## Achumawi Database

## Summary of July 2023 work

You can download the current backup from

- http://zelligharris.org/Achumawi/achumawi-db.html

I have updated the webonary at

- https://www.webonary.org/odissi/

Since I replaced my computer FLEx has not crashed during routine work. Last night I got it to crash with no error message by pushing hard on an editing method that I knew had preceded such a crash: selecting a bit of the raw text in Baseline and typing so as simultaneously to delete and replace it. (First deleting then typing seems to work OK now.) I have now FLEx 9.1.22, the newest stable release. I'll push on it again.
I plan to travel to California for the last weekend sessions in the Language House in Round Mountain. I hope to have an Atsuge database started by then. The final 3-year grant of the Achumawi Database Project begins in September.
Sections in this report are:

1. Zellig's advice
2. Of various kinds: cihe
3. Of men and boys: yályú, yályúlcan
4. Word assembly and lexicalization
5. Of what is divided and what is set aside: táw and $s$
6. Of hidden things: $\mathfrak{q u l}$
7. Of taking: $s u$
8. Of cause and pretense: áyám
9. Of stretching and extending: táq
10. Pit River Band Names
11. Of belonging: wi

## 1. Zellig's advice

In 2015, when I was helping Naomi Sager pack up the papers of her late husband, Zellig Harris, and ship them to the American Philosophical Society for archiving, I scanned an undated, handwritten page of his notes apparently giving advice to a student at work on some language. Here is a relevant portion:

"Let the language decide - do not tell the language what to do - do not project, that is one of the greatest dangers."

One corollary which may not be obvious is that a phonemic representation established at one stage of analysis should not 'tell the language what to do' when subsequent analysis indicates otherwise. Morphological analysis can lead to rectification of phonological representations.

A case in point is my discovery last May of máh ~ mááhíy ~ mááhíy $k a \sim$ maahíý $c a(n)$ vs. what I had always written mah'hikcan 'a day', and correspondingly matiy' ka 'all night, at night' ~ matiy can 'a night', which I formerly wrote as máttikcan. The misperception of a $k$ was recognized by re-hearing and analyzing the acoustic record. As you see, I now analyze these with the stative $\dot{y}$.

Other reconsiderations follow below.

## 2. Of various kinds: cihe

This month, on returning to progress through initial $i$ in the lexicon, I came to ihaanákcihé 'light weight (thing)' alongside ihaani' 'light (in weight)'. ${ }^{1,2}$ The apparent suffix cihe has been puzzling for a long time. Its meaning intersects that of $c a$, can, 'an individual of this kind'. Indeed, I did write $c a$ in Grandma Lela's word aatímcahe 'Maple Creek person' because she identified it with aatímca 'Maple Creek'. ${ }^{3}$ From her I also have istimcihe' 'a heavy one' (istiimi' 'heavy'), custámcihe name of the old man in Day who could direct hunters to deer (custam place where grew lots of custi 'sweet anise'); isćupcihe 'skinny, sharp-featured person' (isćuupi' 'sharp pointed', sćup sćup waláátiw' 'darts around'), aaqúúcehe name of a butte near the old Lee place (aaq́u 'mountain'). I sometimes wrote cehe (as I have done above), and Harrington recorded $e$ in aaq́u isćákcehe 'sharp mountain' (across the river from The Cove; sćak ‘sharp pointed'), paacáwilóo úúlimcehe 'ridge/cliff kind of black manzanita'. ${ }^{4}$

This cihe is preceded by $k$ in records of thísýlkcihe (de Angulo) 'nice kind', iihaanákcihe 'light, agile kind' mékcihe 'more than'. Considering these of course immediately brought to mind my discovery last May of mah́~ maahi' ~ maahi' 'ka ~maahi' 'can vs. what I had always written mah'hikcan 'a day', and correspondingly maati'ka $\sim$ maati'can vs. maatikcan 'a night'.

The most frequent occurrence of kcehe by far is in a word that I transcribed as mékcehe, which may be translated as 'more' or as 'compared to' in comparative constructions. There is one occurrence at 14:45-46 in CLA recording 18 (grandmother's escape from soldiers) and three in recording 30 (Spider and Lizard), e.g. at 14:51.9. The clearest of the three examples that I extracted is in the file bigger3.wav, which I invite you to download from Dropbox here now. Listen to the sound of this mékcehe before reading farther. The visual analog is in the Praat sound spectrogram below.

[^0]

The energy of the voiceless release labeled ${ }^{\text {' }}$ is clearly visible before the following $c$. The first formant is at about 500 Hz and the second at about 2360 Hz , consistent with a short $i$ vowel, somewhat low toward $\varepsilon$. The second formant is is slightly higher for the final $i$. This and a close listening to the vowel quality indicates a rectification to mikcihi. ${ }^{5}$ I do not yet have an analysis. The second and third formants rise before the $k$.

A brief tutorial on formants is perhaps long overdue for some readers of these reports.
The image on the right, from one of the many opensource Praat tutorials, shows the formant transitions characteristic of various stop consonants for F1 and F2.

Since these are CV syllables, the vowel formants in each case are on the right. the F2 for $i$ has a high frequency, but F2 for $g$ (or $k$ ) is even higher and drops down to it. F2 for $d$ (or $t$ ) is lower than F2 for $i$, and rises to it.

A mirror image is seen for the close of the mik syllable in the spectrogram for mikcihi above:

If it were mit or mic (not shown), F2 would curve


 expected.

At 2.03.34 in 'CG1 Rules for boy coming of age' is ihaanákcihé, which I have exported to light-weight.wav. Although Craven's articulation is too lenis in the recording, evidently he articulated it more clearly when I

[^1]transcribed the tape with him. At the end of that recording, the release of the medial $k$ in $k^{h} o k c a$ is clear (although the initial $k^{h}$ is not clearly aspirated). In Grandma Lela's stories, there is a clear release of the medial $k$ in $k^{h} \dot{o} k c a$, monikcan, and other words with this cluster that I was able to check.

## 3. Of men and boys: yályú, yályúlcan

There are four occurrences of ýályúlcan 'boy' in the story of Spider and Lizard, clustered fairly closely in sentences 12.3, 12.4, 12.11, and 13.5, and in CLA recording 18 they may be heard between 14:00 and 14:46. I have exported these to the files yalyulcan-1.wav, yalyulcan-2.wav, yalyulcan-3.wav, and yalyulcan-4.wav, They differ slightly in phonetic detail.

## 1

yályúlcan
Initial $y$ glottalized.
The signature of the $l$ before can is rise of the second formant and increased energy in higher formants, despite devoicing before $c$.


## 2

yályúlcan
The glottalized $y$ glide is lenis.
Glottalization of the second $1 \dot{1}$ appears as a slowing (wider spacing) of the glottal pulse (vertical striations).


## 3

qa yályúlcan
The loss of sound energy where the second formant rises to a peak marks glottalization of the initial $y$ after $q a$.


4

## qa yályúlcan

The initial widely spaced glottal pulses reflect the very low pitch of $q a$ as well as glottalization centered at the F2 peak for $\dot{y}$,

The second $l$ is devoiced before the $c$.


Evidently, the word is yályúlcan 'boy'. Is the word glossed 'man' yályúl, with a final $l$ ?
The central phrase in sentence 26 of LR: Bear Doctor cures a thief is hamís ýályú taacááwací qa ápphit 'a man was stationed in the doorway'. The excerpt from CLA recording 12 at 11:42.20 (available here) ends with the syllable taa. In the sound spectrogram below, the vertical dotted line marks the onset of a rise in F2 as the articulation changes from $u$ to the $t$ of taaćááwací. If the word were ýályúl, this rise would be seen in the preceding devoiced segment, as it is in the examples of yályúlcan, above. Compare the medial $l$ of $y$ ýlyú about a third of the way from the beginning, where the energy of F2 is reduced even as higher formants appear. The laryngealization of taa prior to $\dot{c}$ is evident in the progressively wider spacing of laryngeal pulses though there is no lowering of pitch.


At 30:36.40 of CLA recording 11, Father finds the deer, we hear yályu $k a$, with the agentive $k a$. Again (below), the usual word-final attenuation of formant energy, but neither subjective sound nor visual signature of a final $l$. This suggests (albeit not conclusively) that the relevant context is morphological rather than phonological.


At 5:37.30 of CLA recording 2, Fox and hungry Coyote, we hear qa ýálvú ckiśsí. The devoiced segment just after the vertical dotted line sounds like a bilabial $f$ fricative with a bit of whistle, so the faint trace of F2 rising toward the articulation of $c$ from its low frequency for $u$ in the spectrogram is no indication of an $l$.


Other occurrences of yályú confirm this.
Since can generally distinguishes individual instances, it seems peculiar that in this one domain it makes an age distinction between 'man' and 'boy'. The explanation may be simply in the greater audibility of the $l$ before can, because yályú and ýályúl are difficult to distinguish. It is likely that a final $l$ in an ancestral form of the word for 'man' was retained in the construction with can but lost elsewhere, and it is the $l$ and not can which carries the semantics of youth. The morphological status and origin of the $l$ remain to be explained, as indeed does the etymology of ýályú.

## 4．Word assembly and lexicalization

By＇word assembly＇I mean the creative capacity to combine roots to convey a particular meaning in context． Lexicalization is the institutionalizing of a particular combination as the normal idiom．I sometimes refer to ＇word assembly＇as the＇inner syntax＇which creates the complex sentential verbs among the words of the language，where the＇outer syntax＇puts words together into sentences．
I＇ve previously touched on the problem of productive derivation vs．etymology．The meanings of many of the complex word forms follow easily from the glosses of their constituent roots．In other forms，the shape results from the same productive patterns of derivation，the＇inner syntax＇that combines roots into words，but the relation of the resulting word meaning to the meanings of the roots is not obvious，or not obvious to a speaker of English．I＇ve also previously questioned how much of this may be due to a mismatch of the semantic fields in English vocabulary to those of Pit River roots．

I＇ll recapitulate here something that I sent to the o－issi email group 3 December last year，but this time using a figure that I have used in my DEL proposal．
Each morpheme specifies some aspect or characteristic of the perceived world．To represent that，we may imagine that it draws a boundary，a circle that contains all the things and phenomena in which we perceive that characteristic．The meaning of the combination of morphemes is within the intersection of their circles，like a Venn diagram in set theory．This illustration from the DEL proposal refers to words with hay／hy＇constrain＇：
> tiluuháááyi＇pull by tether＇， tiluuh́ááyé＇kite＇
> tíluuhíica＇lead it！＇（dog，goat，etc．）${ }^{6}$
> tíluuhíntíwa＇lead it around on a leash！＇
> tiluuhíwca＇pull it back to you！’ or＇bind it！＇ tíluuhíwcé＇belt＇


The construction of meaning from the meanings of constituent morphemes reminds me of Chinese writing．In that system，there are 214 ＇Radicals＇（roots）which are combined to form many thousands of complex characters． Each radical and each complex character represents one word．The meaning of the word is derived from the meanings of the roots，but often in ways that are not obvious to us．For example，the radical 人 ren＇person＇is a component of the characters translated＇you＇，＇body＇，＇rest＇，and many others．

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人 Ren 'person'
你 Ni 'you'
体 }\mp@subsup{}{}{Ti}`\mathrm{ 'substance, body’
休 Xiū`rest'
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[^2]In $X i \bar{u}$ 'rest' the second radical is $木$ ( $m \grave{u}$ 'wood, tree'), and a usual story about it is a person resting under a tree. I have next to zero competence with Chinese, so I have nothing to say about the other radicals in these examples, nor about other and more complex characters in which ren has a part. I would call your attention to two aspects. First, Chinese is what is called an 'isolating' language with short words, many of them monosyllables. Secondly, Chinese comprises several mutually unintelligible languages, but famously a document written in one of these languages can be read in another, using this writing system. This is possible because all varieties have similar semantic and syntactic conventions for organizing the monosyllabic words into sentences. It would be very difficult for anyone to learn to write English using Chinese characters. ${ }^{7}$

Now I'm not suggesting that we try to write Pit River in Chinese characters! But there are reasons to suspect that the Shastan languages (including the Pit River languages and Yana) were 'isolating' languages with monosyllabic words combined more freely into idiomatic phrases than they are in the languages we consider today, but after their regular 'Big Time' gatherings down on the Sacramento at the spring and autumn salmon runs got disrupted, things like word order, idioms, and specializations of meaning went in different directions in the separated foraging communities because no longer regularly talked to each other. In Achumawi we still see this flexibility and divergence reflected in alternative names for things. We'll look at some of these below.

As I suggested above, an immediate problem is that we're relying on English glosses to get at the meaning. In English, the different parts of the semantic field depicted in the Venn diagram above are expressed in entirely different words (tether, kite, belt, bind), and to translate various other uses of those Achumawi morphemes in various combinations requires even more words that are unrelated to each other in English. Context imposes further limits (Are you packing for a trip? Then think of tying a bundle rather than pulling a tether.), and in every language, words can be so highly expectable in a given context that language users normally just leave them understood but unspoken.

- Does John drive a Ford or a Chevy?

Does John drive a Ford or [does John drive] a Chevy?

- I'll get there on Tuesday so I'll take an umbrella.

I'll get there on Tuesday [and this app says it will rain on Tuesday, and an umbrella protects one from rain] so I'll take an umbrella.

In the report for November 2020 I mentioned the example of 'paddle' and 'driftwood', with a bit more detail in some email following that. In tićaapiili, the ća draws a circle around the semantic field of upright orientations , and pil draws a circle around complex collections of overlapping linear objects or strands, like a braid if it's nice or like a tangle if it's not. Because of the context ("Oh, yeah, we're talking about crossing the river") we can eliminate the possibility of, say, a tuft of hair sticking up from a braid. The word áw'wood' doesn't have to be said because driftwood is obvious in the river context. Maybe part of the context is that to 'harvest' a paddle you look for a nice piece sticking up clear of the water so it's not waterlogged or rotten, or maybe the river is making it easy for you to recognize it and take it.

Prefixes and stem vowels proper to the verb or participle can get omitted to make a noun: ćaapil for the paddle, and ćaaṕílóo 'driftwood' from which you can 'harvest' a paddle, much as you harvest the wood for a bow from a qúússiimalóo 'juniper tree' (quússi was a word for 'bow' before the arrival of guns).

The generation I learned from had some uncertainty about the 'paddle' words. They probably did not have strong personal memories of paddling of canoes on the water, given the abductions to schools and the economic demands of colonization, but also people used the creative capacity in the language in different ways to make

7 Some characters can be used as clues for pronunciation, but this is not germane here.
words for paddle and paddling. These words are all descriptive, so it's not just a matter of remembering a word, it seems also to involve remembering how to assemble the word so that it makes the meaning. So one day I was given two words one after the other, ćaapílóo = 'paddle' and qahpíllóo = 'driftwood' apparently as a source of firewood: qah' ‘knock' occurs in maqqáh 'pitch wood' ( $m a$ 'fire'), qahtáw' ‘dry firewood’ (táw ‘divide, separate’; more on this below).

From taliícuumi' 'paddle along', waliićcuumi 'one paddles', tilićccak 'go ahead and paddle hither!', a creative speaker could probably make another synonym, taliićuumé 'a paddle' and a person would probably know what you're talking about. To the extent that it is an unaccustomed idiom, it might mean that they were making do with something other than a regular paddle to propel their canoe (but they'd be just as likely to use the regular word for comic effect of a significant mismatch).

In the context of cooking we have tálááyí'wí ‘stir (mush)', lááyíwé 'stirring paddle'. The la 'move in a line' and iwi 'around about' are well attested. I have glossed $y i$ as a 'move' root, but I'm considering that it may be the familiar stative $y$ of twiyí, etc. and now recognized at the end of maahiy, etc. In cooking, the emphasis is on the state or condition. Other occurrences that are questionably glossed as 'move' include čityíime 'socks' from tićílýími 'put foot into; socks; overshoes', tááyíími 'put on underneath; underclothes, anything you put on under your clothes', as tóóćíími 'water bag', anúúýílami 'inside' ( $n u$ 'inside'), etc. Either way, context assures that you wouldn't use lááyíiwé 'stirring paddle' in a canoe: you don't move a canoe by just stirring the paddle in circles.

On to more examples of-what shall we call it-semantic mad-lib?

## 5. Of what is divided and what is set aside: táw and s

In qahtáw' ‘dry firewood’ and in Harrington's tilaatáw'ci 'store food in a tree' we see the CVC root táw' 'separate, divide, aside' and not áw' 'wood'; unlike the Chinese 'rest' example there are no instances in the database where $a ́ w$ 'wood' refers to a tree, and if that were the source the $t$ would require explanation. It is followed by $s$ in the following examples:

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wicuutáwosi qá thiiyí 'one parts hair'
tátaatáwósi 'give equal shares to'
yaátáwósi 'separated, divorced'
aqtáẇsu
'on either side'
'they had already jumped aside'8
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The occurrence of $s$ 'indefinite, unmanifest' makes sense for a mass noun like water and hair, it asserts the fungibility of items in masses or collections that makes them suitable for dividing into shares, in divorce it asserts that a relationship becomes 'unmanifest', and a warrior dodging side to side has a purposely indeterminate location. The firewood and the wrapped bundle of stored food are well-defined resources.

## 6. Of hidden things: quul

The CVC root qúúúl occurs in

| waaquúúli | He gambles |
| :--- | :--- |
| waaquúlíwci | They gamble |

[^3]```
waaquúúlíwcíwci They gamble together
sát icaaquuuláke’ Pocket knife \({ }^{9}\)
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In gambling, whether in the hand game or with cards, the players conceal what they hold from one another.

## 7. Of taking: su

| isúúcak | 'wealthy' (isúúčaki, isúúćcak'wací, tiliisúúwaci) |
| :--- | :--- |
| tisíúci | 'grab, seize' |
| tiluísuuce | 'bad luck; a stranger must feed the country to be safe' |

## 8. Of cause and pretense: áyám

| támmááyami | feed someone (cause him to eat) |
| :--- | :--- |
| mlámmááyami | I'll feed him (future volitional) |

Speculative analysis: volitional - $a$ followed by an auxiliary verb yami 'it furthers', with $m$ 'thither'.
sálictiikaýámáké I pretended to be afraid
A causative followed by reflexive, 'cause myself to be afraid', doesn't fit, but a less specific meaning of $m$ as root of an auxiliary works better.
$t^{t h}$ ins yááma tsiýí $^{\text {I'm in a good place }}$
This is consistent with a 'furthering' and even a causative sense of yááma. This may be considered an 'impersonal' use of the $3^{\text {rd }}$ person $y$-, perhaps 'I am one who progresses well'.

## 9. Of stretching and extending: táq

Confirmation of word boundary: taq iy' 'high, big' (vs. taq ${ }^{\text {híy }}$ ); táq á ‘again' = táq (w)á 'with extension, by extending' (vs. tááqá); and of course taq tuci 'stretch'.

| táaq ẏi, táq ẏé | 'thus extent' | $\dot{y}$ 'manifest'; pi táquyé 'this big' |
| :---: | :---: | :---: |
| táq cán ${ }^{\text {y }}$ ¢ | 'tall' | can 'individual', $\dot{y}$ 'manifest' |
| s taq | 'flabby, floppy, doughy' | $s$ 'indefinite' (perh. like as 'water') |
| tikústaaqi | 'wipe off hand on somet |  |
| tikústaaqi qa | 'rub lips with hand (fing |  |



Free I put slimy stuff on board with hands
Note mud pies
Note LR 1973 37.6: $2 / 24$

[^4]
## 10. Pit River Band Names

This is a recurrent request. Here's a current representation.
Matéési, Matéésiwi
Iicáátawi
Ílmááwi
Acúmmááwi
Atwámsini
Astaaqíwawi
Hُéwissátééwi
Q́ússi álláqutawi
Hámmááwi
Atsuke, Atsukei and Apwaruke, Apwarukei are the Hat Creek and Dixie Valley names, or my semi-informed approximation to them. Perhaps we'll work out etymologies for them that we can be confident of.

## 11. Of belonging: wi

The wi ending which is common to many of these is a stative morpheme with the sense 'characteristic of, belonging to, that kind'. It also occurs

- At the beginning of a verb stem, with the sense 'one who characteristically or habitually does this', as in winilláátiwi' 'one who repeatedly goes from place to place all around; white man'.
- At the beginning of a verb stem as though a $3^{\text {rd }}$ person pronoun. More on this below.
- At other places among the roots in a verb stem (sometimes reduced to $u$ or changing $a$ to $o$ ) with a sense of state, duration, purpose, etc.
winilláátiwi' ' white man; one who moves around' (tinééláátiwí 'play around')
páálá is ikkááci ka waasiimí ka, sówaasiimini. When (I was) first living, when (I became) one (who) hunts, I went hunting.
- As the root $u w$ in e.g. astaq yuwi 'they're hot' húútáa ka iičí tkuwááticka 'a rattlesnake might bite you'
Both $w$ - and $y$-occur as a $3^{\text {rd }}$ person pronoun (he, she, it, they). The conditions for using $w$-vs. using $y$-are presently unclear, but seem related to the stative $w$ above. It may be that $w$ - is preferred when some change of condition or state is concerned, vs. a transitional or recurrent activity for $y$-, for example winimmááci 'he saw (it); one who sees', yánaatánki 'he walked down this way'. The $y$-form is treated as a noun with the sense of 'one who $\qquad$ 'in a few cases, such as yawas, tuwáási 'singer'; yawás 'hunter' (but also awás); this is much more common with the $w$ - form.

Examples with táq ca and táq fُ́é (which are not verb stems, see the discussion above) strengthen the suggestion that wi be treated as a root rather than a pronominal prefix:
láh wُ w táq yé
'itthú tálilláqti wí taq ca
qa qué qa tánnisti wí taq ca
as big as (one's) head
as long as I like, as much as I like
up to those foothills

In parallel, there is kítaq ca 'this far, up to here', mí taq ca 'that far, up to there'; e.g. tucciimámé twiýý qá itt'u' lúp w'ilisé kí taq ca 'my bow won't do that far' ([tuutuiisi] tuci 'do [shooting]', ámé 'lacking, without').


[^0]:    1 Also Harrington's ihaaláli tiíquaati "A litl mt. dr. of Fender's Flat on n. side of P. River. Across from wacúw (Scott's place)" (spelling unchanged). This is Grapevine Tom's translation of Yana kahwáyna into Pit River, and his substitution of $l$ for $n$ (albleit a common alternation) is here probably his non-native innovation.
    2 Given the CVC root haw and the reduction of $\dot{w}$ to $w$ in some constructions (hawaý, ihwaaỳ'' 'light, agile', ticahwaýćuci 'lift something lightly', etc.), there arises the prospect of rectifying this construction as ihawnákcihé and looking for phonetic evidence of an overlooked lenis $a w$ diphthong, or even registering hiaa as an allomorph of haw before $n$ (if there are no counterexamples). There's too little evidence at present to sustain that.
    3 The tim may be te 'lateral, broad' $+m$ 'thither'. I don't know where this creek is. The name may have been changed. There is a Maple Creek in Humbolt County, but no Maple Creek is presently listed in Shasta or Lassen County.
    4 Setting aside (as less certain) ictáncehe name of Walter Moody's mother (in The Cove), and Curtin's yắtsahe ' 'scar'.

[^1]:    5 In his grammar, de Angulo also recorded the $t+c$ cluster as $t k$. He interpreted this form as related to wáqci 'grow, become':
    d-ǐmàs'át-gú-kùwá hùtámákcà
    tiímacq̉át kú kuwá huutá mékcihe 'You will learn after a while longer'
    wà 'wá-máqtsè qà town Alturas-ú-wádé
    waw̉á mékcihe qa tháwn althúúlas $u$ wáté 'This is a bigger town than Alturas'

[^2]:    6 I assume that this and the next three are reduced from e．g．tiluhyica，or perhaps should be so rectified，though it is possible they have $h i$＇head＇（in its sense of＇lead＇）．

[^3]:    8 Or maybe the pair of Mouse Brothers jumped 'to either side', but it's the sideways arrow-dodging of traditional warfare.

[^4]:    9 'By grasping concealing itself'? The 'reflexive' gloss of $a k$ is problematic.

