A COMPARATIVE STUDY

OF SALISH LEXICAL SUFFIXES

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A Work Paper

for the Third International Conference on Salish Languages

at the University of Victoria, August 26-27, 1968

One of the morphological features considered to be characteristic of Salish is a set of suffixes variously termed "etymological,"[1] "nominal,"[2] "field,"[3] "lexical."[4] These are suffixes referring to body parts, some other entities, and spatial notions; they are attached to nouns as well as to verbs, where they may function syntactically as subjects or objects. In this paper the term "lexical" will be adopted, distinguishing these suffixes from other Salish affixes which have a more formal grammatical content.

The purposes of this study are: 1) to examine the cognatic relationships shown by the lexical suffixes and to compare this evidence with the results derived from glottochronology; 2) to describe the common Salish features of this suffix system.

Each of the four divisions of Salish, as classified by Swadesh,[5] are represented in the sources used. The following are the languages treated in the present study, with their abbreviations given in parentheses:[6]

Bella Coola (BC)

Coast Division

South Georgia Branch: Squamish (Squam)

Puget Sound Branch: Snoqualmie-Duwamish (S-D)

Olympic Branch: Upper Chehalis (UCh)

Oregon Division: Tillemook (Til)

Interior Division

Thompson (Thom)

Kalispel (Kal)

Coeur d'Alene (CdA)

The Cognate List

For the sake of consistency in the citation of forms, symbols occurring in the sources have been modified to conform to prevailing usage: e.g., š has been substituted as the shibilant symbol for the c of the older sources; digraphs like ts have been changed to units like c, except where they were intended to represent phoneme clusters. Additional revisions have been made in the Til and CdA transcriptions in accordance with the suggestions of Thompson and of Sloat.[7]

The data do not permit a comparative phonological analysis of the suffixes. The sample of sounds provided by the cognate sets is too small to offer any reliable results, and the morphophonemic complications in many instances obscure the sound correspondences. But the following correspondences have been used as a guide for identifying cognate forms:[8]

*k > č (UCh, Til, Kal, CdA) in BELLY[b], BOW, HAND, and perhaps FIRE

*x > š (S-D, UCh, Til, Kal, CdA) in PEOPLE

*a > i or e (Kal, CdA) in BELLY[b], BETWEEN, EAR, HIDE, HOUSE, NECK[a], SIDE, TOOTH, WEATHER[9]

*p > h (Til) in BOTTOM, TAIL[a]

*m > w (Til) in PEOPLE

*m > b (S-D) in BODY[b], PEOPLE

*n > d (S-D) in FOOT[a], HEAD[a]

*w > g^w (CdA) in BELLY[a]

*ƛ > ɬ (BC, UCh, Til, CdA) in CHEST, CHILD[b], CLOTH, FOOT

*ɬ > ƛ (Squam) in CANOE[10]

A conservative basis of judgment was used for deciding that lexical suffixes were cognate. They were regarded as cognate only when the forms and meanings showed correspondences and equivalences or were sufficiently close as to leave no doubt of cognation. In a few cases dubious cognates are listed below in parentheses with a question mark; these cases are not included in the cognate counts of the next section.

cpd. ✓ANKLE. Thom -čin anklejoint, Kal -cíʔšən ankle. Cm.-cín-xən ankle.

? ✓ANIMAL, DOMESTIC. Thom sqaxa domestic animal, Kal -sqáxeʔ cattle. Cm.-sqáxaʔ horse.

ANUS. BC nu-...-a·x̣ anus, Til -a·lx̣ behind.

✓ARM. Squam -i(ʔ)axan, -ayʔax̣-aʔn arm, UCh[OK] -ax̣n arm, edge, Thom -ax̣an arm, Kal -ax̣ən arm, CdA -ax̣en arm, wing. Cm. -(á)x̣ən arm.

✓BACK[a]. Squam -ičn, -ačn, -ečn back, UCh[OK] -ečn back, Til -i·čen back, Thom -ičen, -ikən back, Kal -ičen back, behind, CdA -ičnʔ back, ridge. Cm. -(í)kən back.

BACK[b]. BC -ułik upper part of back, Thom -oƛik back.

cf. canoe BELLY[a]. Squam -wiƛ, -uƛ belly, bowels, container, esp. canoe, Thom -wiƛ belly, inside of body, CdA -g^wil, -g^wul abdomen, hollow object, wagon, canoe.

✓BELLY[b]. BC nu-...-ank chest, front of body, Til -anč, -anəč stomach, Thom -ank, -inč belly, intestines, Kal -énč stomach, CdA -inč belly, hollow. Cm. -ánk flat surface, stomach.

✓BETWEEN. Thom -aus, -eus in the middle, on top, Kal -e?us between, middle, on high, CdA -íẃes, -eẃes, -aẃes between, together, in contact. UCh. -(á)low?s together, etc. Cm. -áẃs upon, across, etc.

✓BLANKET. OK UCh -e·ć̓a blanket, Thom -ica, -ič blanket, hide. Cm. -(é)ć̓a? blanket, skin.

BODY[a]. Squam -iws body, heart, inside, Til -es body, Thom -eus body.

BODY[b]. OK UCh -namc body, CdA -núm̓ body (? S-D -bec whole body, skin, bark).

✓BOTTOM. S-D -ep bottom of something, rump, hip, Til -eh, -ah bottom, Thom -ep bottom, back part, Kal -ép, -ep bottom of something, foot, behind, CdA -ip, -p bottom, behind, after. Cm. -áp foot, lower end

✓BOW. Thom -ink bow, Kal -íńč bow, weapon. Cm. -ínk, -ank weapon.

BREAST[a]. OK UCh -aχ̣ʷc chest, Kal -áχ̣ʷcč breast.

✓BREAST[b]. Til -alikas breast, Thom -algas breast (? CdA -aqs breast, -ilgʷes heart). Cm. -alawás chest

BREATH. Til -asči breath, Thom -asči breath. UCh. -tnačš breath (?)

BUSH[a]. OK UCh -n?ɬ plant, Til -ɬ bush, Thom -eɬ bush, tree.

BUSH[b]. Squam -ay? bush, tree, Thom -ai bush, tree.

✓CANOE. BC -aluɬ side of a boat (see SIDE for *-al), Squam -wiɬ, -uɬ canoe, container, belly, bowels, OK UCh -oɬ canoe, Til -ekɬ canoe, boat, Thom -wiɬ, -uɬ canoe, CdA -gʷil, -gʷul canoe, wagon, hollow object, abdomen. Cm. -wíl, -wal canoe, conveyance

CHEST. Til -aɬaɬ chest, Thom -aɬaɬ outer breast.

✓CHILD[a]. Squam -ulɬ young specimen (human or animal), Thom -elt child, Kal -élt child, CdA -ilt child, offspring, young. Cm. -ált child.

CHILD[b]. Squam -ay?ɬ, -íaɬ child, OK UCh -eɬ offspring, Thom -oɬ, -aɬ young.

CLOTH. BC -aʔɬ cloth, Thom -anɬ blanket.

✓DAY. Thom -asqət day, sky, Kal -ásq̓at, -sq̓at day, sky, CdA -asq̓ɪt, -sq̓ɪt day, sky, atmosphere. Cm.-(á)sq̓t day

✓EAR. BC -ikan ear (-ik visible top surface), Squam -aʔn cheek, -ayaʔn, -ayan ear, UCh -ánʔ ear, Til -ani ear, Thom -ane, -ena ear, Kal -éneʔ -eneʔ ear, CdA -inɛʔ, -ɛnɛʔ ear (? S-D -ləyad ear, handle). Cm.-ánaʔ ear

EDGE. BC -uc rim, mouth, Squam -c edge, opening, door, mouth, lip, Thom -oc edge, tooth.

EYE[a]. Squam -ay-ʔus eye (see FACE for -us), UCh -al(ə)s eye, Til -ais, -əis eye, fire, Thom -als eye, face.

EYE[b]. BC -aq̓ʷs eye, Thom -aqs eye.

✓FACE. BC -us face, Squam -us face, S-D -os face, neck, UCh -s face, Til -əs, -is, -as face, Thom -us face, eye, fire, neck, Kal -ús, -s face, eye, fire, neck, CdA -us face, eye, fire, hole through which light shines. Cm.-(ó)s eye, face; fire; road.

FAMILY. Thom -aksus family, Kal -aqʷsu family, band.

FATHOM. Til -asx̣a fathom, Thom -asxa fathom.

✓FIRE. Squam -ikʷup fire, UCh -čp fire, Thom -kup, -čup, -əp fire, CdA -kʷup fire, fuel. Cm.-(át)k'p fire

FISH. Thom -esuɬ fish, CdA -isgʷɛl, -aswɛl, -sgʷɛl fish.

✓FOOT[a]. Til -šən foot, Squam -šn foot, leg, S-D -šəd foot, leg, UCh -šn foot, Thom -xən, -šən foot, leg, Kal -šin, -šən foot, CdA -šin, -šen, -šən foot, leg.[11] Cm. -xən, -xán foot, leg

FOOT[b]. BC -aɬ, -a·ɬ foot, Thom -aɬ foot, leg.

FOREHEAD. Thom -esxən forehead, CdA -isčən, -sčən forehead at the edge of the hair, horn.

✓GROUND. BC -ulmx floor, Thom -uloχ̣ place, earth, Kal -úle?x^{W}, -ele?x^{W} ground, CdA -u̯lumx^{W} ground. Cm. -ú̓l'ox^{w} soil, earth.

✓HAIR. Thom -ep hair, rope. Kal -ép, -ep hair. (UCh. -cap hide.) Cm. -áp rope

✓HAND. BC -ak hand, Squam -ač hand, -čis hand in cíačis five, S-D -či hand, wrist, UCh (or) -ač̌a hand, Til -eči arm, Thom -akst, -čis hand, arm, Kal -ečst hand, finger, manual work, CdA -ičs palm or back of hand, -ičt hand with fingers. Cm {-(á)ks(ən) hand, arm / -(á)kst hand, arm, fingers

✓HEAD[a]. Squam -qin head, hair, top, S-D -q̓ed head, Til -qən, -qan head, Thom -qən head, Kal -qín, -qən head, CdA -qin head, top, tip. Cm. -qín, -qən head

HEAD[b]. BC -i·χ̣^{W} head, Squam -eq^{W}, -q^{W} head, top, Thom -(u)q head.

✓HIDE. Thom -alux hide, Kal -élx^{W} hide, skin, CdA -ilx^{W} hide, skin, cover, mat. Cm. -(á)l'x^{w} skin, hide.

✓HOUSE. Squam -tx^{W} house, -aw?-tx^{W} house, room, UCh (or) -ótx^{W}, -ax^{W}, -a·ɬx^{W}, -lwltx^{W} house, Til -aɬtx^{W} house, Thom -tx^{W}, -aɬx^{W} house, Kal -éɬx^{W}, -eɬx^{W} house, CdA -iɬx^{W}, -ɬx^{W} house (see INSIDE for -iɬ).[12] Cm. -(á)tx^{w} house

cf. meat

INSIDE. BC -als, -a·ls inner surface, Squam -ay?č, -i?č surface, area, Thom -alce inside, room, Kal -éɬc̓e? all over inside, meat, game, CdA -iɬ inside from within, -ic̓ɛ?, -c̓ɛ? inside surface, all through inside, from inside out, -iɬ-c̓ɛ? inside surface, meat, flesh, game.

?

✓INSTRUMENT. Squam -tn implement, Thom -tən instrument, locality. UCh. -tn nominalizer. Cm. -tn nominalizer.

LEG. Squam -qa leg, one of a pair, Thom -qa leg (? UCh (or) -eyq leg, -awq legs).

LONG. Til -alak wood, long thing, Thom -alk, -alx long round things, tree, CdA -alq^{w}, -alq long stiff object, log, tree. Cm -(á)lq^{w} tree; long

MEAT. Thom -elce, -eɬce meat, deer, Kal -éɬčeʔ meat, game, all over inside, CdA -iɬ-čɛʔ meat, flesh, game, inside surface (see INSIDE for -iɬ and -čɛʔ). UCh. -čc body. Cm. -(á)tča' body; side

MOUTH. Til -čin mouth, edge, Thom -čin mouth, -c(ən) edge of something, shore, Kal -cin, -cən mouth, lips, tongue, speech, food, CdA -cin mouth, edge, shore. (? UCh -ocn river) Cm. -cín, -cən mouth; language.

NECK^{a}. BC -apsm neck, Squam -apsám, -apsm, -psm back of neck, S-D -ps neck, UCh (OK) -áps neck, Thom -aps, -elps back part of neck, Kal -elps back part of neck, CdA -eps neck all around, -ilps throat of person, back of animal's neck. Cm. -álps back part of neck

NECK^{b}. BC -a·lxi nape of neck, Squam -aɬx̣a neck, throat.

NOSE. BC -lx̣s nose, -lqs tip, point in -lqsak finger (-ak hand), -lqsaɬ toe (-aɬ foot), Squam -qs nose, point, promontory, small oblong object, S-D -ks nose, point, front, UCh (OK) -qs nose, front end, Til -aqs nose, Thom -qs, -qsən nose, point, CdA -ɪʔqs nose, point, back. Cm. -alqs nose, point

PEOPLE. BC -mx people, person, Squam -mix^{w}, -mex^{w} occurs especially in names of (groups of) people, S-D -abš people, UCh (OK) -mš people, Til -wiš, -wəš people, Thom -mux^{w}, -miš people, person, Kal -ɬtúmš people, CdA -umš people. Cm. -ámx people; -míx^{w} person, man.

PLACE. Til -wuš, -uš place, Thom -euš place. Cm. -(u)x^{w} resident of

ROAD. Thom -(a)qs road, CdA -alqs road, end.

ROCK. UCh (OK) -és rock, CdA -iʔst, -ɛʔst rock, surface of round object. Cm. -áʔst rock

ROUND. BC -li·c, -li·č long cylindrical object, Til -elč round thing, Thom -ales round things, CdA -ɛls round object. Uch -(c)os head, hair.

SHOULDER[a]. Squam -ay?am?it shoulder, Thom -alemet shoulder, neck.

SHOULDER[b]. Thom -łqeit shoulder, CdA -ałq̓iw̓t shoulder. Cm. -atq̓áyt shoulder

SIDE. BC -aluł side of a boat (see CANOE for -uł), UCh[ok] -elals side, together, Thom -al, ala place, -ałneut side of a body, Kal -łnf?ut side of a person, CdA -ɛłniw̓ beside, alongside. Cm. -atnéwt beside

= breast STOMACH. Squam -inas chest, UCh[ok] -eno?s stomach, belly, Thom -eɯas stomach, breast, heart.

= round? STONE. Til -als stone, forehead, Thom -als stone.

TAIL[a]. Squam -i?ups tail, UCh[ok] -eps tail, Kal -ups tail, rump, CdA -ups anal region (? S-D -ped tail, rump, buttock, hind end, Til -sehs tail). Cm. -(ú)ps tail, rump.

TAIL[b]. Til -ais tail, back, buttocks, hind end, Thom -ais tail. (? UCh -ay?s point, -el?s end).

THIGH. Squam -alap thigh, UCh[E] -áp thigh, Thom -alep leg above knee.

THROAT. BC -ałłn throat, neck, nu-....-ałł throat, inside the mouth, Squam -ƛ.n-ay inside of throat, Thom -λiƛ throat, windpipe, -əłkolt throat. (?Ch -ɬnt mouth, -ɬnač tongue)

TOOTH. Squam -ans tooth, teeth, UCh[ok] -ns tooth, Til -a·ns tooth, Thom -nis tooth, edge, -is tooth, Kal -éis tooth, -ins, -ɛns tooth.

TREE[a]. Squam -ačx[w] limb of a tree, branch, Til -anč, -anš tree, wood.

TREE[b]. BC -łp tree, plant, Thom -əłp tree, bush, CdA -áłp, -ɛłp, -əłp tree, plant, part of a bush, root. Cm. -(ú)tp tree, plant

VOICE. Squam -qin throat, language, UCh[ok] -aq voice, -aqp voice, word, CdA -qin, -qen voice, throat.

WATER[a]. Squam -aɬq^{w}u water (used in cooking), fluid, UCh -eyq water, Til -aɬq water, Thom -qo water.

WATER[b]. Squam -k^{w} in a number of words connected with the sea, Thom -(at)k water, Kal -k^{w}, -étk^{w} water, CdA -k^{w}ɛʔ water, liquid. Cm. -(ét)k^{w} water.

WATER[c]. Til -ais water, Thom -ais water, -eis rain, snow, Kal -éis rain.

WEATHER. Squam -yú-nəx^{w} waves, UCh -anx^{w} weather, Thom -nuɣ weather, CdA -inx^{w}, -ɛnx^{w} weather.

Cognatic Relationships

In comparing these cognates, the variable quality of the sources must be kept in mind. The inventory of suffixes presented in the 8 sources should not be regarded as equally complete or equally accurate descriptive reports for representing the lexical suffixes of the 8 languages: some of the sources are sketchy, others detailed; they range in time from a half century ago to 1968. It would be a mistake, therefore, to apply any refined analytic techniques to the data, based on the assumption that the samples from the 8 languages are directly comparable.

But certain broad conclusions about the history of these suffixes can be derived from the distribution of the cognate sets in the 4 major divisions of Salish. The 75 cognate sets listed above are distributed as follows:

In all 4 divisions (6 sets): CANOE, EAR, FACE, HAND, NOSE, PEOPLE.

In 3 divisions (18 sets):

Coast, Til, Interior (10 sets): BACK[a], BODY[a], BOTTOM, BUSH[a], EYE[a], FOOT[a], HEAD[a], HOUSE, TOOTH, WATER[a].

BC, Coast, Interior (6 sets): EDGE, HEAD[b], INSIDE, NECK[a], SIDE, THROAT.

BC, Til, Interior (2 sets): BELLY[b], ROUND.

In 2 divisions (38 sets):

Coast, Interior (19 sets): ARM, BELLY[a], BLANKET, BODY[b], BREAST[a], BUSH[b], CHILD[a], CHILD[b], FIRE, INSTRUMENT, LEG, ROCK, SHOULDER[a], STOMACH, TAIL[a], THIGH, VOICE, WATER[b], WEATHER.

Til, Interior (10 sets): BREAST[b], BREATH, CHEST, FATHOM, LONG, MOUTH, PLACE, STONE, TAIL[b], WATER[c].

BC, Interior (6 sets): BACK[b], CLOTH, EYE[b], FOOT[b], GROUND, TREE[b].

BC, Coast (1 set): NECK[b].

BC, Til (1 set): ANUS.

Coast, Til (1 set): TREE[a].

In 1 division (13 sets):

Interior (13 sets): ANKLE, ANIMAL, BETWEEN, BOW, DAY, FAMILY, FISH, FOREHEAD, HAIR, HIDE, MEAT, ROAD, SHOULDER[b].

On the basis of the overall distribution there can be no doubt that the lexical suffixes represent an elaborate morphological system of common Salish. Of the 75 cognate sets, 62 (83 percent) are found in 2 or more divisions. It can be assumed that few, if any, of these 62 suffixes include borrowings across divisional lines or recent local creations. As will be demonstrated below--and as would be expected--the lexical suffixes, being bound forms, manifest a greater retentiveness than do vocabulary items.

Furthermore, this large number of suffixes should be regarded as a low estimate: a more extensive sample of languages and a selection of sources with more thorough treatments of these suffixes would certainly raise the number.

In examining the distribution of each of the 4 divisions, it should be remembered that these groupings are not equally weighted in the sample. The Coast and Interior are each represented by 3 languages; for each of the other two divisions only a single language, BC and Til, is available. With this reservation in mind, the Coast languages can be compared to those of the Interior. It is evident from the distribution that the lexical suffixes have been retained to a greater extent in the Interior than among the coastal languages: Interior participates in 100 percent of the 18 cognate sets found in 3 divisions and in 90 percent (35/38) of the sets in 2 divisions, whereas the languages of the Coast share only 89 percent (16/18) of the 3-division sets and 55 percent (21/38) of the cognates covering 2 divisions.

The occurrence of all the 1-division cognate sets within the Interior may indicate either that these suffixes have been retained here longer than elsewhere or that the suffix pattern has undergone greater local elaboration in the Interior than among the Coastal languages. The extremely large number of lexical suffixes found in Thom, as compared to the other languages in the sample, suggests that this Interior language, at any rate, has extended the pattern to new lexical suffixes, some of which it shares only with Kal and CdA. Lexical suffixes in Thom number 187, more than twice the number in the next highest sample, that of UCh with 87 (see Table 1). In addition to its large inventory of suffixes, Thom participates

Cw has over 80

TABLE 1

Relationships of Lexical Suffixes and Common Vocabulary among Salish Languages

	N_x	C_1	C_2	C_1/N_1	C_2/N_2	C_{es}/N_{es}	R_2	R_{es}
BC	51	20	20	27	32	26	7	7
Squam	74	35	35	47	56	39	2	2
S-D	16	7	7	--	--	39	--	--
UCh	87	24	24	32	39	32	5	4.5
Til	41	30	30	40	48	31	3	6
Thom	187	68	55	91	85	41	1	1
Kal	50	31	22	41	35	35	6	3
CdA	74	37	29	49	46	32	4	4.5

N_x: total number of lexical suffixes in each language.

C_1: number of suffixes in each language occurring in all 75 cognate sets.

C_2: number of suffixes in each language occurring in the 62 cognate sets covering 2 or more divisions.

N_1: 75, the total number of cognate sets.

N_2: 62, the number of cognate sets covering 2 or more divisions.

C_1/N_1, C_2/N_2: percentage of suffixes in each language occurring in all 75 cognate sets, in the 62 cognate sets.

C_{es}/N_{es}: percentage of common vocabulary in Swadesh's "Early Salish" (from his Table 4, IJAL 16.166, 1950).

R_2: rank order of C_2/N_2.

R_{es}: rank order of C_{es}/N_{es}.

in the largest proportion, 91 percent, of the 75 cognate sets as compared to the other Salish languages in the sample (Table 1, column 4). In contrast, UCh shares in only 32 percent of the 75 cognate sets. Of the 13 sets found only among the Interior languages, Thom has cognates for all 13, Kal for 9, and CdA for 8. There are no cognate sets unique to the Coast languages.

Divisions represented by a single language in the sample--BC and Til--can be similarly compared. Til participates in 67 percent (12/18) of the cognate sets covering 3 divisions and 29 percent (11/38) of the 2-division sets; BC has cognates in only 33 percent (6/18) of the sets in 3 divisions and 21 percent (8/38) of those in 2 divisions. In the total of 75 sets, Til shares in 48 percent as compared to BC's 32 percent (Table 1, column 4). Til shows a higher percentage of cognation even though the number of suffixes available for comparison is smaller in Til (41) than in BC (51).[13] It can be concluded, therefore, that the lexical suffixes common to Salish have been retained to a considerably greater extent in Til than in BC.

A comparison of the evidence derived from suffix cognation with Swadesh's results in his glottochronological study of Salish reveals some interesting similarities and differences. One of the analyses made by Swadesh was based on his construct dialect of "Early Salish," computed as dating back to 4000 years ago; the vocabulary of this dialect was reconstructed by "noting all forms shared by any pair of languages removed four periods or more from each other."[14] Comparable to this vocabulary would be the lexical suffix forms shared among languages belonging to 2 or more divisions, for the only languages in our sample separated by less

than 4 millennia, according to Swadesh's computation of glotto-chronological periods, are the Interior languages. In establishing the suffixes to be used for comparison, therefore, the 13 cognate sets limited to the Interior are omitted, leaving 62 sets shared by 2 or more divisions. The number of cognates in each language covering 2 or more divisions is shown in Table 1, column 3. This number, when divided by 62, provides a percentage score comparable to Swadesh's "common vocabulary" percentage (Table 1, columns 5 and 6). Of the 51 lexical suffixes found in BC, for example, 20 occur in cognate sets; BC's cognation score for all sets is 27 percent (20/75); its score for 2 or more divisions is 32 percent (20/62), comparable to Swadesh's score of 26 percent of "Early Salish" common vocabulary retained in BC. S-D is omitted from the percentage scoring because of its extremely small sample of suffixes, which would result in an excessively low percentage that could not be validly compared to the Swadesh scores.

A consistent difference can be noted between the percentages for suffixes and those for vocabulary items: the suffix scores are higher. This would indicate that there has been as much or greater retention of lexical suffix morphemes throughout these Salish languages than of basic vocabulary morphemes.

A rough indication of the retentiveness of the languages relative to each other can be obtained by converting the percentages into rank orders. Five of the languages show a close agreement in their rankings on suffixes and on vocabulary (Table 1, last 2 columns). For both these types of morphemes Thom manifests the greatest retentiveness, followed in second place by Squam; UCh

and CdA are in fourth and fifth place; BC, in last place, has retained the smallest proportion of both suffixes and vocabulary items. Two of the languages, however, reveal a marked discrepancy in their rank orders: compared to the other languages considered here, Til has preserved the Salish suffix morphemes to a greater degree than it has the vocabulary morphemes; in contrast, Kal shows greater retention of the common vocabulary than of the lexical suffixes.

Another comparison with Swadesh's glottochronological study can be made in terms of cognates shared by pairs of languages. The number of lexical suffix cognates for each pair of languages is entered in the upper and right half of Table 2. The lower and left segment contains two figures in each box: the top figure shows the percentage of suffixes shared by the pair of languages; the underlined lower figure is Swadesh's percentage of shared basic vocabulary. A comparison of the two percentage figures reveals, again, that in most of the cases--in 25 of the 28 items--the proportion of shared suffixes is higher than that of shared vocabulary; i.e., the language pairs tend to show more cognation in lexical suffixes than in basic vocabulary. It must be recognized, however, that these percentages are ultimately based on sample size; the number of suffixes drawn from the 8 Salish languages varies over a wide range (see Table 1, column 1), whereas the number of vocabulary items in Swadesh's basic list was kept fairly constant in his Salish comparisons.[15] Yet, in spite of this statistical weakness, certain consistencies can be noted. In both suffixes and vocabulary, BC is the most remote in its linkages to other languages; it has closer relationships to Squam and Thom

TABLE 2

Sharing of Lexical Suffixes and Common Vocabulary

by Pairs of Salish Languages

	BC	Squam	S-D	UCh	Til	Thom	Kal	CdA
BC	- - -	29	3	5	6	17	6	9
Squam	24	- - -	6	17	14	29	14	18
	18							
S-D	19	37	- - -	5	5	6	7	7
	16	29						
UCh	10	23	31	- - -	13	19	10	14
	12	17	31					
Til	15	34	31	32	- - -	27	13	15
	14	20	20	17				
Thom	33	39	37	25	66	- - -	26	31
	17	18	23	22	19			
Kal	12	28	37	20	32	52	- - -	21
	11	13	20	16	17	37		
CdA	18	25	44	19	37	42	42	- - -
	12	14	17	16	16	34	55	

Upper and right segment: number of shared lexical suffixes between each pair of languages.

Lower and left segment: top figure--percentage of shared suffixes between each pair of languages; bottom underlined figure--percentage of shared vocabulary between each pair of languages (from Swadesh's Table 1, IJAL 16.159, 1950).

than to any others, though the magnitude of the suffix proportions are probably inflated for Thom because of its extremely large sample of 187. If the Thom suffix percentages are discounted, Til shows approximately the same degree of cognation in suffixes and vocabulary to the Coast as to the Interior. The Interior languages show closer relationships among themselves than do the Coastal languages. Of the latter, Squam and UCh differ in their two scores with relation to the Interior: Squam is consistently higher than UCh in its suffix scores with Thom, Kal, and CdA, and consistently lower in its vocabulary scores.

Semantic Features

The semantic categories expressed by the lexical suffixes can be conveniently grouped into body parts, other entities, and spatial references. This is not intended as a logical classification. Body parts are given a special status as a separate category because they constitute about half of the references in the cognate sets. The class of "other entities" covers a variety of subtypes, such as references to human beings (CHILD, PEOPLE), animals (ANIMAL, FISH), plants (BUSH, TREE), natural phenomena (ROCK, WATER), man-made objects (BLANKET, CANOE), and others. The cognates contain only a half-dozen spatial references.

The extent to which the meaning categories are attested across the 4 major divisions of Salish is shown in the following list of glosses:

<u>In all 4 divisions:</u>

Body parts: EAR, FACE, HAND, NOSE.

Other entities: CANOE, PEOPLE.

In 3 divisions:

Body parts: BACK[a], BELLY[b], BODY[a], EYE[a], FOOT[a], HEAD[a], HEAD[b], NECK[a], THROAT, TOOTH.

Other entities: BUSH[a], HOUSE, WATER[a].

Spatial: BOTTOM, EDGE, INSIDE, ROUND, SIDE.

In 2 divisions:

Body parts: ANUS, ARM, BACK[b], BELLY[a], BODY[b], BREAST[a], BREAST[b], CHEST, EYE[b], FOOT[b], LEG, MOUTH, NECK[b], SHOULDER[a], STOMACH, TAIL[a], TAIL[b], THIGH.

Other entities: BLANKET, BREATH, BUSH[b], CHILD[a], CHILD[b], CLOTH, FATHOM, FIRE, GROUND, INSTRUMENT, PLACE, ROCK, STONE, TREE[a], TREE[b], VOICE, WATER[b], WATER[c], WEATHER.

Spatial: LONG.

In 1 division:

Body parts: ANKLE, FOREHEAD, HAIR, HIDE, SHOULDER[b].

Other entities: ANIMAL, BOW, DAY, FAMILY, FISH, MEAT, ROAD.

Spatial: BETWEEN.

As in considering the distribution of cognates, an examination of the semantic evidence must also observe several cautions. The sources differ considerably in the thoroughness with which the meanings of suffixes are reported: some list numerous meanings for each suffix; others content themselves with providing a gloss term or two. The sources also differ in the range of data upon which the suffix analysis is based: in some cases the field data are obviously sparse and the analysis cursory; in others a careful

analysis is made of an extensive body of material. It should be remembered, too, that the sampling of languages in the present study is limited: in particular, more data from other dialects of the Oregon Division as well as from other branches of the Coast languages would provide more cognates and give greater historical depth to any conclusions that might be derived from the semantic data. Although these limitations would not permit any treatment of subtle semantic details, the data can legitimately be utilized for broad generalizations of a survey type.

The glosses offer few references useful for the reconstruction of cultural items. But nautical terms obviously belong in the earliest levels of Salish. Suffixes meaning canoe and perhaps other types of water craft are found in all divisions and can be assigned to the proto-language; suffixes for fathom, occurring in 2 divisions, would fit into Swadesh's "Early Salish."

From the fact that body-part references predominate in all of the distributions covering 2 or more divisions, it must be inferred that this emphasis reflects a semantic peculiarity of the proto-Salish system of lexical suffixes. In most of the individual languages of our sample, furthermore, half or more of these suffixes refer to body parts. The old pattern of a system with a heavy representation of anatomical references has been preserved in most languages and in all the 4 major divisions. Thom and UCh, however, depart from this pattern. They have a greater proportion of suffixes in the category of "other entities," but this preponderance is perhaps due in part to the relatively large number of suffixes in their samples. Thom, with 187 lexical

suffixes, has richly elaborated the other-entity type, which contains over 100 morphemes. For most of these, cognates cannot be found in any of the other Salish languages compared here.

Suffixes with other-entity references are represented in all distributions and in all the languages. These references, like body-part meanings, must be assigned to the proto-Salish system. But they are fewer in number than the body-part references among the cognate sets covering 3 and 4 divisions, and they are also less numerous among the lexical suffixes of most of the languages. Consequently, other-entity meanings were probably a secondary part of the proto-Salish inventory. In a productive system, however, this semantic area provides more room for expansion than that of body parts, whose range of references is inherently more restricted. The relatively large number of other-entity meanings at the 1- and 2-division levels, and in Thom and UCh, indicates that this is the area in which the lexical suffix system has been enlarged in those languages where the system has grown.

Suffixes referring to spatial relations and shapes do not occur at the 4-division level, and only a handful are found at the other levels. The evidence suggests that spatial meanings, though a part of the proto-Salish system, were only a minor part. In addition to the few suffixes with a primarily spatial force, some body-part suffixes in our sample have secondary references to spatial concepts. Thus, the cognate set **NOSE** contains such associated meanings as <u>front</u>, <u>front end</u>, <u>point</u>, <u>promontory</u> in BC, Squam, S-D, UCh, Thom, and CdA; the suffixes glossed under **MOUTH** have <u>edge</u> as an additional meaning in Til and CdA, and conversely those glossed under **EDGE** also have the meanings of <u>mouth</u>, <u>lip</u>, <u>tooth</u> in BC,

Squam, and Thom. These are undoubtedly old Salish patterns associating anatomical with spatial references. In some instances, however, associated meanings have developed in individual languages from the phonological merging of originally distinct suffixes. As an example, two suffixes kept distinct in Thom -wiƛ (see BELLY[a]) and -wiɬ (see CANOE) have fallen together in Squam -wiƛ belly, bowels, container, esp. canoe and in CdA -g^{w}il hollow object, wagon, canoe, abdomen. Proto-Salish *ƛ and *ɬ have coalesced to ƛ in Squam (which lacks ɬ) and to l in this suffix of CdA (which lacks ƛ), with the result that a Coast language and an Interior language have independently merged the same two suffixes into a single form whose meanings appear to be related.

The multiple meanings of a suffix, then, may either reflect an archaic pattern of linked meanings or be the result of a historical change whereby originally distinct forms have become homophonous. In his grammar of Kal, Vogt often enumerates the distinctive meanings attached to a suffix: e.g., -ús, -s 1) eye, 2) face, 3) neck, 4) fire. The conjunction of disparate meanings for a given suffix is a phenomenon frequently reported in most of the languages. With its large number of lexical suffixes, Thom has many examples which can be suspected of being homophonous forms of distinct morphemes: e.g., -als face, eye, place, knife, stone; -aƛ foot, leg, young, road, direction. The very brevity of the suffix forms multiplies the probability that many of them, as a result of phonological coalescences, have fallen together as homophonous morphemes.

Synonymy is also a marked semantic characteristic of the lexical suffix system. In the present study it was necessary to

assign identical glosses, usually in a and b pairs, to nearly half the cognate sets. Thom provides an extreme example of a language with a profusion of synonymous suffixes: e.g., -alex, -(en)ac, and -ilč are glossed as tree, -ai, -eɬ, and -eɬp as tree, bush, -alk as tree, long round things, -ax as tree, piece of tobacco, and -anč as tree, log, bark. Although synonymous forms are not as numerous and semantically intricate as this in other Salish languages, they are nevertheless abundant in all of them.

Comparison of the suffixes makes it possible, of course, to identify particular changes of meaning that have taken place in each of the languages: e.g., the form glossed as GROUND has been specialized to flooɹ in BC; HAND has become arm in Til; INSIDE has been generalized to surface, area in Squam; BOTTOM has added the meanings of rump, hip in S-D; FACE has been extended to eye, fire in the 3 Interior languages.

In addition to the changes of meaning in suffix units, the morphemes have been combined to create new references: e.g., BC -lqsak finger is composed of a combining form of nose, point plus hand; Squam -ayʔeqšn knee is head plus foot; Til -ǻhšen heel is bottom plus foot; CdA -cinčt wrist is mouth, edge plus hand.

It is clear that various historical processes--phonological change, semantic change, combining of suffixes--have resulted in a complex network of homophonous and synonymous forms. The semantic complexity that has developed from these processes is an impressive evidence that the system of lexical suffixes, despite its age, is a productive and viable part of Salish morphology.

Morphological Features

Although lexical suffixes may appear in combination, this is not a free process. Only 2 elements have been found to combine, and only certain limited sequences are favored. Most commonly, the compound is composed of a spatial suffix, or a body-part suffix with spatial meaning, plus another body-part suffix: e.g., BC -ikus forehead, containing -ik visible top surface and -us face. Examples of this kind are found abundantly in BC, Squam, Kal, and CdA.[16] Some of the suffixes occur in individual languages only in petrified combinations: e.g., BC -aluɬ side of a boat (see CANOE), Squam -ɬ.n-ay inside of throat (see THROAT), UCh -áytmš land (contains -mš, see PEOPLE), Thom -eɬkolt (see THROAT), Kal -cín̓šen (see ANKLE). And evidence of archaic compounds can be found in a few of the cognate sets.[17]

In all of the Salish languages the suffix morphemes appear in allomorphic patterns based primarily on vowel alternations. In BC the changes are solely quantitative, as -a·ls, -als inner surface. In all the other languages allomorphs are differentiated by vowel quality. A few examples will illustrate the range of vocalic alternations: Squam -íw?as, -was, -us stick, pole; S-D -áč, -eč, -č head, hair, brow; UCh -áq^{w}, -q^{w} prairie; Til -éɬ, -iɬ dried food, grease; Thom -wiɬ, -uɬ canoe; Kal -álqs, -lqs clothes; CdA -áɬp, -eɬp, -eɬp tree, part of a bush, plant, root. It will be noted that vowel changes include a zero grade and, in some instances, give rise to accompanying consonantic changes. In those grammars which attempt to describe the phonology of these

changes, the influence of stress shift and of such vocalic processes as assimilation, dissimilation, and reduction are prominent.[18] It is beyond the scope of this paper to attempt a reconstruction of the morphophonemic processes that have reshaped the suffixes and produced the present allomorphic forms. But the allomorphic variations, in all languages except BC, suggest that one of the morphophonemic principles has been an alternation between heavy-stressed full forms versus weak-stressed reduced forms.

The combining of lexical suffixes and the presence of allomorphic sets are sufficiently widespread phenomena to be regarded as common Salish features marking the internal morphology of this suffix system. The external morphology also manifests commonalities. Languages in all of the divisions attest to a close relationship between lexical suffixes and particular prefixes. One of the associated prefixes, in fact, appears to have the following cognate forms: BC nu- middle region, center; Squam nəx^{w}-, n- on, in, at, over (a surface), by way of (on body-part names); Til ns-, nš-, n- in, at, to; CdA nɨ?- in, on, among. Examples of this prefix with lexical suffixes are: BC nu-...-u·ɬ navel (-u·ɬ outer surface); Squam nəx^{w}-?ác-ač palm of hand (?ac surface, -ač hand); Til nš-nə?-áqs-əs its bow (nə? formal stem, -aqs nose, also front, point in other Salish languages, -əs 3rd p. sing. poss.); CdA nɨ?-...-ɨ?qs hair of the nostril (-ɨ?qs nose, point). The following are examples of other prefix-suffix complexes noted in these languages: BC ?us-...-aχ̣ small of the back (-aχ̣, which has not been found to occur independently, is probably related to the suffix in nu-...-aχ̣ anus); Til taɬ-...-ais bottom, hind end (-ais

tail); CdA hɨn-...-inč room (hɨn- in, -inč belly, hollow).

The structural properties of these complexes differ among the Salish languages. In BC some of the prefix-suffix combinations are in the nature of discontinuous morphemes. For example, the prefix ʔus- is found with only 2 lexical suffixes, ...-ax̣ and ...-aq, neither of which can be clearly identified with suffixes occurring independently of this combination. The forms in other BC linkages are more transparently isolable, but most combinations are characterized by specialization of meaning. Squam manifests greater independence of the prefix and suffix elements. The Til structure is more difficult to assess because of the sparse descriptive data, but semantic specialization marks certain prefix-suffix complexes. In CdA particular combinations occur with high frequency and have specialized meanings. Although the degree of cohesion between prefixes and lexical suffixes varies among the languages, there is evidence from at least 3 of the 4 major divisions to indicate that these combinatory linkages represent a common structural feature of Salish.

Another feature of external morphology can be examined in the status of lexical suffixes within the suffixing system as a whole. Most of the grammars present the system in terms of fixed positions. The lexical suffixes of BC occupy the first position, immediately following the nuclear morpheme(s) of the word; in verb-like words the remaining positions may be filled by suffixes of 2) voice, 3) pronominal reference, 4) aspect, and 5) mode. Among the Coastal languages, UCh is also described as having suffix orders, with lexical suffixes again appearing first, followed

in the verb by suffixes indicating 2) voice, subjects of transitive verbs, 3) 2nd person subjects in the imperative, all subjects in the indicative, and 4) adverbial references. In S-D the lexical suffixes are spread over several of the lower positions and share order slots with other types of suffixes: the first 4 positions contain 1) 7 lexical, 4 voice, and 1 modal suffix, 2) 2 lexical, 1 voice, 1 modal suffix, 3) only 1 suffix of voice, and 4) 4 lexical and 1 voice suffix; no lexical suffixes occur in the remaining 9 positions. Of the Interior languages, Kal has the following suffix sequences: 1) a "p suffix," evidently indicating medio-passive voice; 2) all the lexical suffixes; 3) suffixes of aspect (inchoative, iterative) and of voice (reflexive, reciprocal); 4) a causative suffix; 5) "stem-forming suffixes" that identify subclasses of the verb; and 6) pronominal suffixes. In CdA the orders seem to be: 1) modal, aspectual, and other suffixes difficult to categorize; 2) the lexical suffixes; 3) -en, a suffix of uncertain function; 4) -min used for; 5) a "dative" suffix; 6) aspectual suffixes; and several additional orders containing pronominal suffixes and a "nominal locative" suffix. No relevant structural description of the suffix system is available for Squam, Til, or Thom.

Despite the differences manifested by the languages in the number of suffix orders and the precise positioning of the lexical suffixes, several common features emerge. With the exception of S-D, the Salish languages treat the lexical suffixes within one positional slot. This is all the more striking in that the lexical suffixes are numerous and comprise a large portion of the

affixing machinery in each language. The combinatory potentialities of lexical suffixes must be viewed within this structural perspective: the limited and often petrified suffix combinations have the status of units, not sequences, in the system of positions, where they occupy a single slot. Furthermore, the lexical suffixes, whether they occur singly or as compounds, either immediately follow the nucleus of the word (in BC and UCh, and largely in S-D) or take the second position (in Kal and CdA), preceding most of the other suffixes.

The noun-like meanings of the lexical suffixes as well as their proximity to root elements might suggest that they should be regarded as incorporated nouns. This possibility has been considered by some of the authors of Salish grammars and has been explicitly rejected.[19] These suffixes are attached to both noun-like and verb-like roots and, in this respect, differ from most other Salish suffixes, which are marked for word class.

Descriptively, then, the lexical suffixes are not derived from noun roots, nor is their historical source to be sought in any class of root morphemes. The evidence indicates that these suffixes have been, as they are now, a coherent set of non-nuclear morphemes, with their own viability for change and productiveness. Some of the types of change resulting in the creation of new suffix forms have already been suggested. Suffixes may combine with one another to produce new units. With shifts of meaning, suffixes can extend their semantic range or be displaced from one reference to another. Phonological change can alter the form of the suffix, and the competing old and new forms may persist in the language. This source for the presence of synonymous suffixes cannot be dis-

tinguished, with our present evidence, from the borrowing of suffix forms between Salish languages. Thom, for example, has several pairs of suffix forms reflecting both phonemes of a Salish sound shift: Thom -iken and -ičen back, -akst and -čis hand (the *k > č shift); Thom -xen and -šen foot, -mux^{w} and -miš people (the *x > š shift). Suffixes of a similar type are found in Chimakuan and Wakashan languages,[20] and it is entirely likely that some of the lexical suffixes may have been borrowed from outside the Salish family.

Summary and Conclusions

This study is a comparison of the lexical suffix systems of languages from the 4 major divisions of Salish: BC, 3 Coast languages (Squam, S-D, UCh), Til, and 3 Interior languages (Thom, Kal, CdA). Of the 75 cognate sets collected, 6 occur in all 4 divisions, 18 in 3 divisions, 38 in 2 divisions, and 13 among languages of the Interior; no cognates are unique to the Coast. The distribution of cognates indicates that the lexical suffixes have been retained more among the Interior languages than among those of the Coast and, similarly, more in Til than in BC. On the basis of comparing the scores for suffix cognation to the vocabulary scores in Swadesh's glottochronological study of Salish, there has been greater retention of lexical suffixes than of basic vocabulary items. In terms of relative retentiveness among the languages, most of them have approximately the same ranking in suffixes and in vocabulary: Thom manifests the greatest retentiveness in both, followed by Squam, UCh, and CdA, with BC showing the

least retention. Two of the languages reveal differences: Til ranks conspicuously higher in suffix than in vocabulary retention, and Kal has a correspondingly high vocabulary but low suffix rank.

The suffixes can be grouped semantically into body parts, other entities, and spatial references. All three types must be assigned to the proto-Salish level. Body-part suffixes predominate in the system. Although the other-entity category contains fewer suffixes in most languages and among the cognate sets, it offers more room for expansion than the category of body parts; the area of other entities has taken precedence in two of the languages (Thom, UCh), where the system has been enlarged. Spatial suffixes form only a minor part of the system. Suffixes with a multiplicity of meanings are prominent: in some suffixes body-part meanings have been extended to spatial references; in others the wide semantic range is the result of a coalescence whereby originally distinct suffixes have fallen together into a single form. In addition to such homophonous forms, synonymy is also characteristic of the lexical suffix system.

Among their internal morphological features, the suffixes may be combined with one another, but the permitted sequences are restricted. Individual suffixes appear in allomorphic patterns based primarily on vowel variations, which suggest an alternation between heavy-stressed full forms versus weak-stressed reduced forms. In external morphology these suffixes show an affinity for particular prefixes, the prefix-suffix combinations often having specialized meanings. Whether the suffixes occur singly or as compounds, they occupy one positional slot. They either follow the word nucleus immediately or appear in the second

position, preceding most of the other suffixes.

Lexical suffixes are not derived from noun roots, either descriptively or historically. The suffixes form a coherent system which differs very little, in its essentials, from one language to another. Historical processes have modified the suffixes, augmenting their number in some languages, as in Thom, decreasing them in others, as perhaps in S-D. Modifications in detail have been brought about by phonological change, semantic change, morpheme fusion, and undoubtedly by borrowing as well. But the major semantic and morphological features of the system have been preserved, for these features show striking similarities throughout the Salish area. The system is obviously an archaic one, and it must have been an extensive and elaborate part of proto-Salish morphology.

Footnotes

[1]May M. Edel, The Tillamook Language, IJAL 10.24ff. (1939).

[2]Gladys A. Reichard, Coeur d'Alene, extract from Handbook of American Indian Languages 3.608ff. (New York, 1938).

[3]Hans Vogt, The Kalispel Language: An Outline of the Grammar with Texts, Translations, and Dictionary (Oslo, 1940), pp. 51ff.

[4]M. Dale Kinkade, Phonology and Morphology of Upper Chehalis: II, IJAL 29.353-6 (1963).

[5]Morris Swadesh, Salish Internal Relationships, IJAL 16.163-4 (1950).

[6]In addition to the sources cited above--Edel, 1939; Reichard, 1938; Vogt, 1940; Kinkade, 1963--the following were used for obtaining the suffix materials: A. H. Kuipers, The Squamish Language (Paris and The Hague, 1967). Colin E. Tweddell, The Snoqualmie-Duwamish Dialects of Puget Sound Coast Salish: An Outline of Phonemics and Morphology, University of Washington Publications in Anthropology 12.1-78 (1950). Thompson Suffixes (probably compiled by Teit), a typed manuscript, was sent to me by Boas around 1935. Bella Coola suffixes are from my own field data.

[7]Laurence C. Thompson and M. Terry Thompson, A Fresh Look at Tillamook Phonology, IJAL 32.313-9 (1966). Clarence Sloat, A Skeleton Key to Reichard's Coeur d'Alene Transcriptions, Anthropological Linguistics 10.5.8-11 (1968).

Footnotes (cont.)

[8]Franz Boas and Herman Haeberlin, Sound Shifts in Salishan Dialects, IJAL 4.117-36 (1927). Morris Swadesh, Salish Phonologic Geography, Lang. 28.232-48 (1952).

[9]Thom frequently has synonymous forms showing both phonological reflexes of a correspondence. It possesses cognate suffixes with k as well as č in BELLY[b], FIRE, HAND, x as well as š in PEOPLE, a as well as i or e in BELLY[b], BETWEEN, EAR, and NECK.

[10]Only S-D, Thom, and Kal have both the ƛ and ƛ̓ phonemes. The affricate is lacking from the phonemic inventories of BC, UCh, Til, and CdA; Squam has no ƛ̓.

[11]Boas and Haeberlin, 1927, p. 125, give CdA -xən foot as well as -sən in moccasins.

[12]The suffix *-tx^{w} house appears most clearly as a separable element in Thom and the Coast languages. In all the languages, however, it occurs as a second element attached to *-aƛ, perhaps a form of *-al (see SIDE); in this combination *-tx^{w} is frequently reduced to -x^{w}, most consistently among the Interior languages.

[13]If the percentages are computed on the basis of sample size, an even greater difference emerges. Of its 41 suffixes, Til shares 73 percent (30/41) with one or more of the other 7 Salish languages as compared to BC's 43 percent (22/51).

[14]Salish Internal Relationships, IJAL 16.166 (1950).

[15]In an attempt to correct for the variable suffix samples, percentages were computed by dividing the number of shared suffixes by a number fixing the upper limit of possible sharing. For lan-

Footnotes (cont.)

guages having a sample of more than 75 suffixes, the total number of suffix cognate sets, the upper limit is 75. For languages whose sample falls below 75, the smallest sample of the pair determines the limit: e.g., the upper limit of suffixes that could be shared between BC (with a sample of 51) and Squam (with a sample of 74) is 51; the 12 suffix cognates shared between them, therefore, are divided by 51 to give 24 percent.

[16]The Til grammar illustrates a few combinations without analysis (see Edel, The Tillamook Language, IJAL 10.28, 1939); but it is not possible to assess how extensively such suffix compounds are formed. Although combinations are reported for UCh, they are said to occur rarely; lexical suffixes in UCh are often preceded by one of the linking suffixes, -al or -ay, which have "no discernible meaning of their own" (Kinkade, Phonology and Morphology of Upper Chehalis: II, IJAL 29.355, 1963). No information on suffix combinations is available for S-D or Thom.

[17]The cognates listed under EYE[a] appear to be combinations of *-al SIDE and *-us FACE. The form *-ak or *-akV is probably to be reconstructed under the gloss HAND; but Squam and the Interior languages attach a second element, -st, -s, or -t, and some of these languages provide variant forms of the combination. Also see HOUSE and fn. 12.

[18]See Reichard, op. cit., pp. 560-8; Vogt, op, cit., pp. 19-22; Kuipers, op. cit., pp. 35-6; Tweddell, op. cit., p. 11.

[19]In his detailed treatment of the Squam lexical suffixes, Kuipers often presents the independent word which corresponds in meaning to the suffix being illustrated (op. cit., pp. 120ff.).

Footnotes (cont.)

In BC, as in Squam, the independent word either contains the corresponding suffix or it has no formal resemblance to the suffix: BC -apsm neck and sk^{w}łapsm neck (sk^{w}ł, a stem occurring in a number of words referring to bony body parts); BC -ak hand but suxa hand. See also Edel, op. cit., p. 23; Kinkade, op. cit., p. 352.

[20]Morris Swadesh, Mosan II: Comparative Vocabulary, IJAL 19.223-36 (1953).