ʔayʔaǰuθəm: A degreeless language*

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Abstract: This paper explores the status of degrees in ʔayʔaǰuθəm, a critically endangered Central Salish language spoken by four communities on the Upper Sunshine Coast in British Columbia, Canada. Inspired by recent work on degreeless languages — in particular Fijian (Pearson 2009), Motu (Beck et al. 2009), Washo (Bochnak 2015), and Warlpiri (Bowler 2016) — we argue that the ontology of ʔayʔaǰuθəm lacks degree elements of the semantic type <d>. To substantiate this claim, we present eight different diagnostics that point towards the absence of degrees in this language. In particular, we examine the availability of measure phrases, various types of comparatives, superlatives, equatives, and degree questions. Since the body of work on these constructions in Salish is still sparse, the argument presented in this paper may not only be of interest for theoretical semanticists, but also for fieldworkers who are active in this language family.

Keywords: ʔayʔaǰuθəm (Mainland Comox), comparatives, degree, degreeless language, measure phrases, subcomparatives

1 Introduction

In recent years, several researchers have proposed the existence of degreeless languages, i.e., languages which lack elements of the semantic type <d>. In particular, such an argument has been made for the Austronesian languages Motu (Beck et al. 2009) and Fijian (Pearson 2009), the language isolate Washo (Bochnak 2015), and for the Pama-Nyungan language Warlpiri (Bowler 2016). This paper explores the status of degrees in ʔayʔaǰuθəm (a.k.a. Mainland Comox), a critically endangered Central Salish language traditionally spoken by four communities on the Sunshine Coast in British Columbia. Despite substantial documentation efforts in recent years, the First Nations languages in Canada remain understudied from the perspective of degree semantics. The present investigation aims to remedy this issue by providing a first-pass assessment of degrees in one of this set of languages.

Drawing heavily from both Beck et al. (2009) and Bowler (2016), we employ a set of eight different diagnostics to determine whether ʔayʔaǰuθəm has a degree ontology or not. Relying on data elicited with two language consultants, we argue that ʔayʔaǰuθəm might be another potential candidate for the class of degreeless languages.

This paper is structured as follows. In Section 2, we briefly review the semantic theories on gradable predicates and their relation to degrees. In Section 3, crucial ʔayʔaǰuθəm data concerning degrees and various comparative constructions are laid out. An account to explain the pattern emerging from the data is outlined in Section 4. Finally, Section 5 concludes the paper.
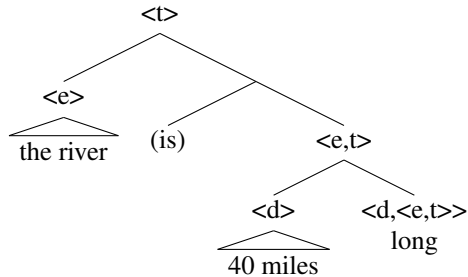
2 Theoretical background

According to the traditional degree-based analysis of gradable predicates in languages like English, gradable adjectives and adverbs contain a degree variable, which is an abstract argument of the semantic type <d> (Heim 2000; von Stechow 1984).[1] The function of this variable is to specify degrees along a scale provided by the lexicon, such as the scale of length introduced by the gradable predicate *long*. As illustrated by the lexical entry in (1), gradable predicates can consequently be understood as elements of type <d,<e,t>>, which relate degrees and individuals (Heim 1985, 2000; Kennedy and McNally 2005).

(1) $[\![\mathbf{long}]\!] = \lambda d \lambda x . x$ is d-long

The degree argument can be overt or covert, as illustrated by the sentences in (2) and (3). In the former, the overt measure phrase *40 miles* fills the degree slot in the syntactic structure, while in example (3) no overt degree morphology is discernible.

(2)   The river is 40 miles long.
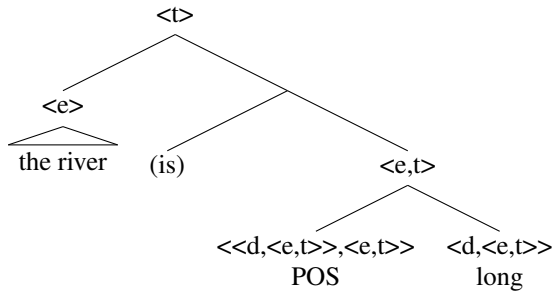
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                        <t>
           <e>                      
      the river   (is)        <e,t>
                                        
                         <d>        <d,<e,t>>
                                       long
                      40 miles
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(3)   The river is long.

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                        <t>
           <e>                      
      the river   (is)        <e,t>
                                        
                   <<d,<e,t>>,<e,t>>   <d,<e,t>>
                         POS             long
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To prevent the semantic calculation in (3) from crashing, Kennedy (1999) proposes the existence of a null morpheme called Positive Form (POS), which binds the degree variable and relates it to a contextually determined standard of comparison.[2] Following Bochnak (2015) as well as Kennedy and McNally (2005), this degree morpheme is defined as in (4), where the degree d meets the standard s_G for a gradable adjective G.

(4) $[\![\mathbf{POS}]\!] = \lambda G \lambda x \, . \, \exists d[d > s_G \, \& \, G(d)(x)]$

Over the last couple of years, however, several linguists have presented evidence for languages which lack degrees altogether, such as Motu (Beck et al. 2009), Fijian (Pearson 2009), Washo (Bochnak 2015), and Warlpiri (Bowler 2016). If these languages are indeed degreeless, then gradable predicates cannot combine with arguments of type <d>. Following Beck et al. (2009), Bochnak (2015), and Klein (1980), we can solve this issue by interpreting gradable predicates relative to a context c. The denotation of the gradable predicate *long* in languages like Warlpiri, for instance, could thus be defined as shown in (5).

(5) $[\![\mathbf{long}_{\text{Warlpiri}}]\!]^c = \lambda x \, . \, x$ counts as long in c

(6) The river is long.
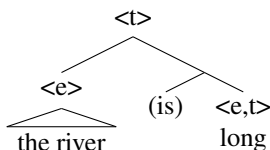
In this paper, we argue that ʔayʔaǰuθəm is a degreeless language as well. Assuming that degrees are not available in the semantic ontology of this language, sentences have to appear analogous to the form presented in (6). If this assumption is correct, then certain degree constructions are predicted not to be available for speakers of this language, as noted by Beck et al. (2009) and Bowler (2016). In the following section, we will take a closer look at these constructions.

3 Data from ʔayʔaǰuθəm

For their cross-linguistic study of comparatives, Beck et al. (2009) compiled a long list of constructions that can be used to assess the status of degrees in a language. While a complete investigation of the entire catalogue is underway, we will limit ourselves to a subset of eight degree constructions in this paper. Primarily, we will focus on the same set of diagnostics used by Bowler (2016) in her investigation on degrees in Warlpiri. The diagnostics include measure phrases, various types of comparatives, superlatives, equatives, and degree questions.

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[2]For a different account relying on a covert morpheme that binds the degree variable, see Rett (2008).

3.1 Elicitation methods

As noted by Bowler (2016:14), eliciting degree constructions can be a challenging endeavor. For instance, it is not always possible to rely on conventionalized units of measurements, such as meters, feet, or kilograms, since these may not be available in every language. ʔayʔaǰuθəm is such a language that lacks lexical items that correspond to these concepts. In the same vein, consultants may also struggle with entire constructions, such as subcomparatives. To mitigate these issues, we employed a variety of different elicitation techniques during the course of our investigation, ranging from the traditional question/answer approach to storyboards (Burton and Matthewson 2015) and other visual stimuli. Inspired by Bowler (2016), we used the web-service Pixton for Fun (https://www.pixton.com/) to create most of these visual prompts. A small panel from one of our storyboards is shown in Figure 1. We also asked one of our consultants questions in her native language to elicit natural responses and to minimize potential interferences from the contact language, English. Considering the use of all these modalities, we feel confident that the data presented in this paper are reliable and represent authentic language use.
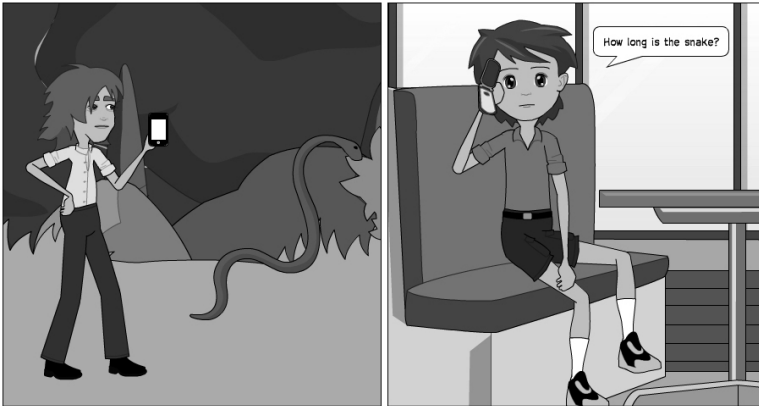
Figure 1: Stimuli used to elicit the degree question *How long is the snake?*

3.2 Measure phrases

First, we assess whether gradable predicates can be combined with measure phrases, such as *three feet tall* or *five meters wide*. Generally, the best candidates to look for are phrases that measure physical dimensions (e.g. *five feet tall*) or temporal length (e.g. *two days long*). Other domains of measurement, such as temperature, appear to be less common cross-culturally (Beck et al. 2009:17).

In ʔayʔaǰuθəm, measure phrases seem to be unavailable. As explained by our main consultant, she never learned any units of measurement, with the exception

of temporal units like days ($t^{\theta}uk^{'w}$) and years ($q^w umay$, literally 'snows'). While this shows that some units of measurement exist after all, they do not co-occur with gradable predicates. Instead, periphrastic constructions, as illustrated in (7), are utilized.[3,4]

(7)   saʔa t̪^θok^{'w} nišx^w   jɛnx^w

saʔa t̪^θuk^{'w} niš-s-x^w   janx^w

two day   here-CAUS-3.OBJ fish

Prompt: 'The fish is two days old.'

Literally: '(For) two days, he has had the fish.'

In addition to such periphrastic constructions, our main consultant frequently employed two fallback strategies when prompted with measure phrases: (i) deletion and (ii) code-switching. Examples for the deletion of measure phrases can be seen in (8) and (9). In these cases, the sentences consist only of the gradable predicate, while the entire measure phrase is omitted.

(8)   tihmot   jɛʔjɛʔ

tih-mut   jaʔjaʔ

big-INTF tree

Prompt: 'The tree is three meters tall.'

Literally: 'The tree is really tall.'

(9)   titih   jɛnx^w

ti~tih   janx^w

RED~big fish

Prompt: 'The fish is one meter long.'

Literally: 'The fish is really big.'

Occasionally, our main consultant would also code-switch to English to preserve a given measure phrase. Whether these English phrases occupy a potential degree slot in the syntactic structure or not is unclear. However, the fact that the code-switching generally extends over the whole predicate, as shown in

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[3] We adopt the reanalysis of third person object markers, as proposed by Mellesmoen (this volume).

[4] Abbreviations used in this paper are as follows: CAUS = causative; CNJ = conjunctive; CTR = control transitive; DET = determiner; EPIST = epistemic; ERG = ergative; EXCL = exclusive; IND = indicative; INTF = intensifier; INTR = intransitive; IPFV = imperfective; LV = link vowel; MDL = middle; NEG = negation; NMLZ = nominalizer; OBL = oblique; OBJ = object; PL = plural; POL = polarity item; POSS = possessive; PST = past; Q = question marker; RED = reduplication; SG = singular. A hyphen (-) stands for an affix boundary, an equal sign (=) for a clitic boundary, and a tilde (~) for a reduplication boundary.

(10), suggests that such data might not be problematic for a degreeless account of ʔayʔaǰuθəm. We acknowledge that yet more research on this matter is necessary.[5]

(10)　Tony　three feet tall　sčɛʔɛt
　　　　Tony　three feet tall　s=čaʔat
　　　　Tony　three feet tall　NMLZ=now
　　　　Prompt: 'Tony is three feet tall.'
　　　　Literally: 'Tony, three feet tall, now.'

3.3　Comparative constructions

Our second test targets comparative constructions, such as *Tony is taller than Laura*. Following Sapir (1944), we distinguish between two types of constructions, namely (i) explicit and (ii) implicit comparatives. While explicit comparatives rely on dedicated morphological markers (such as English *-er*), implicit comparatives are unmarked and consequently context-sensitive. Kennedy (2007) defines the two constructions as follows:

(11)　a.　**Explicit comparison:**
　　　　　Establish an ordering between objects *x* and *y* with respect to gradable property *g* using a morphosyntactic form whose conventional meaning has the consequence that the degree to which *x* is *g* exceeds the degree to which *y* is *g*.

　　　　b.　**Implicit comparison:**
　　　　　Establish an ordering between objects *x* and *y* with respect to gradable property *g* using the positive form by manipulating the context in such a way that the positive form is true of *x* and false of *y*.

Based on our data, ʔayʔaǰuθəm does not have any specialized comparative morphemes. Instead, it makes use of implicit comparative constructions. Thus, this Central Salish language patterns exactly like other potentially degreeless languages, such as Fijian (Pearson 2009), Motu (Beck et al. 2009), Washo (Bochnak 2015), and Warlpiri (Bowler 2016), where explicit comparatives are also unavailable.[6]

The implicit comparatives in ʔayʔaǰuθəm can further be divided into two subcategories, namely (i) conjoined comparatives and (ii) directional comparatives.[7]

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[5]Bowler (2016) speculates in her study on Warlpiri whether the use of code-switched measure phrases might be a sign of a bigger semantic change that has been triggered by the close contact to English, a language which allows degrees.

[6]The absence of dedicated comparison markers is not uncommon in Salish languages and has also been documented in St'át'imcets (Davis 2011), Straits Salish (Jelinek and Demers 2014), and Klallam (Montler 2015), among others.

[7]Depending on the context, our consultant expressed preferences for one or the other construction. How exactly these preferences arise is yet to be explored.

The former consist of two coordinated — or conjoined — independent clauses, of which one describes the object of comparison, while the other describes the standard of comparison (Stassen 2013). Generally, the predicates used in these two clauses tend to be antonymous, such as *big* vs. *small* (Bochnak 2015). The sentences in (12) and (13) illustrate the use of these conjoined comparatives in ʔayʔaǰuθəm.[8]

(12) χaχaɬ Tony titol Laura
      χaχaɬ Tony titul Laura
      tall   Tony small Laura
      Prompt: 'Tony is taller than Laura.'
      Literally: 'Tony is tall. Laura is small.'

(13) tih mɛmo   titol q̓atən
      tih mimaw titul q̓atən
      big cat   small rat
      Prompt: 'The cat is bigger than the rat.'
      Literally: 'The cat is big. The rat is small.'

The second type of implicit comparatives introduces the standard of comparison via a directional expression, thus meeting the criteria of directional or locational comparatives (Hohaus 2010; Stassen 2013). Constructions belonging to this typological class construe comparisons as motion from one point to the other. In the case of ʔayʔaǰuθəm, the standard DP is introduced by the allomorphic expressions *hu* or *θu* ('to'). In these "to-comparatives", as Stassen (2013) calls them, the standard of comparison is conceptualized as the goal of the movement.[9] The examples (14) through (18) below illustrate the use of this particular comparative construction in ʔayʔaǰuθəm.

(14) χaχaɬ Tony ho Laura
      χaχaɬ Tony hu Laura
      tall   Tony to Laura
      Prompt: 'Tony is taller than Laura.'
      Literally: 'Tony is tall to Laura.'

(15) tih mɛmo   ho q̓atən
      tih mimaw hu q̓atən
      big cat   to rat
      Prompt: 'The cat is bigger than the rat.'
      Literally: 'The cat is big to the rat.'

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[8]This conjunctive strategy has also been observed in another Central Salish language, Klallam (Montler 2015:92).

[9]According to Montler (2015), to-comparatives can also be found in Klallam.

(16) niːjɛʔ nʊn̓šəmot   Mary ho Peter
     nija? nə~n̓šə-mut   Mary hu Peter
     far   IPFV~swim-INTF Mary to Peter
     Prompt: 'Mary swam further than Peter.'
     Literally: 'Mary swam far to Peter.'

(17) qaχ təmtumiš   ƛasəm   Peter ho qʷomqɛtasoɬ   saʔɬtxʷ
     qəχ təm~tumiš ƛas-əm Peter hu qʷumq-i-t-as-uɬ   saʔɬtxʷ
     lots PL~man   hit-MDL Peter to kiss-LV-CTR-3.SG.ERG-PST girl
     Prompt: 'Peter hit more boys than he kissed girls.'
     Literally: 'Peter hit lots of boys to girls he kissed.'

(18) qaχ hɛʔgəns   Peter ho Laura
     qəχ hig̓ən-s   Peter hu Laura
     lots strawberry-3.SG.POSS Peter to Laura
     Prompt: 'Peter has more strawberries than Laura.'
     Literally: 'Peter has lots of strawberries to Laura.'

While the expressions *hu* and *θu* appear frequently in comparative construc-tions, they are not restricted to this specific context of use. They can also be found in other, non-comparative utterances, usually acting as verbs of motion ('to go to') or as preposition-like verbs ('to/into'),[10] as shown in example (19) and (20), respectively.[11] This is strong evidence that neither *hu* nor *θu* is a dedicated comparative marker.

(19) hoč   Vancouver st̓θok̓ʷ
     hu=č   Vancouver s=t̓θuk̓ʷ
     go=1.SG.IND Vancouver NMLZ=day
     'I'm going to Vancouver today.'

(20) ƛəč̓-t-as   θu ʔ=tə=qaʔya
     push-CTR-3.SG.ERG into OBL=DET=water
     'He pushed it into the water.'   [Kroeber (1999:46)]

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[10]Verbs which act like prepositions have also been found in other Salish languages, such as Squamish (Jacobs 2013; Kuipers 1967). Generally, the terms *relator verbs* or *preposition-like verbs* are used to refer to such items.

[11]Reisinger et al. (2017) provide evidence that the use of *hu* in the comparative construction is preposition-like and not verb-like.

3.4 Differential comparative constructions

Having assessed the status of normal comparatives, we now turn to differential comparatives, such as *Henry is two days older than Betty*. In these constructions, the degree of difference between the standard and the object of comparison is explicitly specified. Just like in Warlpiri (Bowler 2016), this kind of comparison appears to be unavailable in ʔayʔajuθəm. When prompted with differential comparatives, our main consultant reliably omitted the measure phrase and utilized the bare directional comparative construction. The sentences in (21), (22), and (23) illustrate this fallback strategy.

(21)   χaχaɬ Peter ho Michael
       χaχaɬ Peter hu Michael
       tall   Peter to Michael
       Prompt: 'Peter is two feet taller than Michael.'
       Literally: 'Peter is tall to Michael.'

(22)   čuy̓   Laura ho Mary
       čuy̓   Laura hu Mary
       young Laura to Mary
       Prompt: 'Laura is two days younger than Mary.'
       Literally: 'Laura is young to Mary.'

(23)   q̓at̓əm   Mary ho Laura
       q̓ət̓-əm   Mary hu Laura
       heavy-MDL Mary to Laura
       Prompt: 'Mary is two fish heavier than Laura.'
       Literally: 'Mary is heavy to Laura.'

     When confronted with constructed differential comparatives, as in (24) and (25), our main consultant reacted rather negatively and pointed out that maybe some people might say this, but she would never use sentences like these.

(24)   # saʔa t̓θokʷ λ̓aλ̓χay   Mary ho Laura
       saʔa t̓θukʷ λ̓a~λ̓χ-ay   Mary hu Laura
       two days RED~old-person Mary to Laura
       Prompt: 'Mary is two days older than Laura.'

(25)   # saʔa ǰɛnxʷ q̓at̓əm   Mary ho Laura
       saʔa ǰanxʷ q̓ət̓-əm   Mary hu Laura
       two fish heavy-MDL Mary to Laura
       Prompt: 'Mary is two fish heavier than Laura.'

3.5 Comparatives with measure phrases

The elicited data suggest that ʔayʔajuθəm also lacks comparatives with measure phrases, such as *Laura is taller than one meter*. Speakers instead use the positive, unmarked form of the predicate, as seen in (26), or code-switch to English to preserve the measure phrase, as shown in (27). In either case, the comparison is not encoded morphologically, but arises contextually.

(26) χaχaɫmot Laura
χaχaɫ-mut Laura
tall-INTF Laura

Prompt: 'Laura is taller than one meter.'
Literally: 'Laura is very tall.'

(27) χaχaɫ Tony one meter
χaχaɫ Tony one meter
tall Tony one meter

Prompt: 'Tony is taller than one meter.'
Literally: 'Tony is tall, one meter.'

In addition, our main consultant also produced a periphrastic, bi-clausal construction when prompted for the sentence *Henry has more than two dogs*, as illustrated by example (28) below.

(28) saʔa čɛ́nos Henry, qʷayin qəji qaχ
saʔa čańu-s Henry qʷayin qəji qəχ
two dog-3.SG.POSS Henry I.think still lots

nisxʷas
ni-s-xʷ-as
be.there-CAUS-3.OBJ-3.SG.ERG

Prompt: 'Henry has more than two dogs.'
Literally: 'Henry has two dogs. I think he may still have lots.'

3.6 Subcomparative constructions

Next, we assess the status of subcomparatives, such as *The river is wider than the tree is tall*. Such constructions appear to be unavailable to speakers of ʔayʔajuθəm. Our main consultant instead reliably produced utterances consisting of two coordinated clauses, as illustrated by the examples given in (29) through (32) below. It is worth noting that Bowler (2016) encountered exactly the same fallback mechanism in Warlpiri.

(29) ṗɛq̓ q̓ʷatəm χaχaɬs   jɛʔjɛʔ
      ṗiq̓ q̓ʷatəm χaχaɬ-s   jaʔjaʔ
      wide river   tall-3.SG.POSS tree
      Prompt: 'The river is wider than the tree is tall.'
      Literally: 'The river is wide, and the tree is tall.'

(30) ƛ̓aqtmot   θɛwθɛtən χaχaɬ ʔɛmən
      ƛ̓aqt-mut   θawθətən χaχaɬ ʔimən
      long-INTF table   tall   door
      Prompt: 'The table is longer than the door is tall.'
      Literally: 'The table is really long, and the door is tall.'

(31) χaχaɬ Mary ƛ̓aqt ʔołqay
      χaχaɬ Mary ƛ̓aqt ʔułqay
      tall   Mary long snake
      Prompt: 'Mary is taller than the snake is long.'
      Literally: 'Mary is tall, and the snake is long.'

(32) ṗɛq̓ nənqam   ƛ̓aqt nuxʷəɬ
      ṗiq̓ nənqam   ƛ̓aqt nuxʷəɬ
      wide killer.whale long canoe
      Prompt: 'The killer whale is wider than the boat is long.'
      Literally: 'The killer whale is wide, and the boat is long.'

While speakers prefer this particular construction to compare two dimensions of distinct DPs, as schematized in (33), a different construction is used when both dimensions refer to one and the same DP, as sketched in (34).

(33)   [$_{DP1}$ Mary] is [$_{DIM1}$ taller] than [$_{DP2}$ the snake] is [$_{DIM2}$ long]

(34)   [$_{DP1}$ The table$_i$] is [$_{DIM1}$ longer] than [$_{DP2}$ it$_i$] is [$_{DIM2}$ wide]

If both DPs in this bi-clausal construction refer to the same entity, speakers emphasize the contrast between its properties by negating one of the predicates. An example for this construction is given in (35) below.

(35) ƛ̓aqt θɛwθɛtən xʷaʔ ṗɛq̓as
      ƛ̓aqt θawθətən xʷaʔ ṗiq̓=as
      long table   NEG wide=3.SG.CNJ
      Prompt: 'The table is longer than it is wide.'
      Literally: 'The table is long, but it is not wide.'

3.7 Superlative constructions

While English encodes superlatives either synthetically with the morphological marker *-est* or analytically with the sequence *the most*, ʔayʔaǰuθəm does not have a dedicated superlative construction, as shown in the examples (36) and (37) below. In this respect, it resembles several other Salish languages, such as St'át'imcets (Davis 2011), Straits Salish (Jelinek and Demers 2014), and Klallam (Montler 2015), all of which also lack specialized superlative markers.

(36) kʷɛʔɛt qaχ čɛ́n̓os̓   Henry
      kʷiʔit qəχ čan̓u-s   Henry
      INTF   lots dog-3.SG.POSS Henry
      Prompt: 'Henry has the most dogs.'
      Literally: 'Henry really has a lot of dogs.'

(37) qaχmot čɛ́n̓os̓   Henry
      qəχ-mut čan̓u-s   Henry
      lots-INTF dog-3.SG.POSS Henry
      Prompt: 'Henry has the most dogs.'
      Literally: 'Henry has really a lot of dogs.'

Similar to Warlpiri (Bowler 2016), speakers of ʔayʔaǰuθəm tend to optionally use intensifiers in situations where a superlative reading is intended. In particular, our main consultant alternated between the independent intensifier *kʷiʔit*, which appears sentence-initially, and the intensifying suffix *-mut*, which usually attaches to the adjectival stem.[12] Both of these intensifiers are not only interchangeable, but also appear to be compatible with each other. To illustrate this, examples in (38), (39), and (40) present three different realizations our main consultant provided for the same prompt.

(38) kʷɛʔɛt x̌ɛ̓x̌ɛ   Patrick
      kʷiʔit x̌i~x̌i̓   Patrick
      INTF   RED~fast   Patrick
      Prompt: 'Patrick is the fastest (cat).'
      Literally: 'Patrick is really fast.'

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[12]Watanabe (2003:479 ff.) provides a thorough description of the intensifier *-mut*. Information on the intensifier *kʷiʔit*, however, is sparse.

(39) ƛ̓ɛƛ̓ɛmot Patrick

ƛ̓i~ƛ̓i-mut Patrick

RED~fast-INTF Patrick

Prompt: 'Patrick is the fastest (cat).'

Literally: 'Patrick is really fast.'

(40) kʷɛʔɛt ƛ̓ɛƛ̓ɛmot Patrick

kʷiʔit ƛ̓i~ƛ̓i-mut Patrick

INTF RED~fast-INTF Patrick

Prompt: 'Patrick is the fastest (cat).'

Literally: 'Patrick is really fast.'

While it might seem tempting to regard these intensifiers as dedicated superlative markers, there are several reasons not to adopt such an analysis. First and foremost, *kʷiʔit* and *-mut* cannot represent specialized superlative markers, as they also appear in various other contexts of use, such as positive or comparative constructions. Secondly, the fact that both of these intensifiers are not obligatory but optional provides further evidence for this argument. As indirect evidence, there is also a tendency for languages without dedicated comparative morphology to lack specialized superlative markers (Bobaljik 2012; Stassen 1985).

3.8 Equatives

Analogous to superlatives, there is no standardized equative construction in ʔayʔaǰuθəm. Prompted with constructions like *Peter is as tall as his father*, our consultant instead used periphrastic descriptions. These often involved some general expression of similarity or resemblance, such as *θuxʷən* 'to be the same' and *nam̓* 'to be like; to resemble', as illustrated in the examples below.

(41) χaχał Peter θuxʷən mans

χaχał Peter θuxʷən man-s

tall Peter be.the.same father-3.SG.POSS

Prompt: 'Peter is as tall as his father.'

Literally: 'Peter is tall, his father is the same.'

(42) ƛ̓aqt ʔołqay θuxʷən nuxʷəł

ƛ̓aqt ʔułqay θuxʷən nuxʷəł

long snake be.the.same boat

Prompt: 'The snake is as long as the boat.'

Literally: 'The snake is long, the boat is the same.'

(43) χaχał Peter nam̓   mans

     χaχał Peter nam̓   man-s

     tall   Peter be.like father-3.SG.POSS

     Prompt: 'Peter is as tall as his father.'

     Literally: 'Peter is tall, like his father.'

(44) ƛ̓εƛ̓ε   jiƛ̓əs   Henry nam̓   Bruno

     ƛ̓i~ƛ̓i   jəƛ̓=as   Henry nam̓   Bruno

     RED~fast run=3.SG.CNJ Henry be.like Bruno

     Prompt: 'Henry runs as fast as Bruno.'

     Literally: 'Henry runs fast, like Bruno.'

It is worth noting that both *θuxʷən* and *nam̓* only target a general similarity between the two compared entities and not particular points on a scale.[13] This also explains why these expressions can be used outside of equative contexts, as illustrated by the sentences in (45) and (46).

(45) hoč̓ʔot   nam̓umiš   t$^\theta$ man

     hu=č=ʔut   nam̓-umiš   t$^\theta$=man

     go=1.SG.IND=EXCL be.like-appearance 1.SG.POSS=father

     'I will look just like my father.'

(46) ʔεməš   mεmo nam̓   tεqεw

     ʔim-aš   mimaw nam̓   tiqiw

     walk-INTR cat   be.like horse

     'The cat walks like a horse.'

3.9   Degree questions

Last, our investigation revealed that ʔayʔaǰuθəm does not have a dedicated construction for degree questions, such as *How wide is the river?* Instead, when confronted with such an utterance, our consultant remodeled it either as a polar question or as an inquiry in the shape of a declarative — similar to the English construction *I wonder whether α*, where *α* represents a proposition.

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[13]Watanabe (2003:365) notes that the root √*nam̓* may be interpreted as 'to look like', 'to act like', or 'to be similar to'. In contrast, the semantic composition of *θuxʷən* is more elusive. Our consultants unanimously translated it as 'to be the same'.

(47) [14] kʷən   č̓ɛ   χaχał Tony
     kʷən-a č̓ə   χaχał Tony
     POL-Q EPIST tall   Tony
     Prompt: 'How tall is Tony?'
     Literally: 'Is Tony tall?'

(48) χʷoχʷoła   nišxʷ   Vancouver
     χʷuχʷ-uł-a   niš=axʷ   Vancouver
     long.time-PST-Q be.here=2.SG.CNJ Vancouver
     Prompt: 'How long have you been in Vancouver?'
     Literally: 'Have you been in Vancouver for a long time?'

(49) tam   č̓ɛ   χaχałs   Tony
     tam   č̓ə   χaχał-s   Tony
     what EPIST tall-3.SG.POSS Tony
     Prompt: 'How tall is Tony?'
     Literally: 'I wonder whether Tony is tall.'

(50) tam   č̓ɛ   ƛ̓aps   ʔaxʷ
     tam   č̓ə   ƛ̓əp-s   ʔaxʷ
     what EPIST deep-3.SG.POSS snow
     Prompt: 'How deep is the snow?'
     Literally: 'I wonder whether the snow is deep.'

(51) tam   č̓ɛ   ƛ̓aqts   ʔołqay
     tam   č̓ə   ƛ̓aqt-s   ʔułqay
     what EPIST long-3.SG.POSS snake
     Prompt: 'How long is the snake?'
     Literally: 'I wonder whether the snake is long.'

4 Evaluation

To sum up, our investigation provides strong evidence for the argument that
ʔayʔaǰuθəm is a degreeless language and consequently resembles languages like
Warlpiri (Bowler 2016) or Washo (Bochnak 2015). After all, as illustrated in Ta-
ble 1, none of the eight degree constructions we examined in this paper appear to
be available for our consultants.

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[14]Watanabe (2003:91) notes that the polarity item *kʷən* should be followed by the question
marker *-a*. However, in fast speech, this marker is often not discernible.

Table 1: Degree constructions in Warlpiri (Bowler 2016:8) and ʔayʔaǰuθəm

	Warlpiri	ʔayʔaǰuθəm
Measure phrases	no	no
Comparatives	no	no
Differential comparatives	no	no
Comparatives with measure phrases	no	no
Subcomparatives	no	no
Superlative	no	no
Equatives	no	no
Degree questions	no	no

To account for the absence of degree constructions in ʔayʔaǰuθəm, we adopt the degree parameter hypothesis, as proposed by Beck et al. (2009). As a result of their cross-linguistic survey of comparatives, they propose three different parameters, whose setting determines the different statuses of degrees in the languages of the world. The degree semantics parameter (DSP) is strictly semantic and accounts for lexical variation, while the degree abstraction parameter (DAP) concerns the semantics/syntax interface and focuses on the mechanisms of compositionality. Last but not least, the degree phrase parameter (DegPP) is purely syntactic and accounts for variation on the structural level. Beck et al. (2009:27-28) define these binary switches as follows:

(52) a. **Degree Semantics Parameter (DSP):**
A language {does/does not} have gradable predicates (type <d,<e,t>> and related), i.e., lexical items that introduce degree arguments.

     b. **Degree Abstraction Parameter (DAP):**
A language {does/does not} have binding of degree variables in the syntax.

     c. **Degree Phrase Parameter (DegPP):**
The degree argument position of a gradable predicate {may/may not} be overtly filled.

Beck et al. (2009) also note that there are certain dependencies between the three parameters. One such dependency is that the negative setting of [DSP] is inherited by the other two parameters — The setting of [−DSP] also results in a [−DAP] and [−DegPP] setting. The absence of a degree ontology in ʔayʔaǰuθəm indicates that the first degree parameter is [−DSP]. Consequently, ʔayʔaǰuθəm also lacks other degree constructions due to simultaneous negative settings of [DAP] and [DegPP], as entailed by [−DSP].

Having determined the setting of the three degree parameters in ʔayʔaǰuθəm, we are now able to compare it with other languages. Table 2 highlights that

ʔayʔaǰuθəm patterns exactly like Warlpiri.

Table 2: Degree parameters in some selected languages (based on
Beck et al. (2009:28))

	DSP	DAP	DegPP
English	+	+	+
German	+	+	+
Spanish	+	+	−
Russian	+	+	−
Japanese	+	−	−
Chinese	+	−	−
Warlpiri	−	−	−
ʔayʔaǰuθəm	−	−	−

5   Conclusion and outlook

In this paper, we presented several pieces of evidence that point towards the absence of degrees, and thus also of degree-related constructions, in ʔayʔaǰuθəm. Our data conform to the predictions made by the degree parameter hypothesis, as proposed in Beck et al. (2009). Specifically, we argue that the complete lack of degree-related constructions, like explicit comparatives, subcomparatives, and superlatives, comes about because of the absence of degree arguments in the denotations of gradable predicates in the language. Considering that the subject of degree semantics in First Nations language research is still largely unexplored, we hope that this investigation will spark follow-up studies in other languages of the Pacific Northwest.

Our next step in the study of degree semantics in ʔayʔaǰuθəm is to investigate comparatives in the contexts of crisp judgment (Kennedy 2007) and to examine other implicit comparatives like *Compared to John, Mary is tall*. Both comparative types have been shown to shed further light on the syntax and semantics of comparison-related constructions (Bochnak and Bogal-Allbritten 2015; Pearson 2009). Eventually, by advancing our understanding of comparatives in ʔayʔaǰuθəm, a more thorough typological picture of degree semantics can emerge.

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