Pit River Languages Project

Summary of work during July 2025

You can download the current Achumawi backup from

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

I have updated the automatically generated Achumawi webonary at

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

The sections in this report are as follows:

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The last two sections report work by Paul Cason and Lisa Craig.

This and all prior monthly summaries are archived under a Monthly Reports link at https://zelligharris.org/Achumawi/achumawi-db.html.

1 Achumawi verb prefixes: t-

This *t-* prefix was omitted from the 'dictionary' of verb prefixes in the June report. The discussion here opens up considerable complexity and some reconsideration of something we looked at last month. Combinations of *t-* with other prefixes are not included here, and the coverage of of them last month has gaps.

In Achumawi, diverse English glosses are attributed to the *t-* prefix. The *t-* marks the subordinate status of the sentence headed by the given verb as the argument of a higher-order operator (verb, adverb, etc.) which sometimes is explicitly present. When it has been zeroed, the resultant structural anomaly is understood to carry the meaning.

Reconstructed sources

It may be helpful to preface this section with a brief discussion of the reconstruction of morphophonemic source forms in relation to internal reconstruction of historically earlier forms. Linguists have long recognized that these are parallel but not identical. The disparity is because requirements imposed by historical reconstruction of language change are different from those imposed by description of a stage of language development at a particular time. A grammatical description freezes the ongoing variation and mutual adaptation which never ceases in the usages of a language community, out of which diachronic change emerges.

In every language there is a growing edge of forms about which even the most fluent speakers may be uncertain, and there are things that can be said and understood but no one is likely actually to say them that way instead of an alternative way which is easier and more customary.

Operator grammar reconstructs source sentences with meanings explicitly represented together with morphophonemic changes that reduce the phonemic content of some of the morphemes. The simplest reduction is the lowered emphasis on a subordinate clause which recapitulates familiar information (reduced amplitude, centralized vowels, etc.). When phonemic content is reduced to zero the resultant departure from the regularity of simple sentences is the basis for recovering them. In this way, secondary grammatical constructions appear to carry the information which is explicitly stated by the zeroed morphemes. For example, the meaning of the English infinitive in *I want to work* is explicit in the source *I want that I should work*.[1]

Next are examples of the more frequently occurring constructions with the *t-* prefix, with some preliminary indications how to reconstruct sources for them.

Overt V_s

In the following examples, the *t-* prefix indicates the argument status under a verb which is explicitly present.

sóótʰééwí qa ál táátʰáaċi qa micistʰúúni	I heard your shouting [about] fish
sisúúḣúq̓ýí qa sáppʰiila tílílláátiwí	I have a bad feeling about wandering around in a boat
slk̓íttʰééwi ittʰú ʾó tiṡi	You should listen to what I say.
ckwíntasqááẇami qa títʰalúumi.	He finished his work.
qʰáṁ sínámmaċq̓áti wínílláátiwí wíímaċq̓áti qa tiiq̓óóli.	I know many white people who know how to gamble

The placement of *micistʰúúni* ‘your (pl.)’ in the first example is noteworthy. On the analogy of English, one might expect *sóótʰééwí qa micistʰúúni ál táátʰáaċi*, but this would be glossed ‘I heard shouting about your fish’ (or possibly ‘I heard your fish shouting’ in appropriate context, such as a fanciful story).

Negation: *ċ́é*, *ámé’*

The negation operator *ċ́é* is not inflected. It requires a carrier for the pronominal and other affixes, an auxiliary or copula. The main verb of the negated sentence is a *t-* participle.

ċ́é suwí tiníímaċq̓áti	I don’t know/understand.
ċ́é ckuwí tíítʰanti qa púllééwí.	Porcupine wasn’t paying attention.
ċ́é kuwí tálílláq̓ti qa tinámmátsi amqʰá lhinííẇíw.	If you don’t want to trade, let’s race (for it).
ċ́é ckúuwi tinímmáaci.	He didn’t see him.
ċ́é kuwí tuci kú tíítʰanti	You won’t pay attention
ċ́é túw má ttánuwí qa céémul, ċ́íllíq uuqaalá ka twiy̓í	It can’t be Coyote, carrying a baby she is
ċ́é slhuwíumá tétẇi qa ál	We didn’t kill fish.
ċ́é suwí tálílláqti céémul ú lúmmé’ tuci.	I don’t want to be Coyote’s wife.
ċ́é lhúccíica tíímúúláqi.	Let’s not wait

1 Z. S. Harris (1982) *A Grammar of English on Mathematical Principles*, New York: Wiley; (1988) *Language and Information* (=*Bampton Lectures in America, 28*), New York: Columbia University Press; (1991) *A Theory of Language and Information: A Mathematical Approach*, Oxford & New York: Clarendon Press.

c̓é lhucciíca ís tuci Let's not be people

The other main form of negation is with *-áme'* 'lacking, without'.

tístí tuccáámé' [tyánuwí] [That's] not right!

céémul tuccáámé' twiyí That's not Coyote

támmáámé' tsiyí yeeníína I don't eat mice

In form this looks like an auxiliary or adjunctive use of the directional *m* 'thither; down' in the manner of *c* 'do' in (*w*)*aci*, the *ti-ta-tu* directional family in (*w*)*áté*, *ka* 'agentive' in (*wá*)*ka*, etc. The stative *y̓* manifests in the fronted vowel and the word-final glottal stop. It is almost always appended to a *t-* participle. When it does occur after a noun, *w-* precedes (*k̓nééwiwámé'* 'hatless, bare-headed', *kʰilá̓áwámé'* 'shoeless', *lúmmé'wámé'* 'batchelor') as in the other auxiliaries mentioned, which indeed typically are adjoined to a noun or to a nominalized *t-* participle, and assimiliation to a final continuant may occur as with *wáté*, e.g. *mállíssáté* 'to/at/in the fire' *mállíssámé'* 'without fire'.

Future: *kú*

The morpheme *kú* enters variety of constructions concerning planned or non-immediate future events. Only those of the form *t*-V-*i kú -uw-* are within the scope of this discussion, a *t-* participle plus *kú* in construction with a form of the *uw* stative copula ending with the *-a* that we see in the volitional forms. We may conjecture that *kú* is a metaphorical specialization of the root *ku* 'press, push (esp. with hand)'. Examples:

támmi kú suwá I am going to eat

tíítʰuk kú yuwá He is going to come back here

tétw̓i kú lhuwááticka. I'm going to kill you.

tínátáám̓a kú lhuwááticka. I'll smoke you out

allu tuci kú suwá (cp. *allu suwí*) I am going to be hungry (cp. I am hungry)

In many constructions *ku* is followed by *c* and by other morphemes which usually follow the verb stem. Some examples occur incidentally below, but further comment is out of scope here.

Interrogative

The pronominal *ki* 'who' and *táq* 'what' are answered by nominal expressions. The adverbial interrogative words *cʰú* 'how, what' and *cʰá* 'where', and their derivatives (such as *cʰú t̓ac̓* 'when?' with *t̓ac̓* 'stick, sticky') are usually answered by adverbs of manner for *cʰú* and directional adverbs for *cʰá*. Before the stative *y̓* the vowel becomes *e* in *cʰey̓é* 'which way?'. One may conjecture a *cʰ-* morpheme analogous to the *kʷ-* of Indo-European languages (Romance *qu-*, English *wh-*, and so on).

However that may be, these interrogative morphemes often occur in construction with a *t-* participle and a main verb. The pronominal prefix on the main verb in these constructions prefixes that also occur in subordinate clauses. (In de Ángulo's Grammar this is the 'subordinate mode', except that he has *t-* for 3rd person singular instead of *tt-*.)

kiiwáli ttiyí pʰííw̓a tííyúmci? Who is it live here?

cʰú tíśí ttiýí	What is he saying? [gloss unclear]
cʰú stuwá tuci kúci	What should I do?
cʰú ḿuwí wiyác áálu tíímacwáké[2]	How might you be disguised as an old woman?
cʰú t́aq ca tániimí [ttánuwí]	How deep is it? [how stretch-increment go thither/down (is it)?]

The subordinate-clause morphology of interrogative sentences derives from an assertion under a performative occurrence of a verb in the 'say' family, e.g. *sóótʰikĺi cʰú tíśí ttiýí* 'I ask: what is he saying?' → *cʰú tíśí ttiýí* 'what is he saying?'

Interrogative sentences occur in this subordinate-clause form without a main verb.

cʰááẃa tiiýí	Where is he?
táq tiiýí	What is he doing?
cʰú tuci kúcumá	what will we do?
cʰú tihóóci kúcí	What are we two going to do?
cʰá tuwí tʰúsýí tici qa kʰilááĺa!	Where might there be such good shoes!

In these cases, an awkward redundancy (a low-information verb, usually constructed on the stative *-ý-*) is reduced to a zero allomorph, as for example *táq tiiýí ttiýí* (or *táq tiiýí tʰítiýí*) 'what is he doing>'→ *táq tiiýí* 'what [is he] doing?'.

Imperative

On the analogy of the analysis in English and other languages, we may posit a verb in the *siśí* 'I say' family, such as *síyśááticka* 'I tell you'[3] in the source for the imperative form of a verb. This could be in combination with a prefix combination including *ĺ-* espressing the speaker's exertion of will. The following examples illustrate the variety of imperative endings.

The suffix *-a* may be considered the basic form. There are some indications that *a* may have volitional significance when it occurs at other places in a verb stem.

támmá	Eat!
taakʰááta	Cut it!
tuuḿááta	Sleep!

The imperative suffix is normally omitted when a verb stem ends with a directional *-m* 'thither/down' or *-k* 'hither' or with the auxiliary *c*.

taaht́óm	Run!

The emphatic *-óo* is available as an alternative for these verbs (though there is no record of e.g. *taaht́úúmóo*).

tuskím, *tuskímcóo*	Sit down (on ground, floor, surface)

This has evidently become the preferred form for some verbs ending with *-m*.

túnnóo	Come here!

2 Note that *m-* is a second person pronoun in interrogative and subordinate clauses, but it is 3rd person in indicative sentences. Homophony of this sort is exceptional.

3 The glottalization of *ś* here may persist as laryngealizeation in the onset of the *á* vowel following the *ś*.

taasímmóo	Jump!

The *-óo* can occur preferentially or as an alternative to *-a* after *-k* ‘hither’ and after verb stems without directional suffixes.[4]

táwaasaatákóo téh̓tac̓ , *táwaasaatáka* presumed OK.	Knock down acorns (hither)!
til̓aaqóo	Wash your hands!
tasláác̓óo[5], also *tasláác̓a*	Nail it!
hay̓ tíínóo	Come back to mind!

Verbs with the root (*a*)*pt* ‘go’ end with *-e* not only in the imperative, but also in other forms.

tupté	Go! Be gone![6]
tepté	Go back! Go home!
sápte	I went. I go.
siwápte	I went back. I’m going home.

Auxiliaries

There are other constructions with *t-*, most of which must be deferred for the present because they intersect with other phenomena which are out of scope for this discussion. Among these are the auxiliary verbs and auxiliary or adjunct uses of roots.

The root *-c-* ‘do’ occurs frequently in a variety of constructions with a noun or adjective. It can occur in construction with a *t*-participle as though it were a nominalization in the form ***qa t-*V*-i tuci*** ‘the V-doing’. (The bare-stem ‘-ing’ participle in construction with *-c-* patterns as an adjective or adverb.)

kiiwáli ttiy̓í pʰííw̓a tííyúmci? *ki ú tuccóó’oy qá as̓cúy?*	Who is it who lives here? Who’s doing [is] the winter house? (=who made it?)
ckyápté qa timmáákʰúútí tucóó’oywáté	He went to where he had done burn-to-cut-down [the tree]
yápté qa timmáákʰúútí tuciyáté	He went to where the [tree] burn-to-cut-down [was (being)] done
c̓é stuci qa tilíísuuci	Don’t treat me as a stranger.

The stative root *w* occurs after a noun as an enclitic *wa* glossed as instrumental, locative, or manner.

póq̓wa wa tucóo	Do it with a spoon.
caah̓úm wa yááná	He comes by horse, horseback
uuc̓iimí’ wa	Burney Falls [=place in (water) falling-down-into state]
cʰá; *cy̓é* *cʰááw̓a*; *cy̓ééwa*	Where? Whither? In what place? Which way?
íssi wa	In the Indian manner

4 Perhaps related is the perfective *-óó’oy*, -o*’oy*, ‘formerly done; where they did’, and the shorter -óo after *c̓é* in e.g. *c̓é tyituucíínóo tíl̓aháámiy̓ééwaci* ‘They didn’t talk with him’. This is suggested by and other forms with *-óóké’* rather than *-áké’,* e.g. *kil̓ kil̓ talúumóo!* ‘Zigzag it!’ w.r.t. *kil̓ kil̓ acuumóóké’* ‘Made like a zigzag’. Also the suffix *-(l)óo* in names for that from which the thing so tagged is harvested (not exclusively a tree, bush, or plant), which has been said to be cognate with Ats.-*op*.

5 From the de Ángulo grammar appendix ms., perh. *tasláćcóo* misheard.

6 The *u* of *tupté* appears to be the stative *w* suggesting that the sense of ‘be gone’ has become preferred. However, this is also seen as the *wa* in *siwápté*, where the English gloss, at least, does not have a stative overtone to the same degree.

The close juncture of the enclitic enables assimilation (*íl̓ la* ‘with the hand, by hand’, *láh̓ ha* ‘on the head, with the head’) and dissimilation (*qásẃa la* ‘with a root-digger’) as an alternant form, bit the basic *wa* form remains acceptable, and likewise when the variant is due to so far unidentified factors (*q̓ússi la ~ q̓ússi wa* ‘with a gun’, likewise *hásti la ticaawááyi* ‘grass game’, *sáápʰi la* ‘in a boat, by boat’). This same pattern of variation is also seen in *wate* and *wake*, but the *w-* in the ‘continuative’ auxiliary verb *waci* does not vary.

Dixon (1997:54f) “suggest[s] that many types of change within a language are not gradual but rather happen fairly suddenly, often within the space of a generation or two. That is, change is more like a series of steps than it is like a steady incline.” The forms we are considering here appear to be in process of change from external syntax to what I have called ‘internal syntax’ (word derivation and declination), in which the categorial steps are

auxiliary verb > enclitic postposition > suffix

In this process the form may be reduced from inflected verb to just a root by itself, and specializations of meaning develop. As noted, *waci* has the form of a 3rd-person auxiliary verb following a verb stem, and there is a large class of verb stems ending with *c*. Following a noun we can have the auxiliary verb *wáka*, which after a vowel is reduced to the agentive root *ka*, which is seen in verbs e.g. for herding animals and for being alive. The *wa* morpheme considered here appears to be such a specialization of the widely distributed stative *uw ~ wa* root.

In certain constructions expressing desire or manifestation of will, *ẃa* occurs consistently with initial glottalization, and with no consonantal alternation. In addition, the final syllable of the preceding *t-* participle has high pitch, where otherwise it has low pitch.

as tisí ẃa síuwí	I want to drink water.
scilwaỷáátuma *cʰú mcálílláqti Pákli tááyííc̓ukí ẃa*	They asked us how would you like to go to Berkeley along with [us]?
táq málílláqti tucí ẃa	What would you like to do?
qʰé tucí ẃa sálílláqti	I want (desire) to do that.
ttayíh̓cítí ẃa ckyáwáása	He sang in order to find out
ckyáás̓á tíntámmaakúyaké ẃa h̓aỷ tucóo	He sang to tell himself “make thoughts!”
titʰík̓lí ẃa híuwícka	I want to ask something of you
tóósí ẃa yuucí twiỷí	He likes to hunt all the time.

An hypothesis is that appending the stative *íỷ* constructs a nominalizion of the form *t*-V-*íỷ* ‘in a V state’. This would account for the glottalization and the otherwise anomalous high pitch. In this analysis, constructions without the participle do not result from zeroing a participle. The construction with a noun argument is normal.

as síuwí	I want water.
qʰé sálílláqti	I want (desire) that.

This analysis accounts for the terminal glottal stop recorded in nouns based on participles, for example the many place names and descriptors that Harrington collected, including on nominal uses of verbs with 3rd-person *w-*.

uuc̓iimí ẃa	waterfall
wílúúỷeeq̓í ẃa	place where one slides down (Shavehead’s place)
winíh̓aalí ẃa	Where the salmon turns around (Fall River falls)

The *wa* looks like the ‘habitual/characteristic’ *w* stative with a volitional *a*. With an ordinary noun, the auxiliary *waté* expresses location with the directional *tu/ta/te* root.

asẃú ẃa yámáálumá	He was hit by a tree.
yáċaḱti lásċaaḱé ẃa	He stuck him with an arrow an arrow.
yituutḭ́ísumá lásċaaḱé ẃa	Someone shot him with an arrow.
yicuuqʰúúċumá satta	Someone stabbed him with a knife.
yamááli saaẏéḥ ḥa	He hit it with his/a leg.

One occurrence after *u* rather than *i* poses a difficulty.

allú ẃa sóóliikací qa wáhhac	Because I'm hungry I asked for bread

This usage appears to be analogic extension of the pattern with *ẃa* as postpostion. Or, starting with the existing constructions *allu tuci* and *allu uci,* there could be a path from *allu ucíẏ wa* to *allú' wa* by zeroing the low-information auxiliary *c*.

The -íuw- rabbit hole

The falling pitch in *as síuwí* 'I want water' recalls the discussion last month of *siiwáátumá*. I proposed to rectify this as *síyuwáátumá* with *y*- 3rd person. However, a 3rd-person subject is not plausible here.

as síuwí	I want water
as yíuwí	He wants water[7]

There is an explicit sense of 'becoming' in the following examples:

qítẃi yíuwí we	It's springtime now
úúlóqma yíuwí	It's getting on toward evening
amittʰéẃcan yíuwí	She became a woman
wánéḥá ckyíuwí	She got a toothache (a toothache became)
ḥaṗ tyíuwí	He disappeared. (Euphemism: he died.)

Functioning as a 'to be' copula, the *íẏ ~ ẏ ~ ẏí* root identifies creatures with agency and power (*ís twiẏí* 'it's a person') whereas the *uw ~ w ~ wa* root identifies attributes and (with *án* 'go, change') identifies things that lack signs of agency such as locomotion (*asẃú tẏánuwí* 'it's a tree'). More generally, the meaning range of the *íẏ ~ ẏ ~ ẏí* root includes 'becoming, attaining a state', vs. the *uw ~ w ~ wa* root 'being in a state or condition'.

I surmise, then, that the high pitch *í* in all these verbs is an allomorph of the *ẏ* root. In *síuwáátumá*, etc. *-umá* identifies the 3rd person agent.

tílíyóq kú síuwáátumá	is going to scold me
amqʰááka aawátca ṫé iicí' tsíuwáátuma	Only those (people) would do that way to me
ḥaḷáċ síuwáátumá	looked at me, glanced my way.
tíímaċq̇át kú síuwáátumá	they'll find out [what] I am to them
it ká síuwáátumá syaakʰáátúyimá	I'm the one they cut it for

7 What I show here as *yíuwí* was recorded as *yúuwí*. These are difficult to distinguish phonetically. (Cp. the common interpretation of *-íwci* as *-úúci* in the older archival literature.) I have made the rectification in the database.

ḱááwawy̓acic̓ka? c̓é síuwíumá. Did he give it to you? He didn't.

I had not yet proceeded with rectifying these occurrences, so the inconsistencies persist in this month's update. Alternatively, with less rectification work, the forms shown in the texts and lists can be derived by morphophonemic reductions in the Analysis display.

2 ʼAcw̓uké· database project

The Atsuge language database grew to over 2,500 words, with plans to integrate newly digitized audio resources from the California Language Archive, enhancing language preservation tools. A recording of Leonard Talmy pronouncing a list of Atsugewi nouns (with glosses) is now in the California Language Archive at https://berkeley.box.com/s/x4hn9bym4t44die2ivspfq13ktv36yb5. It was recorded by Eric Pederson in 1989 after he and Talmy made a follow-up field trip.

3 Acúmmá ʼó tiṡi íímac̓ciʼ

This was a busy month with community events and other activities.

Community Engagement and Volunteer Coordination: .

Seasonal Tribal Activities: The language camp at Satitla introduced new activity lessons and featured the ceremonial launch of a traditional dugout canoe at Medicine Lake, incorporating inclusive language use across multiple age groups.

Impact: At the Conference on Indigenous Languages (COIL) held at UC Davis, Pit River language teacher Connor Yiamkis showcased the timeline of language revitalization in Pit River territories, accompanied by a panel discussing domain reclamation benefiting tribal members and diaspora. A paper by Connor and two faculty advisors is in review for publication. It summarizes his research into learning Pit River language pronunciation.

4 A draft lexicon of Achumawi verb prefixes

A draft lexicon of Achumawi verb prefixes is presented in the following pages. It is incomplete for at least two reasons.

First, I have not yet pursued the analysis of occurrences with initial *t-* alone, not in combination with another of these prefixes.[8] Forms in which *t-* occurs in combination with other prefixes are included in the 'dictionary' tables below. It will be seen that these support the hypothesis that *t-* is an argument indicator, a morpheme that is associated with a verb, phrase, or sentence when a higher-order operator (verb, adverb, etc.) V_s enters upon it.

For example in English, in *I think that he should go to the meeting*, the word *that* is an argument indicator on the sentence *he should go….* The parallel construction *I want that I should go* is conventionally reduced to *I want to go*, where *to* is the argument indicator. In English, other changes may occur when a verb occurs in the argument of another verb. Under *should* and in the reduction nto the infinitive with *to* there is no *-s* (or other tense) on the verb *go*, as compared e.g. with *he goes*. The most common argument indicator in Achumawi is the *t-* prefix. It occurs with questions, commands, and modal or aspectual constructions where the higher-level V_s either is explicitly present or is implicit in context both in the English gloss and in Achumawi.

In general, when the information borne by words can be recovered from context, those words may be reduced in form. The reduction may be merely lowered stress and amplitude. Some of the phonemes may be less fully articulated or reduced even to zero (*He's gonna go* vs. *He is going to go*). Entire words may be reduced to zero phonemic content. The condition for zeroing is that, contextually or by convention, there is no loss of information. We are familiar with historically conventionalized zero allomorphs, for example in *sheep* singular and *sheep* plural. Recognizing this as a pervasive phenomenon resolves many difficulties and greatly simplifies the grammar.

Because of the diversity of contexts for reduction, the *t-* argument indicator appears to have a diversity of specialized meanings. They hypothesis being tested is that these are the meanings of diverse higher-order operator which have been zeroed. Recovering these is beyond the scope of this month's report. It will be the next step after the collection of *t-* words has been partitioned according to those differences of meaning.

8 These *t-* forms are usually classified as participles in the database. Product or result nominalizations ending with *-e* are classified as nouns.