handle the quantifier binding data presented in 4.1. above. We will begin with the Kayneian approach (in 4.1.2.) and then turn to the subject adjunction approach (in 4.1.3).
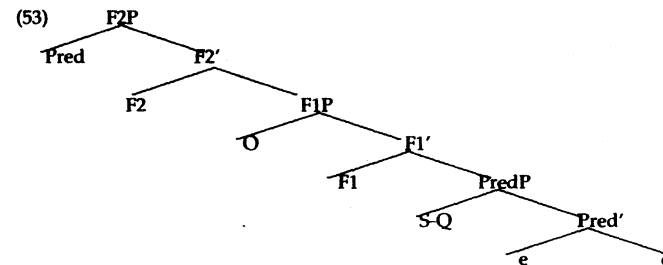
4.2.2 St'át'imcets meets antisymmetry

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).

(51)

```
            F
           / \
         Pred  F'
              / \
             F   PredP
                /   \
              S-Q    Pred'
                    /   \
                   e     O
```

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 possibilty: 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):

(52)

```
                F
              /   \
           Pred'    F'
           /  \    /  \
        Pred   O  F   PredP
                     /   \
                   S-Q    e
```

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):

(53)

```
      F2P
     /   \
   Pred   F2'
         /   \
        F2    F1P
             /   \
            O     F1'
                 /   \
                F1    PredP
                     /    \
                   S-Q     Pred'
                          /    \
                         e      e
```

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]
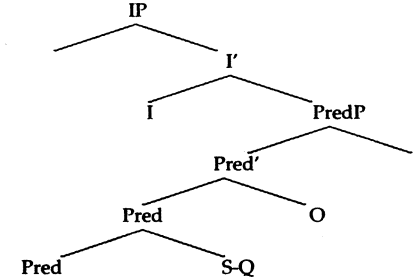
4.2.3. St'át'imcets meets subject adjunction

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):

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[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 t]]] order
(b) next we raise the constituent now containing S and V (but not O) over O, to yield [[S [V t]] [O [t]]. 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 [t t]] [O [t]]]. 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).

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(54)

IP
I'
I   PredP
Pred'   e
Pred   O
Pred   S-Q

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 subject 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.

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Appendix

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

orthography	phonemic	orthography	phonemic
p	p	x	x̣
p'	p̓	xw	x̣ʷ
m	m	r	γ
m'	m̓	r'	γ̓
t	t	g	ʕ
ts	č, c	g'	ʕ˙
ts'	c̓	gw	ʕʷ
s	š, s	g'w	ʕ˙ʷ
n	n	h	h
n'	ñ	w	w
t'	ƛ̓	w'	ẇ
lh	ɬ	y	y
l	l	y'	ẏ
l'	ḷ	z	z
k	k	z'	z˙
k'	k̓	7	ʔ
kw	kʷ	a	æ
k'w	k̓ʷ	a	a
c	x	e	ə
cw	xʷ	v	ʌ
q	q	i	ɪ
q'	q̓	u	u
qw	qʷ	o	o
q'w	q̓ʷ		