Numeral classifiers in Halkomelem

Donna B. Gerdts, Mercedes Q. Hinkson, Thomas E. Hukari
Simon Fraser University, Northwest Indian College, University of Victoria

Of the over one hundred lexical suffixes in Halkomelem Salish, around thirty function as numeral classifiers. This paper discusses the syntax and semantics of Island Halkomelem numeral classifiers. The combination of numeral plus classifying lexical suffix yields a form that can be used attributively or anaphorically. We outline the classificatory system, discussing the meaning of each suffix and the nouns that it classifies. Specific lexical suffixes classify key elements of Salish culture, including people, fish, waterfowl, plants, houses, and canoes. However, most inanimate objects are classified on the basis of their shape. New items get added to the system according to their shape or function.

1 Introduction[1]

This paper focuses on lexical suffixes used as numeral classifiers in Halkomelem, a Central Salish language.[2] As has been noted for other Salish languages, Halkomelem uses a sub-set of lexical suffixes as numeral classifiers. Of the approximately 120 lexical suffixes in this language, around thirty are used as classifiers. They attach to numerals and quantifiers ('how many', 'many') but not to articles or demonstratives:[3]

---

[1] We would like to Wayne Suttles for sustained advice on the semantics of lexical suffixes. Thanks also to Alexandra Aikhenvald, Michelle Parent, and Charles Ulrich for comments and corrections. Remaining errors are our own responsibility. A shorter version of this paper is published as section 2 of Gerdts and Hinkson (to appear), which also discusses the historical origins of the Halkomelem classifying suffixes.

[2] Halkomelem is spoken in the vicinity of Vancouver, British Columbia, and on Vancouver Island. Unless otherwise indicated, data come from our field research on the Island dialect of Halkomelem. We would like to thank the speakers who have helped us with this project: Wilfred Aleck, Cecelia Alphonse, Leonard Edwards, Hazel Good, Arnold Guerin, Margaret James, Ruby Peter, Dora Sampson, Steve Sampson, Sr., Wilfred Sampson, and especially Theresa Thorne. Funding for our research has come from Jacobs Fund, SSHRC, Simon Fraser University, and the University of Victoria.

[3] Abbreviations used in this paper are: ASP aspect, AUX auxiliary, BEN benefactive, CON connective, CS causative, DT determiner, EMPH emphatic, ERG ergative, EVID evidential, FUT future, LCTR limited control transitive, MID middle, NEG negative, NM

(1) łqećs=əməłθ šeł
     four=long road
     'four roads'

(2) k̇ʷin=əqən x̌θəm?
     how.many=container box
     'How many boxes are there?'

(3) ni? ?əẇ qəx̌=mat kʷθə ləx̌ʷtən ni? ťəyəm̓-t-əxʷ
     AUX Q.CN lot=part DT blanket AUX stick-TR-2SSUB
     ?ə kʷθə šxʷ?am̓ət-s łən̓ silə?
     OBL DT bed-3POS DT:2POS grandparent
     'Did you put a lot of blankets on your grandmother's bed?'

There are three dialects of Halkomelem—Island, Downriver, and Upriver. This topic has been previously addressed in Island Halkomelem by Leslie (1979), who briefly illustrates six suffixes, and Hukari & Peter (1995), who give an extensive list of lexical suffixes and illustrate many of them with numerals. Suttles (in preparation) identifies seventeen suffixes appearing on numerals in Downriver Halkomelem and gives partial paradigms, and Shaw et al. investigate a sub-set of Suttles' suffixes, but give complete paradigms, commenting on details of phonology. Galloway (1993) identifies twenty suffixes in Upriver Halkomelem and sets up a useful typology of features. For example, he asks for each suffix : can it also be used on noun and verbs; can it be used with *kwi:l* 'how many?'; what numbers can it be used with, and is it optional or obligatory?

This paper reports on our on-going research on lexical suffixes in Halkomelem. It is the first systematic look at the topic from the typological point of view of a classificatory system. Like previous researchers, we collected examples of the use of numeral classifiers from texts and then elicited paradigms and sought information about the sort of meanings the classifiers convey. In addition, we worked backwards from a list of nouns (both native and borrowed) to see how each fit into the classifier system. Also, we used a catalog of pictures designed to elicit subtleties in the use of classifiers. We worked with individual speakers and groups of speakers. What we found is that our consultants had excellent control of the classifier system. They unhesitatingly knew whether a classifier should be used or not and if so which one, even for modern objects that they had never heard referred to in Halkomelem. They were almost always in agreement about what classifiers could be used for a noun in a particular context and had a clear sense of the semantic nuances when options were available. They could easily count out a paradigm with a classifier extending to

nominalizer, OBJ object, OBL oblique, PAS , passive, PL plural, POS possessive, PR prefix, Q interrogative, SSUB subordinate subject, SUB subject, and TR transitive.

numbers as high as ninety-nine though they also commented on the unlikelihood of a situation arising that would require precisely counted higher numbers of certain objects. There was, however, some phonological differences between speakers, manifested in differences in vowel quality, stress, and length, and also in the glottalization of resonants. We put aside phonological aspects of this domain for future research.

In this report, we first briefly illustrate the range of functions of lexical suffixes, situating numeral classification with respect to other uses of the suffixes. An important point that we feel has been overlooked in previous studies is that all suffixes that appear on numerals are not in fact classifiers. This is in part what the typology of Galloway reveals. Once we delineate a class of true classifiers, we can make much more precise comments about the morphosytax (section 2) and the semantics (section 3) of numeral classifiers. The system that emerges from the investigation of the meaning of the suffixes and the nouns that they classify matches our expectations of classificatory systems based on cross-linguistic typology.

1. 1   Compounding and classifying lexical suffixes

Lexical suffixes are bound forms with the meanings of nouns (Kinkade 1963:352). Today they usually bear little or no resemblance to free-standing nouns of the same or similar meaning:[4]

(4)   =aləs   'eye'   qələm   'eye'
         =šən   'foot, leg'   sx̌enə   'foot'
         =ex̌ən   'arm, wing'   ṫeləẇ   'arm, wing'
         =eẇtxʷ   'building, room'   leləm̓   'house'
         =eyəɬ   'baby, child'   qeq   'baby'

However, comparative evidence shows that lexical suffixes derive historically from nouns (Egesdal 1981, Mattina 1987b, Carlson 1990, Kinkade 1998).

---

[4] Each suffix appears in a variety of phonological shapes: with and without a full vowel (correlating with stress), with and without glottal stops or glottalization of resonants, with and without a connective morpheme between the stem and the suffix. In addition, there are sometimes truncated forms used in older, frozen contexts. So, for example, the suffix meaning 'mouth, edge, blade' variously appears as =aẏaʔθ, =aʔθ, =ayθən, =θən, =θin, or =θ. We will represent the Halkomelem suffix by its simplest form, and we will not segment the connective elements—*Vy*, *Vl*, and *Vw*—when representing the Halkomelem data.

While we have found considerable variation both within the speech of individuals and across speakers, certain phonological processes generally take place. Many lexical suffixes of the shape =VCVX trigger vowel reduction or loss in CVC roots. This is may be stress conditioned although a detailed study is yet to be carried out. Lexical suffixes of the shape =CVX generally trigger vowel reduction (as opposed to loss).

Lexical suffixes developed from nominal roots used as the right-hand member of a compound. The historical picture in Salish is that the second element in a compound was phonologically shortened and eventually became a bound form. New, longer, free-standing forms were invented; these often themselves contain the original form, which is now a lexical suffix.

Gerdts and Hinkson (1996), propose that the functions of lexical suffixes can be organized according to the following cline: **compounding lexical suffix > classifying lexical suffix**. The lexical suffix has the lexical and semantic properties of a noun when used in compounding functions, but it becomes acategorial and semantically bleached when used as a classifier. Thus the suffixes grammaticize from a lexical entity to a grammatical one. We see these two types of function at work in the use of lexical suffixes today.

The most transparent use of lexical suffixes occurs when they are suffixed to a noun, verb, or adjective root to derive a noun.[5]

(5)	saX̌ʷəl=ewtxʷ	'barn'	[grass=building]
	təX̌ʷaʔc=əlp	'yew tree'	[bow=plant]
	ɬiẃəyəl=ewtxʷ	'church'	(pray=building)
	ʔitət=əlwət	'pajamas'	(sleep=garment)
	p̓q̓=enxʷ	'a white flower'	(white=flower)
	xʷ-ƛ̓əqt=nəc	'cougar'	(PR-long=tail)

This use is still productive and is a common means for creating vocabulary to accommodate new items.

Lexical suffixes also commonly appear in complex predicates. That is, they are attached to a verb stem and the resulting compound functions syntactically as the main predicate of a clause. They can express a theme (6) or an oblique relation, such as locative or instrument (7).

(6)	qʷs=eyən	'set a net'	(go.into.water=net)
	səẃq̓=iẃs	'search for a lost person'	(seek=body)
	ɬc̓=əlqən	'shear wool'	(cut=animal hair)

(7)	q̓t=aθən	'walk along (a shore etc.)'	(go along=mouth)
	q̓ət=nəc	'go around end of lake'	(go along=bottom)
	q̓a=šin-t	'accompany him'	(add=foot-TR)

Lexical suffixation of the theme leads to an intransitive construction that parallels compounding noun incorporation (Gerdts 1998).

---

[5] Throughout this paper, we assume, following Suttles (in preparation), that Halkomelem has the categories noun, verb, and adjective. See Czaykowska-Higgins & Kinkade (1998:35-37) for a history of the debate concerning categories in Salish. Also see Montler (2001) for a presentation of the evidence for the category adjective in the nearby language Klalam.

(8) niʔ   cən   šk̓ʷ=əyəɬ.
     AUX   1SUB   bathe=baby.
     'I bathed the baby.'

Halkomelem person marking follows a split ergative pattern. First and second person subjects in main clauses are marked by clitics in Wackernagel's position while objects are marked by verbal suffixes. Third person subjects in transitive main clauses determine ergative agreement:

(9) niʔ   šak̓ʷ-ət-əs   ɬə   sɬeniʔ   ɬə   qeq.
     AUX   bathe-TR-3ERG   DT   woman   DT   baby
     'The woman bathed the baby.'

Word order is usually VSO, though VOS is also possible. Subject and object noun phrases are not marked for case. Determiners mark deixis and gender.[6] Transitive verbs are marked with one of several suffixes: -ət 'control transitive', -n(əxʷ)'limited control transitive', -st(əxʷ) 'causative', etc. We see that the clause in (9) is surface-transitive since the verb is marked for transitivity, the two noun phrases appear without case, and the subject determines ergative agreement. The parallel clause with lexical suffixation is intransitive:

(10) niʔ   šk̓ʷ=əyəɬ   ɬə   sɬeniʔ.
      AUX   bathe=baby   DT   woman
      'The woman bathed the baby.'

The verb in the above example lacks a transitive suffix and an ergative agreement suffix.[7]

We refer to the above uses of lexical suffixes as compounding. In each of the above cases, the lexical suffix stands in for a noun, either as a head of a compound, as in (6), or as a noun argument of the verb, as in (7).

Lexical suffixes can also be used as classifiers. When lexical suffixes are used as classifiers on nouns or adjectives, the base, not the lexical suffix, is the head of the resulting word.

(11) s-q̓ʷx̌ʷam=əws   'body odor'   (PR-odor=body)
      ƛ̓əqt=eməšθ   'tall' (of people)   (long=long.object)
      c-q̓x̌=elč   'black-haired'   (PR-black=hair)

ʔiy=əs	'happy'	(good=face)
xʷ-θi=qən	'loud'	(PR-big=throat)

Lexical suffixes can also be used as classifiers on verbs. In a classifying construction, the verb takes a transitive suffix, and a free-standing object that references the same entity as the lexical suffix.

(12)　 niʔ　　t̓θəx̌=wil-t-əs　　　　t̓θə　　ləpat.
　　　 AUX　 wash=vessel-TR-3ERG　DT　　cup
　　　 'She washed the cups.'

This is a surface-transitive construction, as evidenced by the third-person ergative agreement, and thus contrasts with the example of compounding lexical suffixation in (10) above. See Gerdts and Hinkson (1996) for further discussion on this construction.

　　　 In sum, we see that lexical suffixes are used in two types of constructions—compounding and classifying. Most lexical suffixes can appear in either type of construction, though a few suffixes are restricted to only one type or the other.

1.2　Numerals and suffixes

　　　 Our research has shown that most of the lexical suffixes that are used on verbs or adjectives can also be used on numerals, if a context can be provided to make sense out of the resulting combination. It is important to note, however, that the resulting constructions do not all constitute classifier expressions. Many of these combinations are simply compounds, that is, the polysynthetic equivalent of a phrase consisting of a numeral and a noun, which are then used as noun phrases, attributively as modifiers, or as quantifying expressions (often referred to as measure words). So our first task, before proceeding, is to set criteria for telling compound numeral suffixes from classifying numeral suffixes. Aikhenvald (2000:114–120) provides the methodology for doing this.

　　　 First, we can exclude all suffixes designating mathematical concepts and measure words: for example, =əłšeʔ 'ten', =eł 'times', =əlex̌ən 'yard', =teł 'fathom', and =əwu:nxʷ 'year' (from 'fish run', 'season').

(13)　ni-i-iʔ　x̌əθən=eł　　　 kʷəs　 šax̌ʷək̓ʷəm̓　 t̓əẃnił niʔ
　　　 AUX　 four=times　　 DT　　 swim-IMP　　 DT　　 AUX
　　　 ʔə　 t̓θeẏ　　 nəc̓aʔ　 x̌acaʔ.
　　　 OBL　 DT　　 one　　 lake
　　　 'He bathed four times at this one lake.'

(14)　wəł t̓θək̓ʷs=əwu:nxʷ ceʔ　 ʔiʔ　 nem̓　　 cən　　 skʷul-stəxʷ.
　　　 now seven=year　　　 FUT　 and　　 go　　 1SUB　 school-CS
　　　 'I'll send him to school when he is seven years old.'

Second, we can exclude all suffixes that never appear in a sortal or mensural relation with a free-standing noun. By this criterion, we can exclude several somatic suffixes: =cəs 'hand'[8], =aɬəẃcəs 'finger', =šən 'foot', =əlqsən 'nose' (used in counting points), =əx̌ən 'side' (used in describing shapes, e.g. a triangle), and =aẏaʔθ 'mouth, edge' (used in counting prongs on spears).

(15) ɬx̌ʷaẏaʔθ   t̪θə s̪ʔənəms   t̪θə swiẃləs   naʔət yəʔiṁəš.
      three=edge   DT spear-3POS   DT young.man   there PR-walk-IMP
      'The young man going by has a three-pronged spear.'

It is clear that these suffixes are used as compounding lexical suffixes. The thing being counted is the suffix itself and not the noun referred to by the suffix. For example, in (16), 'tires' (> 'feet') not 'cars' are being counted.

(16) tx̌ʷ-ɬix̌ʷ=šən   ʔaɬ   t̪θə   snəx̌ʷəɬ.
      only-three=foot   only   DT   canoe
      'The car only has three tires.'

A parallel construction in English would be one like 'four-legged animal'.
        In contrast, in the case of a sortal classifier, the noun has the same referent as the suffix:

(17) ɬix̌ʷ=əqən   x̌θəm
      three=container   box
      'three boxes'

In many instances, the lexical suffix emphasizes one feature of the noun, but the construction nevertheless refers to the noun as a whole:

(18) ɬq̇ečs=əmət̪θ   šeɬ
      five=long   road
      'five roads'

Lexical suffixes can also be used in mensural expressions. Mensural classifiers are determined by the quantity of the object or the arrangement that it occurs in.

(19) ɬix̌ʷ=əqən   sqewθ
      three=container   potato
      'three sacks of potatoes'

---

[8] The suffix for 'hand' is used in some Salish languages as a measure word indicating 'handful' or 'cupful'.

In such examples, it is the head noun that is being counted, and thus true classifying lexical suffixes differ from compound ones such as the 'three-tired car' illustrated in (16) above.

Using these criteria leaves us with a core set of suffixes that function as numeral classifiers. These will be explored in the subsequent sections.

2   The morphosyntax of numeral classifiers

Numerals are adjectives in Halkomelem. In NPs, they appear between determiners and head nouns, like other adjectives, and they do not head an NP.

(20)   ʔəm̓i-stəxʷ   č   kʷθə   łixʷ   *(x̌θəm)!
        come-CS:3OBJ   2SUB   DT   three   box
        'Bring the three *(boxes)!'

(21)   ʔəm̓i-stəxʷ   č   kʷθə   θi   *(x̌θəm)!
        come-CS:3OBJ   2SUB   DT   big   box
        'Bring the big *(box)!'

Adjectives, including numerals, can take lexical suffixes. These can be used attributively, like plain adjectives, to modify a noun as in (20) and (21), but they can also be used anaphorically—without a head noun.

(22)   ʔəm̓i-stəxʷ   č   kʷθə   łixʷ=əqən   (x̌θəm)!
        come-CS:3OBJ   2SUB   DT   three=container   box
        'Bring the three (boxes)!'

(23)   ʔəm̓i-stəxʷ   č   kʷθə   θe:=qən   (x̌θəm)!
        come-CS:3OBJ   2SUB   DT   big=container   box
        'Bring the big (box)!'

Question (24) lacks a lexical suffix (and thus we see that numeral classifiers are often omitted in Halkomelem), while the reply in (25) uses the lexical suffix, but omits the head noun, which would be regarded as redundant in this context.

(24)   ʔi   ʔə   łixʷ   k̓ʷən̓   sənixʷəł   ʔələp?
        AUX   Q   three   DT:2POS   canoe.PL   2PL
        'Do you all have three canoes?'

(25)   ʔəwə,   ʔəw̓   θəm=əxʷəł   ʔal̓.[9]
        NEG   just   two-canoe   just
        'No, just two.'

---

[9] The bound root −θəm− is an older form for 'two'.

The answer without the classifier is possible but less preferred.

Within the noun phrase, the numeral plus lexical suffix will appear between the determiner and the noun phrase, as in (22) above. The noun phrase can function in any syntactic position usually occupied by a noun phrase. For example, it can function as subject (26), object (27), or an oblique marked phrase (28).[10]

(26) niʔ   q̓ʷəyəлəš   kʷθə   x̌əθi:nə   q̓eləmiʔ.
      AUX   dance   DT   four.people   girl.PL
      'Four girls danced.'

(27) niʔ ct   q̓ʷəm-ət   kʷθə yəseлə=nəc   kʷəmləxʷ.
      AUX 1PL.SUB uproot-TR   DT   two=bottom   root
      'We dug up two roots.'

(28) ʔix̌əm cən   ceʔ   ʔə   k̓ʷ   ʔəpan=əs.
      lend   1SUB FUT   OBL   det   ten=round
      'I will lend ten dollars.'

The head noun can be singular as in (29) or plural as in (26) above.

(29) teʔcs=elə   kʷθə   nə   sc̓aṁəqʷ.
      eight=people DT   1POS   great.grandchild
      'I have eight great-grandchildren.'

[Compare sc̓aləṁəqʷ 'great-grandchildren'; q̓emiʔ 'girl'.] Plural inflection, marked by the infix -l- (and glottalization of resonants) or by reduplication, is in general optional in Halkomelem, especially where the context makes number clear. For some frequently used nouns such as terms for people and the larger items of material culture, marking plurality is preferred to not marking it.

Like other noun phrases, the counted noun can appear in a clause-initial focus position. The phrase serves as a predicate nominal in expressions of these sorts, followed by a determiner-headed relative clause:

(30) k̓ʷin=əqən   x̌θəm k̓ʷə   niʔ   ʔiləq-ət-əxʷ?
      how.many=container box   DT   AUX   buy-TR-2SSUB
      'How many boxes did you buy?'

---

[10] Halkomelem subjects and objects are bare noun phrases, while non-terms—such as locatives, instruments, as well as themes (secondary objects) in antipassives and ditransitives— are preceded by the catch-all preposition ʔə. For a general introduction to Halkomelem syntax see Gerdts (1988) and Gerdts & Hukari (to appear).

In addition, the numeral and lexical suffix alone can appear as a predicate adjective in clause initial position:[11]

(31) x̌əθin=əwəɬ   kʷθə   nə   puʔəlt.
      four=canoe   DT   1POS   boat.PL
      'I have 4 boats.'

Like other adjectives, numerals with lexical suffixes can undergo further derivation. For example, they can take the inchoative prefix $x^wə$- and they can become transitive predicates through the addition of the causative suffix $-st(əx^w)$.

(32) xʷə-ɬxʷ=əmat-stəxʷ   č   k̓ʷəns   ɬič-ət
      become-three-part=CS:3OBJ 2SUB DT:2POS:NM   cut-TR
      tθə sce:ɬtən!
      DT salmon
      'Cut your salmon into three chunks!'

(33) txʷ-yəsəɬ=aləs-stəxʷ   č   tθən   sya:ys   ʔiʔ   ʔəy̓.
      only-two=loop-CS:3OBJ 2SUB   DT:2POS   work   and   good
      'It will be better if you do two more rounds in your knitting.'

Thus numerals with lexical suffixes show for the most part the distributional properties of adjectives, which seem to be a subclass of adjective. The one apparent exception is the fact that numerals with lexical suffixes can be used anaphorically, appearing as the superficial head of an NP, as in (25). However, we noted this is also a feature of adjectives with lexical suffixes, as in (23). An open issue is whether these function as NP heads or as modifiers of null heads. In some instances, the use of a numeral with lexical suffixes without a head noun goes beyond contextual anaphora. The suffix =as to denote money is a notable example, as in (28), where ʔəpan=əs is normally construed quite specifically to mean 'ten dollars'.

3   The Semantics of Numeral Classifiers

In this section we turn to an exploration of numeral classifiers in Halkomelem. In Table 1, we exemplify twenty-four classifying lexical suffixes found to appear on numerals in Halkomelem. We use the number $ɬix^w$ 'three' as the base. Suffixes are sorted by the kinds of objects they classify and glossed with a typical noun that they classify. In subsequent sections, we discuss each group of suffixes.

---

[11] Halkomelem lacks a verb for 'have'; possessive expressions like (31) are a common means of expressing this notion.

HUMAN/ ANIMAL	NATURAL ENVIRONMENT	MATERIAL CULTURE	SHAPE/ SIZE	CONTAINERS, GROUPS
łxʷ=elə 'three people'	s-łixʷ=əłp 'three trees'	łixʷ=əẃtxʷ 'three houses'	łixʷ=əs 'three dollars'	łixʷ=əqən 'three containers'
łxʷ=eẏł 'three children'	ləxʷ=nec 'three root plants'	łxʷ=əwəl 'three canoes'	łxʷ=aləs 'three loops'	łixʷ=əleʔc 'three loads'
łxʷ=iws 'three ducks'	łxʷ=e:nxʷ 'three plant parts'	łxʷ=e:łwəs 'three paddles'	łixʷ=əẏəs 'three coils'	łxʷ=əmat 'three pieces, piles'
łixʷ=aʔqʷ 'three fish (heads)'	łxʷ=əłcəp 'three pieces of firewood'	łxʷ=əlwət 'three garments'	łxʷ=als 'three spheres'	
łxʷ=elqł 'three pieces of game'	łxʷ=ənəp 'three plots of land'		łixʷ=əmət̪θ 'three long thin objects'	
			łixʷ=ət̪θeʔ 'three strands'	
			łixʷ=aʔqʷ 'three heads'	

Table 1 Halkomelem numeral classifiers.

3.1 Classifying humans and animals

For numbers three and higher, the lexical suffix =elə is used to classify people.

	NUMBER	NUMBER + LEXICAL SUFFIX	GLOSS
		=elə	people
3	łixʷ	łxʷelə	three people
4	x̌əʔaθən	x̌əθiːnə	four people
5	łq̇ecəs	łq̇əcseí̇ə	five people
6	t̓x̌əm	t̓x̌əmələ	six people
7	t̓ᶿaʔkʷəs	t̓ᶿəkʷselə	seven people
8	teʔcəs	teʔcselə	eight people
9	tuːxʷ	tuːxʷelə	nine people
10	ʔapən	ʔəpeːnə	ten people
20	ck̓ʷəš	ck̓ʷšelə	twenty people
how many?	k̓ʷin	k̓ʷiːnə.	how many people?

Table 2 Halkomelem classifiers for people.

The suffix is used to count people of all types—men, women, children, elders, friends, relatives, and professionals: [12]

(34) x̌əθiːnə   swaẃləs   t̓ᶿə   xʷ-t̓ᶿx̌ʷ=wiːl-stəm.
      four:people boy.PL   DT   PR-wash=vessel-CS:PAS
      'They had four boys do the dishwashing.'

(35) t̓x̌əm=elə   kʷθə   sx̌əliqəł   niʔ   neː-təm.
      six=people DT   children   AUX   name-PAS
      'Six children got named.'

(36) niʔ   q̇aʔ-təm   ʔə   kʷθə   syays   kʷθə   łxʷ=elə   xʷiẏaθənəq.
      AUX   add-PAS   OBL   DT   work   DT   three=people language.teacher
      'Three language teachers were hired.'

First and second person pronouns are also be counted with =elə.

---

[12] With numbers ending in /n/, like x̌əʔaθən 'four' and ʔapən 'ten', lexical suffixes show deletion of an /l/ or /n/. Also we sometimes see vowels of lexical suffixes being deleted with compensatory lengthening of the last vowel of the number.

(37) ʔi   ct   ʔəẃ   txʷ-ˍtx̌əm=ələ ʔaˍl.
      AUX   1PL.SUB   just   only-six=people just
      'There are just six of us now.'

As has been noted by Anderson (1999), many Salish languages use reduplicated forms of numerals for counting people and animals. He reconstructs *CVC-, *CV-, and *-VC reduplication for counting people and *CV- diminutive reduplication for counting animals. This system of classification is prevalent in Interior Salish languages and also in some of the Central Salish languages, e.g. Squamish and Lushootseed. However, in Halkomelem, the only remnant of this system is with the numbers 'one' and 'two' when counting people.

(38) nəc̓aʔ 'one'   nan̓əc̓aʔ one person'   nəc̓naːnc̓a 'one person at a time'

(39) yəseˍlə 'two'   yeẏsələ 'two people'   yəsyeẏsələ 'two people at a time'

As seen by comparison to the numbers for 'one' and 'two' in the first column, the forms for 'one person' and 'two people' show CV reduplication with a full vowel, and glottalization of a resonant. The meanings 'one person at a time' and 'two people at a time' are indicated with double reduplication.[13] These forms function as classifiers.

(40) niʔ   qʷals   t̓ʰeẏ   nan̓əc̓aʔ   swəẏqeʔ.
      AUX   speak   DT   one.person   man
      'One man spoke.'

(41) səẃ   txʷ-yeysələ   ct   kʷəʔeł xʷəẃe
      NOM-COMP only-twoːpeople 1PLSUB   indeed not-yet
      niʔ-ət   kʷənnəxʷ   kʷs   xʷə-təcsəłx̌éʔ ct   silanəm.
      AUX-1PLSSUB   take-LCTRː3OBJ   DT   become-thirty 1PLPOS   year
      'So there are two of us only that have not yet reached their eightieth year.'

One other lexical suffix is used on numerals to refer to people: =eyəł 'child' (see (10) above).

(42) ˍtx̌əm=eẏł   kʷθə   nə   sc̓aˍləm̓əqʷ.
      six=child   DT   1POS   great-grandchild.PL
      'I have six great-grandchildren.'

---

[13] The doubly reduplicated forms show CVC reduplication of the root as the first prefix and then CV reduplication is infixed into the second position. See also Lushootseed (Bates, Hess, Hilbert 1994:79).

We see though that this suffix can also be added to a form that already has the suffix =elə.[14]

(43)   tx̌əm=ələ=eẏɬ   kʷθə   nə   sċaləṁəqʷ.
          six=people=child   DT   1POS   great-grandchild.PL
          'I have six great grandchildren.'

The plain numeral or the reduplicated forms for one or two people can also co-occur with the lexical suffix =eyəɬ.

(44)   yəsəl=eyɬ.
          two=child
          'two children'

(45)   yeẏsəɬ=eẏɬ
          two.RED=child
          'two children'

This is the only case we have seen of lexical suffixes used as numeral classifiers stacking in this fashion.

       Turning now to other animates, there are no generic words for 'animal', 'bird', 'fish', etc. and there are also no general classifiers for non-human animates.[15] Usually, animals and birds are counted without a classifier:

(46)   te'cəs   tθə   p̓əp̓tθ=əlməxʷ-təm   məlusməs.
          eight   DT   squeeze=breast-PAS   cow.PL
          'There were eight cows to milk.'

Furthermore, Halkomelem, unlike many Salish languages (Anderson 1999) does not use reduplication for counting animals. However, three lexical suffixes are regularly used for counting certain types of animals. The suffix =a'qʷ 'head' is used to count fish, fish heads, and round and cylindrical-shaped sea-life such as chitons, clams, oysters, sea urchins, and sea cucumbers.[16]

(47)   ni'   cən   xʷšam=əs-t   kʷθə   tx̌əm=a'qʷ   sce:ɬtən.
          AUX   1SUB   smoke=face-TR   DT   six=head   salmon
          'I smoked six fishheads.'

---

[14] Hukari & Peter (1995) also notes the form yeẏsəleẏɬ 'have two children', which shows the reduplicative form for 'two people' as well as the lexical suffix.

[15] This is not to say that there are no words for types of animals, birds, etc.

[16] Note on this example the suffix on the verb refers to 'face' while the suffix on the numeral refers to 'head'. This shows that verb classifiers and numeral classifiers diverge.

(48)   łixʷ=aʔqʷ   X̌əX̌ʷX̌əxʷ   kʷθə   niʔ   nə   sʔəłtən.
        three=head   oyster   DT   AUX   1POS   food
        'Four oysters is what I had to eat.'

The suffix =aʔqʷ is also used for round objects and appears in the section on shape classifiers below.
        The lexical suffix =iẃs 'body' is used to count waterfowl and chickens.

(49)   niʔ   cən   ləm-naxʷ   kʷθə   łxʷ=iws   maʔaqʷ.
        AUX   1SUB   look-LCTR   DT   three=body   duck
        'I saw three ducks.'

In addition, as Suttles (in preparation) notes, rabbits and other small game can be counted with =iẃs. We have found that carcasses of larger game animals and domestic animals, such as elk, sheep, and horses can also be counted with this suffix.

(50)   niʔ   cən   kʷələš-t   kʷθə   X̌θin=iws   sqəqəweθ.
        AUX   1SUB   shoot-TR   DT   four=body   rabbit
        'I shot four rabbits.'

(51)   łxʷ=iws   səmiyəθ   ʔiʔ   həṅ-cəẃ-nəxʷ-əs   kʷθə   swəẏqeʔ.
        three=body   deer.PL   and   go-down-LCTR-3ERG   DT   man
        'The man managed to bring down three deer form the mountains.'

    One speaker told us that dogs when they were alive could be counted with =elə, the suffix used for counting people, but they would be counted with =iẃs when they were dead.

(52) a.   tX̌əm=elə   tθə   sqʷəqʷəmeẏ.
           six=people   DT   dog.PL
           'There are six dogs.' (alive)

    b.   tX̌əm=iẃs   tθə   sqʷəqʷəmeẏ.
           six=body   DT   dog
           'There are six dogs.' (dead)

Dogs had special status in Coast Salish culture since their hair was used to make blankets. Amoss (1993:26–27) points out that wool dogs were fed dried meat or fish, traveled with the family in the canoe, and were a measure of a woman's wealth. Other animals cannot be counted with =elə. So, although there is no special classifier for dogs in Halkomelem, as there is, for example, in Jacaltec (Craig 1986), they nevertheless are treated distinctly from other animals.

Suttles (in preparation) mentions the use in Downriver Halkomelem of the suffix *=elqɬ* meaning 'catch, game' in words like *ɬəẃ=-élqɬ* 'lose a fish, miss a shot, *qx̌=élqɬ* 'have a big catch', *k̓ʷín=əlqɬ* 'how many caught'. One Island speaker we worked with suggested that game could be counted with this suffix: *íx̌ʷəm=elqɬ* means 'six pieces of game' and *ʔapənelqɬ* means 'ten pieces of game'. But she suggested that the suffix was old-fashioned and preferred using the suffix *=iẃs* for caught birds and animals.

3.2   Classifying the natural environment

Several lexical suffixes are used to count elements of the natural environment, including plants, firewood, and ground.

	TREE	FIREWOOD	GROUND
	=əɬp	=əlcəp	=-ənəp
1	snəċəɬp	nəċəlcəp	nəċənəp
2	syəseʔəlíp syəselə́ʔəɬp	yəselə́cəp	yəselə́nəp
3	sɬixʷəɬp	ɬxʷəlcəp	ɬxʷənəp
4	sx̌əθi:nɬp	x̌əθiṅəlcəp	x̌əθənənəp
5	ɬq̓ecsəɬp	ɬqecsəlcəp	ɬq̓ecsənəp
6	stx̌əməɬp	tx̌əməlcəp	tx̌əmənəp
7	t̓θak̓ʷssəɬp t̓θaʔk̓ʷsəɬp	t̓θək̓ʷsəlcəp	t̓θak̓ʷsənəp
8	teʔcsəɬp	teʔcsəlcəp	teʔcsənəp
9	tu:xʷəɬp	tu:xʷəlcəp	tu:xʷənəp
10	ʔəpenəɬp	ʔəpeṅəlcəp	ʔəpe:ṅəp
20	ck̓ʷəšəɬp	ck̓ʷšəlcəp	ck̓ʷəšənəp
how many?	k̓ʷinəɬp	k̓ʷiṅəlcəp	k̓ʷi:nəp

Table 3 Suffixes denoting elements of the natural environment.

The suffix *=əɬp* refers to trees, bushes, and plants.

(53)   niʔ   cən   pən-ət   t̓θə   sx̌əθi:n=ɬp   x̌peẏ.
        AUX   1SUB   plant-TR   DT   · four=plant   cedar
        'I planted four cedars.'

(54) ʔəpen=əɬp   t̪ᶿə   sɨᶿeʔqən.
ten=plant   DT   cattail
'There are ten cattails.'

Two other suffixes are used for counting plants. The lexical suffix =*nec*
'bottom' is used to count tubers such as potatoes, carrots, and camas, as well as
tree roots.

(55) ɬəxʷ=nəc   sqewθ   niʔ   q̓ʷəmə-təm.
three=bottom   potato   AUX   dig.up-PAS
'There were three potatoes dug up.'

(56) ʔəpe:n=nec t̪ᶿə nə   spe:nxʷ.
ten=bottom DT 1POS   camas
'I got ten camas.'

Also, the suffix =*e:nxʷ* 'plant part' is used to count sprouts and shoots, as well
as ears of corn or tomatoes when they are on the plant.

(57) ʔəpe:nxʷ   t̪ᶿə   sqewθ niʔ   cisəm.
ten:plant.part   DT   potato AUX   grow
'Ten potatoes sprouts grew.'

(58) ɬxʷ=e:nx   t̪ᶿə   kʷan
three=plant.part DT   corn
'three ears of corn'

Firewood is counted with the lexical suffix =*əlcəp*.

(59) ɬxʷ=əlcəp   x̌pey̓   niʔ   yəq̓ʷ-təm.
three=firewood   cedar   AUX   burn-pas
'Three pieces of cedar were burned.'

(60) ʔəpen=əlcəp   kʷθə   nə   syaɬ   niʔ   xʷə-say̓.
ten=firewood   DT   1POS   firewood   AUX   become-ready
'I have ten blocks of firewood ready.'

This suffix can refer to single pieces of wood for the fire as in (59) or to a chunk
of a tree (a block) that is ready to be split into stove-sized pieces as in (60).
    The suffix =*ənəp* 'ground' refers to a plot in a garden or the things
planted there.

(61)   ni⁷   cən   pən-ət   kʷθə   łxʷ=ənəp   šewəq.
        AUX   1SUB   plant-TR   DT   three=ground   carrot
        'I planted 3 plots of carrots.'

(62)   k̓ʷiːnəp   tθəṅ   spəṅəm.
        how.many:ground   DT:2POS   planting
        'How many different things are you planting?'

3.3   Classifying items of material culture

Lexical suffixes are used on numerals to refer to four key items of material culture: =*ew̓tx*ʷ 'house', = *wəł* 'canoe', = *eːl̓wəs* 'paddle', and = *elwət* 'garment'. Other items of material culture may be classified according to shape or function, as discussed in sections 3.4 and 3.5 below.

	HOUSE	CANOE	PADDLE	CLOTHING
	=əw̓t⁷xʷ =ew̓t⁷xʷ	=wəł =xʷəł	=eˑl̓wəs	=elwət
1	nəćəw̓txʷ	nećəxʷəł	nećə⁷eːl̓wəs	nećə⁷əlwət
2	yəsel̓əw̓txʷ θəṁtxʷ θəməw̓txʷ θəmtxʷ	θeməxʷəł	yəsel̓eːl̓wəs	⁷isel̓wət
3	łxʷəw̓txʷ	łxʷəwəł	łxʷeːl̓wəs	łxʷəlwət
4	x̌əθinəw̓txʷ	x̌əθinəwəł	x̌ə⁷ałəneːl̓wəs	x̌ə⁷ałənelwət
5	łq̓ecsəw̓txʷ	łq̓ecsəwəł	łq̓ecseːl̓wəs	łq̓cselwət
6	t̓x̌əməw̓txʷ	t̓x̌əməwəł	t̓x̌əməwəł	t̓x̌əmelwət
7	tθakʷsew̓txʷ	tθa⁷kʷsəwəł	tθə⁷kʷseːl̓wəs	tθə⁷kʷsəlwət
8	te⁷csew̓txʷ	te⁷csəwəł	te⁷cseːl̓wəs	te⁷cselwət
9	tuːxʷəw̓txʷ	tuːxʷəwəł	tuːxʷeːl̓wəs	tuːxʷelwət
10	⁷əpenəw̓txʷ	⁷əpenəwəł	⁷əpeneːl̓wəs	⁷əpenəlwət
20	ck̓ʷəšəw̓txʷ	ck̓ʷəšawəł	ck̓ʷəšeːl̓wəs	ck̓ʷšelwət
how many?	k̓ʷiṅew̓txʷ	k̓ʷinəwəł	k̓ʷəneːl̓wəs	k̓ʷinəlwət

Table 4 Suffixes for material culture.

The suffix =ew̓txʷ 'house' is used when counting houses and buildings.[17]

(63)   yəseɬ=əw̓txʷ   tᶿə leləm̓ xʷ-əweʔ niːs   c-həẏqʷuːn̓.
        two=house   DT house PR-not AUX:3SSUB PR-lamp
        'Two houses haven't got their lights yet.'

(64)   ƛ̓im̓   nan ʔəw̓ stətastəl̓   tᶿə qeʔis ɬixʷ=əw̓txʷ
        really   very CON close.together DT new   three=house
        həleləm̓.
        house.PL
        'The three new houses are very close together.'

(65)   x̌əθin=əw̓txʷ   tᶿə   telew̓txʷ.
        four=house   DT   bank
        'There are four banks.'

(66)   ʔəw̓   nəc̓=əw̓txʷ ʔaɬ šxʷimelə niʔ   ʔə-ƛ̓   sʔamənaʔ.
        just   one=house just store   AUX   OBL-DT Somenos
        'There is just one store at Somenos.'

The suffix =wəɬ (~xʷəɬ) 'canoe' refers to canoes and boats of all kinds, including sailboats, warships, and ferries.[18]

(67)   x̌əθin=əwəɬ   snəxʷəɬ ʔi   tecəl.
        four=canoe   canoe   AUX   arrive
        'Four canoes arrived here.'

(68)   x̌əɬə   kʷs   ɬxʷ=əwəɬ-s   k̓ʷ   q̓x̌əw̓ɬ
        say.IMP   DT   three=canoe-3POS DT   war.canoe
        ʔi   yə-ʔew̓ə.
        AUX   PR.come.IMP
        'He says there are three war canoes coming.'

---

[17] An alternative form =eːltəxʷ 'house' can be used as a compound lexical suffix to refer to spouses living together under one roof.

(i)   xʷ-ɬʷ=eːltəxʷ kʷθeẏ swəẏqeʔ.
        PR-two=house   DT   man
        'That man has three wives.'

For a man to take on two wives was not unusual in pre-contact times, and sometimes he would take three or four. A woman with two husbands was much rarer.

[18] See Hinkson (2001) for a Pan-Salish discussion of the semantics of this suffix.

The general word for canoe *snəxʷəł* today also means 'car', and various canoe terminology has been transferred over to automobile culture.

(69)   k̓ʷin=əwəł   snəxʷəł ni?   ?əńexʷ ni?   ?ə   kʷθeleləm̓?
       how.many=canoe canoe   AUX   stopped AUX   OBL   DT:2POS house
       'How many cars were parked in front of your house?'

(70)   yə-łəxʷ=əẃəł   ćə   kʷθə   s?əlelexʷ   neṁ   ?əmšasəṁ.
       PF-three=canoe.IMP   EVID   DT   elder.PL   go   tour.IMP
       'The elders that are going on a tour are going on three cars.'

This suffix is also used when counting other vehicles, including wagons, buggies, planes, trains, trailers, scooters, bicycles, and skateboards.

(71)   ?əpen=əwəł   kʷθə   lilut.
       ten=canoe   DT   railroad
       'The train has ten cars.'

Finally, we see that =wəł is used for counting plates and platters.

(72)   ?əṁi-stəxʷ   x̌əθin=əwəł   la?əłθən ?i? θəm=əxʷəł
       come-CS:3OBJ   four=canoe   plate.PL   and two=canoe
       qʷθaləs!
       platter
       'Bring four plates and two platters!'

Pre-contact Salish dishes were long canoe-shaped wooden vessels used for holding food for a group of people. Plates and platters are the only household implements counted in this fashion. Other vessel-like objects are classified as containers, as discussed in section 3.5 below.

       The suffix =e:íwəs is used for counting paddles, as in:

(73)   łxʷ=əíwe?s   kʷθə   nə   sq̓əməl.
       three=paddle   DT   1POS   paddle
       'I have three paddles.'

The most common use of the canoe in modern times is racing. Teams travel throughout the Pacific Northwest to compete in races sponsored by different tribes and bands. Galloway (1993:192) reports that in the Upriver dialect, the suffix =ówes not only counts paddles but also the number of paddlers in a canoe. We have not been able to verify this use in the Island dialect; however, paddlers seem to be counted with the people suffix =elə.

(74) ɬxʷ=elə   kʷθə   *klootchman.*
      three=people   the   women
      'There are three women paddlers.'

The Chinook Jargon word *klootchman* 'woman' is used to refer to women paddlers.

    Items of clothing, such as shirts, skirts, dresses, coats, and pajamas, can be counted with the suffix *=əlwət* 'garment'.

(75) ɬixʷ=əlwət   tθə   nə   šƛ̕piw̓ən̓.
      three=garment   DT   1POS   shirt
      'I have three shirts.'

(76) x̌aθin=əlwət   θə   nə   kəpu.
      four=garment   DT   1POS   coat
      'I have four coats.'

Blankets or pieces of cloth that are worn as ceremonial garments can also be counted with *=əlwət*.

(77) k̓ʷin=əlwət   tθən̓   ləx̌ʷtən?
      how.many=garment DT:2POS   blanket
      'How many blankets do you have?'

(78) ɬixʷ=əlwət   tθə   nə   sil.
      three=garment   DT   1POS   cloth
      'I have three pieces of cloth.'

    Other items of material culture do not have lexical suffixes of their own but rather are classified by shape or function, as discussed in the next two sections.

3.4   Classifying by shape

    Several lexical suffixes are used with numerals to count objects classified by their shape.

SUFFIX	MEANING	CLASSIFIES:
=as	ROUND	dollars, small round objects, months
=aləs	LOOP, CYLINDER	meshes of net, stitches of knitting, campfires, pens, sticks, boards
=iẏəs	COIL	rings, bracelets, coils of rope, coiled baskets
=als	SPHERICAL	stones, eggs, berries, apples, oranges, potatoes. tomatoes, balls, balls of yarn
=aʔqʷ	HEAD, SPHERICAL	animals, fish, fish heads, sea life, cabbages, lettuce, garlic, berries, balls of yarn
=eməɬᶿ	LONG THIN OBJECT	poles, rods, logs, house posts, roads, water pipes
=iɬᶿeʔ	STRAND	ropes, roots, strands of fibre, strips of cloth

Table 5 Halkomelem shape-based classifiers.

Paradigms for three of the clssifiers that refer to round objects are given in Table 6.

	ROUND, DOLLARS	LOOP, CYLINDER	SPHERICAL
	=as	=aləs	=als
1	nəċəs	nəċaləs	nəċals
2	yəsaɬəs	yəsəɬaləs	yəsəɬals
3	ɬixʷəs	ɬxʷaləs	ɬxʷals
4	x̌əθinəs	x̌əθinələs	x̌əθinəls
5	ɬq̇acsəs	ɬq̇əcsaɬəs	ɬq̇əcsals
6	t̓x̌əməs	t̓x̌əmaləs	t̓x̌əməls
7	ɬᶿaʔkʷsəs	ɬᶿəkʷsaləs	ɬᶿəkʷsals
8	taʔcsəs	teʔcaləs	teʔcsals
9	tuːxʷəs	tuːxʷaləs	tuːxʷals
10	ʔəpanəs	ʔəpanaləs	ʔəpanəls
20	ck̓ʷšas	ck̓ʷšaləs	ck̓ʷsals
how many?	k̓ʷinəs	k̓ʷinaləs	k̓ʷinals

Table 6 Some classifiers for round objects.

The first five suffixes listed in Table 5 refer to round objects of various sorts. Of these suffixes, =as classifies flat round objects. Its most common use is in reference to dollars, originally coins. In modern usage it refers to paper currency as well.

(79) x̌ʷəm ʔə č ʔiʔ ʔəx̌im-θ ʔə kʷs ʔəpan=əs?
      can Q 2SUB CON lend-TR:1OBJ OBL DT ten=round
      'Can you lend me ten dollars?'

(80) ɬq̓ecəɬšaʔ=əs ɬə yaθ ʔəẃ kʷeṅ-nəxʷ-əs
      fifty=round DT always CON get-LCTR:3OBJ-ERG
      ʔə tθ-əẃ məkʷ ɬqeɫč̓.
      OBL DT-CON all month
      'He receives fifty dollars every month.'

(81) ck̓ʷš=as ʔiʔ k̓ʷ ɬq̓acs=əs ʔə tθəṅ teləʔ?
      twenty=round and DT five=round Q DT:2POS money
      'Do you have twenty-five dollars?'

Another common use of =as is to count months (i.e. 'moons').

(82) wawaʔ niʔ yəsaɫ=əs ɬqeɫč̓ ʔiʔ ƛ̓eʔ wəɬ neṁ cam.
      perhaps AUX two=round moon and again already go go.up.
      'It was maybe two months later and he again went up into the mountains.'

(83) ni-i-is k̓ʷin=əs ɬqeɫč̓ kʷsəs
      AUX-3SSUB how.many=round month DET:3SSUBP
      seẃq̓-təṁ tθəẃniɬ swiẃləs.
      look.for-TR:PAS.IMP DT young.man
      'It was not known how many months they looked for the young man....'

The second suffix in Table 5 is =aləs 'loop'. It refers to (rows of) stitches of knitting, meshes of net, and campfires.[19]

(84) txʷ-yəsəɫ=aləs-stəxʷ č tθəṅ sya:ys ʔiʔ ʔəẏ.
      only-two=loop-CS:3OBJ 2SUB DT:2POS work and good
      'It will be better if you do two more rounds in your knitting.'

(85) x̌əθin=ələs tθə həẏqʷ
      four=loop DT fire
      'four fires'

---

[19] People sit around a campfire in a ring.

Halkomelem women are famous weavers and knitters. Coast Salish style sweaters (often referred to as Cowichan sweaters), vests, toques, and slippers are marketed world-wide. Many natives are commercial fishermen and are adept at gill netting. Suttles (in preparation) states that =aləs refers to tens of mesh, as would be used in giving the depth of a gill net, the length being given in fathoms. Speakers that we have worked with also use =aləs to count single mesh when mending nets.

The loop shape when extended into three-dimensions yields a tube or cylinder figure. The Halkomelem suffix =aləs gets used with cylindrical-shaped objects, including pens and sticks.

(86) yəsəl̓=aləs   t̓ᶿən̓   x̌əl̓tən.
      two=loop   DT:2POS   pen
      'You have two pens.'

(87) ɬxʷ=aləs   sc̓ešt
      three=loop   stick
      'three sticks'

The long three-dimensional shape need not be round. Thus, boards (such as 2" x 4" lumber) can also be referred to by =aləs.

(88) k̓ʷin=ələs   t̓ᶿə   ləplaš?
      how.many=loop   DT   board
      'How many boards are there?'

A third suffix referring to round shapes is =iỷəs.[20] Like the previous suffix, it seems to refer to loops, including rings, bracelets, and coils of rope.

(89) ɬixʷ=əỷəs   θə   nə   šeləmcəs.
      three=coil   DT   1POS   ring
      'I have three rings.'

Whereas the previous suffix =aləs extends to oblong objects, =iỷəs refers to loop-shaped objects elongated in height. For example, =iỷəs is used for coiled baskets and sheaves of wheat that are wrapped with string and then stood vertically in the field.

The fourth suffix in Table 5, =als, is used for small spherical objects, including stones, balls, eggs, berries, fruits, and vegetables.

---

[20] The suffixes =aləs and =iỷəs derive from the suffix =as plus the connectors =al and =iỷ respectively. Until we know more about the form and function of connectors, we have opted to keep these suffixes distinct.

(90) q̇aʔ-t   č   t̓ᶿə   yəsəĺ=als   ĺᶿət̓ᶿəx̌als!
     add-TR 2SUB   DT   two=sphere   egg
     'Add two eggs!'

(91) x̌əθi=nəls   kʷθə   sqewθ.
     four=sphere DT   potato
     'There are four potatoes.'

(92) łxʷ=als   t̓ᶿə   nə   ʔalənčəs.
     three=sphere DT   1POS   orange
     'I have three oranges.'

The suffix =aʔqʷ 'head', as noted in section 3.1, is used to count fish, fish heads, and sea-life. It is also used to count vegetables that grow in 'heads', such as lettuce, cabbage, and garlic. Balls of yarn and berries can be counted either with this suffix or with the suffix =als. We surmise that historically the difference between the two suffixes may have been size, where =aʔqʷ referred to larger spherical objects and =als referred to smaller spherical objects. Future research may shed light on this issue.

The last two suffixes in Table 5 refer to long thin objects; see Table 7 below. The lexical suffix =emət̓ᶿ refers to rigid objects such as poles, rods, logs, boards, sticks, house posts, roads, and water pipes.[21]

(93) x̌əθin=əmət̓ᶿ   kʷθə   qeqən.
     four=long   DT   house.post
     'There are four house posts.'

(94) łixʷ=əmət̓ᶿ   qʷłeẏ
     three=long   log
     'three logs'

(95) x̌əθin=əmət̓ᶿ   šeł
     four=long   road
     'four roads'

Not all rigid objects with a long thin shape are counted with this suffix. For example, trees are counted with =əłp, paddles with =əlwəs, and pencils (since they are perceived as cylinders) with =aləs, while brooms are counted without a suffix on the numeral.

---

[21] Galloway (1993:193) gives the suffix =éməč (prob. =émət̓ᶿ) 'upright, poles'. We have found in Island dialect that the suffix applies to horizontal as well as vertical objects.

	LONG, THIN, RIGID OBJECT	LONG, THIN, FLEXIBLE OBJECT (STRAND)
	=eməɬ	=iɬeʔ
1	nəc̓eməɬ	nəc̓əɬeʔ
2	yəseməɬ	yəseləɬeʔ
3	ɬixʷəməɬ	ɬixʷəɬeʔ
4	x̌əθinəməɬ	x̌əθinəɬeʔ
5	ɬq̓ecsəməɬ ~ ɬq̓əcseʔməɬ	ɬq̓ecsəɬeʔ
6	t̓x̌əməməɬ	t̓x̌əməɬeʔ
7	t̓ᶿaʔkʷsəməɬ	t̓ᶿaʔkʷsiɬeʔ
8	teʔcsəməɬ	teʔcsəɬeʔ
9	tuːxʷəməɬ	tuːxʷəɬeʔ
10	ʔəpenəməɬ	ʔəpenəɬeʔ
how many?	sk̓ʷinməɬ	

Table 7 Suffixes referring to long, thin, rigid objects and flexible objects.

In contrast, =iɬeʔ refers to long, thin, flexible objects like cedar roots, ropes, strands of yarn, or strips of cloth or bark.

(95)   kʷθə   ɬq̓ecs=əɬeʔ   k̓ʷaləxʷ
        DT   five=strand   dog.salmon
        'five strips of dog salmon.'

(96)   t̓ᶿaʔkʷs=iɬeʔ   t̓ᶿə   nə   x̌ʷix̌ʷləm̓.
        seven=strand   DT   1POS   thread
        'I had seven pieces of thread.'

In sum, Halkomelem has a large set of lexical suffixes that classify objects according to features of shape. The semantic parameters used in the Halkomelem system match the results of cross-linguistic research on classifiers by Allan (1977), and Denny (1979), among others. The key parameters are dimension (e.g. flat vs. spherical) and consistency (rigid vs. flexible). Also Halkomelem uses secondary features involving size and elongation. The Halkomelem system allows for the accommodation of new items, which are

added to the system according to their shapes or shared function with a core classified object.

3.5   Classifying containers and groups

Three classifiers refer to objects that are put together into some arrangement and the containers that hold them.

	CONTAINER	BUNDLE, LOAD	GROUP, PILE
	=əqən	=əleʔc	=əmat
1	nəċəqən nəċaqən	nəċəleʔc	nəċaṁat
2	yəseɫəqən	nəċəleʔc	yəsaɫəmat
3	ɫixʷəqən	ɫxʷəleʔc	ɫxʷəmat
4	x̌əθinəqən	x̌aθinəleʔc	x̌əθinəmat
5	ɫq̓ecsəqəṅ check glottal	ɫq̓ecəleʔc	ɫq̓əcsəmat
6	ɬx̌əməqən	ɬx̌əməleʔc	ɬx̌əməmat
7	ƛ̓aʔkʷsəqən ƛ̓əkʷsəqən	ƛ̓ək̓ʷəsəleʔc	ƛ̓əkʷsəmat
8	teʔcsəqən	təċəleʔc	teʔcsəmat taʔcsəmat
9	tuːxʷəqən	təwxʷəleʔc	tuːxʷmat
10	ʔəpenəqən	ʔəpeynəleʔc	ʔəpenəmat
20	ck̓ʷəšiqən		ck̓ʷəšamat
how many?	k̓ʷinəqən	k̓ʷinəleʔc	k̓ʷinəmat

Table 8 Suffixes referring to containers and piled up objects.

The lexical suffix =əqən is used to count items of material culture whose function involves containment of a substance, e.g. bowls, cups, teapots, pans, pots, pipes, and lanterns.

(98) nəča̓ʔ=qən   ʔal̓   t̓θəń   sq̓ʷal̓s.
      one=container   just   DT:2POS   pot
      'You have just one pot.'

(99) l̓ixʷ=qən   t̓θə   nə   štiheḷə.
      three=container DT   1POS   teapot
      'I have three teapots.'

(100) k̓ʷin=əqən   x̌θəm   k̓ʷə   niʔ   ʔiləq-ət-əxʷ.
      how.many=container box   DT   AUX   buy-TR-2SSUB
      'How many boxes did you buy?'

The suffix =əqən is also used to count containers of all sizes, including buckets, barrels, baskets, jars, cans, boxes, sacks, suitcases, and pillowcases. The noun associated with the numeral phrase can be the container (101-102) or the substance contained (103-104).

(101) k̓ʷin=əqən   k̓ʷəń   skʷaw̓əs.
      how.many=container DT:2POS bucket
      'How many buckets do you have?'

(102) nəc̓=əs   telə   t̓θə nəc̓=əqən   lisek
      one=round   money   DT   one=container   sack
      'one dollar a sack'

(103) neḿ   kʷən-ət ƚqecs=əqən   sqewθ.
      go   take-TR five=container   potato
      'Go get five sacks of potatoes!'

(104) neḿ   cən   ləw̓eːn-t   ƚə   nə   məńə
      go   1SUB   give.gifts-TR DT   1POS   offspring
      [ʔə   kʷθə   ʔapen=əqən   ʔapəls].
      OBL   DT   ten=container apple
      'I am going to bring gifts (of 10 boxes of apples) for my daughter.'

The suffix =əleʔc is used to refer to a collection of items that constitute a load and to the packaging method that effects this. This includes bales of hay, bundles of wood, barrels of fish, baskets of laundry, bundles of blankets, sacks of potatoes, boxes of fruit, and trunks of possessions.

(105) łxʷ=əleʔc   sqewθ
       three=bundle   potato
       'three packages of potatoes'

(106) nəc̓=əleʔc t̓θə nə   sitən
       one=bundle DT 1POS basket
       'one basketful'

Large containers, since they often constitute a load, can be classified with either
=əleʔc or =əqən. If the emphasis is on the amount of the item then =əleʔc is
used. If the emphasis is on the type of container the item is in, then =əqən is
used.

(107) k̓ʷin=əleʔc   t̓θəń   təməwĺəč?
       how.many=bundle   DT:2POS   barrel
       'How many (loads of) barrels?'

(108) k̓ʷin=əqən   t̓θəń   təməwĺəč?
       how.many=container DT:2POS   barrel
       'How many barrels?'

It is also possible to use the suffix =eĺec to refer to a quantity of an item that
constitutes a load even if the item is not contained.

(109) k̓ʷin=ələʔc   t̓θəń   ləx̌ʷtən?
       how.many=bundle   DT:2POS   blanket
       'How many stacks of blankets do you have?'[22]

(110) łixʷ=əleʔc   x̌ʷiĺəm
       three=bundle   rope
       'three coils of rope'

The lexical suffix =mat is the most difficult of the classifier suffixes to
gloss. Suttles (in preparation) defines this suffix as 'kind, part, piece' while
Galloway (1993:214) defines it as 'piles'.[23] We see reflections of the first

---

[22] We were told that that a bundle of ten blankets make a stack.

[23] The suffix =aẃəθ also means 'kind'. It appears to modify any inanimate noun that has
a variety of types, e.g. spears, berries, stories, languages, medicines, canoes, and spears.

(i)   xʷ-xəθin=əwəθ   snəxʷəł
        PR-four=kind   canoe
        'four kinds of canoes'

meaning in examples in (110-113), where the suffix means 'part', 'piece', or 'group.'

(111) niʔ   cən   xʷə-ɬxʷ=əmat-stəxʷ   k̓ʷə-nə-s   ɬič-ət
       AUX   1SUB   become-three=part-CS:3OBJ   DT-1POS-NM   cut-TR
       tᶿə   θəqiʔ.
       DT   sockeye
       'I sliced the sockeye (salmon) into three chunks.'

(112) yəsaɬ=əmat   ceʔ   k̓ʷə neṁ   həyeʔ-stxʷ-ət.
       two=part   FUT   DT go   leave-CS:3OBJ-1PL.SSUB
       'We are going to take two teams.'

(113) ʔiɬe   xʷəlməxʷ=qən   tə   nəča=mat   pukʷ
       let's   Indian=throat   DT   one=part   book
       'Let's Speak our First Nations Language: Book 1'
       (title of a Halkomelem textbook)

(114) ɬixʷ=əma·t   sčaɬaʔ
       three=part   leaf
       'three piles of leaves'

(115) ɬixʷ=əma·t   x̌ʷiɬəm
       three=part   rope
       'three piles of rope'

Blankets, mats, and rugs of all kinds are also counted with =*mat*.

(116) txʷ-ɬxʷ=əmat   ʔal   θə   nə   swəq̓ʷaʔɬ.
       just-three=part   only   DT   1POS   goat.blanket
       'I only have three goat wool blankets.'

(117) x̌əθin=əma·t   sɬəwən
       four=part   bulrush.mat
       'four bulrush mats'

(ii)   xʷ-ɬxʷ=aw̓əθ   tᶿə   sqʷal.
       PR-three=kind   DT   speech
       'There are three different ways of speaking.'

It was unclear to us whether this should be regarded as a classifier or a compounding use of a suffix.

Traditionally, the dog wool and goat wool blankets were used for ceremonial purposes in the longhouse. The blankets were laid down on top of each other in a pile. The suffix =*mat* now applies to blankets even when they are not piled.

As Aikhenvald (2000:115) notes: "Since the choice of a mensural classifier is often determined by the temporary state of an object (its quantity, or the arrangement it occurs in) there may be more freedom in choosing a mensural classifier than in choosing a sortal one." This is exactly what we find in Halkomelem. Choosing between the classifiers =*əqən*, =*eʔləc*, and =*mat* varies from situation to situation, depending on whether emphasis is being placed on the quantity, the arrangement, or the containment of the item. Also relevant is whether the item will be stored, carried, or used in that configuration.

3.6   Summary: the Halkomelem system

This section has discussed the form and function of lexical suffixes used as numeral classifiers in Halkomelem. The system includes both sortal and mensural classifiers. Sortal classifiers refer to a specific kind of entity or to a shape-based class of entities. A handful of specific suffixes refer to living things—flora, fauna, and people, but the majority of suffixes refer to inanimate objects. Some specific suffixes refer to key items of the natural environment and the material culture. The specific suffixes allow us to draw a picture of the most important items in the Halkomelem pre-contact lifestyle—people, waterfowl, fish, trees, plants, ground, firewood, houses, canoes, paddles, and garments. Most inanimate objects are classified based on their shape. Small round flat objects, loops, coils, spheres, long thin rigid objects, and long thin flexible objects seem to be the main classificatory categories for objects. Some suffixes extend in length or height and thus include cylindrical objects. The mensural classifiers allow for several perspectives on a item based on its containment, its packability, its arrangement into piles or stacks, or its division into parts.

The Halkomelem system easily accommodates new items. They fit into the system based upon their shape or manner of containment. In addition, classifiers can extend semantically based on shared functions. For example, the suffix for small round flat objects, used first for coins, subsequently extended to paper money.

It may be the case that in earlier times all items were obligatorily classified. But today many nouns are counted without the use of lexical suffixes. These include mountains, bays, lakes, rivers, islands, points of land, and other large land forms. Hours, days, and weeks are not classified. In addition many of the larger items of material culture—tables, chairs, doors, desks, axes, brooms—are not classified. More abstract items, such as stories, words, languages, and work, are not classified, even though they are counted.

(118)   niɬ   nə́caʔ   syays-s   tᶿə swaẃləs   tᶿə syaɬ.
         3EMPH   one   work-3POS   DT boy.PL   DT firewood
         'The wood was one of the jobs for the boys.'

So a likely hypothesis is that only the most important and smaller items (ones that were handled, probably) were obligatorily counted with classifiers.

4 Conclusion

This paper explored the system of numeral classification in Halkomelem. Some countable concrete nouns are counted with simple cardinal numbers, but many nouns can be counted with classificatory lexical suffixes. We discuss both the meaning of the suffixes and the nouns that they classify. Classifiers refer to animate and inanimate entities. Suffixes for animates characterize the most salient feature of the entity. Some classifiers for inanimates originate in suffixes referring to specific elements of the natural environment or items of material culture. Most inanimates, however, are classified according to their shape or function. In sum, classification in Halkomelem is the sort of system that we are led to expect based on cross-linguistic typological research. (See Aikhenvald 2000 and references therein.).

References

Aikhenvald, Alexandra Y. 2000. *Classifiers: A typology of noun categorization devices.* Oxford Studies in Typology and Linguistic Theory. Oxford: Oxford University Press.

Allan, Keith. 1977. Classifiers. *Language* 53.2:285–311.

Amoss, Pamela. T. 1993. Hair of the dog: Unraveling pre-contact Coast Salish social stratification. In Anthony Mattina & Timothy Montler, eds. *American Indian linguistics and ethnography in honor of Laurence C. Thompson.* University of Montana Occasional Papers in Linguistics No. 10, 3-36.

Anderson, Gregory D. A. 1999. Reduplicated numerals in Salish. *International Journal of American Linguistics* 65.4, 405–48.

Bates, Dawn, Thom Hess, & Vi Hilbert. 1994. *Lushootseed dictionary.* Seattle: University of Washington Press.

Carlson, Barry F. 1990. Compounding and lexical affixation in Spokane. *Anthropological Linguistics* 32 .1–2:69–82.

Craig, Colette G. 1986. Jacaltec noun classifiers: A study in language and culture. In Craig, Colette G. ed.), *Noun classes and categorization: Proceedings of a Symosium on Categorization and Noun Classification, Eugene, Oregon, October 1983.* Amsterdam: John Benjamins, 263-294.

Czaykowska-Higgins, Ewa, and M. Dale Kinkade. 1998. Salish languages and linguistics. In Eva Czaykowska-Higgins and M. Dale Kinkade (eds), *Salish languages and linguistics: Theoretical and descriptive perspectives.* Berlin: Mouton de Gruyter, 1-68.

Denny, J. Peter. 1979. The 'extendedness' variable in classifier semantics: Universal features and cultural variation. In Madeleine Mathiot, ed.,

Ethnolinguistics: Boas, Sapir, and Whorf revisited. The Hague: Mouton, 97–119

Egesdal, Steven M. 1981. Some ideas on the origin of Salish lexical suffixes. *University of Hawaii Working Papers in Linguistics* 13.2:3–19.

Galloway, Brent D. 1993. *A grammar of Chilliwack Halkomelem.* University of California Publications in Linguistics 96. Berkeley: University of California Press.

Gerdts, Donna B. 1988. *Object and Absolutive in Halkomelem Salish.* New York: Garland.

Gerdts, Donna B. 1998. Incorporation. In A. Spencer and A. Zwicky (eds.), *The Handbook of Morphology.* Basil Blackwell, Oxford, 84–100.

Gerdts, Donna B., & Mercedes Q. Hinkson 1996. Salish lexical suffixes: a case of decategorialization. In Adele Goldberg (ed.) *Proceedings of the Conference on Conceptual Structure, Discourse and Language.* Stanford: CSLI, 163–176.

Gerdts, Donna B., & Mercedes Q. Hinkson. To appear. Salish Numeral Classifiers: A Lexical Means to a Grammatical End. *Sprachtypologie und Universalienforschung.*

Gerdts, Donna B. & Thomas E. Hukari. To appear. *Halkomelem.* Munich: Lincom Europa.

Hinkson, Mercedes Q. 2001. The semantics of the lexical suffix *wil, Proceedings of the Thirty-Six International Conference on Salish and Neighboring Languages,* Chilliwack, British Columbia, 155–174.

Hukari, Thomas E., ed., and Ruby Peter, assoc. ed. 1995. *Hul'qumi'num' dictionary.* [Duncan, British Columbia]: Cowichan Tribes.

Kinkade, M. Dale. 1963. Phonology and morphology of Upper Chehalis: II. *International Journal of American Linguistics* 29:345–356.

Kinkade, M. Dale 1998. Origins of Salishan lexical suffixes. *Papers for the 33rd Int.ernational Conference on Salish and and Neighboring Languages.* Seattle: University of Washington, 266–295.

Leslie, Adrian. 1979. *A grammar of the Cowichan dialect of Halkomelem Salish.* Ph.D. dissertation, University of Victoria.

Mattina, Anthony. 1987b. On the origin of Salish lexical affixes. Paper presented at the 26th Conference on American Indian Languages, AAA, Chicago.

Montler, Timothy. 2001. Auxiliaries and other grammatical categories in Klallam. *Proceedings of the Thirty-Six International Conference on Salish and Neighboring Languages.* Chilliwack: BC, 237-264.

Shaw, Patricia A., Susan J. Blake, and Jill Campbell. 2001. Numerals and lexical suffixes in hənq̓əminəm̓ Salish. Paper presented at the Thirty-Six International Conference on Salish and Neighboring Languages, Chilliwack, British Columbia.

Suttles, Wayne. In preparation. *A Reference grammar of the Musqueam dialect of Halkomelem.*