# The Case for D-Quantification in Salish: 'All' in St'át'imcets, Squamish and Secwepemctsín*

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## 0. Introduction

This paper presents evidence that there is determiner-type quantification in several Salish languages. We undertake a comparative study of one quantificational element, the word for **all**, in three languages from two separate divisions of the family: Squamish, from the Central Coast Salish branch, and St'át'imcets (Lillooet) and Secwepemctsín (Shuswap), both from the Northern Interior Salish branch. We show that in each of the three languages, **all** is neither a main predicate nor a second-order predicate, but a quantifier syntactically associated with an argument. The evidence, and hence our analysis, differs in major respects from that presented by Jelinek (in press) for Straits Salish.

In section 1 we give background information, beginning with a brief discussion of Jelinek's analysis of Straits Salish. In this section we also outline, for each language, basic syntactic information which will be relevant to subsequent discussion and argumentation. The following sections systematically test which syntactic category **all** belongs to for each language. Section 2 shows that, as Jelinek predicts, **all** does not function as a main predicate. However, unlike in Straits, we have evidence that **all** is not a second-order predicate in the languages studied here (section 3). Thus, it is neither an auxiliary nor an adverb. Section 4 argues that **all** and the DP which defines its range form a single constituent, but that **all** is neither an adjective nor a relative clause. In section 5 we argue that when **all** occurs sentence-initially, it has been extracted from a DP. In sections 6 through 8 we present our analysis. We derive the distribution of **all** from a single base-structure: **all** is base-generated within DP in the position of a non-predicative adjective. If it remains in-situ it has a non-quantificational reading. However, since it has inherent quantificational force, it may raise by S-Structure to an operator position: Spec, DP. Once this has taken place, Quantifier-raising or Focus movement of the entire DP to an operator position may then occur, or **all** itself may undergo Quantifier-raising at S-Structure, thus, stranding the DP which defines its range. The analysis extends to cases where the range is a null pronominal. In section 8, we discuss a restriction on the quantifier's range

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We have chosen to present our data using the orthographies of the languages, rather than in phonetic or phonemic transcription. See the appendix for keys to the orthographies, and for abbreviations used.





and on the distribution of the topical object marker **-táli**, when **all** is separated from its range in St'át'imcets. We derive these two restrictions from the requirement that a quantifier bind a topic, since it presupposes the existence of the set over which it ranges.

If a case can be made for D-type quantification in Salish, as we argue here, then there are significant consequences for the debate on the existence or non-existence of lexical distinctions in Salish. If there is determiner quantification, then we must recognize the existence of noun phrases in these languages.

Because quantification is a vast subject area, there are many interesting issues we have been forced to avoid. For example, we do not examine the behavior of wh-indefinites which can combine with **all** to produce meanings such as **everyone, everything**. We also do not discuss in detail the distributive universal quantifier **zí7zeg'** 'each' in St'át'imcets, which will be the subject of future research. Nor do we deal with other quantifiers such as **many**, or cardinality expressions, except in passing.

## 1. Background
### 1.1. Jelinek's analysis of quantification

Jelinek (in press) argues that there is no distinction between nouns and verbs in the Straits Salish lexicon and, consequently, no distinction between the syntactic projection of these categories (NP vs.VP) (see also Kinkade 1983). Jelinek only admits the existence of two syntactic categories in (Straits) Salish: IP and DP. In particular, she claims that 'The Salish lexicon contains inflected words and various closed list categories' (Jelinek in press:1; emphasis added). Since there are no bare predicates in Salish, there are no predicates that can be used as referring expressions on their own. Under Jelinek's analysis, every predicate is a clause, as illustrated in (1a) from St'át'imcets. A clause combines with a determiner to yield the referential category DP, as is in (1b).

1. a. smúlhats-Ø
[IP woman-3abs]
'She is a woman'

b. ti smúlhats - Ø a
[DP Det [IP woman-3abs] det]
'The woman'

This view has predictions for the syntax of quantification in the language. In particular, the claim that there is no lexical category N and hence no syntactic projection of this category (no maximal projection of the category NP), entails that (at least in Straits), there is no D(eterminer)-type quantification. That is, Straits Salish cannot express quantificational notions by means of determiners quantifiers such as **every, each, many, most** or **three** since these quantifiers are determiners that are syntactically associated with predicates of the category NP.

If (Straits) Salish lacks bare (uninflected) predicates such as NPs, then the only way of expressing quantification is via A(dverbial)-type quantification. The claim made by Jelinek is two-fold. First, adverbial quantification and determiner quantification have different syntactic properties: A-Quantifiers belong to the syntactic category 'adverb' or 'auxiliary' and have scope over a clause (a predicate-argument structure), whereas D-Quantifiers belong to the syntactic category 'determiner' and have scope over

arguments (individuals). Second, adverbial quantification and determiner quantification have different semantic properties. Lewis (1975) named the former type of quantification unselective binding: a single adverb of quantification will bind any free variable in its scope.

A second important feature of Jelinek's analysis is the distinction between weak and strong quantifiers (Milsark 1977). She analyses weak quantifiers (which include existentials such as **some**, cardinal numbers and quantifiers such as **many**) as main predicates, and strong quantifiers (such as **all** or **most**) as adverbial second-order predicates. This distinction is illustrated below.

2. a. Nen ce scenex$^{w}$
big/many=3abs det fish
'They are many, the fish' (Jelinek in press:26)

b. *mek$^{w}$ ce scenex$^{w}$
all=3abs det fish
*'They are all, the fish' (Jelinek in press:26)

(2a) shows that a weak quantifier like Nen can be the main predicate of the sentence: it has scope over the the absolutive argument.[1] In contrast, (2b) shows that strong quantifiers like the universal quantifier mek$^{w}$ cannot occur alone. As shown in (2c), mek$^{w}$ can only occur connected to the main predicate via a LINK particle; that is, it must have scope over a predicate/argument structure.

2. c. mek$^{w}$ 'əw 'əwə-s-əw-ɬəq̓
all=3abs link neg-irr-link-white
'All of them are not white' (Jelinek in press:25)

The study of quantification in Salish languages has fundamental implications for Universal Grammar. First, the question of whether or not "Salish lacks 'essentially quantificational' NPs" (Jelinek in press:1) is closely tied to the question of the universality of 1) lexical categories such as nouns and verbs and 2) their respective syntactic projections. Second, it has implications for the typological division of languages with respect to how they express quantificational notions. Bach et al (in press) propose that there are two types of quantification in natural languages: D-Quantification and A-Quantification; further, Partee (1987) suggests that D-Quantification is not universal (see Jelinek in press).

This paper investigates the syntax of the quantifier **all** in three Salish languages. We will show that **all** has neither the syntax nor the semantics of A-type Quantification. In particular, we propose that the syntax of **all** is an instance of D-Quantification The claim that **all** is a determiner entails that there are "essentially quantificational" noun phrases (Jelinek in press: 1), in the three languages investigated.

[1] Note that for Jelinek, a lexical NP such as ce scenex$^{w}$ in (2) is not an argument, but an adjunct binding a pronominal argument marked on the verb (in this case, the null 3rd absolutive).





## 1.2. Basic Syntactic Information

In this section we give basic syntactic information which will be relevant to our argumentation in later sections.

### 1.2.1. St'át'imcets (St')

St' sentences are predicate-initial; arguments of the main predicate may not occur before the predicate unless they are focussed, as shown in (3):[2]

3. a. * ta smúlhats-a qwatsáts
det woman-det leave
'The woman left' (RW, GN, BF 1)

b. * ti sqáycw-a qwatsáts
det man-det leave
'The man left' (AA, LT 2214)

c. nilh ti sqáycw-a qwatsáts
foc det man-det leave
'It was the man who left' (AA, LT 2214)

The focus construction, as in (3c), provides a test for constituency. As shown in (4a,b), a single DP may be focussed. A PP may also be focussed, as in (4c), but a predicate without determiners may not be focussed (4d), and two DPs may not be focussed at the same time (4e):

4. a. nilh [ti sqáycw-a] áts'x-en-as
foc det man-det see-tr-3erg
'It was the man that I saw' (GN, RW, BF 30)

b. nilh [ta sqátsza7-s-a s-Mary] ats'x-en-táli
foc det father-3sg.poss-det nom-Mary see-tr-TO
'It was Mary's father that saw her' (BF 350)

c. nilh [l-ta tsítcw-a] lh áts'x-en-an s-Bill
foc in-det house-det when see-tr-1sg.conj nom-Bill
'It was in the house that I saw Bill' (RW, GN 127)

d. * nilh [qwatsáts] i stsmál't-s-a
foc leave pl.det children-3sg.poss-det
'It was leave that her children did' (RW, GN 1421)

e. * nilh [i sqáycw-a] [i ts'f7-a] wa7 zúqw-nucw
foc pl.det man-det pl.det deer-det prog kill-suff
'It's the men, the deer, killed' (LT 17-6-94)

[2] Some speakers allow pre-predicate arguments without the focus marker, although even for these speakers, the predicate-initial structure is preferred. Sentences with fronted arguments require further research; the interpretation of the fronted NPs (whether they are topicalized or focussed) is unclear at this stage.

There is movement (of an empty operator) in a focus construction, as argued in Davis, Gardiner and Matthewson (1993) on the basis of island effects.

There is a contrast between indicative and conjunctive morphology on both transitive and intransitive predicates in St'. Conjunctive morphology is used in subjunctive ('optative') environments (van Eijk 1984:173), and in certain types of subordinate environments. Of particular relevance here is the appearance of conjunctive morphology in relative clauses (5a,b), focus structures (5c), and wh-questions (5d):

5. a. ts'áqw-an'-lhkan tu7 na ts'úqwaz'-a ta taw-en-ts-ácw-a
eat-tr-1sg.subj def.past det fish-det det sell-tr-1sg.obj-2sg.conj-det
'I ate the fish you sold me' (RW 887)

b. t'iq tu7 ti xwi-s-án-a smém'lhats
arrive def.past det love-caus-1sg.conj-det girl
'The girl I love arrived' (RW 2102)

c. nilh s-Alice ta ats'x-en-án-a
foc nom-Alice det see-tr-1sg.conj-det
'It was Alice I saw' (AA 1831)

d. stam' ku pzán-acw
what det meet-2sg.conj
'What did you meet?' (GN, RW 225)

Focus constructions, relative clauses and wh-questions can all be shown on independent grounds to involve movement in the syntax (see Roberts 1994, Davis, Gardiner and Matthewson 1993). Where conjunctive morphology occurs in a non-extraction environment, it is triggered either by subjunctive semantics, or by an overt marker of conjunctive (for instance the complementizer **lh** always induces conjunctive morphology). Hence, we use the presence of conjunctive morphology, in the absence of a trigger such **lh** or of subjunctive semantics, as a diagnostic for movement.

In St', there are both headless relative clauses, as shown in (6), and headed relatives, as in (7) (relative clauses were also illustrated in (5a,b) above):

6. a. ta tsún-an-a
det tell-1sg.conj-det
'the one I told' (van Eijk 1984:187)

b. ti wa7 núk'w7-an-ts-as
det prog help-tr-1sg.obj-3sg.conj
'the one who helps me' (van Eijk 1984:229)

7. a. i ats'x-en-án-a nk'yap
det see-tr-1sg.conj-det coyote
'the coyotes I saw' (BF 830)

b. ti wa7 xat'-min-án-a tsitcw
det prog want-appl-1sg.conj-det house
'the house I want' (RW 3020)





c. ti xzúm-a tsitcw
det big-det house
'the big house' (the house which is big) (van Eijk 1984:229)

A DP may be combined with a headless relative to create strings such as in (8a). (8b) shows that such combinations can form a constituent, as they can be focussed as a unit:

8. a. ta sqáycw-a ta xwi-s-ás-a
det man-det det love-cause-3sg.conj-det
'the man she loves' (the man, the one she loves) (RW, GN 476)

b. nilh [ta sqáycw-a ta ats'x-en-án-a] cúlel
foc det man-det det see-tr-1sg.conj-det run.away
'It's the man I saw that ran away' (RW, GN 346)

The two-determiner relative, as in (5a) and (8) (which we call rel1), is 'head-initial' in the sense that the nominal head precedes the notional predicate. The second type (in (5b) and (7)), termed rel2, has a final nominal head without determiners.[3]

Finally, the morpheme **-tali**, which has been called the topical object marker (Matthewson 1993, Matthewson, Davis and Gardiner 1993; see also Kinkade 1989, 1990, Davis, this volume), is used in this paper as a diagnostic for movement. This morpheme appears on the predicate in St' only in sentences where ergative extraction has occurred. It is not obligatory in all cases of ergative extraction, however, as its presence is dependent also on discourse factors. Hence, its absence in a particular sentence does not tell us that ergative extraction has not taken place, while its presence unambiguously shows that ergative extraction has taken place. Some examples are given in (9):[4]

9. a. swat ku tsuw'-n-táli ti sqáycw-a
who det kick-tr-TO det man-det
'Who kicked the man?' (RW, GN 1602)

b. stam' ku tsuw'-n-ás ti sqáycw-a
what det kick-tr-3sg.conj det man-det
'What did the man kick?' / 'What kicked the man?' (GN 86)

[3] Our claim that the head is a nominal presupposes a distinction between nouns and other predicates (see Kinkade 1983, Jelinek 1987, 1982, 1993, in press, for opposing views). Note that in St', it is crucially not the case that any two predicates can occur in any order in either relative clause type, as would be predicted by a theory which claims no syntactic distinction between nouns and verbs. Demirdache and Matthewson (in prep) argue that the typology of relative clauses in St' provides strong evidence for a distinction between lexical categories in the syntax. That issue is not crucial to any of the argumentation in this paper, however.

[4] The interpretation of (9b) and other parallel examples in which the ergative argument has been questioned is possible only for some speakers. Other speakers have obligatory **-tali** when ergative extraction has taken place. See Davis (this volume).

### 1.2.2. Squamish (Sq)

Squamish sentences are normally predicate initial, as shown in (10a). Unlike in St', though, arguments may occur before the main predicate. As seen in the English translation of (10b), most of these fronted constructions appear to be cases of left dislocation. Sq also uses the focus construction for fronting, as in (10c):

10. a. na huyá7 ta slhanay'
rl leave det woman
'the woman left'

b. ta slhanay' na huyá7
det woman rl leave
'the woman, she left'

c. nilh ta swi7ka na wa i7tut
foc det man rl prog sleeping
'it's the man that is sleeping'

Sq only allows DPs to be focussed (11a-c). When an oblique case argument is focussed the relative clause is nominalized (either by **s-** or by **lh-**) (11c). A predicate may not be focussed (11d). Only one DP can be focussed (11e). Thus, focussing can also be used as a test for constituency in Sq.

11. a. nilh [ta sts'ukwi] na huy'-s-t-an
foc det fish rl eat-caus-tr-I
'It's the fish that I ate'

b. nilh [ta s7ixwalh] na ilhen-s ta skwemay'
foc det child rl eat-caus det dog
'it's the boy that fed the dog'

c. nilh [ta lhach'ten] wa n-lh na lhich'-it ta sts'ukwi
foc det knife prog my-nom rl cut-tr det fish
'that's the knife with which I cut the fish'

d. * nilh [huyá7] ta stelmexw
foc leave det people
'it's leaving that the people did'

e. * nilh [ta swi7ka] [ta sxwi7shen] na kw'uy-ut
foc det man det deer rl kill-tr
'it's the man, the deer, killed'

Squamish has a contrast between main clause subject marking and relative clause subject marking. The main clause subject is marked by an independent clitic, whereas the relative clause contains a type of conjunctive marking:

12. a. chen ch'aw-at ta n-siyáy'
I help-tr det my-friend
'I helped my friend'





b. nilh ta n-siyáy' na ch'aw-at-an
foc det my-friend rl help-tr-1sg.conj
'it's my friend that I helped'

c. swat kwi na ch'aw-at-axw
who det rl help-tr-2sg.conj
'who did you help?'

Only relative clauses have this type of conjunctive marking. Other types of conjunctive clauses have the conjunctive clitics after the first word or clitic in the clause.

A headless relative clause in Sq is shown in (13a), and a headed relative clause in (13b), where the relative clause follows the head. There are also a few cases of relative clauses which come before the head, as shown in (13c).

13. a. ta na kw'ach-nexw-axw
det rl see-tr-2sg.conj
'the one that you saw'

b. ta sxwi7shen na kw'uy-ut-an
det deer rl kill-tr-1sg.conj
'the deer that I killed'

c. ta na tsun-t-as skwtsa7s
det rl tell-tr-3erg island
'the what he called an island'

### 1.2.3. Secwepemctsín (Secw)

Secw differs significantly from St' and Sq in allowing multiple elements to precede the predicate and in several details of its predicate morphology.

While both St' and Sq permit elements to occur preceding the predicate, they are somewhat selective. St' only permits clefted constructions with the focus marker **nilh** (although see footnote 2); Sq permits focus constructions and additionally permits left-dislocation. Secw on the other hand allows elements to occur preceding the predicate in a much freer manner. Gardiner (1993) argues that there is a (clause) external topic position, a focus position and, further, topics can be adjoined to a clause internal position (i.e. adjoined to IP). These positions have distinct syntactic properties.

In order to illustrate these pre-predicate positions, we first introduce basic wh-questions (14), focus constructions (15) and relativization (16):

14. a. swéti7 k-qwetséts
who irr-leave
'Who left?'

b. swéti7 k-wik-t-s re John
who irr-see-tr-3erg det John
'Who saw John?'/'Who did John see?'

c. swéti7 k wik-t-m es re John
who irr see-tr-pass 3conj det John
'Who saw John?'

d. pnhé7en k qwetséts es re John
when irr leave 3conj det John
'When did John leave?'

e. stém'i k s-kec-t-éc re John
what irr nom-give-tr-2subj det John
'What did you give John?'

15. a. John ri7 re m-qwetséts
John foc det compl-leave
'It's John that left.'

b. John ri7 re m-wik-t-s
John foc det-compl-see-tr-3erg
'It's John that he saw.'

c. John ri7 re m-wik-t-m es
John foc det compl-see-tr-pass 3conj
'It's John that saw him.'

d. l pexyéwtes lu7 l m-qwetséts es re John
yesterday foc det-compl-leave 3conj det John
'It's yesterday that John left.'

e. sek'wmín' lu7 re s-kec-t-éc re John
knife foc det nom-give-tr-2subj det John
'It's a knife that you gave John.'

16. a. m-wik-t-s re sqélemc t m-qwetséts
comp-see-tr-3erg det man obl compl-leave
'He saw the man that left.'

b. m-wik-t-s re sqélemc t m-ts'úm'qs-n-s
comp-see-tr-3erg det man obl compl-kiss-tr-3erg
'She saw the man that she kissed.'

c. m-wik-t-s re sqélemc t m-ts'úm'qs-nt-m es
comp-see-tr-3erg det man obl compl-kiss-tr-pass 3conj
'She saw the man that kissed her.'

d. m-wik-t-c re sek'wmín' te s-kec-t-és re John
comp-see-tr-2subj det knife obl nom-give-tr-3erg det John
'You saw the knife that she gave John.'

Wh and focus constructions share the same properties: the notional predicate is preceded by a determiner/complementizer—k in questions and either re or l in focus constructions. Relative clauses are preceded by the oblique marker te. Secondly, when non-direct arguments are questioned, focussed or relativized, the notional predicate takes either conjunctive clitics (14c-d,15c-d and 16c) or is nominalized (14e,15e and 16d). These two properties suggest that the constructions exemplified in (14-15) are bi-clausal and the notional predicate is part of a subordinate clause. It is argued in Davis, Gardiner and





Matthewson (1993) and Gardiner (1993) that these constructions are clefts in which syntactic movement takes place.

It is possible to observe elements on either side of the wh/focus position, as shown in (17).

17. re John swéti7 re qé7tse-s k-wik-t-s
det-John who det father-3poss irr-see-tr-3erg
'John, who did his father see?'

Elements to the left of the wh-form **swéti7**, (**re John** in (17)), are argued in Gardiner (1993) to be external topics; those to the right, immediately preceding the predicate (**re qé7tses** in (17)), are internal topics. See Gardiner (1993, in press) for the syntactic properties of these positions. As we shall see, quantified expressions may occur in any of these pre-predicate positions.

An important point of comparison of the languages under discussion is the distribution of person marking. While St' is classed with Secw as a member of the Northern Interior Branch of Salish, it patterns more closely with Sq in its person marking system. In St' and Sq, main clauses subjects are clitics, whether intransitive or transitive. In subordinate contexts, subjects are affixes (referred to as conjunctive). Secw on the other hand employs subject clitics of the indicative set only in intransitive main clauses (18):

18. a. m-qwetséts-kn
compl-leave-1subj
'I left.'

b. m-qwetséts-k
compl-leave-2subj
'You left.'

On the other hand, in transitive constructions Secw employs person marker affixes (related to what are termed the conjunctive affixes in St' and Sq).

19. a. me7 wík-t-s-en
exp see-tr-2obj-1subj
'I'll see you.'

b. kuk-st-sé(ts)m-c
save-caus-1obj-2subj
'Thank you.' (lit: 'You saved me.')

A second set of clitics (referred to as conjunctive in Secw) mark subordinate contexts (20):

20. a. t'hé7en k t'7ék uc
where irr go 2conj
'Where are you going?'

b. t'hé7en k t'7ék wes
where irr go 3conj
'Where is he going?'

c. t'hé7en k wik-t-c wes
where irr see-tr-2subj 3conj
'Where did you see him?'

d. t'hé7en k wik-t-s-s es
where irr see-tr-2obj-3erg 3conj
'Where did he see you?'

Subordinate transitive constructions (20c-d) take regular transitive affixes but are followed by the third person conjunctive clitic. This system of marking subordination is in complementary distribution with nominalization constructions, depending on the argumental status of the nominal being questioned or focussed.

21. a. stém'i k 7-s-wík-em
what irr 2poss-nom-see-mid
'What did you see?'

b. stém'i k s-wík-em-s
what irr nom-see-mid-3poss
'What did he see?'

c. stém'i k s-kec-t-éc
what irr nom-give-tr-2subj
'What did you give him?'

d. stém'i k s-kec-t-sí-s
what irr nom-give-tr-2obj-3erg
'What did he give you?'

In nominalizations, intransitive constructions take members of the possessive pronominal set; transitives take regular transitive affixes. In addition the predicate takes a s- prefix.

While nominalizations and the use of conjunctive clitics are used as diagnostics for non-direct arguments, there are other environments where they occur. Nominalizations occur in negative constructions (22) and in adverbial expressions (23).

22. a. ta7 k s-qwetséts-s
neg irr nom-leave-3poss
'He didn't leave.'

b. ta7 k s-wík-t-s-s
neg irr nom-see-tr-2obj-3erg
'He didn't see you.'

23. a. tikemtús re s-qwetséts-s
always det nom-leave-3poss
'He's always leaving.'

b. yerí7 re s-qwetséts-s
now det nom-leave-3poss
'He's leaving now.'





Conjunctive clitics commonly are used in progressive constructions (24), and in other subordinate contexts such as temporal adjuncts (25a) and hypothetical constructions (25b):

24. a. w7ex re píx-em es
exist det hunt-mid 3conj
'He is hunting.'/'He is a hunter.'

b. w7ex re ts-ník'-st-s es re spéts'en
exist det hab-cut-caus-3erg 3conj det rope
'He is cutting the rope.'

25. a. tse-lx-em-st-é(t)en l qwetséts es
hab-know-mid-caus-1subj det leave 3conj
'I know when he left.'

b. me7 kec-t-si-n te speqpéq e qwenén uc
exp give-tr-2obj-1subj det berries conj like 2conj
'I'll give you some berries if you want.'

## 2. 'All' is not a main predicate

Jelinek claims that **all** in Straits Salish is a second-order predicate, which quantifies over a subordinate clause. She shows that unlike the weak quantifiers such as **many**, **all** cannot be the main predicate of a sentence. We also find in St' that **tákem** cannot occur with an argument to form a full sentence. In this it differs from all main predicates, including weak quantifiers, as shown in (26) and (27):

26. a. tákem i sqaycw-a
all pl.det man-det
'all the men' (only interpretation; not a full sentence) (AA 1553)

b. tákem i ts'í7-a
all pl.det deer-det
'all the deer' 'not a full sentence' (RW, GN 1768)

c. tákem i qwatsáts-a smúlhats
all pl.det leave-det woman
'all the women that are leaving' 'not a full sentence' (RW, GN 1771)

27. a. cw7it i ts'í7-a
many pl.det deer-det
'There are lots of deer' (RW, GN 1769)

b. xzum ti n-s-kwám-a
big det 1sg.poss-nom-take-det
'I caught a big one' (The one I caught was big) (AA 2816)

(28) shows that even when the context provides a set of items over which **tákem** could quantify, it is impossible to use **tákem** as a main predicate:

28. Cw7it i sts'úqwaz'-a. * Tákem i zúmak-a.
many pl.det fish-det all pl.det spring.salmon-det
'There are many fish. They are all spring salmon.' (AA 2773)

Finally, **tákem**, unlike the weak quantifiers, cannot take 1st or 2nd person subject clitics to form a full sentence, as shown in (29):

29. a. tákem-lhkalh
all-1pl.subj
'all of us' (not a full sentence) (LT 2752)

b. cw7ít-kalh
many-1pl.subj
'There's a lot of us' (LT 2753)

In addition to the above evidence for **tákem**'s non-main-predicate status, there are many more subtle differences in syntactic behavior between **tákem** and main predicates of the language. Following sections will contain examples of constructions where **tákem** is possible, but main predicates, including the weak quantifiers, are impossible, pointing again to the different syntactic status of **tákem**.

The same results hold in Sq and Secw, as shown in (30) -(33):

30. a. i7xw ta swi7ka
all det man
'all the men' (Sq)

b. i7xw ta sxwi7shen
all det deer
'all the deer' (Sq)

31. a. kex ta sxwi7shen
many det deer
'There are many deer' (Sq)

b. na huyá7 lha slhánay'
rl leave det woman
'The woman left' (Sq)

32. a. xwexwéyt re sqélemc
all det man
'all the men' (Secw)

b. xwexwéyt re ts'i7
all det deer
'all the deer' (Secw)

33. a. cw7it re ts'i7
many det deer
'There are many deer' (Secw)

b. qwetséts re núxwenxw
all det woman
'The woman left' (Secw)





## 3. 'All' is not a second-order predicate
### 3.1. Syntactic evidence

We have shown in the previous section that **all** is not a main predicate. Under Jelinek's assumption that there are only inflected predicates and DPs in Salish languages, the only other option for the categorial status of **all** would be a second-order predicate. That is, it would be either an auxiliary or an adverb. Our claim is that **all** is neither a main predicate nor a second-order predicate, but a Determiner-Quantifier.

Auxiliaries in St' can express aspectual notions (e.g. the progressive auxiliary **wa7**), or can be verbs of motion (e.g. **nas** 'go', **tsicw** 'come'). These items are immediately followed by first order predicates, with no marking of subordination. The auxiliaries are strictly confined to this position; they may not 'wander around' the clause. (34)-(37) contrast the environments in which **tákem** and the auxiliary **wa7** can appear:

34. a. **tákem** qwatsáts i stsmál't-s-a
all leave pl.det child-3sg.poss-det
'All his children left' (GN, RW 405)

b. **wa7** guy't ta sqáycw-a
prog sleep det man-det
'The man is sleeping' (BF, GN, RW 2)

35. a. qwatsáts tu7 **tákem** i sk'wemk'úk'wm'it-a
leave def.past all pl.det children-det
'All the children left' (BF, RW 573)

b. ?? qwatsáts **wa7** i sk'wemk'úk'wm'it-a
leave prog pl.det children-det
'The children are leaving' (RW, GN 1732)

36. a. ? qwatsáts i smelh-múlhats-a **tákem**
leave pl.det women-redup-det all
'The children are leaving' (RW, GN 843)

b. * qwatsáts i sk'wemk'úk'wm'it-a **wa7**
leave pl.det children-det prog
'The children are leaving' (LT 2583)

37. a. **tákem** i tsítcw-a tseqwtsíqw
all pl.det house-det red
'All the houses are red', * 'The houses are completely red' (BF, RW 1876)

b. * **wa7** i smúlhatsa qwatsáts
prog pl.det woman-det leave
'The women are leaving' (RW, GN 1721)

As we see, we have a systematic contrast in grammaticality when we substitute an auxiliary for **tákem**. The contrast between (35a,b) and (37a,b) shows that **wa7** is ungrammatical in two syntactic positions in which **tákem** is fully acceptable. Hence, although **tákem** superficially behaves similarly to an auxiliary in (34), the obvious conclusion (and the null hypothesis) is that we are dealing with members of two different syntactic categories.

In Sq, which also has the progressive auxiliary **wa**, we obtain the same results.

38. a. na **i7x̲w** itut ta swi7k̲a
rl all sleep det man
'All the men are sleeping' (Sq)

b. na **wa** itut ta swi7k̲a
rl prog sleep det man
'The man is sleeping' (Sq)

39. a. na ilhen **i7x̲w** ta sta7uxwlh
rl eat all det children
'All the children are eating' (Sq)

b. * na ilhen **wa** ta sta7uxwlh
rl eat prog det children
'The children are eating' (Sq)

40. a. * na ilhen ta sta7uxwlh **i7x̲w**
rl eat det children all
'All the children are eating' (Sq)

b. * na ilhen ta sta7uxwlh **wa**
rl eat det children prog
'The children are eating' (Sq)

41. a. **i7x̲w** ta swi7k̲a na itut
all det man rl sleep
'All the men are sleeping' (Sq)

b. * **wa** ta swi7k̲a itut
prog det man sleep
'The man is sleeping' (Sq)

Secw lacks auxiliaries; progressive aspect is expressed as a bi-clausal structure, with **w7ex** 'exist' functioning as a predicate:

42. a. xwexwéyt re itc wes re sqélemc
all det sleep 3conj det man
'All the men are sleeping.' (Secw)

b. xwexwéyt re illen es re stsmémelt
all det eat 3conj det children
'All the children are eating.' (Secw)

43. a. w7ex re itc wes re sqélemc
exist det sleep 3conj det man
'The man is sleeping.' (Secw)

b. w7ex re illen es re stsmémelt
exist det eat 3conj det children
'The children are eating.' (Secw)

There is another class of second-order predicate in the three languages; these express adverbial notions and have more freedom of word order than the auxiliaries. An example from St' is **papt** 'always' (cf. Straits;





Jelinek gives as an example of a second-order predicate the word for 'always'). **Papt** typically appears in clause-initial position, and takes subject clitics; subordinate marking is not present on the main predicate:[5]

44. a. pápt-lhkan wa7 píx-em'
always-1sg.subj prog hunt-intr
'I went hunting many times' (RW, GN 2535)

b. pápt-lhkacw ats'x-en-túmulh
always-2sg.subj see-tr-1pl.obj
'You always see us' (RW, GN 1757)

**Papt**, unlike the aspectual and motion-verb auxiliaries, has some freedom as to where it can appear in the sentence. However, there are clearly environments where **papt** cannot appear and **tákem** can, or vice versa. Compare the (a) and (b) examples in (45) through (47):

45. a. ? qwatsáts i smelh-múlhats-a **tákem**
leave pl.det women-redup-det all
'The children are leaving' (RW, GN 843)

b. ít'em i smúlhats-a **papt**
sing pl.det woman-det always
'The women always sing' (RW, GN 1746)

46. a. áts'x-en-as **tákem**
see-tr-3erg all
'He saw everything' (RW, GN 2522)

b. * áts'x-en-lhkan **papt**
see-tr-1sg.subj always
'I always see him/her' (LT 2585)

47. a. qwatsáts tu7 **tákem** i sk'wemk'úk'wm'it-a
leave def.past all pl.det children-det
'All the children left' (BF, RW 573)

c. * qwatsáts **papt** i syáqts7-a
leave always pl.det woman-det
'The women always leave' (LT 2587)

These data show that **tákem** and the adverb **papt** do not have the same syntactic distribution.

In Sq the adverb **lhik̲'** 'always' does not have the same distribution as **i7x̲w** 'all'. Although in a range of positions the two items act in a parallel fashion, as shown in (48)-(51), notice that 'always', unlike 'all', cannot occur immediately after the main predicate, as in (50b); nor in sentence-initial position, immediately followed by an NP, as shown in (52):

48. a. **i7x̲w** na ilhen ta sta7uxwlh
all rl eat det children
'All the children are eating' (Sq)

---

[5] One of our speakers requires subordinate marking with **papt**; for this speaker, **papt** acts as a first-order predicate.

b. **lhik'** na ilhen ta men'-s
always rl eat det son-his
'His son is always eating' (Sq)

49. a. na **i7xw** itut ta swi7ka
rl all sleep det man
'All the men are sleeping' (Sq)

b. na **lhik'** itut ta swi7ka
rl always sleep det man
'The men are always sleeping' (Sq)

50. a. na ilhen **i7xw** ta sta7uxwlh
rl eat all det children
'All the children are eating' (Sq)

b. * na ilhen **lhik'** ta sta7uxwlh
rl eat always det children
'The children are always eating' (Sq)

51. a. * na ilhen ta sta7uxwlh **i7xw**
rl eat det children all
'All the children are eating' (Sq)

b. * na ilhen ta sta7uxwlh **lhik'**
rl eat det children always
'The children are always eating' (Sq)

52. a. **i7xw** ta swi7ka na itut
all det man rl sleep
'All the men are sleeping' (Sq)

b. * **lhik'** ta swi7ka na itut
always det man rl sleep
'The men are always sleeping' (Sq)

**In section 5, we argue that (52a) involves fronting of all the men, as a single constituent. (52b) shows that always the men cannot be analysed as a single constituent fronted to the left of the predicate, on a par with (52a). Thus, 'always' and 'all' are syntactically differentiated in Sq, as in St'.**

**Adverbials in Secw occur as main predicates in bi-clausal structures. The dependent clause is nominalized, as in (53):**

53. a. **kemtús** re s-illen-s
always det nom-eat-3poss
'He's always eating.' (Secw)

b. cw7it l m-s-qwetséts-s re stsmémelt
many det compl-nom-leave-3poss det children
'The children often leave.' (Secw)

**Notice however that (53) contrasts with (54) in two respects: they have different readings (adverbial vs. non-adverbial) and a different syntax (presence vs. absence of nominalisation).**





54. a. xwexwéyt t m-qwetséts es re stsmémelt
all det compl-leave 3conj det children
'All the children left.' (Secw)

b. cw7it t m-qwetséts re stsmémelt
many det compl-leave det children
'Many children left.' (Secw)

Further evidence that **all** does not behave like an adverb comes from person marking. The St' adverb **papt**, as noted above, always takes 1st and 2nd person subject clitics when it occurs in clause-initial position. Jelinek predicts that the same will be true of **tákem**, and in particular that a sentence such as (55) should be possible, parallel to (44b) above (similar examples are, indeed, possible in Straits; Jelinek in press:21):

55. * tákem-lhkacw ats'x-en-túmulh
all-2sg.subj see-tr-1pl.obj
'You (sing.) saw all of us' (RW, GN 1754)

If **tákem** behaved like **papt**, there would be no reason why (55) would be ungrammatical. However, while **papt** bears no semantic relation to the subject clitic which attaches to it (**papt-lhkacw** does not mean 'always you'); **tákem** is construed as distributing over the pronominal which attaches to it and defines its range (see section 6.1), hence the impossibility of a singular pronominal attaching to **tákem**. Exactly the same is true of Sq, as illustrated in (56):

56. a. lhik' chexw ch'awat-umulh
often you help-us
'you helped us often' (Sq)

b. * i7xw chexw ch'awat-umulh
all you help-us
'you saw all of us' (Sq)

### 3.2. Semantic evidence

Not only does **all** not have the syntactic distribution of an adverb, as shown in the previous section, but it does not have the construal of an adverbial quantifier. The first piece of evidence for this comes from negation. Consider (57):

57. a. All the kids left
b. The kids all left
∀x ( kid (x)) (x left)

In (57a) we have the determiner **all**; in (57b) we have the adverb **all**. These sentences are truth-conditionally equivalent. However, under negation, they are not equivalent:

58. All the kids didn't leave
a. It is not the case that for ∀x ( x a kid) (x left )
b. ∀x ( kid (x)) (x didn't leave)

59. The kids didn't all leave
   a. It is not the case that for ∀x ( x a kid) (x left )
   b. (reading as in (16b) impossible)

Thus, the scope of negation allows us to disambiguate the adverbial reading from the determiner reading: in (58b), **all** attaches to a subject noun phrase and can, thus, have wider scope than the negation. In (58a) and (59), it modifies the VP forming a second-order predicate. Where **all** is an adverbial, the sentence is unambiguous and cannot have the reading where none of the kids left.

In all three languages, we have evidence for a non-adverbial reading of **all**. In (60a) from St', the preferred reading for some speakers is one where 'all the women' has higher scope than negation. This is crucially not the adverbial reading. Rather, 'all the women' forms a single constituent, which is negated. This contrasts with (60b), where we have the adverbial reading:

60. a. cw7aoz kw-s q'weláw'-em tákem i smelh-múlhats-a
   neg det-nom pick.berries-intr all pl.det woman-redup-det
   'None of the women picked berries' (RW 2960)

   b. cw7aoz kw-s tákem i smelh-múlhats-a q'weláw'-em
   neg det-nom all pl.det woman-redup-det pick.berries-intr
   'Not all of the women picked berries' (RW, GN 2958)

There is also a contrast in Secw between an adverbial and non-adverbial reading of **xwexwéyt**; when **xwexwéyt** is within the scope of negation it gets an adverbial reading, as in (61).

61. a. ta7 k s-qwetséts-s xwexwéyt re stsmémelt
   neg irr nom-leave-3poss all det children
   'Not all the children left.' (some stayed) (Secw)

   b. ta7 k s-xwexwéyt-s re stsmémelt k s-qwetséts-s
   neg det nom-all-3poss det children irr nom-leave-3poss
   'Not all the children left' (some stayed) (Secw)

However, when **xwexwéyt** is outside of the scope of negation it receives a non-adverbial reading, as in (61c).

   c. xwexwéyt re stsmémelt ta7 k s-qwetséts-s
   all det children neg irr nom-leave-3poss
   'All the children didn't leave' (Secw)

Similarly, in Sq, the non-adverbial reading of **i7xw** is possible, as shown in (63):

62. i7xw ta sta7uxwlh haw k-as ya huyá7
   all det children not irr-3conj asp leave
   'All the children didn't leave (all of them stayed)' (Sq)

(60), (61c) and (62) are parallel to the English sentence in (58), where we have determiner quantification; the quantifier and the NP form a DP.





### 3.2.1. Unselective binding

The core property of adverbs of quantification is that they are unselective: more then one indefinite in a sentence can receive the quantificational force of a single adverb of quantification. This is illustrated by the Japanese sentence in (63a), quoted from Nishigauchi (1986: 161).

63.a. Dare-ga doko-de nani-o kaw-te-mo, boku-wa kamawa-nai
   who-N where-at where-at buy-Q I-Top care-not
   'For all, x, y, z, x a person, y a thing, z a place, I don't care if x buys y at z.'

Nishigauchi argues that the quantificational element **mo** in Japanese is an unselective binder because the quantificational force of the three (underlined) wh-indefinite noun phrases in (63a) "...is determined uniformly by the single-Q element **mo** which occurs in Comp of their clause, in such a way that all of them function as (part of) universal quantification." Nishigauchi (1986: 162).

St' also has wh-indefinites (**swat, stam'**) that combine with **tákem** to yield meanings such as **everyone/everything**, as seen in (63b). (63c), however, shows that **tákem** is clearly not an unselective binder.

63.b. tákem swat ats'x-en-táli i s-k'wemk'úk'wm'it-a
   all who see-tr-TO pl.det nom-child-(redup)-det
   'Everyone saw the children' (GN, RW 2045)

   c. * tákem swat ats'x-en-táli ku stam'
   all who see-tr-TO det what
   'For all, x, y, x a person, y a thing, x saw y ' (GN, RW 2047)

If we compare the Japanese sentence in (63a) with the ungrammatical St' sentence in (63c), we see that **tákem** does not have the semantics of an adverb of quantification: unlike **mo**, it cannot determine the quantificational force of more then one wh-indefinite noun phrase. Indeed, it is a determiner-quantifier: it associates with a single noun phrase, as in the grammatical (63b).

We have seen in this section that **all** has neither the syntax of a second-order predicate (auxiliary or adverb), nor the semantics of an adverb of quantification. The next section shows that **all** must crucially form part of DP.

## 4. 'All' + DP form a single syntactic constituent

A common environment in which **tákem** appears in St' is shown in (64); it attaches directly to the left of an argument NP, preceding the determiner. The NP may itself contain a relative clause, as in (65):

64. qwatsáts tu7 tákem i sk'wemk'úk'wm'it-a
   leave def.past all pl.det children-det
   'All the children left' (BF, RW 0573)

65. qvl-qvl-ts-mín-lhkan tákem i sqáycw-a i ats'x-en-án-a
bad-redup-mouth-appl-1sg.su all pl.det man-det pl.det see-tr-1sg.conj-det
'I swear at all the men I see' (GN, RW 712)

Main predicates (including cardinal quantifiers) cannot replace **tákem** in this position, as shown in (66):

66. a. * qwatsáts xzum i sk'wemk'úk'wm'it-a
leave big pl.det children-det
'The big children are leaving' (RW, GN)

b. * qwatsáts cw7it i smúlhtas-a
leave many pl.det woman-det
'Many women left' (RW, GN, 1763)

The same construction is found in both Secw and Sq, as shown in (67-68):

67. a. na huyá7 i7xw ta swi7ka
rl leave all det man
'All the men left' (Sq)

b. * na huyá7 hiyí ta swi7ka
rl leave big det man
'The big man left' (Sq)

c. * na huyá7 kex ta swi7ka
rl leave many det man
'Many men left' (Sq)

68. a. qwetséts xwexwéyt re sqélemc
leave all det man
'All the men left' (Secw)

b. * qwetséts xyum re sqélemc
leave big det man
'The big man left' (Secw)

c. * qwetséts cw7it re sqélemc
leave many det man
'Many men left' (Secw)

There is evidence that in the constructions in (64), (65) (67a) and (68a), **all** and its range form a single constituent (as proposed in Matthewson 1994 for St'). Note that this is precisely what Jelinek (in press) predicts to be impossible; a quantificational element which is syntactically associated to a noun phrase is D-type quantification.

The first piece of evidence that [**all** DP] forms a constituent is determiner behavior in St'. There is only one determiner present; determiners on each element cause ungrammaticality, as shown in (69):

69. a. * psác-em i smelh-múlhats-a i tákem-a
gather-intr pl.det woman-redup-det pl.det all-det
'All the women gathered firewood' (RW, GN 2685)





b. * psác-em i tákem-a i smelh-múlhats-a
gather-intr pl.det all-det pl.det woman-redup-det
'All the women gathered firewood' (RW 2684)[6]

c. * qvl-qvl-ts-mín-lhkan i tákem-a i sqáycw-a i
bad-redup-mouth-appl-1sg.subj pl.det all-det pl.det man-det pl.det
ats'x-en-án-a
see-tr-1sg.conj-det
'I swear at all the men I see' (LT 2626)

d. * qwatsáts i tákem-a i syáqts7-a
leave pl.det all-det pl.det woman-det
'All the women left' LT: 'remove i from tákem' (LT 2622)

The ungrammaticality of (69) does not result from an incompatibility between **tákem** and a determiner; as will be shown below, **i tákema** can stand alone as an argument of the main predicate.[7] The relevance of (69) is that phrases with determiners behave like constituents in St': they can be moved (scrambled) within the clause, they display internal cohesion, and they are able to co-ordinate with other DPs. Hence, if two determiners were possible in (69), we would have potential evidence for two independent constituents.[8]

Likewise, in Secw, the distribution of determiners provides evidence for analyzing **all** plus DP as a single DP.[9]

70. qwetséts xwexwéyt re sqélemc
leave all det man
'All the men left' (Secw)

The impossibility of two non-oblique determiners argues against a two-DP analysis of the string in question.

Another piece of evidence for the constituency of [**all** DP] is the impossibility of inserting another DP in between **all** and its range, as shown in the St' example in (71):

71. ats'x-en-ít-as tákem ta sk'úk'wmi7t-a i smúlhats-a
see-tr-3pl-3erg all det child-det pl.det woman-det
'The women saw the whole child'; *'All the women saw the child' (RW 890)

---

[6] This sentence has been accepted by one of our consultants.

[7] In Sq, sentences parallel to (69) are also impossible; however, since there can be no DPs of the form [det **i7xw**] anyway, the examples are less relevant.

[8] Notice that (69a) also shows that **tákem** cannot form the clausal part of a relative clause. This fits in with the fact that it cannot be a main predicate; see section 2 above.

[9] There are rare apparent instances of double determiners in Secw:
i. tqelq'wél't l xwexwéyt l speqpéq
ripe det all det berries
'All the berries are ripe.' (Secw)
Mona Jules offered the above construction in a context where huckleberries were being discussed. There is a possibility that the second NP is right-dislocated in (i).

In spite of the fact that it is dispreferred for **tákem** to attach to a singular DP, with the meaning 'the whole X', this is the only reading possible in (71). It is not possible for **tákem** to quantify over **i smúlhats-a**, because it is separated from it by another argument, namely **ta sk'úk'wmi7t-a**.

In Sq, as in St', **all** may not be separated from its range by another argument. Unlike in St', the determiner **ta** is ambiguous between singular and plural, as shown in (72) where **all** cannot quantify over **ta slhenlhanay.**

72. na ch'aw-at-as i7x̱w ta siw'i7k̓a ta slhenlhanay'
rl help-tr-3erg all det men det women
'All the men helped the women.' (Sq)

Secw likewise associates **xwexwéyt** only with the argument that it is adjacent to.

73. wik-t-s xwexwéyt re stsmémelt re núxwenxw
see-tr-3erg all det children det woman
'The woman saw all the children.'/*'All the women saw the children.' (Secw)

Co-ordination tests also show that [**all** DP] behaves equivalently to other DPs, since the two constituents of a conjunct must have the same syntactic identity. (74) shows that [**tákem** DP] can be conjoined with a DP:

74. a. áts'x-en-lhkan i smúlhats-a múta7 tákem i kwtámts-i-ha
see-tr-1sg.subj pl.det woman-det and all pl.det husband-3pl.po-det
'I saw the women and all their husbands' (RW, GN 1719)

b. wá7-lhkan qvl-qvl-ts-mín' tákem i smelh-múlhats-a
prog-1sg.subj bad-redup-mouth-appl all pl.det woman-redup-det
múta7 i sqáycw-a wa7 ats'x-en-án
and pl.det man-det prog see-tr-1sg.conj
'I swear at all the women and the men I see' (RW, GN, LT 1730)[10]

c. wá7-lhkan qvlqvltsmín' tákem i syáqts7-a múta7
prog-1sg.subj bad-redup-mouth-appl all pl.det woman-det and
ti kúkwpi7-a
det chief-det
'I swear at all the women plus the chief' (LT 17-6-94)

(75) shows the same for Secw:

75. l nuxwnúxwenxw ell xwexwéyt l sqélqlemc m-sxup
det women conj all det men compl-left
'The women and all the men left' (Secw)

In Secw, evidence for constituency comes from focus constructions, which only permit a single constituent to be focussed.

[10] (74b) is ambiguous, just as in English, between the two readings in (i):
i. a. ... [all the women] and [the men] I see
b. ... [all [the women and the men]] I see





76. xwexwéyt re stsmémelt ri7 re qwetséts
all det children foc det leave
'It's all the children left.' (Secw)

Semantic evidence for the constituency of [**tákem** DP] comes from the negation facts discussed above. Recall that [**all** DP] could be negated as a constituent for some speakers in St', and in Secw and Sq:

77. a. cw7aoz kw-s q'weláw'-em tákem i smelh-múlhats-a
neg det-nom pick.berries-intr all pl.det woman-redup-det
'None of the women picked berries' (RW 2960)

b. xwexwéyt re stsmémelt ta7 k s-qwetséts-s
all det children neg irr nom-leave-3poss
'All the children didn't leave.' (Secw)

c. i7x̱w ta sta7uxwlh haw k̓-as ya huyá7
all det children not irr-3conj asp leave
'All the children didn't leave (all of them stayed)' (Sq)

To summarize, we have strong evidence that **all** combines with a DP in each of the three languages, to create a constituent which functions as the argument of a sentence. This behavior is not only unique to **all**,[11] it is an example of a quantifier syntactically attaching to a nominal, contrary to Jelinek's claims for Straits Salish. We have syntactic evidence for D-Quantification in St', Secw and Sq.

### 4.1. The syntactic status of [Det all Pred]

We have argued that [**all** DP] is a single constituent. There is, however, an alternative construction in St' and Sq: [det **all** NP]. Again, we show that this string forms a single DP; it can neither be analyzed as a rel1 (i.e. as a sequence of two DPs), nor as a rel2 (that is, as $[_{DP}$ Det $[_{IP}$ x is **all**] NP]).

In the St' sentence in (78a), the argument (DP) contains two lexical roots (**xzúm, spzúza7**)[12]. This is a relative clause structure (a rel2, as discussed in section 1.2.1.); the first element can have a propositional meaning, as in (78b-c).

78. a. saq'w ta xzúm-a spzúza7
fly det big-det bird
'The big bird flew' (GN, RW 335)

b. ta ats'x-en-án-a sqaycw
det see-tr-1sg.conj-det man
'the man I saw' (St')

c. ta wa7 xat'-min-án-a tsitcw
det prog want-appl-1sg.conj-det house
'the house I want' (RW 3020)

[11] In St', we predict that **zí7zeg'**, the distributive quantifier 'each', will belong to the same category as **tákem**. Initial results support this prediction, but more research is required.

[12] The enclitic portion of the determiner (**-a**) phonologically attaches to the first lexical item in the noun phrase.

We assume that a rel2 has the following structure: [$_{DP}$ Det [$_{IP}$ x is Pred] NP][13]. (79) shows that **tákem** can occur as the first member of an apparent rel2 structure:

79. qwatsáts i tákem-a smúlhats
leave pl.det all-det woman
'All the women left' (GN, RW 840)

Note that this structure is dispreferred; **tákem i smúlhats-a** is the usual way to express **all the women**. This is shown in (80), where (80b) is the volunteered correction of (80a):

80. a. ? kí7kel' i tákem-a syáqtsa7
lazy pl.det all-det woman
'All the women are lazy'
LT: 'doesn't sound very great; you could say it' (LT 2631)

b. tákem t'u7 i syáqts7-a kí7kel'
all part pl.det woman-det lazy
'All the women are lazy' (LT 2631)[14]

Thus, we could analyze the **[i tákem-a** NP] constituent as a rel2, where **tákem** is parallel to the inflected predicate found in the first position of other rel2s. However, this analysis is untenable. Recall that **tákem** cannot function as the main predicate of a sentence (i.e. **tákem** cannot be analyzed as **tákem**-3abs, or 'x is **all**'). This entails that unlike ordinary main predicates and cardinal quantifiers, **tákem** cannot function as the clausal part of a relative clause.

Further evidence for this claim is provided by the other type of relative clause (rel1). As outlined in section 1.2.1., in a head-initial relative clause, determiners appear on both elements of the relative. This is repeated in (81):

81. ta sqáycw-a ta xwi-s-ás-a
det man-det det love-cause-3sg.conj-det
'the man she loves' (the man, the one she loves) (RW, GN 476)

Notice crucially that **tákem** cannot function as the clausal part of this type of relative clause:

82. * psác-em i smelh-múlhats-a i tákem-a
gather-intr pl.det woman-redup-det pl.det all-det
'All the women gathered firewood' (RW, GN 2685)

This confirms that **tákem** cannot be a CP, and function as the clausal part of a relative clause, thus implying that the **[i tákema** NP] structures cannot be relative clauses. See section 6 for the structure we propose for **[i tákema** NP]. We also discuss in that section the slightly different interpretations of the [det **all** NP] constructions vs. the **[all** det NP] ones, and how these follow from the different structures proposed.

[13] See Demirdache and Matthewson (in prep.) for an anlysis of rel2.

[14] The particle **t'u7** in (80b) is a second-position clitic whose position tells us nothing about constituency.





Sq supports the analysis just outlined for the St' [det **all** NP] structure. (83) shows that Sq also allows structures where **all** appears inside the determiner:

83. na ch'awat-as ta men i7xw nch'umexw
rl help-tr-3erg det just all stranger
'He helped all the strangers' (Sq)

However, unlike in St', the rel2 structure is not generally available in Sq. This supports the claim that the St' **[i tákema** NP] structures are not rel2s.

Finally, in Secw it is not possible to have the determiner on **xwexwéyt** followed by an NP with either a direct determiner (84a), an oblique determiner (84b), or lacking a determiner at all, which would be the equivalent of the St' rel2:

84. a. ??tqwelq'wél't l xwexwéyt l speqpéq
ripe det all det berries
'All the berries are ripe.' (Secw)

b. *stém'i k wik-t-s l xwexwéyt te stsmémelt
what irr see-tr-3erg det all obl children
'What did all the children see?' (Secw)

c. *stém'i k wik-t-s l xwexwéyt stsmémelt
what irr see-tr-3erg det all children
'What did all the children see?' (Secw)

(See footnote 9 regarding the status of (84a)).

## 5. Extraction of 'all'

In the preceding section, we discussed constructions in which **all** and its range appear in argument position. In addition, **all** can also appear in sentence-initial position in all three languages. In St', the entire **[tákem** DP] complex can be fronted, as in (85), or **tákem** may be immediately followed by the main predicate, as in (86):

85. a. [tákem i sq'wél'-a] ts'aqw-an'-ít-as i stmál't-s-a
all pl.det fruit-det eat-tr-3pl-3erg pl.det children-3sg.po-det
'His children ate all the berries' (BF, RW 585)

b. [tákem i wa7 máwal'] wa7 ílhen
all pl.det prog live prog eat
'Everything that's alive eats' (BF, RW 1985)

c. [tákem i máw-a] kwan-en-s-twít-as ta pú7y'acw-a
all pl.det cat-det take-redup-caus- 3pl-3erg det mouse-det
'All the cats caught one mouse' (the same mouse) (GN, RW 2055)

d. [tákem i tsítcw-a] tseqwtsíqw
all pl.det house-det red
'All the houses are red', * 'The houses are completely red' (BF, RW 1876)

86. a. tákem qwatsáts i stsmál't-s-a
all leave pl.det child-3sg.poss-det
'All his children left' (GN, RW 405)

b tákem xwi-s-twít-as i snek'w-núk'w7-i-ha
all love-caus-3pl-3erg pl.det friend-redup-3pl.po-det
i sk'wem-k'úk'wm'it-a
pl.det child-redup-det
'The children loved all their friends'; 'All the children loved their friends'
(RW, GN 1779)

c. tákem ats'x-en-tsál-it-as i sqáycw-a
all see-tr-1sg.obj-3pl-3erg pl.det man-det
'all the men saw me' (LT 2602)

d. tákem ats'x-en-tumul-ít-as i sqáycw-a
all see-tr-1pl.obj-3pl-3erg pl.det man-det
'All the men saw us' (LT 2603)

However, fronting of **i tákema** is bad, as shown in (87):

87. a. * i tákem-a qan'im-ens-táli ti kúkwpi7-a
pl.det all-det hear-tr-TO det chief-det
'Everyone heard the chief' (RW 23-6-94)

b. * i tákem-a sqaycw qan'im-ens-táli ti kúkwpi7-a
pl.det all-det man hear-tr-TO det chief-det
'All the men heard the chief' (RW 23-6-94)

See section 7 for explanation of why (87) and (90) below are impossible.

In Sq, **[all** DP] fronting is also possible (indeed, is the most common pattern in elicited sentences):

88. a. [i7x̲w ta sk̲w'elam] na huy'-s-t-as ta sta7uxwlh
all det berries rl eat-caus-tr-3erg det children
'The children ate all the berries' (Sq)

b. [i7x̲w ta swi7k̲a] na ch'aw-at-as
all det man rl help-tr-3erg
'He helped all the men' (Sq)

Fronting just of **i7x̲w** is also possible, as shown in (89):

89. a. i7x̲w na huyá7 ta sta7uxwlh
all rl leave det children
'All the children left' (Sq)

b. i7x̲w na huy'-s-t-an ta sts'ukwi7
all rl eat-caus-tr-1sg.conj det fish
'I ate all the fish' (Sq)

Finally, just as in St', fronting of a determiner-initial NP containing **all** is ungrammatical:





90. * ta men i7x̲w swi7k̲a na huyá7
det just all man rl leave
'All the men left' (Sq)

Secw also permits fronting of either **xwexwéyt** by itself or with the DP that it is associated with.

91. a. [xwexwéyt re sqélemc] m-qwetséts
all det man compl-leave
'All the men left' (Secw)

b. [xwexwéyt re speqpéq] m-7i7llen-s
all the berries compl-eat-3erg
'He ate all the berries' (Secw)

92. a. xwexwéyt m-qwetséts re sqélemc
all compl-leave det man
'All the men left'
(Secw)

b. xwexwéyt m-7illen-s re speqpéq
all compl-eat-3erg the berries
'He ate all the berries' (Secw)

We now show that the structures in (85-86) and (88-92) are not base-generated structures; they involve movement of **all** (with or without its range) to a sentence-initial position.

In St', evidence for movement comes from ergative extraction morphology (**-tali**) (see section 1.2.1.). (43) shows that **-tali** is possible when [**tákem** DP] is sentence-initial and corresponds to the ergative argument:

93.a. T'ak tu7 káti7 ti nk'yáp-a. [Tákem i sqáy-qeycw-a] ats'x-en-táli.
go def.past deic det coyote-det all pl.det man-redup see-tr-TO
'The coyote was going along and all the men saw him' (RW 2882)

b. [tákem i stsmál't-s-a] ats'x-en-táli
all pl.det children-3sg.poss-det see-tr-TO
'All her children saw somebody' (LT 17-6-94)

The example in (94) shows [**tákem** NP] inducing **-tali** marking in a subordinate clause:

94. tsút-kacw kw-s tákem i syáqts7-a ats'x-en-táli kw-s Mary
say-2sg.su det-nom all pl.det woman-det see-tr-TO det-nom Mary
'You said that all the women saw Mary' (LT 2628)

There appears to be an alternative analysis of (94) which does not entail extraction of **[tákem i syaqts7a]**. Given that **[i syaqts7a ats'xentali kws Mary]** is a legitimate relative clause ('the women who saw Mary'), the subordinate clause in (94) could be construed as having **tákem** as its main predicate, with **[i syaqts7a ats'xentali kws Mary]** as the subject of this predicate ('the women who saw Mary were all'). That such a structure is possible is shown in (95), where **tákem** has been replaced by an ordinary main predicate:

95. tsút-kacw kw-s xzum i smúlhats-a ats'x-en-táli kw-s Mary
say-2sg.su det-nom big pl.det woman-det see-tr-top.ob det-nom Mary
'You said that the big women saw M' (You said the women who saw M were big)
(GN, RW 1733)

However, as shown in section 2, strong quantifiers like **tákem** cannot be main predicates in St', as also argued by Jelinek for Straits. Hence, the analysis of (94) as parallel to (95) is unavailable. In the subordinate clause in (94), the only possible main predicate is **ats'xentáli**, and given this fact, simple word order shows us that **tákem i syáqts7a** has been fronted to pre-predicate position. Notice that this fronting is further evidence for the constituency of [**tákem** DP] in St'. See section 7 for an analysis of **all** in pre-predicate position.

A second piece of evidence for extraction, rather than base-generation, in the **tákem** initial sentences comes from the obligatory presence of conjunctive morphology on the main predicate in such sentences:

96. a. tákem i cwík'-ten-a kulhen-mín-an
all pl.det butcher-instr-det borrow-appl-1sg.conj
'I borrowed all the knives' (RW 2115)

b. * tákem i cwík'-ten-a kulhen-mín-lhkan
all pl.det butcher-instr-det borrow-appl-1sg.subj
'I borrowed all the knives' (RW 2115)

Recall from section 1.2.1. that conjunctive morphology is a diagnostic for movement in the absence of subjunctive semantics or of overt markings of a conjunctive environment.

In Sq, conjunctive morphology, of the type which indicates a relative clause, is also obligatorily present in sentences where **i7xw** is fronted with its range, as shown in (97):

97. a. i7xw ta skw'elam na huy'-s-t-an
all det berries rl eat-caus-tr-1sg.conj
'I ate all the berries' (Sq)

b. * i7xw ta skw'elam chen huy'-s
all det berries I eat-caus
'I ate all the berries' (Sq)

Secw also has evidence of extraction. In particular, in (98) the notional predicate is marked with a determiner, and with non-direct arguments takes either nominalization (98a) or conjunctive morphology (98b):

98. a. xwexwéyt re swewll ri7 re m-s-kec-t-é(t)n re núxwenxw
all det fish foc det compl-nom-give-tr-1subj det women
'It's all the fish that I gave the women.' (Secw)

b. xwexwéyt re sqélqlemc ri7 re m-wik-t-m es re núxwenxw
all det men foc det comp-see-tr-pass 3conj det woman
'It's all the men that the woman was seen by.' (Secw)





Thus far we have shown that extraction takes place in the syntax in the cases where [**all** DP] occurs in pre-predicate position. Now let us investigate the bare **all**-fronting cases.

Conjunctive morphology is obligatory in St' with bare **tákem** extraction, as with [**tákem** DP] extraction:[15]

99. a. * tákem kulhen-mín-lhkan i cwík'-ten-a
all borrow-appl-1sg.subj pl.det butcher-instr-det
'I borrowed all the knives' (RW 2116)

b. ? tákem kulhen-mín-an i cwík'-ten-a
all borrow-appl-1sg.conj pl.det butcher-instr-det
'I borrowed all the knives' (RW 2114)

The **tali** test for extraction raises more complex issues when we look at the fronting of **tákem** alone. We postpone this discussion to section 8.2.

In Sq, it is usual to have conjunctive morphology in bare **i7xw**-extraction, as in (100a-c); however, (100d) shows an instance of non-conjunctive morphology. More research is required on this matter:

100.a. i7xw na huy'-s-t-an ta skw'elam
all rl eat-caus-tr-1sg.conj det berries
'I ate all the berries' (Sq)

b. men i7xw na s-7exwa7-t-an
just all rl nom-give-tr-1sg.conj
'I gave him all of it' (Sq)[16]

c. i7xw na huy'-s-t-an ta sts'ukwi7
all rl eat-caus-tr-1sg.conj det fish
'I ate all the fish' (Sq)

d. i7xw chen ta7l-t ta snichin
all I learn-tr det words
'I learnt all the words' (Sq)

Secw permits the fronting of **xwexwéyt** while stranding the DP:

101. a. xwexwéyt t m-qwetséts es re núxwenxw
all obl compl-leave 3conj det women
'All the women left.' (Secw)

---

[15] A note is in order regarding (99). Fronting of **tákem** away from an ergative argument is perfect, as in (46c,d) above. However, conjunctive and non-conjunctive markings are homophonous for (3rd person) ergative. Fronting of **tákem** away from the internal argument of a transitive predicate when the subject is pronominal is ungrammatical, for reasons discussed in section 8. The overt NP in (99b) is not the internal argument of the verb (that is, it is not the argument that is marked on the verb since in ditransitives, the source/goal is generally the argument that is referenced on the predicate). That extraction of the outer argument of a ditransitive verb is marginal is significant, as the discussion in Section 8 will show. However, in order to show that bare **tákem** has been extracted, we are forced to use the marginal example in (99b). Although (99b) is marginal, there is nonetheless a real contrast in the minimal pair in (99) which is due to the distinct types of morphology used.

[16] The nominalization on the predicate in (100b) is unexplained at present.

b. xwexwéyt t m-wik-t-s es re núxwenxw
all obl det-see-tr-3erg 3conj det woman
'He saw all the women.' (Secw)

In (101a-b) evidence for extraction comes from the presence of the oblique determiner and from the use of conjunctive morphology. When **xwexwéyt** is fronted, the notional predicate takes conjunctive morphology irregardless of the grammatical relation of the argument that is quantified.

In this section, we have argued that whenever **all** is in a pre-predicate position, syntactic movement has taken place. It can be fronted with or without its range.

## 6. The internal structure of quantified phrases

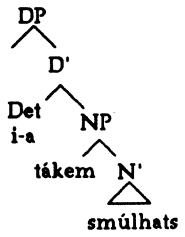
We have argued that **all** and its range form a single constituent. What is the internal structure of this single constituent? As seen in the following paradigm from St', the discontinuous determiner **i-a** can appear on either **tákem,** as in (102a), or on the NP **smúlhats** 'woman', as in (102b).

102.a. qwatsáts i- tákem-a smúlhats
leave pl.det-all-det woman
'All the women left' (RW, GN 843)

b. qwatsáts tu7 tákem i-sm̓lh-múlhats-a
leave def.past all pl.det-woman-redup.-det
'All the women left' (RW, GN 1784)

To derive the distribution of **tákem** with respect to the determiner from a single base-structure, we propose that the DPs containing **tákem** in (102) both have the base-structure in (103).

103.




In (103), the quantifier is in a prenominal position inside the NP; this position is similar to that of a non-predicative adjective such as 'whole'. Under the structure in (103a), **i-tákem-a smúlhats** has a collective (group) interpretation: it means 'the whole (set of) women'. Finally note that the discontinuous determiner **i-a** must cliticize onto **tákem**; this cliticization is derived via head-raising of Q (**tákem**) to Det in the mapping between S-Structure and PF (Phonological Form).





There are two pieces of evidence for this analysis. First, in St', **det tákem NP** often appears with the determiner **ki**, which has a collective meaning:

104. tákem-wit nas **ki** tákem-a s7ístken
all-3pl go det all-det underground.house
'They all went to all the s7ítstkens' ('all the s7ístkens are in a bunch')
(RW, GN 2504)

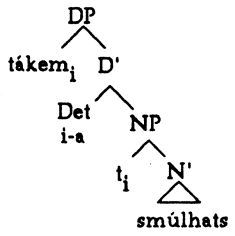
Second, in Sq, DPs where **all** follows the determiner usually require the presence of **men** 'just'. In contrast, in DPs where **all** precedes the determiner, **men** is absent. The example in (105) suggests that **men** emphasizes the collective/group reading of **i7x̲w**. The first noun phrase, containing **men i7x̲w,** has a collective meaning, whereas the second one, containing **i7x̲w** alone, means **every**:[17]

105. na wa na7 t-ta sch'iyípshen-s ta na men i7x̲w smen'hem-s
rl prog be.on obl-det leg-3pos det rl just all descendents-3poss
ta i7x̲w sx̲wi7shen
det all deer
'it is on the leg of all the descendents of every deer' (Sq)

Finally, recall that when the range of **all** is singular in St', the only construal possible is 'the whole NP' (see (71), Section 4).

The order Quantifier Det NP in (102b) is then derived from the base structure in (103), by raising of **tákem** to the Specifier of DP, as shown in (106). This movement is possible because the prenominal modifier has inherent quantificational force. This movement can take place either overtly at S-Structure (as is the case in (102b)), or covertly at LF (Logical Form). Note that this time the discontinuous determiner **i-a** must cliticise onto **smúlhats**. Again, this cliticization is derived via head-raising of N (**smúlhats**) to Det in the mapping between S-Structure and PF (Phonological Form).

106.




17 Interestingly, Straits Salish also has a construction **det all NP**, which Jelinek (in press) analyzes as a determiner followed by a complex predicate. She notes that 'the complex predicate in the Determiner Phrase ... produces a collective term'. Hence, the Straits construction further supports our analysis.

The structure in (106) is the structure proposed for all quantified NPs by Reinhart (1987). She argues that binding by a quantified NP as in (107) always involves 'specifier binding'. The quantified NP does not in itself bind the pronoun in (107). Rather, there is operator movement (inside the DP) of the quantifier to a specifier (operator) position. It is precisely this movement of the quantifier to an operator position that enables the whole DP to be interpreted as a quantified phrase: the operator **every** has a distributive index, and this index binds any variable in the restriction of the quantifier (i.e. man (x) in (107)) and in its scope (i.e 'x thinks x is a fool') (see also Heim 1982).

107. Every man$_i$ thinks he$_i$ is a fool

## 6.1 Distributive vs. collective construal

In St', **tákem** allows either a distributive or a collective construal of the DP it binds. However, **tákem** is not a distributor like **each** or **every**. That is, a proposition where **tákem** has scope over say the subject does not entail corresponding propositions about each atomic part of what is denoted by the subject. There are two tests for distributivity. First, distributive determiners cannot attach to mass nouns (they can only attach to count nouns), as seen in (108). Second, distributors are impossible with certain predicates (for instance, symmetric predicates), as seen in (109).

108.a. *Each sand, *Every water, (vs. Every man)
b. All sand, All water

109.a. The women all gathered/met at noon
b. *The women each gathered/met at noon

The same is true in St', as shown in (110) and (111).

110.a. peq' t'u7 tákem i-máq7-a
white part all pl.det-snow-det
'All snow is white' (LT 17-6-94)

b. áts'x-en-lhkan tákem i-máq7-a
see-tr-1sg.subj all pl.det-snow-det
'I saw all the snow' (LT 17-6-94)

c. * peq' t'u7 zf7zeg' i-máq7-a
white part each pl.det-snow-det
* 'Each snow is wet' (LT 17-6-94)

d. pus t'u7 tákem i-qú7-a
wet part all pl.det-water-det
'All water is wet' (LT 17-6-94)

e. * pus t'u7 zi7zeg' i-qú7-a
wet part each pl.det-water-det
* 'Each water is wet.' (LT 17-6-94)





111.a. tákem t'u7 i-sqáycw-a gew'p
all part pl.det-men-det gathered
'The men all gathered.' (LT 17-6-94)

b. * zf7zeg' t'u7 i-sqáycw-a gew'p
each part pl.det-men-det gathered
* 'The men each gathered' (LT 17-6-94)

We see that in St', quantifiers are clearly sensitive to the count vs. mass noun distinction. This is significant because one of Jelinek's arguments for the non-existence of Determiner-Quantification in (Straits) Salish is precisely the insensitivity of determiners to the count/mass noun distinction in Straits. That this distinction exists in St', thus, provides further support for D-Quantification.

Now **tákem** does allow a distributive reading, as shown clearly in (112), where the possessive pronoun is interpreted as a bound variable: its reference varies according to the range of the quantifier (the set of children specified in the discourse):

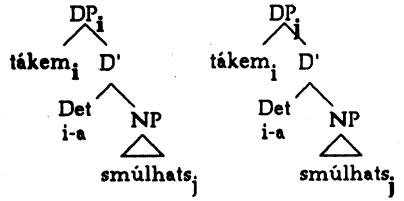
112. tákem i-stsmál't-a ts'um'-qs-an'-it-as i-skicez7-í-ha
all pl.det-child-det lick-nose-tr--pl-3erg pl.det-mother-3pl.poss-det
'All the children kissed their (respective) mothers' (AA 2658)

To explain how **tákem** licences either a collective or a distributed reading, we adopt Heim, Lasnik and May's (1991) analysis of (distributed) plural noun phrases (i.e. **the men (each/all)**). In particular, in the DP in (106), the operator and its range each have their own separate index: the index of the operator is a distribution index, the index of the NP is a range index. When the whole DP inherits (by percolation) the index of its range, it is construed as a group; it denotes a collection of individuals and is, thus, referential. On the other hand, when the whole DP inherits the index of its distributor, it gets a quantificational interpretation: the quantifier distributes over the members of the collection of individuals specified by the NP. The Heim, Lasnik and May analysis explains 1) why these noun phrases are ambiguous between a quantificational and a referential construal and, 2)why its range must be plural (as is the case in all three languages[18]): a singular NP cannot be interpreted as distributed since it denotes an atomic indivídual. The representation of these two readings is given in (113). In (113a), we have a distributed plural NP since the DP has inherited the distribution index of the operator in its specifier, whereas in (113b), we have a (non-distributed) plural NP since it bears a simple range index.

[18] Note that plural marking on the NP is obligatory only in St'. Plural in Sq and Secw is marked by reduplication of the noun and is optional (there are no plural determiners as in St'). Thus, there is no syntactic way of identifying an NP range as unambiguously singular. The semantics of the NP, however, is plural.

113.

a. Distributive reading b. Collective reading




Thus, an NP under the scope of **all** will have the distributed interpretation of a quantified NP only if **all** first raises to an operator position and then transmits its index to the whole DP. This interpretation can be derived at S-Structure or at LF.

Finally, note that the head noun in all the above structures can be the non-overt pronominal *pro*. (114) gives examples of **tákem** appearing with no overt range:

114.a. ts'áqw-an'-as tákem k John
eat-tr-3erg all det John
'John ate everything.' (AA 2808)

b. áts'x-en-as tákem
see-tr-3erg all
'He saw everything.' (RW, GN 2522)

c. smelh-múlhats-wit tákem
woman-redup-3pl all
'They're all women' (RW, BF 2758)

d. ít'em-wit t'u7 tákem
sing-3pl part all
'They all sang' (AA 2783)

e. kwan tákem
take all
'Take everything' (GN, RW 2052)

Sq also allows **i7xw** without an overt range as an argument:

115.a. ...kwi s-s shich'an-tsut i7xw
det nom-3poss turn.round-refl all
'...they thought that everything was turning around'
(Sq: Kuipers 1967:239)

b. men i7xw na huyá7
just all rl leave
'They all left' (Sq)





c. s-s men kw'elh-at-as-wit i7xw txw7utsk
nom-3poss just pour-tr-3erg-pl all out
'They poured it all out' (Sq: Kuipers 1967:239)

(116) shows that **i tákem-a** can also occur without an overt range. Notice that **i tákem-a** as an argument by itself is often marginal, in particular in (116c-d) which require a nominal to be interpreted as the main predicate. This in line with the dispreferred status of **i tákem-a** NP as compared with **tákem i-NP-a**:

116.a. ats'x-en-lhkan i- tákem-a
see- tr -1sg.sub det-all-det
'I saw all of them'

b. ít'em i tákem-a
sing pl.det all-det
'They all sang' (GN, RW 1739)

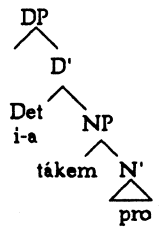
b. ? smúlhats i tákem-a
woman pl.det all-det
'They're all women' (GN, RW 839)

c. ? syáqtsa7 i tákem-a
woman pl.det all-det
'They're all women' (LT 2694)

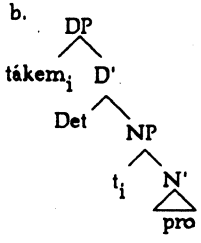
The quantified phrases in (116) and (114-5) have the following structures respectively:

117.

a.




b.




The above analysis of DPs containing **all** yields a three-way distinction which we now recapitulate because it is crucial to the discussion in the following sections. First, a DP containing prenominal **all** (as in (103) above) is not quantificational: it has a meaning close to 'the whole NP' where **all** is merely an adjectival (non-predicative) modifier. Second, operator movement of **all** within the DP creates the quantificational phrase **all the NP**, as shown in (106 or 113). This movement takes place at S-structure or at LF. Finally, when the QP inherits the distributive index of its operator, the QP is interpreted as distributed (as in **all the men** with the meaning **each man**); when the QP inherits the index of its range, we get a non-distributed interpretation (as in the collective/sum construal of **all the men** and **every man**).

## 7. The pre-predicate position

Now let us turn to the cases of quantifier float: where **all** (and its range) appears to the left of the predicate. The situation is illustrated below in (118) for St' (See also section 5).

118.a. tákem i-smúlhats-a qwatsáts
all pl.det-woman-det leave
'All the women left'

b. tákem qwatsáts i-smúlhats-a
all leave pl.det-woman-det
'All the women left'

c. * i-tákem-a smúlhats qwatsáts
pl.det-all-det woman leave
'All the women left'

d. * i-tákem-a qwatsáts (smúlhats)
pl.det-all-det leave woman
'All (the women) left'

To explain the above paradigm, we must answer the following three questions: 1) why is fronting of **all** (without or without its range) possible, 2) what is the landing site of this movement and 3) why is it impossible in (118c-d). The first question is particularly relevant in St' because NPs occur only marginally in sentence initial position in this language, whereas both Secw and Sq allow NPs to occur sentence-initially. Notice also that in (118b), the quantifier is fronted without its range. Finally, note that the only difference between the ill-formed (118c-d) and the well-formed (118a-b) is that the quantifier follows the determiner instead of preceding it; for a parallel contrast in Sq, compare (88-9) with (90).

### 7.1. Quantifier-float as Quantifier-raising (QR)

We propose that movement of **all** to a pre-predicate position is the result of Quantifier-raising (QR) at S-Structure. In particular, consider the St' examples in (118a-b). We have already argued that the order **tákem i-smúlhats-a** is derived by operator movement inside the DP of **tákem** to Spec DP,(following Reinhart 1987). Once the operator raises to an operator position inside the DP (as in (106) above), it can further raise all the way up to an operator position inside the clause. There are two canonical positions to which operators can raise to, at either S-Structure or LF: they can either land in Spec CP of the matrix clause (as in the case of wh-movement), or adjoin to IP (as in the case of topicalization or QR). For concreteness, we assume that **tákem** in say (118 a) adjoins at S-Structure to IP, as shown in (119):

119. $[_{IP}$ tákem$_i$ $[_{IP}$ qwatsats $[_{DP}$ $t_i$ $[_{NP}$ i-smúlhats-a]]]
all leave pl.det-woman-det
'All the women left'

In (120) (which is the S-Structure representation of the sentence in (118b), the quantifier has adjoined to IP at S-Structure, pied-piping its range:





120. $[[_{IP}$ tákem$_i$ $[_{DP}$ i-smúlhats-a] $[_{IP}$ qwatsats $t_i$ ]]
all pl.det-woman-det leave
'All the women left'

Thus, in (119-120), **tákem** occupies at S-Structure the position that a quantifier will eventually occupy at LF. The same analysis extends to Secw and Sq.[19]

This analysis explains why fronting of DET ALL NP is impossible in both St' and Sq (see (87, 118 c-d) and (90) respectively). Recall that **i-tákem-a smúlhats** has the structure given in (103) above where **tákem** is a modifier in prenominal position. Operator movement internal to the DP creates a quantificational phrase (with the further proviso that this DP will have a distributed construal only when it inherits the index of the operator in its specifier). Thus, the DP **i-tákem-a (smúlhats)** does not have the syntactic status of a QP. It is not quantificational because it does not contain a Q in an operator position, but merely a prenominal adjectival modifier. Then, raising of **i-tákem-a (smúlhats)** at S-Structure in (118c-d) is impossible because QR is restricted to QPs. In other words, **all** cannot raise to an operator position within the clause at S-Structure unless it has first raised to an operator position within the DP at S-Structure.

Further support for analyzing quantifier float as QR is provided by the fact that this movement is clause bound. Compare the ill-formedness of (121a-b) with the well-formedness of (121c):

121.a. * tákem tsún-ts-as kw-s Mary kw-s ft'em i-smúlhats-a
all say-1sg.obj-3sg.conj det-nom Mary det-nom singpl.det-woman-det
'Mary told me that all the women sang' (RW, GN 1435)

b. * tákem i-púkw-a tsút-acw kw-s náq'w-ens-as (kw-s) Mary
all pl.det-book-det say-2sg.conj det-nom steal-tr-3erg (det-nom)Mary
'You told him that Mary stole all the books' (AA 2785)

c. stam' kw-s tsút-su kw-s úm'-en-acw ti sk'úk'wm'it-a
what det-nom say-2sg.poss det-nom give-tr-2sg.conj det child-det
'What did you say you gave the child?' (RW, GN, BF 155)

(121c) is an instance of long distance wh-movement which, like relativization, is not clause-bound. On the other hand, (121a-b) are ill-formed. We assume that their ungrammaticality derives from a general property of QR, namely that it is clause bound.

### 7.2. Q-movement vs. Focus-movement

Strictly speaking, QR is merely a rule that raises an operator to an operator position. Different types of operators can undergo this movement, as shown below. In (122a), a universal quantifier is raised at LF,

[19] There are two canonical operator positions (Spec CP and Adjunction to IP). There might be parametric variation with respect to the landing site of the operator. Thus, the presence of a determiner on the notional predicate in cases of **all**-fronting in Secw suggests that the quantifier is raised to Spec CP whereas the impossibility of a determiner on the predicate in St' suggests that the quantifier adjoins to IP.

whereas in (122b) a focussed NP is raised at LF. That focussed NPs undergo QR is supported by the fact that they trigger Weak Crossover effects, just as quantifiers do, as shown in (122c-d).[20]

122.a. Every girl left --> LF: [$_{IP}$ Every girl$_i$ [$_{IP}$ t$_i$ left ]
b. MAX left --> LF: [$_{IP}$ MAX$_i$ [$_{IP}$ t$_i$ left ]
c. *His$_i$ mother loves every man$_i$
d. *His$_i$ mother loves MAX$_i$

We have argued that quantifier float is QR at S-Structure. We will now show that some instances of S-Structure QR of **all** involve focus (parallel to (122b)), whereas others involve quantification (parallel to (122a)).

### 7.2.1. Evidence for Focus-movement

The clearest evidence for focus-movement comes from Secw, where there are various tests which distinguish a focus position from both an internal and an external topic position (see Gardiner 1993). In (123), **all** has been fronted along with its range to a focus position. The landing site of the quantified phrase is unambiguously a focus-position because the notional predicate is marked with a determiner and takes conjunctive morphology.

123. xwexwéyt re tutuwîwt ri7 re ts'úm-qs-n-s es
all det boys foc det kiss-nose-tr-3erg 3conj
'It's all the boys that she kissed' (Secw)

In Sq, fronted **i7xw** constructions are sometimes translated as clefted sentences, which have the semantics of focus, as shown in (124a). Further, the morphology on the verb in (124b) suggests that it has the structure of a cleft. Recall from Section 1.2.2, that relative clauses induce a special subject marking on the verb.

124. a. [i7xw melh ta stá7uxwlh] nilh [kwetsi tim'á-s(-t) kwetsi
all part det children cop det do.as-caus(-tr) det
s-nichim-min-t-m-s-wit tl'a T'it'kí7sten]
nom-speak-tr-tr-detr-3poss-pl obl/det T'it'kí7sten
'All the children it was, that did what they were told by T.' (Sq)

b. i7xw na huy'-s-t-an ta skw'elam
all rl eat-caus-tr-1sg.conj det berries
'I ate all the berries' (Sq)

As for St', it is not clear when (or whether) the quantified phrase is undergoing Q-movement or Focus-movement. In Secw and Sq, we can tease these two movements apart on the basis of their respective syntactic properties: Focus-movement patterns with wh-movement and clefting whereas Q-movement

[20] Lasnik and Stowell (1991) suggest that focussed NPs contain a covert quantifier with the meaning of **only**.





patterns with topicalisation, as shown below. (In section 8, we will see why this is the case). In the following sections, we will see that there are ways of teasing these two movement apart even in St'.

### 7.2.2. Evidence for Q-movement

Secw provides strong evidence for quantifier float as Q-movement. Gardiner (1993) argues that wh-phrases occupy a focus position since wh-questions have the syntax of clefts and both questions and clefts involve focussing an NP. In (125a), the fronted DP is in an external topic position, as can be seen from the fact that it precedes the wh-word. In (125b), the fronted phrase is in an internal topic position, as can be seen from the fact that it follows the wh-word. External topics occur to the left and internal topics occur to the right of the wh/focus position. Unlike wh-movement and focus constructions, neither of them trigger special morphology on the notional predicate.

125. a. xwexwéyt re tutuwíwt swéti7 k ts'úm-qs-n-s
all det boys who irr kiss-nose-tr-3erg
'All the boys, who did they kiss?' (Secw)

b. swéti7 xwexwéyt re tutuwíwt k ts'úmqs-n-s
who all det boys irr kiss-nose-tr-3erg
'Who did all the boys kiss?' (Secw)

In Section 8, we argue that the range of a quantifier must be a topic. Thus, the fact that the extracted DP lands in an external topic position in (125a), and in an internal topic position in (125b), provides strong support for deriving these sentences via Q-movement at S-Structure.

Further, recall that in Sq, there is a contrast between main clause subject marking and relative clause subject marking (see Section 1.2.2). Thus, (126) below contrast with the previous Sq example (124b) in one respect: (126) has main clause subject marking whereas (124b) has relative clause subject marking.

126. i7xw chen ta7l-t ta skwxwu7mesh snichim
all I learn-tr det squamish words
'I learnt all the Squamish words' (Sq)

The contrast between (124b) which has a clefted structure and (126) which has a dislocated structure supports our claim that extraction of **all** is either focus-movement (124b) or Q-movement (126).

We now turn to semantic evidence for analyzing certain instances of extraction of **all** (with or without its range NP) as Q-movement. Consider the following example from St', where the possessive pronoun is construed as a bound variable:

127.a. tákem t'u7 swat ts'um'-qs-án'-it-as i-skicez7-í-ha
all part who lick nose-tr-3pl-3erg pl.det-mother-**3pl.poss**-det
'They all kissed their (respective) mothers' (AA 2657)

b. tákem i-stsmál't-a ts'um'-qs-án'-it-as i-skicez7-í-ha
all pl.det-child-det lick nose-tr-3pl-3erg pl.det-mother-**3pl.poss**-det
'All the children kissed their (respective) mothers.' (AA 2657)

The bound variable interpretation of the pronoun in (127) is not possible unless the quantifier distributes over the members of the set of individuals specified by its range (the set of children). As we shall see in section (8), the strong quantificational reading of a QP (that is, its distributed reading) is incompatible with focus; more precisely, the strong quantificational reading requires the quantifier to bind a topic. Thus, (127) unambiguously involves Q-movement.

The bound variable interpretation in (127b) resulting from Q-movement of the quantifier is represented below; note that the possessive pronoun is under the scope of a DP which has inherited the distribution index of the operator in its specifier.

127.c [ $_{IP}$ [$_{DPi}$ tákem$_i$ [$_{NPj}$ i-stsmál't-a ]] [ $_{IP}$ ts'um'-qs-an'-it-as [$_{DP}$ i-skicez7-i$_j$ -ha ]]
all pl.det-child-det lick nose-tr-3pl-3erg pl.det-mother-**3pl.poss**-det
'All the children kissed their (respective) mothers.' (AA 2657)

Further support for this analysis comes from the interaction of post-verbal **tákem** with wh-movement. The question in (128) allows either the individual answer in (129a) or the pair list answer in (129b).

128. stam ku um'n-it-as tákem i-stsmál't-a
what det buy-tr-pl-3erg all det-child-det\
'What did all the children give him? (AA 2651)

129.a. um'n-it-as i-sqláw-a
buy-tr-pl-3erg pl.det-money-det
'They gave him money' (AA 2651)

b. um'n-it-as s-Taylor ti-púkw-a, Susan ti-metslák7-a múta7
buy-tr-pl-3erg nom-T det-book-det S det-pen-det and
s-Hamida ti-káo-ha
nom-H det-car-det
'Taylor gave him a book, Susan a pen and Hamida a car' (AA 2651)

However, a distributive reading is also fine without **tákem** in (128). This is predictable because the quantifier's range NP is (must be) plural, and a plural NP always allows a distributive reading itself, as seen in the English sentence **The men left.** This sentence has two readings: each man left separately, or the men left collectively as a group. Thus, a distributive reading in (128) is possible with or without **tákem** as long as the post-verbal DP is plural. In fact, our consultant prefers the distributive reading without **tákem** and the collective reading with **tákem**. It seems, therefore, that post-verbal **tákem** in the above example forces a collective reading. In contrast, in (127) with preverbal **tákem**, we clearly get a distributive reading.

Now, we cannot use wh/quantifier interaction to test whether pre-predicate **tákem** allows a strong quantificational reading because St' does not allow more then one constituent to be fronted to the left of the predicate. We can, however, test the interaction of wh-phrases with pre-predicate **all** in Secw because





there is no such restriction. When asked how to render the distributive reading, the consultant offered the external topic structure:

130. xwexwéyt re tutuwíwt swéti7 k ts'úm-qs-n-s
all det boys who irr kiss-nose-tr-3erg
'All the boys, who did they kiss?' (Secw)

In (130), the quantified phrase in the external topic position, preceding both the wh-phrase and the predicate. Further, (130) has a distributive reading; notice that this construal is reflected by the order of the quantifiers: the universal **xwexwéyt** precedes the indefinite **swéti7**. The syntactic position of this QP and its construal, thus, confirm our analysis of Quantifier-float as Q-movement.

Final evidence for this analysis comes from both St' and Sq. In the following examples, the preverbal NP cannot have a collective/sum interpretation since it is quantifying over times, its range is a temporal noun phrase.

131.a. i7xw skwayel kwis ne-s wá7ew wa mík'entsut
all day det-nom rl-3poss continue prog bathe
'He bathed every day ...' (Sq)

b. tákem t'u7 lh-wá7-an tawn, áts'x-en-lhkan i n-snek'wnúk'w7-a
all part det-prog-1sg.conj town see-tr-1sg.subj pl.det 1sg.poss-friends-det
'Every time I go to town, I see my friends/relatives' (RW, GN 2536)

## 8. Raising bare tákem vs. raising [$_{DP}$ tákem NP] in St'

### 8.1. A restriction on quantification over the absolutive

A very intriguing property of quantifier floated constructions in St' is illustrated below:

132.a. t'aol-aon'-tán-em-wit tákem i-qwal'ímak-a
bite-tr-3pl.obj-pass-3pl all pl.det-mosquito-det
'They were bitten by all the mosquitos.' (LT 17-6-94)

b. tákem t'aolaon'itas i-qwal'imk-a
all bite-tr-3pl-3erg pl.det-mosquito-det
'Everyone bit the mosquitos.'
*'The mosquitos bit everyone.' (LT 17-6-94, RW 23-6-94)

Notice the difference in interpretation between (132a-b): in (a), we have a passive sentence where **tákem** has scope over the passive agent. Thus (132a), basically is equivalent to 'all the mosquitos bit them'. In contrast, this reading is impossible in (132b). In fact, the only possible reading is the pragmatically very odd reading in which everyone bites the mosquitos. Thus, it seems that when bare **tákem** is fronted, it can only have scope over the ergative argument. This restriction is confirmed by the following contrast:

133.a. * tákem áts'x-en-an i-ts'i7-a
all see-tr-1sg.conj det-deer-det
'I saw all the deer' (BF, RW 2752)

b. tákem áts'x-en-tsál-it-as i-sqáycw-a
all see-tr-1sg.obj-3pl-3erg det-men-det
'All the men saw us' (LT 2602)

We propose that the ungrammaticality of (133a) and of the reading in (132b) where the quantifier is trying to have scope over the absolutive is the result of the incompatibility between strong quantification and focus. To see why, consider the following pair of sentences where the position of the quantifier (subject vs. object position) determines the possible readings of the sentence:[21]

134. a. Who did every kid talk to?
b. Who talked to every kid ?

As is well-known (134a) is ambiguous: it allows an individual answer (i.e. **Rex**) or a pair list answer (i.e. **Rex talked to Max, Dobbie talked to Sam...**). In contrast, (134b) is unambiguous: it only allows the individual answer (i.e. **Rex**). Erteschik-Shir (1993) argues that the distributive reading is only available when the quantifier quantifies over a topic. Now, in the unmarked case, the subject of a sentence can be identified with the topic and the VP with the focus. In (134a), the quantified NP is in subject position and, thus, its range ('kid') can be interpreted as the topic of the sentence. The list answer to (134a) is possible precisely because the quantifier binds a topic.[22] In contrast, when the quantified NP is focussed (by assigning stress to it), the list answer is no longer available. Thus, the only possible answer to (134c) is the individual answer (i.e. **Rex**):

134. c. Who did EVERYONE talk to?

Likewise, in (134b), the distributive reading is excluded because the quantifier does not bind a topic. That is, the quantified NP is the internal argument of the verb, and therefore within VP, the domain of focus. The strong quantificational reading of the quantified NP would require interpreting the object as a topic and thus violating the canonical mapping of subject to topic.

Note that the correlation between quantifiers and topics (and definite NPs in general) is well established in the literature (see Berman 1991, Diesing 1992, Milsark 1974 among others). Topics are presuppositional (since their referent has been previously introduced in the discourse). Likewise, QPs are also presuppositional: **every man** presupposes the existence of the set that the quantifier **every** ranges over (i.e. the existence of a set of men). So, for instance, strong quantifiers are excluded from existential

[21] See Erteschik-Shir (1993) for a discussion of this paradigm and, more generally, of how topic/focus structure determines the different interpretation of quantifiers (collective vs. (semi-)distributive readings).

[22] For Erteschik-Shir (see pages 246-7), the collective reading of the quantifier is possible because the NP it binds can, but need not, be interpreted as a topic. Thus, (134a) has two possible topic/focus structures:
i. Who$_i$ did everyone [talk to t$_i$ ]$_{Foc}$
ii. Who$_i$ did [everyone talk to t$_i$ ]$_{Foc}$
When it is interpreted as a topic, as in (i), the list answer ensues. When it is not the topic but part of the domain of focus, the individual answer is the only one possible. The list answer is not possible in (134b) in the text because the quantifier in object position is necessarily part of the domain of focus.





sentences, just like specific (presuppositional) NP; this was illustrated in (2b) for Straits[23]. Thus, the restriction of the quantifier represents the presupposition of existence induced by the quantifier (see in particular Berman's (1991) motivation of QR in terms of 'Presupposition accommodation'). Thus, the unavailability of a strong quantificational reading (i.e. of the distributive reading in (134b-c)) when a quantified NP is focussed is not surprising: no restrictive clause defining the set that the quantifier ranges over can be formed, since there is no presupposition of existence when the NP is focussed.

With this in mind, let us return to the contrast in (133). Note that (in the unmarked case) the ergative argument generally corresponds to the topic of the sentence (see Kinkade 1989, Mathewson 1993, Roberts 1994, Davis this volume). In contrast, the absolutive argument is in the unmarked case, inside the domain of focus (VP) (see Davis this volume, Roberts 1994). We have argued that fronting of **tákem** is possible because the quantifier can be analysed as an operator that (quantifier-) raises out of the DP in which it was base-generated. Now, once **tákem** has raised out of its noun phrase and adjoined to IP at S-structure, the stranded DP must provide a range for the quantifier. This is possible only if the stranded DP is a topic. Thus, raising in (133a) is disallowed because the restriction of the quantifier, **i-ts'í7-a** (the set of deers), cannot be interpreted as the topic of the sentence since it is the internal argument of the verb, within the VP, the domain of focus. This is illustrated below.

135.a. * [$_{IP}$ tákem$_i$ [$_{IP}$ [$_{VP}$ áts'x-en-an t$_i$ i-ts'i7-a ]$_{Foc}$ ]]
all see-tr-1sg.conj det-deer-det
'I saw all the deer'

In contrast, QR in (133b) is allowed because the restriction of the quantifier can be interpreted as the topic of the sentence since it is the ergative (external) argument:

135.b. [$_{IP}$ tákem$_i$ [$_{IP}$ [$_{VP}$ áts'x-en-tsál-it-as ]$_{Foc}$ t$_i$ i-sqáycw-a ]]
all see-tr-1sg.obj-3pl-3erg det-men-det
'All the men saw us'

The same explanation carries over to the paradigm in (132). (132b) can only have the pragmatically very odd reading represented in (136a) below, where **i-qwal'ímak-a** is inside the VP, within the domain of focus, and the quantifier binds the ergative (null) argument (i.e. the topic). The reading in (136b) is excluded because **i-qwal'ímak-a** is interpreted as the subject (i.e. the topic), and the (null) range of the quantifier is within the domain of focus.

136.a. [$_{IP}$ tákem$_i$ [$_{IP}$ [$_{VP}$ t'aol-aon'-ít-as i-qwal'ímak-a]$_{Foc}$ [$_{DP}$ t$_i$ pro$_i$ ] ]]
all bite-tr-3pl-3sg.conj pl.det-mosquito
'Everyone bit the mosquitos'

b. * [$_{IP}$ tákem$_i$ [$_{IP}$ [$_{VP}$ t'aol-aon'-ít-as [$_{DP}$ t$_i$ pro$_i$ ] ]$_{Foc}$ i-qwal'ímak-a ]]
all bite-tr-3pl-3sg.conj. pl.det-mosquito
'The mosquitos bit everyone'

[23] This is also the case in Secw, Sq and St', see for instance the contrasts in (28) or (29), in section 2.

Note that since quantifier raising out of the ergative argument is allowed, the sentence in (132b) should also have the reading in (137):

137. * [$_{IP}$ tákem$_i$ [$_{IP}$ [$_{VP}$ t'aol-aon'-ít-as pro$_j$ ]$_{Foc}$ [$_{DP}$ t$_i$ [i-qwal'ímak-a ] ]]
all bite-tr-3pl-3sg.conj pl.det-mosquito
*'All the mosquitos bit them'

The reading in (132) where the quantifier binds the ergative argument is not grammatical. Indeed, this reading can only be elicited as the passive in (132a). The ungrammaticality of (137) is a reflex of Gerdts' (1988) One-Nominal Interpretation effect: there is a strong preference for interpreting a single overt argument as an object (and not as a subject). As argued by Roberts (1994), the One-Nominal Interpretation effect is due to the interaction of two syntactic properties: 1) the canonical mapping of focus (or predication) onto the VP and topic (of the predication) outside the VP, and 2) the anaphoric (i.e. bound variable) status of pronominal arguments: not only is their reference presupposed in the discourse, but they can never refer independently (that is, be used deictically). These two properties conspire to force the pronominal argument (in a transitive sentence with a single overt NP) to be linked to the topic and the lexical argument to be inside the VP, since overt arguments introduce new information and VP represents the predication (the new information) of the sentence. (See in particular Davis (this volume) for a discussion of the One-Nominal Interpretation in terms of the mapping of discourse functions onto syntactic structure). Thus, the readings in (136b) and (137) are ungrammatical for two reasons: the single overt NP must be inside the domain of focus and the range of the quantifier cannot be within the domain of focus.

Now this restriction on which argument (ergative vs. absolutive) **tákem** can bind disappears when its range is not stranded (in a post-predicate position), as shown below:

138. [$_{IP}$ [ tákem i-sq'wél-a] $_i$ [$_{IP}$ [$_{VP}$ ts'áqw-an'-an t$_i$ ]$_{Foc}$ ]]
all det-berries-det eat-tr-1sg.conj.
'I ate all the berries' (RW 2121)

In (138), the quantifier can bind the absolutive argument precisely because the quantifier and its range have both been raised out of the domain of focus at S-structure. The above structure is well-formed; the restriction of the quantifier is a topic (i.e. is not inside the VP).

Recall, however, that we argued that quantifier float could be analysed as either Q-movement or Focus-movement. The above contrast between extraction of **tákem** with its range and extraction of **tákem** without its range leads us to the following conclusion: extraction of the whole DP can be analysed as either Q-movement or Focus-movement, since there is no restriction on the range of the quantifier. In contrast, extraction of a bare quantifier is unambiguously an instance of Q-movement, since there is a restriction on which argument can serve as its range. Floated bare **tákem** cannot be construed with the absolutive argument because quantifiers quantify over topics, and the absolutive argument must remain VP-internal





- else the One-Nominal Interpretation is violated. Section 9, where we examine the distribution of the topical object marker **tali**, will provide further support for this analysis.

Note that this state of affairs is not unexpected since when we extract **tákem** and its range, we are extracting a whole DP. The latter can be construed referentially (as a sum of individuals) or quantificationally (as a set). The only claim we are making is that the quantificational/set reading entails that the QP is in a topic position. On the other hand, extraction of bare **tákem** at S-structure is unambiguously Q-movement because it yields precisely the structure of a quantificational sentence at LF. In particular, for Heim (1987) and Reinhart (1987), a quantifier must QR out of its NP in order to bind any variable in its restriction and in its scope (i.e.[$_{IP}$ Every x [$_{IP}$ [man (x) [x is a fool]]]).

We have derived the restriction on the range of fronted bare **tákem** from the requirement that a quantifier bind a topic (since the Q presupposes the set over which it ranges). This restriction, however, is surprising in so far as Gerdts (1988) uncovered the reverse restriction in Halkomelem. In particular, she argues that in sentences with two overt nominals, fronted bare **all** cannot have scope over the ergative (Gerdts 1988: 78-ff). Interestingly, the preferred word order in Halkomelem is VSO, although word order is not fixed for some speakers (Gerdts 1988: 42). Since an object must be base-generated as the internal argument the verb (as a sister to V, directly theta-marked by V), VSO must be derived from VOS by scrambling of the object outside the VP (i.e [$_{VP}$ VOS] > [$_{VP}$ V t$_i$ S] O$_i$ ]). This suggests that deriving word order is is the key to explaining why Halkomelem does not allow the ergative to serve as the range of fronted bare **all**: the scrambled object is outside the domain of focus (VP), whereas the ergative is stranded within the VP. We, thus, conjecture that the absolutive restriction in Halkomelem, is also derivable from the requirement that a quantifier bind a topic[24].

Note that in St', there appears to be no restriction on the range of floated **tákem** in transitives sentences with two overt nominals. We have found examples in our data-base where the quantifier can have scope over either the ergative or the absolutive (see (86b), Section 7). Thus, it seems that in sentences with two overt nominals, either NP could be scrambled out of the VP to serve as the range of the quantifier (or remain VP-internal)[25]. As the ungrammaticality of (137) clearly illustrated, the absolutive restriction only holds in transitive sentences where a single overt NP is forced to remain within the domain of focus (must be interpreted as the object, in conformity with the One-Nominal-Interpretation effect).

Finally, notice that when **tákem** occurs in a post-predicate position, there is no restriction on which arguments it binds. Thus, in (139), **tákem** is linked to the absolutive argument:

24 It is notable that Chung (1990) analyses Chamorro as VOS. She derives VSO order by lowering S into the VP. In Chamorro, like Halkomelem there is a ban on the extraction of ergative quantifiers.

25 Sentences with two overt nominals in St' must be checked more systematically in order to understand their topic/focus structure with and without quantification. In particular, it is not clear why they are marked sentences in the first place (see Davis (this volume) for a discussion of precisely this point).

139. a. áts'x-en-lhkan i- tákem-a sqaycw
see- tr -1sg.sub det-all-det men
'I saw all the men'

b. áts'x-en-lhkan tákem i-sqáycw-a
see-tr all det-men-det
'I saw all the men'

There is no restriction on the range of **tákem** in the above sentences because nothing prohibits a QP from remaining within the domain of focus (VP) at both S-structure and LF.[26] We predict, however, that the collective/sum construal of the QP will be strongly preferred, as in English (see the discussion of the paradigm in (134) above): the distributed/set construal will be possible only if the quantifier binds a topic, and this would violate the One-Nominal-Interpretation. We have not further tested this prediction but the data we have collected is consistent with it since all the readings that are clearly distributive involve Q-movement (see section 7). In particular, recall that when the absolutive argument was questioned as in (128) above, there was a preference for construing the plural ergative argument as distributed without **tákem** and as collective with **tákem**. Also, recall that when asked for a distributive reading, the consultant for Secw volunteered (130, repeated below) where the QP is in the external topic position.

130. xwexwéyt re tutuwíwt swéti7 k ts'úm-qs-n-s
all det boys who irr kiss-nose-tr-3erg
'All the boys, who did they kiss?' (Secw)

In the next section we provide further support for our analysis of bare **tákem** extraction as unambiguously Q-movement vs. extraction of [$_{DP}$ **tákem** NP] as either Q-movement or Focus-movement.

### 8.2 The topical object marker tali

Consider the following paradigm:

140.a. *tákem ats'x-en-táli ta-sqáycw-a i-ucwalmícw-a
all see-tr-TO det-man-det pl.det-person-det
'All the people saw the man.' (LT 2453)

b. T'ak tu7 káti7 ti-nk'yáp-a. Tákem i-sqáy-qeycw-a ats'x-en-táli
go def.past deic det-coyote-det all pl.det-man-redup-det see-tr-TO
'The coyote was going along and all the men saw him.' (RW 2882)

As we see in (140a), the topical object marker (discussed in Section 1.2.1) is illicit on the main predicate when bare **tákem** is fronted to a sentence initial position[27]. In contrast, we see that in (140b), where

[26] Recall also, that under our analysis in Section 6, **tákem** in **i-tákem-a sqáycw** is merely a pre-nominal modifier. In particular, it is not an operator in (139a) since it has not raised to an operator position (neither is it raised to Spec DP, nor is it adjoined to IP).

[27] Note that the quantifier in (140a) cannot be construed with **ta-sqáycw-a** because this NP is singular. Also, (140a) cannot mean 'The man saw all the people', with would require construing the sentence as VSO. For another example, parallel to (140b), see (93b) in section 5.





**tákem** has pied-piped its range, **tali** is licit on the main predicate. Why is **tali** incompatible with bare **tákem** extraction? Recall that **tali** appears on the predicate in St' only in sentences where ergative extraction has occurred. In particular, it occurs when the ergative argument is either questioned or relativized, as in (141).

141.a. swat ku tsuw'-n-táli ti-sqáycw-a
who det kick-tr-TO det-man-det
'Who kicked the man?' (RW, GN 1602)

b. ti-sqáycw-a tsuw'-n-táli ta-k'ét'h-a
det-man-det det-kick-tr-TO det-rock-det
'the man who kicked the rock'

Question formation and relativisation are syntactic processes that both involve focussing of an NP: the wh-phrase in (141a) is the focus of the sentence (since the purpose of a question is to seek new information). Likewise in the relative clause in (141b), the head noun **ti-sqáycw-a** is the focus (the new information) with respect to the subordinate predication **tsuw'-n-táli** (which is old information). Thus, as argued by Roberts (1994), **tali** appears on the predicate when the ergative is focussed (See in particular Davis (this volume) for an analysis of **tali** and its effect on the mapping of discourse functions onto syntactic structure).

Let us go back to the paradigm in (140). Since **tali** appears when the ergative is focussed, then the pre-verbal constituent [$_{DP}$ **tákem** NP] must be the focus of the second sentence in (140b) (note that the coyote was introduced in the first sentence of this stretch of discourse and is referenced by a pronominal in the the second sentence). Now, recall that there are two alternative analyses of [$_{DP}$ **tákem** NP] in sentence initial position: Q-movement as in (142a), or focus movement as in (142b):

142.a. [$_{IP}$ [$_{DPi}$ tákem i-sqáy-qeycw-a]$_{Top}$ [$_{IP}$ ats'x-en- as $t_i$ ]]
all pl.det-man-redup-det see-tr-3erg
'All the men saw him'

b. [$_{IP}$ [$_{DPi}$ tákem i-sqáy-qeycw-a]$_{Foc}$ [$_{IP}$ ats'x-en-táli $t_i$ ]]
all pl.det-man-redup-det see-tr-TO
'All the men saw him'

Since **tali** signals that the ergative is focussed, then (140b) must be derived via focus-movement, as in (142b). Recall, that focussing constrains the range of interpretations of a QP. Thus, in (143a), focussing the QP (by assigning stress to it) eliminates the distributed construal (only an individual answer is possible.

143. a. Who do ALL THE KIDS love?
b. A policeman [ arrested all the students ]$_{Foc}$

Likewise in (143b), where the QP is within the domain of focus, the distributed reading in which the QP has scope over the subject is impossible to get. This sentence cannot mean 'For every x (x a student), there is a y (y a policeman), such that y arrested x' (see Erteschik-Shir 1993) .

Notice that we have now two ways of unambiguously identifying the type of movement involved: 1) the presence of **tali** signals that the fronted (ergative) argument is the focus, and 2) the interpretation of the fronted constituent: the strong quantificational/distributed construal entails Q-movement.

Let us now turn to the ungrammaticality of (140a): why is bare **tákem** extraction incompatible with **tali** ? Precisely because extraction of bare **tákem** is an instance of Q-movement (as argued in the previous section). So the ungrammatical (140a) must have the following representation:

144. *[IP [Q i tákem] [IP ats'x-en- táli ta-sqáycw-a [DPi ti [i-ucwalmícw-a]] ]]
all see-tr-TO det-man-det pl.det-person-det
'All the people saw the man'

In (144), the fronted Q must have a range.[28] Further the argument that defines its range must be a topic, as was illustrated in (135) repeated below:

135.a. * [IP tákemi [IP [VP áts'x-en-an ti i-ts'i7-a]Foc ]
all see-tr-1sg.conj det-dear-det
'I saw all the deer' (BF, RW 2752)

b. [IP tákemi [IP [VP áts'x-en-tsál-it-as]Foc ti i-sqáycw-a ]
all see-tr-1sg.obj-3pl-3erg det-men-det
'All the men saw us' (LT 2602)

If extraction of **tákem** is an instance of Q-movement, the incompatibility of **tali** with bare **tákem** extraction, in say (144), comes as no surprise: **tali** requires the ergative to be focussed, whereas QR of **tákem** requires the ergative to be a topic.

Finally, consider the following example, which contrasts with (140a) in two respects: 1) fronted bare **tákem** does not have an overt range, and 2) **tali** is marked on the verb:

145. T'ak tu7 káti7 ti-nk'yáp-a. Tákem ats'x-en-táli
go def.past deic det-coyote-det all see-tr-TO
i-ucwalmícw-a.
pl.det-person-det
'A coyote was going along. *All the people saw it / Everyone saw the people.

Now, notice that the second sentence is grammatical this time with **tali** [29]. We cannot tell wether or not the range of the quantifier has been stranded in its base-position because the range is null. However, since the sentence is grammatical with **tali**, we know that (145) is not an instance of Q-movement. Recall also, from section 8.1, that fronting of a bare Q with an overtly stranded range must involve Q-movement. Then (145) must be movement of a whole DP with a null head (pro). That is, **tali** is allowed on the main predicate because (145) can be analysed as focus-movement of a DP:

[28] A quantifier must bind something, vacuous quantification is prohibited.

[29] Notice that the only reading it can have is very odd given the context of the previous sentence; this is again a One-Nominal-Interpretation effect: the single overt nominal must be construed as the object.





146. [IP [DPi tákem pro ]Foc [IP ats'x-en-táli i-ucwalmícw-a ti ]]
all see-tr-TO pl.det-person-det
'Everyone saw the people.' (LT 2701)

In contrast, **tali** was not licensed in (140a) because this sentence is unambiguously an instance of bare Q-movement at S-Structure, as shown in (144). This analysis is nicely corroborated by the following contrast:

147. a. * [IP tákemi [IP [VP áts'x-en-an ti i-ts'i7-a]Foc ]]
all see-tr-1sg.conj det-dear-det
'I saw all the deer' (BF, RW 2752)

b. tákem áts'x-en-as
all see-tr-3sg.conj
'He saw everything' (RW, GN 2526)

As was discussed in section 8.1 , when bare **tákem** is extracted in a transitive sentence with a single overt NP, it can only be construed with the ergative argument. Then why can **tákem** be construed with the absolutive argument when it has no overt range, as in (147b)? The answer is the same as the one just given to explain (145). Extraction of **tákem** without an overt range is ambiguous: it can be analyzed as movement of a DP with a null head (pro) or as movement of a bare Q, with a stranded null range. However, we know that (147) cannot be Q-movement since there is no restriction on the construal of the quantifier.

To recapitulate, the claim that extraction of **tákem** with no overt range is focus-movement of a DP with a null head explains the presence of **tali** on the predicate in (148a-b) (**tali** appears when the ergative is focussed), and why the focussed DP can be construed as the absolutive argument in (148c).

148.a. [IP [DP tákem pro ]Foc [IP ats'x-en-táli ]]
all see-tr-TO
'Everyone saw it/her/him' (RW, GN 2527)

b. [IP [DP tákem pro ]Foc [IP ats'x-en-táli i-ucwalmícw-a ]]
all see-tr-TO pl.det-person-det
'Everyone saw the people' (LT 2701)

c. [IP [DP tákem pro ]Foc [IP ats'x-en-as]]
all see-tr-3sg.conj
'He saw everything' (RW, GN 2526)

In contrast, extraction of **tákem**—when its range is overtly standed—is unambiguously Q-movement. This is why **tali** is impossible on the predicate in (149a vs. 149b) (**tali** requires the ergative to be focussed, whereas Q-movement requires the ergative to be a topic); and why **tákem** cannot be construed as the absolutive argument as in (149c) (the absolutive must remain within the domain of focus, cf. the One-Nominal Interpretation effect).

149.a.*[IP [Qi tákem] [IP [VP ats'x-en- táli [DPi ti [i-sqáy-qeycw-a]
all see-tr-TO pl.det-man-redup-det
'All the men saw him'

b. [IP [Qi tákem] [IP [VP ats'x-en- as [DPi ti [i-sqáy-qeycw-a]
all see-tr-3sg.conj pl.det-man-redup-det
'All the men saw him'

c. * [IP tákemi [IP [VP áts'x-en-an ti i-ts'i7-a]Foc ]
all see-tr-1sg.conj det-dear-det
'I saw all the deer' (BF, RW 2752)

## 8.3. The plural marker wit

Quantification in sentences with intransitive predicates further supports our analysis of **tákem** extraction with a null range. When **tákem**'s range is null and the quantifier precedes an intransitive predicate, the 3rd person plural marker **wit** is usually present. This is shown below: in (150a-b), we have a transitive predicate preceded by bare **tákem** (and no overt NP range in the sentence) whereas in (150c-e) we have an intransitive predicate preceded by **tákem-wit**. As the contrast between (150e-f) shows, although bare **tákem** is syntactically possible with an intransitive predicate, it is dispreferred.

150.a. tákem áts'x-en-as
all see-tr-3sg.conj
'He saw everything' (RW, GN 2526)

b. tákem ats'x-en-ít-as
all see-tr-3pl.-3sg.conj
'Everyone saw it' (RW, GN, LT 2612)

c. Cw7it i ucwalmícw-a. Tákem-wit syeqyáqtsa7.
many pl.det person-det all-3pl woman-redup
'There are many people. They are all women.' (AA 2775)

d. tákem-wit smelhmulhats
all-3pl. woman-redup.
'They are all woman' ( RW 2759)

e. tákem-wit qwatsáts
all-3pl leave
'They all left' (is a sentence) (AA 2805)

f. ? tákem qwatsáts
all leave
'They all left' (AA 2805)

Note that **wit** is ungrammatical when it co-occurs with a transitive predicate because plural is already marked on the predicate, as shown in (151):

151. * tákem-wit ats'x-en-ít-as
all-3pl see-tr-3pl-3erg
'Someone saw all of it' / 'They all saw anything' (RW 2946)





An interesting twist is that **wit** appears on **tákem** rather than on the main predicate. This is so because **wit** in St' is a second-position clitic which phonologically attaches to the first element in the sentence.

152 *tákem ít'em-wit
all sing-3pl
'Everyone sang' (AA 1542)

Whereas pronominal affixes that reference an argument on a predicate can freely cooccur with overt arguments, the plural marker **wit** cannot cooccur with a lexical argument. Thus, we analyse **wit** as a pronominal argument and not as an agreement marker. In other words, **wit** overtly specifies the pronominal range of the quantifier. Note that this range need not be overt when it is recoverable from the discourse context. Thus, if you set up a context where the range has already been introduced, **wit** is not required:

153. Cw7it i sts'úqwaz'-a. Tákem t'u7 zúmak.
many pl.det fish-det all part spring.salmon
'There's lots of fish. They're all zúmak.' (volunteered form) (LT 2726)

In the preceding section, we argued that extraction of **tákem** with no overt range in a transitive sentence can be analysed as movement of a DP with a null head *pro*, as in (154a). In intransitive sentences, the pronominal range of the quantifier is overt, as shown in (154b).

154.a. [IP [DPi tákem pro ] [IP ats'x-en-as ti ]]
all see-tr-3sg.conj
'He saw everything' (RW, GN 2526)

b. [IP [DPi tákem wit ] [IP qwatsáts ti ]]
all 3pl leave
'They all left' (AA 2805)

In both instances of (154) we are fronting a DP with a pronominal head: in (154b), the pronominal is overt whereas in (154a), the pronominal is null.

### 8.3.1. The plural marker wit in Sq

Sq also has the plural marker **wit** (it is restricted to human arguments, compare (155a-b) with (115) section 6.1). When **i7χw** is construed with the subject of an intransitive predicate, **wit** must be present as the following paradigm illustrates (note that the nominal is the main predicate since it does not have a determiner). Notice also that the particle **men** can rescue (155a), as in (155c); the reason for this is not clear though.

155 a. * i7χw slhenlhánay'
all women
'They're all women'

b. i7xw-wit slhenlhánay'
all-pl women
'they're all women'

c. men i7xw slhenlhánay'
just all women
'they're all women'

As was the case in St', **wit** does not co-occur with overt lexical arguments. Interestingly, however, **wit** is allowed in transitive clauses in Sq. Again, when **ixw** is present, then **wit** must attach to it[30].

156. a. chen ch'aw-at-wit
I help-tr-pl
'I helped them'

b. chen ch'aw-at i7xwixw-wit
I help-tr all.redup-pl
'I helped all of them'

Finally note that the plural marker in Sq is not confined to second position as in St'. It can attach to clitics (157a), to the main predicate (157b) and even to a demonstrative (157c)[31].

157. a. na-wit wa i7tut
rl-pl prog sleeping
'they're sleeping'

b. i7xw slhenlhánay'-wit
all women-pl
'they're all women'

c. chen kw'ach-nexw kwetsi-wit kwi chel'aklh
I see-tr dem-pl det yesterday
'I saw those ones yesterday'

Thus, Sq confirms our analysis of **tákem** with no overt range as the null headed DP [**tákem** pro]. When the pronominal range of the quantifier in Sq is human and plural, it is spelled out as **wit**, whether the predicate is transitive or intransitive.

## 9 Conclusion

We have argued that the syntax and semantics of **all** entails the existence of D-Quantification in (at least) three Salish languages. We first showed that **all** has neither the syntactic nor the semantic properties of an A-Quantifier: it is not an auxiliary or an adverb, and it is not an unselective binder. We then argued that **all** and the DP which defines its range form a single constituent. The distribution of **all** with respect to the determiner and its range is derived from a single base-structure. **All** is base-generated in the position of a prenominal modifier. If **all** remains in-situ, it gets a non-quantificational reading. However, since it has

30 Reduplication of **i7xw** is apparently optional for human plural referents, yet **wit** is not optional.
31 **wit** can co-occur with a lexical noun phrase when it is attached to a demonstrative. However, anaphora between a DP and a demonstrative is an instance of (left) Dislocation.





inherent quantificational force, it may raise to an operator position within the noun phrase -Spec DP (following Reinhart 1987). In instances where **all** occurs sentence-initially, we showed that it has been extracted. In particular, we argued, that once the quantifier has raised to an operator position within the noun phrase, it can further raise to an operator position within the clause, at S-Structure. That is, Quantifier raising or Focus movement of the entire DP may take place, or the quantifier itself can raise, thereby stranding its range. We correlate the position of the quantifier in the sentence with its interpretation: distributive/set construal vs. collective/sum construal of its range. Finally, we discuss restrictions on the range of the quantifier in St' and on its co-occurence with the topical object marker **-táli**. These restrictions are derived from the requirement that the range of a quantifier be a topic since it represents the presupposition of existence induced by the quantifier. If, as argued here, **all** is a D-Quantifier, then these languages have 'essentially quantificational' noun phrases. This claim, in turn, has significant consequences for the debate on the universality of lexical categories and for the typology of languages with respect to how they express quantificational notions.

## Appendix

### Key to St'át'imcets (van Eijk) orthography

| orthography | phonemic script | orthography | phonemic script |
|---|---|---|---|
| p | p | q'w | q̓ʷ |
| p' | p̓ | x | x |
| m | m | xw | xʷ |
| m' | m̓ | r | ɣ |
| t | t | r' | ɣ̓ |
| ts | c | g | ʕ |
| ts' | c̓ | g' | ʕ̓ |
| s | s | gw | ʕʷ |
| n | n | g'w | ʕ̓ʷ |
| n' | n̓ | h | h |
| t' | t̓ | w | w |
| lh | ɬ | w' | ẇ |
| l | l | y | y |
| l' | l̓ | y' | ẏ |
| k | k | z | z |
| k' | k̓ | z' | z̓ |
| kw | kʷ | 7 | ʔ |
| k'w | k̓ʷ | a | a |
| c | x | e | ə |
| cw | xʷ | i | ɨ |
| q | q | u | u |
| q' | q̓ | v | ʌ |
| qw | qʷ | | |





### Key to Squamish orthography:

| orthography | phonemic script | orthography | phonemic script |
|---|---|---|---|
| p | p | kw | kʷ |
| p' | p̓ | kw' | k̓ʷ |
| m | m | xw | xʷ |
| t | t | k̲ | q |
| t' | t' | k̲' | q̓ |
| ts | c | k̲w | qʷ |
| ts' | c̓ | k̲w' | q̓ʷ |
| ch | č | h | h |
| ch' | č' | w | w |
| s | s | y | y |
| sh | š | 7 | ʔ |
| tl' | ƛ̓ | a | a |
| lh | ɬ | e | ə |
| l | l | i | e |
| k | k | u | o |
| k' | k̓ | ' | . |
| | | x̲ | x̲ |
| | | x̲w | x̲ʷ |

**Key to Secwepemctsín orthography**

| orthography | phonemic script | orthography | phonemic script |
|---|---|---|---|
| p | p | q' | q̓ |
| p' | p̓ | qw | qʷ |
| m | m | q'w | q̓ʷ |
| m' | m̓ | x | χ |
| t | t | xw | χʷ |
| ts | c | r | ɣ |
| ts' | c̓ | r' | ɣ̓ |
| s | s | g | ʕ |
| n | n | gw | ʕʷ |
| n' | n̓ | g'w | ʕ̓ʷ |
| t' | t̓ | h | h |
| ll | ɬ | w | w |
| l | l | w' | w̓ |
| l' | l̓ | y | y |
| k | k | y' | y̓ |
| k' | k̓ | 7 | ʔ |
| kw | kʷ | a | a |
| k'w | k̓ʷ | e | ə |
| c | x | é | ɛ |
| cw | xʷ | i | ɪ |
| q | q | o | o |
| | | u | u |





**Abbreviations used**

| | | | |
|---|---|---|---|
| 1 | 1st person | mid | middle |
| 2 | 2nd person | N | nominative |
| 3 | 3rd person | nom | nominalizer |
| abs | absolutive | obj | object |
| A | accusative | part | particle |
| appl | applicative | pass | passive |
| caus | causative | pl | plural |
| compl | completive | poss | possessive |
| conj | conjunctive | prog | progressive |
| def.past | definite past | redup | reduplication |
| deic | deictic | refl | reflexive |
| dem | demonstrative | rl | realis |
| det | determiner | sing | singular |
| detr | detransitivizer | subj | subject (indicative) |
| erg | ergative | suff | suffix |
| foc | focus | TO | topical object |
| intr | intransitive | Top | topic marker |
| irr | irrealis | tr | transitive |

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