**Salish Lexical Suffixes: A Case of Decategorialization**

Donna B. Gerdts and Mercedes Q. Hinkson
Simon Fraser University

## 1. Introduction

Salish languages, and other languages of northwestern North American languages, are well-known for their lexical suffixes. These are substantival suffixes that bear little or no resemblance to free-standing nominals with the same or similar meaning. Some lexical suffixes and corresponding free nouns in Halkomelem are given in (1):[1]

| | | | |
|---|---|---|---|
| (1) | *-cəs* | *céləš* | 'hand' |
| | *-šən* | *sx̌énʔə* | 'foot' |
| | *-ʔéx̌ən* | *íélu* | 'arm, wing' |
| | *-wil* | *láwəx̌* | 'rib' |

Most Salish languages have approximately 100 lexical suffixes denoting

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[1]Data that are unlabelled or simply referred to as Halkomelem are from Gerdts' fieldnotes on Halkomelem as spoken by the late Arnold Guerin, a speaker of the Island dialect. Her research on Halkomelem was supported by the Jacobs and Phillips research funds. The abbreviations used in glossing the data are: ADV = advancement, ASP = aspect, AUX = auxiliary, BEN = benefactive, CN = connective, DET = determiner, ERG = ergative, INT = interrogative, INTR = intransitive, LCTR = limited control transitive, OBL = oblique, PL = plural, POS = possessive, REFL = reflexive, SUB = subject, TR = transitive, 1 = first person, 2 = second person, 3 = third person.

body parts (*hand, foot, heart, nose*), basic physical/environmental concepts (*earth, fire, water, wind, tree, rock, berry*), cultural items (*canoe, net, house, clothing, language*), and human/relational terms (*people, spouse, offspring*).

In this paper, we present a survey of some of the properties of Salish lexical suffixes. Data are drawn from two languages, Halkomelem, a Coast Salish language, and Lillooet, an Interior Salish language. The Halkomelem data are from Suttles's (in prep.) grammar of the Musqueam dialect and from Gerdts' fieldnotes on Island dialects. The Lillooet data are from van Eijk's (1985) grammar. Taking the forms with lexical suffixes given in the Musqueam and Lillooet grammars, we created a database consisting of 445 Musqueam words with 48 different lexical suffixes and 712 Lillooet words with 68 different suffixes.[2]

Lexical suffixes are used in several types of constructions. One common use is as the head of the theme in a complex predicate, as the Halkomelem data in (2) and (3) illustrate:

(2) *ni cən yə́qʷ-əl?-cəp.*
AUX 1SUB burn-CN-firewood
'I made a fire.' (lit. 'I burned wood.')

(3) *ni cən kʷə́s-cəs.*
AUX 1SUB burn-hand
'I burned my hand.'

Such examples, of course, are reminiscent of noun incorporation found in other languages of the Americas and thus raise the question: Should lexical suffixes be regarded as incorporated nouns? Sapir (1911, 251–252) says no. He claims: "... As long, however, as they are lexically distinct from noun stems proper, they must be looked upon as grammatical elements pure and simple, however concrete their signification may seem." If we accept Sapir's viewpoint, then we are nevertheless left with a problem: What is a grammatical element? Furthermore, how are the properties of lexical suffixes accounted for within a theory of grammatical elements?

In this paper, we propose that lexical suffixes are the final stage of a

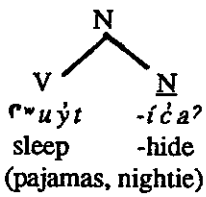
[2]Words with different derivational endings were given separate entries, but words that differed only in inflection were grouped under the same entry. Lexical suffixes that had similar form and meaning were grouped under a single "mega-gloss". For example, Suttles cites the various forms *-aʔθ/-áʔθ/-θən/-á·y-θən/-áyəθə/-əyə-θín/-θ/-áθən* with meanings such as 'mouth', 'edge', 'border', 'lip', and 'margin'. We treated this as a single suffix in our counts.

(8) V + lexical suffix = N

| | | |
|---|---|---|
| Lillooet: | | |
| *ʔʷuẏt-íċaʔ* | 'pajamas, nightie' | 'sleep' + 'hide' |
| *qʷəcp-úlṁəxʷ* | 'earthquake' | 'shake (ASP)' + 'land' |
| *ṗaṅt-átqʷaʔ* | 'back eddy' | 'return' + 'water' |
| *wáw-əlckzaʔ* | 'poplar' | 'shout' + 'leaf' |
| *zél-kʷaʔ* | 'whirlpool' | 'go around, twist' + 'water' |
| *saẏsż-álxʷ* | 'gym' | 'play' + 'hub/locus' |
| Musqueam: | | |
| *qʷáʔ-cəp* | 'spark' | 'get through' + 'firewood' |
| *qəq̇-əyás* | 'barrel' | 'bind it' + 'face/circle' |
| *xiləx̌-áwəl* | 'battleship' | 'make war' + 'vessel' |
| *ż́ím-eĺeʔc* | 'berry basket' | 'pick berries' + 'container' |
| *i̇ẁəyəl-éwtxʷ* | 'church' | 'worship' + 'house' |
| *qiq̇-éwtxʷ* | 'jail' | 'be bound' + 'house' |

When such compounding results in a word of the category N, as represented in (9), we can see that the lexical suffix, which we take to be the head, determines the category of the word.

(9)




This is an extremely common pattern in Salish. For example, of the 712 words in the Lillooet corpus, 440 are Ns while 214 are Vs. We discuss compounds of the latter type in the next section. Of the 440 Ns, 108 were based on N stems while 121 were based on V stems. Other forms are adjectival or indeterminate without further data. Thus we see that using lexical suffixation to create a N from a V stem is very common.

The above data show that the lexical suffix carries the categorial feature N which determines the feature of the compound.[4] Given the possibility of zero derivation, this evidence may not seem convincing. However, we can point out cases of stems that cannot appear as nouns without nominal

[4]Despite the bad press given the noun/verb distinction in Salish, it is easy to distinguish these categories on formal and functional grounds (van Eijk and Hess 1986, Suttles in prep.). The forms that we take to be Ns have the typical distributional properties associated with this category.

morphology, for example the forms with the *s-* prefix in (10), which nevertheless form N compounds without the need for further nominalization:

(10) Musqueam:

| | | | |
|---|---|---|---|
| *s-qéwθ* | 'potato' | *qewθ-éwtxʷ* | 'potato cellar' |
| *s-mə́q̓ʷaʔ* | 'blue heron' | *məq̓ʷaʔ-é·n* | 'heron feather' |
| *s-t̓ʰə́m̓* | 'bone' | *t̓ʰə́m̓-əcən* | 'bracelet' |
| *s-lí·m* | 'sandhill crane' | *lí·m-əs ʻa* | 'month name' |

Lillooet:

| | | | |
|---|---|---|---|
| *s-k̓ə̓l-t* | 'mud' | *k̓ə̓l-t-ú̓l-wil* | 'earthenware pot, crock' |

This fact suggests that the noun-hood of the lexical suffix itself is sufficient to determine the category of the compound.

What we have shown so far is that lexical suffixes appear as heads in right-headed compounds. They are suffixed to noun or verb stems and the resulting compound is a N. Our claim then is that the lexical suffix, which developed historically from a free-standing N, continues to function as a N in nominal compounds. All of the lexical suffixes in our database appear in compounds of this sort. As far as we know, all lexical suffixes attach to either N or V stems. Thus we see that compounding of this type is a pervasive and general process.

### 3. Lexical Suffixation Paralleling Noun Incorporation

Next, we turn to a second major use of lexical suffixation. As noted above, 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. Examples are given in (11) and (12):[5]

(11) V + lexical suffix = V
lexical suffix = theme
Lillooet:

| | | |
|---|---|---|
| *ník̓-ɬc̓aʔ* | 'cut meat' | 'cut' + 'flesh' |
| *líʔʷ-alc* | 'tear down a house' | 'tear down' + 'dwelling' |
| *ɬúkʷ-wiɬ* | 'bail out a canoe' | 'bail out' + 'vessel' |
| *kʷuɬn-áwɬ* | 'borrow a car, canoe' | 'borrow' + 'vessel' |
| *məc-úl-wiɬ* | 'paint a canoe' | 'paint' + 'vessel' |
| *məys-áwɬ* | 'repair a car, boat' | 'fix, repair' + 'vessel' |

[5]These forms act inflectionally and derivationally as verbs.

Musqueam:

| | | |
|---|---|---|
| *pə́·-ƛ̓cəp* | 'blow on a fire' | 'blow on' + 'firewood' |
| *q̓ʷə́m-əẇs* | 'pluck a bird' | 'pull out' + 'body' |
| *θék̓ʷ-əƛ̓yən* | 'pull a net' | 'pull ' + 'basket/net' |
| *məx̌'-é·lż̓eʔ* | 'return wealth' | 'return' + 'hide' |
| *səẇq̓-t̓ẇs* | 'search for a lost person' | 'seek' + 'body' |
| *łəc̓-ə́ƛ̓qən* | 'shear wool' | 'cut' + 'head' |

(12) V + lexical suffix = V
lexical suffix = adjunct
Lillooet:

| | | |
|---|---|---|
| *zəx̌-lá p* | 'crawl on the floor' | 'move' + 'ground' |
| *zənm-ús* | 'go around the top' | 'go around' + 'face' |
| *x̌aƛ̓am̓-ús* | 'go up a hill' | 'go up' + 'face' |
| *kʷuʂʔ-ą́ƛ̓nup* | 'wet one's bed' (of man) | 'urinate' (man) + 'flat surface' |
| *cíxʷ-aƛ̓-us* | 'be able to see' | 'reach over there' + 'eye' |

Musqueam:

| | | |
|---|---|---|
| *sxʷ-nə-xíṅ* | 'walk' | 'be there' + 'foot' |
| *q̓ət-á-θən* | 'walk along'(shore, etc.) | 'go along' + 'mouth' |
| *k̓ʷc-áləs* | 'see with one's own eyes' | 'see' + 'eye' |
| *xʷ-q̓ə-wíl-t* | 'go with him on a canoe' | 'accompany' + 'vessel' |
| *xʷ-ʔə́ẇ-cəs-t* | 'show him with the hand' | 'show, guide' + 'hand' |
| *xʷ-k̓ʷən-wíl-t* | 'transfer it from one craft to another' | 'transfer' + 'vessel' |

When lexical suffixation is used to form complex predicates, the process directly parallels noun incorporation as found in other languages of the world. Whether noun incorporation is treated as a syntactic rule of head-movement (Baker 1988) or as a lexical rule (Rosen 1989) the result is the same: a piece of a complex predicate (namely, the incorporated noun) is in a nominal relationship to the verb stem. Lexical suffixes also function in this fashion.

Two core properties of noun incorporation can also be seen in lexical suffixation. First, in typical cases of noun incorporation, the noun functions as the object of the predicate or as a locative or instrumental adjunct.[6] The

[6]As with incorporated nouns, lexical suffixes do not refer to subjects of transitives or unergatives, nor to indirect objects or benefactives.

data in (11) and (12) above show that lexical suffixes in complex predicates have these functions as well. Second, it is typical of noun incorporation that when the head of the object nominal is incorporated, object properties can be transferred to other nominals in the clause, for example to a possessor, benefactive, or locative. This happens as well in lexical suffixation:[7]

(13) lexical suffix = head
Musqueam:

| | | |
|---|---|---|
| *θəy-é?l-t* | 'make his bed' | 'fix it' + 'flexible material' |
| *xʷ-?əmq-lé·l-t* | 'take food to them' | 'take it to him' + 'throat' |
| *kʷə́x-nəc-t* | 'name its price' | 'name' + 'end' |
| *?ə́m-nəc-t* | 'put money down on it' | 'give' + 'end' |

**3.1. Lexical Suffixation Paralleling Compounding Noun Incorporation**
We see then that lexical suffixation parallels noun incorporation in two key respects. This raises a further issue. Research on noun incorporation has revealed that there are two basic types. Following Rosen (1989), we will refer to these as compounding and classifying noun incorporation. In compounding NI, the incorporation of the notional object results in surface intransitivity. No external modifiers or doubling of the incorporated N with a free-standing form are possible. In classifying NI, on the other hand, the clause remains transitive even when the object is incorporated, and external modification and doubling is possible.

In Salish, complex predicates formed from lexical suffixation generally mirror compounding NI. First, we can see that when the lexical suffix refers to the object, the form is intransitive, since the subject in a clause like (14) determines absolutive rather than ergative agreement (Gerdts 1988).

(14) *ni yə́qʷ-əl?-cəp(*-əs).*
AUX burn-CN-firewood(-*3ERG)
'He made a fire.'

Furthermore, external modification is usually not possible:

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[7]One of the most common uses of lexical suffixes is to represent body parts. The possessor of the body part always takes the argument position. We see a case of a possessor as subject in (3) above and as object in (15) below. Inalienable possession is not a requirement for transference, however, as the first example in (13) shows.

(15) *ni lək$^{w}$-əl-wíl-t-əs ((*k$^{w}$θə) *łíx$^{w}$) k$^{w}$θə John*
AUX break-CN-rib-TR-3ERG DET three DET John
'He broke (*three of) John's ribs.'

(16) *ni lák$^{w}$-šə-n-əm ʔə-x̌ John*
AUX break-foot-LCTR-INTR OBL-DET John
*(*k$^{w}$θə sʔiyál̓əm̓-šənʔ-s) łə sléniʔ*
DET right-foot-3POS DETwoman
'John broke the woman's (*right) foot.'

Finally, the lexical suffix usually cannot be doubled with a free-standing noun of the same or more specific meaning as (17) and (18) show:

(17) *q$^{w}$s-íy̓ən (*tə-n̓ swáltən)*
go.into.water-net DET-your net
'Set your net.'

(18) *ni tší-ʔq$^{w}$-t-əs (*k$^{w}$θə sx̌áləməs-s)*
AUX comb-head-TR-3ERG DET white hair-3POS
*łə stálʔəs-s*
DET spouse-3POS
'He combed his wife's (*white hair) hair.'

The above data show that lexical suffixation generally parallels compounding noun incorporation. We see that lexical suffixes, just like incorporated nouns, have the syntactic characteristics of a nominal in an argument or adjunct position in the clause. And while we have no direct evidence that the lexical suffix should be assigned the categorial status of N, we note that it does block a free-standing N of the same or more specific meaning from occurring in the clause.

**3.2. Lexical Suffixation Paralleling Classificatory Noun Incorporation**
We turn now to a third use of lexical suffixation. A small subset of lexical suffixes in each Salish language can serve as numeral classifiers. The thirteen found in Halkomelem are: *-as* 'round or spherical object' (used for counting dollars, months), *-aq$^{w}$* 'head' (cabbage, animals, derogatorily of people), *-e·l p* 'tree, plant', *-emət̓$^{θ}$* 'long object' (boards, logs, poles), *-ew̓tx$^{w}$* 'building'. *-əleʔc* 'bundle' (blankets), *-iw̓s* 'body' (birds), *-el* 'time', *-qen* 'container', *-elə* 'person', *-mat* 'stuff' (clothing, flexible material), *-wil/-wəl/-x$^{w}$əl* 'vessel' (canoes, conveyances), and *-winx$^{w}$/-e·nx$^{w}$* 'season' (years, fish runs). The classifier constructions are used for counting.[8] Only a few, very common objects have classifiers.

Other nominals are simply referred to periphrastically with a cardinal number and the nominal.

This type of lexical suffixation parallels classificatory noun incorporation. In the case of numerals, the classifier is usually doubled with an elaborating nominal:

(19) *ɬíx$^{w}$-əqən* *lisék*
three-containers sack
'three sacks'

(20) *te?cs-élə* *k$^{w}$θə* *nə* *méṁənə*
eight-people DET 1POS children
'I have eight children.'

In addition, we have found a handful of examples where the classificatory suffixes attached to a lexical verb can double with a free-standing nominal. Examples are given in (21), (22), and (23).

(21) *ż̇s-əlé?c-t* *tə* *nə́wək$^{w}$a?*
nail-container-TR DET coffin
'nail up the coffin' (Musqueam: Wayne Suttles p.c.)

(22) *wə-náy* *k$^{w}$s* *ż̇əx̌-wíl-t* *ct* *tə* *lepát*
only DET wash-vessel-TR 1PL.SUB DET pot
*?i* *tə* *lá?θən*
and DET dish
'We only wash pots and plates.' (Musqueam: Wayne Suttles p.c.)

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[8]We also find that numeral classifiers are used instead of free-standing Ns in connected speech. For example, the response to a question like (a) could be formed as a plain numeral, but a response like (b), where the lexical suffix refers anaphorically to the nominal in (a), is considered better style.

(i) (a) *?i* *?ə* *?ápen* *k̓$^{w}$ən?* *sənníx$^{w}$əɬ?áləp*
AUX INT ten DET+2POS canoe PL
'Do you all have 10 canoes?'

(b) *?ə́wə* *?u* *θéməx$^{w}$əɬ* *?al?*
no just two-vessel just
'No, just two.'

(23) lexical suffix = classifier

Lillooet:

| | | |
|---|---|---|
| *záw-alk-an* | 'scoop smt. off' (cream off milk) | 'scoop' + 'flexible material' |

Musqueam:

| | | |
|---|---|---|
| *qṗ-ɔ́le?c-t* | 'tie them up in a bundle' | 'tie it' + 'container' |
| *yəx̌ʷ-ɔ́le?c-t* | 'untie it' (a bundle) | 'untie it' + 'container' |
| *ẋəx̌ʷ-wíl-t* | 'wash them' (dishes) | 'wash it' + 'vessel' |

What we see in these cases is that the lexical suffix does not saturate the object position. The free-standing nominal behaves as the grammatical object. The lexical suffixes do not behave like full-fledged Ns in these cases. Rather they are grammatical elements reminiscent of pronominal agreement. They sketch in the general properties of the entity which can then be identified through context or by elaboration.

## 4. Lexical Suffixes as Applicatives

Finally, we would like to make some speculative comments about some grammatical affixes in Salish languages. These languages are fairly polysynthetic; a great number of affixes referencing nominals appear in the verb complex. These include agreement markers, transitive suffixes, reflexives, reciprocals, and applicative suffixes. The applicatives are particularly relevant to this paper since the three applicative suffixes in Halkomelem, ADV(ancement suffix) A, B, and C (Gerdts 1988, p. 25f.) are suspiciously similar to lexical suffixes. The dative suffix appears to be the suffix for 'face', the benefactive appears to be 'belly', the seat of emotions in Salish, and the causal appears to be the instrumental suffix.[9]

(24) ADV A: *-əs* dative (aka redirective) (< *-as* 'face')

| | | | |
|---|---|---|---|
| *ʔéʔəm* | 'give' | *ʔá·m-əs-t* | 'give it tohim/her' |
| *xʷáyəm* | 'sell' | *xʷáyem-əs-t* | 'sell it to him/her' |
| *ʔíẇ-* | 'instruct' | *ʔíw-əs-t* | 'show it to him.her' |
| *yɔ́θ* | 'tell' | *yɔ́θ-əs-t* | 'tell him/her about it' |
| *ḵʷɔ́ɬ* | 'spill' | *ḵʷɬ-ás-t* | 'throw liquid on him' |

[9]The use of the instrumental suffix as an applicative seems to occur widely in Salish languages, but the use of 'face' and 'belly' as applicatives seem to be Halkomelem innovations.

ADV B: *-əɬc* benefactive (<*-əɬcə* 'belly' ?)

| | | | |
|---|---|---|---|
| *q̓ʷə́l* | 'bake' | *q̓ʷə́l-əɬc-ət* | 'bake it for him/her' |
| *θə́y-t* | 'fix it' | *θə́y-əɬc-ət* | 'fix it for him/her' |
| *x̌ə́lʔ-t* | 'write it' | *x̌ə́lʔ-əɬc-ət* | 'write it for/to him/her' |

ADV C: *-meʔ* stimulus, causal (< *-mən* 'instrument/residue' ?)

| | | | |
|---|---|---|---|
| *ɬcíws* | 'tired' | *ɬciws-méʔ-t* | 'tired of him/her' |
| *q̓élʔ* | 'believe' | *q̓elʔ-méʔ-t* | 'believe him/her' |
| *síʔsiʔ* | 'afraid' | *siʔsiʔ-méʔ-t* | 'afraid of him/her' |
| *x̌íʔx̌iʔ* | 'embarrassed' | *x̌iʔx̌iʔ-méʔ-t* | 'embarrassed by him/her' |

The hypothesis that the applicative markers are actually lexical suffixes is supported by phonological and morphological evidence. We can tell that the dative applicative is underlying *-as* since it appears like this under stress, as in the form for 'throw a liquid on him'. Furthermore, as Suttles (in prep.) notes, like the lexical suffix for 'face', the dative applicative triggers vowel harmony in the root vowel. For example, the form *ʔéʔəm* 'give' harmonizes to *ʔáʔm-* before the applicative suffix. It is also obvious that the applicatives occupy the same post-stem position as lexical suffixes. Compare the forms in (24) with those in (23), for example. Finally, it can be noted that applicative suffixes share some distributional properties with lexical suffixes. Transitive clauses form reflexives with the suffix *-θət*, but clauses with lexical suffixes use a middle form, based on the general intransitive suffix instead, as (25) shows.

(25) *ni ʔəx̌-ay-θín-əm / *ni ʔəx̌-ay-θín-θət*
AUX scrape-CN-mouth-INTR AUX scrape-CN-mouth-REFL
'He shaved.'

The same fact holds for applicatives:

(26) *ni cən q̓ʷə́l-əɬc-əm / *ni cən q̓ʷə́l-əɬc-θət*
AUX 1SUB bake-BEN-INTR AUX 1SUB bake-BEN-REFL
'I cooked it for myself.'

Finally, it should be noted that forms for 'face' have developed into grammatical markers in other languages. Brugman (to appear) shows that the Mixtec form for 'face' is used in locative and dative applicatives, and MacLaury (1989) shows that the Zapotec form for 'face' is used in applicatives based on verbs of speaking.

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