Not all there: The interactions of negation and universal quantifier *ʔuk̓ʷ* in ʔayʔaǰuθəm*

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Abstract: The current paper examines the ambiguity between negation and the universal quantifier *ʔuk̓ʷ* in ʔayʔaǰuθəm, a critically endangered Central Salish language. I argue that the ambiguity in ʔayʔaǰuθəm arises from the nonmaximal, exception-tolerating property of Salish *all*, instead of resorting to the scopal interaction between negation and the universal quantifier, as in English. Specifically, by assuming that negation in ʔayʔaǰuθəm is always interpreted with the maximal force, the ambiguity can be understood as originating from exceptions to this canonical interpretation. Whether or not this ambiguity is only available in ʔayʔaǰuθəm is still unclear, and further data elicitation and cross-Salish comparison are underway.

Keywords: ʔayʔaǰuθəm (Mainland Comox), semantics, ambiguities, negation, universal quantifier

1 Introduction

This paper presents a preliminary analysis of the semantic ambiguity involved in the combination of negation and the universal quantifier *ʔuk̓ʷ* in ʔayʔaǰuθəm, a critically endangered Central Salish language. The ambiguity between a negative element and a universal quantifier is also found in English. For example, consider the English paradigm in (1) from Carden (1976), where (1a) has only one reading while (1b) is ambiguous.

(1) a. Not all the boys will run.
$\neg(\forall x, \text{boy}(x), \text{run}(x))$

b. [All the boys] won't run.
i. $\neg(\forall x, \text{boy}(x), \text{run}(x))$
ii. $(\forall x, \text{boy}(x)), \neg(\text{run}(x))$

In the traditional account, with the readings in (1a) and (1b-i), negation takes higher scope than the quantified DP at LF. With the reading in (1b-ii), the subject DP *all the boys* is assumed to undergo Quantifier Raising (QR) and move outside the scope of negation at LF.

An example that is semantically similar to the English one in (1a) can be constructed in ʔayʔaǰuθəm, such as in (2) below. Note first that in (2), the subject

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čəyčuy 'kids' follows the predicate *ƛ̓əč̓təm* 'sleepy', reflecting the canonical VSO word order of the language. Note also that the universal quantifier *ʔuk̓^{w}* 'all' in this case does not immediately precede the subject DP *čəyčuy*, unlike its English counterpart. The syntax of *ʔuk̓^{w}* will be briefly discussed below, but for now let us focus on the semantics of (2).[1]

(2) **x^{w}aʔ ʔuk̓^{w}**=as ƛ̓əč̓t-əm čəy-čuy
NEG all=3.CNJ sleep-DSD PL-child
a. 'Not all the kids are sleepy.' (some of them are)
$\neg(\forall x, \text{kid}(x), \text{sleepy}(x))$
b. 'All the kids are not sleepy.' (none of them is)
$(\forall x, \text{kid}(x)), \neg(\text{sleepy}(x))$ [ʔayʔaǰuθəm]

The most interesting fact about (2) is that there is semantic ambiguity between the readings in (2a) and (2b). As a first pass, it seems that the ambiguity can be straightforwardly accounted for by optionally allowing the universally quantified subject DP to raise over the negator *x^{w}aʔ*. The ambiguities are then reduced to scopal interactions between negation and the universal quantifier. However, as I will show below, this account raises problems as QR is argued to be absent in Salish languages (Davis 2010). Therefore, quantifiers have to be interpreted *in-situ*. The goal of this paper is to develop an analysis that captures the ambiguity between negation and a universal quantifier without resorting to QR. To foreshadow the analysis to follow, the core argument laid out in this paper is that the universal-quantificational force is introduced by a covert (distributive) D-operator on the predicate, and that DP-adjoined *all* simply serves to select the appropriate implicatures that are already associated with DPs (Schwarzschild 1996). Adopting this assumption, ʔayʔaǰuθəm *ʔuk̓^{w}* differs from English *all* in that it tolerates more implicatures and therefore allows some "exceptions" in both positive and negative sentences, which leads to ambiguities.

This paper is organized as follows: In section 2, I present data from other Salish languages and provide more ʔayʔaǰuθəm data that further demonstrate the scopal interactions between quantifiers and negation. In section 3, I present core assumptions and a preliminary analysis. Finally, the last section concludes the study.

[1] Abbreviations used in this paper are as follows: A.INTR = active-intransitive; ASP = aspect; AUX = auxiliary; CAUS = causative; CLT = clitic; CNJ = conjunctive; CONJ = conjunction; CTR = control transitive; DET = determiner; DSD = desiderative; ERG = ergative; EXCL = exclusive; EXIS = existential; IMPF = imperfective; INDC = indicative; INTR = intransitive; IRR = irrealis; LINK = link particle; MDL = middle; NEG = negation; NMLZ = nominalizer; NTR = noncontrol transitive; OBL = oblique; PASS = passive; PERF = perfective; PL = plural; POSS = possessive; RED = reduplication; REM = remote in time; RFL = reflexive; RLT = relational; SG = singular; TR = transitive; YNQ = yes-no question enclitic. A hyphen (-) stands for an affix boundary, and an equal sign (=) for a clitic boundary.

2 The data from ʔayʔaǰuθəm and beyond

Before diving into ʔayʔaǰuθəm data, it is useful to survey similar examples from the other Salish languages. Examples (3), (4), and (5) include data from St'át'imcets (Northern Interior), Squamish (Central), and Secwepemctsín (Northern Interior), lifted from Matthewson (1998) and Demirdache et al. (1994). In all three languages, the interpretation of a sentence is contingent on scope relations between negation and a quantifier which are present at the S-structure (Matthewson 1998). For instance, (3a) shows negation taking higher scope than the universal quantifier at both S-structure and LF. However, in (3b) and (3c), the quantified subject DP escapes the scope of negation again at both S-structure and LF. In other words, LF preserves the scope relation from the S-structure. This results in a tendency for LF to be more transparently represented in the overt syntax in Salish languages than other languages, such as English.

(3) a. **cw7aoz** kw-s **tákem** i smelhmúlhats-a
NEG DET-NMLZ all PL.DET woman(RED)-EXIS
q'weláw'-em
pick.berries-INTR
'Not all of the women picked berries.' (some of the women did)
$\neg(\forall x, \text{woman}(x), \text{picked berries}(x))$

b. [**tákem** i smelhmúlhats-a]$_i$ **az'** t'u7 kw-s
all PL.DET woman(RED)-EXIS NEG just DET-NMLZ
q'weláw'-em t$_i$
pick.berries-INTR
'All the women didn't pick berries.' (none of them did)
$(\forall x, \text{woman}(x)), \neg(\text{pick berries}(x))$

c. [**tákem** i syeqyáqts7-a]$_i$ **ay** t'u7 kw-s
all PL.DET woman(RED)-EXIS NEG just DET-NMLZ
ts'aqw-an'-ítas [i mik'il-áw's-cen-a] t$_i$
eat-TR-3.PL.ERG PL.DET fish.oil-middle-foot-EXIS
'All the women did not eat the bannock.' (none of them did)
$(\forall x, \text{woman}(x)), \neg(\text{eat bannock}(x))$ [St'át'imcets; Matthewson (1998)]

(4) [**i7xw** ta sta7uxwlh]$_i$ **haw** k-as ya huyá7 t$_i$
all DET children not IRR-3.CNJ ASP leave
'All the children didn't leave.' (none of the children left)
$(\forall x, \text{child}(x)), \neg(\text{leave}(x))$ [Squamish; Demirdache et al. (1994)]

(5) a. **ta7** k s-qwetséts-s [**xwexwéyt** re stsmémelt]
NEG IRR NMLZ-leave-3.POSS all DET children
'Not all the children left.' (some children left)
$\neg(\forall x, \text{child}(x), \text{leave}(x))$

b. **ta7** k s-**xwexwéyt**-s re stsmémelt k s-qwetséts-s
NEG DET NMLZ-all-3.POSS DET children IRR NMLZ-leave-3.POSS
'Not all the children left.' (some children left)
$\neg(\forall x, \text{child}(x), \text{leave}(x))$

c. [**xwexwéyt** re stsmémelt]$_i$ **ta7** k s-qwetséts-s t$_i$
all DET children NEG IRR NMLZ-leave-3.POSS
'All the children didn't leave.' (none of the children left)
$(\forall x, \text{children}(x)), \neg(\text{leave}(x))$ [Secwepemctsín; Demirdache et al. (1994)]

The observation that scope relations at LF are mapped directly from S-structure does not seem to hold across all examples from in St'át'imcets or in the ʔayʔaǰuθəm data. For example, as noted by Matthewson (1998), some speakers of St'át'imcets allow quantified subjects to have higher scope than negation, even when the subject is clause-final at S-structure, as shown in (6) below. It is worth noting that, although (6) has two readings (6a) and (6b), it is not ambiguous for a given speaker: None of Matthewson's (1998) consultants allows ambiguity for (6), even though they may interpret it differently.

(6) **cwʔaoz** kw-s q'weláw'-em [**tákem** i
NEG DET-NMLZ pick.berries-INTR all PL.DET
smelhmúlhats-a]
woman(RED)-EXIS

a. 'None of the women picked berries.'
$(\forall x, \text{woman}(x)), \neg(\text{pick berries}(x))$

b. 'Not all of the women picked berries.'
$\neg(\forall x, \text{woman}(x), \text{picked berries}(x))$ [St'át'imcets; Matthewson (1998)]

Data from ʔayʔaǰuθəm show an even more interesting pattern. The sentences in (7) (=(2)) and (8) are ambiguous for my consultant, such that both (a) and (b) readings are available. Again, we see the interpretations containing scope relations not reflected at S-structure. Note also the flexibility with respect to the possible positions of *ʔuk̓^{w}*. With the crucial data laid out in this section, it is possible to form an analysis of the semantic ambiguity.

(7) a. **x^{w}aʔ** **ʔuk̓^{w}**=as x̌əč̓t-əm čəy-čuy
NEG all=3.CNJ sleep-DSD PL-child

b. **x^{w}aʔ** x̌əč̓t-əm=as **ʔuk̓^{w}** čəy-čuy
NEG sleep-DSD=3.CNJ all PL-child

i. ‘Not all the kids are sleepy.’ (some of them are)
$\neg(\forall x, \text{kid}(x), \text{sleepy}(x))$
ii. ‘All the kids are not sleepy.’ (none of them is)
$(\forall x, \text{kid}(x)), \neg(\text{sleepy}(x))$ [ʔayʔaǰuθəm]

(8) a. **xʷaʔ ʔuḵʷ**=as məkʷ-t-əm Tony ǰanxʷ
NEG all=3.CNJ eat-CTR-PASS Tony fish

b. **xʷaʔ** məkʷ-t-əm=as Tony **ʔuḵʷ** ǰanxʷ
NEG eat-CTR-PASS=3.CNJ Tony all fish
i. ‘Tony didnt eat all the fish.’ (he ate some)
$\neg(\forall x, \text{fish}(x), \text{eat}(x)(\text{Tony}))$
ii. ‘Tony didnt eat any fish.’ (he ate none)
$(\forall x, \text{fish}(x)), \neg(\text{eat}(x)(\text{Tony}))$ [ʔayʔaǰuθəm]

3 Toward an analysis

In this section, I attempt to account for the ambiguities reported above in the ʔayʔaǰuθəm data. This section proceeds in two parts. In the first part, the syntactic and semantic properties of the universal quantifier in Salish languages are presented, along with their key assumptions. In the second part, I show how the ambiguities as seen in (7) and (8) follow from these assumptions.

3.1 The absence of generalized quantifiers and Quantifier Raising in Salish languages

On first glance, it seems that the ambiguous scope relations between negation and the universal quantifier can be resolved if we assume, naïvely, that quantifiers in Salish languages behave exactly like their counterparts in English: They form a generalized quantifier (GQ) and then undergo QR. In this view, the ambiguities arise from whether QR carries the GQ containing the universal quantifier within or outside the scope of negation. However, this simple account does not hold water because, as argued by Davis (2010), there is evidence suggesting that Salish languages lack GQs and QR altogether.

Davis (2010) argues that Salish languages do not possess GQs, based on the observation that, in St’át’imcets, when both the subject and object DPs contain DP-adjoined strong quantifiers, they yield only cumulative readings; they do not yield distributive readings, which would be expected if DPs containing strong quantifiers behaved as GQs. Davis (2010) used the example in (9), with the quantifiers *tákəm* ‘all’ and *šaq̓ʷuɬ* ‘half’, to make this point.

(9) Context: Four children are meant to read four books over the summer holidays.

[**tákem** [ʔi=šk̓ʷəmk̓ʷúk̓ʷmiʔt=a]] paqʷal̓ikšt-mín-itaš [**šaq̓ʷuɬ**
all PL.DET=child(PL)=EXIS read-RLT-3.PL.ERG half

[ʔi=púkʷ=a]]
PL.DET=book=EXIS

'All the children read half the books.' [St'át'imcets; Davis (2010)]

Judged *good* in all situations where each child reads at least one of the books, and a total of two out of the four titles are read; *bad* otherwise.

Similarly, reversing the positions of the two quantifiers, as shown in (10), also produces just the accumulative reading.

(10) Context: Four children are meant to read four books over the summer holidays.

[**šaq̓ʷuɬ** [ʔi=šk̓ʷəmk̓ʷúk̓ʷmiʔt=a]] paqʷal̓ikšt-mín-itaš [**tákem**
half PL.DET=child(PL)=EXIS read-RLT-3.PL.ERG all

[ʔi=púkʷ=a]]
PL.DET=book=EXIS

'Half the children read all the books.' [St'át'imcets; Davis (2010)]

Judged *good* in all situations where exactly two of the children between them read a total of four titles; *bad* otherwise.

Based on this, Davis (2010) concludes that DPs containing *tákəm* 'all' or *šaq̓ʷuɬ* 'half', an inherently proportional quantifier, do not show the behavior expected of GQs. One prediction following the absence of GQs in Salish languages is that QR may be absent as well. Davis (2010) provides evidence that this prediction is correct by showing that Antecedent Contained Deletion in St'át'imcets is impossible, as in (11). This is a strong argument for Salish languages lacking QR, in addition to GQs.

(11) * xʷúz̓=łkan [$_{VP1}$ ʔáč̓χ-ən [tákəm
going.to=1.SG.INDC see-TR all PL.DET=movie=EXIS

[ʔi=píkčh=a plán=tuʔ [$_{VP2}$ _____] kʷ=š=Lisa]]
already=REM DET=NMLZ=Lisa

'I'm going to see all the movies that Lisa has.' [St'át'imcets; Davis (2010)]

3.2 D-type and A-type quantification in Salish

A characteristic of *ʔuk̓ʷ* that is immediately noticeable is its relatively flexible syntactic positions, as can be identified in (7) and (8). Following Davis (2013), I assume that *ʔuk̓ʷ* in different syntactic positions corresponds to distinct types of quantifiers, with the ones adjoining to DPs being the D-type (D stands roughly for "determiner") and the others the A-type (A stands for "adverb, auxiliary, affix, or argument adjuster"). The morphological and syntactic base for the opposition between D-type and A-type quantification in Salish is beyond the scope of the current paper; the interested reader is referred to Davis (2013). Specifically, I treat an *ʔuk̓ʷ* that precedes the predicate, as in (7a) and (8a), as the A-type quantifier and one that immediately precedes a DP, as in the case of (7b) and (8b), as the D-type quantifier.

Despite the fact that the Salish *all* might belong to distinct syntactic categories, depending on what syntactic constituent it adjoins to, D-type and A-type Salish quantifiers behave similarly semantically. Using data from St'át'imcets, Davis (2013) argues that adverbial *all* (i.e., the A-type) in Salish is invariably associated with the domain of entities, not with events or states, just like its adnominal counterpart. To demonstrate the exclusively entity-related reading associated with Salish *all*, consider the examples in (12).

(12) a. # takəm=ɬkán=x̓uʔ x̓alál
all=1.SG.INDC=EXCL tired
i. # 'All of me is tired!' (i.e., each part of me)
ii. * 'I'm completely exhausted.'

b. # takəm=ɬkáxʷ=ha čúkʷ-alč̓
all=2.SG.INDC=YNQ finish-food
i. # 'Has all of you finished eating?' (i.e., each part of you)
ii. * 'Have you completely finished eating?' [St'át'imcets; Davis (2013)]

In these cases, the pragmatically favored maximal event-related reading is consistently ruled out, and only the entity-related subpart reading is available, even if it is pragmatically implausible. Therefore we must conclude that the domain of *all* in Salish is restricted to entities, even when it occurs in adverbial positions.

Given that some occurrences of *all* in Salish fall into the adverbial category and that adverbials generally enjoy certain degree of freedom in terms of their syntactic positions, it seems plausible that one could account for the semantic ambiguities in (7) and (8) through LF movement of the adverbial *all*, either within or out of the scope of negation. In essence, instead of turning to QR, which is argued to be prohibited, LF movement of the adverbial *all* serves the same function, altering the scope relations between negation and quantifiers. Unfortunately, this step is not ideal either. The interpretation of scopal adverbials with negation also has to respect their relative order at S-structure, and therefore there are no

semantic ambiguities involved. Consider the examples in (13) from ʔayʔaǰuθəm, both containing the scopal adverbial *qəǰi* 'still'. It is clear now that the correct interpretations of sentences in (13) are sensitive to the relative positions of the adverbial *qəǰi* 'still' and the negator *xʷaʔ* 'not'.

(13) a. **xʷaʔ**=č **qəǰi**=an p̓ap̓-am
NEG=1.SG.INDC still=1.SG.CNJ work-MDL
'I'm not working any more.'

b. **qəǰi**=č=ʔut **xʷaʔ** p̓ap̓-am=an
still=1.SG.INDC=CLT NEG work-MDL=1.SG.CNJ
'I'm still not working.' [ʔayʔaǰuθəm]

If we allow adverbial *all* to optionally undergo LF movement in order to account for ambiguity, we cannot explain why sentences (13a) and (13b), which also have a scopal adverbial and negator, are not ambiguous. Therefore, I conclude that covert adverbial movement is not the solution to the semantic ambiguities in question.

3.3 The nonmaximal property of Salish *all*

Unlike English *all*, Salish *all* has a weaker effect on its domain, such that DPs quantified over by *all* readily tolerate exceptions, as shown in St'át'imcets and Halkomelem (Central) examples in (14) and (15) below (Davis 2013).

(14) a. **tákəm** ʔi=šk̓ʷəm.k̓ʷúk̓ʷmiʔt=a qʷačáč, x̌̓uʔ xʷʔaz
all PL.DET=children(PL)=EXIS leave but NEG
ta=páplʔ=a, xʷʔaz kʷ=ə=š
DET=one=EXIS NEG DET+NMLZ=IMPF=3.POSS
χáx̌̓-min̓-aš kʷ=ə=š ʔíʔwaʔ
want-RLT-3.ERG DET+NMLZ=IMPF=3.POSS go.along
'All the children left, but one didn't, he didn't want to go along.'

b. ? **tákəm** ʔi=šk̓ʷəm.k̓ʷúk̓ʷmiʔt=a qʷačáč, x̌̓uʔ xʷʔaz
all PL.DET=children(PL)=EXIS leave but NEG
ʔi=núkʷ=a, xʷʔaz kʷ=ə=š
DET=other=EXIS NEG DET+NMLZ=IMPF=3.POSS
χáx̌̓-min̓-ítaš kʷ=ə=š
want-RLT-3.PL.ERG DET+NMLZ=IMPF=3.POSS
ʔíʔwaʔ=wit
go.along=3.PL
'All the children left, but some didn't, they didn't want to go along.'

c. ?* **tákəm** ʔi=šk̓^{w}əm.k̓^{w}úk̓^{w}miʔt=a q^{w}ačáč, x̌̓uʔ x^{w}ʔaz̓
all PL.DET=children(PL)=EXIS leave but NEG

ʔi=x^{w}ʔít=a, x^{w}ʔaz̓ k^{w}=ə=š
DET=many=EXIS NEG DET+NMLZ=IMPF=3.POSS

χáx̌̓-min̓-ítaš k^{w}=ə=š
want-RLT-3.PL.ERG DET+NMLZ=IMPF=3.POSS

ʔíʔwaʔ=wit
go.along=3.PL

'All the children left, but many didn't, they didn't want to go along.'
[St'át'imcets; Davis (2013)]

(15) a. **mək̓^{w}** ʔəẁ-q̇^{w}əyiləš t^{θ}ə=məstiməx^{w} ʔiʔ yeẏsəl̓ə swaẁləs
all LINK-dance DET=people CONJ two.person boy

k^{w}θə=niʔ qəl-st-ənmət
DET=AUX bad-CAUS-NTR.RFL

'All the people danced but two boys who didn't want to.'

b. niʔ həliyeʔ **mək̓^{w}** k^{w}θə=swaẁləs ʔiʔ hay k^{w}θə=naṅəc̓aʔ
AUX leave all DET=boy CONJ only DET=one.person

qəl-st-ənmət
bad-CAUS-NTR.RFL

'All the boys left but only one who didn't want to.' [Halkomelem]

To explain this cross-linguistic difference requires a novel approach towards quantification. One such consideration concerns the source of universal-quantificational force. Instead of being introduced by the quantificational elements themselves, it is argued that universal quantification over the individuals in the subject position comes from a covert D-operator on the VP. The function of quantificational elements is simply to adjust the exact quantification domain, which is introduced by the D-operator (Schwarzschild 1996).

A crucial property of this new perspective is that this is a context-dependent domain selection variable, termed *Cov* (since the variable always takes the form of a cover of the universe of discourse) by Schwarzschild (1996), which always accompanies the D-operator. The definition of a cover is given in (16).

(16) *X* covers *Y* iff:
a. *X* is a set of nonempty subsets of *Y*
b. $\forall y \in Y \exists x \in X [y \in x]$

Applying this theory to an English example involving the universal quantifier *all* like (17a), the truth condition of this sentence now has a context-dependent Cov_i variable, as in (17b).

(17) a. All the children ^{D_i}left.

b. $\forall x[x \in [\![Cov_i]\!] \ \& \ x \subseteq [\![\textbf{the children}]\!] \rightarrow x \in [\![\textbf{left}]\!]]$

To illustrate this (for detailed discussion, see Brisson (2003)), consider a universe U and some possible covers of the set of singularities of U, which is given in (18).

(18) $U = \{a, b, c, s, t, \{a,b\}, \{a,c\}, \{a,s\}, \{a,t\}, \{a,s,t\}, \ldots\}$
$[\![\textbf{the children}]\!] = \{a,b,c\}$
$J = \{\{a\}, \{b\}, \{c\}, \{s,t\}\}$
$K = \{\{a\}, \{c\}, \{b,s,t\}\}$

Suppose the value J is assigned to Cov_i by the context in (17b). (17a) would be true because each child occupies a singleton set of the cover J assigned to Cov_i and thus each child is asserted to be in the extension of *left*. In this case, the J cover is called a "good-fitting" cover. In contrast, if the context assigns the value K to Cov_i, (17a) would be false because, in this case, the semantics in some sense does not care whether b left or not (since the set $\{b,s,t\}$ is not a subset of the set $\{a,b,c\}$, there is no cell containing b that satisfies the restriction of the quantifier), which does not correspond to how (17a) is interpreted in English. K is therefore called a "bad-fitting" cover in this scenario.

The approach described above allows for the comparison of English *all* and Salish *all*. While English *all* adjusts the domain and subsequently eliminates ill-fitting covers, thus ensuring that only a maximal interpretation of the plural DP surfaces, Salish *all* accommodates ill-fitting covers, allowing for a nonmaximal reading. This is the reason why *all*-adjoined DPs in English do not tolerate exceptions, but *all*-quantified DPs in Salish can easily tolerate exceptions (cf. (14) and (15)).

3.4 Negation and quantification in ʔayʔaǰuθəm

The patterns of negation show cross-linguistic variation across Salish languages (Davis 2005). As in many Central Salish languages, the basic pattern of negation in ʔayʔaǰuθəm involves a negator $x^wa?$ and a negated predicate, without any complementizer preceding the negated predicate. When the whole negative construction functions as a main clause, the negator $x^wa?$ hosts an indicative subject enclitic that agrees in person and number with a conjunctive subject suffix on the negated predicate, as illustrated in (19) below.

(19) a. x^{w}aʔ=**č** ʔaq̓-θi=**an**
NEG=1.SG.INDC chase-CTR+2.SG.OBJ=1.SG.CNJ
'I do not chase you.'

b. x^{w}aʔ=ʔut k̓əlt̓-aʔam-iyt=**as** ʔə=k^{w}=janx^{w}
NEG=CLT hook-A.INTR-PERF=3.CNJ OBL=DET=fish
'He did not hook any fish (with a fishhook).' [ʔayʔaǰuθəm; Watanabe 2003]

The syntactic category of the negator *x*^{w}*aʔ* and the exact clausal structures of the negative construction are still a subject of debate. Here I am only concerned about the semantic contribution of the negator; the reader interested in the syntactic aspects of the negative construction is referred to Davis (2005) and Wiltschko (2002).

The most important claim regarding the semantics of the negator *x*^{w}*aʔ* in ʔayʔaǰuθəm that I make (although I still need other language-internal as well as cross-Salish evidence to support this claim) is that, when universally quantified DPs fall within the scope of negation, negation effectively takes the complement of the set denoted by the universally quantified DPs. That is, the interpretation when negation takes scope over universal quantification is semantically equivalent when the universal quantification has higher scope than negation. This is illustrated in (20) (=(7a)). My claim asserts that, instead of the interpretation (20a), the canonical interpretation of (20) is actually (20b).

(20) **x^{w}aʔ ʔuk̓^{w}**=as ƛ̓əč̓t-əm čəy-čuy
NEG all=3.CNJ sleep-DSD PL-child
a. ‘Not all the kids are sleepy.’ (some of them are)
$\neg(\forall x, \text{kid}(x), \text{sleepy}(x))$
b. ‘All the kids are not sleepy.’ (none of them is)
$(\forall x, \text{kid}(x)), \neg(\text{sleepy}(x))$ [ʔayʔaǰuθəm]

The same rule of “maximal negativity” applies to all the examples in (7) and (8), repeated below as (21) and (22). According to this claim, the interpretations in (ii) should be taken as the standards.

(21) a. **x^{w}aʔ ʔuk̓^{w}**=as ƛ̓əč̓t-əm čəy-čuy
NEG all=3.CNJ sleep-DSD PL-child
b. **x^{w}aʔ** ƛ̓əč̓t-əm=as **ʔuk̓^{w}** čəy-čuy
NEG sleep-DSD=3.CNJ all PL-child
i. ‘Not all the kids are sleepy.’ (some of them are)
$\neg(\forall x, \text{kid}(x), \text{sleepy}(x))$
ii. ‘All the kids are not sleepy.’ (none of them is)
$(\forall x, \text{kid}(x)), \neg(\text{sleepy}(x))$ [ʔayʔaǰuθəm]

(22) a. **x^{w}aʔ ʔuk̓^{w}**=as mək^{w}-t-əm Tony ǰanx^{w}
NEG all=3.CNJ eat-CTR-PASS Tony fish
b. **x^{w}aʔ** mək^{w}-t-əm=as Tony **ʔuk̓^{w}** ǰanx^{w}
NEG eat-CTR-PASS=3.CNJ Tony all fish
i. ‘Tony didnt eat all the fish.’ (he ate some)
$\neg(\forall x, \text{fish}(x), \text{eat}(x)(\text{Tony}))$
ii. ‘Tony didnt eat any fish.’ (he ate none)
$(\forall x, \text{fish}(x)), \neg(\text{eat}(x)(\text{Tony}))$ [ʔayʔaǰuθəm]

If the interpretations in (ii) are canonical, the remaining question is how to account for the interpretations in (i) for the sentences above. The answer, I argue, lies in the nonmaximal nature of the universal quantifier in Salish. Recall from the discussion in section 3.3 that DPs quantified over by *all* readily tolerate exceptions in Salish. If exceptions can be tolerated in positive contexts, then they should also be tolerated in negative contexts. Using (20) from above again to illustrate, this means the sentence can be uttered even if there are some sleepy kids, which is essentially the truth condition of (20a). The same argument goes for the examples in (22): Sentences (22a) and (22b) are pragmatically felicitous even when Tony ate some fish, thanks to the nonmaximal nature of the universal quantifier *ʔuk̓ʷ*. Therefore the nonmaximal quantification property of Salish *all*, in conjunction with a special negation rule, gives rise to ambiguities for sentences containing both negative and universal-quantificational elements.

4 Conclusion

In this paper, I argue that, contra the ambiguity between negation and quantifiers in English, which results from the scopal interactions of negation with quantification, the similar ambiguity in ʔayʔaǰuθəm arises from the nonmaximal property of Salish *all*, together with the maximal negative force of the negator. Specifically, with the assumption that the interpretation equivalent to quantification over negation being canonical, the interpretation corresponding to negation taking scope over quantification originates from the fact that exceptions are tolerated with the canonical interpretation. While the current analysis accounts for the data seen so far, further data elicitation and analytical refinement are still needed to support this analysis.

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