Degree Constructions in Two Salish Languages[*]

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Abstract: In this paper we undertake a systematic comparison of degree-related constructions in St'át'imcets (a.k.a. Lillooet: Northern Interior Salish) and ʔayʔaǰuθəm (a.k.a. Comox-Sliammon: Central Salish). We conclude that both languages instantiate the positive setting of all three degree parameters in Beck et al. (2009): the Degree Semantics Parameter, which introduces degree arguments into the syntax via gradable property-denoting predicates of type $\langle d, \langle e,t \rangle \rangle$; the Degree Abstraction Parameter, which allows abstraction over the degree argument; and the Degree Phrase Parameter, which allows a degree phrase to be overtly expressed. We provide a preliminary compositional semantics for degree-related constructions in the two languages. Finally, we examine one speaker's use of conjoined comparatives in ʔayʔajuθəm: we show that in spite of surface appearances, they too must be given a semantic treatment which makes crucial use of degrees.

Keywords: Salish, St'át'imcets/Lillooet, ʔayʔaǰuθəm/Comox-Sliammon, syntax, semantics, degree constructions, conjoined comparatives

1   Introduction

Until very recently, there has been no work explicitly addressing comparative constructions in Salish; what little we knew had to be gleaned from descriptive grammars and dictionaries, which provide no detailed syntactic or semantic information, or extracted from textual materials, which give us at best a fragmentary picture of the relevant constructions. This is an unfortunate gap in documentation, which needs to be remedied, both for linguistic and pedagogical reasons, while we still have the opportunity to work with fluent first language speakers.

Lo and Reisinger (2018; henceforth L&R) have made a promising start to this endeavor. Their work on comparatives in the Central Salish language ʔayʔaǰuθəm (Comox-Sliammon) follows a line of cross-linguistic research initiated by the parametrization of degree semantics in Beck et al. (2009). More specifically, L&R claim that ʔayʔaǰuθəm exemplifies the negative setting of the *Degree Semantics Parameter* (DSP), meaning that the language lacks property-denoting predicates of type $\langle d, \langle e,t \rangle \rangle$, where d is the semantic type of degrees.

However, L&R also acknowledge that the negative setting of the DSP may not hold for all Salish languages. In particular, they suggest that St'át'imcets (Northern Interior Salish)

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exemplifies the *positive* setting of the parameter. This entails that two related and geographically adjacent Salish languages have different settings of a rather radical semantic parameter. While such a situation is logically possible, it invites closer examination.

Accordingly, in this paper, we re-evaluate the claim that ʔayʔaǰuθəm is degreeless. We show that once morphosyntactic properties of the language are taken into account and methodological difficulties are overcome, the grammar of ʔayʔaǰuθəm comparatives is very close to that of the St'át'imcets system. In fact, both are not only [+DSP] languages, but also test positively for the two other degree parameters proposed by Beck et al. (2009): the *Degree Abstraction Parameter* (DAP), which regulates quantification over the degree argument, and the *Degree Phrase Parameter* (DegPP), which regulates overt expression of a degree phrase. In addition, we explore one particularly interesting pattern in ʔayʔaǰuθəm, involving *conjoined comparatives*, which have previously been assumed to be diagnostic for [-DSP] status. We show that in spite of surface appearances, this pattern also tests as [+DSP] in ʔayʔaǰuθəm.

The paper is organized as follows. We begin in Section 2 by briefly introducing relevant aspects of the literature on degree semantics, focusing on the parametric approach in Beck et al. (2009) which serves as a framework for our investigation. We then turn in Section 3 to a description of degree-related morphology in the two languages under investigation, before undertaking a systematic comparison of degree-related syntactic constructions in Section 4. Section 5 provides an outline of the degree semantics we propose for both languages. Section 6 explores the grammar of conjoined comparatives in ʔayʔaǰuθəm, and Section 7 concludes.

2   The Semantics of Degree and Comparison

The grammar of comparatives has been of interest to compositional theories of the syntax-semantics interface for nearly half a century. Central to most approaches has been the postulation of *degrees* — intervals on a scale. The basic idea behind the degree-based analysis of gradable predicates and comparatives (as first proposed by Cresswell 1976, and then developed by von Stechow 1984, Heim 1985, 2000, Kennedy 1997, inter alia, employing syntactic generalizations first discovered by Bresnan 1973), is that gradable predicates contain an extra degree argument of type *d*, and are therefore of type $\langle d,\langle e,t\rangle\rangle$. This argument may be quantified over or modified by degree operators such as measure phrases, comparative '-er/ more', superlative '-est/ most', and equative 'as', as in (1)–(4):

(1)   Marianne is **nearly six feet** tall.

(2)   Marianne is tall**er** than Henry.

(3)   Marianne is the tall**est** of us.

(4)   Gloria is not **as** tall as Henry.

To give an idea of the degree-based approach, an example like (2) can be paraphrased as 'The maximum degree on the scale of tallness which characterizes Marianne is greater than the degree of tallness which characterizes Henry.'

Not all approaches to comparison have been degree-based: there are competing analyses which treat gradable predicates as vague and context-dependent. These theories, of which the best known is that of Klein (1980, 1991), work by partitioning the domain of discourse so that in a given context a gradable predicate is true of one set of individuals and false of another. Under

such an approach, (2) could be paraphrased as 'In the context under consideration, Marianne is tall and Henry is not tall'.

Though arguably more economical, the pragmatic analysis has problems with *difference* or *differential comparatives* such as '*three feet* tall*er*', which do not simply partition individuals into comparison classes, but need an arithmetical operation of subtraction over degrees, as famously pointed out by von Stechow (1984).

However, in a cross-linguistic context, the pragmatic approach has recently undergone a revival due to the possibility that there may be a parametric difference between "degreeful" and "degreeless" languages. Under this view, *both* types of theory may be correct, but for different types of languages: degreeful languages have property-denoting predicates containing a degree argument and operators which range over it, while degreeless languages treat property-denoting predicates as vague and have operators which manipulate comparison classes of individuals rather than degrees. Languages which have been claimed to be degreeless in this sense include Motu (Beck et. al. 2009), Fijian (Pearson 2009), Washo (Bochnak 2013; 2015), Warlpiri (Bowler 2016), and Nez Perce (Hohaus and Deal 2019).

2.1   Degree Parameters

Like L&R, for the purposes of this paper we will assume the framework set forth in Beck et al. (2009), who propose three parameters that determine the presence of degree arguments and how they are expressed in the grammar. The first of these is the DSP (5), which specifies whether a language has lexical items that introduce degree arguments, and in particular gradable predicates of type $\langle d,\langle e,t\rangle\rangle$. The second parameter is the DAP (6), which either allows or prohibits degree variables from being bound in the syntax (e.g., by WH-operators, as in '*how* tall'). The final parameter is the DegPP (7), which determines the possibility of overt material in the degree argument position of a gradable predicate (e.g., '*three feet* tall', '*that* wide').

(5)   **The Degree Semantics Parameter (DSP)**
         A language {*does/does not*} have gradable predicates (type $\langle d,\langle e,t\rangle\rangle$ and related), i.e. lexical items that introduce degree arguments. (Beck et al. 2009:19)

(6)   **The Degree Abstraction Parameter (DAP)**
         A language {*does/does not*} have binding of degree variables in the syntax. (Beck et al. 2009:11)

(7)   **The Degree Phrase Parameter (DegPP)**
         The degree argument position of a gradable predicate {*may/may not*} be overtly filled. (Beck et al. 2009:24)

Of these three parameters, the most radical (and the one we will focus on here) is the DSP, which is a classic *macroparameter*, in the sense that it constitutes a single "switch" set on the basis of positive evidence during the process of language acquisition, with multiple ensuing effects on the grammar. The DSP is what distinguishes a degreeless (i.e., [-DSP]) language from a degreeful (i.e., [+DSP]) language, while the settings of the DAP and the DegPP subsequently constrain the syntactic instantiation of degree expressions in a [+DSP] grammar. A [-DSP] language is expected to lack both morphological and syntactic exponents of degrees. The former include comparative, superlative, and equative morphemes, as well as items meaning 'too' and 'enough'; the latter include measure phrases, comparisons with degrees, differential comparatives, degree questions, and degree equatives.

It is worth noting that the morphological and syntactic reflexes of the DSP have a somewhat different status. The presence of a dedicated comparative morpheme, for example, does not preclude a degreeless analysis, as emphasized by Hohaus and Deal (2019), who provide a pragmatic analysis of the Nez Perce comparative morpheme *qetu* 'more', while treating the language as a whole as a [-DSP] system. Conversely, nothing forbids a [+DSP] language from lacking degree morphology, as long as the syntax can support the compositional mechanisms which will derive degree semantics. In fact, it is not uncommon for languages to lack degree morphology outright (Kennedy 2007), and cross-linguistically, dedicated degree morphemes like English *-er* and *-est* are far more common in European languages than elsewhere (Stassen 2013). In other words, neither the presence nor absence of dedicated degree morphology constitutes sufficient evidence for either a negative or positive setting of the DSP.

While many of the syntactic reflexes of a [+DSP] system can also be successfully modeled in a [-DSP] system using a pragmatic theory, at least one syntactic diagnostic, the existence of differential comparatives, appears to be a sufficient condition for [+DSP] status. Accordingly, we will place special emphasis on this construction in the following discussion.

3   The DSP in ɁayɁaǰuθəm and St'át'imcets

ɁayɁaǰuθəm (a.k.a. Comox-Sliammon; ISO 363-3: coo) is the northernmost Central Salish language, traditionally spoken by the K'ómoks, Tla'amin, Klahoose, and Homalco communities in southwestern coastal British Columbia. There are approximately 47 L1 speakers. St'át'imcets (a.k.a. Lillooet; ISO 363-3: lil) is a Northern Interior Salish language spoken in southwestern interior British Columbia by fewer than 50 remaining L1 speakers.

In their investigation of comparative structures in the two languages, L&R run through a subset of the diagnostic tests in Beck et al. (2009) for ɁayɁaǰuθəm, and then compare them to parallel structures in St'át'imcets. Their conclusions are summarized in the table in (8). Their claim is that while all the relevant structures are possible in St'át'imcets, they are either impossible or questionable in ɁayɁaǰuθəm.

(8)   Degree semantics in Salish according to Lo and Reisinger (2018)

	ɁayɁaǰuθəm	St'át'imcets
Measure phrase constructions	**No**	**Yes**
Comparison with degrees	**?**	**Yes**
Differential comparatives	**?**	**Yes**
Degree Questions	**No**	**Yes**
Subcomparatives	**No**	**Yes**
Degree Equatives	**No**	**Yes**

They conclude that ɁayɁaǰuθəm is best characterized as instantiating the negative setting of the [DSP], in contrast to St'át'imcets, which is a [+DSP] language.

In the following sections, we revisit this conclusion. We begin in 3.1 with an examination of the morphology of degrees in the two languages, pointing out some significant differences which make the two grammars *look* rather different. However, these differences turn out to be superficial: in Section 4, we provide a systematic comparison of degree constructions in the two languages, showing that they behave virtually identically in the syntax.

3.1 Degree Morphology

In this section, we provide a survey of degree morphology in the two languages, beginning in 3.1.1 with St'át'imcets, which shows a more extensive inventory of degree-related morphemes, and then turning to ʔayʔaǰuθəm in 3.1.2.

3.1.1 Degree-related morphology in St'át'imcets

St'át'imcets has free and bound morphemes marking both comparatives and superlatives (though the bound form of the comparative is confined to a few lexical items).

The comparative is usually expressed by the predicate *p̓aʔxʷ* 'more' followed by a nominalized subordinate clause, which is optionally introduced by the determiner/complementizer (D/C) *kʷ(u)=*.[1] Comparison with *p̓aʔxʷ* is not limited to gradable adjectives: it may be over any gradable property, including amounts (usually with *xʷʔit* 'much, many'), times, distances, and even desires.[2]

(9) **p̓aʔxʷ**   **s**=záx-al̓qʷəm̓=**s**   ta=sqáyxʷ=a   ɬəl=ta=smúɬac=a.
     more   **NMLZ**=long-appearance=**3POSS**   DET=man=EXIS   from=DET=woman=EXIS
     'The man is taller than the woman.'

(10) xʷuy, lhum-un-í=maɬ   kʷu=**p̓áʔxʷ**   sǝl   l=ki=kʷíkʷs=a   pátkʷa.
      okay attach-DIR-PL.IMP=ADHORT   DET=**more**   string on=PL.DET=small=EXIS   needle
      'Okay, put some more string on the little needles.'

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[1] St'át'imcets examples are taken from an unpublished English-Upper St'át'imcets dictionary (*Nqwal'uttenlhkálha*: Davis et al. 2019) and an unpublished Upper St'át'imcets Teaching Grammar (Davis in prep.), as well as via direct elicitation by the first author. Unless otherwise indicated, ʔayʔaǰuθəm examples are from original fieldwork by both authors. Examples are given in the 'northwestern' version of the APA used traditionally in the literature on Salish languages. We use the following abbreviations: ABSN = absent, ACT = active intransitive marker, ADHORT = adhortative, AUT = autonomous intransitive marker, CAUS = causative transitivizer, CHAR = characteristic, COMP = complementizer, COP = copula, CTR = control transitivizer, D/C = determiner/complementizer, DEM = demonstrative, DET = determiner, DIR = directive (full control) transitivizer, EPIS = epistemic modal, ERG = ergative (transitive subject), EXCL = exclusive, EXIS = existential, FEM = feminine, INCH = inchoative, INDP = independent pronoun, INS = instrument, INTS = intensifier, INV = invisible, IPFV = imperfective, LOC = locative, MID = middle, NCT = non-control (limited control) transitivizer, NMLZ = nominalizer, OBL = oblique, PASS = passive, PL = plural, PN = proper noun, POSS = possessive, PST = past tense, REC = reciprocal, RFLX = reflexive, RLT = relational transitivizer, SG = singular, SJV = subjunctive subject, STAT = stative, SUP = superlative, VIS = visible. A hyphen (-) is used to mark an affix, an equals sign (=) a clitic, a bullet (•) a reduplicant, and angle brackets (< >) for infixation into the root; + is used where two or more morphemes are fused and cannot be linearly separated, as with e.g., D/C+NMLZ+IPFV+3POSS.

[2] The Upper dialect of St'át'imcets also has a comparative predicate *huʔ* which is confined to amounts, as in (i):

(i)   waʔ   sáwɬen=wit   ʔi=wáʔ   cunám̓-xal   kʷu=**húʔ**   sqlaw̓.
      IPFV ask=3PL   PL.DET=IPFV   teach-ACT   DET=**more**   money
      'The teachers are asking for more money.'

(11) p̓aʔxʷ=ƛ̓uʔ   **s**=xʷʔit=**s**   ʔi=scúqʷaż =a   s-ʔústək-s   s-John
     more=EXCL   **NMLZ**=many=**3POSS**   PL.DET=fish=EXIS   NMLZ-catch-3POSS   NMLZ-John
       ɬəl=s-Bill.
        from=NMLZ-Bill
     'John caught more fish than Bill.'

(12) **p̓aʔxʷ**   kʷənswá   cixʷ   ʔákʷuʔ   sáƛ=a
     more   **D/C+1SG.POSS+NMLZ**+IPFV   get.there   to.there.INV   Lillooet=EXIS
       ɬəl=ta-n-səmʔám=a.
        from=DET=1SG.POSS-wife=EXIS
     'I go to Lillooet more (often) than my wife.'

(13) ʔáo=tiʔ   ɬlátiʔ   kʷas   **p̓aʔxʷ**   ɬəlkʷʔú
     NEG=DEM   from.there.VIS   D/C+NMLZ+IPFV+3POSS   **more**   from.there.INVIS
       two mile=k̓a   ɬlátiʔ   *Clinton*=a.
        two miles=EPIS   from.there.VIS   Clinton=EXIS
     'It can't be more than about two miles from Clinton!'

(14) **p̓aʔxʷ**   kʷənswá   x̌áƛ-min̓   kʷənswá   ləp̓-xál
     more   **D/C+1SG.POSS+NMLZ**+IPFV   desire-RLT   **D/C+1SG.POSS+NMLZ**+IPFV   bury-ACT
       ɬəl=kʷənswá   mays-áwɬ.
        from=D/C+1SG.POSS+NMLZ+IPFV   fix-vehicle
     'I like gardening more than fixing cars.'

The examples above also serve to illustrate the *standard of comparison* in St'át'imcets, which is introduced by a proclitic preposition, usually *ɬəl=* 'from', though *l=* 'at' is also sometimes used, with *ʔə=* 'to' being preferred in equatives. The standard may be either phrasal, as in (9), (10), and (11), or clausal, as in (12), and generally appears in the surface string following the *target* or *associate* of the comparison, as in English.

With gradable adjectives (including those which specify quantity, such as *xʷʔit* 'much, many'), the standard of comparison alone can induce a comparative reading, as in (15)–(17).

(15) **záx-alq̓ʷəm̓**   kʷ=s-Fred   **ɬəl=s-Bill.**
     long-appearance   PN.DET=NMLZ-Fred   **from**=NMLZ-Bill
     'Fred is taller than Bill.'

(16) **x̌áw̓ən̓**   ɬus   ɣi<ʔ>p   ʔi=məlínɬəp=a
     low   COMP+IPFV+3SJV   grow<INCH>   PL.DET=subalpine.fir=EXIS
       ɬəl=ki=ċkáż=a.
       from=PL.DET=whitebark.pine=EXIS
     'Subalpine fir trees grow lower down than whitebark pine trees.'

(17) **xʷʔit**   ʔi=kʷúkʷpiʔ=a   **ɬəl=ki=ʔuxʷalmíxʷ=a**   kəncʔá-wna!
     many   PL.DET=chief=EXIS   **from**=PL.DET=indigenous.person=EXIS   around.here-exactly
     'There are more chiefs than Indians around here!'

This possibility is *only* available for gradable adjectives, however, and thus acts as a sufficient though not necessary condition for identifying the syntactic category Adj(ective): see H. Davis (2011). Compare for example (14a) and (14b), both based on the root √*zax̌ʷ* 'melt', the first with

an adjective derived via reduplication, the second with a verb derived by infixation of the inchoative marker -ʔ-.

(18) a. **zəx̌ʷ•záx̌ʷ**   ta=sqʷiqʷənt-átkʷʔ=a   **ɬəl**=ta=miχaɬ-átkʷʔ=a.
          melt•CHAR   DET=whistler-liquid=EXIS   **from**=DET=bear-liquid=EXIS
          'Whistler (hoary marmot) grease is more runny ('melty') than bear grease.'

      b. * **za<ʔ>x̌ʷ**   ta=sqʷiqʷənt-átkʷʔ=a   **ɬəl**=ta=miχaɬ-átkʷʔ=a.
          melt<INCH>   DET=whistler-liquid=EXIS   **from**=DET=bear-liquid=EXIS

Aside from comparatives formed with *ṗaʔxʷ*, St'át'imcets also has a suffixal comparative morpheme *-ám* which is restricted to a few lexical items such as *kʷikʷs-ám* 'smaller' and *twiẃt-ám* 'younger, more youthful'.

(19) kʷikʷs-**ám** ta=káh=a   waʔ s-tqálk-s-as   s-Carl
        small-**er**   DET=car=EXIS IPFV STAT-drive-CAUS-3ERG   NMLZ-Carl
          ɬəl=s-Teresa.
          from=NMLZ-Teresa
        'Carl drives a smaller car than Teresa.'

(20) plán=ƛ̓əɬ   s=zaxt=s   cʔa kʷu=syáp ɬəl=ta=núkʷ=a,
        already=now   NMLZ=long-3POSS this DET=tree   from=DET=other=EXIS
          ƛuʔ twiẃt-**ám**.
          but young-**er**
        'This tree is already taller than that one, even though it's younger.'

Turning to superlatives, St'át'imcets employs two main strategies, one of which involves the general purpose intensifier *-ʔúl* 'real, authentic, truly, too (much)', and the other the dedicated superlative morpheme combination *n-...-tən* '-est'.

The general purpose strategy is more common. Typical examples are given below.

(21) snúwa   ta=kəlʔa-mx-**ʔúl**=a   qátsk-kaɬ.
        2SG.INDP   DET=first-person-**INTS**=EXIS   older.brother-1PL.POSS
        'You are our oldest brother.'
        (Literally: 'You are truly the first amongst our older brothers.')

(22) swat   kʷu=ʕəl•ʕəl-**ʔúl**   ɬəl=wi=snuláp?
        who   DET=strong•CHAR-**INTS**   from=PL=2PL.INDP
        'Who is the strongest of you folks?'
        (Literally: 'Who is the truly strong one from among you folks?')

Notice there is nothing specifically superlative about *-ʔúl* in these cases: its usual intensifying function yields a quasi-superlative reading when combined with a gradable adjective and an optional standard of comparison.[3]

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[3] One of our St'át'imcets consultants, however, does use a variant of *-ʔúl* which appears to be a dedicated superlative morpheme, namely *-ʔúlaʔɬ*, which consists of *-ʔúl* plus an *-aʔɬ* accretion of uncertain origin.

In contrast, the dedicated morphological superlative *n-...-tən only* attaches to gradable adjectives, and only yields superlative meanings. Morphosyntactically, it is also distinctive in that it is noun-creating, with the target of comparison marked as the possessor of the derived noun. Examples are given in (23)–(25):

(23) niɬ   tiʔ   **n**-cáʔ-**tən-s**   (kʷ=s=záx-alʼqʷəmʼ=s)   kʷu=syáp.
     COP   that   **SUP**-high-**SUP-3POSS**   (DET=NMLZ=long-appearance=3POSS)   DET=tree
     'That is the tallest tree around here.'

(24) niɬ   s-Bill   ta=**n**-lə́x̌•ləx̌-tən-s=a   ɬəl=ki=tákəm=a
     COP   NMLZ-Bill   DET=**SUP**-smart•CHAR-**SUP-3POSS**=EXIS   from=PL.DET=all=EXIS
             l=ta=n-cunámʼ-xal-tən=a.
             in=DET=LOC-teach-ACT-INS=EXIS
     'Bill is the smartest kid in the school.'

(25) ɬkʷúnsa kákʷuʔ   **n**-qə́mp-**tən-s**   ta=sqʼít=a   l=ta=spipánck=a.
     now   around.INV **SUP**-hot-**SUP-3POSS** DET=day=EXIS   in=DET=summer=EXIS
     'Today is the hottest day of the summer.'

The productivity of this construction seems to vary: some speakers use it with only a few lexical items, whereas others employ it with any gradable adjective. The provenance of superlative *n-...   -ten* is something of a mystery: it is homophonous with a locative combination meaning 'setting', as in *n-lám-xal-tən* 'church' (*LOC-pray-ACT-INS*), *n-ɬámʼ-tən* 'container' (*LOC-contain-INS*) (see also 'school' in (24)), but this seems to be an accident; more likely, it is related to Squamish *-tan*, which also yields a superlative nominal with possessive morphology, according to Kuipers (1967:125).[4]

3.1.2   Degree-related morphology in ʔayʔaǰuθəm

Before presenting the morphological exponents of comparison in ʔayʔaǰuθəm, we begin by providing some more general remarks about its morphology, which at least superficially looks

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Examples are given below:

(i) sʔə́nca   ta=ɬəqʼiqʼ-alʼqʷəmʼ-**ʔúlaʔɬ**=a   ɬəl=ki=tákəm=a   n-kʼsáytkən.
     1SG.INDP DET=short-appearance-**SUP**=EXIS   from=PL.DET=all=EXIS 1SG.POSS-relative
     'I am the shortest one amongst my relatives.'

(ii) niɬ   cʔa   ta=xzum-**ʔúlaʔɬ**=a   zúmak   kʷu=n-s-ʔústək   cʔa
     COP   this   DET=big-**SUP**=EXIS   spring.salmon   DET=1SG.POSS-NMLZ-catch   this
            kʷu=spipáncək.
            DET=summer
     'This is the biggest spring salmon I've caught this summer.'

[4] There are reports of superlative constructions in other Salish languages, though these are mostly given as isolated forms and it is therefore unclear if they function in a parallel manner to superlative *n-...-tən* in St'át'imcets or *-est* in English. These include: C_1C_2 reduplication applied to the predicate *hičim* 'more' in Sechelt (Beaumont 2011:287); the word *tim* 'most' in Cowlitz (Kinkade 2004:264), and the suffix *-wins* 'superlative' in Tillamook (Edel 1939).

rather different from that of its Salish neighbours and relatives.

More specifically, ʔayʔajuθəm has lost non-reduplicative prefixes, and has a strong tendency to omit proclitics.[5] The result is that some important pan-Salish morphemes have either been lost or obscured. Most strikingly, the nominalizing prefix *s-* has gone, and its proclitic analogue *s=* is either fused with possessive subjects (in first and second person) or omitted altogether (in third person).

Proclitic determiners are also more frequently dropped in ʔayʔajuθəm than in neighbouring languages, though for the most part they can be restored in elicitation contexts (Huijsmans et al. 2018, Mellesmoen 2018). And finally, the single proclitic preposition/oblique marker *ʔə=* typical of Central Salish languages of the Georgia Strait region (including Halkomelem, Northern Straits, and Sechelt) has either been obscured or lost altogether, depending on the speaker. The overall result is that ʔayʔajuθəm often *looks* superficially distinct from other Salish languages, even when its underlying syntax is largely identical.

Turning to explicitly degree-related morphology, we note first of all that ʔayʔajuθəm, like St'át'imcets, has a predicate meaning 'more' (*kʷihit*). Examples are given below.

(26) **kʷihit** xaxał Tony **hu** Gloria.
more tall Tony **go** Gloria
'Tony is taller than Gloria.'

(27) **kʷihit** tih tə kʷakʷaju **θu** tə qʷisqʷis.
more big DET squirrel **go** DET Stellar's.Jay
'The squirrel is bigger than the Stellar's Jay.' (L&R:121)

(28) **kʷihit** saʔa t̓θuk̓ʷ niʔ-uł=s nəpət.
more two day be-PST=3POSS lie
'It's been there for more than two days.'

(29) **kʷihit** qəx max-əxʷ-axʷ.
more many get-NCT-2SG.ERG
'You got more.'

Like St'át'imcets *p̓aʔxʷ*, *kʷihit* can be used for comparison over any scalar property, including amounts (usually with *qəx* 'much, many'), times, and distances.

Morphosyntactically, ʔayʔajuθəm comparatives show two obvious differences from those in St'át'imcets. First, subordinating morphology, including the D/C element, the proclitic nominalizer, and the enclitic third person possessive subject *=s* are more often than not missing on the complement to *kʷihit*. As we will see below, all three do sporadically show up, indicating

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[5] This is almost certainly due to influence from the neighbouring Northern Wakashan language Kwakw'ala (J. Davis 1970), which, like other members of its family, differs from all Salish languages except ʔayʔajuθəm in two relevant respects: first, it lacks complex onsets; and second, it has no non-reduplicative prefixes. Both of these traits now also characterize ʔayʔajuθəm; however, it remains unclear in individual cases how the Kwak'wala influence played out, since, for example, a consonantal prefix like the nominalizer *s-* could either have been eliminated indirectly by the phonology (since it forms complex onsets with a following C-initial stem) or directly by the morphology (since it is prefixal).

that they are underlyingly present, though the D/C element is noticeably less common than the other two.[6]

The second difference is in the standard of comparison. In contrast to St'át'imcets, which uses prepositions to mark the standard, ʔayʔaǰuθəm employs the predicate *hu~θu* 'go', thus qualifying as an "exceed-type" comparative language (Stassen 2013). There are language-internal reasons for this. Because it only has a single, evanescent preposition *ʔə=*, ʔayʔaǰuθəm employs verb serialization in locative constructions with *hu~θu*, as in (30):

(30) λ̓əč̓-t-as   **θu** ʔ=tə=qaya.
      push-CTR-3ERG   **go** OBL=DET=water
      'He pushed it into the water.'   (Kroeber 1999:46)

Given that elsewhere in Salish (e.g., in St'át'imcets) locative prepositions mark the standard of comparison, the replacement of prepositions by motion verbs in locative contexts naturally extends to comparatives, accounting for the development of exceed-type standards with *hu~θu*.

As observed by L&R, ʔayʔaǰuθəm lacks affixal morphology relating to degrees, including both comparatives and superlatives.[7] English superlatives are translated into ʔayʔaǰuθəm in a number of ways, sometimes without any explicit marking at all (31), sometimes with *kʷihit* 'more' (32), and sometimes with the intensifier *-mut*, with or without *kʷihit* (33). A standard of comparison containing the universal quantifier *ʔukʷ* 'all/any' may also be supplied to limit the contextually defined partition imposed by *kʷihit* to a unique individual (34).

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[6] Neighbouring and closely related Sechelt, whose inflectional morphology has not undergone the same kind of erosion as in ʔayʔaǰuθəm, also has a lexical item meaning 'more', *hičim* (Beaumont 2011:286). Interestingly, there appear to be *two* ways to use *hičim* syntactically: one resembles the St'át'imcets pattern, with a nominalized complement introduced by a D/C element, as in (i), and the other looks like the ʔayʔaǰuθəm pattern, with a bare complement, as in (ii):

(i) **hičim**   **tə=s=ʔiy=s**   łə=Stella   cuʔt   λ̓ə=caliyu.
     more   **DET=NMLZ=good=3POSS**   FEM.DET=Stella go   OBL.DET=1SG.INDP
     'Stella is better than me.'

(ii) čəwat   čə=n-man   ʔə=šə=hiyay,
      smart   ABSN.DET=1SG.POSS-father   OBL=INV.DET=make.canoes
          qəm   **hičim**   **čəwat**   čə=n-čičt.
          but   **more**   **smart**   ABSN.DET=1SG.POSS-older.brother
      'My father is good at making canoes, but my older brother is better.'

This indicates that ʔayʔaǰuθəm examples such as (26)–(29) could have two sources: one with phonologically elided nominalization and associated possessive morphology, and one without. In the latter case, *kʷihit* could either be acting as an auxiliary or forming a hitherto unattested form of complex predicate with an adjectival head.

[7] One of our ʔayʔaǰuθəm consultants (JF) also produces and recognizes a prosodic contrast associated with superlative semantics, in the form of a glottal stop infixed into gradable adjectives such as *titul* 'small', to yield *ti<ʔ>tul* 'really small/the smallest'. The same pattern is found with *tihmut* 'big' and *χaχał* 'tall'. The contrast manifests itself acoustically as a sudden drop of pitch in the initial syllable of the word, resulting in a very strong HL contour. However, it is currently unclear if the meaning associated with this process is specific to superlatives, as opposed to being a general-purpose strategy of emphasis.

(31) hiɬ   kʷəsim   ǰaʔǰa   titul.
     COP   blue   tree   small
     'The blue tree is the smallest.' (Literally: 'It's the blue tree which is small.')

(32) hiɬ   tə   kʷəsim   ǰaʔǰa   **kʷihit**   titul.
     COP   DET   blue   tree   **more**   small
     'The blue tree is the smallest.' (Literally: 'It's the blue tree which is smaller.')

(33) hihaw   t̓ʰit̓ʰay-**mut**   Henry.
     very   loud-**INTS**   Henry
     'Henry is the loudest.'

(34) **kʷihit**   x̌ax̌aɬ   paʔa   ǰaʔǰaʔəm   **hu   ʔuk̓ʷ   ǰaʔǰaʔəm**.
     more   tall   one   tree   **go   all   tree**
     'One tree is the tallest.' (Literally: 'One tree is taller than all the trees.')[8]

4   Degree Constructions

In this section we turn to a systematic inventory of degree constructions in the two Salish languages under consideration, more or less following L&R, who in turn base their survey on Beck et al. (2009). For each construction, we first give an English equivalent by way of introducing the relevant syntactic characteristics, and then compare its St'át'imcets and ʔayʔaǰuθəm counterparts.

4.1   Measure Phrase Constructions

The English example in (35) shows a measure phrase construction. It has three parts: a number, a unit of measurement, and a gradable predicate.

(35)   The lake is six feet deep.

Note that a language with measure phrases must not only be valued [+DSP], but also [+DegPP], since the DegP Parameter (8) specifically refers to the expression of an overt measure phrase (which is impossible in, e.g., Russian and Japanese, even though these are [+DSP] languages).

   Measure phrases are attested in both St'át'imcets and ʔayʔaǰuθəm. In St'át'imcets, the unit of measurement may either be a traditional one based on dimensions of the body, such as *tɬ-áx̌an-am,* literally 'stretched out arm', a direct translation from English (e.g., *sq̓ʷax̌t,* literally 'foot'), or a borrowing (e.g., English 'miles').

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[8] For most speakers, *ǰaǰaʔəm* is the plural of *ǰaǰa* 'tree'; however, the consultant (JF) who produced (34) uses both forms indiscriminately to refer to either 'tree' or 'trees'.

(36) **ʔán̓was tɬ-áx̌an-am**   s=zaxt=**s**   ta=sp̓ac̓ən-ɬkáɬ=a.
two   stretch-arm-MID NMLZ=long=**3POSS**   DET=net-1PL.POSS=EXIS
'Our net is two arm lengths long.'

(37) **kaʔɬás   s=q̓əm̓p=s**   **sq̓ʷax̌t** s=x̌áʔ=**s=a**   ta=sɣáp=a.
three   NMLZ=ten=3POSS **foot**   NMLZ=high=**3POSS=EXIS** DET=tree=EXIS
'The tree is thirty feet high.'

(38) **ʔán̓was s=q̓əm̓p=s**   **wi=cílkst** *miles*=k̓a   s=zaxt=**s**
two   NMLZ=ten=3POSS   **PL=five**   miles=EPIS   NMLZ=long=**3POSS**
  na=n-q̓ʷʔ-úm-tən-s=a   s-x̌óƛ̓a.
  ABSN.DET=LOC-trap-MID-INS-3POSS=EXIS   NMLZ-x̌óƛ̓a.
'X̌ót'a's trapline must have been twenty five miles long.'

In terms of syntax, the number and the unit of measurement together form a complex nominal predicate, which then takes a nominalized subordinate clause containing the gradable adjective and its argument.

The ʔayʔaǰuθəm measure phrase construction is similar (after making allowances for missing morphology). Nominalization of the adjectival complement may be signaled by the presence of the third person possessive enclitic =s on its adjectival head, as in (39) and (41).

(39) **saʔa   čayiš**   ƛ̓aqt=**s**   paʔa   yawup.
two   hand   long=**3POSS** one   fabric
'One piece of fabric is two hands long.'

(40) **saʔa   laplaš** p̓iq̓   tə=q̓ʷətəm.
two   plank   wide   DET=river
'The river is two planks wide.'

(41) **čaləs   məm•mimaw**   x̌ax̌aɬ=**s**   Marianne.
three   PL•cat   tall=**3POSS**   Marianne
'Marianne is three cats tall.'

Notice that none of the units of measurement used here (with the possible exception of 'hands') are conventionalized. Unlike St'át'imcets speakers, more conservative ʔayʔaǰuθəm speakers resist using unassimilated English terms such as 'miles' or 'pounds' in their measure phrase constructions, and since traditional measures seem to have largely dropped out of the language, the result is a lexical semantic gap in the domain of measure words. This is undoubtedly one of the reasons L&R concluded that ʔayʔaǰuθəm lacked measure phrase constructions altogether, particularly since they were working with the oldest of our consultants, who are particularly resistant to employing non-traditional terms.

Younger and more innovative speakers, however, do readily accept nonce measure terms such as 'planks', and even 'cats' in elicitation contexts; an analogy can be made to the use of measure functions with mass nouns, as in 'piles of dirt', 'pots of water', or 'handfuls of gold'. Furthermore, even the oldest of our ʔayʔaǰuθəm consultants is able to use measure phrase constructions with demonstratives such as *tiʔi* 'this (much)', even though she generally rejects measure phrases containing English borrowings or nonce measure words:

(42) θəxʷin **tiʔi** **s=ƛ̓aqt=s.**
how **this** **NMLZ=long=3POSS**
'This is how long it is.'
('This is how the length of it is.' — speaker's translation, accompanied by a hand gesture)[9]

The construction in (42) is syntactically parallel to the cases in (39)–(41), with the gradable property term in a nominalized subordinate clause, and the degree predicate *θəxʷin* 'how (much)' in main predicate position.[10]

4.2 Comparison with Degrees

In this construction, the standard of comparison is a degree rather than an entity, as illustrated by the English example in (43), where the degree to which the lake is deep exceeds the degree of depth denoted by 'six feet'.

(43) The lake is more than six feet deep.

Comparison with degrees is possible in both St'át'imcets and ʔayʔaǰuθəm. St'át'imcets examples are given in (44)–(45).

(44) **p̓aʔxʷ ɬəl=kʷu=x̌ʷʔúcin sq̓ʷax̌t** s=zaxt=s ti? kʷu=sc̓úqʷaż.
more **from=DET=four foot** NMLZ=long=3POSS that DET=fish
'That fish is more than four feet long.'

(45) **p̓áʔxʷ=k̓'a l=kʷu=pála? sq̓ʷax̌t** s=zaxt=s ʔi=sxʷák̓ʷt=a
more=EPIS **at=DET=one foot** NMLZ=long=3POSS PL.DET=hoar.frost=EXIS
wa? s-tax̌ʷ l=ki=syráp=a k̓íkta?-s=a ʔi=cal̓áɬ=a.
IPFV STAT-hang at=PL.DET=tree=EXIS near-3POSS=EXIS PL.DET=lake=EXIS
'The hoar frost hanging from the trees next to the lakes must have been more than a foot long.'

Notice that the standard of comparison immediately follows *p̓aʔxʷ* when it directly denotes a degree, in contrast to examples where it does so indirectly via an entity, in which case it is extraposed (cf., e.g., (9), (12), and (14) above).
    Parallel examples from ʔayʔaǰuθəm are given in (46)–(47):

(46) **kʷihit θiyačis** *miles* niǰi *Maple Ridge*.
more five *miles* far *Maple Ridge*
'It is more than five miles to Maple Ridge.'

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[9] It is important to emphasize that the nominalization in (42) is not noun-creating (in spite of the speaker's translation): rather, it yields a nominalized subordinate clause. We can tell this because lexical nominalization (which marks nouns and NPs, as opposed to clauses) is completely absent in ʔayʔaǰuθəm, due to the elimination of all prefixes in the language. The *s=* here is therefore a proclitic, which is used generally in Salish to introduce a clause-level nominalization (see, e.g., Kroeber 1999).
[10] Thanks to Daniel Reisinger for this example.

(47) **kʷihit saʔa tintin** ƛ̓əct Daniel.
      more   two   bell   sleep Daniel
      'Daniel slept for more than two hours.'

Once again, missing morphology here belies the fundamental similarity of the ʔayʔaǰuθəm degree system to its St'át'imcets counterpart: word order, for example, is identical in the two languages, though both nominalization and the standard marker *hu~θu* are absent in the ʔayʔaǰuθəm examples.

4.3 Differential Comparatives

Differential (or difference) comparatives involve a comparison of degrees, whereby two or more sets of degrees are compared along the same scalar dimension. An English example is given in (48), where the (degree of) depth of a lake is compared to the (degree of) depth of a creek. The difference between the two totals is six feet.

(48)   The lake is six feet deeper than the creek.

As mentioned above, differential comparatives provide crucial evidence for a degree-based semantics, since they do not simply partition the domain of gradable properties, but specify the difference between them via an explicit operation of subtraction over degrees.

Differential comparatives are found in both St'át'imcets and ʔayʔaǰuθəm. The examples in (49)–(51) illustrate the construction in St'át'imcets.

(49) **kaɬás   sq̓ʷax̌t s=p̓aʔxʷ=s**   **s=zaxt=s**   cʔa kʷu=laplás
      three   foot   NMLZ=more=3POSS   NMLZ=long=3POSS   this DET=plank
          ɬəl=ti=núkʷ=a.
          from=DET=other=EXIS
      'This plank is three feet longer than the other one.'

(50) **pála?   sq̓ʷax̌t s=záx-alq̓ʷəm̓=s**   s-Tony   ɬəl=s-Mary.
      one   foot   NMLZ=long-appearance=3POSS NMLZ-Tony   from=NMLZ-Mary
      'Tony is a foot taller than Mary.'

(51) **ʔán̓was s=zánuxʷ=s   s=kəlʔá-mx=s**   s-Mary   ɬəl=s-Peter.
      two   NMLZ=year=3POSS NMLZ=first-person=3POSS   NMLZ-Mary from=NMLZ-Peter
      'Mary is two years older than Peter.'

As in examples with simple measure phrases (4.1) the number and the unit of measurement together form a complex nominal predicate, followed optionally by a nominalized clause headed by *p̓aʔxʷ* 'more', which in turn takes another nominalized clause containing the gradable adjective, the target, and the standard of comparison. As (50) and (51) show, *p̓aʔxʷ* is more often than not omitted in these cases, with the standard of comparison alone inducing a comparative meaning, just as in ordinary comparisons with gradable adjectives.

Examples of differential comparatives in ʔayʔaǰuθəm are given in (52)–(54):

(52) **paʔa jəšin kʷihit=s**   **x̌ax̌ał** Marianne higa Daniel θu Gloria.
     one foot more=3POSS   **tall**   Marianne CNJ Daniel go Gloria
     'Marianne and Daniel are one foot taller than Gloria.'

(53) **paʔa mimaw kʷihit=s**   **x̌ax̌ał** Marianne θu Gloria.
     one cat   **more=3POSS**   **tall**   Marianne go Gloria
     'Marianne is one cat taller than Gloria.'

(54) **paʔa qʷumay tᶿ=kʷihit**   **s=ƛ̓ax̌ay** θu nəgi.
     one snow   **1SG.POSS=more**   **NMLZ=old** go you
     'I am one year older than you.'

These cases parallel those in St'át'imcets, and furthermore all show relics of nominalization, including the third person possessive enclitic =s on *kʷihit* in (52)–(53), and the first person possessive proclitic *tᶿ=* on *kʷihit* in (54), as well as the nominalizer *s=* introducing its complement.

4.4 Degree Questions

Degree questions involve explicit quantification over the degree argument of a gradable predicate, and are thus relevant not only to the DSP but also to the Degree Abstraction Parameter (DAP) given in (6) above. Languages like Japanese and Mandarin, which are [+DSP] but [-DAP], do not permit genuine degree questions, though some care must be taken to distinguish them from look-alike constructions involving e.g., degree-denoting nouns. The distinction can be illustrated with the English examples in (55):

(55) a.   How (many feet) deep is the lake?
      b.   What is the depth (in feet) of the lake?

According to the DAP, (55a) is a genuine degree question, while (55b) is not. Accordingly, Japanese and Mandarin lack type (a) questions, and employ variants of the strategy in (b).

    Degree questions can be formed in St'át'imcets in two ways. The first involves the "approximative" adverb *c̓íla* '(be) like, resembling' together with the general purpose WH-predicate *nkaʔ* '(be) where, which', with the adjectival complement of the predicate nominalized.

(56) **c̓íla nka? s=ƛ̓pam̓=s**   ta=sx̌ə́tq=a?
     like which NMLZ=deep=3POSS   DET=hole=EXIS
     'How deep is the hole?'

(57) cwas-ən-ítas   ta=*Rex Mountain*   **c̓íla s=nka?**   **s=xa?=s.**
     measure-DIR-3PL.ERG DET=*Rex Mountain*   **like NMLZ=which**   **NMLZ=high=3POSS**
     'They measured Rex Mountain to see how high it was.'

The likelihood is that this is not a genuine case of quantification over the degree argument of a gradable adjective, but an "extent" question of a type also attested in Japanese (Beck et al. 2009): i.e., 'To what extent is the hole deep?' rather than 'How deep is the hole?'.

The second type of St'át'imcets degree question is a better candidate for genuine WH-quantification over degrees. It involves the WH-word *skənkán* 'how (much)' which also quantifies over portions of mass nouns.[11] As usual with degrees expressions, the complement of the WH-predicate is nominalized, and may optionally also be preceded by the D/C element *kʷ(u)=*.

(58)   **skənkán**   **kʷ=s=xin̓=s**   kʷáĺap   mamáẃs?
       how   **D/C=NMLZ=long=3POSS**   D/C+NMLZ+IPFV+2PL.POSS   couple
       'How long have you been a couple/married?'

(59)   **skənkán**   **s=pəm-p=s**   ɬ=as   n-q̓áy-ləx
       how   **NMLZ=fast-INCH=3POSS**   COMP=IPFV+3SJV   LOC-jump-AUT
           NMLZ-Mary?
           s-Mary
       'How fast does Mary swim?' (Literally 'How fast is Mary when she swims?')

There are also two ways of expressing degree questions in ʔayʔaǰuθəm. The first employs the question word *θəxʷin*, '(be) how'. This word is not a typical Salish WH-predicate: it has a basic meaning of 'be like this, be this way', and appears in equatives with this meaning (see 4.6 below).[12] Its use as a WH-word therefore appears to be an innovation. When used as a degree quantifier, it takes a nominalized complement clause (signaled by both the nominalizer and possessive morphology) containing the gradable predicate whose degree argument it quantifies over.

(60)   **θəxʷin**   **s=ƛ̓əp=s**   tə   qaya?
       how   **NMLZ=deep=3POSS**   DET   water
       'How deep is the water?'

(61)   **θəxʷin**   **s=p̓iq̓=s**   θ=χaƛ̓?
       how   **NMLZ=wide=3POSS**   2SG.POSS=want
       'How wide do you want it?'

The second type of ʔayʔaǰuθəm degree question employs the pan-Salish WH-quantifier *k̓ʷin* 'how many', which is also present in St'át'imcets. Questions with *k̓ʷin* in ʔayʔaǰuθəm always contain a measure phrase as well as a gradable property, which is unsurprising if *k̓ʷin* only quantifies over countable entities (including degrees).

(62)   **k̓ʷin**   **čayiš**   p̓iq̓=s   tə   yawup?
       how.many   **hand**   wide=**3POSS**   DET   fabric
       'How many hands wide is the fabric?'

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[11] More generally, the syntax and semantics of gradable properties is very similar to that of mass nouns in both St'át'imcets and ʔayʔaǰuθəm. This is unlikely to be an accident, and invites more detailed investigation: see Schwarzschild (2005) for observations on this relationship in English.

[12] Sechelt has a direct cognate of *θəxʷin*: *c(ə)xʷin*, glossed by Beaumont (2011:286) as 'equal, identical, similar to s.o./s.th., including the way s.th.is done, is supposed to be, etc.'. However, Beaumont gives no indication that the Sechelt term can be used as a WH-predicate.

(63) **ḱʷin** **tə** *miles* kʷihit=**s** niǰi?
     how.many **DET** **miles** more=**3POSS** far
     'How many miles further is it?'

4.5 Subcomparatives

Subcomparative constructions involve the explicit comparison of two different dimensions: the degree to which one thing is X is compared to the degree to which another is Y. An example from English is given in (64), where the degree to which the lake is deep is compared to the degree to which the creek is wide. The parenthesized measure phrase shows that it is also possible to create a differential subcomparative.

(64) The lake is (six feet) deeper than the creek is wide.

Subcomparatives are only possible in languages where the standard of comparison may be clausal. For example, Nez Perce, which only allows phrasal comparatives, disallows subcomparatives altogether (Hohaus and Deal 2019).

    Both Salish languages under investigation permit subcomparatives. St'át'imcets examples are given in (65)–(66).

(65) **ṕaʔxʷ** **s**=zaxt=**s** ta=sýáp=a **łəl=ta=s=łə́q̇=s=a**
     more **NMLZ**=long=**3POSS** DET=tree=EXIS **from=D/C=NMLZ=wide=3POSS=EXIS**
       ta=scwáẃx=a.
       DET=creek=EXIS
     'The tree is taller than the creek is wide.'

(66) **ṕaʔxʷ** **s**=xzum=**s** ta=x̌ə́cəm=a **łəl=ta=s=λ̇páṁ=s=a**
     more **NMLZ**=big=**3POSS** DET=box=EXIS **from=D/C=NMLZ=deep=3POSS=EXIS**
       ta=sx̌ə́tq=a.
       DET=hole=EXIS
     'The box is bigger than the hole is deep.'

It is typical in St'át'imcets for the clausal standard of a subcomparative to be overtly introduced by a D/C element (here, *ta=…=a*) as well as the nominalizer.

    The same is partially true of ʔayʔaǰuθəm; as shown in (67), the clausal standard of subcomparatives is one of the few places (along with degree equatives) where we have recorded an initial D/C element in ʔayʔaǰuθəm degree constructions. In addition, remnants of nominalization may appear both on the target and the standard.

(67) **kʷihit** λ̇aqt=**s** θiwθitan θu **kʷ=ṗiq̇=s**.
     more long=**3POSS** table go **D/C**=wide=**3POSS**
     'The table is longer than it is wide.'

(68) **kʷihit** ṗiq̇ θiwθitən hu tih=**s** θək̇ʷnačtən.
     more wide table go big=**3POSS** chair
     'The table is wider than the chair is tall.'

4.6 Degree Equatives

Degree equatives are constructions that assert that two measurements are the same. The English example in (69) can be paraphrased as 'the degree to which the creek is deep is the same as the degree to which the lake is deep'.

(69)   The creek is as deep as the lake.

As with degree questions, it is important to distinguish degree equatives from vague similarity predicates ('like', 'the same as') which do not specifically refer to degrees, and provide no evidence for or against a positive setting of the DSP. It is not easy, however, to tell them apart; here we rely on syntactic parallels with other clearly degree-related constructions to diagnose degree-related equatives, without excluding the possibility that they can be as easily analyzed without invoking degrees.

Equatives in St'át'imcets employ the predicate *c̓íla* '(be) like, resembling', which we have already seen in the formation of degree questions in 4.4. In equatives, *c̓íla* (usually accompanied by the exclusive enclitic *=λ̓uʔ* 'just') takes a nominalized complement clause, with the standard of comparison introduced by the proclitic preposition *ʔə=* 'to'.

(70)   **c̓íla=λ̓uʔ**   **s=zax-al̓q̓ʷəm̓=s**   s-Peter   **ʔə=s-Tony.**
        like=EXCL   **NMLZ**=long-appearance=**3POSS**   NMLZ-Peter   **to**=NMLZ-Tony
        'Peter is as tall as Tony.'

(71)   **c̓íla=λ̓uʔ**   **s=pəm-p=s**   n-q̓áy-ləx=s=a   s-Peter
        like=EXCL   **NMLZ**=fast-INCH=**3POSS** LOC-jump-AUT=3POSS=EXIS   NMLZ-Peter
            ʔə=s-Tony.
            to=NMLZ-Tony
        'Peter swims as fast as Tony.'

Equative constructions in ʔayʔaǰuθəm are based on the predicate *θəxʷin* 'same, alike', which is also found in degree questions (see 4.4).[13] In equatives, *θəxʷin* usually undergoes plural C₁ reduplication and ablaut to yield *θaθxʷin*, which may either then take a nominalized subordinate clause, as in (72), or be further suffixed with the non-control transitivizer *-(n)xʷ* followed by the non-control reciprocal suffix *-igas* to yield the derived predicate 'like each other', as in (73).[14] Note, however, that (73) contains no gradable predicate, and is thus most likely to represent a vague (non-degree) equative.

(72)   x̌ʷit=št=ʔut   **tə=ʔəms=θa<θ>xʷin**   **tams=x̌ax̌ał.**
        really=1PL.SUBJ=EXCL   **DET=1PL.POSS=alike<PL>** **DET+1PL.POSS**=tall
        'We are the same height.'[15]

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[13] It is surely not an accident that degree questions in both St'át'imcets and ʔayʔaǰuθəm use "approximative" predicates with a basic meaning of 'like' or 'same' (*c̓íla nkaʔ* and *θəxʷin*, respectively), though the reason is far from obvious. Further investigation is warranted.

[14] Alternatively, under the analysis of Mellesmoen (2017:192) the non-control transitivizer is simply *-n* and the non-control reciprocal is *-xʷigas*.

[15] This example is additionally interesting because it appears to involve copy raising of the first person

(73) **θa‹θ›xʷin-(n)xʷ-igas**   ǰaʔǰaʔəm.
      alike‹PL›-NCT-REC   tree
      'The trees are the same (height).'

4.7 Conclusion: Degree constructions in St'át'imcets and ʔayʔaǰuθəm

Our re-examination of degree constructions in St'át'imcets confirms L&R's conclusion: it tests unequivocally as [+DSP] (and also as [+DAP] and [+DegPP]).

   However, our results for ʔayʔaǰuθəm differ from those of L&R: we find that once the relative morphological opacity of the language is taken into account, and methodological issues with eliciting measure phrases are dealt with, ʔayʔaǰuθəm also tests positively for the DSP, DAP, and DegPP. Our conclusions are summarized in the table in (74): compare table (4) above.

(74)   Degree semantics in two Salish languages (revised)

	ʔayʔaǰuθəm	St'át'imcets
Measure phrase constructions	**Yes**	**Yes**
Comparison with degrees	**Yes**	**Yes**
Differential comparatives	**Yes**	**Yes**
Degree Questions	**Yes**	**Yes**
Subcomparatives	**Yes**	**Yes**
Degree Equatives	**Yes**	**Yes**

In terms of the DSP, this is probably good news. While it is not logically impossible for closely related languages to differ along macroparametric lines, a macroparametric split raises the issue of triggering evidence: in particular, how can a language learner set the parameter, if two syntactically similar languages differ radically on an abstract semantic level? This problem obviously does not arise if both systems have the same parameter setting.

   With the basic facts established, we now turn to analysis: Section 5 provides a preliminary sketch of degree semantics in the two languages, focusing on measure phrases and subcomparatives.

5   Degree Semantics

Given what we have established in the preceding sections, we begin here with two assumptions: first, in spite of superficial morphological differences, the grammar of comparison in St'át'imcets and ʔayʔaǰuθəm is fundamentally similar in both syntactic design and semantic interpretation; and second, since both exemplify the positive value of the DSP, comparison in both languages involves degrees of semantic type *d,* and more specifically, gradable predicates of type $\langle d, \langle e, t \rangle \rangle$.

   Before proposing an explicit analysis, however, we need to make one more empirical point. It is usual in the literature on degree semantics to distinguish between *clausal* and *phrasal* standards of comparison; as their names indicate, clausal standards involve an embedded CP constituent, while phrasal standards simply contain a DP. English examples of both are given in (75):

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plural possessive subject of the nominalized complement clause into the matrix clause, whose predicate is impersonal *x̌ʷit* 'really'.

(75) a.   Carl drives a smaller car **than Teresa does.**
      b.   Carl drives a smaller car **than Teresa.**

The example in (75a) is obviously clausal (with the auxiliary *do* controlling an obligatory VP ellipsis site). The usual assumption in such cases is that the comparative operator takes two arguments, the first of type *d* (a degree), the second of type $\langle d,t \rangle$ (i.e., a set of degrees). A lexical entry for the clausal comparative morpheme is given in (76), from Heim (2000):

(76) $[[-er_{\text{(clausal)}}]] = \lambda d_d. \lambda D_{\langle d,t \rangle}. \text{MAX}(D) > d$

Applied to (75a), this says that the comparative morpheme *-er* takes a degree (the value of the standard = the degree to which the car that Teresa drives is small) and a set of degrees (the value of the gradable predicate = the set of degrees of smallness of the car that Carl drives) and yields a value of true iff the maximal degree in the set of degrees denoted by the predicate exceeds the degree denoted by the standard.

   Both Salish languages under consideration clearly permit clausal standards, as evidenced, for example, by the existence of subcomparatives (4.5), so some variant of (76) will be necessary: we return to clausal comparatives in 5.2.

   The question as to how to characterize phrasal standards such as that in (75b) is more complex, since there are several possible analyses, distinguished by quite subtle tests that are not always easy to apply cross-linguistically. One possibility (argued by Lechner 2004 and Bhatt and Takahashi 2011 for English) is that phrasal standards are disguised clauses, with ellipsis responsible for the missing material. An obvious advantage of this analysis is that the comparative operator will have a single lexical entry, though obviously, much of the empirical force of the analysis depends on independent motivation for the ellipsis processes which drive it.

   Alternatively, several different non-clausal analyses have been proposed for phrasal comparatives. All of them involve a comparative operator which takes two individual arguments of type *e* and a gradable predicate over degrees of type $\langle d,\langle e,t \rangle \rangle$, but they differ in the order of composition, with non-trivial empirical consequences, as detailed in Beck et al. (2012). Of particular relevance is the distinction between *internal* and *external* readings of the phrasal standard. For example, (75b) has both an (absurd) internal and an external reading: on its internal reading, Carl's car is smaller than Teresa; on its external reading, Carl's car is smaller than the one that Teresa drives. Under a phrasal analysis, the external reading must be derived by LF raising of the target ('Carl') followed by "parasitic" raising of the standard 'than Teresa' to create a derived predicate of degrees (Bhatt and Takahashi 2011). This cannot be achieved (at least under normal assumptions about LF movement) via a comparative operator which takes the gradable predicate as its first argument, such as that proposed by Kennedy (1997), shown in (77). However, a Heim-style analysis which takes the standard of comparison as its first argument, as in (78), does combine the arguments in the required order.

(77) $[[-er_{\text{(Kennedy)}}]] = \lambda \text{Adj}_{\langle d,\langle e,t \rangle \rangle}. \lambda x_e. \lambda y_e. \text{MAX} (\lambda d .\text{Adj} (d) (x)) > \text{MAX} (\lambda d'.\text{Adj} (d') (y))$

(78) $[[-er_{\text{(Heim)}}]] = \lambda x_e. \lambda \text{Adj}_{\langle d,\langle e,t \rangle \rangle}. \lambda y_e. \text{MAX} (\lambda d .\text{Adj} (d) (x)) > \text{MAX} (\lambda d'.\text{Adj} (d') (y))$

This means that if phrasal standards yield only internal readings (as reported for e.g., Greek and Russian genitive comparatives: see Beck et al. 2012), an analysis like (77) is appropriate, but if external readings are possible, (77) is out, and either a clausal analysis like (76) with ellipsis or a non-clausal analysis like (78) is required.

As it turns out, both St'át'imcets and ʔayʔaǰuθəm allow external readings of phrasal standards. This is shown for St'át'imcets in (79), repeated from (19) above, which is a direct equivalent of the English example in (75):

(79) kʷikʷs-ám   ta=ḳáh=a   waʔ s-tqálḳ-s-as   s-Carl
     small-er   DET=car=EXIS IPFV STAT-drive-CAUS-3ERG NMLZ-Carl
         ** łəl=s-Teresa**.
         from=NMLZ-Teresa
     'Carl drives a smaller car than Teresa.'
     (i)   Carl drives a smaller car **than Teresa does**.
     (ii) Carl drives a smaller car **than Teresa (is)**.

An ʔayʔaǰuθəm example is given in (80).

(80) kʷihit tih   čanu ḳʷən-[n]əxʷ-əm-uł Marianne **hu Gloria**.
     more   big   dog   see-NCT-PASS-PST Marianne **go Gloria**
      'Marianne saw a bigger dog than Gloria.'
     (i)   Marianne saw a bigger dog **than Gloria did**.
     (ii) Marianne saw a bigger dog **than Gloria (is)**.

The existence of external readings eliminates a phrasal analysis like that in (77), but not one like that in (78). In order to choose between (78) and a reduced clausal analysis based on (76), we then need to find other tests to distinguish clausal and non-clausal comparatives, such as the arguments based on binding and scope in Bhatt and Takahashi (2011). We have not yet found a way to adapt their tests to the languages under investigation; pending further research, we will therefore sidestep these questions for now and assume a uniformly clausal analysis.

In the following two subsections we give a brief sketch of what a degree semantics might look like for the two Salish languages under investigation, using measure phrases (5.1) and subcomparatives (5.2) to exemplify our approach. For reasons of exposition, we use data from St'át'imcets to illustrate the analysis; however, as argued above, ʔayʔaǰuθəm behaves in exactly the same way once superficial morphological differences are taken into account.

5.1   Composition of a Measure Phrase Construction

Consider the St'át'imcets measure phrase construction in (37), repeated below as (81):

(81) kaʔłás   s=q̇əṁp=s   sq̇ʷaχt   s=xáʔ=s=a   ta=syáp=a.
     three   NMLZ=ten=3POSS   foot   NMLZ=high=3POSS=EXIS DET=tree=EXIS
     'The tree is thirty feet high.'

We assume the standard account of gradable adjectives (here *xaʔ* 'high') as functions from degrees to predicates of individuals, of type $\langle d,\langle e,t\rangle\rangle$, and treat measure phrases (here, *kaʔłás sq̇əṁps sq̇ʷaxt* 'thirty feet') as predicates of degrees, of type $\langle d,t\rangle$.
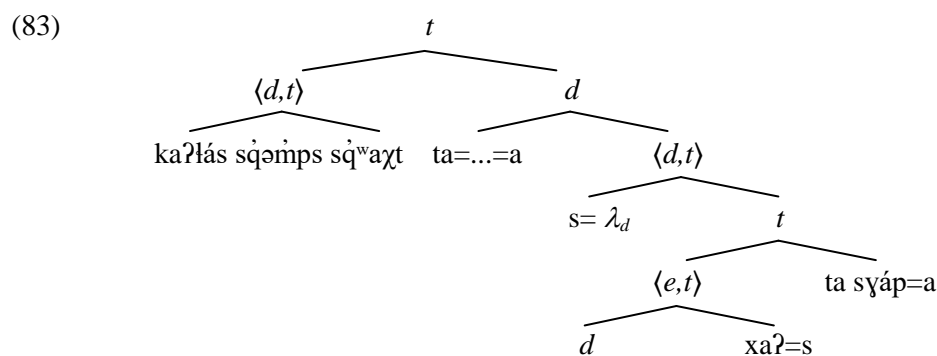
Next, we propose that nominalization of a clausal constituent containing a gradable predicate creates an abstraction over its degree argument: therefore *[s=xaʔ=s ta=syáp=a]*

'NMLZ=high=3POSS DET=tree=EXIS' = λd_i [the tree is d_i high], also of type $\langle d,t\rangle$.[16] This gives us two predicates of degrees.

   We then convert the second of these predicates to an argument (of type d) via a determiner (which is elided in (81), but detectably present via the existential enclitic $=a$ on *s-xaʔ=s=a*).[17] We propose that determiners be allowed to range over predicates of degrees as well as predicates of individuals, in which case they are of type $\langle\langle d,t\rangle,d\rangle$. On the analysis of Matthewson (2008), Salish determiners pick out the unique/maximal individual in a local context: this analysis will extend to determiners of degrees, whose effect will be then equivalent to von Stechow's (1984) *Max* operator, defined here in the form used by Alrenga and Kennedy (2014:11).

(82)   For any degree property C, max(C) = $\iota d[C(d) \land \neg \exists d'\ [C(d') \land d' > d]]$

   We can now represent the LF of (81) as in (83):

(83)

```
                                t
              ┌─────────────────┴──────────────┐
            ⟨d,t⟩                               d
   kaʔɬás sq̓əm̓ps sq̓ʷaχt       ┌───────────────┴────────┐
                            ta=...=a                    ⟨d,t⟩
                                           ┌──────────────┴────┐
                                        s= λ_d                 t
                                                      ┌────────┴─────┐
                                                    ⟨e,t⟩        ta syáp=a
                                              ┌───────┴──────┐
                                              d            xaʔ=s
```

This will allow us to derive the correct meaning, which can be paraphrased as 'the degree to which the tree is high is equal to thirty feet'.

5.2   Composition of a Subcomparative

Next, we turn to subcomparatives, illustrated by the St'át'imcets example in (84), repeated from (65) above.

(84)   p̓aʔxʷ   s=zaxt=s   ta=syáp=a   ɬəl=ta=s=ɬə́q̓=s=a
       more   NMLZ=long=3POSS   DET=tree=EXIS   from=D/C=NMLZ=wide=3POSS=EXIS
              ta=scwáw̓x=a.
              DET=creek=EXIS
       'The tree is taller than the creek is wide.'

Following Heim's analysis of clausal comparatives in (76), we treat the comparative morpheme *p̓aʔxʷ* 'more' as a predicate of type $\langle d,\langle\langle d,t\rangle,t\rangle\rangle$ taking two arguments, the first (the clausal

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[16] More broadly, we make the assumption that syntactic nominalization *always* marks abstraction, but can differ in the argument that is abstracted over (including at least situations, degrees, and entities). This is — we suspect — the likeliest route to provide a unified analysis of nominalization in Salish.

[17] 'Assertion-of-existence' determiners such as *ta=* are always accompanied by the existential enclitic *=a* in St'át'imcets (Matthewson 1998), which attaches to the end of the first prosodic word in the DP.

standard of comparison) of type *d*, the second (the nominalized clause containing the gradable predicate) of type $\langle d,t \rangle$. (We treat the preposition that introduces the standard as semantically vacuous, in line with most work on comparative *than*.) This gives us the lexical entry in (85).

(85) $[[\dot{p}a\mathglyph{?}x^w]] = \lambda d_d. \lambda D_{\langle d,t \rangle}. \text{MAX}(D) > d$

As with measure phrases, we will assume nominalization marks lambda abstraction over the degree argument in both clauses to yield derived predicates of type $\langle d,t \rangle$, and a determiner on the first argument (the standard of comparison) then saturates the resulting derived predicate to yield an argument of type *d*.[18] The result will be an LF such as (86); note that as in English, the standard of comparison will extrapose to yield surface word order.

(86)
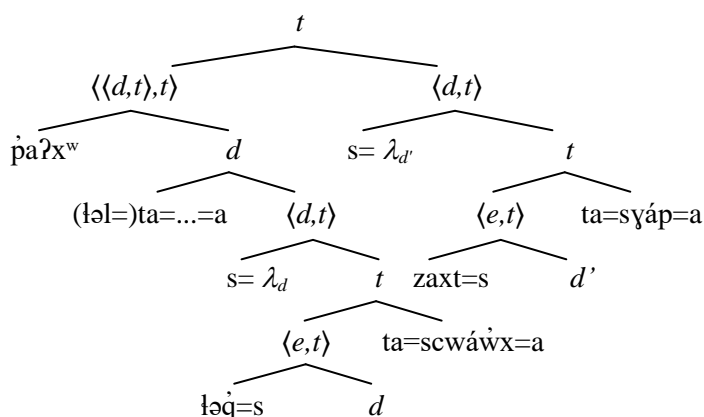
The resulting meaning can be paraphrased as 'the maximum degree in the set of degrees to which the tree is tall is greater than the degree to which the creek is wide'.

6   Conjoined Comparatives in ʔayʔaǰuθəm

One of our ʔayʔaǰuθəm consultants, JF, shows a particularly interesting grammatical pattern in comparatives, as first reported by L&R. In addition to using regular structures with *kʷihit* 'more' and a standard of comparison introduced by *hu* 'go', she also frequently employs *conjoined comparatives*, as shown in (87)–(88).[19]

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[18] The distribution of determiners in subcomparatives in both St'át'imcets and ʔayʔaǰuθəm supports the proposed analysis, in which the first (standard) argument of the comparative morpheme denotes an individual degree (*d*), but the second (target) argument denotes a set of degrees ($\langle d,t \rangle$). As noted in 4.5, a referential (assertion of existence) determiner (*ta=...=a*) marks the standard in St'át'imcets, whereas the target either lacks a determiner altogether, as in (84), or (more marginally) takes the non-referential D/C element *kʷ=*. In ʔayʔaǰuθəm, the standard is one of the few places where an overt determiner (*kʷ=*) is volunteered, as in (67); the target is never introduced by a determiner.

[19] It is important to emphasize that though JF is one of our younger consultants, her conjoined comparatives are not the result of language attrition or disuse; she is a fully fluent L1 speaker who still uses the language every day at home. In fact, her grammar is noticeably distinct from that of other contemporary ʔayʔaǰuθəm

(87) x̌ax̌ał Tony, titul Laura.
     tall   Tony   small Laura
     'Tony is taller than Laura.' (Literally: 'Tony is tall, Laura is small.')   (JF)

(88) či̓čiƛ ǰaʔǰa, x̌ax̌ał paʔa ǰaʔǰaʔəm.
     short   tree   tall   one   tree
     'This tree is shorter than the other.' (Literally: 'The tree is short, one tree is tall.')   (JF)

As these examples show, conjoined comparatives consist of two clauses in apposition, with or without an overt conjunction. The first clause contains the positive value of a gradable adjective, the second either its antonym or its negation (both are possible for JF).

Conjoined comparatives were first identified in the typological literature by Stassen (1985). They have a wide cross-linguistic distribution, with a geographical concentration along the Pacific rim; in the WALS survey, about a fifth (34/167) of the languages sampled employ conjoined comparatives (Stassen 2013).

Of particular interest to us is the fact that all previous detailed descriptions of conjoined comparatives have argued that they represent a *negative* setting of the [DSP] parameter. These include studies of Motu (Beck et al. 2009), Fijian (Pearson 2009), Washo (Bochnak 2015), Warlpiri (Bowler 2016), and (old) Samoan (Hohaus 2018). This body of work suggests that the availability of a conjoined comparative construction may be a sufficient diagnostic for identifying a [-DSP] language.

Such a conclusion raises immediate questions for the comparative system of ʔayʔaǰuθəm, which we have argued above must be analyzed as [+DSP]. Logically, three possibilities arise for a speaker like JF:

   (i)   She has a uniformly [-DSP] system, in which case her grammar differs radically from those of other ʔayʔaǰuθəm speakers.

   (ii)   She has a uniformly [+DSP] system, in which case her conjoined comparatives, in spite of appearances, must be analyzed as involving degrees.

   (iii)   She has two grammars, one [+DSP], for regular comparatives, one [-DSP], for conjoined comparatives.

As far as (i) is concerned, we have already come to the general conclusion that ʔayʔaǰuθəm comparatives with *kʷihit* involve degree semantics; but more specifically, JF herself produces structures which are diagnostic of degrees, including measure phrases (89), differential comparatives (90), and subcomparatives (91).

(89) čaləs məm•mimaw x̌ax̌ał=s Marianne.
     three PL•cat   tall=3POSS Marianne
     'Marianne is three cats tall.'   (JF)

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speakers in ways which lead us to suspect that her conjoined comparatives are an archaism rather than an innovation.

(90) (kʷihit) paʔa   mimaw x̌ax̌ał Marianne   hu Gloria.
     (more) one   cat   tall   Marianne   go Gloria
     'Marianne is one cat taller than Gloria.'   (JF)

(91) (kʷihit) x̣̌əp-mut   q̇ʷətəm   hu p̓iq̇.
     (more) deep-INTS   river   go wide
     'The river is deeper than it is wide.'   (JF)

We can therefore dismiss the possibility that JF's grammar is just [-DSP].

This leaves possibilities (ii) and (iii), which require further examination of JF's conjoined comparatives. As a first step, we observe that in addition to producing conjoined comparatives and standard degree comparatives, she regularly produces hybrid structures between them, with *kʷihit* in the first conjunct of a conjoined structure and an antonym in the second, as shown in (92) and (93).[20]

(92) *Context: picture of two bonsai trees*
     kʷihit x̌ax̌ał paʔa ǰaʔǰa, titul   paʔa ǰaʔǰa.
     more   tall   one   tree   small   one   tree
     'This tree is bigger than that one.' (Literally, 'One tree is taller, one tree is small.')   (JF)

(93) *Context: picture of two tall trees*
     kʷihit titul   paʔa ǰaʔǰaʔəm,   x̌ax̌ał paʔa   ǰaʔǰaʔəm.
     more   small   one   tree   tall   one   tree
     'This tree is shorter than that one.' (Literally, 'One tree is smaller, one tree is tall.') (JF)

Furthermore, we find the same structure with measure phrases, as in (89).

(94) *Context: picture showing Marianne as three cats tall, Gloria as two cats tall*
     a. paʔa mimaw x̌ax̌ał=s   Marianne, titul   Gloria.
         one   cat   big=3POSS   Marianne small   Gloria
         'Marianne is one cat taller than Gloria.'   (JF)
         Consultant's comment (to Gloria): 'Marianne is one cat bigger and you are smaller.'

     b. paʔa mimaw x̌ax̌ał=s   Marianne, xʷa   x̌ax̌ał=as   Gloria.
         one   cat   big=3POSS   Marianne NEG   big=3SJV   Gloria
         'Marianne is one cat taller than Gloria.'   (JF)
         Consultant's comment (to Gloria): 'Marianne is still taller by one cat, Gloria is still small.'

Note that without the first conjunct, the second conjuncts in (94a) and (94b) would be translated simply as 'Gloria is small' and 'Gloria is not big', respectively, with normative (positive form) readings; and without the second conjuncts, the first conjunct in both cases would mean 'Marianne is one cat tall', without a comparative reading. In fact, the two halves of the conjoined comparative can be elicited in isolation with exactly these interpretations, as shown in (95) and (96).

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[20] A negated form of the first predicate is also possible in the second conjunct.

(95) paʔa mimaw x̌ax̌aɬ=s   Marianne.
    one   cat   big=3POSS   Marianne
    'Marianne is one cat tall.'   (JF)

(96) titul   Gloria.
    small   Gloria
    'Gloria is small.'   (JF)

This provides clear evidence that the conjoined comparative structures employed by JF are more than just the conjunction of two independent clauses. In fact, the examples in (94) are conjoined versions of differential comparatives, which are diagnostic for degree semantics (see 4.3 above).

   We conclude that JF's grammar (including conjoined as well as ordinary comparatives) is uniformly [+DSP], just like that of other ʔayʔaǰuθəm speakers, and therefore that possibility (ii) above is the correct option. This has implications for the status of conjoined comparatives in the wider cross-linguistic context: in particular, it is no longer possible to automatically assume that conjoined comparatives are a sufficient diagnostic for [-DSP] status.

   It also sets an agenda for future work on the syntax-semantics interface of conjoined comparatives. In particular, how can a standard degree semantics be derived from what looks on the surface to be a simple conjunction of two clauses? We will not attempt to pursue an answer to this question here, though we do note that previous syntactic work on comparatives has identified certain properties of clausal standards that are characteristic of coordination rather than subordination: for example, they tolerate operations such as gapping and right node raising that are otherwise confined to coordinate structures, and they allow across-the-board movement in order to avoid apparent Coordinate Structure Constraint violations (Lechner 2004).

7   Conclusion

We conclude that both Salish languages investigated here (St'át'imcets of the Northern Interior sub-branch and ʔayʔaǰuθəm of the Central branch) instantiate the positive values of the Degree Semantics Parameter, the Degree Abstraction Parameter, and the Degree Phrase Parameter of Beck et al. (2009). In addition to comparatives with subordinate syntax, conjoined comparatives also test as [+DSP] in ʔayʔaǰuθəm, showing that the language is uniformly degreeful, in spite of having two separate types of comparative construction.

   These conclusions are important both in a Salish context and more broadly for the cross-linguistic typology of degree constructions. As far as Salish is concerned, the current study establishes for the first time that two languages from separate branches of the family show similar degree-based syntax and semantics, in spite of superficial morphological differences.

   In cross-linguistic terms, our work adds to the growing body of research on parametric variation in the expression of comparatives and other degree expressions. Of particular interest in this respect are our conclusions regarding the degreeful status of conjoined comparatives in ʔayʔaǰuθəm. since conjoined comparatives have often implicitly assumed to be diagnostic for [-DSP] status in the typological literature.

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