AN INVESTIGATION OF THE LEXICAL SUFFIX IN COLUMBIAN SALISH[1]

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Introduction. Lexical suffixes, although they are derivational affixes, do not affect the syntactic category of the root or stem to which they are attached; they function, instead, to change or augment its meaning. Thus they serve as semantic elements in lexical items. This paper focusses on the semantics of lexical suffixes, discussing observations on the meanings of lexical suffixes, the process of semantic extension, word-formation, and the semantic roles and functions of lexical suffixes in (Moses) Columbian. The corpus on which these observations is based is a list, compiled by M. Dale Kinkade, of about 3000 lexical items, each containing one or more lexical suffixes. Within the Columbian corpus there are 95 different lexical suffixes. These are listed in the Appendix.

1. Meaning in Lexical Items. Broadly speaking, there are two categories of formatives which combine to form lexical items in Columbian: purely syntactic or relational formatives (e.g. s- 'absolutive') and semantic formatives, so called because they have lexical meaning. The category of semantic formatives includes roots and lexical suffixes, and perhaps some prefixes. It is only the meanings of the roots and the lexical suffixes which contribute to the lexical meaning of lexical items.

1.1 The meaning of a lexical item can be 1) merely the sum of the meanings of its component morphemes (e.g. ʔəmkʷ-ákst 'skinned hand'), or 2) a semantic extension of the sum of the component morphemes (e.g. kat-xʷəs-xʷús-kʷ 'beer'), or 3) it can arise from the combination of one (or more) of its component morphemes with the semantic extensions of the other morphemes in the item (see (13) below). Root morphemes appear to be semantically stable--no items in which the meaning of the root has been extended have been discovered.[2] Lexical suffixes, on the other hand, unlike roots, have a great propensity for semantic extension.

1.2 The core meanings of the lexical suffixes are usually concrete.[3] The lexical suffixes which have concrete lexical referents can be divided into two classes: 1) body-part suffixes (those which have specific anatomical referents); 2) object suffixes (all other suffixes with concrete referents). The process of semantic extension changes the concrete core meanings of the lexical suffixes, making them more abstract. Three different kinds of semantic extension of concrete-referent suffixes are possible:

1.2.1 CONTIGUOUS EXTENSION This kind of extension occurs along the axis of contiguity. For example, -ákst refers to the whole arm from the fingers to the upper arm. In combination with different roots and affixes, however, -ákst can be used to refer to a small part of its core-meaning referent:

(1) lxʷ-əl'-ákst 'gloves'
(lxʷ- 'hole,' -əl' ?, -ákst 'fingers')

(2) t'íxʷ-ax-kst 'fingers swell and spread stiffly'
(t'íxʷ- 'spread stiffly', -ax 'Collective')

In these examples, a whole (-ákst 'hand, arm, finger') stands for a part of itself (finger). The other body-part suffixes which can undergo such extension are:

-álqʷp 'throat, oral cavity' (n-k'əm-álqʷp 'palate, roof of mouth', n- 'LOC', k'əm- 'surface of')

-ána? 'side of the head' (s-n-hc-ána? 'earring', s- 'Abs.', hc- 'tie on')

-ápas 'jaw, chin, tooth' (n-łənp-ápas 'he broke a tooth' łənp- 'break')

-xn 'leg, foot, toes' (p'ísɬa?-xn 'big feet' p'ísɬa? 'big')

The meaning of body-part lexical suffixes can also be extended to include something which emanates from, or is connected in some way with, the referent of the suffix. This type of semantic extension

also occurs along the axis of contiguity. -qín 'head', for example, is used to mean 'voice':

(3) n-pəǩʷ-qín 'he has a deep voice'
(pəǩʷ - ?)

And -cín 'mouth' can mean 'language' or 'speaking', or 'food', all of which are obviously connected with the mouth:

(4) silx-cín 'Okanogan language'
(silx- ?, -cín 'language')

(5) (s)-nəm̓ -cín 'dumb, mute'
(nəm̓ - 'nothing', -cín 'speaking')

(6) táw-cn 'buy food'
(táw- 'buy', -cn 'food')

-ələwás, 'chest', is used in lexical items referring to states of being, moods, or characteristics of a person:

(7) t-qʷətn-ələwás 'warrior'
(t- 'on, attached to', qʷətn - 'big')

(8) n-ǩʷa?-ələwás-n 'angry with someone'
(ǩʷə? - 'bite')

(9) n-ǩ$ -ələwás 'a mean person'
(ǩ$ - 'bad')

1.2.2 FEATURE EXTENSION Inherent in the meanings of the body-part lexical suffixes are notions of shape or space (locative notions). That is, one can characterize the suffixes in terms of, among other things, shape and space features (see Friedrich 1970). In combination with certain roots and affixes the body-part suffixes lose their referential meanings, retaining only those shape or space features which make up their meanings. This can be called feature extension:

(10) s-n-qʷà?p-ús-xn 'front pocket, hip pocket'
(qʷà?p- 'pocket', -ús 'face'→ 'front', -xn 'leg')

(11) n-ɬc- ánk-tn 'wall-board'
(ɬc- 'stack thin objects', -ánk 'belly'→ 'flat surface', -tn 'NOM')

(12) na-kʷəm-lqs 'end, tip'
(-lqs 'nose'→'end')

1.2.3 METAPHORIC EXTENSION In some cases, the similarity in the spatial relations represented by a lexical suffix and an object in the "real world" becomes the basis for a metaphoric extension:

(13) n-ɬ̓ənp-qín 'top of tree snaps off'
(ɬ̓ənp- 'break', -qín 'head'→'top')

(14) s-na-ʔ'ám-m-lqs 'end of a road'
(ʔ'ám- 'end', -lqs 'nose'→'end')

1.2.4 The object suffixes refer to a wide variety of "things": e.g. -lúp 'foundation, floor, bed', -álqs 'clothes, dress', -áɬxʷ 'house', -átkʷp 'fire', -sqáxa 'horse'. These suffixes have in general fewer semantic extensions than do the body-part suffixes. There are four suffixes, however, which can lose their referential meaning and retain features of shape by feature extension:

-álqʷ 'tree'→'tall, long object' (t-xʷˁ-xʷˁ?-álqʷ 'flute' xʷˁ - 'hole')

-á?st 'stone'→'round, solid object' (k-nəx-nəx-á?st 'cantaloupe, nəx- ?, k- 'on something vertical')

-á?sn 'club'→'long, solid object' (ǩm̓-á?sn 'pestle', ǩm̓- ?)

-úsa? 'egg'→'small sphere' (c̓əsl'-ósa? 'hail', c̓əsl' - ?)

1.3 There are a number of lexical suffixes whose concrete meanings are not attested (e.g. -áp 'lower end, base' probably referred initially to 'foot of the leg', but there are no lexical items in the data where it has retained this meaning in a non-figurative sense). Other suffixes are used more frequently in their extended senses rather than in their primary, concrete senses. For example, -aɬníwt probably primarily refers to the side of the body (see (15)), but is used most often in the sense of 'side(s)':

(15) n-ǩəm-aɬníwt 'side of body (from hips up)'

(16) n-p̓ən-p̓əm̓-aɬníwt 'shafts of a buggy'
(p̓ən- 'pl. long objects lie')

(17) t-ƛəm-aɬníwt 'alongside'

In these cases the more abstract, extended senses of the suffix have become dominant. -íc̓a?/-c̓a? 'outside, skin, hide', and -áɬc̓a? /-ɬc̓a? 'body, flesh, inside' are similar to -aɬníwt .

-áwt 'distant, removed', -áẇs/-ú?s 'middle', and -álus 'plural objects' are three suffixes whose possible concrete meanings cannot be determined. There are also 20 suffixes whose meanings cannot be determined at all, either because there are not enough examples to make this possible, or because there does not seem to be any consistency in their usage.

There are two suffixes in the data which are difficult to categorize; these are -tn a kind of nominalizer/instrument, and -mín 'instrument'. -mín and -tn are especially interesting in that they occur in many lexical items which are obviously neologisms, since they refer to tools and instruments which have only been in existence for the last century.

1.4 In addition to concrete-referent suffixes, a third category of lexical suffixes--classifiers--probably exists. All Salish languages seem to have some lexical suffixes which function as classifiers in combination with numerals. In Shuswap, for example, the numerals 1-10, and the numerical interrogative ƛ̓ʷínx can be combined with certain lexical suffixes (Sh -úpye?'leafy part', -usm 'persons', -úse? 'small round objects, etc.) to refer to objects of a certain class. In her grammar of Coeur d'Alene, Gladys Reichard writes that "many objects are counted by affixing the designation of their class so that affixing is representative" (p. 643). She lists 11 affixes used to count classes (including Cr -älxʷ 'hide, hidelike object', and -alqʷ 'long objects like longs and poles, or strings'); all of these affixes have Columbian cognates, suggesting that 1) Columbian has classifiers, and 2) those Columbian suffixes whose Coeur d'Alene cognates are classifiers are probably also classifiers. In addition, Columbian contains a number of

lexical suffixes without Coeur d'Alene cognates which are probably classifiers (e.g. -álƛ̓/-ánƛ̓ 'times', -álus'stack', -áẇs 'layer', and -spántk'year'). The nature of the data is such,however, that it is impossible to come to a definite conclusion about the classifier category in Columbian. At present no criteria by which classifiers can be distinguished from non-classifiers have been found.

1.5 As mentioned above, the meaning of a lexical item can be the sum of its component morphemes, or it can be the result of semantic extension. There is, in addition, another parameter to consider when analyzing the meanings of lexical items. That is, the lexical suffix can function as a distinct meaning element having a specific semantic role in a lexical item:

(18) t'əs-ksn-cút 'he slapped his hand'
(t'əs- 'slap', -ksn 'hand', -cút 'Reflexive')

(19) k-t'əm̓-m̓-ána? 'he cut his ear'
(t'əm̓ - 'cut', -m̓ 'Developmental', k-X-ána? 'ear')

(20) s-k-t'əm̓-ákst-m 'prune'

(21) ma?'ʷ-lqs 'he broke his nose'
(ma?'ʷ- 'break')

(22) s-q̓íl-qn 'headache'
(q̓'íl- 'sick, ill')

or it can be fused semantically with the root, modifying or emphasizing the root meaning:

(23) k-c̓xʷ-ána? 'spill water on'
(c̓xʷ - 'spill', -ána? 'all over')

(24) qʷəm̓-áwt 'a long time'
(qʷəm̓- 'long time', -áwt 'remote, distant')

(25) miy-miy-áẇs 'middle, half-way'
(miy- 'middle', - áẇs 'middle')

Although the internal semantic structure of the two types of lexical items is different, the root+lexical suffix functions in both cases

as a syntactic unit (i.e. as a stem onto which inflectional and lexical suffixes may be added).

1.5.1 The different internal semantic structures are clearly revealed in items which contain more than one lexical suffix. A sequence of lexical suffixes can function as a semantic unit--that is, as a compound lexical suffix with its own specific referent. Many compound lexical suffixes refer to body-parts (e.g. -qn-us-ákst 'finger', -ànk-ákst 'palm of hand', -áya?-qn 'crown of head', and so on. The derivation of compound lexical suffixes appears to be layered:

(26) k-səƛ̓t-áx̣n 'one-armed'
(səƛ̓t - 'half', -áx̣n 'upper arm')

(27) t-ƛəm-us-áx̣n 'top of shoulder'
(t- 'attached to',-ús 'front')

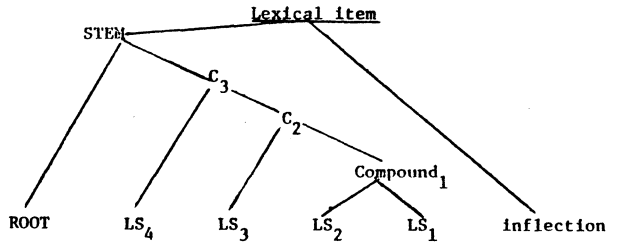
(28) n-ɬənp-ap-ús-x̣n 'broken arm-upper part'
(-ap 'base')

(29) s-n-q̓ənnc-s-ap-ús-x̣n 'shoulder joint'
(q̓ənnc - 'joint', -s 'front')

The primary meaning element of a compound lexical suffix is the final or rightmost suffix; the accretion of suffixes proceeds from right to left:

LS_1 = -áx̣n
$[LS_2+LS_1]$ = -us-áx̣n
$[LS_3+ [LS_2+LS_1]]$ = -ap-ús-x̣n
$[LS_4+ [LS_3+ [LS_2+LS_1]]]$ = -s-ap-us-áx̣n

A lexical item containing a compound lexical suffix composed of four suffixes as in (29) can be diagrammed as follows (ommitting infixes and prefixes):



The second, third, and fourth suffixes in a lexical suffix compound lose their referential meanings, retaining those aspects of their meanings which result from feature extension. Only the final suffix--the primary meaning element--retains its referential meaning. The other suffixes modify, and make more specific, the final suffix in the compound. A compound lexical suffix almost always functions as a distinct meaning element in a lexical item:

(30) n-q'iy̓-ap-ána? 'branded on the cheek'
(q'iy̓ - 'mark, write' -ap-ána? 'cheek')

(31) mahàh-ús-xn 'pull hip out of joint'
(mahah- 'sprain,dislocate' -ús-xn 'hip')

(32) s-kɬ-y̓ərƛ̓-cn-ákst 'bracelet'
(y̓ərƛ̓ -- 'bend', kɬ-X-cn-ákst 'wrist')

(33) səl-ya?-qən 'round-head'
(səl- 'round', -aya?-qən 'crown of head')

1.5.2 In those cases in which a sequence of lexical suffixes does not function as a compound, the suffix which is closest to the root fuses with the root to form a stem onto which other lexical suffixes (functioning as distinct meaning elements) can be added:[4]

(34) n-p̓iy̓-atk̓-ál'qs 'wash clothes'
(p̓iy̓ -- 'wash', -atk̓ 'water', -ál'qs 'clothes')

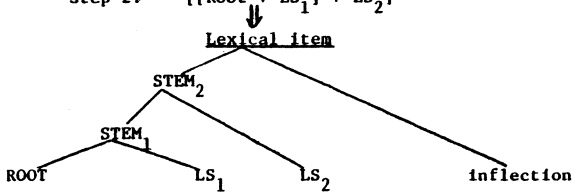
(35) n-xa?-àmx-cín — 'Moses-Columbian language'
(xa?- 'here', -àmx 'people', -cín 'language')

(36) n-ƛ̓ʷʔ̓'p-akst-átkʷ-n — 'drop sg. object into water deliberately'
(ƛ̓ʷʔ̓'p- 'take out/off, come off')

(37) miy-miy-u?s-álqʷ — 'middle of pole or tree'
(-u?s 'middle', -álqʷ 'long, vertical object')

There are different degrees of fusion; in (37), for example, the root and lexical suffix (-u?s) are more closely fused than in (35). The derivation of such items is also layered, although the accretion of the lexical suffixes proceeds from left to right rather than from right to left as in compounds. The steps in a derivation of a fused lexical item would look as follows:

step 1: [Root + LS_1]
step 2: [[Root + LS_1] + LS_2]



LS_2 does not fuse semantically with root + LS_1. In fact, the data suggest that only one lexical suffix may fuse with a root, and that only one suffix may occur after a fused stem. More work must be done on fusion.

2. The Process of Word-formation. In Columbian, as in other Salish languages, the process of forming complex words (lexical items containing roots and lexical suffixes) is DESCRIPTIVE--that is, the name or label for an object, event, person, and so on, often reflects or focuses on some characteristic(s) of whatever it refers to. The name for "handbag", for instance, describes that

property of a handbag which makes it a hand bag: the fact that it hangs on the arm. "Trees on the shoreline" are named metaphorically as "those objects standing upright on the shore", and so on:

(38) s-k-ɬuxʷp-ákst — 'handbag'
(k- 'on something vertical', ɬuxʷp- 'hang up')

(39) čəl-cín — 'trees on the shoreline'
(čəl - 'stand upright', -cín 'edge')

(40) s-na-q̓əl-ɬča? — 'stomach ache'
(q̓əl - 'sick, ill', -ɬča? 'inside')

(41) s-čik-á?st — 'granite'
(čik - 'rough, gritty', -á?st 'stone')

(42) xát-ksn — 'derrick'
(xát- 'up, lift', -ksn 'arm')

Objects can also be labelled in terms of their functions:

(43) k-ɬəqʷ-mín-tn — 'clothesline'
(ɬəqʷ- 'put over, drape over', -mín 'instrument' -tn 'Nominalizer')

(44) q̓iy̓-mín — 'paper, pen, pencil'
(q̓iy̓ - 'mark, write')

(45) t'əq-mín-tn — 'derrick'
(t'əq- 'stack, pile')

(45) and (42) both mean 'derrick'. But (42) labels 'derrick' in terms of what it is (metaphorically)--a lifting-arm--whereas (45) labels 'derrick' in terms of what it does--a stacking, piling instrument. A different aspect of the object is salient in each synonym. The fact that different aspects or properties of an object can be focused on when naming an item emphasizes the descriptive nature of the word-formation process in Columbian.

2.1 It is not surprising, then, to find that Columbian has many synonyms; in fact, a particular entity can have three to five different labels. There are three types of synonyms. The first type consists of items which contain the same root, but differ with

respect to their lexical suffixes:

(46) s-ƛəm-áp-xn 'heel'
(ƛəm- 'surface of', -áp 'base')

(47) ƛəm-ápla?-xn 'heel'
(-ápla? 'handle')

The second type consists of items which contain the same lexical suffix(es), but differ with respect to their roots:

(48) kat-kəm̓-átkʷ-n 'pick up pl. objects off water'
(kat- 'on a flat surface',
kəm̓ - 'carry pl. objects', -átkʷ 'water')

(49) kat-c̓s-átkʷ-n 'pick up pl. objects off water'
(c̓s- 'salvage, pick up small objects')

And the third type of synonymy consists of items in which more than one formative is different:

(50) s-ƛəm-cn-átxʷ 'doorway'
(-atxʷ 'house')

(51) kɬ-n-ƛəm-áp 'doorway'
(kɬ-n-X-áp always refers to 'door')

(52) n-laʕ'ʷ-ləʕ'ʷ-íkn-xn 'horseshoe'
(laʕ'ʷ- 'put over a convex object', -íkn 'back')

(53) q̓a?-xn-a-xƛ'-cín-tn 'horseshoe'
(q̓a? - 'wedge into', -xƛ'-cín 'horse')

The key characteristic of the Columbian word-formation process--that different morphemes can be combined in different ways, focussing on different aspects of the objects which are named--can be called "creativity."

2.2 Word-formation is also, to some extent, a productive process. There are at least two kinds of productivity: productivity of roots, and productivity of lexical suffixes.[5]

(1) Root Productivity: a root is productive if it can combine with different suffixes.

e.g. (54) mahah-ús-xn 'pull hip out of joint'
(mahah- 'disolcate, sprain')

(55) n-maháh-s-aw̓s-xn 'knee comes out of joint'
(n-X-s-aw̓s-xn 'knee')

(56) kɬ-maháh-cin-xn 'he sprained his ankle'
(kɬ-X-cin-xn 'ankle')

(57) kɬ-màhah-cn-ákst 'he sprained his wrist'
(kɬ-X-cn-ákst 'wrist')

(2) Lexical-suffix Productivity: a lexical suffix with a particular referent is productive if it cooccurs as a distinct meaning element with different roots. (A lexical suffix which combines with many different roots, but which changes its meaning, by extension, with each root, is not productive.)

e.g. (58) kʷíw-ya?-qn 'long-head'
(kʷíw- 'almost pointed, oval', -ya?-qn 'crown of head')

(59) pə́l-ya?-qn 'flat-head'
(pə́l- 'flat')

(60) sə́l-ya?-qn 'round-head'
(sə́l- 'round')

3. The Semantic Role of Lexical Suffixes. The descriptive word-formation process in Columbian (and in other Salish languages) is analogous to the syntactic process of building sentences. A finite number of morphemes combine to form lexical stems whose meanings, like those of sentences, can be both literal or extended (idiomatic). The similarity of the two formation processes suggests that morphemes have semantic roles and functions in lexical items, just as words have them in sentences. The semantic role of a morpheme would be that relation which the morpheme could hold with respect to the other morphemes in a lexical item. The data, in fact, suggest that there are a limited number of semantic roles of morphemes.

One such role could be called "locative":

(61) s-kɬ-ƛ̓ənp̓-cn-ákst 'bracelet'
(ƛ̓ənp̓ - 'ring around')

(62) məl'kʷ-álqʷ 'bracelet'
(məl'kʷ- 'round')

(63) n-lu-luw-aɬq̓áyt-tn 'suspenders'
(luw- 'tie on', -aɬq̓áyt 'shoulder')

The lexical suffixes in the above examples refer to that around which something is ringed, or on which something is tied. Another semantic role could be that represented by the lexical suffix in (64):

(64) n-ɬ̓ənp-àpás 'he broke a tooth'
(ɬ̓ənp- 'break', -àpás 'tooth')

in which -apás is the "experiencer" of 'break'.

3.1 Most Salishanists claim that the root (or stem) of a lexical item is its primary semantic (and syntactic) element, and that the root is restrictively modified by affixes, and, in particular, by lexical suffixes. The majority of lexical items in Columbian support such a claim:

Type 1:

(65) s-líx̌-kst 'finger'
(líx̌- 'digit', -ákst 'hand')

(66) s-líx̌-a?x̌-xn 'toe'
(-a?x̌ 'Collective', - xn 'foot')

There are, however, a number of lexical items in which the primary semantic element (although not the primary syntactic element) seems to be the lexical suffix:

Type 2:

(67) s-č̓ìk-á?st 'granite'
(č̓ik - 'rough, gritty', -á?st 'stone')

(68) s-č̓s̓-á?st 'gravel'
(č̓s̓- 'pick up small objects')

In Type 2 items, it is the root which seems to restrictively modify the lexical suffix. The difference between Type 1 and Type 2 seems to correspond, to some extent, to the two kinds of productivity discussed above, since Type 1 includes items in which the root may be productive (see 54-57), whereas Type 2 includes items in which the lexical suffix may be productive (see 58-60).

3.2 In order to make explicit the difference in Type 1 and Type 2 items, one could perhaps view lexical items as morphologically complex words which have semantic heads. The head of a lexical item would be that morpheme whose meaning bears the greatest semantic weight in the meaning of the item. Or, in other words, if one could somehow analyze morphemes and lexical items in terms of semantic features, then the head of an item would be that morpheme which contributed the most semantic features to the total meaning of the item.[6]

4. The Semantic Function of Lexical Suffixes. The final question to be discussed in this paper is, "Do lexical suffixes serve some specific function in Columbian, a function which no other element in the language serves?" Since Salish languages have very few "general" terms--words for animal, tree, and so on--P. Amoss suggests, in "The Domain of Food in Skagit," that lexical suffixes perhaps "serve in place of lexemic cover terms, to label and define major semantic domains."

4.1 It has been difficult to draw firm conclusions regarding the function of the lexical suffixes. It seems, however, that only one lexical suffix clearly defines a major semantic domain: -á̓ɬp/-ɬ̓p 'tree, plant'. There are two suffixes which mean 'tree': -álqʷ 'something long or tall, tree', and -á̓ɬp /-ɬ̓p . -aɬ̓p is used only in lexical items which serve to name specific trees or plants:

(69) pún̓-ɬ̓p 'juniper'
(pún̓- ?)

(70) ʔapəls-á‡p 'apple tree'
(ʔapəls- 'apple')

(71) s-ẃəń-ẃəńaʔx-á‡p 'mountain huckleberry bush'
(ẃəńaʔx- 'huckleberry')

All other lexical items which refer to trees in general, rather than to specific types of trees, use the suffix -álqʷ:

(72) sətk-álqʷ 'twisted tree'
(sətk- 'twisted')

(73) s-t'əp-m-álqʷ 'tree hit be lightning'
(t'əp- 'thunder', -m- 'Middle')

-á‡p , then, seems to refer to the general domain TREE/PLANT; the meanings of the root and stem morphemes indicate specific members of the TREE domain. -álqʷ, on the other hand, refers to the object "tree", and, by extension, to anything which is long or tall.

One other lexical suffix may perhaps define a major semantic domain; this is the suffix -ámx/-míx/-əxʷ 'people'. It seems to function in a manner similar to -á‡p , but it cannot be contrasted with any other suffix as -á‡p can. The possibility that -ámx... defines a major domain needs further investigation.[7]

4.2 The body-part lexical suffixes serve within the domain of anatomy to define classes and subclasses. Each body-part suffix defines a unique class within the domain in that it has a unique referent. The layered compounding of the suffixes (proceeding from right to left) described above, subdivides the classes, increasing the specificity of the anatomical reference. For example, -aplá?-xn 'heel' is a subclass (or part) of the class (or whole) -xn 'leg'. Although the body-part lexical suffixes do indicate part-whole relationships, their use is not consistent (as it is in the domain of head-bones in Bella Coola; see Saunders and Davis 1974). Furthermore, lexical suffixes do not define all the classes or subclasses of the domain. There is no other domain in which lexical suffixes function in the way the body-part suffixes function.

4.3 Most lexical suffixes, then, do not seem to function as

lexemic cover terms, nor does their use seem to reflect taxonomic hierarchies. Nevertheless, they do function to classify objects, and events, and so on, together. As we saw earlier, in the descriptive word-formation process the name of an object often focuses on or reflects a characteristic of its referent; the name of an object is, therefore, formed with a particular lexical suffix because that object is judged to be similar or closely related to the referent of the suffix. Objects are classified together according to which morphemes are used to describe them in the word-formation process. Lexical suffixes in Columbian, then, seem to function largely by defining descriptive domains.

Conclusion. In summary, then, lexical suffixes function as semantic elements in lexical items. They do so in a number of different ways. First, the lexical suffixes can function literally within a lexical item--that is, in terms of their core-meanings--or they can be semantically extended (in three different ways) and can thus contribute their extended senses to the meanings of lexical items in which they occur. Secondly, lexical suffixes can fuse with the roots with which they occur to form semantic as well as syntactic stems onto which other elements may be added, or they can function as meaning elements entirely distinct from the roots. In this latter case, the root + suffix functions as a syntactic, but not as a semantic, stem. Thirdly, sequences of lexical suffixes can occur in lexical items; a sequence of suffixes can function either as a semantic unit, a compound suffix which is a distinct meaning element in the lexical item, or it can function in such a way that the first (leftmost) suffix in the sequence fuses with the root, while the other lexical suffix(es) functions as a distinct meaning element.

At the same time as the lexical suffixes contribute to the meanings of the lexical items in which they occur, they also have semantic roles--that is, they hold specific semantic relations--with respect to the other morphemes(s), particularly the root, with which they cooccur in an item. In this paper, it is suggested that the primary

meaning element in a lexical item is its semantic head, and that the ways in which the other morphemes restrictively modify the semantic head determine their semantic roles in the lexical item. Both roots and lexical suffixes have the potential to function as heads in lexical items.

In addition to their function in specific lexical items, lexical suffixes function within the context of the Columbian Salish language to define descriptive domains. That is, although the lexical suffixes do not seem to serve as lexemic cover terms which define major semantic domains (except in one, or perhaps two, cases), they do classify objects together according to how they are perceived and described in the naming (word-formation) process.

Much more research remains to be done on lexical suffixes. The conclusions and observations of this paper are, necessarily, still tentative, since they are based on a limited corpus of lexical items examined largely out of the context of the language. It is to be hoped, however, that the observations discussed in this paper have contributed to the understanding of the lexical-suffix morpheme in both Columbian Salish and in the Salish languages generally. Although I studied specifically one type of morpheme, in one language, the implications of such a study may be much wider, since it is precisely by examining the semantic "behaviour" of particular morphemes in particular languages that we may eventually come to understand the semantics of morphology--that is, to understand how morphemes combine semantically to form "words."

Notes

[1] This paper was originally presented as a graduating essay for an Honours B.A. in Linguistics. I would like to thank Dr. M. Dale Kinkade for providing me with the Columbian Salish data as well as opening his files to me, and for encouraging and helping me. I would also like to thank Dr. Sarah J. Bell for discussing some of my ideas with me. While Dr. Kinkade and Dr. Bell supervised me, they are not responsible for any errors, of whatever sort, for any misrepresentations of the data, or for the conclusions reached.

[2] There are still many roots whose meanings have not been determined. It is, therefore, impossible to draw any definite conclusions concerning their meanings.

[3] Unlike Saunders and Davis, who assume that the core meanings of the lexical suffixes are abstract, I assume that the core meanings are usually concrete. There are three reasons for this assumption:
1) Most lexical suffixes have only concrete meanings and do not seem to be able to undergo any process of semantic extension.
2) There are a few lexical suffixes which have a number of different semantic extensions; these extensions appear to be related to each other only through the concrete meaning of the suffixes. -cîn is the best example of this. -cín has the meanings 'mouth', 'language', 'speaking', and 'food'. 'Language' and 'speaking' can both be semantically extended to the more concrete 'mouth', but neither of them can be directly extended to 'food' (except by the process: 'language'→ 'mouth'→'food'). But if 'mouth' is taken as the core meaning then 'language', 'speaking',and 'food' can be different semantic extensions emanating directly from the same core.
3) If one assumes that the core meanings of lexical suffixes are generally concrete, then semantic extension falls almost neatly into the three types of extension I discuss. This does not seem to happen if abstract meanings are taken as primary.
The question of whether the core meanings of lexical suffixes are abstract or concrete is problematic. Perhaps future research will provide more answers.

[4] Dr. Kinkade has pointed out to me that in general the vowels of -atkʷ in (34) and -akst in (36) would be deleted. The fact that the vowels are retained in these forms is additional support for my claim that the lexical suffixes closest to the root are fused with the root to form stems onto which other lexical suffixes (functioning as distinct meaning elements) can be added.

[5] The notion of productivity presented is not yet fully developed, and may need to be revised. Some roots and lexical suffixes are unquestionably more productive than others, but it is still unclear, for example, how many different lexical suffixes a root must combine with in order to be termed productive (and vice versa). Furthermore, productivity of lexical suffixes is probably quite distinct from that of roots, since roots can function as individual lexical

items, and can therefore cooccur with other lexical items in sentences, as well as with lexical suffixes, whereas lexical suffixes can only cooccur with roots and other suffixes.

[6] How exactly semantic features could be determined and counted is unclear at this point.

[7] -cín 'language' functions syntactically in the same way as -ałp , and -mix.. do; from the data, however, it is not possible to determine if -cín also functions in the same way semantically (i.e. whether it defines a major semantic domain). This needs further investigation.

Appendix

1) Body-part lexical suffixes

-ákst, -kst	'hand, arm, finger'
-áks(n),-ks(n)	'hand, arm'
-álps	'back part of neck'
-álqʷp, -lqʷp	'throat, oral cavity'
-ál'ś	'forehead'
-álxʷ, -lxʷ	'skin, hide'
-áłčaʔ, -łčaʔ	'body, side, inside'
-ałníwt	'side(s)'
-ałqáyt	'shoulder'
-ánaʔ, -naʔ	'side of face, ear, all over'
-ánk	'stomach, flat surface'
-áp	'foot, base, lower end'
-apás, -aps	'jaw, chin, tooth'
-asx̌áyt, -ásx̌it	'heart, spirit (?)'
-áχn, -χn	'upper arm'
-áyaʔ, -yaʔ	'head, top'
-cín, -cn	'mouth, edge, language creek, food'
-əlәwás	'chest, mood, spirit'
-əlqs	'nose, point, tip'
-əlqst	'shin'
-íčaʔ, -čaʔ	'skin, hide, outside'
-íkn, -kn	'back'
-qín, -qn	'head, top'
-qníl	'pelvic area'
-(t)sámxʷ	'breast'
-úps, -ps	'tail, rump'
-ús, -s	'eye, face, fire, road'
-xn	'leg, foot'

2) Object lexical suffixes

-áʔsn, -ás	'club, long solid object'
-áʔst	'stone, round solid object'
-ál, -l	'cover (?)'
-ál'qs, -lqs	'clothes, dress'
-álqʷ	'tree, something long or tall'
-ált , -lt	'child'
-áłq	'fruit, food'
-áłqʷ	'wind'
-áłxʷ	'house'
-áp	'door'
-áp	'egg'
-áp	'rope'

-ápla?, pla?	'handle'
-ásc̓t , -sc̓t	'day'
-átkʷ, -kʷ	'water'
-átkʷp, -kʷp	'fire'
-íc̓a?, -c̓a?	'blanket'
-ínk, -nk	'weapon'
-kan	'metal'
-lúp	'foundation, floor, bed'
-qn-wíl	'car'
-sqáx̌a?	'horse, domesticated animal'
-úl'əxʷ, -l'əxʷ	'soil, earth, ground'
-úsa?	'egg, small sphere'
-wíl, -wəl	'canoe, conveyance, container'
-míxʷ	'people'

3) Classifier lexical suffixes

This list does not include those lexical suffixes which have Coeur d'Alene classifier cognates, since it is not certain that those suffixes are also classifiers in Columbian. The suffixes listed here are presumed to be classifiers because they occur in lexical items which contain numbers.

-álƛ̓, -ánƛ̓	'times'
-álus, -lus	'stack'
-ásc̓t,-sc̓t	'day'
-atkʷúp	'fire' ?
-əm̓	'each'
-máw̓s	'layer'
-s̓pántk	'year(s)'
-álus	'plural objects'

4) Unclassified lexical suffixes

This list includes a) lexical suffixes which do not seem to belong to the first three categories, and b) lexical suffixes whose meanings have not been determined.

a)	-áw̓s, -u?s	'middle'
	-áwt	'something distant or remote'
	-tn	'nominalizer'
	-mín	'instrument'
	-á4̓p, -4̓p	'TREE, PLANT'
	-ámx, -mix, -əxʷ	'PEOPLE'
b)	-a?cín	
	-ala	
	-álƛ̓, -lƛ̓	
	-áltn	
	-ál'st	
	-a4̓ptə́k	

-aʔíɬa?	
-ána?	
-ánxʷ	
-áwya?, -wya?	
-áʷas	'head(?)'
-áy̓	
-əl'úy̓a?	
-ímt-, -mt-	'non-final suffix found only in personal names'
-ísa?	
-ít	
-íʷɬy̓a?	
-kʷ1'	
-ɬkʷp	
-nʷáln	
-qs	
-tk	
-tkʷ	
-ús	
-útiy̓a?, -ʷitiy̓a?	

References

Amoss, P. "The Domain of Food in Skagit." manuscript.

Berlin, B., D.E. Breedlove and P.H. Raven. 1973. "General Principles of Classification and Nomenclature in Folk Biology." American Anthropologist. 67, No.5, Part 2. 249-258.

Carlson, B.F. 1972. A Grammar of Spokan: A Salish Language of Eastern Washington. Working Papers in Linguistics (University of Hawaii). 4, No.4.

Egesdal, S.M. 1981. "Some Ideas on the Origin of Salish Lexical Suffixes." Working Papers in Linguistics (University of Hawaii). 13, No.2. 4-19.

Friedrich, Paul. 1969. "On the Meaning of Tarascan Suffixes of Space." IJAL. Memoir 23.

----------. 1970. "Shape in Grammar." Language. 46, No.2, Part 1. 379-407.

Galloway,B.D. 1977. A Grammar of Chilliwack Halkomelem. Ann Arbor, Michigan: University Microfilms International. 2 vols.

Kinkade, M. Dale. 1963. "Phonology and Morphology of Upper Chehalis I and II. IJAL. 29. 181-195 and 345-356.

----------. 1973. "A Grammar of Lexical Suffixes in Columbian Salish." Eighth International Salish Conference.

----------. 1975. The Lexical Domain of Anatomy in Columbian Salish. Lisse: Peter de Ridder Press.

Kuipers, A.H. 1974. The Shuswap Language. Grammar, Texts, Dictionary. The Hague: Mouton & Co.

Lyons, J. 1978. Semantics. Cambridge: Cambridge University Press. 2 vols.

Matthews, P.H. 1974. Morphology. Cambridge: Cambridge University Press.

Mattina, Anthony. 1973. Colville Grammatical Structure. Working Papers in Linguistics (University of Hawaii). 5, No. 4.

Reichard, Gladys A. 1939. Coeur D'Alene. Handbook of American Indian Languages. Part 3. edited by Franz Boas. Germany: J.J. Augustin Inc. Publisher. 515-707.

Saunders, R. and P.W. Davis. 1974. "Bella Coola Head Bone Nomenclature." Journal of Anthropological Research. 30. 174 -190.

----------. 1975a. "The Internal Syntax of Lexical Suffixes in Bella Coola." IJAL. 41. 106-113.

----------. 1975b. "Bella Coola Lexical Suffixes." Anthropological Linguistics. XVII. 154-190.

Speck, B.J. 1980. An Edition of Father Post's Kalispel Grammar. Occasional Papers in Linguistics (University of Montanta). No. 1.

Thompson, L.C. and M.T. Thompson. 1980. Thompson. prepublication copy.

Voegelin, C. and F. Voegelin. 1957. "Hopi Domains." Indiana University Press Anthropological and Linguistic Memoirs. 14.

Williams, E. 1981. "On the notions "Lexically Related" and "Head of a Word"." Linguistic Inquiry. 12, No. 2.