ON THE SEMANTICALLY INTERLOCKING NATURE OF THE KASHAYA VERB PREFIXES: THE CASE OF SI- 'WATER, DRINK, TONGUE'

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The Kashaya language has a set of twenty actively used verbal prefixes of the type often called instrumental. The semantic range certainly includes inanimate instruments, and in many contexts the prefix would be translated into English by instrumental phrases -- 'with a nonlong object (rock)', 'with an instrument with a handle (paintbrush)', etc. Many of the prefixes also refer to body parts and these too can often be translated by an instrumental phrase -- 'with the finger', 'with the foot', etc. Some prefixes refer to natural forces and, although these may sometimes be rendered by an instrumental phrase -- 'by heat', 'by gravity', etc. -- there is a syntactic difference in Kashaya, for there is usually no expressible agent to control such an "instrument". With descriptive verb roots, the prefix may indicate the object being described. With such a verb, phi- might be 'to be (big-)eyed'; with an active verb root, the translation might be 'to (examine) with the eyes'. The types of meaning range even further, and the necessity of this can be understood from the situation that two-thirds of the verb roots in Kashaya are of a type that takes these prefixes and that then the root must occur with one, and only one, of the set of mutually exclusive prefixes. Many of the prefixing verb roots are of general meanings, like -hrat- 'try, test, investigate'; the method of 'trying' is indicated by the prefix, and since almost every conceivable action must be designated by one or another of only twenty prefixes, each prefix has a quite wide semantic domain.

In Table 1 (at the end of this paper), there is given a list of the twenty productive verbal prefixes together with sets of glosses that indicate in simplified fashion the semantic range of each. The table is presented here simply to make the information more widely available; the discussion below mentions only a few and will come to focus on the one prefix si-.

Now, if one were constructing an artificial language and decided to divide all possible instruments or forces into twenty boxes, a portion of the essay might look like Figure 1.
In such an attempt, there would be, of course, some complexities and uncertainties, but the result would be simple and sharply defined relative to the realities of a natural language. Now, it happens Kashaya has prefixes that in general fit the labeled boxes of Figure 1, but not in such an orderly way; there are intrusions of one prefix into the neatly delimited box of another such that a closer approximation of the reality in Kashaya would be that in Figure 2.
The prefix pʰu- probably has the fewest semantic complications of any of the Kashaya prefixes. It is principally confined to denoting actions of moving air, that is 'wind', and is often best rendered by 'blow', whether the blowing is done by the wind or by an animate being expelling breath. However, pʰu- does have one projection beyond the simple confines of this definition; it also serves as the causative counterpart of mu- in the meaning 'burn'. Within a complex semantic domain dealing with various manifestations of energy (kinetic, thermal, photo, psychic), prominent applications of mu- include 'heat, fire, burn'. For example, with the verb root -ʔku- 'finish', a full verb mu-ʔku-w would often be translatable as '(The house) to finish burning', with no agent being syntactically expressible other than the natural force fire. But the verb pʰu-ʔku-w would be applicable for '(Someone) to finish burning (the house)' and an agent could be expressed in the sentence. There is also a freely used Causative suffix in the language, -ʔqæ-, so that it is also possible to say mu-ʔku-ʔqæ-w as a close equivalent of pʰu-ʔku-w in a context referring to burning. However, in other contexts the meanings do not overlap, so that pʰuʔkw also applies to 'to finish blowing' (but not muʔkwqaw) and muʔkwqaw serves for 'to cause a nonlong object to finish moving' (but not pʰuʔkw).

The semantic domain of pʰu-, in turn, suffers encroachment from the use of si- when the movement of the air is very light and gentle. This I surmise to be a metaphoric extension of one of the common applications of si- 'liquid, etc.', as will be described later. The box for mu- is also penetrated by the use of si- in certain verbs denoting a flash or momentaneous light. In fact, a diagram like that in Figure 2 is altogether too simple for the actual situation in Kashaya. That situation is so complex, with each prefix having semantic extensions into what would seem to be the core space of several other prefixes, that the total configuration cannot be illustrated in a single two- or three-dimensional diagram, nor adequately described in less than a monograph. It is only by reducing the scope of discussion that a two-dimensional diagram can be made to serve. In this exposition, the scope has been reduced to concentrate on the one prefix si-, in order to be able to present the semantic applications of that one prefix in considerable detail.

If, in the early course of a linguistic investigation of Kashaya (or of any of the Pomo languages for that matter), a collection is made of verbs beginning with si-, which repeatedly have the meanings 'sail', 'rain', and 'taste', it might be perceived that si- is segmentable but it also might appear on the basis of these meanings that there are three homophonous prefixes. It is only as the evidence accumulates
that connecting links are found so that a more contiguous semantic domain can be gradually filled. On the basis of several hundred examples it appears to me that the various meanings cluster in two areas which are linked to each other; thus I think of the semantic domain of si- as being dumbbell-shaped. A similar relationship between two (sometimes more) semantic clusters is repeated with other prefixes and, as is the case with si-, one cluster involves a body part and the other something outside the body but associatable in some fashion with that body part. In some of the other cases this might be a similarly shaped instrument; with si-, the association is with an elemental substance. With si-, the body part is the TONGUE, the elemental substance is WATER. An accurate and more general term would be LIQUID, as si- encompasses all liquids; but, of course, all liquids known aboriginally to the Kashaya consisted primarily of water, whether rain, ocean, blood, milk, juice, or sap (of trees).

The dumbbell shape of the semantic domain of si- is roughly depicted in Figure 3, with many indentations and protruberances. Not every action that involves WATER or the TONGUE can be denoted with si-; these cases are represented as indentations or incursions of other prefixes into the smooth outlines of the core area of si-, as simply defined. And si-, for its part, extends into what would seem to be the core areas of several other prefixes. An attempt was made in Figure 3 to represent semantic extensions as narrow, or narrow-stemmed when they were particularized or it was relatively difficult for me to see a connection with a core meaning (for example, si- 'flash') and as broader, the clearer or more elaborated the extension (for example, 'unsteady: wobble, dizzy'). All of the usages inscribed in Figure 3 are multiply attested.

A rather full documentation (but still only a minor portion of the corpus) of the various applications of si- now follows. Those who do not need such detail can skim or skip this part without damage to an understanding of the final sections of the paper. The examples are grouped by type of application -- initially by properties of WATER -- these various particularizations are, of course, brought out in conjunction with the verb root, and sometimes by a wider context, and do not lie entirely in the prefix.

The examples are cited phonemically (except for some segmented forms); the complex morphophonemic alternations will not be detailed. Most single word examples are in the Absolutive, the citation form, with a suffix which is -w after vowels, -u after -d-, -? after resonants, and -Ø after other consonants. Stem-final plain stops all change to -w before word-boundary. Another common suffix, indicating a momentaneous act, or its inception, is -c- after vowels and -ci- after consonants, with complications. Reduplication, of either one or two syllables, usually indicates iteration. Complexly alternating vowel length is represented by o.
WATER

1. The physical force of the movement of water has an effect. This includes falling as rain, swirling, being agitated, and minor lapping at the shores of a pond or stream. Certain types of water movement are denoted by other prefixes and are indicated in Figure 3 as encroachments into the domain of water; namely, cu- (usually for NONLONG OBJECTS) for flowing water (either of a river or from a hose), da- (HAND) for waves (larger than minor lapping), pa- (LONG OBJECT ACTING SIDEWAYS) for breakers, șa- (MESH) for leaking or draining.

siq̓ahaw '(rainstorm) to knock off (nuts) from (a tree)'. -q̓a̩- 'detach many'.
siʔtelciw '(grass) to be parted by the force of falling rain'. -ʔtel- 'part'.
ʃahku si-hloʔ-ci-wi-ye to q̓a̩-woʔto =wi leg flop 1p-obj. Evid. me water-rolled with 'My legs collapsed in the roiled water.'
siʔcolhoiwiw '(riverbank) undercut by lapping water to collapse leaving a hole or cave'. -ʔcolh- 'make a hole'.

2. Wetness; the property of water that causes it to penetrate and diffuse through certain substances.

sihcow 'to get wet'. The most common word for 'wet'. -hco- occurs uniquely with this prefix si-.
siʔúʔsuʔ 'to get soaking wet'. Again the root occurs uniquely with this one prefix.
siʔduwaʔlaw 'water to soak down through (a substance)'. -aʔla- 'down'; -ʔdu- 'penetrate a barrier'. Cf. 
muʔduwaʔlaw 'heat to diffuse down through (the roof)'.
ʔihce ʔnati si - hthoʔh-ma - ʔkhe =thin mu-1 buʔaqə ʔaʔa rain even penetrate Future not that-obj. bear skin 'Even rain will not penetrate that bear skin.'

3. Water or solutions may stain or discolor.

siʔʔew 'water to stain or mark'. -ʔe- 'make a mark'.
siʔkahkhaʔ 'to be stained here and there by dripping water'. -kha- when reduplicated, plus -c-, means 'stain'.
sicow 'to be transformed by water, turned a different (color)'. -c̓o- 'transform'.

4. Water softens and weakens, causing some substances to distort, disintegrate, disperse, or dissolve.

siʔwaʔciw '(cardboard box) to flatten when wet'. -waʔ- 'flatten'.
siʔhthaw '(paper bag) to tear open when wet'. -hth-a- 'open'.

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heye do?lo mito si - kél? - ye' -lahqa =wi
hair curly your straighten Evid. water in
'Your curly hair is straightening in the water.'
sinθhil? '(sweater) to stretch when wet'. -hθhil- 'stretch'.
silo?sihqaw 'to soften (a scab), to ease (a pain), by soaking in water'. -lo-ci- 'soften', -hqa- Causative.
sihko? '(soap) to dissolve in water'. -hko- 'become nothing'.
sihsö? 'to dissolve in water, to vanish into thin air (not just into water)'. The only other occurrence of hso- is in mohso? 'to melt'.
sišaw? '(acorn flour) to be leached'. Unique occurrence of -ša-.
sišem? 'leaching to be proceeding too slowly'. -iem- 'process go too slow'.

5. Being wet causes objects to adhere, cling, stick, or become compact.

siša'si? 'to wet the hair to hold it off the forehead'. -sa's- 'bare the forehead', -ıd- Reflexive.
clothes you-obj. stick-against Evid.
'Your clothes are clinging to you wet.'
siwol? '(pine pitch) to be thin and sticky'. -wo'l- usually means 'be soft, yielding'.
sipa'tay? 'wet (cloth) to adhere to'. -pa'ṭ- 'cover', -a'ay- 'against'. The word is extended in application to fabrics which adhere, whether wet or not. A further derivative is sipa'ṭay'li 'adhesive tape', literally 'adherers'.
siḥpanhciw? '(ground) to become compacted from being wet'. -hpang- 'pack down'.

6. Being wet causes objects to swell, sometimes entailing other changes.

siṃoš '(drowned animal's belly) to bloat in water'. -po'oš- 'swell, blister'.
siśqacćiw? 'from being wet (board) to swell and fit tight'. -cać- 'tight'.
siścaba? '(seed) when soaked to swell and crack apart'. -caba-c- 'crack apart'.
siḳaṭ̠hi? '(hull of nut) to crack open'. -kaṭ̠hi-c- 'crack open'. In application, this word is used of some hulls cracking open in the normal ripening process, not just when wet.
7. Water has buoyancy; some things float in it.

siʔdimʔ 'one to float in place'. -ʔdi- 'act with one object', -m- Essive 'in one place'.
side'du 'one (boat) to sail along'. -de-, allomorph of -ʔdi- above, -'d- 'move along'.
siʔbomʔ 'group (of ducks) to float together in one place'. -ʔbo- 'group to do'. In a metaphorical extension, siʔbomʔ also applies to a group of dancers performing as if floating in place.
sibo'hiʔ '(school of fish) to rise to the surface together', 'dance ensemble leap up together'. -bo-, allomorph of -ʔbo- above, -'biʔ- 'move up'.

8. Water yields; some things sink in it.

siʔulciʔ 'to duck oneself into water'. -ʔul- 'disappear into'. The final -ʔ comes from -ʔ- Reflexive.
sipilʔ 'to be fine-textured'. Of sift or acorn flour selected by letting the coarser particles settle out first and taking the finer particles that settle out of suspension last. -pilʔ- 'fine, slick'.
sinamʔ 'to drown'. -nəm- 'cover over'. Although the meaning 'drown' does not necessarily follow from the sum of the parts 'be covered over with water', this particularized meaning 'drown' is common in cognate constructions in other Pomo languages.
sihpʰukutʰciʔ 'to sink slowly into water (or mud)'. -hpukt- 'enter something yielding'.

9. Wet surfaces are slippery.

siʔhastihqhaw 'to slip back and forth'. -hqa- 'move along a surface'.
siʔhayaʔmaw 'to slide across a slick surface'. -hqaʔ- 'move along a surface', -ma- 'across'.

10. One broad bulge from the WATER lobe of si- is labeled 'unsteady' (including 'wobble' and 'dizzy'). This area may have a partial metaphorical origin from the preceding concern with the slipperiness of wet surfaces. Because being drunk and dizziness are connected, there is that added link with si-, but the present 'unsteady' application has no necessary association with WATER or DRINK. This application cannot be said to be an encroachment on the semantic space of another prefix, because no other is clearly concerned with 'unsteadiness'. I could imagine that mu-, because it occurs in verbs for emotional states, might have taken on the 'dizzy' application, but it has not.
siʔt̚imʔ 'to stand unsteadily (like a baby)'. Most occurrences of -ʔt̚i- with other prefixes mean 'curl, roll, gather up'; -m- Essive 'in one place'.

siʔt̚it̚iʔ 'to stagger'. Same verb root as above.

ʔanáʔ 'ahca ʔthuʔul in, sikhóhkow. -hko- 'move loosely at so house old being point of attachment'. 'The house being so old, it is wobbling.'
sikoʔ 'to feel dizzy (from vertigo)'. -koʔi- 'spin, turn'.
sikuʔ 'to feel dizzy'. Other occurrences of the root -ku̯ʔt̚- with an associatable meaning are bakuʔ 'to have a ringing in the ears' and mikuʔ 'to hum'.

sikuʔtiʔ is formed with -iʔq- Reflexive added to the preceding verb; literally 'to dizzy oneself', it is the most common word for 'to get drunk'.

11. A second important bulge from the WATER lobe concerns the gaseous state and is labeled in Figure 3 'fog, air, breeze'. I believe it quite probable that this semantic area developed because air has several properties similar to those of water; those given above as 7 buoyant and 8 yielding. Additionally, the 'fog' meaning is appropriate because fog is damp. When air is moving lightly, si- is the preferred prefix with a limited number of roots, while phu- is the common prefix for ordinary wind.

sinaw 'fog'. -naʔ- 'cover, block'. This construction for 'fog' appears in several Pomo languages.

qaliʔ siʔulciʔ-yeʔ 'ʔihθiθ. up Evid. feather
'The feather disappeared up (into the fog, air, or sky).'
Note that siʔulciʔ was also given in 8 for 'duck oneself into water'.

sit̚uθew '(parachute) to spread open in the air'. -θeθ- 'spread'. Note that this is the appropriate form when the parachute opens because it is falling or moving through the air. If the wind blows it open, the verb is putθew. sit̚uθew also applies to opening in water.

sit̚eθcaʔlaw (snow) to settle down, (flock of birds with spread wings) to settle down'. -aθla- 'move down'.
sikilʔ 'to be fresh air or a light breeze'. -ki̯l- with most prefixes means 'swing, wave around'.
sikilqaw 'to fan the air lightly'. -qa- Causative.
sikhikwiw 'to be repeatedly or continually breezy'. -hki̯- reduplicated usually means 'swing' or 'tum', repeatedly.
12. A third bulge is labeled 'cut, sharp' and this I consider an encroachment into the domain of *ca-*, which is much the most common prefix for cutting and for acts with a knife or blade. The semantic specialization is that with *si-* the cut is quick, clean, and easy, and usually made with a very sharp instrument like a razor or scissors; with *ca-* it can be a hack job. This particularization of meaning is more difficult to relate to the semantic core of *si-*, although I could imagine it having arisen by likening the ease of the cut to the ease with which one can slice water. In any case, the meaning development is probably very old, predating the advent of razors and scissors, because it occurs in most Pomo languages, those both closely and distantly related. The prefix *qa-* 'with hard opposed forces' is also employed for cutting with scissors (but not a razor) because they have two blades in opposition to each other.

si?baw 'to slice open (meat) with something very sharp'; it is used especially for 'to cut out a pattern from cloth with scissors'. -?ba- 'break apart, crack open'.

siqâaw 'several to be cut off quick and clean with something really sharp'. -qâa- 'detach many'. Note this verb also appeared under 1. with a different particularization.

si - lâch - mela' -?a kâe taqâma.

misâdo Evid. I my dress

'I miscut (the material for) my dress.

si?bâco'co' 'to cut around the edges (of paper or cloth) with scissors'. -?bco- 'detach piece from the edge'.

13. A few verbs with *si-* are concerned with fire or light going out or being extinguished; in some instances the quenching agent may be water, but this is not necessarily so in most occurrences.

si?baw 'to cool off, light or fire to go out'. -?ba- 'break apart, crack open'. Cf si?baw under 12. above.

sîkalciw 'fire to burn down and cut'. With most other prefixes, -kâ- means 'open slightly'.

sîkalcihqaw 'to let a fire die down, to turn a light off'. -hqâ- Causative.

sihsim? '(water) to put a fire out'. -hsim- 'extinguish'.

14. A few verbs with *si-* are concerned with flashing light and this is marked in Figure 3 as an intrusion into the space of *mu-*. It is difficult to see how such a use could develop from the core meanings of *si-* except perhaps through the intermediary of the 'extinguish' meaning illustrated in 13 above -- in that case, the Kashaya emphasis is perhaps on the light going out and not that it goes on momentarily. There are very few examples and it is interesting to note that these verbs fail a test for the native speaker feeling
for what verbs are associatable with others beginning si-.
(The test is described below, following this section of examples.)

siła'ka·ti? '(searchlight or lighthouse) to be flashing'.
Cf. mulaka·ti? 'to be sparkling from rocks striking together'. The final syllable contains -i·c-
Reflexive.

sihla'ka·talaw was translated "see lights down in the valley
go out". This derivative contains the same verb root
as in the preceding example, but with the suffix
-a·la- 'down' instead of the Reflexive. That the
translation can shift from emphasis on the light(s)
going on momentarily to going off, provides evidence
that the applications in 13 and 14 are related.

siš'a·ma? '(lightning) to flash'. -šam- occurs uniquely
with si-.

siš'amasiš'a·ma? 'to flash and flash'.

15. Besides the preceding multiply attested applications
of si-, there are several unique uses belonging to the
WATER lobe.

qa·na· 'ahq'a écoute·ta? - 11 , 'ilamo balay si-hsokoth-wiy
so water 'dive - switch, nose blood spurt Evid.
'When [I] dived so much, [my] nose spat blood.'
The agent appears to be the pressure of the water.

ši·ba ści?cë·če? 'body is paralyzed'. -če- has a variety
body
of meanings; in a few constructions, when reduplicated,
it means 'misshapen'. The connection with WATER comes
about because paralysis is one of the punishments for
breaking the taboo against approaching water while
menstruating. sići?cë·če is also descriptive of a head
flattened in back, but this need not have come about
through breaking a water taboo or through any other
agency of water.

sići'li? 'to get smelly when wet (of dogs and some foods)'.
-co·l- occurs uniquely with this prefix.

siqam? '(water) to become clear'. -qam- occurs uniquely
with si-.
16. DRINK provides a link between the two major lobes of the semantic space of si-: DRINK is an act performed on WATER (and other liquids), and DRINK is an act performed by the TONGUE (in conjunction, of course, with other parts of the mouth and throat). There are an amazing number of verb constructs in Kashaya for which, in certain contexts, DRINK provides part of the translation. This comes about partly because there are many verb roots with an "aspeccual" type of meaning; the more "concrete" meaning is supplied by the prefix. A sampling follows.

si'kumi? 'to drink as much as one can'. -kum-1°c- 'do to one's limit', -1°c- Reflexive.
sihp'utay? 'to be unable to finish drinking'. -hp'ut-a°y- 'be too much to finish', -a°y- 'against'.
si?po?po? 'to drink to the last drop'. -po- , when reduplicated, means 'do to the last bit'.
to? =c° ?aná wí?no si - hqa -w in , šulam-?khe =thín. me Contrast so wine inured Abs. being sick Future not. 'As for me, being inured to drinking wine, [I] won't get sick.

si - ?féla - si - ?ta - yich - wíye' to. insufficient feel Incep. Evid. me

There is not enough to drink; I feel like drinking more.
si'ci° 'to drink several kinds of drinks'. -ci°t- 'mix, do one thing with another'.

17. The TONGUE is a sense organ, which can taste. In this use there remains a considerable element of the WATER meaning; si- is not applicable to all tasting done by the tongue but only to tasting of liquids and licked foods. The prefix qa- TEETH is employed for tasting chewed foods, and the prefix bi- LIPS for tasting foods eaten with a spoon. This division in usage does not mean that the Kashaya believe, for example, that the teeth do the actual sensing.

si?ya? 'to recognize a drink by its flavor'. -?ya°q- 'detect and recognize'.
sišudu 'a drink to taste strange'. -šu- 'be strange, unfamiliar, unrecognizable'.
sihqahqahaw 'to get a faint taste of a drink'. -hqha-, when reduplicated, means 'barely detect'.
si?nè'ci? 'to get used to the taste of a drink'.
-?nè'c-i'o- Reflexive.

ti?bahqa: ti'o'o si - htay'o- ba , do?di si - o?a - yi'- y 
blackberry sauce touch co-ref. good seem Incep. Evid.
'When [I] got a touch of the blackberry sauce, it tasted good.

18. The TONGUE can perform actively as an instrument. This 
application is far removed from the WATER node, as no liquid 
need be involved in the action. The most common translation 
is 'lick', but that is not always possible.

sibal? 'to be licking off (one's plate)'. -ba'o- 'to be 
-wiping'.

sibol? 'to be licking out a hollow (in an icecream cone)'. 
-bo'o- 'to be hollowing out'.

sisuli? '(cat) to be licking itself to make (its fur) smooth 
and shiny'. -sul- 'make smooth and shiny, -i'o- Reflexive.

sibeta'du 'to be testing with the tongue (whether there is 
a fishbone in the mouth)'. -bet- 'try to detect some-
thing unseen that is not known for sure to be present', 
-a'o- Durative.

sihsilhma? 'to get a sliver in the tongue'. -hsilh- 'get a 
sliver in', -ma- Essive 'in one place', -o'o- Reflexive.

si'dim? 'to hold (a lozenge) on the tongue'. -di- 'to act 
with or on one object', -m- Essive 'in one place'.

Note that this is the same verb given under 7. Various 
Directional suffixes can be added to form verbs mean-
ing 'to carry on the tongue' or 'to push with the tongue'
(in the direction specified). Such uses are normally 
less common than the 'sail' meaning under 7.

19. Another semantic area of si- is concerned with 'suction', 
and this application has a rather rich development because in 
Kashaya culture sucking out disease is a common method of 
treatment by Indian doctors. Curiously, in a few of the most 
common doctoring words, a parallel form with qa- TEETH is 
preferred to the one with si- (second example below); although, 
to my knowledge, no difference in method of sucking is 
intended. Although the meaning 'suck' undoubtedly arose 
because it is an activity done with the tongue, the applica-
tion is extended to include kissing, inhaling, smoking, and 
suction created by various devices.
si'rin\' to straighten with the tongue, to suck or lick to make (a wound) well'. -ht\'in- 'straighten, correct a defect'.

si'hi\' to suck out (a pain, disease, or other object)'.
-ch\'i\'t- 'extract, remove one thing from in another'.
qachi\' is the more usual doctoring word.

si'sal\' to suck juice from (an orange). -sa\'l- 'express liquid from a solid'.

si'tuthu\' to suck (a straw) so that it collapses in'.
-\'tuthu\'c- 'constrict'.

qapa šalal - am - qa\' mito. ciba\'=thi\'n si-hchi\'iw\'du\'ye\': your cheek bruise become Evid. your who not hurt. Evid.?
'Your cheek has turned black and blue. Did someone kiss you too hard?'

siq\'coli\' to suck up (soup into the mouth), to suck snot up (the nose), to inhale, to smoke'. -q\'hol- occurs uniquely with si-, -\'ol- Reflexive. ša\'ša siq\'coli\' ya?
'vacuum cleaner', literally 'dirt sucker'.

20. Another semantic area of si-, for what might be termed "paraphonation", is represented Figure 3 as a bulge into the domain of ba-, and slight intrusion into p\'hu-. The prefix for most sounds produced by the mouth, vocal cords, or musical instruments is ba-; si- is employed in certain instances when the sound is somewhat unusual, whether formed with the vocal cords or, more commonly, not. The first two examples provide a link with the meaning of 19., as the sounds denoted are produced by suction.

si\'q\'o\'t\'ow 'to make a series of ingressive, sucked alveolar t\'s. -\'t\'o- 'tap'.

siq\'oc\' to snort'. The only other occurrence of -q\'o\'t- is in miq\'oc\' 'to snort, to snore', where mi- is NOSE:

silusilu\' to confuse by fast talk'. -lu-, when reduplicated, means 'smear, blur'.

si\'le\'olow 'to sing (of meadowlark), to go tra-la-la, to speak fast and trippingly'. -\'lo-, when reduplicated means 'roll around, tangle'. Cf. ba\'le\'olow 'to talk broken, incorrectly, or in a strange language'.

si\'kisi\'kiw\' to giggle'. With most prefixes, -\'ki- means 'narrow down, cut almost through'.

sih\'ahk\'ahw 'to whisper, murmur'. This root occurs with only one other prefix: šuh\'ahk\'ahw 'to pant (cf dog)'.

sihq\'am\' to grunt, give the vocal rhythm in Kashaya singing, give the bass accompaniment in a musical ensemble, play the bass on a piano'. -hq\'am- occurs uniquely with si-.
sisu? 'to whistle with teeth and tongue or fingers and tongue'.
With other prefixes -sut- means 'scratch off the surface'.

For many of the examples in the preceding sections, the
coming together of prefix and verb root particularizes enough
of an image that any Kashaya speaker would come up with ap-
proximately the same translation; for other constructs there
is enough variability that a fuller context is needed to
focus the image. For example, in a peanut-rolling contest
side, du might evidently be 'to push along with the tongue',
but in other situations 'to sail along' would be the usual
interpretation.

There are a large number of verb roots in the language
with an "aspectual" meaning. Some have appeared at various
points among the examples; a few common ones are -hyeo-
'stop', -'ku- 'complete, finish', -hmuv - 'fall short of
completing', -mhmic - 'do absolutely completely, do to perfe-
tion'. Such verb roots appear with any of the 20 prefixes,
and then the prefix can take on, according to the context,
any of the meanings within its scope. Thus sihyew embraces
the meanings 'to stop sailing, drinking, licking, sucking,
etc.' As with the English word 'stop', the Kashaya word can
take a verbal complement to specify more precisely the action
that is being stopped: sida, sihyew 'to stop sucking juice
from (an orange)'. However, the Kashaya word sihyew is less
ambiguous than the English 'stop', because the use of the
prefix narrows down considerably the area of application.
As a result, the use of a complement is less often necessary
in Kashaya than in English.

Now, verbs such as sihyew can be used to test whether
the native speaker feels another verb beginning si-
contains the same prefix. Thus, I have asked if it is correct to say
siqham? sihyew for 'to stop giving the vocal rhythm in
Kashaya singing', and the answer was yes (although to me this
use was as far out from the core meanings as any example).
The other meanings given in Figure 3 have been tested in
this way and all were accepted as being in the purview of
sihyew, except for two: sihyew was totally denied as approp-
riate for any of the forms under 14, 'flashing light'. It
was waveringly denied for those forms under 11 concerned
with 'light air movement'.

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HISTORICAL COMMENTS

It is no accident that *si- was selected as the first of the prefixes to be given a detailed treatment. It complements, semantically and historically, the subjects of two other recent explorations: WATER (Oswalt 1975) and TONGUE (Oswalt 1977). A prefix *si- can be reconstructed for Proto-Pomo, as all seven daughter languages have regular reflexes with major elements of the meanings itemized herein. There are undoubtedly differences in the particularizations of use, which cannot be stated, for few of the Pomoan languages have had a deep probing of the semantic range of their prefixes.

The moderate number of Kashaya prefixes, twenty, which must encompass a universe of meaning, would favor the semantic extension of any one which was born with a limited range. One might liken a prefix to an amoeba; however small and limited at creation, it can grow and put out pseudopods, or metaphoric extensions. Some pseudopods may never grow further, or may be abandoned; others take hold and expand so that the location of the nucleus of the semantic protoplasm may shift, or it may even split. I am not aware of any convincing evidence within Pomoan that *si- originated with its nucleus located at any one of the areas of meaning illustrated herein, rather than at another. However, there are, in other Hokan languages, enough roots resemblant to *si- to provide a guide to its origin.

Within Pomoan, the most common independent words for WATER, TONGUE, and DRINK bear no phonetic resemblance to the verbal prefix that encompasses these meanings. It happens that those three words, as well as the prefix, can all be reconstructed for Proto-Pomo: ***qha WATER, *hibal TONGUE, and *ho*dq- DRINK. For the first two, there are resemblances sufficiently widespread through Hokan to permit a try at reconstruction like the following: Proto-Hokan ***a-qha WATER, where ***a- is a noun-forming prefix (Oswalt 1975); and ***-i-PAL TONGUE, where ***i- is a prefix on terms for body parts, and ***H- stands for a laryngeal, ***- or ***h-, and may have been a prefix for a third person or indefinite possessor, or may have been an inorganic development on vowel-initial stems. The capital letters in the reconstructions indicate segments whose phonetic nature cannot be specified closely.

In the other Hokan languages there are no multiply attested resemblances to Proto-Pomo *ho*dq- DRINK. The implication is that *ho*dq- is an innovation within Pomoan. I believe that there is a fair likelihood that the core syllable *dq- arose as an imitative of the sound of a gulp or of drinking noisily. The Kashaya verb root *dq- 'drink' is connected with a symbolic set of such imitatives: *dot- 'sound of a gulp (yielding the prefixing verb roots -dot- 'gulp' and -dot- 'choke'), dol 'sound of gurgling' (yielding the verb dolo- 'gurgle'), and dos 'sound of (dog)
lapping water or of water running in a riffle' (yielding *doso*- 'slurp', *doso1*- 'water to splash gently as in a riffle', *dohsohso*- 'make a lapping sound'). The second consonants of the above forms also have symbolic meanings: stops, such as t, indicate sudden short sounds or acts; the resonant l indicates resonating or continuing sounds; the sibilant s indicates protracted sounds of rubbing, scratching, sizzling, and splashing water. (The system is described more completely in Oswalt 1971). It is certainly no accident that in languages around the world there are forms similar to these in Kashaya, with a consonant articulated at the back of the mouth, toward the throat, occurring in words designating the throat or actions performed there. Examples abound; consider English gargle, gurgle, and gulp. From these it is a relatively slight semantic shift to a more generalized meaning DRINK.

Although it is difficult to find resemblances in Hokan for Proto-Fomo *ho?do- DRINK, it is easy to find them for *si-, not as prefixes, but as the verb roots meaning DRINK:

Proto-Yuman *s i′·
(Sensus of several Yumanists)
Seri -s′i-
(Edward Moser, personal commun.)
Salinan -(e)s(e)-
(Wm. Jacobsen, Jr., fieldnotes)
Northern Yana si′-i
Yahi ci′-
(Sapir and Swadesh 1960)

The more northern Hokan languages share the innovation of having the word for WATER derived from the root for DRINK by means of the Proto-Hokan noun-forming prefix *s′a-. Such a prefix seems to be no longer productive in these northern languages (argumentation of these points was presented at Oswalt 1975). The high front vowel appears before the sibilant, or affricate, of the root, rather than simply after it. Whether this was a feature of Proto-Hokan, or was innovated later, is a point that will not be argued here. Note that Shasta and some of the other northern languages require vowel-initial verb roots.

<table>
<thead>
<tr>
<th>DRINK</th>
<th>WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karok</td>
<td>ʔiʃ  ʔa′s</td>
</tr>
<tr>
<td>Shasta</td>
<td>-ɪc′i- əc′a</td>
</tr>
<tr>
<td>Atsugewi</td>
<td>-ɪc′h- əc’h</td>
</tr>
<tr>
<td>Pit River</td>
<td>-is ʔa’s</td>
</tr>
</tbody>
</table>

(Bright 1957). The palatalization of the sibilant in the verb is automatic in the presence of i. (Silver 1976). Vowel-initial words, like the noun here, automatically begin with ʔ-. (Leonard Talmey, personal communication). The forms are written morphophonemically. (Bruce Nevin, personal communication). There are variant vowels in some verb forms.
In those Hokan languages in which DRINK is not of a form related to the above, it is often possible to find a similar form with one of the extended meanings of Kashaya si-. For example, in Chimariko, lu' 'drink' is aberrant, but -s'i- 'suck, nurse' is phonetically very close (J. P. Harrington's fieldnotes). However, I do not intend here to pursue all possible cognates; the meaning DRINK is so clearly predominant that it is the logical choice of meaning for the Proto-Hokan reconstruction **s1. Insofar as this is the source of the Kashaya prefix, the original meaning of si- must be that which is centrally located in Figure 3 as the connecting link between the two nodes. There is a natural bias of DRINK toward the WATER node, as illustrated by Karok and the other northern languages; the inclusion of actions of the TONGUE would then be a later, Pomoan development, as would be the many proliferations of use in both the WATER and TONGUE lobes.
mouth, snout, beak, vocalizing, speaking, singing, (reciprocally) by hearing (any sound).
soft opposed forces, encirclement, sewing, with both arms, embracing, lips, eating with a spoon.
rear end, sitting, moving backwards, massive object, knife, cutting.
small or constricted part of a larger object, instrument with a handle, hook, suspend.
controlled nonlong object (rock, wad of material), rounded part of the body (head, shoulder, knee, elbow), front end; flowing or spouting water; shoot, gamble; vegetative growth.
hand, palm, paw, waves, fog; (in certain descriptive verbs) grouped long objects (hair, bones, branches).
gravity, falling, pressure of a weight; genetics, race; cutting many long objects (hair, branches).
finger, finger opposed to the thumb, finger-like object, generalized work.
uncontrolled long object, leg, kicking (especially backwards), swinging, wing, flapping.
of or with the body as a whole, at least not purposefully with one of its individual parts.
bottom of the foot, sole, hoof, claw (of birds); twisting motion of the hand or wrist.
small protuberance on a larger object, toe, nose, chin, horn, back of fingernail, kicking forward, smelling, snorting, reckoning, reading, small devices, clouds.
energy (thermal, photo, kinetic, psychic), heat, cold, light, fire, mind, emotion, pain, disease, quick movement, mechanisms, uncontrolled nonlong object.
long object move lengthwise into contact, poke, stab, stiff-legged; wrapping, enfolding, squeezing in palm.
long object act sidewise (bat, stick, axe, hoe, hammer), eyes, see, face, neck, surf, breakers.
wind, blow (of wind or mouth); burn transitive.
hard opposed forces, teeth, jaws, pliers, wrench, crowbar, bite, chew, pry, grip strongly.
long object move lengthwise into or thru or in and out, phallus, thru a membrane (mesh, net, hole in container).
water, rain, float, dissolve, stick, slip, wobble, flash, drink, tongue, lick, suck, paraphenation.
long flexible object (rope, stockings), pull, push and pull, breathe.

KASHAYA VERB PREFIXES

Table 1
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Number 9

PROCEEDINGS
OF THE
1980 HOKAN LANGUAGES WORKSHOP

James E. Redden, Editor

Held at
University of California, Berkeley

June 30-July 2, 1980

Copies of the 1980 HOKAN Languages Workshop proceedings are still available from the Department of Linguistics, Southern Illinois University, Carbondale, Illinois 62901. The volume for the 1979 and 1978 workshops, which appeared in the NLC series, University Museum Studies, are now out of print, but copies may be obtained from microfiche or hardbound volumes from BNC Vistas linguistiques, University of California Press, Berkeley, New York, 1980.

The 1981 HOKAN Languages Workshop will meet jointly with the Scientific Languages Conference at Sonoma State University, Rohnert Park, California, June 26-29. The proceedings of the 1981 workshop will appear in Occasional Papers on Linguistics in early 1982. For the first time, the proceedings of the Scientific Languages Conference will be published in the same volume as the HOKAN papers. Copies may be ordered from the Department of Linguistics, Southern Illinois University, Carbondale, Illinois 62901.

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UNFORTUNATELY, EVERYONE WHO PRESENTED A PAPER AT THE 1980 HOKAN LANGUAGES WORKSHOP WAS NOT ABLE TO PREPARE A FINAL VERSION FOR INCLUSION IN THIS VOLUME. ALL PAPERS IN THIS VOLUME EXCEPT TWO WERE PRESENTED IN AN EARLIER VERSION AT THE 1980 WORKSHOP. THE PAPERS ARE ARRANGED IN THE ORDER THEY APPEARED ON THE PROGRAM.

THE PAPER BY BIRGITTE BENDIXEN WAS PRESENTED AT THE 1979 HOKAN LANGUAGES WORKSHOP. THE CAMERA-READY MANUSCRIPT FOR HER ARTICLE ARRIVED AT THE EDITOR'S OFFICE MORE THAN THREE MONTHS BEFORE THE PUBLICATION DEADLINE. THE EDITOR IS SO USED TO HAVING TO CALL UP CONTRIBUTORS AND BEGGING THEM TO GET THEIR MANUSCRIPTS IN THAT HE TOTALLY FORGOT DR. BENDIXEN'S PAPER WAS IN HIS FILES AND LEFT IT OUT OF THE 1979 VOLUME. THE EDITOR HUMBLY APOLOGIZES FOR THIS OVRIGHT. THE SECOND PAPER BY PAMELA MUNRO WAS DISCUSSED IN PART AT THE 1980 WORKSHOP, AND THE EDITOR ASKED HER TO INCLUDE IT IN THIS VOLUME.

THE PARTICIPANTS OF THE 1980 HOKAN LANGUAGES WORKSHOP GRATEFULLY ACKNOWLEDGE ALL THE WORK DONE BY LEANNE HINTON AND SEVERAL OF HER STUDENTS, WHICH MADE THE WORKSHOP RUN SO SMOOTHELY AND ENJOYABLY. WE ALSO WISH TO THANK THE COLLEGE OF LETTERS AND SCIENCES AT THE UNIVERSITY OF CALIFORNIA, BERKELEY, FOR A GRANT TO HELP DEFRAY THE COSTS OF HOLDING THE WORKSHOP.


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