The field of linguistic typology has made great strides in mapping the structures to be found across languages. We can now ask whether speakers of all languages distribute their ideas over such structures in the same ways. This question is explored here by examining complement constructions in three genealogically and areally unrelated languages. Each offers glimpses into some factors that shape grammar over time. Crosslinguistic differences in grammar arise from what speakers have chosen to say over millennia, but even languages spoken today can provide snapshots of moments in such processes, if we care to listen to their speakers.*

Keywords: Barbareño Chumash, complementation, grammaticalization, information packaging, Mohawk, prosody, Yup’ik

Essential elements of scholarship are discerning patterns and positing general principles. The search for general principles can, accordingly, tempt us to discard differences as not pertinent. But differences can be important, and the field of linguistics is becoming richer with them. Languages provide tools for structuring our worlds, at the core of intellectual and cultural heritage. And crosslinguistic differences can carry powerful social value as shared specialness for communities. The differences can also do more: they can lead us to an enriched understanding of language in general. If we jump too soon in setting up typological principles, we can miss out on deeper generalizations and potential explanations. Even where we have clear ideas about structures that recur in language after language, we can ask whether speakers of different languages distribute their ideas over such structures in the same way. That question is explored here with a common syntactic construction: complementation.

1. Complement constructions. Among the patterns most familiar to syntacticians are complement constructions, in which an argument of one clause (the matrix) is another clause (the complement), as in 1b and 2b.

(1) Object complement
   a. He saw a bug.
   b. He saw [that he had finished].

(2) Subject complement
   a. Politeness is important.
   b. It is important [that you be polite].

Such constructions have long been the focus of syntactic typology. In foundational work, Noonan (1985, 2007) listed kinds of matrix verbs that tend to appear with complements.

* This article is a writeup of my Presidential Address presented on January 12, 2021, at the virtual annual meeting of the LSA. I am grateful to the speakers cited here and others who worked through recordings with me. Special thanks to Mohawk speakers Annette Kaia’titahkhe’ Jacobs of Kahnawà:ke, Quebec, and Kaner-ahtenhá:wi Hilda Nicholas and Skawén:nati Montour of Kaneshsata:ke, Quebec. Work on Barbareño came out of the Chumash Language Project funded by NSF grant BNS-90110018. Thanks to Suzanne Wash for her fastidious work on the project. I appreciate the time spent with Ernestine Ygnacio DeSoto, daughter of Barbareño speaker Mary Yee, going through the notebooks her mother kept during her work with John Peabody Harrington. I am also grateful to the Central Alaskan Yup’ik speakers cited here, who worked through recorded conversations and narratives with me, particularly Elizabeth Ali, Elena Charles, and George Charles. All have contributed valuable expertise and insight over the years of our work together.
(3) Classes of complement-taking matrix verbs (Noonan 2007:120–45)

a. Utterance: say, tell, report, promise, ask, etc.
b. Propositional attitude: believe, think, suppose, assume, doubt, deny, etc.
c. Pretense: imagine, pretend, fool, trick into thinking, make believe, etc.
d. Commentative: regret, be sorry, be sad, be odd, be significant, be important
e. Knowledge: know, discover, realize, find out, forget, see, hear
f. Fear: be afraid, fear, worry, be anxious
g. Desiderative: want, wish, desire, hope
h. Manipulative: force, make, persuade, tell, threaten, let, cajole, command, etc.
i. Modal: can, be able, ought, should, may, be obliged
j. Achievement: manage, chance, dare, remember to, happen to, get to, try, forget to, fail to, avoid
k. Phasal (aspectuals): begin, start, continue, keep on, finish, stop, repeat, resume
l. Immediate perception: see, hear, watch, feel, imagine

Complement constructions are pervasive crosslinguistically, and descriptions of them are easy to find in grammars. Most are unsurprising. A closer look at how speakers actually use them can be more interesting.

2. Mohawk. Mohawk (ISO 639-3: moh) is a language of the Iroquoian family, indigenous to northeastern North America. There are six major Mohawk communities, located in what are now Quebec, New York State, and Ontario. Examples here are drawn from spontaneous speech.¹

2.1. Complement constructions. Mohawk complement constructions are often characterized mainly prosodically.²

¹ The Mohawk materials cited here come from recordings made over a period from 1973 to the present. Examples are given in the community orthography. The values of most symbols are close to their IPA counterparts, with a few exceptions. The symbol <i> is used for both the glide [j] and the high front vowel [i], the digraphs <en> and <on> for nasalized vowels [ʌ̨] and [ų], respectively, the apostrophe <’> for glottal stop [ʔ], and the colon <:> for vowel length. An acute accent <á> over vowels indicates stress with high or rising tone, and a grave accent <à> stress and a tone that rises sharply then plunges steeply. Obstruents are voiced before other voiced segments.

(4) Mohawk complement construction: Sadie Sesír Smoke Peters, speaker
Kè:iähre’
k-ehiar-e’
1SG.AGT-remember-EP-ST
‘I remember’
[énska wahiiaten’nikôn:raren’
enska wa-hii-aten-’nikonhr-a-r-en-’
one FAC-1SG>M.SG-MID-mind-LK-be.on-Caus-PFV
once I put my mind on him
ri’kèn:’a].
ri-’ken’=a
1SG>M.SG-have.as.yr.sib=dim
I have him as younger sibling
‘once I took care of my little brother.’

The Mohawk examples are arranged here so that, where possible, each line represents an intonation unit or prosodic phrase. (If the intonation unit is too long to fit on a single line, the next line is indented, as in the bracketed prosodic phrase in 4.) The remark in 4 was pronounced as a single prosodic sentence, beginning with an initial pitch reset and ending with final terminal fall, visible in the pitch trace in Figure 1. It consisted of two intonation units, the first ending with a nonterminal fall, and the second beginning with a smaller pitch reset on the stressed syllable. (The sharp descent in pitch on the stressed syllables in wahiiaten’nikôn:raren’ ‘I minded him’ and ri’kèn:’a ‘my younger brother’ reflect special contours descended from coda laryngeals.)

Mohawk is relatively polysynthetic, with potentially morphologically complex verbs, like wahiiaten’nikôn:raren’ ‘I minded him’. It is head marking: all verbs contain pronominal reference to their core arguments, here -hii- (1SG>M.SG) ‘I>him’. (Neuters are not marked overtly unless no other participants are present.) Verbs can accordingly constitute complete clauses and even sentences in themselves. There is also incorporation of noun stems, here -’nikonhr- ‘mind’ in ‘I put my mind on him’ = ‘I minded him’.

Though complement constructions are often characterized by prosodic packaging alone, complements may also be set off with demonstratives, the particle tsi ‘how, that, as’, and/or the article ne.

(5) Mohawk complement with demonstrative: Josephine Kaieríthon Horne, speaker
Sénha’ kí’ ietsohná:ten’ kí:ken;
sénha’ kí’ ie-ts-io-nhaten-’ kiken
more in.fact TRL-REP-N.PAT-regret-ST this
‘It’s more regrettable’
Distributing meanings over structure

(6) Mohawk complement with *tsi*: Josie Jacobs Day, speaker

That's when I found out his son is now running this golf course. It's big. Buildings here and there, and many things started up, a restaurant.

She then continued with what was later translated ‘He’s done well’. But she used a complement construction, with matrix ‘it is good’.

(7) Mohawk complement: Sha’tenkenhátie’ Marion Patton Phillips, speaker

He’s doing well.’

Like the other examples seen so far, this was a single prosodic sentence, beginning with a high pitch reset on the stressed syllable of the matrix, and ending with a final terminal fall. It consisted of two intonation units, the first the matrix and the second the complement. The complement began with a smaller pitch reset on its stressed syllable; see Figure 2.

Some other speakers were discussing differences between Mohawk and English. When one noted, ‘Our words come out differently’, he used a complement construction with ‘we are different’ as the matrix.
(8) Mohawk complement: Billy Kaientarónkwen Two Rivers, speaker
Tetiattihen
te-ti-at-tih-en
dv-1INCL.DU-MID-be.different-ST
we are different
[tsi ni: tsi entkawenníneken’ne’].
 tsi ni-io-h tsi en-t-ka-wenn-inenke’n-e-’
how PRT-N-be.so how FUT-CSL-N.AGT-word-emerge-EP-PFV
how so it is how the words will emerge
‘Our words come out differently.’

Again this was a single prosodic sentence (Figure 3).

On another occasion two men were complaining about someone’s behavior. One made the comment in 9, later translated as ‘He should be smart enough about this stuff’. He used a complement construction with matrix ‘it is enough’.

(9) Mohawk complement: Joe Awenhráthon Deer, speaker³
iekai:ri [tsi nihononhtionnhtsétarà:ien’
ie-ka-i-eri tsi ni-ho-anonht-nion-h-htsa-ien-
TRL-N.AGT-be.right.ST how PRT-M.PL.AGT-think-DISTR-NMLZ-LK-have-ST
it is enough how so he thoughts has

³ Note that in this example, the width of the page and length of the complement will not allow for accurate representation of intonational units by line. The first word iekai:ri is one intonational unit, and then the entire complement that follows (in the square brackets) is a second intonational unit.
ne; tsi nah:ò:ten’] ...
ne tsi na-h-o’ten’
that how pron-n-be-a.kind.of
that such kind of thing
‘he should be smart enough about this stuff … ’

A group was reminiscing about their childhoods. One speaker recalled how her younger brother had been criticized at church for the way he was dressed. She used a complement construction with matrix clause ‘it was not correct’.

(10) Mohawk complement: Charlotte Kaherákwahs Bush Provencher, speaker
Iah teioiánere’ ki:
iah te-i-o-ianr-e’ kiken
not NEG-N.PAT-be.good-st this
not is it correct this
[tsi ni: tsi rótston].
tsi ni-io-ht tsi ro-atst-on
how pron-n.be.so how M.SG.PAT-use-ST
how so it is how he is dressed
‘He wasn’t dressed correctly.’

In each of these examples, the information the speakers expressed in their matrix clause was different from their English counterparts.

(11) Matrix + complement
‘He’s done well.’ Matrix: ‘It is good’
‘Our words come out differently.’ Matrix: ‘We are different’
‘He should be smart enough about that stuff.’ Matrix: ‘It should be enough’
‘He was not dressed correctly.’ Matrix: ‘It is not correct’

The information packaging here was not random: the main point of the statement was expressed in the initial matrix, which coincidentally occurred at the prosodic peak.

If community goals in language programs are to pass along traditional ways of organizing information, word-by-word translations from another language can miss the mark.

2.3. More prosody. Not all Mohawk complement constructions show precisely this prosodic profile. Speaker Annie Diabo mentioned that she had received a telephone call from her niece, who was alarmed to hear that someone named Annie Diabo had passed away. Mrs. Diabo continued, ‘I said there are a lot of Annie Diabos’. (Diabo is not an uncommon name in the community.) Not surprisingly, the matrix clause was ‘I said’.

(12) Mohawk complement: Annie Diabo, speaker
Wa’ki
wa’-k-ihron-
FAC-1SG.AGT-say-PFV
‘I said’
[è:so’ ne Annie Diabos].
eso’ ne Annie Diabo-s
be.much ART name-PL
‘there are a lot of Annie Diabos.’

But this time the matrix clause was less prominent prosodically than the complement. It ended with a pitch rise, indicating there would be more to follow, then the complement began with a much higher pitch reset, as can be seen in Figure 4. The substance of the matrix verb ‘I said’ was also reduced, from wa’ki:ron ’ to wa’ki.
The sentence seen earlier in 9 was itself the complement of a larger sentence, shown in full in 13.

(13) Mohawk complement within a complement: Joe Awenhráthon Deer, speaker
A:ki:ron’ ó:nen,  
aa-k-ihron’ onen  
OPT-1SG.AGT-say-PFV now  
‘I’d say now’  
[iekaié:ri ‘it is enough’  
[tsi nihononhtomionhtserá:ien’ ne:, tsi nahò:ten’ … ] …  
how so he thoughts has that how such kind of thing  
‘he should be smart about such stuff’  
Here, too, the initial matrix clause ‘I would say’ was less prominent prosodically than its complement. It was also reduced in form, from a:ki:ron’ to a rapid akiron, the first small bump in the pitch trace in Figure 5.

(14) Reduced matrix: Watshenní:ne’ Sawyer, speaker
Í:kehre’ ká:ti’ ken’,  
i-k-ehr-e’ katï’ just  
PROTH-1SG.AGT-believe-st actually just  
I believe actually just  
[ok neniá:wen’ [tsi entiónnhheke’]].  
ok n-en-iaw-en’ tsi en-tewa-onnh-ek-e’  
just it will happen how we stay alive

Certain reduced matrix clauses are actually quite common, like that in 14.
The sequence í:kehre’ kati’ ken’, literally ‘I actually just believe’, is normally pronounced very quickly as a single word with little stress, kherekatiken, as can be seen in Figure 6. Here, too, it was pronounced with much lower pitch and less pitch variation than the following complement, which showed a high peak on its stressed syllable tióhn. In fact, speakers are barely aware of the full form. The sentence was later translated ‘Guess something will happen to keep us alive’.

In each of these examples with a prosodically reduced matrix clause, the matrix had semantic scope over the complement, like those in other complement constructions, but it was not the main point of the statement.

(15) Complement constructions

<table>
<thead>
<tr>
<th>Matrix</th>
<th>Complement</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘I said there are a lot of Annie Diabos.’</td>
<td>‘I said’</td>
</tr>
<tr>
<td>‘I’d say he should be smart enough about that stuff.’</td>
<td>‘I’d say’</td>
</tr>
<tr>
<td>‘Guess something will happen to keep us alive.’</td>
<td>‘I believe’</td>
</tr>
</tbody>
</table>

2.4. Speaker choices. Mohawk speakers have certain choices in how they distribute information over complement constructions. The speaker in 16, who was 103 years old at the time, was asked about her secret to good health. Her response was later translated ‘I go to bed early and I get up early’.

(16) Mohawk complement construction: Sha’tekenhátie’ Marion Patton Phillips, speaker

<table>
<thead>
<tr>
<th>Speaker</th>
<th>103 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>I go to bed early and I get up early</td>
<td>Iohsnó: re’ [waki:ta’s]</td>
</tr>
<tr>
<td>io-hsnor-e’ wak-ita’w-s</td>
<td>N-be.fast-st 1SG.PAT-sleep-HAB</td>
</tr>
<tr>
<td>it is early</td>
<td>1SG.PAT-sleep-HAB</td>
</tr>
<tr>
<td>tanon’ iohsnó: re’ [katkétkwas]</td>
<td>1SG.PAT-sleep-HAB</td>
</tr>
<tr>
<td>tanon’ io-hsnor-e’ k-at-ketskw-as</td>
<td>it is early</td>
</tr>
<tr>
<td>and N-be.fast-st 1SG.AGT-MID-raise-HAB</td>
<td>I get up</td>
</tr>
</tbody>
</table>

The important part of her message was not the fact that she went to bed and got up, but rather that both were early.

Another speaker was describing Christmas at the school she attended as a child. When she said ‘we would go to bed early’, it was the verb ‘we would go to bed’ that appeared initially.

(17) Mohawk complement construction: Josie Jacobs Day, speaker

<table>
<thead>
<tr>
<th>Speaker</th>
<th>76 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>We would go to bed</td>
<td>Enionkwenta:wha’ wahi’,</td>
</tr>
<tr>
<td>en-ionkwa-ita’w-ha’ wahi’</td>
<td>FUT-1PL.PAT-sleep-PURP-PFV TAG</td>
</tr>
<tr>
<td>we would go to bed you know</td>
<td>1SG.AGT-MID-raise-HAB</td>
</tr>
</tbody>
</table>
She was explaining that on Christmas Eve the children would be sent to bed, then only later awakened for midnight Mass, rather than staying up until the service. This time the important information was the going to bed.

The Mohawk distribution of information over complement constructions allows us to look more deeply at the essence of complementation. In general, matrix verbs have semantic scope over their complements, but with variable illocutionary force. In Mohawk, their information value is reflected in both the distribution of information over their components and their prosodic patterns. Important information is expressed early in all sentences; in complement constructions this is often in the matrix clause. Less newsworthy information that nevertheless has scope over the complement may still be expressed in a matrix clause, but with reduced prosody. If used with sufficient frequency, such matrix clauses are susceptible to erosion in substance and may ultimately be further reduced to discourse and grammatical particles, and even affixes.

Such has happened, as in many languages, in the development of a Mohawk hearsay particle *iaken*’ from a verb *iaká:wen* ’one says’. An example is in 18.

(18) Mohawk hearsay particle: Annette Kaia’titáhkhe’ Jacobs, speaker

Kon’tatiéshon iaken’ tanon’ ahshontakwekónhshon kon’t-atie-shon iakaw-en’ tanon’ ahsont-akwek-on-hshon
day-PROG-DISTR FL.PAT-say-ST and night-be.all-ST-DISTR
teiotihi:hen.

DV-Z.PL..PAT-bark-ST

‘All day long they say and all night long they would bark.’

What apparently originated as a matrix verb *iaká:wen* ‘one says’ in complement constructions has been reduced prosodically and segmentally and no longer appears in sentence-initial position. Its low prosodic profile and brevity can be seen in Figure 7.

![Figure 7. Mohawk hearsay evidential: ‘All day long they say and all night long they would bark.’](image)

3. **Barbareño Chumash.** A member of the Chumashan language family, Barbareño (ISO 639-3: boi) is indigenous to the South Coast of Central California. It is also sometimes referred to as Šmuwič. There are no longer any first-language speakers, but there is rich documentation, especially from three generations of highly skilled speakers: Luisa Ygnacio (1835?–1922), her daughter Lucretia Garcia (1877–1937), and especially her granddaughter Mary Yee (1897–1965), all of whom worked with John
Peabody Harrington. Harrington’s Barbareño materials date from 1913 to his death in 1961. Mrs. Yee also worked with Madison Beeler from 1954 to 1963.4

Like Mohawk, the Chumashan languages are polysynthetic and head marking, with pronominal affixes in the verb identifying the core arguments of the clause. As in Mohawk, verbs can function on their own as clauses and even sentences. The syntactic structure of the language is somewhat different, however. Basic Barbareño sentences consist of an initial predicate, usually a verb containing a subject prefix and (if transitive) an object suffix, optionally followed by any number of dependent constituents, each marked with a proclitic *hi=*. Within constituents, dependents are marked with the same proclitic. These structures can be seen in 19. (Third-person singular objects are unmarked.) Materials cited here are from the Harrington (n.d.) and Beeler (n.d.) field notes. Those from Harrington are cited by microfilm reel and frame number: JPH59.596. Those from Beeler are cited by notebook and page number: B3.19.52.

(19) Barbareño basic sentence: Mary Yee, speaker, B3.19.52

S~eqwel-us hi skonko’nin
3SBJ-make–BEN.APPL DEP bug.RDP
he prepared for her bugs

‘He prepared bugs’

hi l=s-ha’-uw hi ho’=s-mis.
3PG.art=3SBJ-FUT-eat DEP 3REM=3POSS-mother.in.law
that she will eat his mother-in-law

‘for his mother-in-law to eat.’

Topicalization constructions are common. The topicalized constituent appears initially, followed by the nuclear clause set off by a proclitic ’i=’.

3.1. Barbareño complement constructions. Complement constructions in Barbareño are much as would be expected, consisting of an initial matrix clause, followed by the complement clause preceded by the dependency clitic *hi=*. A subject complement can be seen in 20.

(20) Barbareño subject complement construction: Mary Yee, speaker, B3.19.53

S~ununa
3SG.SBJ-start
it started

‘It started’

[hi s-tuhuy].
3REM 3SG.SBJ-rain

that it rains

‘to rain.’

This was pronounced as a single prosodic sentence consisting of two intonation units, the first beginning with a high pitch reset, the second with a smaller pitch reset, and the whole ending in a final fall; see Figure 8.

We are fortunate that Madison Beeler made audio recordings with Mrs. Yee (Beeler 1954–1963), so the phonetic values of transcriptions are clear. The recordings of connected speech are of her reading from her notebooks, so information on the prosody of complex constructions is less clear. For that reason the Barbareño examples are arranged here by syntactic structure rather than prosody.

4 The apostrophe <’> is used for glottal stop here, <š> for the alveo-palatal fricative counterpart to IPA [ʃ], and <č> for the alveo-palatal affricate [ʧ]. Otherwise symbols are close to their IPA values.
A sentence with an object complement is in 21.

(21) Barbareño object complement: Mary Yee, speaker, JPH59.596R
S-am-‘ip
3SBJ-INDF-say
‘They say’
[hi ho’=l=kuhku’
DEP DIST=ART=RDP.person
‘that those people’
i=’al-e-non’o’ hi s-iy-sukik’i hi l=tip].
TOP=ST.NMLZ-NEG-much DEP 3SBJ-PL-care.about DEP ART=salt
‘did not care much about salt.’

3.2. SOME SURPRISES. Complement constructions occur in Barbareño where they would be unlikely in European languages. In 22, Mrs. Yee was describing a family she had worked for, saying, ‘They sipped their soup noisily’. She used a complement construction with matrix ‘they were loud’.

(22) Barbareño complement: Mary Yee, speaker, JPH59.643R
S-iy-qili-xax’in
3SBJ-PL-HAB-be.loud
they were loud
[hi s-iy-axlulun hi s-’o’
DEP 3SBJ-PL-sip.RDP DEP 3POSS-broth
that they sipped its broth
hi l=’awin-aš hi s-’am’in].
DEP ART=boil-RES DEP 3POSS-meat
the boiled result its meat
‘They sipped their soup noisily.’

The main information was not the fact that the family ate soup, but rather that they were noisy.

Commenting on the stars, she observed that ‘The stars still make lines painting things, but they are called different things from what they used to be called’. This last idea she expressed with a complement construction with matrix ‘they make them different’. The point was not that the stars were called something, but that the names were different.

(23) Barbareño complement: Mary Yee, speaker, JPH59.301R
S-am-su-’oyni-wun
3SBJ-INDF-CAUS-other-3PL.OBJ
they make them different
Describing dialect differences among the various Barbareño communities, Mrs. Yee noted that ‘Sometimes the people in a large rancheria and those living nearby talked the same way. But generally each rancheria spoke a little differently’. For ‘they talked the same way’, she used a complement construction with matrix ‘it is one’. Her point was not that they talked, but rather that their speech was the same.

(24) Barbareño complement: Mary Yee, speaker, JPH59.662L

‘They are called different things.’

Discussing traditional remedies, Mrs. Yee noted that ‘To cure a cold, people would drink elderflower tea, sweat profusely, then go to bed’. She followed this with the sentence in 25, ‘You don’t get up for quite awhile’.

(25) Barbareño complement: Mary Yee, speaker, JPH59.514R

You don’t get up for quite awhile.

The main information was not that the patient would not get up, but that it did not happen immediately.

In 26 her main point was not that men spoke, but that their words were few.

(26) Barbareño complement: Mary Yee, speaker, JPH59.596L

Indian men do not say much.

She noted that in earlier times women married and had children when they were quite young. The point of 27 was not that mothers and children played, but that they did it together.

(27) Barbareño complement: Mary Yee, speaker, JPH59.356L

they are together
The patterns here are much as in Mohawk. The main information is packaged in the matrix clause.

3.3. Some Barbareño alternatives. It was seen earlier that in Mohawk, matrix clauses that do not convey the main information are less prominent prosodically and often show signs of segmental erosion, moving toward status as particles. Alternatives available to Barbareño speakers show evidence of similar processes further along this trajectory. Counterparts to English ‘start’, for example, can be expressed either with a full matrix verb in a complement construction, or with an inceptive prefix on the verb.

(28) Barbareño verb and prefix ‘start’: Mary Yee, speaker, JPH59.408

Mal’i s-iy-qili-suwatin’una
when 3SBJ-PL-HAB-start
“When they would start’

(29) Barbareño verb-verb compound

aqni-čʰo
think-be.good
‘to like (persons)’

Recurring combinations can come to be processed as chunks. Some time after this happens, either element may cease to exist on its own, even though the chunked combination remains. In fact, the second elements of some Barbareño compounds originally formed with the verb aqn ‘think’ no longer occur as independent stems.

(30) Barbareño ‘mentally’: Applegate n.d. 32.201

a. aqni-kuyupi ‘to pay attention to’ kuyupi?
b. aqni-wus ‘to desire to, to want to’ wus?
c. s-aqni-k’ulš ‘to be sad’ k’ulš?

The verb stems in 31 also apparently developed from verb-verb compounds. Their second elements still persist on their own, though the first, ulu-, no longer does.

(31) Barbareño prefix: Applegate n.d. 32.201

a. ulu-peč ‘to chip flint, knap flint’ pen ‘to strip off’
b. ul-eqpey ‘to follow, to be behind’ eqpey ‘to stick to’
c. ul-iqip ‘to plug up, stop up’ iqip ‘to close, shut’

A number of other verb-affix alternatives are available to speakers. The pairs are sometimes related, but not necessarily. As seen in 28 earlier, there is both a verb suwat-in’una ‘start’ and a prefix uti-. (The verb suvatin’una is itself morphologically complex: su-wati-nu-na’n ‘caus-simultaneously-with-go’.) There is both a verb ‘be quick’ and a prefix ‘quickly’. Mrs. Yee had said, ‘Then after bathing the cut, it is good to sprin-
Distributing meanings over structure

kle dried leaves of the hare’s ear plant on it so it will heal promptly’. The statement ‘it will heal quickly’ was expressed as a clause with full verb ‘it will be quick’, the rapidity being her main point.

(32) Barbareño verb ‘be quick’: Mary Yee, speaker, JPH59.630
čukanu s-saʔ-šutowič
so.that 3SBJ-FUT-be.quick
so that it will be quick
[hi s-xalas].
DEP 3SBJ-heal
that it heals
so that it will heal promptly’

On another occasion she was describing a brave man who jumped into action when everyone was numb with fear. He reached over and took a drink of pespibata (made with tobacco), which gave him strength. This was part of a discussion about pespibata. Her point was that drinking the pespibata gave him strength, not that he did it quickly.

(33) Barbareño prefix ‘quickly’: Mary Yee, speaker, JPH59.288R
S-kuy ho’=l=šow
3SBJ-take DIST=ART=pespibata
he took it that pespibata
hika s-api-’uw, …
and 3SBJ-quickly-eat
and he quickly drank it
‘He took some pespibata and drank it quick.’

Once a prefix has become sufficiently established, speakers may extend it analogically to new formations. There are now numerous verb stems containing the prefix api-‘quickly’, among them those in 34.

(34) Barbareño prefix api- ‘quickly’: Applegate n.d. 27
a. api-’atikuy ‘glance, look quickly’ atikuy ‘be facing’
b. api-kuy ‘grab for something’ kuy ‘hold, take’
c. ap-uqushťáy ‘flash’ uqushťáy ‘be bright’
d. ap-ackawš ‘happen fast, unexpectedly’ ackaw ‘do something bad/badly’
e. ap-aqliwin ‘gulp down’ aqliwin ‘swallow’
f. ap-axsil ‘snap at’ axsil ‘bite’
g. ap-exen ‘gobble up’ exen ‘eat up’
h. ap-u’liš ‘catch, get a hold of, grab’ u’liš ‘take hold of’
i. api-nu’na ‘start from, to depart from’ nun’a ‘bring, take’
j. api-yuntasin ‘blush suddenly’ yuntasin ‘be red hot, blush’

4. Central Alaskan Yup’ik. Yup’ik is a language of the Inuit-Yupik-Unangan or Eskimo-Aleut family, spoken in southwestern Alaska (ISO 639-3: esu). Like Mohawk and Barbareño, it is polysynthetic, with potentially many morphemes per word, and holophrastic, with core arguments identified in pronominal suffixes. Single verbs can constitute complete sentences in themselves. Both verbs and nouns begin with just one root, optionally followed by potentially many postbases (mainly derivational suffixes), and ending with an inflectional suffix complex. For verbs, the ending consists of what is termed a mood marker and a pronominal suffix; for nouns, the ending indicates number, possession if the referent is possessed, and case.
As in Mohawk and Barbareño, Yup’ik contains prototypical complement constructions, with an initial matrix clause followed by a complement clause. An example is in 35. Examples are arranged according to their prosody, with each intonation unit displayed on a separate line.5

(35) Typical Yup’ik complement construction: George Charles, speaker

Tuai-llu-gguq tangerrliniuq
then=too=hrs see-apparently-INTR.IND-3SG
‘Then he saw’

[imkut cuassaat nangelliniluki].
imkut cuassaaq-t nange-lini-lu-ki
those rhubarb-PL finish-apparently-SUBORD-R>3PL.
‘that he had finished the wild rhubarb.’

As can be seen in the pitch trace in Figure 9, this sentence was spoken as a single prosodic sentence, beginning (after the particles) with a high pitch reset and ending in a terminal fall.

![Pitch trace of Yup'ik complement construction](image)

Figure 9. Yup’ik complement construction: ‘Then he saw that he had finished the wild rhubarb.’

But as in Mohawk, not all complement constructions show the same prosodic patterns. The matrix clause in 36 is ‘they would say’.

(36) Yup’ik matrix ‘say’: Elizabeth Ali, speaker

Tua-i-llu-gguq,
‘And so’
qanlartut,
qaner-lar-tu-t
speak-habitually-INTR.IND-3PL
‘they would say,’

[Ilumun-gguq pagaani yungqertuq taucken,
ilumun=gguq paga-ani yu-ngqer-tu-q tauku-nek
truly=hrs up-LOC person-have-INTR.IND-3SG that-ABL.PL
‘Indeed up above there are those people’
pagaaggun, anellreq].
pagaa-ggun ane-lleq
up.above-VIA go.out-NMLZ
‘who left through the upper door.’

5 The Yup’ik material cited here is in the community orthography: <ng> represents a velar nasal [ŋ], <g> a velar fricative, and <r> a uvular fricative. Voiceless fricatives are represented with double consonants: <vv> = [f], <ss> = [s], <ll> = [l], <gg> = [x], <rr> = [χ]. Fricatives are devoiced before voiceless sounds.
The most important information here was not the saying. The matrix clause accordingly showed reduced prosody; see Figure 10.

Figure 10. Yup’ik matrix ‘say’: ‘And so they would say, “Indeed up above there are those people who left through the upper door.”’

Similarly, the packaging of ‘they thought’ as the matrix clause in 37 is appropriate semantically, since it has semantic scope over the content of their thinking.

(37) Yup’ik matrix ‘think’: Elizabeth Ali, speaker

\[
\begin{align*}
\text{Waten} & \quad \text{umyu aqu t,} \\
\text{waten} & \quad \text{umyu aq e - u - t} \\
\text{like. this} & \quad \text{think - intr. ind - 3pl} \\
\text{‘They thought,’} \\
[\text{uternariyaqliniuq,} & \quad \text{yugnu n – nuniit nun}]. \\
\text{urnte - nari - yaq - llini - u - q} & \quad \text{yuk - nun} \quad \text{nuna - itnun} \\
\text{return - time. to - go - apparently - intr. ind - 3sg} & \quad \text{person - all} \quad \text{land - 3pl > pl} \\
\text{‘that it was time to go back to Yup’ik country.’}
\end{align*}
\]

But it was less prominent prosodically than the complement, because it was the complement that contained the main information (Figure 11).

Figure 11. Yup’ik matrix ‘think’: ‘They thought that it was time to go back to Yup’ik country.’

A similar pattern can be seen in 38, where the matrix clause is ‘they believed’.

(38) Yup’ik matrix ‘believe’: Elizabeth Ali, speaker

\[
\begin{align*}
\text{Waten} & \quad \text{ukverlall – ukver - lar - llru - u - t,} \\
\text{this. way} & \quad \text{believe. us} \quad \text{believe - customarily - pst - intr. ind - 3pl} \\
\text{‘The people have always believed,’} \\
[\text{man’a - gguq} & \quad \text{nuna,} \\
\text{this=hrs} & \quad \text{land} \\
\text{‘that this land’}
\end{align*}
\]
Again, it was the complement that contained the main information (Figure 12).

![Figure 12. Yup'ik matrix 'believe': 'The people have always believed that this land is inhabited by many people.'](image)

Intriguingly, there is a conspicuous rarity of complement constructions in Yup'ik spontaneous speech in comparison with many other languages. The counterparts of many matrix verbs that are frequently uttered with low prosodic profiles in other languages are suffixes in Yup'ik. They have developed further in the direction first seen in Mohawk in the segmental and prosodic reduction of erstwhile verbs to particles, then in Barbařeño in the reduction of certain verb roots in compounds to prefixes. Among the eleven categories of complement-taking matrix verbs listed by Noonan, eight have suffix forms in Yup'ik.

(39) Noonan’s complement-taking verbs (2007:120–45) that have Yup’ik suffixes
   a. Utterance: say, tell, report, promise, ask, etc.
   b. Propositional attitude: believe, think, suppose, assume, doubt, deny, etc.
   c. Knowledge: know, discover, realize, find out, forget, not know whether
   d. Desiderative: want, wish, desire, hope
   e. Manipulative: force, make, persuade, tell, threaten, let, cajole, command, etc.
   f. Modal: can, be able, ought, should, may, be obliged
   g. Achievement: try, manage, dare, remember to, not manage to, get to, fail to
   h. Phasal (aspectuals): begin, start, continue, keep on, finish, stop, repeat, resume

The ones that have developed suffix counterparts are exactly those with the kinds of meanings that are less likely to convey the main information in a sentence. Some examples are in 40–45.

(40) Yup’ik utterance suffix ‘say’: George Charles, speaker
     Ayallrunillruaat.
     ayag-llru-ni-llru-a-at
     leave-pst-say-pst-tr.ind-3pl>3sg
     ‘They said he had left.’
Distributing meanings over structure

(41) Yup’ik utterance suffix ‘ask’: Elizabeth Ali, speaker
Eniitun ayasqeluki.
enaii-nun ayag-sqelu-ki
house-3PL>3SG=ALL go-request-subord-R>3PL
‘They asked them to come to their house.’

(42) Yup’ik propositional attitude suffix ‘think’: Elena Charles, speaker
Tamakut yuut
tamaku-t yug-t
those-PL person-PL
‘Those people’
umyuariuklua-’ll
umyuaq-ite-yuke-lu-a=llu
mind-lack-think-subord-R>1SG
‘thought I was stupid.’

(43) Yup’ik knowledge suffix ‘not know whether’: Reed et al. 1977:442
Qavauciitaqa.
qavar-ucite-ar-ka
sleep-not.know.whether-tr.ind-1SG>3SG
‘I don’t know whether he slept.’

(44) Yup’ik desiderative suffix ‘want to’: Elena Charles, speaker
Annagayagan qalarecuvgu,
anngaq-yagar-n qalarte-yug-ku-vgu
older.brother-dear.little-2SG>3SG talk-want.to-cond-2SG>3SG
‘If you want to talk to your brother,’
qalaresgu.
qalarte-gu
talk-opt.2SG>3SG
‘talk to him.’

(45) Yup’ik manipulative suffix ‘cause’: Elizabeth Ali, speaker
Tuai alangaamaqluteng.
tuai alangaar-nar-lu-teng
well.then be.surprised-cause-subord-3PL
‘Well they are very alarming.’

(46) Yup’ik modal suffixes ‘should’, ‘be able to’: Elena Charles, speaker
Assirarkau guq maavirskuvet,
assir-garkau-gu-q maavir-su-ku-vet
be.good-should-intr.ind-3SG here-go.to-be.able.to.well-cond-2SG
‘It would be good if you’re able to come here,’
kuvyacumiartukuk wangkuk elpet-llu, …
kuvyar-cu-niartu-kuk wangkuk elpet=llu
to.driftnet-able.to.well-fut-intr.ind-2DU we.two you=also
‘we’ll be able to driftnet … ’

(47) Yup’ik achievement suffix ‘try’: George Charles, speaker
Uqurivkangnaq luki, […]
uquri-vkar-ngnaq-le-ki
be.fat-cause-trry-subord-R>PL
‘Trying to fatten them up, [my father would feed them and cook for
them].’
(48) Yup’ik phasal suffix ‘start’: Elena Charles, speaker
Akikinngeqatartua.
aki-kiur-nge-qatar-tu-nga
money-prepare.something.to.be-begin-fut-intr.ind-1sg
‘I’m going to begin to make objects to sell.’

Like other languages in the family, Yup’ik has a wealth of derivational suffixes (postbases). Jacobson (2012) lists around 500 of them. Many of these still have relatively concrete ‘lexical’-type meanings. Many are apparently descended from the second element of noun-verb, noun-noun, or verb-verb compounds. They appear in frequent collocations comparable to compounds in some other languages. Those in 49, for example, resemble noun-verb compounds (‘food-prepare’), noun-noun compounds (‘food-material.for’), and verb-verb compounds (‘eat.repeatedly-love.to’).

(49) Common Yup’ik collocations: Elena Charles, Elizabeth Ali, speakers
EC: Neqkiurkenka cali.
neqe-kiur-ke-nka cali
food-prepare-tr.particip-1sg>3pl still
‘I’m still cooking for them.’
EA: Ii-i.
‘Yes.’
Neqka vnek-wa nerayunqeggamta.
neqe-kaq-vnek=wa nere-a-yunqegg-a-mta
food-material.for-2sg>pl.abl=emph eat-repeatedly-love.to-cons-1pl
‘Since we love to eat your meals.’

The routinization of frequent collocations has had further consequences for the grammar. A number of frequently cooccurring suffixes have themselves come to be processed as chunks, as new suffixes. Traces of the desiderative suffix -yug-, for example, are still visible in a number of longer suffixes, like those in 50.

(50) Yup’ik suffix-suffix routinization: Elena Charles, speaker
Manaryugyaaqua taugaam
manar-yug-yaque-u-nga taugaam
fish-want.to-in.vain-intr.ind-1sg however
‘I want to go fishing, but’
qenumun atraryuumiitua, [...].
qenu-mun atrar-yug-ma-ite-u-a
ice-trm.sg descend-want-having-lack-intr.ind-1sg
‘I no longer want to go down, [with the way the ice looks].’

5. SO WHAT DOES IT ALL MEAN? Crosslinguistic differences can be of great value. For those interested in the universals of human language, they can be crucial to answering such questions as how much of language is due to innate design features, how much is shaped by more general human cognition, and how much is shaped by human interaction. For the communities whose languages are described, differences can be a living testament to a unique heritage, to traditional patterns of thought, to the heart of ongoing culture. They can greatly enrich community resources for fostering respect and appreciation of their specialness. And for new speakers, they can be integral to working toward native-like fluency. For all, with attention to spontaneous speech in use, we can move beyond checking existing hypotheses to looking carefully at what speakers actually do, why they do it, and how often, and, in the process, sometimes discover the unexpected. Furthermore, rich documentation of spontaneous speech can provide snapshots of the
development of structures in context and the circumstances behind them, helping us push back the boundaries of the arbitrary. We just need to listen.

REFERENCES


BEELER, MADISON. n.d. Field notes on Barbareño Chumash. Santa Barbara, CA: Santa Barbara Museum of Natural History, Department of Anthropology, ms.


REED, IRENE; OSAHITO MIYAOKA; STEVEN JACOBSON; PASCHAL AFCAN; and MICHAEL KRAUSS. 1977. Yup’ik Eskimo grammar. Fairbanks: Alaskan Native Language Center, University of Alaska.

[mithum@linguistics.ucsb.edu]