Stalking the Adjective in St'át'imcets*

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This paper investigates the lexical category 'adjective' in St'át'imcets (Lillooet Salish). Strong syntactic evidence for the category is provided by argument modification: only nouns and adjectives, but not verbs, may act as direct (non-clausal) prenominal modifiers. Since a distinction between nouns and non-nominal predicates has previously been established for St'át'imcets, the result is a standard syntactic division between noun, verb, and adjective. This is only partially reflected by the morphology: many derivational processes are sensitive to adjectives, but the category has no inflectional reflexes. A comparison between St'át'imcets and its Interior Salish relatives Thompson and Okanagan shows that all three languages distinguish a category of adjectives, and that argument modification differences between St'átimcets and the other two languages exactly match parametric variation within Indo-European between Germanic and Romance. The conclusion is that not only is the category adjective widely instantiated in Interior Salish, but that its grammar reflects universal properties of modification.

KEYWORDS: St'át'imcets/Lillooet, Salish, syntax, adjectives, modification, lexical categories, relative clauses

1. Introduction.[1]

* This is the second of two companion articles on argument modification in St'át'imcets in NWJL; see Davis (2010) for the first, which deals with the syntax of relative clauses. The nucleus of the present article was a paper originally presented at the 37th International Conference on Salish and Neighboring Languages at Western Washington University, Bellingham in 2002. The occasion was notable because Dale Kinkade, and Eloise Jelinek, the two most eminent proponents of the category-neutral hypothesis for Salish, publicly recanted their position on the lack of a syntactic noun-verb distinction during the conference, thus effectively bringing to an end a debate that had lasted nearly a century. They were moved to do so in the face of increasingly convincing syntactic evidence for the noun-verb distinction from several Salish languages, including St'át'imcets (Demirdache and Matthewson 1995), Okanagan (Mattina 1996), Straits (Montler 2001, subsequently published as Montler 2003), and Lushootseed and Bella Coola (Beck 2002). However, this left the status of a third lexical category, adjective, still in limbo (although see Kinkade 2000 and Montler 2003). My (2002) paper was a first attempt to resolve this issue for St'át'imcets. Since its appearance, important research has been carried out on argument modification by Koch (2004, 2006) working on Thompson (River) Salish and by Lyon (2010) on Okanagan: the present paper has been updated to take their findings into account.

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1.1. Prolegomena: how to hunt for lexical categories.

Before beginning this investigation, I want to clarify what I mean by lexical categories in general, and how I intend to go about finding them.

The approach I am taking is syntax-driven. In practice, this means that a category is whatever emerges from a set of distributional tests, which must usually be constructed on a language-specific basis. If the results of the tests for an unfamiliar language pick out classes that correspond to the lexical categories of noun, verb, and adjective in more familiar languages (as seems to be overwhelmingly the case), this provides evidence that these categories are universal or near-universal. That, however, is a contingent (and therefore, empirically interesting) fact, not an a priori assumption.

It is also important to emphasize that the syntax-driven approach is strictly neutral with respect to the semantic basis of lexical categories. It may be that the categories which emerge from syntactic analysis are reducible to independently motivated semantic categories (with the emphasis here on 'independently motivated', to avoid circularity). But it is possible that syntactic categories merely approximate semantic categories, cross-cut them, or do not correspond to them at all. That is another empirical question: but one which is dependent on *first* elucidating categories from a purely syntactic perspective.

This approach may be contrasted with one that first attempts to provide an independent semantic definition for a lexical category (i.e. 'What *is* a noun/verb adjective?') and then to test whether this notional semantic category is actually instantiated in natural language. That may be a valid approach (though I have my doubts as to whether it is possible to provide definitions of this type), but it is not the one I am taking here.

Finally, with this kind of investigation, it is important to distinguish heuristic procedures from a priori assumptions. When examining syntactic categories in an unfamiliar language, the investigator does not begin by abandoning all prior knowledge of categories in familiar languages, any more than a detective solving a new crime would abandon years of experience gained from investigating old ones. On the contrary: prior acquaintance with other grammatical systems provides a set of provisional hypotheses which guide the investigation, but crucially do not determine its outcome. Given the pervasive presence of a noun-verb distinction in natural language, for example, it is reasonable to hypothesize its presence in an unfamiliar language as a heuristic procedure, without making any a priori commitment to its existence. In practice, this involves setting up provisional classes of 'notional nouns' and 'notional verbs', and then systematically testing their behavior across as wide a range of syntactic tests as possible. The results tell us whether and to what extent the original hypothesis is correct. This has already been a productive strategy in the investigation of the noun-verb distinction in Salish; I will adopt it here for the investigation of the third major lexical category, that of adjectives.

1.2. A brief history of the category adjective in Salish.

Compared to the long and celebrated debate in the Salish literature over the distinction between nouns and verbs, the status of the third major lexical category, adjectives, has received

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St'át'imc territory: a conversion chart to a standard North American phonemic alphabet is appended, together with a list of abbreviations used in the morpheme-by-morpheme glosses.

less attention until recently.[2] Often, it has been assumed on the basis of superficial syntactic criteria (the ability of notional adjectives to occupy main predicate position without the support of a copula, and the ability of notional verbs to – apparently – modify nouns directly) that adjectives form a subclass of intransitive verbs. Kinkade (2000:120), discussing Upper Chehalis nominal modifiers, is typical in this regard, baldly stating that adjectives 'are a subcategory of verbs'. Beck (2002:124) elaborates on the same claim for Lushootseed:

> This means that words expressing property concepts and words expressing actions, temporal relations, etc. – *i.e.*, all words expressing semantic predicates – form a unified lexical class whose unmarked syntactic distribution includes the role of syntactic predicate *and* the role of modifier.

Nevertheless, in their important paper on lexical category distinctions in Salish, Demirdache and Matthewson (1995) identify two environments in St'át'imcets (Lillooet) which they claim provide purely syntactic evidence not only for the noun-verb distinction, but also for a distinct lexical category of adjectives. The first of these involves modification in complex nominal predicates (CNPs), the second, modification inside argument DPs. Their findings with respect to these two environments are as follows.

Within CNPs, the final (head) element must be a noun, and all non-final (modifying) elements must be individual level adjectives, as shown in (1): (1a) contains a grammatical CNP with an adjectival modifier and a nominal head, whereas in the ungrammatical examples (1b) and (1c) the modifier and the head, respectively, are verbs:

(1) a. [*kwikws* *spzúza7*] na=7ats'x-en-án=a
[*small* *bird*] ABS.DET=see-TRA-1SG.ERG=EXIS
'A small bird was what I saw.'

b. * [*saq'w* spzúza7] na=7ats'x-en-án=a
[*fly* bird] ABS.DET=see-TRA-1SG.ERG=EXIS
'A flying bird was what I saw.'

c. * [kwikws *saq'w*] na=7ats'x-en-án=a
[small *fly*] ABS.DET=see-TRA-1SG.ERG=EXIS
'A small flying (thing) was what I saw.'

Within DPs, Demirdache and Matthewson show that only a noun may be modified, as shown in in (2), where the bracketed DP in (2a) has a nominal head, but those in the ungrammatical examples in (2b) and (2c) contain non-nominal heads.[3]

[2] It is usually assumed that prepositions in Salish are functional rather than lexical categories: they form a small closed class and may not generally act as main predicates.

[3] I have rephrased Demirdache and Matthewson's original generalization, which was couched specifically in terms of (the heads of) relative clauses. As we shall see, not all modification structures in St'át'imcets involve relative clauses.

(2) a. áts'x-en=lhkan [na=sáq'w=a *spzúza7*]
see-TRA-1SG.SU [ABS.DET=fly=EXIS *bird*]
'I saw a flying bird.'

b. * áts'x-en=lhkan [na=sáq'w=a *kwikws*]
see-TRA-1SG.SU [ABS.DET=fly=EXIS *small*]
'I saw a flying small (thing).'

c. * áts'x-en=lhkan [na=kwíkws=a *saq'w*]
see-TRA-1SG.SU [ABS.DET=small=EXIS *fly*]
'I saw a small flying (thing).'

In other words, according to Demirdache and Matthewson, CNPs yield a three-way lexical category distinction between nouns, adjectives, and verbs, while modification inside DP yields a two-way distinction between nouns on the one hand and verbs and adjectives on the other.

Subsequent work (Davis, Lai and Matthewson 1997 on St'át'imcets and Secwepemctsín (Shuswap), Davis and Matthewson 1999 on St'át'imcets, and Montler 2003 on Straits Salish) has refined Demirdache and Matthewson's original observations on CNPs. In particular, the claim that CNPs necessitate a three-way lexical category distinction has been shown to be too strong: while it is the case that CNPs always contain a final noun, non-final predicate modifiers may be either nominal or adjectival, as long as they are individual level rather than stage level. This is shown in (3)-(4) (adapted from Davis et al. 1997): the modifying element in the bracketed CNP in (3), *tsátawaz'* 'cedar tree', is clearly a noun, as evidenced by its ability to take a modifier in the bracketed DP in (4).

(3) [*tsátaw-az'* t'ak'wáml'acw] i=qwez-en-ítas=a
[*cedar-tree* root] PL.DET=use-TRA-3PL.ERG=EXIS
'What they used were cedar roots.'

(4) t'uts-q-án'-itas [ti=xzúm-alqw=a *tsátaw-az'*]
chop-bottom-TRA-3PL.ERG [DET=big-log=EXIS *cedar-tree*]
'They chopped down a big cedar tree.'

This finding undermines Demirdache and Matthewson's original argument for the lexical category 'adjective', since the CNP data constituted their sole positive evidence for distinguishing adjectives from the semantic class of individual level predicates. It *is* still possible to isolate a class of 'individual level adjectives', by intersecting the set of lexical heads which cannot be modified (i.e., non-nouns) with the set of possible CNP modifiers (i.e., individual level predicates), but this leaves stage level adjectives in limbo – or rather, treats them as a subset of intransitive verbs.[4] Furthermore, the label 'adjective' is now redundant,

[4] The claim that only projections of the lexical category 'noun' may be directly modified raises the question of adverbs, at least some of which are commonly regarded as direct modifiers of verbal projections in English. In St'át'imcets, this does *not* appear to be the case, however. Setting aside sentence-level adverbs, which form a closed class of invariant particle-like elements, the equivalents of English VP adverbs are either realized as adjunct clauses (most temporal modifiers), PPs or pro-PPs (locative modifiers), or main predicates (manner adverbs). The

since the distribution of lexical categories is fully accounted for by a binary categorial distinction between nouns and non-nouns, together with the independently necessary distinction between stage level and individual level predicates. Given that in St'át'imcets there are no necessary morphological cues which serve to distinguish a separate category of adjectives, it appears that the category may be dispensed with altogether, as concluded by Davis et al. (1997).[5]

However, there is one piece missing from the puzzle originally assembled by Demirdache and Matthewson. While they investigated the categorial status of both the head and its modifiers within CNPs, they only examined the category of the *head* in modification structures within DP. The reason for this was their assumption that all DP-internal modifiers were full relative clauses, and therefore of category CP.

It is this assumption that I question here. I argue that in fact there are two distinct modification structures in St'át'imcets DPs, and that only one of them is clausal. I then show that the conditions on non-clausal modification in DP are *nearly* identical to those which hold in CNPs. The difference, though is crucial: whereas modifiers in CNPs consist of individual level predicates, inside DP, non-clausal prenominal modifiers include stage level as well as individual level *adjectives*.

2. Clausal modifiers in St'át'imcets DPs.

In order to distinguish clausal from non-clausal modifiers, it is first necessary to review the major diagnostic properties of relative clauses in St'át'imcets. For reasons of space, the exposition here is abbreviated; for a comprehensive analysis, see Davis (2010).

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latter are in fact adjectives which either take the event they modify as a clausal argument (i), or are predicated of a subject with a temporal adjunct clause restriction (ii):

(i) xwem [kw=s=tsicw=s úxwal']
fast [DET=NOM=get.there=3POSS home]
'S/he got home fast.' (Literally: 'It was fast that s/he got home.')

(ii) stéxw=t'u7 pvmp [lhas q'ílhil]
really=EXCL fast [COMP+IMPF+3CNJ run]
'S/he runs really fast.' (Literally: 'S/he is really fast when s/he runs.')

A handful of 'manner adjectives' (including *xwem* 'quick, fast', for example, but not its near-synonym *pvmp* 'fast') can modify VP directly. Even these cannot occur as 'bare' modifiers, however, but must be introduced by a determiner, usually the non-assertion-of-existence determiner *ku=*, as in (iii):

(iii) wa7 xíl-em=wit ets7á kw=s=zwat-en-ítas swát=as ku=wá7
IMPF do-MID=3PL to.this DET=NOM= know-TRA-3PL.ERG who=3CNJ DET=IMPF
ka-xilh-tal'í-ha áti7 *ku=xwém*
CIRC-do(CAU)-NTS-CIRC to.that *DET=fast*
'They did this to find out who could do it the fastest.'

In other words, the syntax of 'adverbs' does not parallel that of adjectives very closely at all, even when they involve the same lexical items. In fact, it is doubtful whether we should even recognize a distinct class of adverbs, except as a label of convenience. Obviously, more work needs to be done in this area; see Arregui and Matthewson (2001) for a promising start.

[5] See Section 5 below for discussion of the morphological reflexes of the category adjective in St'át'imcets.

There are three major types of relative clause in St'át'imcets, referred to in Davis (2010) as *prenominal*, *postposed*, and *postnominal*.[6] They are exemplified below:

(5) a. *prenominal relative clause*

na=[[qwatsáts=a] smúlhats]
ABS.DET=[[leave=EXIS] woman]
'the woman who left'

b. *postposed relative clause*

na=[smúlhats=a [qwatsáts]]
ABS.DET=[woman=EXIS [leave]]
'the woman who left'

c. *postnominal relative clause*

na=[smúlhats=a [na=qwatsáts=a]]
ABS.DET=[woman=EXIS [DET=leave=EXIS]]
'the woman who left'

The three types display the same verbal morphology, but differ in word order and in the number of overt determiners, as summarized in Table 1 below.[7]

	position	number of overt determiners
prenominal	preceding head NP	one
postposed	following head NP	one
postnominal	following head NP	two

Table 1. Types of relative clause in St'át'imcets.

One of my principal claims here will be that non-clausal modifiers are confined to pre-head position. In order to make this argument go through, it will be necessary to show that (i) post-head modifiers are always clausal; and (ii) pre-head modifiers may be either clausal or non-clausal.

I will begin with the postnominal case, which is easily distinguished from the others by the fact that it has two determiners, one introducing the NP head, the second the clausal modifier.

As first shown in Davis (2004), these two determiners are not copies of each other, but have different sources: the first, 'external' determiner is sister to the whole NP constituent

[6] Of the three types, postnominal relatives are less commonly used than the other two, and are confined to speakers from the northern sector of St'át'imc territory, adjacent to Secwpemctsín (Shuswap) and Nɬeʔkepmxcín (Thompson) speaking areas, where relativization is canonically postnominal. See Davis (2010) and Section 6 below for discussion.

[7] The morphology of relative clauses in St'át'imcets is complex, but since most of the complexity concerns transitive verbs and is not directly relevant to the issues under discussion here, I set it aside: see Davis (2010) and references therein for details.

containing the relative clause, while the second 'internal' one is A'-moved within the relative clause to the left periphery of CP, and as such, is diagnostic of clausal modification. This structural difference predicts that the two determiners need not match, and this is indeed the case: *determiner mismatches* in postnominal relatives occur when different determiners are used to locate separate predication times for main and relative clauses. For example, in (6), the unmarked (present) determiner *ta=…=a* on the subject DP helps to locate the predication time of the main clause as present relative to the utterance time, while the absent determiner *na=…=a* on the relativized DP locates the predication time of the relative clause as past relative to the utterance time.

(6) *postnominal relative clause*

wa7	l=ts7a	*ta=*[smúlhats=a	[*na=*wá7	k'al'-em-mín-acw]][8]
be	at=here	*DET=*[woman=EXIS	[*ABS.DET=*IMPF	wait-MID-RED-2SG.ERG]]

'The woman you *were* waiting for *is* here.'

While determiner mismatches are not as obvious in 'single determiner' (prenominal and postposed) relatives as in 'double determiner' (postnominal) relatives, Davis (2010) argues that they can still be detected, because a single determiner can reflect the selectional properties of *either* its containing DP *or* the relative clause. Thus, in the prenominal and postposed relatives in (7), the determiner can either be present/unmarked *ta=…=a,* like the first determiner in (6), or past/absent *na=…=a,* like the second determiner in (6): when it is past/absent, the determiner signals a difference in predication times between the main and relative clauses, just as in (6).

(7) a. *prenominal relative clause*

wa7	l=ts7a	[*ta=/na=*wá7	k'al'-em-mín-acw]	smúlhats]
be	at=here	[*DET=/ABS.DET=*IMPF	wait-MID-RED-2SG.ERG]	woman]

'The woman you *are/were* waiting for *is* here.'

b. *postposed relative clause*

wa7	l=ts7a	[*ta=/na=*smúlhats=*a*	[wa7	k'al'-em-mín-acw]]
be	at=here	[*DET=/ABS.DET*=woman=*EXIS*	[IMPF	wait-MID-RED-2SG.ERG]]

'The woman you *are/were* waiting for *is* here.'

The relative clauses in (7) involve a transitive verb, but the same phenomenon can be readily observed with relatives containing 'bare' intransitive verbs, as shown in (8), from Davis (2010:22):

[8] The existential clitic *=a* which normally follows an 'assertion-of-existence' determiner such as *na=* 'absent' coalesces with the imperfective auxiliary *wa7*, as here and in (7a), to yield *na=wá7*.

(8) a. *prenominal intransitive relative clause*

plan t'iq [*t7u* [[*na*=qí-7-cw=*a*] ts'qáxa7]]
already arrive [*over.there* [[*ABS.DET*=bolt+INCH=*EXIS*] horse]]
'That horse over there that bolted has already returned.'

b. *postposed intransitive relative clause*

plan t'iq [*t7u* [[*na*=[ts'qáx7=*a* [qí-7-cw=tu7]]
already arrive [*over.there* [[*ABS.DET*=[horse=*EXIS* [bolt+INCH=DIST]]
'The horse over there that bolted has already returned.'

Just as in (7), the reference time of the main clause in these examples is the same as that of the utterance time, as shown by the presence of the demonstrative *t7u* 'that one over there', which denotes a referent visible to the speaker at the time of the utterance. But the reference time of the relative clause is past relative to the utterance time, due to the absent determiner *na*=…=*a*.

The property of *temporal independence* between the main and relative clause illustrated above gives us a diagnostic for separating clausal and non-clausal modifiers, because, as originally observed by Demirdache (1996), the predication time of stage-level NPs *not* containing relative clauses must co-vary with the predication time of the clause which contains them. For example, in the following example, the time at which the main predicate *sécsec* 'silly' holds must coincide with the time at which the subject was leader of the United States: both are located in the past relative to the utterance time, via the absent determiner *ni*=…=*a*.[9]

(9) sécsec [*ni*=kel7áqsten-s=a ti=USA=ha]
silly [*ABS.DET*=leader-3POSS=EXIS DET=USA=EXIS]
'The former leader of the USA *was* silly.' (Only at the time he was leader).

In order to express the proposition that the former leader of the USA is currently silly, a headless relative clause containing the aspectual auxiliary *wa7* must be employed instead:

(10) sécsec [*ni=wá7* kel7áqsten-s ti=USA=ha]
silly [*ABS.DET=IMPF* leader-3POSS DET=USA=EXIS]
'The former leader of the USA *is* silly.'

This shows us two things: first, the ability to denote an independent predication time is strictly confined to clauses in St'át'imcets; and second, aspectual auxiliaries such as *wa7* automatically project to clauses (and are therefore able to support their own predication times). The latter claim receives independent support from the fact that aspectual auxiliaries demonstrably occupy functional projections above the level of the 'small clause' (*v*P) consisting of a predicate and its arguments. For example, auxiliaries are generated outside the scope of the predicate nominalizer *s-*, which selects for *v*P:

[9] The absent determiner *ni*=…=*a* is the Lower dialect variant of Upper St'át'imcets *na*=…=*a* (just as the present/unmarked determiner *ti*=…=*a* is the Lower dialect variant of Upper St'át'imcets *ta*=…=*a*).

(11) áma ta=*wá7* [*s*-tsút*(-su)]
good DET=*IMPF* [*NOM*-say*(-2SG.POSS)]
'What you are saying is good.'

The possessive suffix *-su* on the nominalized predicate in (11) is obligatory, and marks the agent of the verb *tsut* 'say'. In contrast, on simple nouns, possessive affixes are optional, and never mark agents (Davis and Matthewson 1995). If predicate nominalizations are (small) clauses, it follows that aspectual auxiliaries must be introduced at the clausal level.[10]

We can now begin to tease apart unambiguously clausal modifiers from cases which are potentially ambiguous between clausal and non-clausal modification. To start with, since the second determiner in double determiner structures such as (6) always has a clause-internal source, postnominals are by definition clausal, and can be set aside. Furthermore, by the same logic, any single determiner modifier (prenominal or postposed) with an internally generated determiner, as in (7)-(8), must also be clausal. And since by hypothesis any constituent containing an aspectual auxiliary projects to a full clause, we can also unambiguously assign clausal status to modifiers containing imperfective *wa7*, as well as other aspectual auxiliaries, including *cuz'* 'prospective' and *plan* 'perfect'.

This leaves only single determiner modifiers with an externally generated determiner and without an aspectual auxiliary as potentially ambiguous between clausal and non-clausal status. Since as we have already seen, relative clauses are certainly possible in both pre- and post-head positions, the issue comes down to whether *non-clausal* modifiers are ever possible in these positions. Before addressing this question directly, however, it will be necessary to deal with a potentially confounding factor: the influence of 'same side' and weight effects on the distribution of prenominal and postposed relatives. These are important because they introduce an independent bias against 'heavy' pre-head modifiers and 'light' post-head modifiers, which must be factored out before strictly grammatical conditions on argument modification can be examined.

2.1. Same side and weight effects in relative clauses.

As in English, French, and Italian, and possibly universally, pre-head modifiers in St'át'imcets are subject to what is variously termed the *Same Side Filter* (Ross 1973), the *Consistency Principle* (Giorgi and Longobardi 1991) and the *No Complement Restriction* (Bouchard 2002), all of which have the effect of barring post-head material within a pre-head modifier. As first observed by Matthewson and Davis (1995), this restriction prevents prenominal relative clauses from containing overt DPs, PPs, or CPs, as can be seen in (12), (13), and (14), respectively (the offending material is italicized):

(12) *Prenominal relatives*

?? áts'x-en=lhkan múta7 [[ta=naq'w-ci-ts-ás=a
see-TRA=1SG.SU again [[ABS.DET=steal-IND-1SG.OBJ-3ERG=EXIS
na=n-káoh=a] sqaycw]
DET=1SG.POSS-car=EXIS] man]
'I again saw the man who stole my car.'

[10] See Thompson (2012) for a recent examination of predicate nominalization in Salish.

(13) ?? wá7=lhkacw=ha lexláx-s [na=7ats'x-en-ém=a
IMPF=2SG.SU=YNQ remember-CAU [ABS.DET=see-TRA-1PL.ERG=EXIS
s-k'ík'ta7-s=a *ta=tsunam'-cal-álhcw-a*] míxalh]
NOM-near-3POSS=EXIS *DET=teach-ACT-place=EXIS*] bear]
'Do you remember the bear we saw near the schoolhouse?'

(14) ?? pún=lhkan [na=qwez-en-ácw=a *i=wácw*
find+TRA=1SG.SU [ABS.DET=see-TRA-2SG.ERG=EXIS *when[PST]=IMPF+2SG.CNJ*
mets-cál mets-láka7]
write-ACT write-tool]
'I found the pen you were writing with.'
Consultant's comment: 'That's okay, but it's hard to find that *metsláka7* at the end there.'

It is important to note that violations of this filter are not straightforwardly ungrammatical, as indicated by the ?? on the examples above, as well as by the consultant's comment on example (14). In fact, on occasion speakers violate the filter in spontaneous speech, though they usually correct themselves afterwards. Furthermore, violations get progressively worse as more material intervenes between the head of the modifier and the head of the modified constituent: in other words, the filter shows gradient behavior. This indicates that we are probably not dealing here with a purely grammatical constraint, but rather with a grammar-sensitive processing preference, whereby the parser seeks to locate the head of a modified constituent as soon as possible after it has identified the head of its modifying constituent.[11] For this reason, it is probably not entirely accurate to refer to the restriction as a filter, since the latter suggests an output constraint on the grammar. Instead, I will refer henceforward to *same side effects*.

In order to avoid same side effects, relative clauses containing post-predicative material are generally realized in post-head position, as shown in the postposed cases in (15)-(17), which are the preferred alternatives to (12)-(14), respectively.

[11] This view of the Same Side Filter is compatible with most accounts of the phenomenon, which typically invoke a filter similar in effect to that of Ross's original version. An exception is that of Bouchard (2002:60-61), who attributes the effect to a more fundamental 'linearization parameter' concerning the order of functor and dependents, which states that in head-initial languages, functors must precede dependents. This in turn depends on the claim that – at least in French and English – *all* prenominal modifiers are intensional (i.e., non-intersective), and all intensional adjectives are functors. In contrast, according to Bouchard, intersective adjectives are not functors, but dependents of the head noun, and thus by the same linearization parameter, end up following it. Whatever the merits of this proposal for French and English, it runs into trouble in St'át'imcets, where relative clauses – i.e., intersective modifiers – clearly *do* appear prenominally, as long as they obey the Same Side Filter (Bouchard's *No Complement Principle*); according to Bouchard's parameter, this should be impossible in a strongly head-initial language like St'át'imcets.

(15) *Postposed relatives*

áts'x-en=lhkan múta7 [ta=sqáycw=a [náq'w-ci(t)-ts-as
see-TRA=1SG.SU again [DET=man=EXIS [sell-IND-1SG.OBJ-3ERG
na=n-káoh=a]]
ABS.DET=1SG.POSS-car=EXIS]]
'I again saw the man who stole my car.'

(16) wá7=lhkacw=ha lexláx-s [na=míxalh=a [áts'x-en-em
IMPF=2SG.SU=YNQ remember-CAU [ABS.DET=bear=EXIS [see-TRA-1PL.ERG
s-k'ík'ta7-s=a ta=tsunam'-cal-álhcw=a]][12]
NOM-near-3POSS=EXIS DET=teach-ACT-place=EXIS]]
'Do you remember the bear we saw near the schoolhouse?'

(17) pún=lhkan [na=mets-lák7=a qwez-en-ácw
find+TRA=1SG.SU [ABS.DET=write-tool=EXIS use-TRA-2SG.ERG
i=wácw mets-cál]
when[PST]=IMPF+2SG.CNJ write-ACT]
'I found the pen you were writing with.'

It is also important to observe that for most speakers, a complementary tendency to the same side effect holds, albeit more weakly: when there is no post-head material inside a relative clause, prenominal position is *preferred* to postposed position. Furthermore, the lighter the relative clause, the greater the tendency for it to appear prenominally. This effect is illustrated in (18)-(19) with the verbs *kwis* 'to fall' and *q'áylec* 'to jump/escape': the (b) cases with 'light' postposed relatives are mildly deviant compared to their prenominal counterparts in (a), but as soon as more material is added, as in (c), they become perfectly acceptable (and in fact, preferable).[13]

(18) a. nkám'-en=malh [i=*kwís*=a stem'tétem'-su]
pick.up-TRA=ADHORT [PL.DET=*fall*=EXIS clothes-2SG.POSS]
'Pick up your fallen clothes!'

b. ? nkám'-en=malh [i=stem'tétem'-sw=a *kwis*]
pick.up-TRA=ADHORT [PL.DET=clothes-2SG.POSS=EXIS *fall*]
'Pick up your clothes that have fallen!'

[12] The locative phrase *[sk'ík'ta7sa ta stsunam'calálhcwa]* 'near the schoolhouse' is underlyingly a PP ***[lta*** *sk'ík'ta7sa ta stsunam'calálhcwa]*: the proclitic preposition *l=* 'at' together with the following determiner *ta=* are frequently dropped in fast speech, as here, though the existential enclitic *=a* is retained, allowing recovery of the elided determiner.

[13] Cases like those in (18b) and (19b) led Demirdache and Matthewson (1995) to assume that postposed relative clauses were ungrammatical in St'át'imcets. This mistake was quickly corrected: Matthewson and Davis (1995) pointed out that they are not only grammatical but very frequent and easy to find in textual material.

c. nkám'-en=malh [i=stem'tétem'-sw=a
pick.up-TRA=ADHORT [PL.DET=clothes-2SG.POSS=EXIS
plán=t'u7 *núkun'* *wa7* *kwis*]
already=EXCL *again* *IMPF* *fall*]
'Pick up your clothes that have already fallen down yet again!'

(19) a. cwil'-en-ítas [na=*q'áy-lec*=a sk'úk'wmi7t]
seek-TRA-3PL.ERG [ABS.DET=*jump-AUT*=EXIS child]
'They searched for the child who ran away.'

b. ? cwil'-en-ítas [na=sk'úk'wmi7t=a *q'áy-lec*]
seek-TRA-3PL.ERG [ABS.DET=child=EXIS *jump-AUT*]
'They searched for the child who ran away.'

c. cwil'-en-ítas [ta=sk'úk'wmi7t=a *papt* *wa7* *q'áy-lec*]
seek-TRA-3PL.ERG [DET=child=EXIS *always IMPF* *jump-AUT*]
'They searched for the child who was always running away.'

The bias against light relatives in postposed position illustrated in (18)-(19) is highly variable. The following examples, both containing a relative clause with a monosyllabic verbal head, were judged equally acceptable in prenominal and postposed position:

(20) a. qwal'út-s=kacw=ha [ta=t'íq=a sqaycw]
speak-CAU=2SG.SU=YNQ [DET=arrive=EXIS man]
'Did you speak to the man who came?'

b. qwal'út-s=kacw=ha [ta=sqáycw=a t'iq]
speak-CAU=2SG.SU=YNQ [DET=man=EXIS arrive]
'Did you speak to the man who came?'

(21) a. núk'w7-an=malh [ta=xán'=a twéww'et]
help-TRA=ADHORT [DET=hurt=EXIS boy]
'Help the boy who got hurt!'

b. núk'w7-an=malh [ta=twéww'et=a xan']
help-TRA=ADHORT [DET=boy=EXIS hurt]
'Help the boy who got hurt!'

Neither dialect nor verb class is an obvious determinant of whether a light postposed relative will be acceptable or not; judgements vary from speaker to speaker and even from session to session with the same speaker. This variability is significant, because it allows us to distinguish weight effects from the categorical (and categorial!) restrictions on postposed relatives to be discussed in the next section.

3. Establishing the existence of non-clausal argument modifiers.

Let us now return to our main theme. Setting aside same side and weight effects, we have established that relative clauses are possible in both pre- and post-head positions, may occur in either single determiner or double determiner structures, have their own predication time, and project to a full CP, including aspectual projections. On the other hand, if they exist at all, non-clausal modifiers must occur in single determiner structures, may not differ in predication time from the main clause containing them, and may not contain aspectual projections.

Now, since none of the diagnostics for non-clausal modifiers above actually exclude relative clauses, it is quite reasonable to assume, along with Demirdache and Matthewson (1995), that all argument modification in St'át'imcets must involve a full relative clause. However, in that case, we should predict, ceteris paribus (in particular, making allowances for same side and weight effects), that the same range of elements should be permitted in pre-head as in post-head positions, and that these elements should always project to a full clause.

In this section, I challenge both these predictions: in particular, I show that there is a set of elements which can *only* occur as pre-head modifiers, and that these elements crucially lack clausal superstructure. I begin by presenting the following cases, in which post-head modifiers (the (b) examples) are ungrammatical for all speakers, in contrast to their pre-head counterparts (the (a) examples), which are grammatical for all speakers.

(22) a. wa7 saq'w kent7ú [[i=*xzúm*=a] spepzúza7]
IMPF fly around.there [[PL.DET=*big*=EXIS] birds]
'Some big birds are flying around over there.'

b. * wa7 saq'w kent7ú [i=spepzúz7=a [*xzum*]]
IMPF fly around.there [PL.DET=birds=EXIS [*big*]]

(23) a. cuz' ts7as [[i=*cw7ít*=a] n-(n)k'sáytken]
going.to come [[PL.DET=*many*=EXIS] 1SG.POSS-relative]
'A lot of my relatives are going to come.'

b. * cuz' ts7as [i=n-(n)k'sáytken=a [*cw7it*]]
going.to come [PL.DET=1SG.POSS-relative=EXIS [*many*]]

(24) a. ats'x-en=lhkácw=ha [ti7 [ku=*emhál'qwem'*] tw.éww'et]
see-TR=2SG.SUB=YNQ [that [DET=*handsome*] boy]
'Did you see that handsome boy?'

b. * ats'x-en=lhkácw=ha [ti7 ku=twéww'et [*emhál'qwem'*]]
see-TRA=2SG.SUB=YNQ [that DET=boy [*handsome*]]

(25) a. qwal'ut-s=kal'áp=ha [[nelh=*núkw*=a] sqáyqeycw]
speak-CAU=2PL.SUBJ=YNQ [[PL.ABS.DET=*other*=EXIS] men]
'Did you folks speak to those other men?'[14]

[14] The quantificational adjective *nukw* 'some, other' is unique in that it only occurs as a pre-head modifier, never as a main predicate. See Matthewson (2009) for an analysis.

b. * qwal'ut-s=kal'áp=ha [nelh=sqáy.qeycw=a [*nukw*]]
speak-CAU=2PL.SUBJ=YNQ [PL.ABS.DET=men=EXIS [*other*]]

(26) a. am'ts-án'-itas [[ta=*kwíkws-eqw*=a] maw]
feed-TRA-3PL.ERG [[DET=*small-head*=EXIS] cat]
'They fed the little cat.'

b. * am'ts-án'-itas [ta=máw=a [*kwíkws-eqw*]]
feed-TRA-3PL.ERG [DET=cat=EXIS [*small-head*]]

It is worth emphasizing that the (b) cases above are *categorically* ungrammatical: that is, there is no inter-speaker or intra-speaker variation, and no weight effect. This is not easy to see with modifiers consisting of a single word, which are typically light, but it is also true of iterated modifiers, as shown in (27):

(27) a. q'wel-en-ítas [i=*cw7ít*=a [*xzum* [zúmak]]]
roast-TRA-3PL.ERG [PL.DET=*many*=EXIS [*big* [spring.salmon]]]
'They cooked many big spring salmon.'

b. * q'wel-en-ítas [[[i=zúmak=a] *cw7it*] *xzum*]
roast-TRA-3PL.ERG [[[PL.DET=spring.salmon=EXIS] *many*] *big*]

c. * q'wel-en-ítas [[[i=zúmak=a] *xzum*] *cw7it*]
roast-TRA-3PL.ERG [[[PL.DET=spring.salmon=EXIS *big*] *many*]

d. * q'wel-en-ítas [[i=*cw7ít*=a [zúmak]] *xzum*]
roast-TRA-3PL.ERG [[PL.DET=*many*=EXIS [spring.salmon]] *big*]

e. * q'wel-en-ítas [[i=*xzúm*=a [zúmak]] *cw7it*]
roast-TRA-3PL.ERG [[PL.DET=*big*=EXIS [spring.salmon]] *many*]

The asymmetry between pre-head and post-head modifiers shown in (23)-(27) is not predicted by any analysis that treats argument modifiers uniformly as relative clauses. In other words, this pattern provides crucial evidence for the existence of a class of non-clausal argument modifiers, with a more restricted distribution than that of relative clauses.

All the cases in (23)-(27) involve notional adjectives; however, bare nouns are also generally ungrammatical as post-head modifiers, as shown in (28b) and (29b).[15]

[15] The noun-noun structures here cannot be treated as compounds, which are rare and unproductive in St'át'imcets, and in any case phonologically quite distinctive: the two elements of a compound are separated by the compound connector *-alh-*, and primary stress falls only on the second element, as in *qvl̲-alh-tmícw* 'bad weather, storm', *pel'-alh-tsítcw* 'stranger'. See Van Eijk (1997:54).

(28) a. qwez-en-ítas [i=*tsaqwemáz'*=a mulc]
use-TRA-3PL.ERG [PL.DET=*saskatoon.bush*=EXIS stick]
nelh=cín'=a úcwalmicw lh=us
PL.ABS.DET=long.ago=EXIS people COMP=IMPF+3CONJ
mays-en-ítas i=qusmal'ts-7úl-i=ha
make-TRA-3PL.ERG PL.DET=arrow-real-3PL.POSS=EXIS
'In olden times the people made their arrows out of saskatoon bush sticks.'

b. #qwez-en-ítas [i=múlc=a *tsáqwemaz'*]
use-TRA-3PL.ERG [PL.DET=stick=EXIS *saskatoon.bush*]
nelh=cín'=a úcwalmicw lh=us
PL.ABS.DET=long.ago=EXIS people COMP=IMPF+3CONJ
mays-en-ítas i=qusmal'ts-7úl-i=ha
make-TRA-3PL.ERG PL.DET=arrow-real-3PL.POSS=EXIS
#'In olden times the people made their arrows out of wooden saskatoon bushes.'
(i.e., 'saskatoon bushes made of sticks')

(29) a. wa7 kwánen i=ts'í7=a l=[[ki=*scátus*=a] sq'u7]
IMPF get.caught PL.DET=deer=EXIS in=[[PL.DET=*deadfall*=EXIS] trap]
'Deer were caught in deadfall traps.'

b. #wa7 kwánen i=ts'í7=a l=[[ki=sq'ú7=a] *scátus*]
IMPF get.caught PL.DET=deer=EXIS in=[[PL.DET=trap=EXIS] *deadfall*]
#'Deer were caught in trap deadfalls.' (i.e., 'deadfalls made of traps')

This is not always the case, though: post-head bare noun modifiers are sometimes grammatical, as in (30b) and (31b):

(30) a. knáti7=t'u7 lh=us t'ak [na=*qélhmémn'*=a
around.there=EXCL COMP=IMPF+3CNJ go.by [ABS.DET=*old.person*=EXIS
smúlhats]
woman]
'There was this old woman who used to go by.'

b. knáti7=t'u7 lh=us t'ak [na=smúlhats=a
around.there=EXCL COMP=IMPF+3CNJ go.by [ABS.DET=woman=EXIS
qélhmémen']
old.person]
'There was this old woman who used to go by.'

(31) a. q'uq'wts [ni7 na=*sám7*=a naplít]
fat [that ABS.DET=*white.person*=EXIS priest]
'That white priest was fat.'

b. q'uq'wts [ni7 na=naplít=a *sáma7*]
fat [that ABS.DET=priest=EXIS *white.person*]
'That white priest was fat.'

However, there is an alternative analysis for the apparently grammatical cases of post-head noun modification in (30b) and (31b), if we treat what appear to be modifiers in these examples as actually *heads*, and what appear to be heads as pre-head modifiers. In support of this move, note that these cases involve 'reversible' modification, where the head and modifier are in a semantic relation of simple intersection, and can be interchanged freely. For example, in (30a), *qelhmémen' smúlhats* refers to an old person who is a woman. Since this means exactly the same thing as a woman who is an old person, *smúlhats qelhmémen'* in (30b) is equally grammatical, with the same meaning.

In contrast, where a noun is ungrammatical in post-head position, the modifier-modifiee relation is non-intersective, and interchanging the two leads to either ungrammaticality or a difference in meaning. For example, *tsáqwemaz' mulc* in (28a) does not mean a stick which is also a saskatoon bush, but a stick *made* from a saskatoon bush; reversing the head and modifier to *mulc tsáqwemaz'*, as in (28b) yields an absurd meaning of 'wooden saskatoon bush'.

Concluding, then, that apparent cases of grammatical post-head modification with nouns are really cases of pre-head modification, we come to the following generalization:

(32) *Neither bare adjectives nor nouns may be post-head modifiers.*

To put it another way, (32) tells us that the *only* possible bare post-head argument modifiers are verbs.

In order to account for this pattern, I make the following additional assumption:

(33) *Verbs always project to full clauses.*

Why? Ultimately, because verbs come lexically equipped with an event argument. (This is a standard assumption in the semantics literature, where 'Davidsonian' and 'neo-Davidsonian' models of argument structure are the rule: see e.g. Kratzer 2003 and references therein.) Since the event argument is a variable, it must be existentially closed: this role is usually assigned to an Asp(ect) projection above *v*P, which denotes a function from event times to reference times. Asp(ect) in turn entails the presence of T(ense), a function from reference times to utterance times. It follows that the presence of an event argument automatically entails the presence of a TP, and therefore, that verbs must project at least to TP. I further assume that in the unmarked case, TP projects to CP: the result is that 'bare' verbal modifiers are in fact always full relative clauses.

Thus we reach the following conclusion:

(34) *All post-head argument modifiers in St'át'imcets are clausal.*

I now turn to a more detailed examination of non-clausal modifiers: that is, the set of modifiers that are *ungrammatical* in post-head positions.

3.1. Individual versus stage level post-head argument modifiers.

It is not coincidental that all of the ungrammatical post-head argument modifiers we have seen so far are bare *individual level* predicates. In particular, recall from Section 1 that the stage level versus individual level contrast is independently necessary to explain the distribution of predicate modifiers in CNPs: predicate modifiers may only be individual level, but are crucially not otherwise restricted by grammatical category. If the same generalization characterized the distribution of ungrammatical post-head argument modifiers, then we would be entitled to draw the same conclusion as Davis et al. (1997): that is, that the stage/individual level distinction is all we need to characterize the distribution of non-clausal modifiers in St'át'imcets.

Bearing this in mind, consider the following sets of examples, which involve stage level post-head adjectival modifiers.

(35) a. qwal'ut-s=kal'áp=ha [[nelh=*qlíl*=a] sqáyqeycw]
speak-CAU=2PL.SU=YNQ [[PL.ABS.DET=*angry*=EXIS] men]
'Did you folks speak to those angry men?'

b. *qwal'ut-s=kal'áp=ha [nelh=sqáyqeycw=a [*qlil*]]
speak-CAU=2PL.SU=YNQ [PL.ABS.DET=men=EXIS [*angry*]]

c. qwal'ut-s=kal'áp=ha [[nelh=*wá7* *qlil*] sqáyqeycw]
speak-CAU=2PL.SU=YNQ [[PL.ABS.DET=*IMPF* *angry*] men]
'Did you folks speak to those angry men?'

d. qwal'ut-s=kal'áp=ha [[nelh=sqáyqeycwa] *wa7* *qlil*]
speak-CAU=2PL.SU=YNQ [[PL.ABS.DET=men=EXIS] *IMPF* *angry*]
'Did you folks speak to those angry men?'

(36) a. am'ts-án'-itas [[ta=táyt=a] mémew']
feed-TRA-3PL.ERG [[DET=hungry=EXIS] kitten]
'They fed the hungry kitten.'

b. *am'ts-án'-itas [ta=mémw'=a [tayt]]
feed-TRA-3PL.ERG [DET=kitten=EXIS [hungry]]

c. am'ts-án'-itas [[ta=wá7 tayt] mémew']
feed-TRA-3PL.ERG [[DET=IMPF hungry] kitten]
'They fed the hungry kitten.'

d. am'ts-án'-itas [ta=mémw'=a [wa7 tayt]]
feed-TRA-3PL.ERG [DET=kitten=EXIS [IMPF hungry]]
'They fed the hungry kitten.'

What these cases show is that a stage level adjective is able to occur in a post-head position if and only if it is supplemented with an aspectual auxiliary, such as imperfective *wa7*. This is

exactly as predicted if post-head argument modifiers may only be clausal, since by hypothesis, aspectual auxiliaries always project to a full CP.

As might be expected, *wa7* also coerces a stage level reading with individual level adjectives, often leading to incongruity:

(37) a. wá7=lhkan s-lhecw-s [[ta=*tseqwtsíqw*=a] sktíts'a7]
IMPF=1SG.SU STA-wear-CAU [[DET=*red*=EXIS] shirt]
'I'm wearing a red shirt.'

b. *wá7=lhkan s-lhecw-s [ta=sktíts'7=a [*tseqwtsíqw*]]
IMPF=1SG.SU STA-wear-CAU [DET=shirt=EXIS [*red*]]

c. #wá7=lhkan s-lhecw-s [ta=sktíts'7=a [*wa7* *tseqwtsíqw*]]
IMPF=1SG.SU STA-wear-CAU [DET=shirt=EXIS [*IMPF* *red*]]
'I'm wearing a red shirt.' (*only if shirt is temporarily red*)
Consultant's comment: 'Not too good: that *sktíts'a7* might change colour!'

d. #wá7=lhkan s-lhecw-s [[ta=*wá7* *tseqwtsíqw*] sktíts'a7]
IMPF=1SG.SU STA-wear-CAU [[DET=*IMPF* *red*] shirt]
'I'm wearing a red shirt.' (*only if shirt is temporarily red*)

Next, we come to the question of whether nouns behave in the same way as adjectives with respect to the individual level/stage level contrast. This question is not straightforward to answer, for two reasons: first, there are very few nouns in St'át'imcets which are easily coercible into stage level behavior; and second, as we saw in (30)-(31), if two nouns are in a relation of intersective modification, either can be interpreted as the head. Nevertheless, there are a few nouns which can be interpreted as stage level, and these show up in post-head position only when supplemented by aspectual *wa7*, as predicted:

(38) a. pzán=lhkan ta=*kúkwpi7*=a smúlhats
meet+TRA=1SG.SU DET=*chief*=EXIS woman
'I met the chief lady.'

b. pzán=lhkan ta=*smúlhats*=a kúkwpi7
meet+TRA=1SG.SU DET=*woman*=EXIS chief
'I met the lady chief.'

c. pzán=lhkan ta=*wá7* *kúkwpi7* smúlhats
meet+TRA=1SG.SU DET=*IMPF* *chief* woman
'I met the lady who is chief/boss.'

d. pzán=lhkan ta=smúlhats=a *wa7* *kúkwpi7*
meet+TRA=1SG.SU DET=woman=EXIS *IMPF* *chief*
'I met the lady who is chief/boss.'

e. #pzán=lhkan ta=*kúkwpi7*=a wa7 smúlhats
meet+TRA=1SG.SU DET=*chief*=EXIS IMPF woman
'I met the chief who is a woman (temporarily).'
Consultant's comment: 'She might change into a man!'

The examples in (38a) and (38b) are parallel to the cases of 'reversible' nominal modification in (30)-(31) above: when no aspectual auxiliary is present, either noun can act as the head of the construction, since their semantic relation is intersective, and only pre-head modification is permitted. When an auxiliary is present, however, it is unambiguously associated with the modifier, and in that case, either pre-head or post-head position is available for a stage level nominal modifier, as predicted if it projects to a relative clause. The noun *kúkwpi7* is interesting in this respect, since it may be interpreted either as an individual level or a stage level predicate. Under its individual level construal, it refers to the (traditionally hereditary) title of chief, as in (a) and (b); under its stage level guise with an auxiliary, it refers to anyone in charge in a particular situation (e.g., at work), as in (c) and (d). Finally, as expected, an unambiguously individual level noun like *smúlhats* 'woman', which cannot readily be coerced into a stage level interpretation, is infelicitous with aspectual *wa7* (e).

We thus end up with a three-way split in post-head argument modification: 'bare' verbs may occur freely in post-head position; stage level adjectives and nouns may occur as post-head modifiers, but only if supplemented by an aspectual auxiliary; and individual level adjectives and nouns may not occur in post-head positions unless coerced into stage level behavior by an aspectual auxiliary. This pattern is summarized in Table 2.

bare verb	√
bare adjective	*
asp+adjective	√
bare noun	*
asp+noun	√

Table 2. The distribution of post-head argument modifiers.

In order to explain the facts described above, I adopt the following additional assumption (cf. Kratzer 1995):

(39) *Stage level but not individual level adjectives and nouns contain an event argument.*

Recall that aspectual auxiliaries are semantically functions from event times to reference times; an event argument is therefore necessary for the application of an aspectual operator, and therefore, any predicate which supports an aspectual auxiliary must have an event argument. Coercion, under this view, involves supplying an event argument to a predicate that does not normally support one.

However, we will need a slight but important modification of (39) to fully account for the pattern of data summarized in Table 2. Recall that stage level adjectives and nouns are ungrammatical in post-head position unless supplemented by an aspectual auxiliary. If stage level adjectives were simply a subclass of intransitive verbs, by hypothesis they would come lexically supplied with an event argument, and would be able to project to a clause unaided, just like the post-head bare verbs in (20b)-(21b). We must therefore assume the opposite: in contrast

to verbs, *no* adjective or noun (stage level or individual level) is *lexically* equipped with an event argument, but they may be *supplied* with one via an aspectual auxiliary. Stage level adjectives and nouns will readily accept an event argument by virtue of their meaning, while individual level adjectives and nouns may be coerced into accepting one only to the extent that they tolerate a stage level interpretation.[16]

This line of reasoning, of course, depends on the assumption that (relative) clauses always contain an event argument. This is hardly controversial: it is connected to the fact that the event argument forms a crucial role in licensing aspectual projections, which in turn form an essential component of the temporal architecture which defines a clause. Empirical support for a definition of the clausal/non-clausal distinction in terms of temporal architecture comes from the fact that clausal but not non-clausal modifiers in St'át'imcets are temporally independent from the matrix clause, as discussed in Section 2 above.

The proposal that adjectives and nouns only support the temporal superstructure of a clause when supplemented by an aspectual auxiliary thus allows us to plug a loophole in our analysis of bare non-verbal post-head modifiers: if they were allowed to freely project to a relative clause without the help of an auxiliary, we would incorrectly predict examples such as (22b)-(27b) to be grammatical.[17]

We are now in a position to provide a unified account for the phenomena we have been investigating. In pre-head position, argument modifiers may either be clausal or non-clausal. Non-clausal modification is restricted to 'bare' nouns and adjectives, which lack an event argument, while relative clauses can be formed only on predicates with an event argument, including verbs on the one hand, and stage level adjectives and nouns with an aspectual auxiliary on the other. In post-head positions, in contrast, bare modifiers (including nouns and adjectives) are ungrammatical, and therefore all modifiers are CPs.[18] Stage level adjective and

[16] It is beyond the scope of this paper to attempt to properly formalize the operation of aspectual coercion I have invoked here, which will involve a type-shifting operation from a simple predicate of type $\langle e,t\rangle$ to a predicate of events of type $\langle l,\langle e, t\rangle\rangle$.

[17] However, note that plugging this gap in the analysis of modifying adjectives and nouns opens up another gap in the analysis of their predicative counterparts. If adjectives and nouns cannot project to clauses without the help of an aspectual auxiliary, as claimed here, then we should expect all predicative instances of these categories to require a supporting auxiliary. But of course, unlike in English, where adjectives and nouns are indeed 'defective' predicates which require a copula, bare nominal and adjectival predicates are commonplace in St'át'imcets and elsewhere in Salish. The problem is particularly acute with individual level predicates, which typically do not occur with aspectual auxiliaries at all: the prediction of the analysis given here – obviously false – is that they will therefore lack predicative uses. One solution would be to follow Baker (2003) and assume that all non-verbal predicates must be the complements of an abstract PRED head, present in predicative but absent in modificational contexts. However, such a solution would be counter-intuitive to most Salishanists, since there is no overt evidence for the existence of a predicative copula in any Salish language. A second possibility would be to appeal to the obligatory presence of (possibly null) aspect and tense projections in full clauses. In order to compose with these temporal heads, a non-verbal predicate would have to acquire an event variable, and therefore raise to the type of an intransitive verb, presumably via aspectual coercion, as suggested in footnote 16 above. I leave these possibilities open here.

[18] Or PPs, which are freely allowed in post-head modifier positions, but which I have not discussed here for reasons of space. By hypothesis, since all post-head modifiers are clausal, PPs should either be lexically equipped with an event argument, like verbs, and thus automatically project to a clause, or be supplied with one via an aspectual auxiliary, like postposed adjectives and nouns. Since they can appear post-nominally without overt aspectual modification (see (12) above), St'át'imcets PPs pattern with verbs rather than nouns and adjectives in this respect, which in turn predicts that they should always act like stage level rather than individual level modifiers. This appears to be true: PPs may not appear in CNPs, and English individual level PPs such as 'with a

noun modifiers may be supplied with an event argument (and therefore project to CP) just in case an aspectual auxiliary is present.

3.2. Reconstituting the class of adjectives in argument modification contexts.

Returning now to the issue of *categorial* asymmetries, it might seem that argument modification provides no stronger motivation for a separate category of adjective than does predicate modification in CNPs, since they appear to be two sides of the same coin: in both cases, the class of non-clausal modifiers consists of individual level predicates (including both adjectives and nouns), and no specifically categorial distinction need be invoked.

However, this conclusion is based only on *post-head* modification. When we factor in pre-head modification, we see that the constraints on modification in CNPs are *not* precisely parallel to those which hold for argument modification. In both cases, a noun may be preceded by a class of non-clausal modifiers including individual level adjectives and nouns. However, while stage level adjectives are impossible as modifiers in CNPs, bare stage level adjectives *are* possible as pre-head argument modifiers, as shown in (35a) and (36a) above. It is *this* difference which yields a categorial distinction between adjectives and verbs in argument modification contexts: one which, crucially, *cannot* be reduced to the stage level/individual level contrast.

In (40)-(41), I give a pair of textual examples (from the same speaker) which further illustrate the contrast between pre-head and post-head non-clausal modifiers. Both employ the stage level adjective *sk'wilh* 'left over, remaining': in (40), the adjective acts as a bare pre-head modifier, while in (41), in contrast, it is supplemented with the aspectual auxiliary *wa7* in post-head position and projects to a (postposed) relative clause.

(40) cw7aoz kw=en=wá stexw lexláx-s lh=as
NEG DET=1SG.POSS+NOM=IMPF really remember-CAU COMP=IMPF+3CONJ
kás-tum [i=*sk'wílh*=a sts'úqwaz']
how+CAU-PASS [PL.DET=*left.over*=EXIS fish]
'I don't really remember what we did with the leftover fish.' (Matthewson 2005: 58)

(41) cw7it lts7a [i=s7ay'tseqw-kálh=a *wa7* *sk'wilh*]
many here [PL.DET=raspberry-1PL.POSS=EXIS *IMPF* *left.over*]
'A lot of our raspberries here are left over.' (Matthewson 2005: 70)

The distribution of pre-head and post-head non-clausal argument modifiers is summarized in Table 3.

	pre-nominal	*post-nominal*
verb	*	*
adjective	√	*
noun	√	*

Table 3. Non-clausal argument modifiers in St'át'imcets.

bald head', 'with big ears', etc. are translated into St'át'imcets as (individual level) adjectives with somatic lexical suffixes, e.g. *lhúq'w-laqin'* 'bald-headed' *xzúm-ana7*, 'big-eared'), rather than as PPs.

Compare this to the distribution of predicate modifiers in CNPs, given in Table 4:

	pre-nominal	*post-nominal*
verb	*	*
adjective	individual level	*
noun	individual level	*

Table 4. Predicate modifiers in St'át'imcets CNPs.

Though slight, the difference between the two tables is highly significant. Recall that in the case of predicate modification, Davis et al. (1997) succeeded in reducing the putative class of adjectives to the conjunction of non-nominal and individual level predicates, However, in the case of argument modification, both individual *and* stage level adjectives and nouns are permitted as bare pre-head modifiers. Since nouns are clearly distinct from verbs and adjectives in their ability to act as the *heads* of modifier-head structures, a three-way lexical category contrast re-emerges between nouns, verbs, and – significantly – adjectives. Table 5 summarizes the distinctions.

	modified head	*non-clausal modifier*
verb	*	*
adjective	*	√
noun	√	√

Table 5. Categorial distinctions in argument modification in St'át'imcets.

Note in particular that adjectives cannot be treated as a 'subclass of intransitive verbs', as often claimed for Salish, since adjectives but *not* verbs can act as non-clausal modifiers.

Argument modification thus provides the crucial missing piece of evidence for a distinct category of adjective in St'át'imcets, vindicating Demirdache and Matthewson's original (1995) claims for a three-way lexical category distinction and overcoming the problems for their account raised by Davis et al. (1997).

As with Demirdache and Matthewson's original claims, it is important to emphasize that the evidence I have provided here is purely *syntactic* in nature, and is thus independent of any morphological evidence for (or against) a distinct category of adjective. It is also both robust, in the sense that the data given here have been replicated independently over a number of years with several speakers from different dialects of the language, and subtle, in the sense that the syntactic category of adjective emerges clearly only in the contrast between pre-head and post-head argument modification, and only once the independent existence of relative clauses in both positions has been taken into account. This is precisely the combination of properties that provides the strongest possible argument for the universal basis of syntactic categories: even in a language where superficial morphological and syntactic criteria fail to support lexical category distinctions, subtler tests reveal their underlying presence.

4. More on the syntax of adjectives in St'át'imcets.

Now that we have reinstated a distinct category of adjective in St'át'imcets based on argument modification, we can ask whether there are any other syntactic tests which pick out the same class of elements. In the following sections, we will examine three potential

diagnostics: ordering effects between NP modifiers (4.1); NP ellipsis (4.2); and degree modification (4.3).

4.1. Order of pre-head argument modifiers.

One prediction of the account given here, in which pre-head modifiers can either be clausal or phrasal, is that we might find ordering effects between non-clausal modifiers and relative clauses. Such effects have been well-documented for English, French, Italian, and other Standard Average European (SAE) languages (Larson 1988, Bouchard 2002, Cinque 2010): when the two types occur on the same side of the head, relative clauses typically occur outside of non-clausal modifiers.

However, there is at best a weak ordering effect in St'át'imcets between pre-head adjectives and relative clauses, as shown in (42) and (43):

(42) a. ?áts'x-en=lhkan ta=*á7emha* *wa7* *saq'úta* smém'lhats
see-TRA=1SG.SU DET=*pretty* *IMPF* *dance* girl
'I saw the pretty girl who was dancing.'
Consultant's comment: 'Yeah, I guess that would be okay for some…'

b. áts'x-en=lhkan ta=*wá7* *saq'úta* *á7ma* smém'lhats
see-TRA=1SG.SU DET=*IMPF* *dance* *pretty* girl
'I saw the pretty girl who was dancing.'
Consultant's comment: 'That's better.'

(43) a. am'ts-án'=lhkan ta=*wá7* *tayt* *kwíkws-eqw* mémew'
feed-TRA=1SG.SU DET=*IMPF* *hungry* *little-animal* kitten
'I fed the hungry little kitten.'
Consultant: 'That's okay.'

b. am'ts-án'=lhkan ta=*kwíkws-eqw*=a *wa7* *tayt* mémew'
feed-TRA=1SG.SU DET=*little-animal*=EXIS IMPF *hungry* kitten
'I fed the litle hungry kitten.'
Consultant: 'Good.'

On the other hand, with more than one adjective and a relative clause, there does appear to be a more robust ordering restriction:

(44) a. culel-mín=lhkan ti=*wá7* *nkál-stum'c-as* *xzum'-qw*
flee-RED=1SG.SU DET=IMPF follow-CAU-1SG.OBJ-3ERG *big-animal*
q'wexq'wíx-qw míxalh
black-animal bear
'I ran away from the big black bear which was following me.'
Consultant: 'That would do.'

b. *culel-mín=lhkan ti=*xzúm'-qw*=a *wa7* *nkál-stum'c-as*
flee-RED=1SG.SU DET=*big-animal*=EXIS IMPF follow-CAU-1SG.OBJ-3ERG
q'wexq'wíx-qw míxalh
black-animal bear
Consultant: 'No.'

c. *culel-mín=lhkan ti=*xzúm'-qw*=a *q'wexq'wíx-qw*
flee-RED=1SG.SU DET=*big-animal*=EXIS *black-animal*
wa7 *nkál-stum'c-as* míxalh
IMPF follow-CAU-1SG.OBJ-3ERG bear
Consultant: 'Aoz.' (= 'No.')

Thus there is at least a tendency for non-clausal adjectives to be ordered inside relative clauses in St'át'imcets, as in SAE languages.

Another frequent claim in the literature on nominal modification is that 'direct modification' adjectives (i.e., non-clausal adjectives; the term is from Cinque 2010) show rigid ordering, whereas clausal modifiers do not. This is the effect we see in English with *big red truck* versus **red big truck*. However, I have been unable to replicate this effect with direct modification adjectives in St'át'imcets: speakers I have consulted are equally happy with both orders of the adjectives in (45) and (46), for example:

(45) a. culel-mín=lhkan ti=*xzúm'-qw*=a *q'wex.q'wíx-qw* míxalh
flee-RED=1SG.SU DET=*big-animal*=EXIS *black-animal* bear
'I ran away from the big black bear.'

b. culel-mín=lhkan ti=*q'wex.q'wíx-qw*=a *xzúm'-qw* míxalh
flee-RED=1SG.SU DET=*black-animal*=EXIS *big-animal* bear
'I ran away from the black big bear.'

(46) a. am'ts-án'=lhkan ta=*táyt*=a *kwíkws-eqw* mémew'
feed-TRA=1SG.SU DET=*little-animal*=EXIS *little-animal* kitten
'I fed the hungry little kitten.' [19]

b. am'ts-án'=lhkan ta=*kwíkws-eqw*=a *tayt* mémew'
feed-TRA=1SG.SU DET=*little-animal*=EXIS *hungry* kitten
'I fed the little hungry kitten.'

In summary, ordering effects, where they exist, tend to follow the SAE pattern, but are weaker in St'át'imcets than in English and other European languages. This is not altogether surprising: adjective ordering is known to be variable even in English (partly but not entirely due to the effects of focus) and still more variable cross-linguistically: see Svenonius (2008) for a lucid exposition of the problems posed by variable ordering for accounts of adjective ordering

[19] Note that though *tayt* 'hungry' is stage level while *kwíkwseqw* 'small (of an animal)' is individual level, by hypothesis both are direct (non-clausal) modifiers in pre-head position, unless coerced into clausal status by an aspectual auxiliary.

relying exclusively on rigid hierarchies of functional projections, such as that of Cinque (1994, 2010).

4.2. Adjectives and ellipsis.

I begin here with an observation made by Hukari (1978) on Island Halkomelem. Hukari noticed that notional adjectives were unhappy as the nuclei of headless relative clauses unless an antecedent was supplied: '…nouns occur freely as argument heads, but adjectives occur as heads only in elliptical constructions, where the head is interpretable in context…' (Hukari 1978: 219).[20]

Davis (2003) corroborates this observation for St'át'imcets, giving the following minimal pair (elicited in an out-of-the-blue context):

(47) a. kwánen-s=kan ta=sts'úqwaz'=a
get.caught-CAU=1SG.SU DET=fish=EXIS
'I caught a fish.'

b. #kwánen-s=kan ta=*xzúm*=a
get.caught-CAU=1SG.SU DET=big=EXIS
'I caught a big.'
Consultant's comment: 'Stam'? ['What?'] (Laughs)…. You're left dangling, waiting for what the big thing was you caught.'

However, the contrast is not as clean as one would like. The following spontaneously produced cases (given as example sentences for an English to St'át'imcets dictionary) all involve adjectives as the nuclei of headless relatives:

(48) wa7 gelgel-s-tsút *ta=ki7kel'-úlh=a*
IMPF strong-CAU-RFL *DET=unwilling-always=EXIS*
'That lazy (person) is pretending to be tough.' (Alexander et al. 2006)

(49) ka-n-mv̲lokw-k=kán-a i=cát-an'=an *ta=xmánk=a*
CIRC-LOC-sprain-back=1SG.SU-CIRC when[PST]=lift-TRA=1SG.CNJ *DET=heavy=EXIS*
'My back got sprained when I lifted (something) heavy.' (Alexander et al. in prep.)

(50) nilh *ta=xzézem'a* xát'-min'-an
FOC *DET=bigger=EXIS* want-RED-1SG.ERG
'I want the bigger (piece).' (Frank et al. 2002)

If these cases were genuine examples of headless relatives, then they would be troubling for the account given here, which predicts that adjectives should be unable to project to relative clauses without the help of an aspectual auxiliary. However, another possibility is that in these examples the speakers are accommodating discourse referent for elided nouns, and thereby treating the adjectives as pre-head modifiers, not heads of their own projection. In support of

[20] See also Gerdts and Hinkson (2004) for related observations on NP ellipsis with numerals in Island Halkomelem.

this alternative, note that when presented with an explicit discourse context which limits accommodation, as in (51a-b) below, speakers generally find bare adjectives deviant, as in (51c), but bare nouns perfect, as in (51d):

(51) a. tsicw Kamloops=a n-sem7ám=a tecwp ku=tsítsel stem'tétem'
went Kamloops=EXIS 1SG.POSS-wife=EXIS buy DET=new clothes
'My wife went to Kamloops to buy some new clothes.'

b. p'an't aylh, tsún-ts-as:
return then, say(TRA)-1SG.OBJ-3ERG
When she returned, she told me:

c. #tecwp=kán ta=tseqwtsíqw=a!
bought=1SG.SU DET=red=EXIS
"I bought a red!"'
Consultant's comment: 'Tseqwtsíqw [red] what?!'

d. tecwp=kán ta=leqwáz'=a!
bought=1SG.SU DET=dress=EXIS
"I bought a dress!"'
Consultant's comment: 'Okay.'

It thus seems that, when accommodation is controlled for, Hukari's original generalization does hold: bare adjectives may not form the nuclei of 'headless' relative clauses, unlike verbs, nor be directly selected for by determiners, unlike nouns. This pattern provides a supporting argument for a distinct category of adjectives in St'át'imcets.

4.3. Adjectives and gradability in St'át'imcets.

Another potential diagnostic for adjectives is provided by the syntax of comparatives and degree words. However, a word of caution is necessary before beginning such an examination: as Doetjes (2008) emphasizes in her careful investigation of the relation between degree modifiers and adjectives in English, Dutch and French, the class of gradable predicates is much broader than the syntactic category of adjective, and many degree modifiers (including *très* 'very' in French, *erg* 'very' in Dutch, and *less* in English) apply to a broad range of gradable predicates, including but by no means limited to adjectives. Furthermore, others (e.g., *much* in English and its French and Dutch equivalents *beaucoup* and *veel*) do not apply to adjectives at all. Doetjes does, however, identify a subclass of 'Type A' degree modifiers (including English *very*) which are limited to adjectives; it is these modifiers which have the potential to act as diagnostics for adjectival status.

At first glance, St'át'imcets seems to lack Type A degree modifiers altogether. There is no equivalent of English *very*; the closest analogues are the adverbial auxiliaries *stexw* and *álas*, which both mean 'really, truly' (*stexw* has a literal meaning of 'straight', *álas* lacks a literal meaning).[21] Both occur freely with verbs (52)-(55), and *stexw* also occurs with nouns with the meaning 'real, genuine' (56).

[21] Another auxiliary, *kéla7* (literally 'first') is also employed as an intensifier by Lower St'át'imcets speakers; I have not yet had the chance to systematically assess its distribution across lexical categories.

(52) *stéxw*=t'u7 wa7 *p'áwew* ta=tsítcw=a
really=EXCL IMPF *echo* DET=house=EXIS
'The house really echoes.' (Frank et al. 2002)

(53) *stexw*=kán=t'u7 wa7 *xwey-s* i=n-slalíl'tem=a
really=1SG.SU=EXCL IMPF *be.dear-CAU* PL.DET-1SG.POSS=parent=EXIS
'I really love my parents.' (Frank et al. 2002)

(54) *alas*=kácw=t'u7 *qíqts'-min*, nílh=t'u7 s=7áma=s
really=2SG.SU=EXCL *chew-RED* FOC=EXCL NOM=good=3POSS
'You chew it really well, until it is good.' (van Eijk and Williams 1981:10)

(55) *álas*=t'u7 wa7 *ít'x-ts-am'* ta=wá7 q'wéq'ws-eq sk'úk'wmi7t
really=EXCL IMPF *scream-mouth-MID* DET=IMPF painful-bottom baby
'The baby with the painful bottom is really screaming.' (Alexander et al. 2006)

(56) *stéxw*=ti7 ku=*7úcwalmicw*
really=DEM DET=*Indian.person*
'He's a real Indian.'[22]

More promising are the comparative adverb *p'a7cw* 'more' and the WH-degree word *skenkán* 'how (much)'. Both are usually found with adjectives, as shown in (57)-(58) for *p'a7cw* and in (59)-(61) for *skenkán*:[23]

(57) *p'a7cw* kw=e=s *megmág*
more DET+NOM=IMPF=3POSS *bright*
'It's brighter.'

(58) nán'atcw, nilh s=t'iq-s-twítas ta=lán=a wa7 *p'a7cw*
morning FOC NOM=bring-CAU-3PL.ERG DET=already=EXIS IMPF *more*
s=*xz.ézem'*=s lhel=s7éntsa smém'lhats
NOM=*CRE.big*=3POSS from=me girl
'In the morning, they brought a girl who was a little bigger than me.'[24] (Matthewson 2005:430)

(59) *p'a7cw* s=*cw7it*=s lh=was súkwh-am lhel=s7énts
more NOM=*much*=3POSS COMP=IMPF+3CNJ sugar=MID from=me
'She takes more sugar than I do.'

[22] In this example, *stexw* is the main predicate, rather than an auxiliary; a more literal translation would be: 'That Indian is real, genuine.'
[23] Like many adverbial elements in St'át'imcets, *p'a7cw* and *skenkan* act syntactically as main predicates whose internal argument takes the form of a nominalized subordinate clause, with or without an initial determiner: see footnote 4 above and Arregui and Matthewson (2001).
[24] This example contains a spontaneously produced same side effect violation: see 2.1 above.

(60) cw7áoy=t'u7 kw=s=zewát-en-an s-*kenkán*=as *cin'*=s
NEG=EXCL DET=NOM=know-TRA-1SG.ERG STA-*how*=3CNJ *long*=3POSS
kw=e=s wa7
DET+NOM=IMPF=3POSS be.there
'I don't know how long she was there for.' (Matthewson 2005:63)

(61) *s-kenkán* kw=s=*kekáw'*=s kw=s=mátq=su
STA-*how* DET=NOM=*far*=3POSS DET=NOM=walk=2SG.POSS
'How far did you walk?' (van Eijk 1987:155)

However, there are examples where both these elements quantify over entities rather than over degrees: relevant cases with *p'a7cw* are given in (62) and (63), and with *skenkán* in (64):

(62) plán=lhkalh aylh wa7 [*p'a7cw* ku=*7úcwalmicw*] wa7
already=1PL.SU then IMPF [*more* DET=*Indian*] IMPF
tsicw skul lts7a sát'=a
go.there school here Lillooet=EXIS
'By that time there were already more Indians going to school here in Lillooet.'
(Matthewson 2005:130)

(63) cuy, lhum-un-í=malh [ku=*p'á7cw* *sel*]
go.ahead attach-TRA-PL.IMP=ADHORT [DET=*more* *string*]
l=ki=kwíkws=a pátkwa
on=PL.DET=small=EXIS needle
'Okay, put some more string on the little needles.'

(64) [*skenkán* *súkwa*] ku=s-técwp-su
[*how.much* *sugar*] DET=NOM-buy-2SG.POSS
'How much sugar did you buy?'

Note that *skenkán* in (64) occurs as a modifier within a CNP headed by *súkwa* 'sugar'. As such, it parallels other weak quantifiers (e.g., *cw7it* 'many, much', *k'wík'wena7* '(a) few, a little', and numbers), which occur frequently as adjectival modifiers in CNPs. But of course since *skenkán* is modifying a noun here, it cannot be characterized exclusively as an A-type modifier. More broadly, there do not appear to be *any* such modifiers in St'át'imcets.

There is, however, one way in which the syntax of comparison *does* yield a test for at least the subclass of gradable adjectives. Aside from comparatives with *p'a7cw*, St'át'imcets also allows structures such as those in (65)-(67) where a comparative interpretation arises simply by adding a standard of comparison, in the form of a PP headed by *lhel=* 'from'.[25]

(65) *pvmp* ti7 ku=káoh *lhel*=n-tsúw7=a
fast that DET=car *from*=(DET)1SG.POSS-own=EXIS
'That car is faster than mine.'

[25] Other prepositions are also sometimes used to introduce the standard of comparison, including *e=* 'to' and *l=* 'at'.

(66) *zexw.záxw* ta=sqwiqwent-átkw7=a *lhel*=ta=mixalh-átkw7=a
soft/melted[TRE] DET=whistler-liquid=EXIS *from*=DET-bear-liquid=EXIS
'Whistler (Hoary Marmot) grease is softer (more liquid-y) than bear grease.'

(67) *títca7* ts7a ku=c.wálh *lhel*=na=núkw=a
narrow this DET=road *from*=ABS.DET=other=EXIS
'This road is narrower than the other one.'

Unlike comparatives with *p'a7cw*, these 'bare comparatives' are restricted to notional adjectives: for example, verbs derived from the same roots as the adjectives in (65)-(66) do not form bare comparatives, but must use *p'a7cw* instead:

(68) a. **pvm-íl̓c* ti7 ku=káoh lhel=n-tsúw7=a
fast-AUT that DET=car from=(DET)1SG.POSS-own=EXIS

b. *p'a7cw* ti7 kwas *pvm-íl̓c* ku=káoh
more that DET+NOM=IMPF=3POSS *fast-AUT* DET=car
lhel=n-tsúw7=a
from=(DET)1SG.POSS-own=EXIS
'That car goes faster than mine.'

(69) a. **za-7-xw* ta=sqwiqwent-átkw7=a *lhel*=ta=mixalh-átkw7=a
melt[INC] DET=whistler-liquid=EXIS *from*=DET-bear-liquid=EXIS

b. *p'a7cw* kwas *za-7-xw* ta=sqwiqwent-átkw7=a
more DET+NOM=IMPF=3POSS *melt[INC]* DET=whistler-liquid=EXIS
lhel=ta=mixalh-átkw7=a
from=DET-bear-liquid=EXIS
'Whistler (Hoary Marmot) grease melts more (easily) than bear grease.'

With adjectives such as color terms which do not denote 'naturally' gradable properties, *p'a7cw* is also preferable:

(70) a.?? *peq* ts7a ku=sktíts'a7 *lhel*=ta=núkw=a
white this DET=shirt *from*=DET=other=EXIS
'This shirt is whiter than the other one.'

b. *p'a7cw* s=*peq*=s ts7a ku=sktíts'a7 *lhel*=ta=núkw=a
more NOM=*white*=3POSS this DET=shirt *from*=DET=other=EXIS
'This shirt is whiter than the other one.'

(71) a.?? *q'wexq'wíx* ti7 ku=ntsqústen *lhel*=ts7á-wna
black that DET=saucepan *from*=this-exact
'That pan is blacker than this one here.'
Consultant's comment: 'I guess it would work…'

b. *p'a7cw* s=*q'wexq'wíx*=s ti7 ku=ntsqústen *lhel*=ts7á-wna
more NOM=*black*=3POSS that DET=saucepan *from*=this-exact
'That pan is blacker than this one here.'

These examples support the following generalization:

(72) *Only 'naturally' gradable adjectives form bare comparatives.*

This means that the ability to form a bare comparative constitutes a sufficient but not a necessary condition for an adjective.

To conclude this section: of the three potential supporting syntactic arguments for the category adjective which we have examined (order of pre-head modifiers, NP ellipsis, and bare comparatives), the first provides weak support for the distinction between clausal and non-clausal modifiers, the second provides a promising additional test for the category adjective once methodological issues have been sorted out, and the third yields a sufficient but not a necessary categorial diagnostic. Overall, the results are positive, and reinforce the conclusion we reached earlier on the basis of argument modification that a separate syntactic class of adjectives must be distinguished from both verbs and nouns in St'át'imcets.

5. The morphology of adjectives in St'át'imcets.

In this section I detail the major morphological characteristics of adjectives in St'át'imcets. My main goal here is to show that while most adjectives bear some form of morphological marking, and some patterns are sufficient to identify an adjective, no morphological characteristic or combination of characteristics is a necessary property of the class as a whole. This should not come as a surprise: it is typical of derivational (as opposed to inflectional) morphology in general. In fact, it simply shows us that adjectives in St'át'imcets have no distinctive inflectional signature, as opposed to English, where – unusually – comparative and superlative morphology (*-er* and *-est*) *are* inflectional (as shown, for example, by their alternation with the free morphemes *more* and *most*). The lack of adjective-specific inflectional morphology in St'át'imcets is one of the reasons why the category has been difficult to identify, since inflectional morphology (e.g., agreement) provides an obvious set of categorial diagnostics; the absence of such diagnostics, however, should *not* be taken to signify the absence of the syntactic category itself, as I have taken pains to show in Sections 2-4 above.

In the following subsections, I give a catalogue of all the major morphological reflexes of the category adjective in St'át'imcets, beginning with bare roots, and ending with outer layers of the derivational morphology. In each case, I will indicate – as far as it is possible to ascertain – the category of the input, that of the output, and whether a particular morphological exponent is unique to or has a unique effect on adjectives. Note that throughout, I take a root-based approach to Salish morphology, as opposed to a stem- or 'lexeme'-based approach, as advocated by e.g. Mattina (1996) for Okanagan. I do not have space to justify this approach here: see Davis and Matthewson (2009) for some pertinent remarks on the psychological and linguistic reality of the Salish root.

5.1. Bare root adjectives.

Many adjectives (both stage and individual level) surface without overt morphology. A selection is given below:

(73)	a.	*ca7*	'high'	√c(a)7[26]
	b.	*qwnuxw*	'sick' (Upper dialect)	√qwnuxw
	c.	*luts'*	'tight'	√luts'
	d.	*xelh*	'cold (weather)'	√x(e)lh
	e.	*pus*	'wet'	√pus
	f.	*máwal'*	'alive'	√máwal'
	g.	*qwits*	'rich'	√qwits
	h.	*meq'*	'full, satiated (appetite)'	√m(e)q'
	i.	*kéla7*	'first'	√kel(a)7
	j.	*t'ec*	'sweet, tasty'	√t'(e)c

Though the possibility that these are zero-derived forms cannot be overlooked, there is no independent motivation for such a process: the more economical view is simply that the roots themselves are lexically specified as adjectival.

5.2. Root-based derivations.

A large number of adjectives are formed by operations which take the root as base. These include several types of reduplication, various affixation processes, and combinations thereof. I list each process separately below.

5.2.1. 'Total' (CVC) reduplication.

Many adjectives in St'át'imcets surface only in reduplicated form. The most common adjective-forming reduplicative process is 'total' reduplication, which involves prefixing a copy of the first two consonants of the root to the root itself, with concomitant insertion of an epenthetic schwa. If the root is 'weak' (contains no full vowel) stress falls on the prefixal schwa: otherwise, it falls on the root vowel (van Eijk 1997:61-66). A selection of adjectives derived by total reduplication is given below:

(74)	a.	*célh.celh*	'eager, diligent'	√c(e)lh
	b.	*gél.gel*	'strong'	√g(e)l
	c.	*men.mán*	'shady'	√man
	d.	*segw.sígw*	'loose'	√sigw
	e.	*meg.mág*	'bright'	√mag
	f.	*tsek.tsák*	'cool'	√tsak
	g.	*nes.nús*	'damp'	√nus
	h.	*t'el'.t'úl'*	'calm (water)'	√t'ul'
	i.	*mekw.mákw*	'dull (blade)'	√makw
	j.	*qecw.qícw*	'wild'	√qicw

[26] Schwas (and their allophones, such as the [a] that occurs before a tautosyllabic glottal stop) are given in parentheses in the root descriptions here, to reflect the likelihood that they are not present in underlying representations. See Matthewson (1994).

There is a morphological generalization separating reduplicated from bare root adjectives: as a rule, adjectives which have undergone total reduplication are derived from bound roots which do not surface independently, but do undergo other morphological processes to yield verbs (and less frequently, nouns). Below I give verbs formed from the roots in (74):

(75)	a.	*celh-antsút*	'volunteer'	√c(e)lh
	b.	*gel-ílc*	'try hard, do one's best'	√g(e)l
	c.	*mán-lec*	'shade oneself'	√man
	d.	*sí-7-eg'w*	'come loose'	√sigw
	e.	*ma-7-eg'*	'get light'	√mag
	f.	*tsa-7-k*	'get cool'	√tsak
	g.	*nu-7-s*	'get damp'	√nus
	h.	*t'u-7-el'*	'get calm (water)'	√t'ul'
	i.	*ma-7-kw*	'get dull (blade)'	√makw
	j.	*qi-7-cw*	'bolt, run away (of an animal)'	√qicw

In contrast, bare root adjectives do not undergo root-based operations. This suggests a difference in the status of the 'bound root' adjectives in (74) and the 'bare root' adjectives in (73): whereas the latter, as suggested above in 5.1, are categorially specified as adjectives at the root level, the former are probably better described as based on category-neutral roots, with the morphological operation of total reduplication itself responsible for giving the adjective its categorial signature.

Color terms illustrate this division rather clearly. Some color adjectives, such as *qwez.qwáz* 'blue' and *tseqw.tsíqw* 'red' are derived from bound roots and obligatorily undergo total reduplication, while others, including *peq* 'white' and *kwl̲ii7* 'green/yellow' are bare roots, and never undergo reduplication.[27] The bound roots √*qwaz* and √*tsiqw* may undergo infixation of the inchoative morpheme *-7-* to yield the change-of-state verbs *qwá-7-ez'* 'go blue' and *tsi-7-q(w)-ús* 'go red in the face, blush'. In contrast, the bare root adjectives *peq* 'white' and *kwl̲ii7* 'green/ yellow' cannot undergo inchoative affixation, and can only form verbs via stem-based operations applying at an outer layer of the morphology.

It is worth pointing out that there is no semantic basis for the morphological division of adjectives into bound and bare root forms, as shown by color terms, which arbitrarily fall into one or the other of these two classes. In fact, there is a larger generalization here: total reduplication has no semantic effect at all on adjectives. In this respect, adjectives contrast rather strikingly with nouns and verbs, both of which yield a plural interpretation (over entities and events, respectively) when totally reduplicated, as shown in (76)-(77) below.[28] In contrast, when applied to adjectives, total reduplication does not denote plurality of either states or participants (78).

[27] John Lyon (p.c. 2012) reports that one Lower dialect speaker from Xáxtsa7 (Port Douglas) in the far south of St'át'imc territory employs the simplex color terms *q'wix* 'black' and *tsiqw* 'red', and uses the reduplicated forms only with an intensive meaning. I have not come across this pattern elsewhere; I suspect it might be an innovation resulting from reanalysis of phonologically reduced forms, since one of the Lower dialect speakers I work with (originally from Lil'wat7úl (Mount Currie)) systematically reduces *tseqwtsíqw* to *qwtsiqw*.

[28] For this reason, some Salishanists (e.g., Thompson and Thompson 1992) split CVC reduplication into two different processes: on adjectives, it is termed 'characteristic', while on nouns and verbs it is known as 'augmentative'.

(76) *Nouns with total (CVC) reduplication*

a. *smúlhats* na=t'ák=a
woman ABS.DET=go.along=EXIS
'A woman was going along.'

b. *smelh.múlhats* nelh=t'ák=a
women[TRE] PL.ABS.DET=go.along=EXIS
'Women were going along.'[29]

(77) *Verbs with total (CVC) reduplication*

a. *seq-cál*=lhkacw=ha
split.wood-ACT=2SG.SU=YNQ
'Did you split a log?'

b. *seq.seq-cál*=lhkacw=ha
split.wood[TRE]-ACT=2SG.SU
'Did you split (a bunch of) logs?' (i.e., did you do a bunch of splitting?)

(78) *Adjectives with total (CVC) reduplication*

a. *gél.gel*=ha na=nuk'w7-an-tsí-has=a
strong[TRE]=YNQ ABS.DET=see-TRA-2SG.OBJ-3ERG=EXIS
'Was the one who helped you strong?'

b. *gél.gel*=ha nelh=nuk'w7-an-tsí-has=a
strong[TRE]=YNQ PL.ABS.DET=see-TRA-2SG.OBJ-3ERG=EXIS
'Were the ones who helped you strong?'

The effect of total reduplication on adjectives is thus complementary to its effect on nouns and verbs. On the former, it is semantically vacuous, but category-deriving; on the latter, it is semantically active, but applies to categorially pre-specified roots.[30]

However, as to be expected with derivational morphology, there are exceptions to this generalization. Certain nouns (e.g., *kéc.kec* 'older sister', *p'eg'.p'íg'lha* 'frog') and verbs (e.g., *sáy'.sez'* 'play') also have the lexical peculiarity of being obligatorily reduplicated without a

[29] The distribution of total reduplication on nouns is somewhat more complex than (76) might indicate, because of interaction with the number specification on determiners. Briefly, total reduplication on plural nouns in predicate position is optional as long as there is a plural determiner on the argument, obligatory otherwise; on nouns in argument position, total reduplication is always optional, because plurality is obligatorily marked on the determiner. See Davis (2003) for discussion.

[30] The variable locus of the categorial signature in these cases means that a uniformly 'precategorial' operation of total reduplication, as proposed by Wiltschko (2005) for Upriver Halkomelem, cannot be correct for St'át'imcets. A further implication is that 'root' cannot be a syntactic category, contra Wiltschko, since root-based operations can apply to categorially prespecified lexical items.

semantic effect. And there are a few adjectives where total reduplication *does* have a semantic effect: *qwnuxw* means 'sick' (Upper dialect) but *qwen.qwnúxw* means 'sick people', with both a category change (to a noun) and the addition of plural semantics. In short, though the semantic (non-)effect of total reduplication is usually distinctive on adjectives, it is obviously not a necessary property of the category, nor an exceptionless one.[31]

5.2.2. Final (C_2) reduplication.

A much smaller set of adjectives is derived by 'final' reduplication, which involves a suffixal copy of the second consonant of the root, with concomitant schwa insertion (van Eijk 1997:58-59). Examples are given in (79).

(79)	a.	*zúw.ew*	'slow (action)'	√zuw
	b.	*áw'.w'et*	'late'	√aw't

Final reduplication is one of a set of morphological operations whose principal function is aspectual, but which are used secondarily to derive adjectives. Normally, it adds a connotation of spontaneous or accidental occurrence or of extra difficulty to a verb root with a change-of-state meaning; for this reason it is sometimes referred to as 'out of control' in the literature on Interior Salish languages (see Carlson and Thompson 1982, Kinkade 1982, van Eijk 1990). Typical examples in St'át'imcets include *lép'.ep'* 'get buried', *lhwál.el* 'get left behind, abandoned', *múl.el* 'get immersed in liquid', *t'íq.eq* 'make it here, finally arrive'.

Interestingly, the effect of final reduplication on adjectives is almost exactly the same as that of total reduplication. Just like total reduplication, it is semantically inert on adjectives, and just like total reduplication, it targets bound (precategorial) roots when deriving adjectives, but categorically specified (verbal) roots otherwise.

There are also a number of bare root adjectives which look like they contain relics of final reduplication: these include *plhulh* 'thick (material)', *qlil* 'angry', and *t'alál* 'tired' (Upper dialect). The last of these is instructive, because it is (at least diachronically) based on the root √*t'al* 'stop', which undergoes regular final reduplication to yield *t'ál.el* 'stop spontaneously' (of e.g., rain or wind).

5.2.3. Initial (C_1) reduplication.

A third reduplicative process, initial reduplication, is also found on a few adjectives, as shown in (80).

(80)	a.	*xe.xzúm*	'big (plural)'	√xzum
		kwe.kwíkws	'small (plural)'	√kwikws
		ke.káw'	'far'	√kaw

Initial reduplication is unproductive and often semantically obscure in St'át'imcets (van Eijk 1997:57-58), though it is most often used to express plurality or collectivity on nouns, as in

[31] Give that total reduplication has no semantic effect, it is reasonable to ask why we should not assume it is simply lexicalized on adjectives. The answer is that we would miss a generalization: aside from a few obvious exceptions (which *are* lexicalized), *only* adjectives (in fact, only bound root adjectives) undergo semantically vacuous total reduplication. There is also, of course, a sense in which all derivational operations are lexicalized, if one assumes – as I do – that both their input and output are listed in the lexicon.

sqwe.qwyíts ‘rabbits’, *spe.pzúza7* ‘birds’, and continued action on verbs, as in *sta.tálhlec* ‘to keep standing’, *cwi.cwíten* ‘to keep whistling’. Unlike total and final reduplication, initial reduplication is semantically active on two adjectives, *xzum* ‘big’ and *kwikws* ‘small’, marking the plurality of their argument. These are the only adjectives in St’át’imcets where plurality is overtly marked.[32]

5.2.4. The stative prefix *(e)s-*.[33]

The stative prefix is another morphological operation with a primary aspectual and a secondary adjective-deriving function. Stative-marked adjectives are quite frequent in St’át’imcets: examples are given in (81).

(81)

s-xel’	‘steep’	√x(e)l’
s-zuqw	‘dead’	√zuqw
s-q’waxw	‘skinny’	√q’waxw
s-k’wilh	‘left over, remaining’	√k’wilh
s-kwil’	‘ready’	√kwil’
s-k’igw	‘frail, sickly’	√k’igw
s-7ilhcw	‘different’	√7icwlh
s-tsugw	‘striped’	√tsugw
s-k’olts’	‘bent, crooked’	√k’olts’
s-xiw’	‘raw’	√xiw’

Like total and final reduplication, the stative prefix generally attaches to bound roots (of the roots above, only *zuqw* ‘die’ occurs as a free form). However, unlike with final reduplication, where the adjectival sense is quite distinct from the verbal one, the meaning of stative-marked adjectives is quite close to that of stative-marked verbs. The latter have a result state meaning, as shown in the examples in (82)-(84).[34]

(82) plan wa7 *s*-lhum ta=s-tlh-ayen-lhkálh=a
already IMPF *STA*-set DET=NOM-stretch-net-1PL.POSS=EXIS
‘Our gillnet is already set.’

(83) wá7=tu7 láti7 *s*-law i=ts’éts’qwaz’=a l=ki=múlc=a
IMPF=DIST there *STA*-hang PL.DET=trout=EXIS on=PL.DET=stick=EXIS
‘Trout were hanging there on sticks.’

(84) cw7it i=n-wáq’=a wa7 *s*-7axw lts7a
many PL.DET=LOC-hollow=EXIS IMPF *STA*-dig here
‘There are many holes dug here.’

[32] Initial reduplication on *xzum* ‘big’ appears to be limited to forms with lexical suffixes (a special set of bound roots with substantive content which are obligatorily suffixed to other roots). Thus we get *n-xexzúm-ána7 (ti7)* ‘He is big-eared’, but not **xexzúm i t’éna7sa* ‘His ears are big.’ I have no idea why this should be the case.

[33] The stative prefix is sometimes pronounced as [ʔəš], with an initial vowel reflecting its Proto-Salish origin as *ʔac-. However, the initial vowel is often dropped in the Upper dialect, and is usually absent in the Lower dialect. I use the vowel-less form here for convenience.

[34] On nouns, *(e)s-* yields a distinctive possessive meaning, which I set aside here; see Burton and Davis (1996).

Assuming that result states consist of an event (a transition) followed by a state, it is easy to see how stative verbs could be converted to adjectives, simply by failing to inherit the event argument of the verbal roots on which they are based: they will then have the aspectual character of simple states, and crucially fail to project to clauses. And in fact, this does seem to occur regularly with stative-marked predicates, which show variable behavior with respect to the syntactic diagnostics we have developed to distinguish verbs from adjectives. Some stative-marked forms occur freely as bare post-head modifiers, and thus pattern like verbs, as in (85); others are ungrammatical in this position, and thus pattern like adjectives, as in (86); and still others vary, depending on the speaker, as in (87).

(85) cw7áoz=as kw=a=su k'w.wát-em l=ta=n-xlílap=a
NEG=3CNJ DET+NOM=IMPF=2SG.POSS tread-MID on=DET=1SG.POSS-floor=EXIS
s-ts'ex
STA-clean
'Don't step on my floor that's been cleaned!'

(86) *wa7 qwez-en-ém i=qú7=a *s-pulh* kents7á
IMPF use-TRA-PASS PL.DET=water=EXIS *STA-boil* around.here
'We use boiled water around here.'
Consultant's correction: i spúlha qu7

(87) %ús-ts=kan i=sáy'si7ten-s=a *s-qácw*
discard-CAU=1SG.SU PL.DET=toy-3POSS=EXIS *STA-break*
n-skwezkwekwez7=a
1SG.POSS-offspring(PL)=EXIS
'I threw out my children's toys that were broken.'

Note that aside from forms like (85)-(87), which are potentially ambiguous between verbal and adjectival behavior, there are also unambiguously adjectival forms where a result state (eventive) interpretation of the predicate is impossible, as in (88)-(89); the stative marker here has clearly been lexicalized.

(88) *s*-xel' ta=xzúm=a s-7acw
STA-steep DET=big=EXIS NOM-slide
'The big slide is steep.' (# 'The big slide has been steepened.')

(89) *s*-7icwlh ta=zúmak=a lhel=ta=sxwá7s=a
STA-different DET=spring.salmon=EXIS from=DET=sockeye=EXIS
'The spring salmon is different from the sockeye.' (# 'The spring salmon has been differentiated from the sockeye.')

Thus result state predicates occupy a transitional zone between the lexical classes of verb and adjective, as might be expected on the basis of their lexical semantics. At one end, we find unambiguous adjectives with a lexicalized (and aspectually inert) stative marker; at the other,

unambiguous verbs with a semantically active stative marker yielding a result state interpretation; and in the middle, varying degrees of ambiguity and uncertainty.

5.2.4.1. The stative prefix *(e)s-* + total reduplication.

In a number of cases, adjectives in St'át'imcets are marked both by total reduplication and non-reduplicative affixes. These include a few stative-marked adjectives, exemplified below:

(90)	a.	*s-ném'.nem'*	'blind'	√n(e)m'
	b.	*s-ken.kín*	'slow (speed)'	√kin

These cases are unambiguously adjectival; just as with other adjectives derived via total reduplication, the semantic effect of affixation (in this case, the stative prefix) is neutralized.

5.2.5. 'The 'immediate' suffix *-(V)t*.

The 'immediate' suffix is widespread in Interior Salish, but semantically obscure (there is nothing particularly 'immediate' about it).[35] In St'át'imcets, it appears sporadically on intransitive verbs (e.g. *lhap-t* 'go out (of a fire)', *ts'niqw-t* 'argue, fight' (Upper dialect), *may-t* 'fix, make') and appears by itself on a couple of adjectives:

(91)	a.	*zac-t*	'long'	√zac	(cf. *zác-al'qwem'* 'tall')
	b.	*zaw'-t*	'annoyed, fed up'	√zaw'	(cf. *zá-7-ew'* 'get annoyed')

In addition, another dimensional adjective, *lhq'í.q'-at* 'short' appears to involve final reduplication plus a fossilized form of the immediate suffix (cf. *lheq'íq'-al'qwem'* 'short (of a person)'.

However, the immediate suffix is much more commonly used to mark adjectives in combination with total reduplication, as detailed below.

5.2.5.1. The immediate suffix *-(V)t* + total reduplication.

The combination of total reduplication and the immediate suffix constitutes one of the more distinctive morphological signatures of an adjective. Typical examples are given in (92):

(92)	a.	*qwám.qwm-et*	'funny'	√qwam
	b.	*k'ín.k'en-t*	'dangerous'	√k'in
	c.	*kwíw.kww-et*	'slippery'	√kwiw
	d.	*ts'éz.ts'ezk'-et*	'scary'	√ts'(e)zk'
	e.	*páol̲.pv̲l̲-t*	'stubborn'	√paol̲
	f.	*zaw'.ezw'-et*	'annoying'	√zaw'

This combination appears to have – at least residually – a distinct quasi-causative meaning. This is seen most easily by comparing *zaw'-t* (91b) with *záw'.ezw'-et* (92f). The former signifies that its subject is in a state of annoyance, the latter that its subject is the cause of annoyance. Most of the examples in (92) share this quasi-causative semantics, though it is not obvious how to extend it to e.g. *páol̲.pv̲l̲-t* 'stubborn' (92e).

[35] The term is from Thompson and Thompson (1992).

5.2.6. The 'characteristic' suffix *–Vm*.

Like the immediate suffix, the 'characteristic' suffix is semantically obscure. It is also homophonous with the widespread middle suffix *-Vm*, which occurs in every Salish language, and is often differentiated into a cluster of different meanings (cf. Gerdts and Hukari 2006 on the middle in Halkomelem). As with the immediate suffix, few adjectives are marked by the characteristic suffix alone, but many occur with the suffix in combination with total reduplication. Examples of non-reduplicated adjectives with the characteristic suffix are given in (93).

(93)	a.	*sc-am*	'crazy'	√s(e)c
	b.	*páq-em*	'mouldy'	√paq

5.2.6.1. The characteristic suffix *-Vm* + total reduplication.

The examples below illustrate the combination of characteristic marking plus total reduplication; as with immediate marking plus reduplication, this combination is only found with adjectives.

(94)	a.	*ts'éx.ts'x-em*	'clean'	√ts'(e)x
	b.	*t'ép.t'p-em*	'dark'	√t'(e)p
	c.	*kwéz.kwz-em*	'smooth'	√kw(e)z
	d.	*tsélh.tslh-em*	'bright, sober'	√ts(e)lh
	e.	*wéq'.weq'-em*	'shiny'	√w(e)q'

It is probably not a coincidence that all the forms in (94) are based on 'weak' (schwa-only) roots. Indeed, it is possible to view the combination of characteristic suffix and total reduplication as the 'weak allomorph' of the combination of immediate suffix and total reduplication, which usually occurs with full vowel roots (but see (92d) for an exception). Note however, that the adjectives in (94) lack the quasi-causative semantics associated with the immediate suffix-total reduplication combination.

In addition to total reduplication, the characteristic suffix occasionally co-occurs with other reduplicative morphemes, as in *cwáo.cwl̓-aom* 'light (of weight)', which has undergone consonant reduplication (see 5.3.1 below). This combination is confined to a few relic forms.

5.2.7. The inchoative infix/suffix *-7-/-p*.[36]

Inchoative marking, which has two quite distinct allomorphs, a glottal infix *-7-* in strong roots and a suffixal *-p* on weak roots, normally yields a verb with a change-of-state meaning (somewhat similar to final reduplication, but without 'out-of-control' connotations). Examples include *su-7-t'* drain', *ri-7-p* 'grow', *za-7-xw* 'melt', *gwel-p* 'burn', *rvn'-p* 'freeze to death', and *kelh-p* 'come apart'. Adjectives with inchoative marking include the following:

(96)	a.	*qem-p*	'hot'	√q(e)m
	b.	*qá-7-ez'*	'tired'	√qaz'
	c.	*pvm-p*	'fast (speed)'	√p(v)m

[36] The *-p* allomorph occurs with weak (schwa-only) roots, the infix elsewhere: see Van Eijk (1997:67,72).

d.	*q'es-p*	'anxious (e.g., for someone to arrive)'	√q'(e)s
e.	*xa-7-s*	'aching (from lack of exercise)'	√xas

Like final reduplication, inchoative marking loses its aspectual effect on adjectives: for example, *qem-p* does not mean 'get hot', *pvm-p* does not mean 'speed up', and *qá-7-ez'* does not (usually) mean 'get tired'.[37] Furthermore, 'adjectival inchoatives', unlike inchoative-marked verbs, can be further suffixed with the 'developmental' suffix *-wíl'c* (van Eijk 1997:104), which, like inchoative marking, yields a change-of-state interpretation, but may only be attached to *non-verbal* predicates (cf. 5.3.3 below).

(97) gélgel ta=snéqwem=a, nilh s=*qem-p-wíl'c*=s
strong DET=sun=EXIS FOC NOM=hot-INCH-DEV=3POSS
'The sun was strong, so it got hot.'

(98) máys-en=lhkan ta=n-káoh=a, nilh kw=s=*pvm-p-wíl'c*=s
fix-TRA=1SG.SU DET=1SG.POSS-car=EXIS FOC DET=NOM=fast-INCH-DEV=3POSS
'I've fixed my car so it goes fast.'

(99) cw7it i=s-zácen-s=a, nilh s=*qa-7-ez'-wíl'c*=s
much PL.DET=NOM-carry.on.back-3POSS=EXIS FOC NOM=tired[INCH]-DEV=3POSS
'He carried a lot on his back, so he got tired.'

This provides further evidence that inchoative morphology on adjectives is semantically inert.

5.2.7.1. The inchoative infix/suffix *-7-/-p* + total reduplication.
Like other adjective-deriving affixes, the inchoative infix sometimes occurs together with total reduplication (though not as frequently as with the characteristic and immediate suffixes). As in simple cases of inchoative-marked adjectives, inchoative morphology in this combination is semantically inert.

(100)	a.	*tsá7.ts-7-acw*	'glad'	√tsacw
	b.	*xá7.x-7-as*	'aching all over'	√xas
	c.	*q'es.q's-ep*	'anxious (e.g. for someone to arrive)'	√q'(e)s

Note that inchoative infixation feeds total reduplication here, which is why the glottal infix in (a) and (b) above forms part of the reduplicant (van Eijk 1997:68). This is interesting, because it means that the input to reduplication is already inchoative-marked, in contrast to cases where (adjective-deriving) total reduplication is in complementary distribution with (verb-deriving)

[37] Many stage-level adjectives (including, but not confined to, those with inchoative marking) can be coerced into change-of-state behavior in appropriate contexts (e.g., with aspectual auxiliaries such as *plan* 'already' or punctual adverbs such as *aylh* 'at that/this point'). In fact, Bar-el (2005) and Kiyota (2008) recognize a distinct aspectual class of 'inchoative states' on the basis of similar data from Squamish and Northern Straits Salish, respectively. While I am not sure this move is justified (I suspect that the change-of-state interpretation is pragmatically coerced rather than deriving from a lexical property of the relevant predicates), it has no bearing on the *syntactic* status of adjectives, since inchoative-marked adjectives still differ from inchoative-marked verbs in having a primary state rather than change-of-state interpretation.

inchoative marking (see 5.2.1 above). However, in the cases in (100) inchoative marking is inert even *before* reduplication applies: *tsa-7-cw* means 'glad', not 'become glad', *xa-7-s* means 'aching', not 'starting to ache', and *q'es-p* means anxious, not 'get anxious'. Thus these cases of multiple exponence actually support the generalization that semantically active verbal morphology is in complementary distribution with adjective-deriving total reduplication.

5.3. Adjectives and stem-based morphology.

In addition to the root-based processes detailed in 5.2. above, St'át'imcets has a number of operations which target an outer morphological layer, which I label the 'stem', for reasons of convenience. Several of these are implicated in the morphology of adjectives, as detailed below.

5.3.1. Adjectives and consonant reduplication.

Consonant reduplication (van Eijk 1997:60) targets the consonant immediately preceding the primary stressed vowel in a stem (which is usually, but not always the root vowel), and copies it after the vowel, which is realized as a stressed schwa; it also induces glottalization on the last resonant of the stem (if there is one).

On nouns and verbs, consonant reduplication (which is fully productive and compositional) yields a diminutive interpretation: see for example *tsitcw* 'house', *tsé.tstecw* 'little house' (also 'outhouse, toilet'); *sqáxa7* 'dog', *sqé.qxa7* 'little dog, puppy'; *máqa7* 'snow', *mé.m'qa7* 'to snow a bit, a little snow'; *matq* 'to walk, travel', *má.m'teq* 'to go for a walk, walk for a bit'. However, on gradable adjectives, consonant reduplication yields a distinct meaning of 'a little (bit) *more*', as shown in (101)-(103); see also (50) above.

(101) *zé.zc-al'qwem'* n-sésq'wez'=a lhel=s7énts
long[CRE]-looking 1SG.POSS-younger.sibling=EXIS from=me
'My younger brother is a little bit taller than me.'

(102) *ge.gel.gel'*=lhkácw lhel=s7énts
strong[CRE+TRE]=2SG.SU from=me
'You're just a little bit stronger than me.'

(103) xaq'-en-tsálem ta=*cw7í.7it*=a sqlaw'
pay-TRA-1SG.PASS DET=*much[CRE]*=EXIS money
'They paid me a little bit more money.'

This impression is misleading, however. The comparative meaning is a lexical property of gradable adjectives, not a property of consonant reduplication: as we have already seen in 4.3, gradable adjectives yield a comparative interpretation just as easily *without* reduplication, simply by the addition of a standard of comparison (see 4.3 above).

(104) *zác-al'qwem'* n-sésq'wez'=a lhel=s7énts
long-looking 1SG.POSS-younger.sibling=EXIS from=me
'My younger brother is taller than me.'

(105) *gel.gel*=lhkácw lhel=s7énts
strong[TRE]=2SG.SU from=me
'You're stronger than me.'

The semantic contribution of consonant reduplication with adjectives, then, turns out to be simply 'a little (bit)', i.e., exactly the same diminutive meaning that it contributes to nouns and verbs.[38]

For completeness' sake, it is also worth mentioning that a number of adjectives contain lexicalized reflexes of consonant reduplication which target bound roots: in these cases, no diminutive interpretation is present (though in some of them, the lexical meaning of the adjective is already diminutive). Examples include the following:

(106)	a.	*mí.m'sa7*	'thin (material)'	√mis(a)7
	b.	*lú.lem'*	'jealous'	√lum
	c.	*q'u.q'wts*	'fat'	√q'uts
	d.	*lhu.lhq'w*	'naked'	√lhuq'w
	e.	*kwi.kws*	'small'	√kwis
	f.	*tí.tca7*	'narrow'	√tic(a)7

5.3.2. Adjectives and 'abstract' suffixes.

'Abstract' suffixes (the term is from van Eijk 1997:102) comprise a semantically miscellaneous class of suffixes, all of which attach to intransitive stems that may surface as independent words. Three of them are of direct interest to us, though for different reasons: the desiderative suffixes *-al'men* and *-almen*, and the 'developmental' suffix *-wíl'c*.

5.3.2.1. The desiderative suffixes *-al'men* and *-almen*.

St'át'imcets has two desiderative suffixes, phonologically distinguished by glottalization of /l/, and semantically distinguished by the type of predicate which they attach to and the meaning of the resulting form. The suffix *-al'men* attaches to agentive intransitive verbs, and has a standard desiderative meaning of 'want to'; the suffix *-almen* attaches to non-agentive intransitive verbs, and has the meaning 'almost'.[39]

Desiderative-marked predicates are of interest here because, like stative-marked verbs, their meaning overlaps with adjectives. Some cases are given below in (107) and (108).

(107)	a.	*uqw7-ál'men*	'thirsty'	úqw(a)7	'drink'
	b.	*guy't-ál'men*	'sleepy'	guy't	'sleep'
	c.	*q'7-ál'men*	'hungry' (Lower dialect)	q'(a)7	'eat'

[38] There is a residual puzzle here: consonant reduplication on a gradable adjective yields a comparative meaning even *without* an explicit standard of comparison (as in (50) and (103)), whereas adjectives without a standard of comparison typically do not carry an (explicit) comparative meaning. I suspect this may be a pragmatic effect, based on the near-contradictory meaning of diminutive morphology with adjectives which normally mark the top end of a scale (e.g. #'a little bit big', #'a little bit many/much'). I leave an analysis for future work.

[39] This is an over-simplification: there are verbs that always take *-almen* even with an agentive subject, such as *tsicw* 'get there' in *tsícw-almen* 'almost there', and non-agentive verbs that take *-al'men*, such as *kwis* 'rain' in *kwís-al'men* 'about to rain'. The real generalization is probably aspectual, with *-almen* attaching to telic and *-al'men* attaching to atelic verbs.

	d.	*uxwal'-ál'men*	'wanting to go home'	úxwal'	'go home'
(108)	a.	*zúqw-almen*	'dying'	zuqw	'die'
	b.	*tsícw-almen*	'almost there'	tsicw	'get there'
	c.	*psíl'-almen*	'almost dawn'	psil'	'dawn breaks'

Note in particular the close semantic correspondence between *q'7-ál'men* 'hungry, wanting to eat' in Lower St'át'imcets and the adjective *tayt* 'hungry' in Upper St'át'imcets.

However, in contrast to stative-marked forms, desideratives generally test as verbs in argument modification contexts: they may appear as post-head modifiers without being supplemented by an aspectual auxiliary. (Note that this does not mean they cannot *also* be classed as adjectives, since the environments in which verbs – i.e., relative clauses – are permitted as argument modifiers form a proper superset of those where adjectives are permitted as non-clausal modifiers.) Examples are given in (109)-(111).

(109) a. cúy=malh s-7ats'x-s [i=*uxwal'-ál'men*=a sk'wemk'úk'wmi7t]
IMP=ADHORT STA-watch-CAU [PL.DET=*go.home-DES*=EXIS children(PL)]
'Go watch the children who want to go home.'

b. cúy=malh s-7ats'x-s [i=sk'wemk'úk'wmi7t=a *uxwal'-ál'men*]
IMP=ADHORT STA-watch-CAU [PL.DET=children(PL)=EXIS *go.home-DES*]
'Go watch the children who want to go home.'

(110) a. cw7aoz kw=a=s ka-zewat.et-s-twítas-a
NEG DET+NOM=IMPF=3POSS CIRC-know[FRE]-CAU-3PL.ERG-CIRC
ku=stám' [i=*guy't-ál'men*=a sk'wemk'úk'wmi7t]
DET=what [PL.DET=*sleep-DES*=EXIS children(PL)]
'The kids that are sleepy can't learn anything.'

b. cw7aoz kw=a=s ka-zewat.et-s-twítas-a
NEG DET+NOM=IMPF=3POSS CIRC-know[FRE]-CAU-3PL.ERG-CIRC
ku=stám' [i=sk'wemk'úk'wmi7t=a *guy't-ál'men*]
DET=what [PL.DET=children(PL)=EXIS *sleep-DES*]
'The kids that are sleepy can't learn anything.'

(111) a. cúy=malh gúts-qw-an' [ta=*zuqw-álmen*=a sts'úqwaz']
IMP=ADHORT break-head-TRA [DET=*die-DES*=EXIS fish]
'Go ahead and break the head of the half-dead fish.'

b. cúy=malh gúts-qw-an' [ta=sts'úqwaz'=a *zuqw-álmen*]
IMP=ADHORT break-head-TRA [DET=fish=EXIS *die-DES*]
'Go ahead and break the head of the half-dead fish.'

5.3.2.2. The 'developmental' suffix *-wíl'c*.

The abstract suffix *-wíl'c* is interesting to us not because of its output – which is straightforwardly verbal – but because of its input: unlike inchoative affixes, which have a

similar meaning but target categorially unspecified roots, *-wíl'c* attaches only to *non-verbal stems*, including nouns (112) and, crucially, adjectives (113).

(112)	a.	*sk'uk'wmi7t-wíl'c*	'become a child'	sk'uk'wmi7t	'child'
	b.	*st'niq-wíl'c*	'become a flicker'	st'niq	'flicker'[40]
(113)	a.	*qwits-wíl'c*	'become rich'	qwits	'rich'
	b.	*peq-wíl'c*	'become white'	peq	'white'
	c.	*q'ix-wíl'c*	'get hard'	q'ix	'hard (of substance)'
	d.	*ama-wíl'c*	'get better'	áma	'good'
	e.	*qvl̲-wíil̲'c*	'go bad, get spoiled'[41]	qvl̲	'bad'

Given that nouns are easily separable from adjectives via other morphological tests (e.g., the ability to take possessive affixes without nominalization), *-wíl'c* provides another sufficient (but not necessary) morphological diagnostic for an adjective: any non-nominal stem that allows *-wíl'c* suffixation is an adjective.

5.4. Summary: the morphological realization of adjectives.

I have now reviewed the morphological reflexes of the syntactic category 'adjective' in St'át'imcets in some detail. The picture that emerges may seem chaotic at first: some adjectives have multiple morphological exponents, while others have none; some types of adjectival marking are semantically vacuous, while others have systematic effects; some marking is unique to adjectives, while some is shared by one or more other syntactic categories.

However, this is quite typical of derivational morphology in general: if we think of the derivational morphology of adjectives in English, for example, we find bare root adjectives ('red', 'tall', 'smart') together with a plethora of adjective-deriving affixes: some of these are unique to adjectives (*-ic, -ive, -ous*), others are shared with other categories (e.g., *-y*, participial forms); some have particular meanings (*-ish, -able*), others are simple categorial functors (*-al, -ous*); some are productive, some semi-productive, some unproductive; and so on.

What is missing from St'át'imcets is not adjective-specific morphology (we have seen plenty of evidence for that) but rather adjective-specific *inflectional* morphology. The difference is important, because while derivational morphology can provide *sufficient* cues for an adjective, it cannot provide *necessary* ones; inflectional morphology, on the other hand, can provide both. Here, English does contrast with St'át'imcets, since for example comparative and superlative morphology on adjectives (*-er* and *-est*) is generally agreed to be inflectional.

In this light, it is worth contrasting the morphology of adjectives in St'át'imcets with that of nouns. The best known morphological test for noun-hood in St'át'imcets (and Salish languages in general) is the ability of nouns to take possessive affixes without first being nominalized (van Eijk and Hess 1986). However, it is important to note that in order to apply with full generality, this test crucially depends on help from the syntax. This is because the large number of nouns which *are* prefixed with the nominalizer can only be told apart from nominalized verbs by syntactic means: nominalized verbs (more accurately, predicate nominalizations) inherit the argument structure of the verbs they contain, and therefore have

[40] The flicker (Colaptes auratus cafer) is a kind of woodpecker.

[41] Tongue-root retraction spreads from retracted roots such as √*qvl̲* 'bad' onto certain suffixes, including *-wil'c,* which is then realized as *-wíil̲c*.

obligatory possessive-marked subjects, whereas true nouns never have obligatory possessor arguments (see (11) above). In other words, the nominalization test for nouns is morpho*syntactic*, in contrast to morphological tests for adjectives, which are all derivational.

Given this, it is perhaps somewhat ironic that prior to the pioneering syntactic work of Demirdache and Matthewson (1995), it was widely assumed that nouns in Salish could only be distinguished from verbs on morphological and *not* on syntactic grounds. Van Eijk (1997: 45) is typical in this regard:

> It is clear that on the syntactic level there is no difference between nouns and verbs, since both nouns and verbs can take the predicate or the complement position. Hence 'noun' and 'verb' are strictly morphological terms with no syntactic relevance.

Of course, there are now convincing, purely syntactic arguments for a noun-verb distinction; but in fact, even the morphological arguments van Eijk appeals to are morpho*syntactic* ones: purely derivational morphology provides no necessary condition for noun-hood, just as it provides no necessary condition for adjective-hood.

Given that syntactic evidence exists to distinguish adjectives as well as nouns from verbs, and that derivational morphology cannot provide a necessary set of criteria to distinguish either one, the single salient difference between nouns and adjectives in St'át'imcets, then, is the lack of morphosyntactic (inflectional) evidence for the latter. I take this to be an accidental gap: as we shall see below in 6.3, adjectives in at least one Salish language (Northern Straits) do appear to trigger inflectional morphology.[42]

6. Adjectives across Salish: an update.

Now that we have seen convincing evidence for the class of adjectives in St'át'imcets, we are in a position to ask whether those conclusions can be generalized across the family. While there is still no relevant evidence available for many languages (and for some of those, it is already too late to gather any), recent work on argument modification in Thompson (River) Salish (nɬeʔkepmxcín) by Koch (2004, 2006) and on Okanagan (Nsyílxcen) by Lyon (2010) has made it possible for the first time to develop a comparative picture of the syntax of argument modification in the Interior branch of the family.[43] Accordingly, in what follows, I will concentrate on these languages, beginning with Thompson in 6.1 and moving onto Okanagan in 6.2, before more briefly discussing other relevant work in the Salish literature in 6.3.

[42] It is worth pointing out that the model of morphology I am assuming here, which makes a traditional distinction between derivation and inflection, is not compatible with 'single engine' models of morphosyntax such as that advocated for Halkomelem by Wiltschko (2005, 2009). Such models attribute lexical categorial features to heads (*n*, *v*, *a*) introduced in the syntax, and treat traditional morphological categories such as roots as syntactic categories. In doing so, however, they lose the ability to account for the rather fundamental differences between derivational and inflectional operations I have detailed here: derivational processes apply to subsets of lexical categories, have lexical exceptions, and may be category-changing; inflectional processes apply to all members of a category, admit no exceptions, and do not change category.

[43] The discussion here focuses on argument modification, since as far as I am aware there is no detailed cross-Salishan work on adjective ordering (4.1), NP ellipsis (4.2) or comparatives (4.3).

6.1. Adjectives and argument modification in Thompson (River) Salish.

Just as in St'át'imcets, one of the main challenges in motivating a separate category of adjective for Thompson is distinguishing between relative clauses and non-clausal modifiers in argument modification contexts. However, the diagnostics which separate them are rather different in the two languages. The main distinction in St'át'imcets, as we have seen, is in word order: in post-head position, only relative clauses are permitted as modifiers. In contrast, in Thompson non-clausal argument modifiers are permitted in post-head as well as pre-head positions. Instead, they differ from relative clauses in the combination of determiner and oblique marker that characterizes them, as shown in (114)-(115), from Koch (2006):

(114) a. *pre-head (preposed) relative clause*

(w)ʔéx xeʔ cu-t-éne
IMPF DEM fix-TRA-1SG.ERG
[*te*=máʔ-t-s-t-ne *te*=zéẇtn]
[*OBL+DET*=break-IMM-CAU-TRA-1SG.ERG *OBL+DET*=cup]
'I am fixing the cup that I broke.'

b. *post-head (postnominal) relative clause*

(w)ʔéx xeʔ cu-t-éne [*e*=zéẇtn
IMPF DEM fix-TRA-1SG.ERG [*DET*=cup
te=máʔ-t-s-t-ne]
OBL+DET=break-IMM-CAU-TRA-1SG.ERG]
'I am fixing the cup that I broke.'

(115) a. *pre-head non-clausal modifier*

kən-t-éne xeʔ [*ə*=ḵʷm-íʔmeʔ *te*=sqáqxa][44]
help-TRA-1SG.ERG DEM [*DET*=little-PRP *OBL+DET*=dog]
'I helped the little dog.'

b. *post-head non-clausal modifier*

kən-t-éne xeʔ [*ə*=sqáqxa *te*=ḵʷm-íʔmeʔ]
help-TRA-1SG.ERG DEM [*DET*=dog *OBL+DET*=little-PRP]
'I helped the little dog.'

The difference between relative clauses and non-clausal modifiers shows up in pre-head position. With pre-head relative clauses (which Koch analyses as having been preposed from an original post-head position), both relative clause *and* nominal head are introduced by the combination of a determiner and an oblique marker, as in (114a); in contrast, in postnominal relatives, the head is introduced by a determiner alone, as in (114b). However, with non-clausal modifiers, the initial element (whether modifier or head) is invariably introduced by a non-

[44] The determiners here are realized as schwa: this is just an allegro variant of *[(h)e]*, the unmarked (present) determiner in Thompson.

oblique determiner, while non-initial elements (either modifiers or heads) are introduced by the oblique-determiner combination, as shown in (115).

This pattern is interesting precisely because the syntax of modification is so different in Thompson than in St'át'imcets, yet the clausal/non-clausal division emerges robustly in both languages. Whereas in St'át'imcets, the distribution of non-clausal modifiers is more restricted than that of relative clauses, the reverse appears to be true in Thompson: attributive modifiers can occur either side of the head with no difference in determiner structure, but preposed relative clauses are a marked option, as reflected by the presence of oblique markers on both head and modifier.[45]

There is another interesting difference between the two languages. As we saw in 5.2, adjectives in St'át'imcets often borrow aspectual morphology from verbs, including the stative prefix, the inchoative affixes, and (less transparently) the immediate suffix. We have also seen that on adjectives, aspectual morphemes are generally semantically inert, as expected if – as I have claimed – adjectives lack an event argument altogether, and therefore have nothing for an aspectual operator to operate on.

Thompson has direct cognates of all three of these morphemes (the immediate suffix is actually more common than in St'át'imcets). Normally, they derive verbs, as in St'át'imcets, but all three also appear on pre-nominal modifiers preceded by a bare (non-oblique) determiner, a position otherwise reserved for non-clausal modifiers such as adjectives (recall that preposed relatives must be preceded by an oblique-plus-determiner combination). Examples are given in (116) (from Koch 2006:128):

(116) a. he=x̣zúm te=snk̓yáp
DET=big OBL+DET=coyote
'the big coyote'

b. e=kʷís-t te=púst
DET=fall-IMM OBL+DET=post
'the fallen pole'

c. ɬ=pm-ɛ̓́p (t)ɬ=spzúʔ
REM.DET=fast-INCH (OBL+)REM.DET=bird[46]
'the fast bird'

d. e=ʔes-k̓ʷúc̓ te=syép
DET=STA-crooked OBL+DET=tree
'a crooked tree'

[45] Koch (2006) provides three other arguments for the marked status of preposed relative clauses in Thompson. First, preposed relative clauses show a one nominal interpretation effect (Gerdts 1988) lacking with postnominal relatives; second, preposed relatives are variably acceptable, even when they show no same side effects; and third, when both a relative clause and a non-clausal modifier modify the same argument, ordering is rigid, with the non-clausal modifier preceding and the relative clause following the head. The last of these arguments at least appears quite convincing to me.

[46] The oblique marker *t=* frequently merges with the remote determiner *ɬ=*, which is why it is parenthesized here.

Koch's analysis of these cases (which follows a similar account of Japanese pre-head modifiers by Ogihara 2004) invokes an 'adjectivizing' head *a* which saturates the event argument of an unaccusative (inchoative-, immediate-, or stative-marked) verb in the *syntax*, yielding a modifier of type <e,t>.[47]

Such an approach is potentially problematic for the account of St'át'imcets given here, which adopts a more traditional view of lexical categories as presyntactic. In particular, I have assumed that inchoative, immediate and stative-marked adjectives in St'át'imcets are categorially specified in the lexicon, rather than converted to adjectives in the syntax. This allows me to capture the lexically variable but syntactically systematic behavior of adjectives, irrespective of their derivational history.

However, note that in fact the Ogihara/Koch approach need not actually entail a syntactic change in lexical category: rather, it enables unaccusative verbs to 'mimic' adjectives via event-argument saturation, while retaining their underlyingly verbal semantics and categorial signature. A parallel can be drawn with pre-head participial modifiers in English (e.g., *fallen*, *broken*, *melted*) which also appear in adjectival positions, but retain eventive semantics (and are also restricted to unaccusative verbs). This makes the prediction that unaccusative verbs used as non-clausal modifiers in Thompson should retain their verbal behavior, in contrast to St'át'imcets, where, as I showed in Section 5.2, aspect-marked adjectives are distinct from verbs both syntactically and semantically. Koch (2006:152) provides some evidence that this is the case: he points out that while true adjectives can modify 'headless' relatives in Thompson (presumably because they are able to license NP ellipsis: see 4.2 above), unaccusative verbs in modifier positions cannot, indicating that they have retained their verbal status.

6.2. Adjectives and argument modification in Okanagan.

As described by Lyon (2010), argument modification in (Douglas Lake) Okanagan offers an interesting contrast to the two other Interior Salish patterns we have seen so far. Okanagan (Nsyílxcen) is the northwestern-most Southern Interior language: the Douglas Lake dialect is spoken directly adjacent to Thompson territory in the Upper Nicola Valley (traditionally, with much bilingualism). Since Thompson territory borders St'át'imcets territory to the northwest, the three languages form a geographical continuum.

Like Thompson and all other Interior Salish languages except for St'át'imcets, Okanagan employs the oblique marker *t=* in modification contexts. And also as in all Interior Salish languages save St'át'imcets, relative clauses in Okanagan are always of the double determiner type, with an external determiner introducing the head, and an internally generated one introducing the modifying clause.

However, here the resemblance with Thompson ends. To start with, unlike in Thompson, postnominal relative clauses modifying direct arguments (subjects and primary

[47] Koch's derivation is actually a little more complex than this, because 'adjectivization' applies only to unaccusative verbs, that is, those with an internal but no external argument. In order to derive a modifier of type <e,t>, the internal argument of unaccusative verbs must remain unsaturated; Koch (2006:153) achieves this by lambda abstracting over it, effectively creating a 'small' (VP-sized) relative clause even for 'non-clausal' modifiers, though one lacking any temporal superstructure.

objects) are not marked oblique in Okanagan, but instead take a direct determiner, like postnominal relatives in St'át'imcets (compare (5c) and (114b) above).[48]

(117) *postnominal clausal modifier*

wík-ən [$_{DP}$ *iʔ*=skəkʕákaʔ *iʔ*=t̓əxʷt-ílx]
see(TRA)-1SG.ERG [$_{DP}$ DET=birds DET=fly-body]
'I saw the flying birds/I saw the birds that are flying.'

And unlike in either Thompson or St'át'imcets, preposed relative clauses are freely available in Okanagan, as shown in (118):

(118) *preposed clausal modifier*

wík-ən [$_{DP}$ *iʔ*=t̓əxʷt-ílx *iʔ*=skəkʕákaʔ]
see(TRA)-1SG.ERG [$_{DP}$ *DET*=fly-body *DET*=birds]
'I saw the flying birds/I saw the birds that are flying.'

Non-clausal modifiers in Okanagan are distinct from relative clauses in two ways. First, they are generally restricted to pre-head positions, as in St'át'imcets but unlike in Thompson (compare (119)-(120) below to (115) above).[49] And second, they optionally induce oblique-marking on the following NP, even when it is a direct argument (compare (120) below to (115a) above).

(119) *direct-marked non-clausal modifier*

a. nʔíys-ən [$_{DP}$ iʔ=c̓w̓c̓iw̓t̓ *iʔ*=lasmíst]
buy(TRA)-1SG.ERG [$_{DP}$ DET=clean *DET*=shirt]
'I bought a clean shirt.'

b. * nʔíys-ən [$_{DP}$ iʔ=lasmíst *iʔ*=c̓w̓c̓iw̓t̓]
buy(TRA)-1SG.ERG [$_{DP}$ DET=shirt *DET*=clean]

(120) *oblique-marked non-clausal modifier*

a. [$_{DP}$ iʔ=qʷuct *t*=qʷʕay-lqs] tali c-ʔilxʷt
[$_{DP}$ DET=fat OBL=black-robe] very CUST-hungry
'The fat priest is very hungry.

[48] Actually, *the* determiner *iʔ*=, since Okanagan shares with its Southern Interior relatives a drastically reduced determiner inventory compared to the rest of the family.

[49] Lyon observes that 'attributive' (i.e., non-clausal) modifiers with *iʔ*= can precede as well as follow animate nouns, whereas they must precede inanimate nouns, as shown in (119). This difference is puzzling, but suggests a partial reanalysis in the direction of Thompson, which allows non-clausal modifiers on either side of a nominal head, as shown in (115).

b. * [$_{DP}$ iʔ=qʷʕay-lqs *t*=qʷuct] tali c-ʔilxʷt
[$_{DP}$ DET=black-robe *OBL*=fat] very CUST-hungry

How do we make sense of this complex pattern, particularly in relation to St'át'imcets and Thompson? One way is to separate out the distribution of the determiners and oblique markers associated with modification from the syntactic position of the modifiers themselves. Table 6 compares the marking of clausal and non-clausal argument modifiers in the three languages, abstracting away from syntactic position by comparing the marking of canonically postnominal relative clauses (shown as TP) to the marking of canonically prenominal non-clausal modifiers (shown as AP). In both cases, modification is of a direct argument, to avoid further complications with oblique marking at the clausal level.

	St'át'imcets	*Thompson*	*Okanagan*
(post-head) clausal modification	*D*=NP *D*=TP	*D*=NP *OBL*=*D*=TP	*D*=NP *D*=TP
(pre-head) non-clausal modification	*D*=AP *(Ø)* NP	*D*=AP *OBL*=*D*=NP	*D*=AP *OBL*/*D*=NP

Table 6. The marking of argument modifiers in three Interior Salish languages.

Here, it looks like the original Interior Salish pattern was probably to mark clausal modifiers directly with determiners (at least, in direct argument positions), and non-clausal modifiers with the oblique marker. This would mean oblique marking in relative clauses is an innovation in Thompson and its Northern Interior neighbor Shuswap, which behaves similarly: see Kroeber (1999). Since these are the only two Salish languages with obligatory oblique marking on relatives, this seems reasonable.

The pattern is more complicated for non-clausal modifiers, since none of the three languages have retained the original pattern (though Okanagan is close). Thompson has innovated in the direction of adding determiners to non-clausal modifiers. Koch (2006:142-143) observes that though this means that relative clauses look superficially similar to cases of non-clausal modification, there is a difference in the status of the 'internal' determiner in the two cases: whereas in relatives, this determiner is moved from a clause-internal position, and can differ from the 'external' determiner in the same way as in St'át'imcets (see (6) above), in non-clausal cases, the internal determiner is simply a copy of the external one, as is to be expected if it is simply inserted for reasons of morphological uniformity. St'át'imcets has gone in the other direction, and lost the oblique marker *t*= altogether, presumably under influence from Central Salish. [50] And finally, Okanagan has retained the original pattern, but supplemented it with a relative-clause like pattern involving two determiners which Lyon (2010:213) suggests is an

[50] Interestingly, though, St'át'imcets does sometimes use its non-referential determiner *ku*= in places where other Interior languages would employ *t*=, including preceding non-initial elements in CNPs (Davis et al. 1997) and (less often) preceding non-initial elements in prenominal argument modification contexts (Matthewson and Davis 1995). This suggests an alternative account, where the original marking of non-clausal modifiers resembled present-day Thompson, with both an oblique marker and a determiner. In St'át'imcets, the oblique marker was then lost, leaving a relic determiner. In Okanagan, either the determiner or the oblique marker was lost, leading to an alternation between the two in the current language.

innovation.[51]

Now let us look at the order of modifiers, this time abstracting away from determiner and oblique marking.

		St'át'imcets	*Thompson*	*Okanagan*
clausal modification	*pre-head*	√	(marked)	√
	post-head	√	√	√
non-clausal modification	*pre-head*	√	√	√
	post-head	*	√	*

Table 7: the position of argument modifiers in three Interior Salish languages

Here, Okanagan clearly patterns with St'át'imcets and against Thompson. Since Okanagan and St'át'imcets are not only in different sub-branches of the family but are geographically non-contiguous, it seems unlikely that the restriction to pre-head position for non-clausal modifiers is a shared innovation. Rather, it seems to represent the original pattern, with Thompson again the innovator. This conclusion is supported by the fact that in all three languages, predicate modifiers in CNPs always precede the head. More generally, it also supports the contention in Davis (2010) that *all* modification in St'át'imcets (and by hypothesis, in Salish more generally) is underlyingly pre-head, with post-head order derived by extraposition of relative clauses and PPs. Under this view, the difference between St'át'imcets and Okanagan on the one hand and Thompson on the other relates to the possibility of raising an NP constituent in the latter: see Section 7 below for further discussion.

While differing from Thompson in the syntactic distribution of modifiers, Okanagan shares with it the ability to employ stative-marked verbs in 'adjectival' positions, presumably via the event-argument saturation mechanism suggested by Koch (2006) for Thompson. Lyon (2010:217) observes:

> Only predicates that either *already are* noneventive individual-level unaccusative predicates (e.g. *təɬtált* 'straight/true'), or *may in principle* be coerced into such predicates by adding stative *ac-* (e.g. *qʷímə̓m̓* 'frightened') may occur in this [pre-head argument modifier] position. I cautiously suggest that the category of adjectives in Okanagan comprise just that class of basic and derived lexical items that may occur as modifiers in complex DP [non-clausal modifier] structures.

This conclusion is strikingly similar to Koch's with respect to Thompson, and suggests that the two languages share the mechanism of 'event argument saturation' proposed by Koch. However, I repeat here my reservation as to whether this process actually involves syntactic 'adjectivization': my prediction is that in both languages, statives will remain verbs, and thus retain a result state interpretation, rather than acquiring a simple state interpretation like lexically derived stative adjectives in St'át'imcets (5.2.4).

[51] The prediction is that in these non-clausal cases the internal determiner would be a copy of the external one, as in Thompson: but unfortunately, this is untestable, because Okanagan only has one determiner.

6.3. Adjectives elsewhere in Salish.

I have discussed the Thompson and Okanagan facts in some detail, for two reasons: first, aside from St'át'imcets, they are the only Salish languages where argument modification has been subject to explicit syntactic analysis; and second, all three languages come from the same major branch of the family, so the similarities and differences between the three systems are particularly revealing.

When we look across other languages in the family, there is as yet no systematic work on modification which might afford the kind of comparison I have pursued above for Interior Salish.

However, there is at least one good morphosyntactic argument for the category adjective in Central Salish, due to Montler (2002, 2003). It concerns number agreement in Straits Salish, and runs like this: normally, plural morphology (which has a number of complex allomorphs, as elsewhere in Central Salish) is optional on both nouns and adjectives in Straits. However, where an adjective modifies a noun (in both argument and predicate positions), if the noun is marked as plural, *so must the adjective be*. The pattern is illustrated below for pre-head argument modification (Montler 2003:140).

(121) *Plural agreement with adjectival modifiers in Klallam (Straits Salish)*

a.		ƛ̓ʷən-nəxʷ=cn	cə=čəq	swə́y̓qaʔ
		see-LCT=1SUBJ	DET=big	man
		'I see the big man.'		
b.		ƛ̓ʷən-nəxʷ=cn	cə=čayq	swə́y̓qaʔ
		see-LCT=1SUBJ	DET=big[PL]	man
		'I see the big men.'		
c.		ƛ̓ʷən-nəxʷ=cn	cə=čayq	sẇ.wə́y̓qaʔ
		see-LCT=1SUBJ	DET=big[PL]	men[PL]
		'I see the big men.'		
d.	*	ƛ̓ʷən-nəxʷ=cn	cə=čəq	sẇ.wə́y̓qaʔ
		see-LCT=1SUBJ	DET=big	man[PL]
		'I see the big man.'		

Montler argues that this agreement pattern (which as far as I know, has not been found elsewhere in the family) is diagnostic for the category of adjective in Straits Salish. If so, this constitutes a morpho*syntactic* (inflectional) argument for the category, of exactly the type I have claimed is missing in St'át'imcets.[52]

[52] Another possible inflectional argument for adjectives in Central Salish comes from Suttles (2004:199), who argues that in the Musqueam dialect of Halkomelem, adjectives may be distinguished from verbs via their inability to take 'progressive' (more likely imperfective) marking. Since adjectives and nouns are distinguishable via the standard argument that only nouns take possessive inflection (see 5.4 above), the result is a three-way categorial distinction; and insofar as imperfective marking is morphosyntactic, as seems probable, this constitutes a second inflectional argument for the category adjective.

In conclusion, there is mounting evidence that a distinct lexical category of adjectives is present in Central Salish as well as the Interior. Indeed, it seems to emerge in *every* Salish language where the right kind of tests have been carried out: the strong likelihood is that it is a general feature of the family, putting a final nail in the coffin of the 'category neutral' hypothesis for Salish.

7. Salish adjectives in a wider perspective.

Finally, it is worth asking how the distribution of nominal modifiers in St'át'imcets (and more generally, in Salish, from the information we currently have available) compares to that of better studied (mainly Standard Average European) languages.

As far as St'át'imcets and Okanagan goes, the answer is that the pattern of modification is rather strikingly close to that of English (or more broadly, Germanic). Consider this: English has both pre-head and post-head modifiers in NP, like St'át'imcets and Okanagan; English post-head modifiers are generally considered to be (sometimes reduced) relative clauses, as in St'át'imcets and Okanagan; and English pre-head modifiers are subject to same side effects, as in St'át'imcets.[53]

The second point in particular is worth elaborating on. A long tradition of work, beginning with Bolinger (1967), and including Larson (1988), Cinque (1994, 2010), and Bouchard (2002), amongst others, has documented a series of interpretive differences between pre-head and post-head NP modifiers.[54] A (partial) list is given in Table 8, adapted from that in Cinque (2010:16); examples are given in (122)-(125), respectively.

Pre-head modifiers	*Post-head modifiers*
stage-level or individual-level reading	(usually) stage-level reading only
restrictive or non-restrictive reading	restrictive reading only
implicit relative clause or modal reading	implicit relative clause reading only
intersective or non-intersective reading	intersective reading only

Table 8. The distribution of pre- and post-head NP modifiers in Germanic.

(122) *Individual versus stage level interpretation*

a. The *visible* stars include Aldebaran and Sirius.
   (i) 'The stars that are generally visible include Aldebran and Sirius.'
   (ii) 'The stars that happen to be visible now include Aldebaran and Sirius.'

[53] I do not know the status of same side effects in Okanagan.

[54] It is important to factor out same side effects when dealing with these contrasts in English, since any same side violation will automatically result in extraposition of a pre-head modifier to a post-head position. For example, the post-head AP in (i) has an individual level reading, contradicting the generalization that post-head adjectives such as *visible* should only have stage level readings.

(i) The [only planetary satellite [visible to the naked eye]] is the moon.

However, the bracketed constituent would incur a same side violation were it to remain in pre-head position, so it must extrapose, overriding the stage level versus individual level distinction. (Thanks to David Beck for supplying the example.)

b. The (only) stars *visible* are Aldebran and Sirius.
(i) # 'The stars that are generally visible include Aldebran and Sirius.'
(ii) 'The stars that happen to be visible now include Aldebaran and Sirius.'

(123) *Restrictive versus non-restrictive interpretation*

a. All of his *inappropriate* behavior was taken into consideration.
(i) 'All of his behavior, which was inappropriate, was taken into consideration.'
(ii) 'All of his behavior that was inappropriate was taken into consideration.'

b. All of his behavior *inappropriate* (to the occasion) was taken into consideration.
(i) # 'All of his behavior, which was inappropriate (to the occasion), was taken into consideration.'
(ii) 'All of his behavior that was inappropriate (to the occasion) was taken into consideration.'

(124) *Implicit relative clause versus modal readings*

a. Mary interviewed every *possible* candidate.
(i) 'Mary interviewed every potential candidate.'
(ii) 'Mary interviewed every candidate that it was possible to interview.'

b. Mary interviewed every candidate *possible*.
(i) # 'Mary interviewed every potential candidate.'
(ii) 'Mary interviewed every candidate that it was possible to interview.'

(125) *Intersective versus non-intersective readings*

a. Olga is a more *beautiful* dancer than her instructor.
(i) 'Olga dances more beautifully than her instructor.'
(ii) 'Olga, who is a dancer, is more beautiful than her instructor.'

b. Olga is a dancer more *beautiful* than her instructor.
(i) # 'Olga dances more beautifully than her instructor.'
(ii) 'Olga, who is a dancer, is more beautiful than her instructor.'

Not all of these well-known contrasts are applicable to St'át'imcets, which, for example, lacks modal adjectives like *possible*, rendering the test in (124) moot. However, otherwise, the parallel between the two systems is striking. English pre-nominal modifiers are ambiguous between intersective, stage level, restrictive, and implicit relative clause readings on the one hand, and non-intersective, individual level, non-restrictive, and non-relative clause readings on the other, while English post-nominal modifiers only have the former readings. St'át'imcets pre-nominal modifiers may either be relative clauses (with intersective, stage level, and restrictive readings) or non-clausal (with non-intersective, individual level, and non-restrictive readings), while St'át'imcets post-nominal modifiers only have the former readings, because, as we have seen, they are always relative clauses. To make the parallel complete, we need only

make the further assumption that post-nominal modifiers in English are in fact reduced relative clauses; this is in fact what is assumed by almost all researchers on English, including Larson, Bouchard, and Cinque.

There is a further intriguing parallel between Salish and SAE. Recall that in Thompson, the distribution of clausal and non-clausal modifiers differs from that in St'át'imcets, in that non-clausal modifiers may freely occur either pre- or post-nominally, while relative clauses are found only post-nominally (with a marked option of preposing: see footnote 45). Now compare this to the pattern of modification characteristic of Romance languages (e.g., Italian, French), as given in Table 9 below (again, adapted from Cinque 2010:16).

Pre-head NP modifiers	*Post-head NP modifiers*
individual level reading	stage level or individual reading
non-restrictive reading	restrictive or non-restrictive reading
modal reading	implicit relative clause or modal reading
non-intersective reading	intersective or non-intersective reading

Table 9. The distribution of pre- and post-head NP modifiers in Romance.

Again, the parallel is striking. Thompson restricts clausal modifiers to the same post-head position where Romance allows stage level, restrictive, intersective, and implicit relative clause readings; in contrast, non-clausal modifiers in Thompson are freely ordered with respect to the head, and so are the individual level, non-restrictive, non-intersective, and modal readings of Romance nominal modifiers.

These parallels are surely non-accidental. What they show is that parametric variation in nominal modification in two completely unrelated language families follows exactly the same pattern: a striking finding, and one that strongly suggests a universal basis for the parameter.

As for the parameter itself, I will follow Cinque here in assuming that the 'Germanic' pattern (shared by St'át'imcets and Okanagan) is the basic one: this fits with the hypothesis in Davis (2010) that at the underlying level, modifiers invariably precede their heads in Salish (and possibly universally), with post-head relative clauses derived by extraposition.[55] The Romance pattern (shared by Thompson) must then be derived: Cinque does so by optionally raising an NP constituent (obviously, small enough to exclude pre-head modifiers) via 'roll-up' movement into a position high enough to precede all post-head modifiers. I will not go into the details of this operation for Thompson here, leaving this task for future work.

8. Conclusion.

Here are the principle conclusions of this study:

(i) An asymmetry between pre-head and post-head argument modifiers provides a strong syntactic argument for the existence of the lexical category of adjective in St'át'imcets.

(ii) Both adjectives and nouns are distinguished from verbs in St'át'imcets by their ability to modify argument nominals *directly*. Verbs come lexically equipped with an event

[55] Or Cinque's Kayneian alternative, which involves leftward movement of the 'extraposed' constituent, followed by further remnant movement of the rest of the clause over the top of it, thus mimicking extraposition while avoiding rightward movement.

argument which forces them to project further temporal structure, with the result that verbal modifiers are invariably relative clauses. Adjectival and nominal modifiers, on the other hand, lack an inherent event argument: they may be coerced into accepting one only via overt aspectual auxiliaries, which project to (relative) clauses.

(iii) Only relative clauses are permitted as post-head argument modifiers in St'át'imcets. The result is that a class of non-clausal, pre-head modifiers can be isolated, which includes nouns and adjectives, but excludes verbs. Since adjectives and verbs may be readily distinguished from nouns – only the latter may head relative clauses, and occupy the final (head) position in complex nominal predicates – adjectives emerge as a distinct syntactic category.

(iv) Three other tests for adjectives (modifier ordering, NP ellipsis, and bare comparatives) yield supporting evidence for the category in St'át'imcets.

(v) In contrast to the syntactic evidence, there is no unique morphological signature which provides a *necessary* condition for identifying adjectives in St'át'imcets. However, a number of derivational patterns provide *sufficient* conditions. It is argued that this is typical of derivational morphology in general, and that what is missing in St'át'imcets is not adjectival morphology in general but specifically adjectival *inflectional* morphology.

(vi) In a cross-Salishan context, work on Thompson (River) Salish by Koch (2004, 2006) and on Okanagan by Lyon (2010) provides support for a distinction between clausal and non-clausal argument modification at least in the Interior branch of the family. While work on modification in other branches of the family is more fragmentary, there is enough evidence to suggest that the category adjective is probably a general property of Salish.

(vii) Looking further afield, the parametric difference in the distribution of pre-head and post-head modifiers between St'át'imcets and Okanagan on the one hand and Thompson on the other finds a striking parallel in the difference between Germanic and Romance languages in Indo-European. The parallel between these two completely unrelated families is very unlikely to be accidental, and points to a universal basis for the syntax of argument modification.

8.1. Final word: what is an adjective?

I began this paper by suggesting an operational approach for the investigation of lexical category distinctions which deferred any decision about definitions (either syntactic or semantic) until after distributional classes had been established. Now that we have established the existence of a distinct class of adjectives in St'át'imcets, can we provide a definition for the category?

Yes. As far as St'át'imcets is concerned, we can conclude the following:

(126) *An adjective is a non-nominal predicate that lexically lacks an event argument.*

My prediction is that this definition can be extended to other Salish languages with a distinct class of adjectives (which I have suggested above probably includes all of them). To what extent it can be applied further afield remains an open question, but one to which I hope this work has contributed part of the answer.

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Appendix 1: conversion chart for American Phonemic and Van Eijk St'át'imcets Practical Orthography.

orthography	phonemic	orthography	phonemic
p	p	q'w	q̓ʷ
p'	p̓	x	χ
m	m	xw	χʷ
m'	m̓	r	ɣ
t	t	r'	ɣ̓
ts	č	g	ʕ
ts	c	g'	ʕ̓
ts'	c̓	gw	ʕʷ
s	š	g'w	ʕ̓ʷ
s	s	h	h
n	n	w	w
n'	n̓	w'	w̓
t'	ƛ̓	y	y
lh	ɬ	y'	y̓
l	l	x	χ
l	l̓	z	z
l'	l̓	z'	z̓
k	k	7	ʔ
k'	k̓	a	æ
kw	kʷ	ao	ɑ
k'w	k̓ʷ	e	ə
c	x	v	ʌ
cw	xʷ	i	i
q	q	ii	e
q'	q̓	u	u
qw	qʷ	o	o

Notes on the orthography:

(i) Since rounding is automatic before a round vowel, the orthography uses a plain (unrounded) consonant before *u* and *o*. Hence, [xʷúləl] 'run away' is written as *cúlel*, not **cwúlel*.

(ii) The orthography does not use a glottal stop word-initially, since it is predictably present in the absence of another word-initial consonant: thus [ʔáma] 'good' is

written as *áma*, not **7áma*. However, in derivations where the same vowel is no longer word-initial, the glottal stop *is* written: hence [kaʔámha] 'get better' is *ka7ámha*, not **kaámha*.

(iii) The orthography uses the retracted vowels *ii*, *ao, v, o* only where retraction is not predictable: thus, since all vowels are retracted in the immediate vicinity of uvular and pharyngeal consonants, we write *gítsmen*, not **gíitsmen* for [ʕíʲčmən] 'tooth', *kamága*, not **kamáoga* for [kamą̇ʕa] 'dawn breaks', *qemp,* not **qvmp* for [qə̣mp] 'hot', and *estsúgw*, not **estsógw* for [ʔəščṵʕʷ] 'striped'.

Appendix 2: abbreviations.

1 = first person, 2 = second person, 3 = third person, ABS = absent, ACT = active intransitive marker, ADHORT = adhortative, AUT = autonomous intransitive, CAU = causative transitivizer, CIRC = circumstantial modal circumfix, CNJ = conjunctive subject clitic, COMP = complementizer, CRE = consonant reduplication, CUST = customary, DEM = demonstrative, DET = determiner, EMPH = emphatic, ERG = ergative (transitive) subject suffix, EXCL = exclusive enclitic, EXIS = existential enclitic, FOC = focus, FRE = final reduplication, IMM = immediate, IMP = imperative, IMPF = imperfective, INCH = inchoative, IND = indirective transitivizer, INF = inferential, INS = instrumental, LCT = limited control transitivizer, MID = middle marker, NEG = negative, NOM = nominalizer, NTS = non-topical subject marker, OBJ = object suffix, OBL = oblique, PL = plural, PASS = passive, POSS = possessive, PRO = (independent) pronoun, PST = past, RED = redirective (relational) transitivizer, REM = remote, REP = reportative, RFL = reflexive, SG = singular, STA = stative, SU = indicative subject clitic, TRE = total (CVC) reduplication, TRA = directive (full control) transitivizer, YNQ = yes-no question enclitic. A hyphen (-) corresponds to an affix boundary, a period (.) separates reduplicants, an equals sign (=) corresponds to a clitic boundary, and a plus sign (+) indicates a portmanteau morpheme whose elements are not linearly separable (including infixation). # indicates an infelicitous or impossible interpretation, and % indicates speaker variation with respect to grammaticality judgments.