Restrictive Locative Fields in Ahousat Nootka[1]

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0. Introduction

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0. This paper examines Ahousat Nootka restrictive locative lexical suffixes, and describes one aspect of their semantic structure as lexical entries. Nootka is polysynthetic, with about 350 lexical or non-inflectional suffixes (LS's), which are classified within the restrictive-governing and semantic theme systems. Each morpheme or stem[2] belongs to one of seven theme classes: locative, substantive etc. (Swadesh 1933:40). A suffix may be classified as *restrictive* if it does not control the semantic theme assigned to a stem or word, or *governing* if it does (Swadesh 1933:111,147). Restrictive locative lexical suffixes (RLLS's) account for about one third of all LS's.[3]

1. Native speakers' glosses for RLLS's are generally clear-cut locations such as 'at the armpit' or 'on the roof', whereas glosses for multi-morphemic words suggest that RLLS glosses must be more diffuse, e.g. hił-p̓iq-uł 'at the forehead' /hił-/ durative locative, /-p̓iq(a)/ 'at the hill-top', /-(q)uł/ 'at the face'. This paper discusses whether all RLLS's have the same conceptual area or lexical field (Lyons 1977:253), namely the spatially-organized environment, as their range of reference, or whether RLLS's can have different *ranges* of reference or refer to different *subfields* of the locative lexical field.[4]

The morphological component is assumed to consist of word-

formation rules, including some global generative rules with access to the whole grammar (Carroll 1975:47), and a lexicon, including morphemes and those stems with a non-predictable derived meaning. Each lexical entry is a lexeme-entering rule (Gruber 1976:275), organized in part hierarchically, interacting with non-linguistic cognitive systems (Tyler 1978:327) and resulting in a phonological output. Each lexeme's sphere of reference has a part which is *salient*, i.e. psycho-culturally primary or foregrounded (Lyons 1977:247). Presumably, speakers would recall the salient sphere of reference for each lexeme as the initial gloss or association given for that lexeme.

To investigate the semantic structure of RLLS's, seventy-six Ahousat RLLS's were affixed to hił- 'there'[5], randomly ordered, and presented to an Ahousat speaker (in three sessions) with the following instructions:

> "... As I say a word, you will repeat it. Then, if another Ahousat word comes to mind, say it... draw the first image or idea which comes to mind concerning the first word I gave you..."

He would count to twenty in Ahousat, and then respond to the word presented.

2. The first-given or *primary* associations were analyzed for the first 28 location words presented. Four words had no primary association. The 24 remaining associations were of the following types:

1. extension: different locative root, such as hin- 'near, coming to' (7)[6], ha•ł- 'way over there' (2,22), ʔust- 'down there' (23, 24), ʔam- 'right there' (8, 11, 19), with the *same* lexical suffix, or with a different RLLS designating the same or adjacent location (1,12,13,14,21,26,27), or the *same* locative *root* plus another RLLS (3);

2. action: an action root plus the same RLLS (4,6,10,17,20,28);

3. nominal: a nominal referring to the location site (15,25). Examples of these types of association are:

(22) hiy-'a·ʔa → ha·y-'a·ʔa    at the rocks → over on the rocks

(13) hiɬ-a·paɬ → ʔap-p̓i·    at back (of → right at top of
body)    back

(28) hi·ɬ-aqsi → t̓i·qʷ-aqsi    at vessal's → sitting at
edge    vessal's edge

(25) hiɬ-a·n̓uɬ → suč̓is    at long obj. → tree

There are two kinds of extension: proximal extensions (hin-, ʔam-) commonly occur for body-site locations, and distal extensions (ha·ɬ, ʔust-) for nature locations.[7] This distinction is a function of use. One does not normally refer to a body-site location as ha·ɬ 'over there', or ʔust- 'down there', but rather, one specifies a site close by (hin-, ʔam-) where there is a discrete mark, object (e.g. fly) or sensation (e.g. itchiness). Conversely, one normally refers to places in nature as distal (and less specific) with respect to the speaker, narrator or action.

Primary associations always refer to the same or a similar location, whether

1. on the body: lip → upper chin, throat → right at neck, back → top of back, body side → hip, ear lobe → cheek;

2. in nature: lower beach → upper beach, in air → over there in air, on ground → underground, at beach → down at beach.

Associations for body, nature and object locations remain body, nature and object locations respectively.[8]

3.0 Secondary associations are secondary *meanings* of a locative word, obtained at the time of initial presentation of the word, subsequent to the primary association, and confirmed one to two weeks later during a second presentation of all words with secondary associations. RLLS's were classified as salient with respect to the body *B*, nature *N*, or man-made objects *M*.[9] Suffixes denoting a location site adjacent to but not touching the subfield referent (the body for *B*-salient RLLS's, an object for *M*-salient RLLS's) are still assigned to that subfield, e.g. -kumqƛi *B* 'behind (a person)'.

The following chart lists each RLLS with its primary gloss, salient subfield, and secondary subfields, identified by the RLLS's

secondary associations. Associations for the original locative word only were considered *independant* secondary associations, e.g.

(26) hiɬ-a·ʔaq *BM*    'at (body) side' → 'at side of table'

Secondary subfield associations for associations consisting of the original locative word plus an *additional* RLLS are termed *dependant* secondary associations and are parenthesized, as in

(26) hiɬ-a·ʔaq-ačišt *B(N)*    'at (body) side' → 'at sea side'
   @side @sea

The sequence of a RLLS's subfields represents the temporal order of volunteered associations. For -a·ʔaq, the order is *BM(N)*.

Chart 1: Subfields[10]

| No. RLLS | Gloss | Subfields | No. RLLS | Gloss | Subfields |
|---|---|---|---|---|---|
| 1-p̓iq(a) | @(hill)top | N(M)(B) | 21-a·ɬuɬ | @ front | B B |
| 2-api L | up above | N(M) | 22-'a·ʔa | @ rock(s) | N |
| 3-asu L | under water | N(N) | 23-'as | @ ground | N |
| 4-aqsi | @ edge of opening | M B(N) | 24-ʕis | @ beach | N |
| 5-p̓ič | @ projection | N M(B) | 25-a·n̓uɬ | @ long object(tree) | $N^2M$ B(B) |
| 6-'i·s | outside | N | 26-a·ʔaq | @ side | B M(N) |
| 7-aksuɬ | @ lips | B N(N) | 27-akuɬ R | @ ear lobe | B B |
| 8-(w)inɬ | @ neck | B | 28-a·ci | @ lap | B |
| 9-ʔa·č̓uɬ | @ 90° projection | $B^2MN(N)$ | 29-(c)sam̓aqƛi | @ wall | M |
| 10-a·č̓ršt | @ sea | N | 30-iyuqƛ | in cavity | B N |
| 11-qi· | @ top | B M N | 31-ca·s | @ side | B |
| 12-iyuɬ | @ throat | B | 32-cimyuɬ | @ hairline | B |
| 13-a·paɬ | @ back | B | 33-(c)sitk | @ top of ceiling | M B N |
| 14-n̓i·s | @ beach | N | 34-sinyuk | @ lower neck | B |
| 15-sinqi | @ belly | B(N) | 35-'akƛi | @ bottom | $B^2M^2N(N)$ |
| 16-yimɬ R | @ shoulder | B | 36-ḥaṭƛi | @ male genitals | B |
| 17-(w)i·c | @ rim of vessal | $B^2M$ N | 37-quɬ | @ projection | B B |
| 18-sit L | on liquid in vessal | M | 38-(c)st̓u· | @ protected spot | N(M)(N) |
| 19-(c)spuq̓i | in crotch (space) | B N | 39-sti·ɬ | @ throat | B B |
| 20-'aqƛ | in vessal | M B(B)(N) | 40-ač R | offshore | N |

| No. RLLS | Gloss | Subfields | No. RLLS | Gloss | Subfields |
|---|---|---|---|---|---|
| 41-(č)it | @ body | B | 59-ḥsa | between | M (M) |
| 42-ʼiḥta | @ point | B M²N(N) | 60-ʼa·ʠsta L | among | M B N |
| 43-ʼimɫ R | behind ear | B | 61-ḥsna·k | between | M (B) |
| 44-ỉ·x̌a | below | B MN(B)(M) | 62-yin | @ bow | M |
| 45-u·č | @ horizon (land) | N | 63-w̉in | @ middle | B (M) (N) |
| 46-ci·ɫ | @ side | M B | 64-ʼapuɫa | underneath | B M N |
| 47-čaqiɫ L | @ inside frontwall | M | 65-kumqx̌i | behind | B |
| 48-ča·tu | offshore | N | 66-p̉i· | @ upper back | B (M) (N) |
| 49-čit | offshore | N | 67-ʼaḥs | in vessal | M B |
| 50-cuqʷa | in mouth | B | 68-(q)u·ɫ | @ face | B |
| 51-(č)ink R | @ joint | B B | 69-tqi· | underneath | M (B) |
| 52-ḥsńuɫ | between | M B (M) | 70-a·s | on surface | M B N |
| 53-ʼas RL | @ side (hip,ear) | B B | 71-ʔa·ɫ | on fabric surface | M |
| 54-ʼa·či | @ crotch | B | 72-a·sča | on roof | M |
| 55-ḥta·k | offshore | N | 73-(c)swi· | through | N M B (M) |
| 56-cu·t | @ side | B MN(B) | 74-(w)ink | @ convergence | B (M) |
| 57-cpa· | near side | B M (N) | 75-(q)ḥta | @ foot | B |
| 58-ču· | in vessal | M B N | 76-(w)akʷ-iniɫ | @ head of bed | M |

3.1  This analysis assumes that secondary associations (S.A.'s) are not a function of presentation sequence, and that the 76 RLLS's studied are representative of all RLLS's in Nootka. Chart 1 shows that RLLS's do not share the same range or sphere of reference: some may refer to body, nature and object locations, such as -cu·t BMN, in hiɫcu·t 'at the side of the body or a man-made object, in early afternoon (sun past zenith)'; some refer to a location restricted to one subfield, such as -ca·s B, in hiɫca·s 'at the side of the body'. These latter suffixes, lacking S.A.'s, define the subfields: B includes body-part locations on animals (principally humans), N includes locations on plants and non-living parts of nature, and M includes locations on non-living objects modified or created by humans, e.g. a vessal or pole.

Secondary associations for each salient subfield are given below. X and Y represent independant secondary associations; (Dep) represents one or more dependant S.A.'s.

Chart 2: Secondary Associations

| Salient Subfield | Secondary Associations | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| | ∅ | B | M | N | (Dep) | XY | X(Dep) | XY(Dep) | |
| B | 14 | (7) | 3 | 5 | | BMN 4 | BM() 2 | BMN() 4 | 39 |
| M | 8 | 2 | | | 2 | MBN 4 | MB() 3 | | 19 |
| N | 11 | | | | 4 | NMB 1 | NM() 1 | NMB() 1 | 18 |

3.2  There is clearly no homogeneity in the subfield associations of RLLS's. An RLLS may have one or two independant associations and/or one (or more) dependant associations. The sequencing of associations is due in part to a location site hierarchy: 1. B 2. M 3. N. First or salient is principally B; a linking association (mediating between a salient and some other secondary association) is principally M; the last secondary association is principally N.

The dominance of B is evidenced by the following. It is the subfield occurring most commonly as the only subfield of a RLLS, as the salient subfield of an RLLS (39:19:18), as any subfield of an RLLS whether salient or secondary (54:40:40), as a salient subfield with secondary associations (18:11:7), and as the salient subfield with the greatest range of secondary associations. It is the subfield occurring least commonly as a secondary association (14:18:23). Finally, the body subfield is the only salient subfield for which additional location sites in the same subfield were given as the only independant S.A.

The salient gloss and the association(s) for each of the RLLS's with this pattern are: (21) 'chest' → 'in front of body', (27) 'earlobe' → 'behind jaw line', (37) 'face' → 'penis' (bulky projection on vertical plane), (39) 'throat' → 'collarbone', (51) 'ankle' -- 'any body joint', (53) 'ear' → 'body side' (hip, shoulder, a body side projection). In fact, most instances of

multiple independant associations within one subfield occur for
the body subfield. In addition to the above, the following cases
occur: (9) 'at sole/palm' → 'ankle, penis' (any jointed place at
right angle to the vertical plane of body), (17) 'rim of head' →
'rim of any bodily circular structure (eye, ear, nostril),
(35) 'buttocks' → 'elbows'. All of these $B$ $B$ sequences of body
locations seem to follow one pattern: if a location salient for
body parts has location sites scattered over the body, then the
site most (vertically) peripheral will be salient. Two cases
require comment: (21) 'chest' → 'in front of chest (or person)'
is the only case of non-vertical peripherality. Clearly a point
near but not touching is more peripheral than one touching a
location site. The salience in (35) 'buttocks' → 'elbows' is
determined in relation to the ground-sitting posture of humans:
Seated thus, the buttocks are more peripheral, as the elbows do
not reach the ground.

$M$, on the other hand, must serve as subfield link in RLLS's
with two or more S.A.'s unless $M$ is already salient. Also, $M$
is most common as the S.A. when there is only a dependant S.A.
But $M$ never serves as final independant S.A. (unless a dependant
S.A. follows). In cases of multiple $M$ associations where $M$ is
salient, the generic site name is given first, and specific
instances are then given in no apparent organized sequence:
(59) 'between layers' → 'blanket layers, book pages, clothing
layers'; (71) 'on fabric' → 'clothes, mats'. Where $M$ is not
salient, a non-organized sequence of man-made locations may
occur: (35) 'bottom' $B$ → 'cup bottom, blunt pencil end'; (42)
'point' $B$ → 'wharf, pencil point'.

$N$ locations are most restricted in association. When salient,
they constitute the subfield with the highest proportion of RLLS's
with no S.A.'s. An $N$-salient RLLS with S.A. must have $M$ as its
first S.A., and must not have just one independant association:
$M$ must serve as the link, either in dependant associations, or in
a series of independant associations. There is one case of a

multiple independant association for a nature location: (25) 'at
tree' → 'along river' → ... There is less independant multiple
association within the $M$ and $N$ subfields, and evidently no salience
organization within either of these subfields.

3.3 Of the set of 36 RLLS's with secondary associations, 24
have at least one dependant association. Examples of these are
given below. RLLS numbers from Chart 1 identify each suffix.

Chart 3: Dependant Associations

| No. | Suffix (First) | Salient Subfield | No. | Suffix (Added) | Salient Subfield | Gloss of Compound | Compound Subfield |
|---|---|---|---|---|---|---|---|
| 2 | -api $L$ | $N$ | 70 | -a·s | $M$ | on table | $M$ |
| 4 | -aqsi | $M$ | 24 | -$^c$is | $N$ | @ riverbank | $N$ |
| 5 | -p̓ič | $N$ | 42 | -'iḥta | $B$ | on nose | $B$ |
| 26 | -a·ʔaq | $B$ | 10 | -a·či·št | $N$ | @ sea side | $N$ |
| 44 | -'i·х̄a | $M$ | 7 | -aksuɫ | $B$ | @ lower lip | $B$ |
| 74 | -(w)ink | $B$ | | -$^c$iɫ$^{11}$ | $M/N$ | in corner (house) | $M$ |
| 35 | -'akх̄i | $B$ | | -$^c$iɫ | $M/N$ | in back of cave, inlet | $N$ |

In all 24 cases, the subfield for the suffix compound (both are
RLLS's) was the subfield of the final RLLS. Hence the dependant
association subfields of RLLS's are always the salient subfields
of the suffix which is added, and therefore may not necessarily
represent a subfield extension of the original RLLS.

3.4 The following rules seem to account for the RLLS pat-
terns of secondary association:
1. Any of three subfields, $B$, $M$, or $N$ may be salient.
2. $B$ dominates $N$: in a choice of $B$ or $N$, $B$ is chosen.
3. $M$ dominates as link: if the salient subfield is not $M$, then
the first of two associations will be $M$; $M$ may not be the final
independant association, unless a dependant association follows.
4. Dependant associations must follow all independant associ-
ations.

5. A third association is the remaining subfield, or dependant association.

These rules block the following sequences:

Rule 2   *NB, *MNB

Rule 3   *NM, *BM, *NBM, *BNM

Rule 4   *(Dep)X, *(Dep)XY, *X(Dep)Y, *(Dep)XYZ, *X(Dep)YZ, *XY(Dep)Z

Rule 5   *BMM, *BMB, *BNN, *BNB, *MBB, *MBM, *MNN, *MNM, *NBB,
         *NBN, *NMM, *NMN.

They predict the following sequences: B, M, N, BN, MB, BMN, MBN, NMB, B(Dep), M(Dep), N(Dep), BM(Dep), NM(Dep), MB(Dep), BMN(Dep), MBN(Dep), NMB(Dep).

Whereas independant S.A.'s were all extended to closure (the subject confirmed that the RLLS's could be employed in no further subfields), dependant S.A.'s were not. It is not clear whether RLLS's have idiosyncratic dependant S.A. patterns, or whether all RLLS's with dependant S.A.'s have them for all three subfields.[12] This problem awaits further research.

4.1   This section examines possible predictions of subfield dominance. Section 3.4 demonstrated that given a pair of independent subfields, the salient subfield can be predicted, B for {B,N} and M for {B,M}. Given two independant subfield S.A.'s plus a dependant S.A., the salient subfield can be predicted for {M,N,(Dep)} (it will be N), but not for {B,M(Dep)}. The BM(Dep) suffixes are (26) -a·ʔaq 'at side', (57) -cpa· 'on, near side'; the MB(Dep) suffixes are (4) -aqsi 'at edge (vessal opening), (20) -ʾaqƛ 'in vessal', (52) -ḥsńuƚ 'between layers (man-made)'.

Given all three subfields as independant associations, any of the three may serve as salient. BMN or BMN(Dep) suffixes are (9) -ʔa·čuƚ 'at right-angled projection', (11) -qi· 'at top', (17) -(w)i·c 'at rim of round thing', (35) -ʾakλi 'at bottom', (42) -ʾiḥta 'at point', (44) -ʾi·ƛ̓a 'below', (56) -cu·t 'at the side', (64) -ʾapuƚa 'underneath'. MBN suffixes are (33) -(c)sitk 'at inside top of vessal', (58) -ču· 'in vessal', (60) -ʾa·qsta

'within, amongst', (70) -a·s 'on surface. NMB or NMB(Dep) suffixes are (25) -a·ńuƚ 'at long object', (73) -(c)swi· 'through, surrounding'. Although no absolute predictive rule can account for subfield saliency among three independant S.A.'s, one can observe that the cardinal locations for a three-dimensional figure (top, bottom, front, back, side) tend to be B-salient, and that locations within an enclosure tend to be M-salient.

4.2   A second question concerns whether an RLLS will have S.A.'s, and whether they will be independant or dependant. Such a prediction *is* possible for N-salient suffixes. RLLS's denoting general land or sea places, not geometrically definable[13] -- on or under water, offshore, at beach, rocks or ground -- have no S.A., whereas those denoting a delimited site -- hilltop, tree, cliff, protected bay, between two rocks -- which is part of a general N-salient location and geometrically definable, *do* have S.A.'s, those denoting the most delimited -- tree, rock -- having *independant* S.A.'s.

Prediction of association potential for M-salient suffixes is not as straight-forward. M-salient suffixes refer largely to location sites relating to an *enclosure*. If a suffix's enclosure site is not sufficiently defined by geometric configuration -- at surface of liquid in vessal, at wall, in bow, on roof, at foot of bed, at inside of wall -- but must be further specified for vessal type, e.g. pot/bowl/cup, house, canoe etc., then such a suffix has no associations. If, however, a suffix's location site is sufficiently defined by geometric configuration, or is at least appropriate for more than one type of man-made object -- at edge of opening on vessal, in open vessal, in closed vessal, inside top of convex vessal -- then that suffix will have secondary associations (independant as well as dependant).

Prediction of association potential for B-salient suffixes parallels that of M-salient suffixes. An RLLS denoting one

specific body part location -- ear, shoulder -- has no S.A.'s, but
one denoting a general spatial configuration found at different
body part location -- at right-angled projection, rim of round
thing, bottom, point -- or found at a point adjacent to but not
touching the body -- at crotch (between legs), below (chin), near
the side, underneath (crotch, between legs) -- has independant
secondary associations.

In summary:

1. An RLLS location adjacent to but *not touching* the subfield
referent (e.g. body, object) will have independant S.A.'s, or
occasionally only dependant S.A.'s.[14]

2. An RLLS location not on or near a *discrete* object (body, man-
made implement, tree, rock) has no independant S.A.'s; a semi-
discrete location (hilltop, bay) has only dependant associations.

3. An RLLS location which is composed of *sub-locations* denoted by
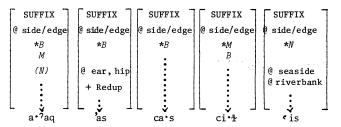RLLS's (e.g. -(č)it 'at the body') has no S.A.'s.[15]

4. An RLLS location which is geometrically definable tends to have
S.A.'s, whereas one which is not geometrically definable tends to
not have S.A.'s.[16]

4.3 A third question concerns whether subfield salience cor-
relates with the particular geometric configuration defining an
RLLS's location site. A given configuration may be denoted by
several RLLS's, with different salient subfield affiliations.

Chart 4: Configuration Saliency[17]

| Configuration | B-Salient | M-Salient | N-Salient |
|---|---|---|---|
| on top | -qi• BMN | -a•s MBN | -p̓ic̓(a) N(M)(B) |
| between | -(c)spuqx̣i BN | -ḥsn̓uɬ M(B)(N) | -(c)swi• NMB |
| enclosure | -iyuqx̣ BN | - ̓aqx̣ MB(B)(N) | [-(c)stu̓ N(M)(N)] |
| | -cuqʷa B | -c̓u• MBN | |
| | | -'ahs MB | |
| extension | -ʔa•c̓uɬ BMN(N) | | -p̓ic̓ NM(B) |
| | -qu•ɬ BB | | |
| side/edge | -a•ʔaq BM(N) | -ci•ɬ MB | [-u•č N] |
| | -ca•s B | | [-ᶜis N] |

5.1 To account for a RLLS's association potential, its lexi-
cal entry would have to include a core gloss, usually an abstract
geometric configuration, plus salient subfield, plus, optionally,
additional specification (e.g. 'at the bed') and/or association
and collocation propensities. One spatial configuration can be
represented by different lexemes with different subfield patterns:

| SUFFIX | SUFFIX | SUFFIX | SUFFIX | SUFFIX |
|---|---|---|---|---|
| @ side/edge | @ side/edge | @ side/edge | @ side/edge | @ side/edge |
| *B | *B | *B | *M | *N |
| M | @ ear, hip | ⋮ | B | @ seaside |
| (N) | + Redup | | ⋮ | @ riverbank |
| ⋮ | | | | ⋮ |
| ↓ | ↓ | ↓ | ↓ | ↓ |
| a•ʔaq | ̓as | ca•s | ci•ɬ | ᶜis |

The starred subfield is salient, and dependant subfields are in
parentheses. A given spatial configuration or a given salient
subfield cannot govern an RLLS's subfield pattern. Hence it must
be entered in the lexicon.

These entries predict that -a•ʔaq and -ci•ɬ can both refer to
a M or B side/edge when contextually-defined, but refer to B and M
respectively when not contextually-defined, e.g. when affixed to
hiɬ- 'there'.

5.2 The generation and interpretation of RLLS compounds is
in part a function of RLLS subfield patterns. For example,
consider the generation of 'at the seaside'. As a general location,
the word will have hiɬ- 'there' as root and N as dominant subfield.
The location-denoting RLLS will be last (and dominant), and pre-
ceding suffixes will denote location only with respect to a spatio-
geometric configuration. A preceding RLLS will be *dependant*, and
therefore must have a dependant subfield association equal to the
salient subfield of the terminal RLLS. Independant S.A.'s of non-
terminal RLLS's are *ignored*. However, additional specifications
are not, and in fact, they block an RLLS from being non-terminal.

These rules account for the grammaticality of /hił-a·ʔaq-a·či·št/
'there-at side *BM(N)*-at sea *N*', and the ungrammaticality of
*/hił-a·či·št-a·ʔaq/ 'there-at sea *N*-at side *BM(N)*',
*/hił-ca·s-a·či·št/ 'there-at side *B*-at sea *N*', and
*/hił-ᶜis-a·či·št/ 'there-at seaside *N*-at sea *N*'.[18]

Suffixes with no dependant S.A.'s are never non-terminal in a
sequence of RLLS's. This is confirmed for *N*-salient suffixes,
which are largely non-associational and must dominate the subfield
affiliation of an RLLS compound[19], e.g. -ᶜis *N* 'at the seaside,
beach'. It is less confirmed for *M*- and *B*-salient RLLS's.

5.3 One feature of RLLS's which influences the kinds of
RLLS compounds which occur is the spatio-geometric configuration.
Certain spatial configurations are strongly associated with a
certain subfield saliency: locations at a convergence (angle,
edge, side, boundary of enclosure), a projection, or one surface
of a three-dimensional cubic-type solid (front, back, top, bottom,
side) are denoted by *B*-salient RLLS's; locations in or at an
enclosure (either a vessal, or a group of discrete objects, as in
'within, between, among') tend to be denoted by *M*-salient RLLS's[20].
The absence of a defining spatial configuration, or its supple-
mentation by specific denotation, as in 'at the foot', is asso-
ciated especially with *N*-salient RLLS's (and also with *B*-salient
ones to a lesser extent). One can predict that *B*-salient RLLS's
denoting locations at convergences, projections or on 'cubic'
surfaces, and *M*-salient RLLS's denoting locations at or in en-
closures will tend to have dependant S.A.'s, allowing these spatio-
geometric configurations to be specified for *any* subfield location
in an RLLS compound. On the other hand, *N*-salient RLLS's will
rarely have dependant S.A.'s.

Although all three subfields are structured as 'part-of'
rather than 'kind-of' taxonomies (e.g. a botanical one)[21] and are
not discretely compartmentalized (no clear boundaries between
shoulder and arm, lip and inside of vessal, etc.), the nature
subfield is especially resistant to compartmentalization.

Boundaries between water and land, tree and land, hill and plain,
etc., are vague and *subject to change*. This in part accounts for
the *N*-salient RLLS's' lack of secondary associations.

5.4 One might ask: are the subfield associations of RLLS's
metaphorical extensions? A metaphor is understood as a predicate
of equivalence or comparison (unassociated with a particular part
of speech; c.f. Ricoeur, 1975:62) in which lexemes with conflict-
ing literal (central) and marginal ranges of reference are juxta-
posed. The metaphor is defined by this conflict and by the
linguistic context (Mooij, 1976:26). Semantic interpretation
requires the cancellation of certain semantic features of the
metaphor's lexemes (Cohen, 1979:69-73). Semantic modification is
less of a one-way or monistic process (Beardsley, 1972:181) and is
more of a two-way or interactionist process (Tyler, 1978:331), but
is both. A metaphor is not deviant or parasitic with respect to
language (Ortony, 1979:2)[22], but is an essential creative and
novel linguistic process and object. Once used, it is lexicalized
as a dead metaphor, usually as a secondary entry for a lexical item.

The presence of different morphemes denoting the same spatial
configuration but having different salient subfields, with or
without S.A.'s, suggests that Nootkan RLLS extensions were histor-
ically metaphorical, but are now lexicalized. For example, the
suffix -a·ʔaq *BM(N)* 'at the side' would have originally been
restricted to body locations 'at the side of the body', and would
have been extended metaphorically to include man-made object
locations, perhaps only in the context of a specified man-made
location at first : hiła·ʔaq č'apic 'at the side of a canoe'.
The extension can be formalized as

$$[-ci·ł \ M, \ -a·ʔaq \ B] \xrightarrow{\text{METAPHOR}} -a·ʔaq \ M$$
$$\text{side} \quad \text{side}$$

and would eventually be grammatical without reference to a speci-
fied object: hiła·ʔaq 'at side of object, e.g. tabletop'. At some
point, the gloss of -a·ʔaq was also extended to denote sides of
nature locations, but only when the immediate (suffix) context was

a nature location: hił-a·ʔaq-ačišt 'at the seaside'. *N* is still a dependant S.A. for -a·ʔaq.

In both independant and dependant S.A. types there is a covert comparison *predicate* (the side of the body is like the side of an object or the seaside), with a *juxtaposition* of morphemes with different salient subfields (*B-M* in 'side-of canoe' and *B-N* in 'side-of sea'), a *loss*[23] of the subfield characteristic of the subordinate location ('side (*B → ∅*) of canoe *M*', 'side (*B → ∅*) of sea *N*') which results in a semantic modification, not of the dominant location ('canoe *M*', 'sea *N*'), but of the subordinate (spatio-geometric) location, resulting in the entering of a new domain, or at least a new part of the original domain.[24] Mooij (1976:169) has characterized metaphors as the suppression and emphasis of features of a principle subject under the influence of a subsidiary subject. By this definition, RLLS S.A.'s are metaphors, albeit dead ones, which extend the range of location morphemes in a fairly principled way. The process of metaphor could make future new extensions as well. Metaphor, then, is crucial in Nootka word-formation, in the orga nization of association choices for multiply-suffixed location words, and is hence a semantic process of much greater use in language than only in certain deviant collocations of words.

6.1 The organization of RLLS's supports *field theory* (c.f. Miller, 1968:64-87), a model in which a language is seen as a structuring matrix of concepts or lexemes, each defined by other concepts or lexemes found in the language's lexicon,[25] and by the contexts in which it is used. Similarly, the range of reference of Nootka RLLS's is partly a function of the range of reference of other RLLS locations, and secondly, the ranges of the subfields themselves -- -(č)it 'at the body', -'as 'outside' (including -'as 'at ground (land)' and -ᶜis 'at beach, seaward') and -ᶜił 'at an enclosure' (most enclosures being *M*-salient: canoes, boxes, houses, cups etc.) -- are defined by the ranges of extension and the *limits* of extension of all the RLLS's.[26]

However, it must be emphasized that the Nootka location extension system is not simply a taxonomy of discrete subsets, but is a generative system in which an inescapable vagueness of domain boundaries (e.g. a doorway as *N* or *M*, a mouth used as a vessal as *B* or *M*, a pole as *M* versus a tree as *N*, a non-human body part as *B* or *N*), part of the 'limited sloppiness' inherant in language (Weinreich, 1966:190), *makes possible* the linguistic interaction, overlap and extension of these location categories which are defined perhaps only within the linguistic system.

6.2 Metaphor (living or dead) is a process vital for establishing links between different categories of experience and knowledge. Although such links often occur within the non-linguistic cognitive component, some links (such as the Nootka location extensions) occur within the linguistic component of one's knowledge of the world, i.e. the lexicon. These extensions result in a certain *ambiguity* of meaning for RLLS's, an ambiguity useful in the establishing of new linguistic relations. This mapping of one domain onto another establishes metaphorical relations between the most immediate human experience of location (the body) and other location domains. Levi-Strauss (1966:93) used the term *bricolage* to denote the establishing of homologies between domains of the world, especially between a domain removed from human experience, such as nature (including geographical, botanical or totemic members), and one closer to human experience, such as a kinship or class system, body parts or technology, in order to account for and to reinforce the natural and social orders perceived. Bricolage can be covert or overt. Even covert linguistic categories can be of great taxonomic importance (Berlin, 1968). The location system in Nootka appears to be a covert system of bricolage, of homologies based on logical similarities of geometric configuration,[27] with body as the archtypical location, and consisting of an interacting taxonomy of place, with a linguistic-cultural division of locations into those of the body, man-made objects and nature, the body linked to nature through

the medium of man-made objects. This taxonomy is important in the lexicon: RLLS's which are *B*-salient or *M*-salient are much more likely to have associations than *N*-salient ones, suggesting a binary classification of immediate human-oriented locations (*B*,*M*) versus more alien nature-oriented ones (*N*). This would help account for the association of *B* and of *M* to *M* and *B* respectively, before gaining a *N* association, and for the common association of both *M* and *B* with an *N*-salient location.

Such a homology of place is not restricted to Nootka. English is rich in body → nature extensions (foot of the mountain, head of inlet); Tzeltal and Salish appear to be rich in body → man-made extensions[28]; Alpine German (Miller, 1968:81) is rich in both body → nature and man-made → nature location extensions. Such differences suggest that particular location extensions are learned as part of a cultural repository of possible homologies, metaphors and associations (Morgan, 1979:143), although the process or strategy of metaphor may be universal. A location system such as that in Nootka suggests that when language creates a subcategorization of reality, it does not necessarily fragment reality as Laszlo (1976:257) suggests, but can build or confirm relations by the *integration* of the categories defined within a network of association and homology. Similar integration is expected within other Nootka domains.[29]

## NOTES

1. This research was funded by the Melville and Elizabeth Jacobs Research Fund, and benefited from advice given by George Louie (consultant), Thom Hess and Barry Carlson. Ahousat Nootka, spoken at Flores Island, is a central dialect of Nootka, one of the Southern Wakashan languages. The phoneme inventory is /a a· c č č̓ h ḥ i i· k k̓ kʷ k̓ʷ ł ƛ ƛ̓ m m̓ n n̓ p p̓ q qʷ s š t t̓ u u· w w̓ x xʷ x̣ x̣ʷ y y̓ ʔ ʕ/. Nootka words are given in surface phonemic transcription; individual morphemes are in underlying phonemic transcription. Parenthesized consonants occur only following vowels; parenthesized vowels occur only word-finally.

2. A stem is a root plus non-inflectional suffixes forming a unit to which inflectional suffixes are added.

3. More if one considers that almost all suffix compounds with a bound element are RLLS's.

4. In the *colour* lexical field, *red* is a subfield and is itself composed of terms such as *vermilion, magenta* etc., in English.

5. Out of 80 originally chosen, four were found to be suffix compounds, one was an action suffix, one was volunteered by the consultant. All have etymons in P.Alberni and Kyuquot Nootka. A suffix beginning with ˀ causes the previous underlying fricative to surface as a glottalized resonant (e.g. /ł/ → y̓); a suffix beginning with ᶜ causes the previous underlying fricative to surface as a resonant (e.g. /ł/ → y).

6. The parenthesized numbers are the RLLS numbers in Chart 1. The surface shapes of hin- and ʔam- are {hin- ~ hit- ~ hita-} and {ʔam- ~ ʔama- ~ ʔap- ~ ʔim-} respectively.

7. Proximal cases are (8,11,19,12,13,21,26,27); distal cases are (2,22,23,24).

8. This is supported by the drawings, which were applicable both to an RLLS's gloss and to its primary association.

9. This system is confirmed by association constraints and patterns discussed below in section 3.2 and following.

10. Suffixes marked as *L* or *R* cause the root vowel to lengthen or the root to reduplicate respectively. A subfield followed by $^2$ indicates a sequence of that subfield. @ signifies 'at'.

11. /-ᶜił/ is a locative meaning 'at an enclosure'. It is the only RLLS found with a double saliency: *M and N* (although *M* is probably dominant; c.f. section 6.1).

12. The dependant S.A. patterns in this study suggest that an RLLS with no independant S.A.'s can have any subfield as a single dependant S.A. or two dependant S.A.'s, subject to the association rules -- hence, *N(B), *M(N) by rule 2; *B(B)(M), *B(N)(B), *N(B)(M),

*N(N)(M) by rule 3. An RLLS with one independant S.A. tends to have the remaining subfield as dependant S.A. (BM(N), MB(N), NM(B) -- by rule 5?) or the salient subfield (MB(M)). An RLLS with two independant S.A.'s tends to have the final independant subfield as the dependant subfield, suggesting that the dependant subfield given was simply triggered by the last independant subfield and did not represent the full range of potential dependant S.A.'s.

13. I.e. easily described in terms of a geometric configuration such as an enclosure, a plane of a three-dimensional object, a circle, projection, angle, or a group of objects. One exception is -api L 'up in air' which, contrary to prediction, has a S.A.

14. The cases with dependant S.A.'s are (2,13,38,74); the cases with no S.A.'s are (2.,65).

15. Cases are (6,10,23,41,68).

16. Some geometrically definable RLLS's have no S.A.'s, e.g. -(q)ḥta B 'at the foot' (parallel to -?aċuɬ 'at right-angled projection'). Most of these are RLLS's denoting an M-salient location limited to one surface-type (e.g. fabric) or vessal-type (e.g. canoe, house etc.) as in cases (28,37,47,62,71,72).

17. Suffixes in square brackets have less support for being placed in the chart.

18. The ungrammaticality of the last word, with - is as a dependant suffix, is good evidence that dependant associations must be entered in the lexicon. -ᶜ is has no dependant associations and must occur as the final RLLS in a sequence of RLLS's.

19. Cases are (6,10,14,22,23,24,40,45,48,49,55).

20. There are non-associational B-salient RLLS's denoting 'in an enclosure': -cuqʷa 'in the mouth', -iyuqʎ 'in throat, up inlet'.

21. It is not clear whether N- and M-salient subfields are transitive or not (c.f. McClure, 1978).

22. Nor does it necessarily morror a lexeme's semantic interpretation (c.f. Ricoeur, 1975:143).

23. The original metaphorical extension of a lexeme would be addition (of a subfield S.A.).

24. In cases where the RLLS has no S.A.'s other than an independant S.A. of the same subfield, e.g. -'as R 'at side of body (ear) -→ 'at hip, shoulder'. Such association within the same domain occurs in Tzeltal, e.g. 'anus' - 'mouth' (Stross, 1975:305).

25. This is, however, not a model of cognitive organization.

26. This differs from Sapir's view of the role of -ᶜiɬ and -ᶜis (Sapir, 1938:257).

27. Crick (1976:48) claims all such homologies are of the same type of 'logical' thinking as 'scientific' taxonomies.

28. Saunders & Davis (1975) for Salish; Stross (1975), Tzeltal.

29. Some areas for future research include: the interaction of governing suffixes with restrictive locatives, presence of a subfield taxonomy for action restrictive LS's, correlation between RLLS and root denoting the nominal for that location, structure of layered derivations, semantic interpretation of RLLS's in contexts other than hiɬ- and in compounds of more than two RLLS's, etc.

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