

Numerals and Lexical Suffixes in hə́ŋqəminə́m Salish*

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Given that the rich system of lexical suffixes is one of the particularly distinctive properties of Salish languages and given expressed concerns as to their decline in usage, this paper focusses on extending the documentation and analysis of their form and function in hə́ŋqəminə́m in the context of the number system. Implications of various paraphrastic options for diachronic language shift and language revitalization are discussed. Further, comparative data from related dialects and from other Salish languages is cited, illustrating divergent strategies for lexical suffixation in compounded numeric roots. Issues related to suppletive allomorphic alternation evidenced in the number paradigms are discussed, along with implications for language change. Finally, documentation from various sources for 15 independent lexical suffixes in combination with numeric roots is summarized in table form, revealing both attested variation and residual gaps in the recorded paradigms, with the express hopes of stimulating further documentation and analysis in this area.

1 Introduction

One of the particularly distinctive properties of Salish languages is the rich set of lexical suffixes (henceforth LSs) which attach to various word classes,

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including numerals. These LSs designate a variety of semantic domains, classifying nominal sets such as animate beings (e.g. people, animals, birds, fish); body parts (Kuipers' (1967:120) "somatic" category); things in nature (e.g. trees); culturally salient objects (e.g. canoes, paddles, net mesh, mats, baskets); characteristics of shape (e.g. long/thin); places or locations (e.g. houses); temporal domains (days, years), number sequences (ordinals, base 10, subset groupings, iterations); etc. Languages and dialects within the Salish family differ in the sets of LSs in use (see e.g. Galloway 1977), in their semantic domains (see e.g. Hinkson 1999), in their morphosyntactic properties (e.g. Czaykowska-Higgins 1998, Gerdt 1999), and in their morphophonemic behaviour (e.g. Blake 2000; see §4 below). This linguistic phenomenon therefore defines an interesting focus for a comparative investigation of cross-dialectal and cross-linguistic properties.

In his reference grammar of the downriver *hənqəminəm* dialect, Suttles (in press:258) documents nearly 150 elements which function as LSs (or LSs linked to a preceding root by a 'connective'¹), many of which are quite productive. Further, in his chapter devoted specifically to the Numeral System, Suttles identifies 17 sets of LSs which attach to numerical roots, generally with the function of counting members of that set, e.g.:

(1) Numerical Root plus Lexical Suffix(es)

Root	LS	gloss	Root=LS	gloss
tu:x ^w		<i>nine</i>		
	=elə	<i>people</i>	tù:x ^w élə	<i>9 people</i>
	=iws	<i>birds, small mammals</i>	tù:x ^w iws	<i>9 birds (e.g. ducks)</i>
	=ət =cye	<i>times = unit of ten</i>	tù:x ^w ət cye	<i>90 (9 times 10)</i>

Our goals in the present paper are as follows. In section 2, we foreground some issues related to language use, citing examples of options available for speakers to use either a morphological construction built on the numerical root (henceforth #Root) plus LS, or a syntactically constructed paraphrase where the #Root functions as a quantifier modifying an independent noun. Implications of these paraphrastic options for diachronic language shift and language revitalization are then discussed. Section 3 addresses the question of which #Root the LS attaches to in cases of a compound base. Data is presented which exemplifies synchronic variability in the locus of suffixation in *hənqəminəm*. Comparative data from some other Salish languages is cited,

¹ There are a number of LSs related by a 'connective' (cf. Kinkade 1999; Suttles in press) usually of the form -VR-, whose semantics are often restrictive, but not generally transparent.

documenting various divergent strategies for suffixation of LSs in compounded numeric roots. In section 4, issues related to allomorphic alternation evidenced in these paradigms are discussed. Finally, in section 5, additional data is provided to augment some of the gaps in several of the #Root=LS paradigms recorded in the available documentation of this dialect, principally by Suttles (in press), Guerin (n.d., 1986), and previous documentation by the present authors (2001). Where there is attested variation, we also document inter-speaker differences. As well, morphophonemic or morphosyntactic properties more specifically relevant to individual paradigms are discussed. In addition, various examples are provided to contextualize the usage of these forms.

2 Language use

In the dual context of endangered language documentation and of revitalization curriculum development, there are important issues related to contexts and patterns of use of LS constructions. Of specific interest is the fact that hə́nq̣mínə́m speakers have available to them two possible ways of counting things: one is a morphological construction built on the numerical root (#Root) plus LS, as exemplified in (1) above, e.g. ṭù:x̣ẉ iwṣ *nine bird or animal bodies (e.g. ducks)*; the second is a syntactically constructed paraphrase where the #Root functions as a quantifier modifying an independent noun, e.g. ṭú:x̣ẉ maʔaq̣ẉ *nine ducks*. The fact that the first kind of construction is deeply embedded in a Salishan morphological system significantly different from English, whereas the second type of construction is broadly comparable to the English pattern, combined with the fact that English has for several decades now been the dominant - indeed, to a large extent the only - language spoken in the community, together raise important questions regarding diachronic shift and bilingual/second language learning. Several of these questions are discussed in this section.

A fundamental issue is the classificatory function of the lexical suffixes. Characteristically, a LS has a generic frame of reference, rather than a specific one. For example, the LS =iwṣ (see §5.9)² can be used in reference to a broad variety of waterfowl, birds, or animals. Consequently, the questions in (2.a) are quite generic: the use of the LS =iwṣ delimits the set of quantified things to members of the =iwṣ class, but the intended referent could range from puppies to mallards. However, the question (2.b) and/or a response (2.c) can be made more narrow in referential scope by including a lexical noun. The examples here show that =iwṣ readily attaches onto numbers for counting not only birds (e.g. hummingbirds, seagulls, ducks (generic term), mallards and other specific species of waterfowl, etc.), but also domesticated animals (e.g. dogs, cats) and even larger wild animals (e.g. bear):

² The alternation of =iwṣ with =əwṣ is the systematic effect of ə-reduction to avoid violations of Weight-to-Stress and Stress Clash (see Shaw 2002).

particular LS, constitute profoundly interesting questions. Whereas there is wide-spread fascination in allegations of lexical distinctions which subdivide perceptions of nature more than the languages people are most familiar with (e.g. the multitude of different words for snow in Eskimo/Inuktitut,⁴ or for wind in Arabic, or for clams in həŋqəminəm), what is really much more interesting for cognitive science - and for 'small' cultures interfacing with the hegemony of voraciously dominant cultures - is the higher-order classifications which group things together that are not structured together by the formal categories of other languages. It is in categories like LSs that the structure of the language offers a fascinating window on how the həŋqəminəm people cognitively interpret and structure the world around them. It is these superordinate categories of language that harbour the most deeply-embedded core of cultural identity and uniqueness.

Neither culture nor language are static, of course. And the flexibility of LSs to incorporate new words for culturally innovative concepts within their classificatory domains provides strong evidence of the vitality of both the grammatical and cognitive systems underlying the LS subsystem (cf. Hinkson 1999). An excellent example of this is illustrated in həŋqəminəm with the LS =əx^wəʔ (§5.6) which traditionally offered a super-ordinate category to generalize reference to various different kinds of canoes (4.a). Slightly variant forms =əwəʔ, =əwəʔ, =awəʔ (4.b) are undoubtedly related, as evidenced by the occurrence of what we posit is the base form =əx^wəʔ on the #Root when these vehicles are being counted (4.d). What is significant here is the productivity of this LS in the creation of new words for new modes of transport: as seen in (4.c) this semantic extension broadens not only to other transport on the water (*battleship*) but also to the sky (*airplane*). It also extends to modes of transport on the land: on the one hand, *car* has been incorporated as a loanword from English and is readily quantified with =əx^wəʔ (4.e); on the other hand, the semantic range of the generic word for *canoe* snəx^wəʔ has also extended such that it is commonly used as the non-loanword to refer to a *car* (4.f). A sample sentence contextualizing usage of the incorporated loan in (4.e) is given in (4.g).

- | | | |
|--------|--|---|
| (4) a. | s-nəx ^w əʔ | <i>canoe</i> (general reference); also <i>car</i> |
| | χəw ^s =əx ^w əʔ | <i>new canoe</i> [AG] |
| b. | q ^x =əwəʔ | <i>racing canoe</i> [AP, AG] |
| | téy=əwəʔ | <i>racing canoe</i> (téy <i>race</i>) [WS] |
| c. | χiləχ=əwəʔ | <i>battleship</i> (χiləχ <i>make war</i>) [WS] |
| | ʔa-ʔək ^w =əwəʔ | <i>flying machine, airplane</i> [WS] |
| | | (ʔək ^w <i>fly</i>) |
| d. | néc=əx ^w əʔ ʔa-ʔək ^w | <i>one airplane</i> |
| | | [one=LS Redup-fly] |

⁴ See Pullum (1991).

- e. $\theta\acute{e}m=\acute{o}x^w\acute{o}t$ ka: *two cars*
 [two=LS car]
 $\theta\acute{e}m=\acute{o}x^w\acute{o}t$ k-əl-a:-s *their two cars*
 [two=LS car-[pl]-3Poss]
 $k^win=\acute{o}x^w\acute{o}t$ ka: *how many cars?*
 [how.many=LS car]
- f. $k^win=\acute{o}x^w\acute{o}t$ *how many vehicles (canoes or cars)?*
 [how.many=LS]
 $k^win=\acute{o}x^w\acute{o}t$ snəx^wə^t *how many vehicles (canoes or cars)?*
 [how.many=LS canoe/car]
- g. ni? $\theta\acute{o}y$ -t-əs k^w $\theta\acute{e}m=\acute{o}x^w\acute{o}t$ ka: k^w cəleqə^t
 Aux fix-tr-3SuAgr Det 2=LS car Det yesterday
He fixed two cars yesterday.

The relationship between the LS $=\acute{o}x^w\acute{o}t$ with the most generic noun referring to vehicles (4.a) snəx^wə^t merits comment. While most LSs do not bear significant phonological resemblance to any of the independent lexical stems within its semantic domain of reference, e.g. (5.a), some do, e.g. (5.b).

(5) a.	LS	Independent lexical stem	
	$=\acute{o}t$ p (§5.10) <i>trees</i>	$\theta\acute{o}t$	<i>tree</i>
	$=\acute{o}qən$ (§5.8) <i>containers</i>	sitən	<i>basket</i>
		$k^w\acute{a}w\acute{o}s$	<i>bucket</i>
	$=i:nx^w$ (§5.13) <i>years</i>	s-yələnəm	<i>year (s- nom)</i>
b.	$=\acute{o}qsən$ <i>nose, point</i>	məqsən	<i>nose</i>
	$=\acute{o}x^w\acute{o}t$ <i>vehicle</i>	s-nəx ^w ə ^t	<i>canoe, car</i>

The evident similarity of form and meaning in examples like those in (5.b) has led Salish scholars (Egesdal (1981), Carlson (1990), Kinkade (1998), amongst others) to question the nature of the relationship between LSs and independent lexical roots. In the context of the hənqəmínəm data in (5.b) above, the question would be: what is the lexical status of the initial m- in məqsən *nose* and the initial n- in s-nəx^wə^t *canoe, car*⁵? Suttles offers discussion of several relevant examples like this (in press: 259-260) along with the suggestion that initial consonants may be “dummy roots that serve no purpose other than to provide a base for the suffix”, at the same time acknowledging Kinkade’s (1998) arguments that the independent lexical stem itself may be the historical source of the LSs, i.e. that $=\acute{o}qsən$ may have been derived from məqsən by truncation

⁵ The s- here is uncontroversially the nominalizer prefix.

of the initial consonant. Another way of framing the issue, then, is whether a stem like *məqsən* or *nəxʷət* is monomorphemic (cf. Kinkade) or bimorphemic, i.e. *m=əqsən* or *n=əxʷət* (cf. Suttles). The latter position entails two consequences which are less systemically coherent in the broader context of our research program. First, it would entail the postulation of single Consonant roots, whereas an extensive body of research sustains the generalization that canonical Roots throughout Salish are minimally biconsonantal. Secondly, it would entail that the postulated *m*- root of *m=əqsən* and the *n*- root of *n=əxʷət* were obligatorily bound exclusively to these (respective) LSs with no freedom of occurrence with any of the other LSs - or other suffixes - in the language. Given that a high degree of flexibility and productivity is a vibrant characteristic of the LS system, this seems a less plausible position. In the lexical representations posited here, therefore, we assume monomorphemic status for stems like *məqsən* and *nəxʷət*.

The above discussion has established that the semantic range of the LSs is often much broader and more generic than the referential semantic interpretation of independent lexical roots. However, as seen in (2) above, the semantic scope can be specifically narrowed by inclusion of a particular noun following the #Root=LS expression. Additional examples are given in (6):

- | | | |
|--------|---------------------------|--|
| (6) a. | <i>θém=əxʷət</i> | <i>2 vehicles (cars, canoes, planes)</i>
<i>2=vehicle</i> |
| b. | <i>θém=əxʷət s-nəxʷət</i> | <i>2 canoes or 2 cars</i>
<i>2=vehicle nom-canoes/car</i> |
| c. | <i>θém=əxʷət ka:</i> | <i>2 cars</i>
<i>2=vehicle car</i> |

Another option available to speakers is to use a syntactic construction with the bare (i.e. without a LS) lexical number followed by the particular noun. Some preliminary examples are given in (7). The examples in (7.a, b, c) are the #Root=LS plus noun constructions, and those in (7.a', b', c') illustrate the #Root plus bare noun construction, with no LS. (Note in the examples in (7.b) that *θém-* is a suppletive allomorph of *yəsélə*; see §4 for further discussion.)

- | | | |
|--------|---------------------------|--|
| (7) a. | <i>néc=əxʷət ʔátəkʷ</i> | <i>1 airplane</i>
<i>1=vehicle airplane</i> |
| a'. | <i>nə́caʔ ʔátəkʷ</i> | <i>1 airplane</i>
<i>1 airplane</i> |
| b. | <i>θém=əxʷət s-nəxʷət</i> | <i>2 canoes or 2 cars</i> |
| b' | <i>yəsélə s-nəxʷət</i> | <i>2 canoes</i> |

- c. nə-wɪ̯ nəcə=wɪ̯:nx^w kʷ-ən-s niʔ həy-nəx^w
Aux-already one=year Det-1sPoss-nom Aux finish-n.tr.
It's already one year since I finished
- c'. ʔa nəcəʔ syələnəm kʷ-ən-s ʔi kʷəc-n-ámə
3Indep one year det-1sPoss-nom Aux see-n.tr-2sOb
It's one year since I've seen you.

Discussion of some of the implications of these available options is the focussed topic of the next section.

2.1 The options: morphological vs. syntactic constructions

The following pairs of examples show that certain options are available to speakers of hənq̄m̄inəm in expressions which involve specifying the number of some set of objects being referred to. The first example in each pair illustrates the *morphological* construction, that is, the #Root followed by the LS, and the second example in each pair presents the corresponding *syntactic* phrase in which the numeral precedes the independent noun. See §5.7 *house*, and §5.13 *years* for the respective LS counting paradigms.

- (8) 1.a. nə́c=əwtx^w one house
1=house (LS)
1.b. nə́ca? léləm̐ one house
1 house (Noun)
- 2.a. 0cm=tx^w two houses
2=house (LS)
2.b. yəséíə léləm̐ two houses
2 house (Noun)
- 3.a. k^wən=əwfi:nx^w how many years?
how.many=year (LS)
3.b. wət k^win syə́lənəm̐ how many years already?
already how.many year (Noun)
- 4.a. nə́ca?=wí:nx^w one year
1=year (LS)
4.b. nə́ca? syə́lənəm̐ one year
1 year (Noun)

Because the Musqueam community has been immersed for several decades in an aggressively dominant (socially, educationally, politically, economically) English language context and because all but a very small

percentage of community members are monolingual English speakers, questions inevitably arise about the potential influence of English structure on specific aspects of language change in hə́nqə́mihəm. In comparing hə́nqə́mihəm grammar with English grammar, it is evident that the phrasal structure in the (b) examples above is transparently parallel to the comparable English structure for overt numerical quantification of a noun, whereas the morphologically derived structures in the (a) examples have no direct parallel in English. A plausible hypothesis, therefore, is that because there is a choice in hə́nqə́mihəm of how to express the counting of things, and because one of these choices is comparable to the mode of expression in English, then the hə́nqə́mihəm pattern that is parallel to the English pattern will likely be reinforced and, over time, its continued reinforcement may lead to the less frequent use and ultimate attrition of the less English-like pattern. Several linguists working with Salish languages over the past 30 to 40 years have in fact commented on a general decline in usage of the LS pattern with a concomitant shift to dominant usage of the English-like syntactic phrasal pattern.

With specific reference to the hə́nqə́mihəm community where he began documenting the language over 40 years ago, Wayne Suttles (in press) remarks:

I suspect that the capacity to create forms with lexical suffixes is one that diminished early in the decline in fluency in the Coast Salish languages and that this is one basis for statements one hears about how in previous generations people spoke "the old language".

One example of precisely this kind of shift⁶ are the two terms used in reference to what is variably called in English the *bighouse*, *smokehouse*, and most recently *longhouse*⁷. The most commonly used hə́nqə́mihəm designation for this is the semantically transparent phrase ʔi lélə́m, composed of the attributive ʔi meaning *big*, and the independent noun lélə́m, which translates as *house*, and is used in reference to modern houses as well. However, an older, more conservative hə́nqə́mihəm term for *bighouse* persists, sə́é:wt̚x̚. The semantics here are narrower (it would not likely be used in reference to a large modern house), but are still basically compositional: the s- is the highly productive derivational nominalizer prefix, followed by the lexical root ʔi *big*, followed by the LS =əwt̚x̚ referring to a *building*. As the following breakdown of the

⁶ Special thanks to Larry Grant and Wayne Suttles for discussion of this example.

⁷ In English, these forms are all lexicalized as compounds, as evidenced by the fact that all three have compound stress, e.g. [bíg.həʊs]. The lexicalized status of *bighouse* is further evidenced by the fact that it can be modified by the adjective 'little' which, as the antonym of 'big', would otherwise be construed as a contradiction. However, in its lexicalized compound sense, the 'bighouse' is a type of building invested with several layers of cultural significance. In the term 'little bighouse', 'little' refers to the literal size and 'bighouse' to the genre of building. Thus, 'little bighouse' designates the smaller of two bighouses at Musqueam.

structure of these two ways of referring to *big house* shows, the relative chronology of *sθe:wtx^w* and *θi léləŋ*, and the greater prevalence in usage of the latter conforms precisely to the choice of morphologically-derived vs. syntactically-derived structures under discussion above.

(9) a. morphologically-derived expression:

	<i>sθe:wtx^w</i>	<i>smokehouse, bighouse</i>
<i>lit.</i>	<i>s-θi=ewtx^w</i>	<i>nom-big^s=house.LS</i>
	nom-Root=LS	

b. syntactically-derived expression

	<i>θi léləŋ</i>	<i>big house</i>
<i>lit.</i>	Adj Noun	

Many members of younger generations who have not had the opportunity to grow up exposed to fluent speakers of the traditional language often wonder what specifically is meant when elders refer to the 'old' language, and how people 'used to' talk. Hopefully discussions like the present one, here focussed on the difference between morphologically- vs. syntactically-derived expressions, can help foster a deeper understanding of issues integrally linked to linguistic heritage, identity, and change.

2.2 Observations about language shift and usage across Salish

The ready availability of syntactically-derived modes of expression which may function as alternatives to the morphologically-based LS constructions has been observed in languages throughout the Salish family. Thompson and Thompson (1992:112-113) note that both these types of constructions are used by Nle'kepmxcin (Thompson River) Salish speakers.

Parallel to complex words involving lexical suffixes, speakers also use simpler predicates, adding detail by means of complements and adjuncts ... which provide more specific identification of entities involved.

Of direct import to questions pertaining to direction and potential influences on language shift are several attestations about the declining use of LSs. Thompson and Thompson state that:

[t]he tendency to favor these syntactic constructions over the morphological ones with LEXICAL SUFFIXES is one of the characteristics of current usage, reflecting the influence of

* The lexical representation for *big* is more accurately /θih/ (see (11.e); also Suttles, in press).

English and a general decline in the exploitation of the rich synthetic resources of the language" (1992: 112).

In a similar vein, M. Terry Thompson in her introduction to Haeberlin (1974) states:

... all the [Salishan] languages are rapidly approaching a state of, at best, limited use. An important characteristic of their late evolution, as they have declined from rich vehicles of communication in a cultural pattern now totally altered, is the disappearance of precisely these elements--the lexical suffixes--from the complex morphological constructions that were formerly common, replaced by full words in syntactic strings more similar to English that is now dominant through the whole area. (1974: 220)

Regarding the usage and productivity of lexical suffixes, Kinkade (p.c. to PAS) comments:

This varies from language to language, of course, particularly in regard to how far gone the language is. Their use in Columbian is certainly very rich, and they were very important for creating new vocabulary to account for all the new things brought in by Euroamerican settlers. On the other hand, their use in Cowlitz was certainly considerably diminished. One of my two informants ... often made up new words; but she didn't usually use lexical suffixes for this -- she preferred compounds or phrases.

With specific reference to the category of LSs which function as 'numerical classifiers', Galloway (1993) in his description of Upriver Halkomelem observes that:

[they] were apparently used more extensively in precontact times or even seventy years ago than they are now. Only the oldest, most fluent speakers remember many of them and use them obligatorily. (1993:213)

Hinkson's (1999) exploration of semantic properties of lexical suffixation across Salish emphasizes that they are a very old, integral characteristic of Salish languages, and offer language communities a very flexible and productive option for vocabulary-building. As such, for a speaker to have mastery of this system is highly valued. Specifically, she states:

most LSs are extremely old and can be reconstructed for Proto-Salish. Though they appear in many frozen expressions, lexical suffixes are still actively used today to coin new words. Control of the lexical suffix system is considered a mark of a fluent speaker. (1999: iii)

A major goal, therefore, of the present paper has been to extend the available documentation of morphological paradigms built on #Root=LS constructions, to investigate various complex patterns of morphophonemic alternation, and to explore issues related to their appropriate use, so that this knowledge may be available for hənqəminəm language revitalization efforts.

It is important to consider what formal constraints may apply within the grammar itself which might limit the expressive use of the morphological as opposed to syntactic constructions. In other words, are there ways in which the expressive power of the morphological construction with LSs is restricted in comparison to what may be expressed through a syntactically-constructed option? Three specific domains of inquiry in this regard are identified in the following sections: attribution (§2.3), possession (§2.4), and conjunction (§2.5).

2.3 Attributive modification of a nominal within the scope of a LS

With respect to the question of whether nominals referenced through LSs can be attributively modified, we note the following two types of constructions.

First, as already seen above, a morphologically-derived LS construction can itself be built on an attributive root such as ʔih *big*⁹ in (10.a). The syntactically constructed paraphrase is given in (10.b).

- | | | |
|------|----------------------------------|---------------------------------|
| (10) | a. tə sʔe: wtx ^w | <i>the smokehouse, bighouse</i> |
| | lit. tə s-ʔi: =cwtx ^w | Det nom-big=house.LS |
| | | Det nom-Root=LS |
| | b. tə ʔi: leləm | <i>the smokehouse, bighouse</i> |
| | | Det Adj Noun |

Secondly, given the option of specifying an independent lexical Noun in the scope of a quantified #Root=LS expression, utterances like those in (11.a, c, e) show that this noun can be immediately preceded by a modifier. A syntactic paraphrase¹⁰ constructed with an independent #Root without a LS is given in each of (11.b, d, f) respectively.

- | | | |
|--------|---|--|
| (11)a. | qe:n̩ tə ʔem=əx ^w əʔ ʔi: s-nəx ^w əʔ | <i>he stole 2 big canoes</i> ¹¹ |
| | steal Det 2=vehicles big nom-canoe | |

⁹ Category status is highly controversial in Salish, and is not addressed here.

¹⁰ Further research is necessary to determine the nature of any semantic differences between these sentences. The major point here is that the use of a LS construction does not pre-empt modification of a noun.

¹¹ In the context of local oral history as to why Simon Fraser was not warmly received when he arrived at Musqueam.

qe:n̩ tə 0em=əxʷəʔ 0i:0ə s-nəxʷəʔ *he stole 2 really big canoes*
 Redup-big

b. qe:n̩ tə yəsələ 0i: s-nəxʷəʔ *he stole 2 big canoes*
 steal Det 2 big nom-canoes

c. niʔ 0əy̌-t-əs kʷ 0em=əxʷəʔ mə-mənʔ ka: kʷ cələqəʔ
 Aux fix-tr-3trSu Det 2=vehicle Redup-small car Det yesterday
he fixed two little cars yesterday

d. niʔ 0əy̌-t-əs tə yəsələ mə-mənʔ ka: kʷ cələqəʔ
 Aux fix-tr-3trSu Det 2 Redup-small car Det yesterday
he fixed two little cars yesterday

e. ʔixʷ=iʷs kʷ 0əh=iʷs s-peʔə0 *3 big-bodied bears*
 3=body Det big=body nom-bear

f. ʔixʷ 0i:0ə s-peʔə0 *3 really big bears*
 3 Redup-big nom-bear

These data illustrate two different ways of expressing modification in the context of LS constructions. What appears to be necessary (though this hypothesis merits further research) is that there must be an independent nominal within the scope of the #Root=LS construction for overt modification to be possible.

2.4 Possession of a nominal within the scope of a LS

A further question is whether possession can be expressed if a morphologically-derived LS construction is used. As seen in the data below, a nominal explicitly referenced after a #Root=LS form can be possessed according to the full range of grammatical means independently available in the həŋqəminəm grammar to express possession.

First, there can be overt possessive marking by affixes from the regular possessive pronominal paradigm. In the following examples, both the LS and the nominal(-ized) root within its scope are single-underlined, and the possessive suffix (here, third person (3Poss)) is double-underlined.

(12) a. nec=əxʷəʔ tə s-nəxʷəʔ-s ʔe:ʔtən
 one=LS.vehicle Det nom-canoe-3Poss 3pl.indep
They have one canoe.

- b. $\Theta\text{em}=\text{əx}^w\text{əf}$ $\text{tə } \underline{\text{ka}:-s}$ $\text{t}\theta\text{eləy}$
 one=L.S.vehicle Det car-3Poss 3pl.Deic
Those people have two cars.
- c. $\Theta\text{em}=\text{əx}^w\text{əf}$ $\text{tə } \underline{\text{k-əl-a:-s}}$ $\text{t}\theta\text{eləy}$
 one=L.S.vehicle Det car-pl-3Poss 3pl.Deic
Those people have two cars. [overt plural marking on noun]
- d. $\Theta\text{em}=\text{tx}^w$ $\underline{\text{leləm-s}}$
 two=L.S.house house-3Poss
he has two houses; his two houses

If the possessor is identified by name, the possessive is marked, as is normally the case, by the oblique (obl) determiner $\underline{\text{x}}$ preceding the proper noun, following the possessed noun:

- (13) a. $\Theta\text{em}=\text{əx}^w\text{əf}$ $\text{tə } \underline{\text{s-nəx}^w\text{əf}}$ $\underline{\text{x}}$ Roddy
 two=L.S.vehicle Det nom-car obl proper.noun
Roddy has two cars.
- b. $\text{wə } \text{nec}=\text{əx}^w\text{əf}$ ʔa^f $\text{tə } \underline{\text{ka}:-}$ $\underline{\text{x}}$ Phyllis
 est one=L.S.vehicle restrict Det car obl proper.noun
Phyllis has only one car.

A further type of possessive marking in həŋqəminəŋ occurs with the $\text{we}^?$ construction (see Suttles (in press); Shaw, Blake, & Campbell (1998/2001)). The following pair of sentences establish that possession functions in a fully parallel manner whether the overt nominal argument of $\text{we}^?$ (here $\text{s-nəx}^w\text{əf}$) occurs in the scope of the LS of a #Root=LS construction (14.a) or whether it occurs independently in the counterpart construction without a LS (14.b).

- (14) a. $\text{ni}^? \text{ s-qe:n } \text{k}^w \text{ } \Theta\text{em}=\text{əx}^w\text{əf} \text{ } \underline{\text{nə}} \text{ } \underline{\text{s-we}^?} \text{ } \underline{\text{nə}} \text{ } \underline{\text{s-nəx}^w\text{əf}}$
 Aux ?-steal Det two=L.S.car 1sPoss nom-own 1sPoss nom-car
he stole my two cars
- a'. $\text{ni}^? \text{ s-qe:n } \text{k}^w \text{ } \text{yəsələ} \text{ } \underline{\text{nə}} \text{ } \underline{\text{s-we}^?} \text{ } \underline{\text{nə}} \text{ } \underline{\text{s-nəx}^w\text{əf}}$
 Aux ?-steal Det two 1sPoss nom-own 1sPoss nom-car
he stole my two cars

In summary, these data establish that a broad range of possessive strategies available elsewhere within the həŋqəminəŋ grammar may also be applied with LS constructions. As was the case with modification (§2.3), however, the

delimiting hypothesis is sustained by our data is that there must be an independent overt nominal within the scope of the #Root=LS construction in order for it to be possible to mark possession.

2.5 Conjunction of nominals within the scope of a LS

A third question is whether more than one nominal within the semantic scope of a LS construction can be conjoined, and what constraints might apply. The data in (15.a, b) document two alternative responses to the question previously posed in (2.a).

cf. (2) a. $k^w in = iws$ $k^w - \theta$ $x\acute{a}nc\acute{a}$? *How many X was your catch?*
 how.many= iws Det-2Poss catch
 [where X signifies membership in the
 = iws class]

(15) a. $\acute{t}ix^w = iws$ $k^w - \acute{a}n - s$ $x\acute{a}nc\acute{a}$ $n\acute{a}c = iws$ $ma? \acute{a}q^w$ $\eta i?$ $n\acute{a}c = iws$
 3=bodies Det-1sPoss-nom catch 1=body duck Conj 1=body
*Three was my catch: one duck and one seagull and one crow.*¹²

$q^w \acute{a}lit\acute{a}q$ $\eta i?$ $n\acute{a}c = iws$ $sp\acute{a}l\acute{a}f$
 seagull Conj 1=body crow

b. $\acute{t}ix^w$ $k^w - \acute{a}n - s$ $x\acute{a}nc\acute{a}$ $n\acute{a}c\acute{a}?$ $ma? \acute{a}q^w$ $\eta i?$ $n\acute{a}c\acute{a}?$
 3 Det-1sPoss-nom catch 1 duck Conj 1
Three was my catch: one duck and one seagull and one crow.

$q^w \acute{a}lit\acute{a}q$ $\eta i?$ $n\acute{a}c\acute{a}?$ $sp\acute{a}l\acute{a}f$
 seagull Conj 1 crow

We conclude, therefore, that conjunction of independent nominals within the scope of a #Root=LS construction is straightforwardly possible. Interestingly, each option in (15) has fully parallel structure: in (15.a), the initial #Root occurs with a LS ($\acute{t}ix^w = iws$), and all three subsequent #Roots mirror this construction with $n\acute{a}c = iws$. In (15.b) the initial #Root is bare ($\acute{t}ix^w$), as are all the subsequent ones ($n\acute{a}c\acute{a}?$). It is not clear whether this manifest parallelism is a stylistic preference or is subject to any formal grammatical constraints.

2.6 Summary

The basic goal of this section has been to initiate a more systematic investigation into the generally latent question of whether there are formal

¹² "Only the duck was good to eat" followed in the discourse.

properties within the həŋqəminəm (or, more generally, Salish) grammatical system which might limit the expressive capability of lexically-suffixed constructions as opposed to alternatively available syntactic paraphrases. Although more extensive analysis of the research issues raised here would contribute substantively to clarifying the nature, scope, and possible variation in the constraints involved, the preliminary data presented here show that attribution (§2.3), possession (§2.4), and conjunction (§2.5) are all readily possible on overt nominals within the scope of a LS. Our hypothesis is that expression of these three properties is dependent on the presence of such independent nominals; intuitively, this would seem to be derivative of semantic constraints rather than of a syntactic system *per se*.

3 Locus of LS with compound bases

The central question in this section relates to the identification of the appropriate domain for affixation of LSs in the case of coordinate structure. As a basic frame of reference, the cardinal numbers from 1 to 10, plus the base forms for 20, 100, 200, and 1000 are given in (16)¹³.

(16) Cardinal Numbers

	WS:384, AP, DP, AG	Phonetic variants	Phonological processes
1	nə́caʔ		
2	yəséʔə	[ʔiséʔə]	vocalization of /y/ with open [ʔ] onset
3	tíxʷ		
4	χəʔáθən	[χaʔáθən]	translaryngeal V-harmony
5	tq́écəs		
6	t'χám		
7	tʰáʔkʷs		
8	tq́eceʔ		
9	tú:xʷ		
10	ʔáþən		

¹³ Forms documented by Suttles (in press) are abbreviated WS with page references. Where he identified speaker variation by initials, that information is repeated here. The other consultants who have contributed their knowledge to this research are also identified by their initials.

20	čk'w'x
100	néčəwəc
200	θéməc yəsélə néčəwəc ¹⁴
1000	ʔápən néčəwəc ¹⁵

The number system for counting from 11-19, 21-29, 31-39, etc., is formed by compounding the #Root for 10 (or 20, etc., respectively) with a #Root from 1 through 9. These are conjoined by the regular conjunction (Conj) ʔiʔ; the second #Root (but not the first) is preceded by the determiner (Det) k'w. Thus, 19 is constructed as follows:

- (17) ʔápən ʔiʔ k'w tu:x'w
10 Conj Det 9

As discussed in §2, the use of a LS as a numerical classifier is not obligatory. Consequently, it is fully grammatical in a sentence such as (18.a) cited from Guerin (1986), for the LS =əx'wəʔ (appropriate for reference to *cars*), not to appear on either #Root. Similarly, in (18.b), it is not necessary for the LS =(w)i:nx'w to be used.

- (18) a. ʔápən ʔiʔ k'w ʔix'w k-əl-i-ká: 13 small cars
10 Conj Det 3 Dim-[pl]-car
- b. ʔápən ʔiʔ k'w yəsélə syəʔanəm 12 years
10 Conj Det 2 year

However, when a speaker chooses to use a LS on compound numbers, a relevant question is: where does it go? That is, given that there are two #Roots in such constructions, the question is *which* #Root does a LS attach to? Or does it attach to both #Roots? There are three logical possibilities (note: the LS is underlined here, and in the egs. to follow, for ease of reference):

- (19) a. #Root Conj Det #Root=LS
b. #Root=LS Conj Det #Root=LS
c. #Root=LS Conj Det #Root

¹⁴ This form occurs in the active productive speech of AP, as well as the θéməc form.

¹⁵ Galloway (1993:407) records ʔápəl k'w lé:čəwəc for 1000. Aside from the straightforward n:l correspondence, note that the Upriver Halkomelem form differs from the Musqueam form in including the Det k'w's between ʔápəl 10 and lé:čəwəc 100. Leslie (1979:91) records the loan táwsən 1000 for the Cowichan dialect.

Interestingly, all three of these possibilities are attested in our data, though the first two patterns are significantly more prevalent than the third.

The data in (20) illustrates the first pattern above, (19.a), where the LS is attached only to the second member of the compound.

- (20) a. ?apən ?i? kʷ nəc=ə́p 11 trees [cf. §5.10]
 10 Conj Det 1 =tree
- b. ?apən ?i? kʷ yəséləʔ=ə́p 12 trees [cf. §5.10]
 10 Conj Det 2 =tree
- c. ?apən ?i? kʷ yəsél=əqən 12 baskets [cf. §5.8]
 10 Conj Det 2 =container
- d. ?apən ?i? kʷ ʔqəcs=éməʔ 15 poles [cf. §5.14]
 10 Conj Det 5 =pole

It is with the LS =əqən for counting containers (baskets, buckets, etc.) that we have also recorded the third pattern, that is, where the LS is attached to only the first #Root. Thus, compare (21) below with (20.c) above.

- (21) ?əpən=əqən ?i? kʷ nəcaʔ eleven baskets [cf. §5.8]
 10=container Conj Det 1

When counting ducks (=iws) and dollars (=as), the LS attaches to both members of the compound, as shown by the data in (22).

- (22) a. ?əpən=əws ?i? kʷ nəc=iws eleven ducks [cf. §5.9]
 10 =duck Conj Det 1=duck
- b. ?əpən=əs ?i? kʷ nəc=əs eleven dollars [cf. §5.5]
 10=dollar Conj Det 1=dollar
- c. ʔkʷəx=əs ?i? kʷ nəc=əs twenty-one dollars
 20=dollar Conj Det 1=dollar

It is worth noting that in all of our data involving the counting of money (see §5.5 below), the LS =as ~ =əs is consistently present on both numbers.

In the related Upriver Halkomelem dialect, data cited by Galloway (1993) also shows the LS attaching to both #Roots in a compound when counting money (=əs):

(23) Upriver Halkomelem (Galloway 1993:406, 408).

- a. ʔəpá:l=əs qes kʷə lə́cə=g eleven dollars
10=dollar Conj Det 1=dollar

cf. ʔapəl qes kʷə lə́cə eleven (lit. ten and the one)
tə
10 Conj Det 1

However, it would seem that this is not uniformly the case. When counting paddles or canoe paddlers, the LS =owəs appears on only the first #Root, as seen in (24.a). Similarly, when counting people (=ələ), the LS is attached only to the first #Root (24.b)¹⁶; here the second #Root (*one*) undergoes reduplication, which is the independently attested form for *one person* (rather than *lə́cə=ələ).

(24) Upriver Halkomelem (Galloway 1993:409, 410).

- a. ʔəpəl=owəs qes tə lə́cə eleven paddles
10=canoes Conj Det 1

- b. ʔəp=ələ qes tə lá-lə́cə eleven people
10=people Conj Det Redup-1

cf. lá-lə́cə one person

Commentary with respect to this issue in the Northern Interior Salish languages suggest a much more restrictive pattern of use there. Thompson and Thompson (1992:189) make the following observation for Nle'kepmxcin (Thompson River) Salish: LSs "are seldom used with numbers larger than ten, and when they are it is only the final unit number that appears in classificatory form." [No data are given to exemplify this point.]

With respect to Lillooet, van Eijk states that "[i]n complex numerals, suffixes [LSs] combine with the last member (1997:131):

- (25) qəmp wi pəlʔ=iʔaz' eleven trees, bushes (=iʔaz' tree, bush).

It would seem then that the documented patterns in these Northern Interior Salish languages are systematically restricted to the rightmost member of the compound. In contrast, as illustrated by the data in (20)-(22), all three of the logically possible suffixation patterns are attested in Musqueam.

¹⁶ Note, as in hə́nqə́mihə́m (§5.3), the apparent haplology of one of the adjacent identical syllables: *ʔəpəl=ələ

4 Allomorphy and morphophonemic alternation

Words built upon #Root=LS morphology exhibit considerable allomorphic and morphophonemic variation. Several factors undoubtedly contribute to this. On the one hand, the historical time depth of LSs within the Salish languages can contribute to greater lexicalization, irregularity and opacity. As well, the roots that these LSs are attaching to are numeric roots, and number systems themselves tend to sustain irregularity; for example, the English number system perpetuates irregularities in the lower numbers, like *first* as opposed to **one-th*, *second* as opposed to **two-th*, *third* as opposed to **three-th*, but then regularizes from *four-th* onwards.

One plausible factor influencing the decline in use of LS constructions across Salish and the concomitant shift to syntactically-derived constructions (as documented in §2 above) is the rich system of lexical allomorphy and morphophonemic interaction in LS-derived morphology. Consequently, if the LS systems are to be sustained in Salish grammatical systems through the current critically challenging period of language maintenance and revitalization, it is important to identify and address the learnability issues which are associated with these particular areas of more focussed lexical and phonological complexity. Often referred to as the 'extreme' of morphological conditioning is suppletion, the case where an allomorph bears no systematic predictable relationship to what may be posited to be a 'base' representation of the morpheme, or to other variant forms (or allomorphs) of that same morpheme in the language. Diachronic factors characteristically have considerable influence on the evolution of suppletive allomorphy. In contexts of precipitous language loss, the synchronic status and stability of suppletion in a grammar are of particular interest. A salient pattern of suppletive alternation within the LS constructions involving the #Root for *two* are the focus of the following section.

4.1 Allomorphy in the Root for *two*: *yəsefə* ~ *θem-*

Within the #Root=LS paradigms is an alternation between *yəsefə*, which functions as the free-standing Root for *two*, as well as a fairly transparent base for suffixation of the LSs shown in (26.a) below, and a suppletive allomorph *θem-*, which functions exclusively as a bound Root, occurring in conjunction with the LSs listed in (26.b). The section number in the leftmost column in these tables refers the reader to the full paradigms in §5 where each of these specific LSs is exemplified in detail. All the #Root=LS paradigms are full of alternations based on regular phonological processes of stress and schwa-reduction, which are not discussed here; the reader is referred to Shaw, Blake, Campbell, & Shepherd (1999); Shaw (2001, 2002) for detailed analysis. As well, it will be noted that some of the derivatives of *yəsefə* occur in reduplicated form (e.g. *yə-ysefə-wəc* §200); although the shape of the reduplicative prefix (Redup) conforms to regular generalizations, its presence in

these forms but not in others is not fully understood and will not be further addressed here. The **e ~ a** Ablaut alternation exhibited in the form **yəsáf=əs** meaning *two dollars* is a regular morphologically-conditioned process further exemplified and discussed in §5.5 below.

(26) a. Root-based allomorphy: **yəsəfə** *two* (free-standing Root)

§5.3	=eíə	<i>people</i>	yé-ýs=eíə	<i>Redup-2=people</i>
§5.5	=as	<i>dollars, round</i>	yəsáf=əs	<i>2=dollars</i>
§5.5	=wəc	<i>hundred</i>	yə-yséfə=wəc	<i>Redup-2=hundred (\$)</i>
§5.8	=əqən	<i>containers</i>	yəséfə=əqən	<i>2=containers</i>
§5.9	=iws	<i>birds, animals</i>	yəsəl=iws	<i>2=ducks, fowl...</i>
§5.10	=ətp	<i>trees</i>	yəséfə?ətp	<i>2=trees</i>
§5.11	=mat	<i>kinds, packs</i>	yəséfə=mát	<i>2=blanket packs</i>
§5.14	=emət ^o	<i>long obj.</i>	?ə-ýsáf=émət ^o	<i>Redup-2=long objects</i>

(26) b. Suppletive allomorphy: **θəm-** *two* (bound Root)

(2)	=(w)əc	<i>hundred</i>	θém=əc	<i>2=hundred</i>
§5.1	=et	<i>times</i>	θəm=é	<i>twice, 2=times</i>
§5.6	=əx ^w ət	<i>canoe</i>	θém=əx ^w ət	<i>2=canoes</i>
§5.7	=(əw)tx ^w	<i>building</i>	θém=tx ^w	<i>2=houses, buildings</i>
§5.13	=(əw)í:nx ^w	<i>years</i>	θəm=(əw)í:nx ^w	<i>2=years</i>
§5.15	s- . . . -s	<i>nom- -ordinal</i>	s-θém-ənt-s	<i>2nd day, Tuesday</i>

First, it is important to enquire about the lexical relationship of **θəm-** to **yəsəfə**. Given its CVC root-canonical form and its complete lack of phonological correspondence with **yəsəfə**, it is quite plausible that **θəm-** was historically an independent Root. However, synchronically it seems more coherent to analyse the two morphs in the present day grammar as allomorphs. In support of this is the fact that **θəm-** occurs in complementary distribution with **yəsəfə**. Interestingly, however, this distribution is not transparently predictable, either phonologically or semantically; rather, one must conclude that it is morphologically-conditioned. If so, one would predict inter-speaker and/or cross-dialectal variation, and this is indeed the case, as illustrated below.

An initial observation from comparing these two distributional sets is that there is no clear semantic cohesion in the distribution of either set of allomorphs. That is, the semantics of the LSs in (26.a) compared with (26.b) do not provide a basis for predicting which allomorph any of the LSs should co-

occur with. Nor does their phonological form offer any transparent criteria for predictability in the choice of allomorph.

However, there is very interesting intra- and cross-dialectal variability in the attested forms for 200. Within the Musqueam dialect itself, the words for *two hundred* (200) as opposed to *two hundred dollars* (\$200) are constructed on different allomorphs of the Root for *two*. The basic form for 200 in *hənqəminəm* (see (2) above) is built on the suppletive allomorph *θem-* plus a form of the LS for *hundred* (normally =*wəc*¹⁷ with the initial /w/ truncated, plausibly due to the adjacent labiality of the preceding [m]): *θém=əc* *lit.* two=hundred. The non-suppletive form *yəsélə néčəwəc* is also an active variant in the speech of our consultant: it can be freely used in the same contexts as *θém=əc*, reflecting essentially free variation.

In contrast, the money referent for \$200 does not have corresponding variant forms. The term in use is not built on *θém=əc* as a base plus the LS =*as* ~ =*as* for *money*; that is, neither **θém=əc=as* nor **θám=əc=as*, which are what one might expect, are attested. Rather, the word for \$200 is constructed from the non-suppletive allomorph *yəsélə*, plus the LS =*wəc* for *hundred*, plus a reduplicative (Redup) prefix, but with no LS for *money*, the result being: *yə-yśélə=wəc*.

On the one hand, it is well documented (e.g. Kiparsky 1982, etc.) that derived forms tend to regularize, but on the other hand, it is not entirely clear here what would manifestly be characterizing *yə-yśélə=wəc* as 'more derived': it does, certainly, have one more layer of affixation, the Redup prefix, but Redup of this shape and context is not standardly viewed as 'derivational'. Further, \$200 is not overtly 'derived' by suffixation of the LS for *money*; consequently, the semantics of the form for \$200 are correspondingly more opaque (i.e. more lexicalized) given that it doesn't have the overt LS for *money*. It would seem, then, that the forms *θém=əc* for 200 and *yə-yśélə=wəc* for \$200 have simply both become quite lexicalized, each in different ways: the former with the suppletive allomorph of the Root, and the latter with the covert semantic connotation (rather than explicit LS morphological representation) of reference to *money*.

In terms of cross-dialectal comparison, the form for 200 that Galloway cites (Galloway 1993:407) for Upriver Halkomelem is not built from the suppletive allomorphy. Rather it corresponds directly to the non-

¹⁷ Suttles (in press:384) analyses this suffix as -*əc* or -*ʔəc*, but this does not transparently account for the presence of the [w] in 100, *nečəwəc*. Galloway (1993:407) analyses the suffix as -*əwəc*, attributing the schwa as well as the [w] to the suffix (note the well-documented resonant deglottalization of *w* to *w* in Upriver). Our position is intermediary between these two: we hypothesize that the [w] is part of the suffix, subject to deletion after another labial, viz. /*θem=wəc*/ → [*θéməc*], and that the first schwa belongs to the root in each case: this is transparent in *yəsélə* 2 vis-à-vis *yə-yśélə=wəc* 200, and straightforwardly the result of schwa-reduction from *nəčə*? 1 vis-à-vis *nečə*? *wəc* 100.

suppletive *həŋqəminəm* form *yəsɛ́lə néčəwəc*. That is, it is compositionally constructed from the independent free-standing root for *two* phrasally concatenated with the word for *100*, itself built up from the root for *one* plus the LS for *hundred*, specifically the syntactic phrasal construction: *ʔisɛ́:lə lé:čəwəc* *lit.* two one=hundred, where the Noun on the right is itself a #Root=LS. An interesting question for extended research is the extent to which the suppletive allomorph (alternatively, 'old' root) *θəm-* may persist in this Upriver dialect as well as in the Island Halkomelem dialects.

In this context, a further observation based on Galloway's (1993:411) documentation of Upriver dialects pertains to the base for *two* which cooccurs with the suffix for counting houses. (The data are reproduced in §5.7 below.) What is important for the present purposes is that the Tait form *ʔislɛ́:wtxʷ* for *two houses* is not built on the suppletive allomorph for *two*, *θəm-*, which serves as the base in all attested sources for the *həŋqəminəm* dialect, viz. *θəm-txʷ*. For suppletion to persist in a grammar, it presumably must sustain a fairly high functional load: for example, it may be hypothesized that English *went* and *am* endure - despite their lack of phonologically predictable allomorphy - because of their pervasive use. Once usage, and the context for usage, of a word declines, suppletive allomorphy will undoubtedly be vulnerable to loss. One would expect then that the direction of diachronic change would be towards paradigm regularization. This is indeed what would seem to be reflected by the loss of the suppletive allomorph in the Tait dialect.

A final question we investigated with respect to the distribution of the suppletive allomorph was its potential participation in compound structures of the form discussed in §3 above. Specifically, given the use of the suppletive allomorph with the specific LSs identified in (26.b) above, the question was whether the suppletive allomorph plus LS would be used intact in higher order numbers built as compounds. That is, given that *2=years* employs the suppletive allomorph, and given that *12* is a compound structure (see §3), then would *12 years*, *22 years*, etc., also allow the suppletive allomorph with the LS? Native speaker judgements rejected such constructions, as in (c) and (g) below.

- | | | |
|------|--|-------------------------------|
| (27) | a. <i>θəm=f:nxʷ</i> | <i>two years</i> |
| | b. <i>ʔápən ʔiʔ kʷ yəsɛ́lə</i> | <i>twelve</i> [10 Conj Det 2] |
| | *c. <i>ʔápən ʔiʔ kʷ θəm=f:nxʷ</i> | <i>twelve years</i> |
| | d. <i>ʔápən ʔiʔ kʷ yəsɛ́lə syə́lanəm</i> | <i>twelve years</i> |
| | e. <i>θəm=əxʷət</i> | <i>two canoes</i> |
| | f. <i>ʔápən ʔiʔ kʷ yəsɛ́lə</i> | <i>twelve</i> |
| | *g. <i>ʔápən ʔiʔ kʷ θəm=əxʷət</i> | <i>twelve canoes</i> |
| | h. <i>ʔápən ʔiʔ kʷ yəsɛ́lə sənixʷət</i> | <i>twelve canoes (pl)</i> |

Interestingly however, if the initial member of the compound is itself suffixed with a LS which requires suppletive allomorphy, then a suppletive #Root=LS form will surface on the right. Compare the well-formedness of (28) below with the unacceptability of (27.g) above.

(28) θém=əc ?i? k^w θém=əx^wət 202 canoes

Various competing hypotheses as to why this might be so remain to be tested.

5 Paradigms of Numerical Root plus Lexical Suffixes

In this section, comparative data from various sources is presented, with the congruent goals of documenting interspeaker variation and of finding gaps in the paradigms which we have tried to contribute to filling¹⁸. As well, some commentary is offered about variant form and patterns of usage, with exemplification. In the AP column, our hypotheses regarding morpheme boundaries are generally made explicit, following the Salish tradition of marking LSs with a preceding = boundary. Where morphological boundary information is uncontroversially (we hope) interpretable in other documentation, we have included that as well, with the goal of facilitating comparison across the columns of each paradigm. Although the unsuffixed ordinal system was presented in (16) as a basic frame of reference, these forms are included in the tables below (where space permits) in order to facilitate comparison across the morphophonemic changes within each paradigm.

5.1 Number of times: =ət times, e.g. twice ~ two times...

	ROOT	WS:386	AP	DP
1	nóca?	nəc'éx ^w	nəc=éx ^w	nəc'éx ^w
2	yəs'éfə	θəmé	θəm=é	θəmé
3	ɬix ^w	ɬix ^w éɬ	ɬix ^w =éɬ	ɬix ^w =éɬ
4	χəʔáθən	χəθənéɬ	χəθən=éɬ	χəθən=éɬ
5	ɬqécəs	ɬqecséɬ	ɬqəcs=éɬ	ɬqəcs=éɬ

¹⁸ Although our intent has been to be as broadly inclusive as possible, we welcome communication regarding documentation inadvertently not included here, as well as additional data which would contribute to filling residual gaps.

	Root	WS	AP	DP
6	tʰχám	tʰχáméɬ	tʰχám=éɬ	tʰχám=éɬ
7	tʰáʔkʷs	tʰakʷséɬ	tʰəkʷs=éɬ	tʰəkʷs=éɬ
8	tqéceʔ	—	tqəccəʔ=éɬ	tqəccəʔ=éɬ
9	tú:xʷ	—		tù:xʷ=éɬ
10	ʔápən	ʔapənɛɬ	ʔəpən=éɬ	ʔəpən=éɬ
<i>how many?</i>	kʷin	kʷənɛɬ	kʷən=éɬ	

Although *one* and *two* are irregular, the LS is consistently =éɬ from *three* on in the paradigm.

Here the root Vowel deletion in *three* vs. the reduction to schwa in *five*, *seven* and *how many* follows the generalizations in Shaw (2001). It is interesting to note that the Root V in *eight* and *ten* reduces to schwa, even though it surfaces as two syllables away from the LS, and functions as a Foot head marked by secondary stress. This implies that epenthetic schwa is transparent to the lexical V-reduction triggered by =éɬ.

Stress throughout the paradigm is consistent with the generalizations in Shaw et. al (1999), Shaw (2001). Examples of usage follow.

- (28) a. niʔ ʔə ɕxʷ wəɬ tem-ət tə Addie?
 Aux Q 2sSu already call-t.tr det Name
Did you (sg) call Addie yet?
- b. ʈəm=é kʷ-ən-s niʔ tém-ət ʔiʔ ʔəwə-teʔ ɬxʷtəlqən.
 2=times det-1sPoss-nom Aux call-t.tr conj Neg answer
I called her twice & there was no answer.
- c. ɬqəcs=éɬ kʷ-ən-s niʔ tém-ət ʔiʔ ʔəwə-teʔ ɬxʷtəlqən.
 5=times det-1sPoss-nom Aux call-t.tr conj Neg answer
I called her 5 times & there was no answer.
- d. kʷən=éɬ kʷ-əθ niʔ tém-ət ?
 how.many=times det-2sPoss Aux call-t.tr
How many times did you (sg) call her?
- e. nəc=éxʷ ʔaɬ
 1=time restric
just once

5.2 Base 10 System: =ə́t=sxé ~ =ə́t=cyé *multiples of ten, times ten*

	ROOT	WS:384 [CC]	DP	AP
20	yəsélə	čkʷəx	čkʷəx	čkʷəx
30	tíxʷ	təxʷ=ə́t=sxé	təxʷ=ə́t=sxé	təxʷ=ə́t=cyé
40	χəʔáθən	χəθən=t=sxé	χəθən=čt=sxé	χəθən=t=cyé
50	tqécəs	tqəcs=ə́t=sxé	tqəcs=ə́t=sxé tqəcs=ə́t=sxé	tqəcs=ə́t=cyé
60	tʰχəm	tʰχəm=ə́t=sxé	tʰχəm=ə́t=sxé	tʰχəm=ə́t=cyé
70	tʰəʔkʷs	tʰəkʷs=ə́t=sxé	tʰəkʷs=ə́t=sxé	tʰəkʷs=ə́t=cyé
80	tqəceʔ	tqəc=ə́t=sxé	tqəcəʔ=čt=sxé	tqəc=ə́t=cye
90	tú:xʷ	tú:xʷ=ə́t=sxé	tú:xʷ=ə́t=sxé	tú:xʷ=ə́t=cyé
100	ʔápən	nécəwəc	nécəwəc	nécə=wəc

Suttles [WS:384] records JP's form of this LS as =ə́t=cye, this being essentially the same form attested in AP's speech. However, in AP's pronunciation, there is palatalization of the affricate /c/ to [č] (this representing a more palatalized, but not lip-rounded articulation) before the following palatal /y/ glide. Similarly, /s/ palatalizes to [š] before /y/.

Suttles [WS:257] notes 'for a few lexical suffixes a final /t/ appears as [l] before -t *transitive*, an alternation not observed elsewhere . . .'. What is observed in one variant of the lexical suffix here is an alternation between /t/ and [l] governed by rate of speech. In slow speech, the segment is clearly [t], but in fast speech sounds like [l].

- (29) slow: tʰχəm=ə́t=cye
 fast: tʰχəm=əl=cye

There are a number of cases where there is multiple layering of LSs, with the sequence indicating *multiples of ten* followed by another LS, for e.g.:

- (30) a. tqəcs=ə́t=cyé=ə́t 50 times
 5=times=10=times
- b. kʷən=t=cyé=aləs how many tens of mesh? [WS:273]
 how.many=times=10= net.mesh, eye

5.3 People =élə ~ ələ [WS]; =élə [AP]

	ROOT	WS:385-6	AP	DP	AG
1	náca?	nánəce? [CC] nánəca? ~ ná:nca? [JP]	ná:nca? ná:nca	ná:nca?	nánəca?
2	yəsélə	yəýsələ	yéýs=ələ	yəýés=ələ	yéýs=ələ
3	ʔixʷ	ʔəxʷélə	ʔixʷ=élə	ʔixʷ=élə	ʔixʷ=élə
4	χəʔáθən	χəθí:lə	χəθí:lə	χəθí:lə	
5	ʔqécəs	ʔqecsélə	ʔqəcs=élə		
6	ʔχəm	ʔχəmələ	ʔχəm=ələ		
7	ʔáʔkʷs	ʔakʷsélə	ʔəkʷs=élə		
8	tqéce?	tqecəʔélə	tqəcəʔ=élə		
9	tú:xʷ	tu:xʷélə	tù:xʷ=élə		
10	ʔápən	ʔapé:lə	ʔapé:lə	ʔap=élə	ʔapé:lə
20	čkʷəx	čkʷəxélə	čkʷəx=élə		čkʷəx=élə
kʷin		kʷi:lə	kʷi:lə		
qəχ		qχéləc			qχ=éləc

Suttles (WS:386) further documents ʔapən i kʷ nánəce? for *eleven, etc.*, his “etc.” implying that it is the righthand member of each of the compounds from 11 to 19 that is modified by the LS construction. We were not able to obtain relevant further documentation on this from our consultants.

The following examples of sentential usage show various kinds of plural number agreement. In (31.a, b) a specified noun in the scope of the Number=LS is overtly marked with CVC- reduplication, compared with the cases in (31.c,d) where, under the focussed interpretation *There are...*, the noun is not reduplicated, but the Plural infix [-əl-] is marked on the verb.

- (31) a. ʔapə:lə s-ʔən-ʔənəy ni? neŋ χʔem kʷə šo:
 10=people nom-Redup-woman Aux go watch Det show
Ten women went to the movies.

b. t̥xəm=ələ s-tən-tənəy ni? nem ʔa:t tə s-nəxʷət
 6=people nom-Redup-woman Aux go aboard det nom-canoe
Six women got on the canoe.

c. xəθi:lə kʷə ɳa xʷəlməxʷ ʔ-əl-a-ʔət kʷə ɳa s-nəxʷət.
 4=people det deic FN.person Redup-pl-aboard det deic nom-canoe
There are 4 people on the canoe.

d. xəθi:lə məsteyəxʷ ʔ-əl-a-ʔət kʷə ɳa s-nəxʷət.
 4=people person Redup-pl-aboard det deic nom-canoe
There are 4 people on the canoe.

Both Suttles (in press) and Guerin (1986) cite forms with =éləc (WS) and =éləc (AG 1986:113) as a variant LS for *person*. Their examples all occur with the root /q̥x/ *many*, e.g. q̥xéləc *many people* (WS:274), q̥xéləc stən-tənəy *many women* [AG]. We assume that the final -c is an independent suffix, but have not been able to re-elic it such forms to explore this issue further.

5.4 C(C)VC- Reduplication at a time, plus =élə people

Whereas a CV- pattern of Reduplication is found on the derived forms for *one* and *two* in §5.3 above, a C(C)VC- pattern of Reduplication¹⁹ marks an independent process signifying *X number of people at a time; by Xs (in a line or row)*, as shown below. The non-reduplicated forms from the previous paradigm (5.3) are cited below following AP's speech as a frame of reference.

	ROOT		
1	nə́cəʔ	ná:ńcəʔ ~ ná:ńcə	1 person
WS		nə́c-ná:ńcəʔ	one by one
AP, JG		nə́c-ná:ńcə	1 person at a time; 1 by 1
2	yəsélə	yə́ys=ələ	2 people
WS		yəsýsə́lə	2 by 2

¹⁹ We thank Adeline Point of xʷməθkʷəy̓əm (Musqueam) and Josephine Good of kʷíkʷəłəm (Coquitlam) for their collaboration in the documentation of these forms.

3	ḥix ^w	ḥix ^w =éíə	3 people
AP, JG		ḥəx ^w -ḥəx ^w =éíə	3 people at a time; by 3s
4		χəθi:íə	4 people
AP, JG		χəθ-χəθi:íə	4 people at a time; by 4s
6	ṭχə́m	ṭχə́m=əíə	6 people
AP, JG		ṭχə́m-ṭχə́m=əíə	6 people at a time; by 6s
7	ṭʰáʔk ^w s	ṭʰək ^w s=éíə	7 people
AP, JG		ṭʰək ^w -ṭʰək ^w s=éíə	7 people at a time; by 7s
9	tú:x ^w	tù:x ^w =éíə	9 people
AP, JG		tù:x ^w -tux ^w =éíə	9 people at a time; by 9s
10	ʔápən	ʔəp=é:íə	10 people
AP, JG		ʔəp-ʔəp=é:íə	10 people at a time; by 10s
20	čk ^w əx	čk ^w əx=éíə	20 people
AP, JG		čk ^w əx-čk ^w əx=éíə	20 people at a time; by 20s

Included in the table above are Suttles' (WS:386) recorded forms for *one by one* and *two by two*. The documentation of the forms for numbers above *two* are from our consultants. Although descriptions of other Salish languages also include reference to pluractional reduplication²⁰, what is to our knowledge unique²¹ within Salish about this hə́ŋqə́mínə́m pattern is its form as revealed by the reduplication of numbers such as *six* and *twenty*. What is specifically interesting is the phonological shape of the reduplicant in these cases, as it sustains the initial CC- cluster of the base (see Shaw 2002 for discussion and analysis). At this point in our documentation, there remain gaps in the paradigm, specifically for *five* and *eight*, as well as for any of the compound roots.

The use of this reduplicative construction in combination with the =éíə *people* LS conforms to Lasersohn's (1995) characterization, within a broad range

²⁰ For example, van Eijk (1987, 1997), Bar-el (1998), Matthewson (2000).

²¹ In the context of our initial presentation of these data at the 2001 ICSNL conference, none of the participants there could attest to a CCVC- reduplication pattern documented elsewhere. We would certainly appreciate being informed of any other cases like this in Salish.

of distributive notions, of 'participant pluractionality'; that is, it characterizes an action involving a plurality of participants, distributed in separate groups (including a potential 'group' of one at a time), each group identifiable as having the same number of participants engaging in essentially the same action. For example, the construction was used in reference to canoes races, where there were several canoes out on the water, each canoe having within it 10 people pulling. A second example was with reference to kids from the community pre-school going on a fieldtrip, lined up to walk along the sidewalk in groups of 3, each group of 3 kids beside each other holding hands, but with an unspecified number of successive groups of 3 following in the line.

5.5 =ás ~ =əs Round objects, e.g. faces, money (dollars)

This particular LS is very commonly used, especially for its role in designating money. Consequently, an additional paradigm for number beyond 1 to 10 is included below.

		WS:386	AP
1	néca?	nécəs	néc=əs
2	yəsélə	ʔisálas	yəsál=əs
3	ʔíx ^w	ʔíx ^w əs	ʔíx ^w =əs
4	χəʔáθən	χəθínəs	χəθín=əs
5	ʔqécəs	—	ʔqác=əs
6	ʔχám	—	ʔχám=əs
7	ʔáʔk ^w s	—	ʔáʔk ^w =əs
8	tqéce?	—	tqéce?=s ~ tqéc=əs
9	tú:x ^w	—	tú:x ^w =əs
10	ʔápən	ʔápánəs	ʔápán=əs
how many?	k ^w in	k ^w ínəs	k ^w ín=əs

As noted in the form for *two*, this suffix triggers an Ablaut shift of e to a in the preceding root. This same shift accounts for the a in ʔápán=əs, as this is the (predictable) ablauted form of the allomorph ʔapən-.

The following set of forms have been documented specifically within the domain of counting dollars.

\$11	ʔəpan=əs ʔiʔ kʷ nə́c=əs
\$12	ʔəpan=əs ʔiʔ kʷ yəsaf=əs
\$13	ʔəpan=əs ʔiʔ kʷ tixʷ=əs
\$14	ʔəpan=əs ʔiʔ kʷ ɣəθín=əs
\$15	ʔəpan=əs ʔiʔ kʷ tɬac=əs
\$16	ʔəpan=əs ʔiʔ kʷ tɬəm=əs
\$17	ʔəpan=əs ʔiʔ kʷ tʰakʷ=əs
\$18	ʔəpan=əs ʔiʔ kʷ tqéceʔ=s
\$19	ʔəpan=əs ʔiʔ kʷ tú:xʷ=əs
\$20	čkʷəx=ás ~ čkʷx=ás
\$30	təxʷ=ət=cyáʔ=əs
\$40	ɣəθən=ət=cyáʔ=əs
\$50	tɬəcs=ət=cyáʔ=əs
\$60	tɬəm=ət=cyáʔ=əs
\$70	tʰəkʷs=ət=cyáʔ=əs
\$80	tqəc=ət= cyáʔ=əs
\$90	tù:xʷ=ət=cyáʔ=əs
\$100	nécə=wəc
\$200	yə-ysefə=wəc

Note: no =əs suffix

As documented in §3 earlier, there is non-uniformity in hənqəminəm with respect to whether other LSs are marked on only the first #Root, or only the second #Root, or on both. What is of interest in this money paradigm, as seen in the forms from \$11 through \$19, is that the LS for *dollar* is consistently attached to both numerical roots in the compound structure.

5.6 Canoes = əx^wəʔ

Interestingly, this suffix is only attested as marked on the #Roots for *one*, *two*, and *how many*, but its use is very common in these contexts, as well as on non-numeric roots (as seen in several examples in §2 above).

		WS:386	AP
1	nə́cəʔ	nécəx ^w əʔ	néc=əx ^w əʔ
2	yəséʔə	θéməx ^w əʔ	θém=əx ^w əʔ
3	ʔix ^w	yəʔiʔəx ^w	yə-ʔi-ʔəx ^w
4	χəʔáθən	yəχáʔaθən	
5	ʔqécəs	yəʔəqécəs [CC] ʔiʔəqécəs [JP]	
<i>how many?</i>	k ^w in		k ^w in=əx ^w əʔ

Beyond counting *two canoes*, the numeric root is prefixed by *yə-*, often translated as *moving along* (cf. Suttles, in press). Representative data exemplifying the use of each of the documented #Root=LS forms follow:

- (32) a. nec=əx^wəʔ tə s-nəx^wəʔ-s ʔe:ʔtən.
one=canoe Det nom-canoe-3Poss 3pl
They have one canoe.
- b. θém=əx^wəʔ tə s-nəx^wəʔ-s tθeləy.
two=canoe Det nom-canoe-3Poss deic-pl
Those people have 2 canoes.
- c. k^win=əx^wəʔ tə s-ə-nix^wəʔ mi ʔə-ʔi:ʔ ?
how.many=LS Det nom-Redup-canoe Aux Redup-come.ashore
How many canoes are coming ashore?

5.7 =ewtx^w ~ =əwtx^w ~ -tx^w [WS], =əwtx^w [AP] *house, building*

		WS:387	AP	AG
1	nə́ca?	nécəwtx ^w	néc=əwtx ^w	néc=əwtx ^w
2	yəséíə	θém̥tx ^w	θém̥=tx ^w	θə́m̥=tx ^w
3	ʔíx ^w	ʔix ^w ə́wtx ^w	ʔix ^w =ə́wtx ^w	ʔíx ^w =ə́wtx ^w
4	χə́ʔáθən	—		χə́θíñ=ə́wtx ^w
5	ʔq́écəs	—		ʔq́écəs=ə́wtx ^w
6	ʔχ́əm̥	—		ʔχ́əm̥=ə́wtx ^w
7	ʔə́ʔk ^w s	—		ʔə́ʔk ^w s=ə́wtx ^w
8	tq́ece?	—		tq́écəs=ə́wtx ^w
9	tú:x ^w	—		tú:x ^w =ə́wtx ^w
10	ʔápən	—		—
<i>how many?</i>	k ^w in	k ^w ínəwtx ^w	k ^w ín=ə́wtx ^w	

Interestingly, the hə́nqə́m̥iñə́m̥ form for *one house* is homophonous with the form for *different house* (see also Suttles 2000:387, 462). When the intransitive suffix -əm̥ is added, néc=əwtx^w-əm̥ means *to go to a different house, to go visiting* as shown by the following example.

- (33) nər̥h cən néc=əwtx^w-əm̥ *I'm going visiting* [AP]
 go 1sSu different=house-intr.

With respect to the LS =əwtx^w, Galloway observes that its use in the Upriver Tait dialect is restricted to counting houses which belong to one person.

(34) Upriver Halkomelem, Tait dialect (Galloway 1993:411)

- a. ʔislé:wtx^w *two houses of one person*
- b. ʔix^wé:wtx^w *three houses of one person*
- c. χə́θlé:wtx^w *four houses of one person*
- d. ʔq́écəsé:wtx^w *five houses of one person*

This restrictive interpretation did not hold for our hə́nqə́m̥iñə́m̥ consultant.

As discussed earlier in §4.1, we see in (34) that the Tait form ʔislé:wtxʷ for *two houses* is not built on the suppletive allomorph for *two*, Өem-, which serves as the base in all attested sources for the hənqəminəh dialect, viz. Өem-txʷ.

5.8 =əqəh [WS], =əqən [AP] *containers, buckets, baskets*

This LS is well attested in current usage, undoubtedly reflecting the continuing cultural importance of activities like basket-weaving and berry-picking. Suttles notes (in press) that it generally refers to *filled containers*.

		WS:387	AP (13-05-01)
1	nə́caʔ	nə́cəqəh	nə́c=əqən
1 {Dim}			ní-nə́=əqən
2	yəsélə	ʔiséləqəh	yəsél=əqən
3	ʔixʷ	ʔixʷəqəh	ʔixʷ=əqən
4	χəʔáθən	χəθínəqəh	χəθín=əqən
5	ʔqécəs	ʔqécəsəqəh	ʔqécəs=əqən
6	ʔχám	tχəməqəh [sic]	ʔχám=əqən
7	ʔəʔkʷs	—	ʔəʔkʷs=əqən
8	tqéceʔ	—	tqécəʔ=əqən ~ tqécʔ=əqən
9	tú:xʷ	—	tú:xʷ=əqən
10	ʔápən	—	ʔəpén=əqən
12			ʔápən ʔiʔ kʷ yəsél=əqən
<i>how many?</i>	kʷín	kʷínəqəh	kʷín=əqən
<i>a little</i>	ʔəxʷín	—	ʔəxʷín=əqən

Leslie (1979:92) cites the Cowichan forms for *twenty* to *ninety containers*. Comparative data is not currently available from the hənqəminəh dialect. Examples of current hənqəminəh usage of these #Root=LS forms follow.

- (35) a. kʷin=əqən kʷ-əθ kʷaʷəs
 how.many=containers Det-2sPoss bucket
 how.many buckets do you have?
- b. ʔχəm=əqən tə s-ʔən-ʔenəy.
 6=containers det nom-Redup-woman
 The women have six baskets
- c. niʔ kʷənət-əs tə yəsəl=əqən sitən
 Aux carry-3Su Det 2=container basket
 She is carrying two baskets.
- d. yəsəl=əqən sitən kʷi-kʷənət-əm (ʔə) ʔ Mary.
 2=container basket Redup-carry-intr (obl) det Mary.
 Two baskets are being carried by Mary.
- e. kʷənət-əm (ʔə) ʔ Betty tə ʔixʷ=əqən.
 carry-intr (obl) det Betty det 3=container.
 Betty is carrying 3 containers.

5.9 =iʷs 'bodies' in reference to birds, waterfowl, animals

Again as seen in the earlier discussion in §2, this LS remains highly productive and is broadly attested in #Root=LS constructions.

		WS:387	AP
1	nə́caʔ	nə́ciʷs	nə́c=iʷs
1 {Dim}			ní-né=əʷs
2	yəsəlʔə	ʔisəlʔiʷs	yəsəl=iʷs
3	ʔixʷ	ʔixʷiʷs	ʔixʷ=iʷs
4	χəʔáθən	χəθiniʷs	χəθín=iʷs
5	ʔqécəs	ʔqécəʷs ²²	ʔqécəs=əʷs
6	ʔχəm	ʔχəməʷs	ʔχəm=əʷs
7	ʔə́ʔkʷs	ʔə́akʷsʔiʷs	ʔə́akʷs=iʷs

²² Suttles notes in his prepublication manuscript grammar that 5 *ducks* should have an [s], but didn't record one. Our data clearly showed an [s].

		WS	AP
8	tqéce?	tqéce?iws	tqéce?=iws
9	tú:x ^w	tu:x ^w iws	tù:x ^w =iws
10	?ápən	?ápənəws	?ápən=əws
11			?ápən=əws ?i? k ^w nəc=iws
20	čk ^w əx	čk ^w xīws	
how many?	k ^w in	k ^w in=əws	k ^w in=əws
a little	?əx ^w in		?əx ^w in=əws

5.10 =ətp vegetation, trees

		WS:387	AP
1	nəca?	snəcətp	nəc=ətp
2	yəsélə	s?isélətp	yəsélə?ətp yəsélə?ətp
3	fix ^w	sfix ^w ətp	fix ^w =ətp
4	xə?áθən	sxəθi:tp	xəθi:tp
5	tqécəs	stqécətp	tqécə=ətp
6	čxəm	—	čxəm=ətp
7	l ^ə á?k ^w s		l ^ə á?k ^w s=ətp
8	tqéce?		tqéce?ətp
9	tu:x ^w		tú:x ^w =ətp
10	?apən		?ápən=ətp
11			?ápən ?i? k ^w nəc=ətp
12			?ápən ?i? k ^w yəsélə?ətp

		WS	AP
<i>how many?</i>	kʷin		kʷin=ətp
<i>to prick</i>	čqʷ		čqʷ=ətp

This seems to be quite a productive suffix. It is used in the names of some trees, and evoked vivid memories from our consultant in the context of the use of the (b) example below:

- (36) a. qʰəmən=ətp *maple*
 b. čqʷ=ətp *spruce: the pokey one (the one used to spank)*
 čqʷ *get poked, get pricked*

Note, as expected from the earlier discussion in §2, that this LS can co-occur with an independent NP headed by the generic word for *tree*:

- (37) a. kʷin kʷə θə-θiqət ? *how many trees?*
 how.many Det Redup-tree/pl [AP:13-05-01:0.55]
 b. kʷin=ətp kʷə θə-θiqət ? *how many trees?*
 how.many=trees Det Redup-tree/pl

5.11 =mat *one piece, whole, number of kinds* [WS]; *pieces, kinds*

Our consultant related the use of this LS to counting blankets in packs tied up together, getting ready for distribution at potlatch for example. Suttles documents its use as including number of kinds, e.g. kʷən=màt *how many kinds?*

		WS:387	AP
1	nə́ca?	nə́caʔmat	nə́caʔ=mát
2	yəséʔə	ʔiséʔəmat	yəséʔə=mát
3	tíxʷ	tíxʷmat	tíxʷ=mát
4	χəʔáθən	—	χəʔáθən=mát
5	tʰécəs	—	tʰécəs=mát
6	tʰəm	—	tʰəm=mát
<i>how many?</i>	kʷin	kʷən=màt	kʷin=mát
<i>many</i>	qəχ	qəχ=màt	

5.12 $\mathbb{A}^1$ -counting bundles

Our consultant recognized this LS in the context of talking about a load to put on a boat or a wagon, for example, a bundle of blankets.

	WS:387	AP
1	nə́cəlɛʔc	nə́c=ɛleʔc ~ nə́c=ɛleʔc

As with Suttles' documentation, we were only able to record it in the number paradigm in conjunction with the #Root for *one*, with a stress difference and variable vowel quality as noted above. Outside of the #Root system, our consultant used this same suffix on a derived nominal signifying a *load* of bundled up things to go on board some mode of transport, such as a canoe or a wagon.

- (38) a. ?a:t *to go on board*
 b. ?á:t=əle?c *a load (noun)*

5.13 =əwí:nx^w ~ í:nx^w years

		WS:387	AP
1	nə́cáʔ	nə́cáwɪ:nx ^w	nə́cə= wɪ:nx ^w nə́cáʔ= wɪ:nx ^w
2	yəséíə	θəmi:nx ^w	θəm=í:nx ^w θəm=əwɪ:nx ^w
3	fíx ^w	ʔx ^w əwɪnx ^w	---
<i>how many?</i>	kʷin	kʷənəwɪ:nx ^w	kʷən=əwɪ:nx ^w

The following examples show that this construction can be used with two different kinds of subordinate predication:

- (39) a. nə-wɪ θəm=f:nx^w ni:n həy-nəx^w.
 Aux-already 2=year Aux-1sSubSu finish-n.tr
It's two years since I finished.
- b. nə-wɪ θəm=f:nx^w k^w-ən-s nə həy-nəx^w.
 Aux-already 2=year Det-1sPoss-nom Aux finish-n.tr
It's two years since I finished.

Alternatively, this same type of expression can be grammatically constructed without the use of LSSs, by using the independent word *syəlanəm* year after an unsuffixed #Root, as shown in (40).

- (40) a. fix^w *syəlanəm* $\text{k}^w\text{-ən-s}$ nə həy-nəx^w .
 3 year Det-1sPoss-nom Aux finish-n.tr
It's three years since I finished.

5.14 =émət⁰ ~ əmət⁰ long objects

Suttles [WS:388] cites this as applying to *poles, pilings, toothpicks, hairs*, as well as to a *tall person*. Guerin (1986) also describes its domain of application as to 'anything long and slender' including *trees*. The contexts of use in our data included *sticks* as well.

		WS:388	AP	AG
1.	nə́caʔ	nə́cémət ⁰	nə́c=émət ⁰	s-nə́c=émət ⁰
1 {Dim}			nǎ-nǎc=émət ⁰	
2.	yəsélə	—	ʔə́ysəl=émət ⁰	
3.	fix ^w	—	fix ^w =émət ⁰	fix ^w =émət ⁰
4.	χəʔáθən	—	χəʔáθən=émət ⁰	
5.	tqécəs	—	tqécəs=émət ⁰	tqécəs=émət ⁰
6.	tχəm	—	tχəm=émət ⁰	
7.	tʰáʔk ^w s	—	tʰək ^w s=émət ⁰	
8.	tqéceʔ	—	tqéceʔ=émət ⁰	
9.	tú:x ^w	—	tù:x ^w =émət ⁰	tù:x ^w =émət ⁰
10.	ʔápən	—	ʔápən=émət ⁰	
15				ʔápən ʔiʔ k ^w tqécəs=émət ⁰
how many?	k ^w in	s k ^w inəmət ⁰		
tall	ʔeqt	ʔəqtémət ⁰	ʔəqt=émət ⁰	

The following example from Guerin counts *poles*:

- (41) ʔapən ʔiʔ kʷ ʔqəcs=éməʔ s-χʷəqʷ-tən 15 poles [AG]
 10 Conj Det 5=long.object nom-pole-instr

5.15 s-...-s Days of the Week (... second, third, fourth, fifth)

This is a minor construction, formed by prefixation of the *s-* nominalizer and suffixation of an *-s*, whose identity is somewhat mysterious. Although not formed by Lexical Suffixation (the *-s* is obligatory, no syntactic paraphrase is possible), it is included in our discussion here because it entails an application of the number system to a small subset of very common forms, namely the days of the week. These are 'counted' as ordinals under the assumption that Monday is the first day of the week; however, the overt use of numbers begins only with Tuesday, the *second* day, and extends through Friday, the *fifth* day.

		WS:388, 434	AP
1	nə́caʔ		
2	yəséʔə	sθəmənts	s-θəm=ənt-s ²³
3	ʔixʷ	sʔixʷs	s-ʔixʷ-s
4	χəʔáθən	sχaʔáθəns	s-χəʔáθən-s
5	ʔqécəs	sʔqécəs	s-ʔqécəs-s

Suttles notes that although he did not record a final [s] on the form for *five* that one might expect one to be there. Our data confirms its presence.

5.16 Concluding Remarks

We are only too aware of the residual gaps in these data and of many challenges in their analysis which space limitations have precluded more detailed consideration of here. However, we sincerely hope that the present effort to extend the documentation of data in this area will encourage others to help fill in information where it is lacking in our current records, as well as stimulate further cross-dialectal documentation of the LS system across the language

²³ θəm-ənt *two days* appears derived from the suppletive allomorph θəm- *two*, plus a reduced form of the root *net* *night* (cf. WS:182). However, compare *three days* ʔəxʷ-əʔ-néʔ, where there is a 'connective' -əʔ- between the #Root ʔəxʷ and *net*.

family, so that the detailed workings of this very old Salishan system may remain a vital part of contemporary Salish language use.

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