

REANALYSIS AND ELABORATION IN YUMAN NEGATIVES¹

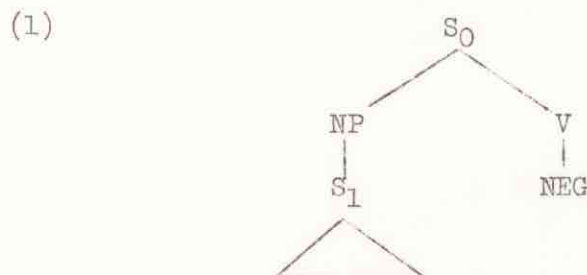
Pamela Munro

1. Introduction

Comparison of the negative constructions in the ten languages of the Yuman family is difficult. Usually, several distinct elements function in the negation of even the simplest sentence, and it is often hard to single out one "negative morpheme." The constructions involved vary a good deal from language to language, and traditional application of the comparative method seems unenlightening.

In this paper I will take a backwards approach to reconstruction: working from a universal logical structure for simple negative sentences, I will show how the synchronic proliferation of surface negative forms could have developed by way of intermediate stages which can be justified in terms of tendencies observable in Yuman today. (The specific negative constructions used in each language will be presented below as this analysis is developed.)

The underlying structure which I assume for some stage of (pre?-)Proto-Yuman (which was probably an SOV language, as all its daughters are) is



--where the embedded S_1 contains the negated lexical material of the sentence. (1) expresses an idea something like 'That S_1 is not true.' But this simple underlying structure was elaborated almost beyond recognition as the modern daughter languages developed.

Many linear strings generated directly from (1), particularly in a language with few unambiguous subordination markers, have an unfortunate communication-disturbing property which suggests a fundamental motivation for change in such structures. In the simplest realization of (1), the negative verb follows the apparent assertion of S_1 : first the listener is told something, but then without warning the statement he has just accepted is denied. Most of the modifications of the Yuman negative we will consider below could have arisen as efforts to escape such a confusing contradiction,

either by emphasizing the negative or somehow bringing it into a position of greater prominence, or by assuring the hearer that the negated sentence was really never true.

The basic Yuman negative verb (in structures like (1)) was, evidently, just a vowel, or, perhaps, a diphthong--the simplest example of the Yuman canonical verb form (C)V(C). The realizations of this root in the modern negatives include a:w, a, o:, o, u, e, and ə. Comparative Yuman vowel correspondences are not well understood, but something like aw or a:w looks like the best source for these different synchronic forms. (The claim that Proto-Yuman had only a three vowel system--unlike some of its daughters--is one reason for choosing aw in preference to, say, o:.) I will use the shorthand *aw in this paper to refer to whatever the reconstructed proto-negative eventually turns out to be.²

One unelaborated but semantically weakened reflex of *aw is the synchronic Yuma "hortatory" suffix -u, in which the negative is implied rather than direct:

- (2) ?-a?a:v-u 'Let me hear it'; 'May I hear it'
 1-hear-hortatory

(by the usual sincerity conditions on exhortations, (2) must also mean 'I don't hear it now'). Notice that (2) has exactly the linear pattern of (1), namely S_1 + NEG, but that in (2) the original independent negative verb has been grammaticized, and appears incorporated as a suffix on the lexical verb. Obviously, too, a good deal of the original negative force is lost (or presuppositionalized) in a tentative statement like (2). Thus, the basic Yuman negative structure was greatly weakened semantically, and had to be reinforced. In the synchronic languages ordinary simple negation (which an exhortation certainly would not exemplify) is expressed by syntactically much more complex structures.

The proliferation of Yuman negative constructions provides a good example of what seems to be a common syntactic phenomenon: the weakening and consequent elaboration of some basic element (like the negative) whose original meaning either loses force with constant use or else is adversely affected by other factors, like the possible violation of the listener's expectations discussed above.

2. The Diegueño case

Negative sentences in Diegueño, like (3), provide a fairly good example of the type of changes that may be observed in a synchronic realization of (1).

- (3) ?-a:m-x ?-ma:w 'I didn't go'; 'I don't go'
 1-go-unrealized 1-neg

This sentence differs from the expected realization of (1) in at least three ways: first, the negative a:w begins with an unexplained m-; the negative verb is marked (with the ʔ- prefix) for a first-person subject, which is not indicated by (1); and the "unrealized" marker -x is suffixed to the negated lexical verb.

The historical derivation of (3) from (1) was evidently a fairly complicated process. Assume, first, that (1) corresponds to a linear string like

$$(4) [[\dots]_{S_1} \text{ NEG }]_{S_0}$$

In Yuman languages, all verbs are marked to agree in person with their subjects. The subject of the negative verb *aw (which was to become a:w in Diegueño) is the whole embedded sentence S_1 , so the third-person subject marker would be prefixed to the negative verb. Since the Proto-Yuman (and basic synchronic Diegueño) third-person subject marker is \emptyset , this prefixation results in no actual change in the phonological representation:

$$(5) [\dots]_{S_1} \emptyset - \left\{ \begin{array}{l} \text{NEG} \\ \text{a:w} \end{array} \right\}$$

S_1 is logically a subject complement, but in synchronic Diegueño and some other Yuman languages sentential subjects are not marked with the subject case marker which occurs on noun subjects. Frequently, in these languages, lower and higher verbs appear in a sort of loose coordination, and a suffix on the lower verb indicates whether its subject is the same as or different from the subject of the higher verb. With an underlying structure like (1) the subject of the lower verb must always differ from the (sentential) subject of the higher verb, so, in the construction just described, the different-subject ("switch-reference") suffix would follow the verb of the lower sentence.

This device was evidently available for Proto-Yuman. The different-subject marker, which we would expect to appear on the lower verb in (5), is -m (definitely reconstructable for the proto-language).³

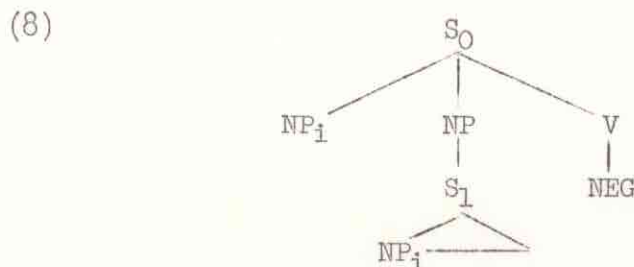
$$(6) [\dots]_{S_1} - m \emptyset - \left\{ \begin{array}{l} \text{NEG} \\ \text{a:w} \end{array} \right\}$$

Thus, by some stage of pre-Diegueño the sequence - m \emptyset - a:w became fixed: given the underlying structure (1), there could never be any alternation between different- and same-subject markers before the negative verb. Inevitably, the switch-reference -m lost its original contrastive function, and was reanalyzed as a prefix on the syllable which always followed it in a sentence negation. The underlined

non-constituent string above came to be felt as a single morpheme, the new Diegueño negative verb ma:w. Prefixes are, as it happens, much more common than suffixes in Yuman morphology; also, CV roots are predictably more common than simple V ones.⁴

(7) [...]_{S₁} ϕ - ma:w

After this stage, a transformation similar to Subject Raising applied to copy the subject of the lower sentence S₁ as the subject of the higher verb ma:w, resulting in a structure like



If the subject of S₁ was 'I', then, the ?- first-person marker would appear on the negative as well as the lower verb:

(9) [... ? - VERB]_{S₁} ? - ma:w

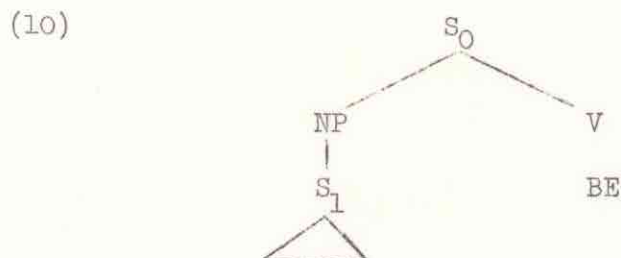
The majority of Diegueño verbs have plural stems used to distinguish singular from plural subjects, but the negative verb ma:w has no alternate form used in agreement with a plural subject. One explanation for this fact could be that the raising process which relates (1) and (8) is still part of the synchronic grammar of Diegueño. The deep-structure subject of (m)a:w (by (1)) is of course a (singular) sentence, even if the subject of that sentence is plural. Thus, if the raising transformation is assumed to follow whatever transformation generates Diegueño plural verbs, the fact that ma:w appears not to agree with its subject in number can easily be explained. The reason for this, of course, is that in the derived structure (8) S₁ is no longer a subject complement. Agreement is however with the underlying rather than the derived subject.

This series of changes from the "universal" structure (1) to the semantically rather peculiar (8) illustrates two general characteristics of the synchronic Yuman negatives: presence of an associated morpheme m, and avoidance of a surface subject complement of the negative verb.

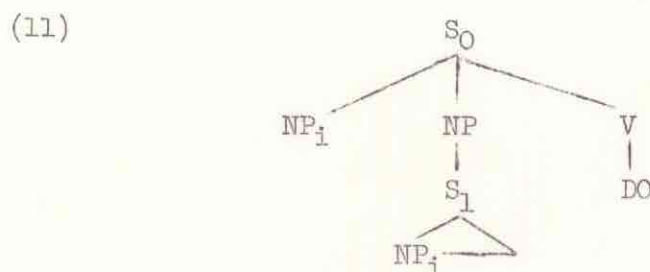
Yuman languages show a very strong tendency to avoid overt sentential subjects whenever possible. Although in languages like Mojave nominalized sentences may be marked with the subject case morpheme -č̣, such a construction is impossible in Diegueño (and also Cocopa).⁵

Thus, as was already mentioned, subordinate clauses whose verbs are marked with the different-subject suffix -m are often semantically subject complements.

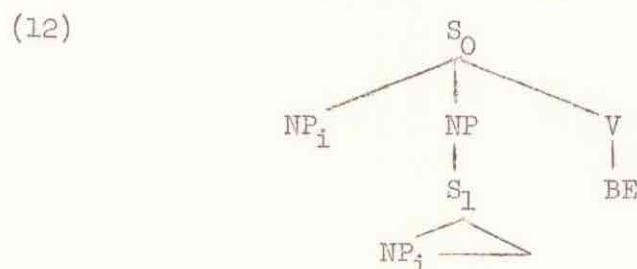
Another example of the avoidance of sentential subjects can be seen in the Mojave aspectual system,⁶ where the perfective of a sentence with an intransitive or stative verb may be expressed with the underlying structure



Transitive or active verbs have the perfective structure



Apparently by analogy with (11), and as part of the general tendency to avoid subject complements, a similar raising transformation to that discussed above applies to (10), producing



for the surface structure of intransitive perfective sentences. Just like the derived negative structure (8), this new form (12) is semantically odd (and consequently difficult to paraphrase), but apparently it follows a language-specifically more acceptable syntactic pattern.

The final modification of the derived Diegueño negative structure which occurred was the marking of the lexical verb with the general nonindicative unrealized/unaccomplished marker -x, which is also used

to indicate the future in Diegueño:

- (13) ?-a:m-x 'I'll go'
 l-go-unrealized

This last modification yields the regular Diegueño negative, as in

- (3) ?-a:m-x ?-ma:w 'I didn't go'
 l-go-unreal. l-neg

3. Similar modifications in the other western Yuman languages

Other Yuman languages show similar modifications of the basic Proto-Yuman system. As we will see, an *m* frequently appears in conjunction with the original negative (or, in some cases, replacing it), and independent negative verbs generally do not have sentential subjects, but rather are marked to agree with the subject of the negated lexical verbs. The tendency to mark the negated clause as unreal or unaccomplished is also not confined to Diegueño.

In Yuma the morpheme *-l^y*, rather than a cognate to Diegueño *-x*, is used to indicate the unreality of the negated clause. *-l^y* is the Yuma locative case marker meaning 'in' or 'into'. In several Yuman languages cognates to this morpheme are used (somewhat like English *to*) to mark complement verbs from which the subject is semantically distanced by the meaning of the main verb. An example of such a use of the Diegueño 'into' morpheme, *-l^y*, is

- (14) ?-a:m-l^y ?-a:r 'I want to go'
 l-go-into l-want

-l^y consistently is used to mark the desired but unaccomplished complement of 'want' in Diegueño. Yuma *-l^y* is similarly used to mark the unaccomplished complement of the negative:

- (15) ?-anaxat po:š ack^yew-l^yə m -š 'My dog didn't bite the cat'
 l-dog cat bite- into neg-tns

(In (15), again, the third-person subject marker on both 'bite' and the negative is \emptyset ; *-š* is a tense marker with no Diegueño equivalent.) Vowels, especially those not part of a lexical root, have a strong tendency to weaken, reduce to *ə*, and then disappear in all Yuman languages: this is apparently what happened to the negative syllable **aw* in Yuma. The affix *m*, which originally had no connection with the negative, thus seems to carry most of the negative force in the derived structure (15).

Actually, though, the segmentation shown in (15) is wrong synchronically: in modern Yuma, the *-l^y* suffix on *S₁* has been

reinterpreted as a prefix on the negative verb, by exactly the same sort of processing which led to the original reanalysis of the switch-reference -m described above. The proper segmentation of a Yuma sentence like (15) is thus

- (16) ?-anaxat po:š ack^Yew l^Ye- m -š 'My dog didn't bite the
1-dog cat bite into-neg-tns cat'

This sort of reanalysis of a preceding l^Y suffix is apparently fairly common in Yuma and neighboring languages. A more concrete example from Mojave involves pronominalization of the locational in a sentence like

- (17) ?ave:-š ?ava:-l^Y u:nu-k 'There are mice in the house'
mouse-subj house-in be-tns

The result is

- (18) ?ave:-š Δ -l^Y u:nu-k
====> ?ave:-š el^Y-u:nu-k 'There are mice there'

where the case marker -l^Y is phonologically a prefix on the following verb. The hypothesized layering of these subsequent reanalyses is confirmed by the relationship of the l^Y prefixes ("newer" than the similarly derived m of the negative) to the person markers (which, as we have seen, precede the m of the negative). The order of the reanalyzed prefix l^Y and the Yuma person markers may be seen in (19), where kə- is the imperative second-person prefix:

- (19) kə- namak el^Y-kə- mə- k 'Don't leave'
imper-leave in-imper-neg-tns

Here, then, is a summary of the reanalysis which occurred in Yuma:

- (20) SUBJ_i - VERB - l^Y SUBJ_i - NEG - TNS

--where SUBJ represents the subject person prefix--becomes

- (21) SUBJ_i - VERB l^Y - SUBJ_i - NEG - TNS (e.g., ?-VERB l^Y-?-m-k)

After this, a further reanalysis: the m of the negative, surrounded by e's, is reinterpreted as a suffix. The second word (the negative verb and affixes) in (21) then becomes the basis for a new negative frame into which a lexical verb may be inserted:

- (22) l^Y - SUBJ - _____ - m - TNS

Thus, in addition to negative sentences like (16) and (19), in the (21) pattern, Yuma has negatives in the (22) pattern, like

- (23) $\text{el}^Y\text{-n}^Y\text{i:n}^Y\text{-ayu:-m}\bar{\text{e}}\text{-te-}$ k 'I did not see you [pl.]'
 in-1=subj/-see-neg-emph-tns
 2pl=obj

(The new morpheme $\bar{\text{t}}$ in this sentence is a general Yuma emphatic; such $\bar{\text{t}}$'s show up often around negatives, as will be seen below.)

A string like (21) presumably becomes (22) by a process like Predicate Raising, which would attach the lower verb on the subject side of the verb of the higher clause to form a derived complex verb. The added presence of the prefix l^Y , in a sentence like (23), makes it difficult to imagine how the derived constituent structure of this sentence should be represented--the prefixed syllable el^Y - is, in a sense, a pronominal relic of the lower clause destroyed by the predicate raising process.

In derived complex negated verbs like $\text{-ayu:m}\bar{\text{e}}$ - 'not see', stress falls fairly naturally on the vowel of the lexical stem (here, $\bar{\text{u}}$), and the negative constituent seems like any ordinary suffix.

A pattern like (22) appears to be the only possible way of negating lexical verbs in Maricopa:

- (24) $\text{n}^Y\text{a: l}^Y\text{-?e- m}\bar{\text{e}}\text{- ks}$ 'I didn't say it'
 I in-say-neg-tns
- (25) $\text{l}^Y\text{-k- sq}^W\text{el-m}\bar{\text{e}}\text{- k}$ 'Don't stir it'
 in-imper-stir-neg-tns

Cocopa shows a similar pattern of a (lateral) prefix and an $\bar{\text{m}}$ suffix marking a negated verb, as in a sentence like

- (26) l-pawya:x-m 'They don't know them'

The only problem with establishing the correspondences here is that the Cocopa prefix is a plain, voiced l . (The regular reflex of Proto-Yuman $*\text{l}^Y$ (the source for Diegueño l^Y and Maricopa and Yuma l^Y) in Cocopa is L ; the Cocopa "desiderative" is $-\text{l}^Y$.) However, the sound correspondences involving Proto-Yuman and Cocopa palatalized consonants are often unpredictable; perhaps this Cocopa morpheme will sometime prove to be a regular cognate.

Another unusual thing about the Cocopa negatives is that the Cocopa morpheme l- has an alternate lu- which appears only if that morpheme immediately precedes the stressed (final) syllable of the verb root (but not if l- and that stressed syllable are separated by another syllable, like -paw- in (26)). Since $\bar{\text{u}}$ is probably not just a $\bar{\text{e}}$, particularly in the unlikely conditioning environment of a (historically palatalized?) l , it may be a relic of the proto-negative $*\text{aw}$.

(Why this u does not always show up is, however, not clear.)

The Cocopa negative may thus have been derived by some such series of steps as

(27) SUBJ - VERB $\left\{ \begin{array}{l} *l^Y \\ \text{Cocopa } l \end{array} \right\} - \text{SUBJ} - m - \left\{ \begin{array}{l} *aw \\ \text{Cocopa } u \end{array} \right\}$

(as in pre-Yuma, before the subject of the lower negated verb was raised or copied)

(28) ... $l - \emptyset - u - m$ (ə)

(by metathesis (an unattractive idea) or harmony/conditioning of a preceding ə by the labial m)

(29) ... $l - u - \emptyset - m$

(simple reinterpretation of the position of the \emptyset SUBJ)

(30) SUBJ_i - VERB $l - u - \text{SUBJ}_i - m$

(subject raising/copying, as in Diegueño, Yuma, etc.)

(31) $l - u - \text{SUBJ} - \text{VERB} - m$

(predicate raising, as in Yuma, etc.). In Maricopa and Cocopa, it seems that the complement of the negative (the lexical verb) undergoes obligatory predicate raising.

Mojave illustrates a similar case. The Mojave equivalent of *m-aw, -mo-, was also suffixed to the negated verb, reflecting the fact that at some point in the history of Mojave, predicate raising was obligatory. However, no trace of the irrealis markers x or l^Y (both of which do have cognates in Mojave) appears in negative constructions. The need to elaborate and reinforce the negative was served by the obligatory presence of an emphatic t (optional in the Yuma negative; cf. (23) above) following negative -mo-. The basic Mojave negative structure is thus

(32) SUBJ - VERB - mo - t - TNS

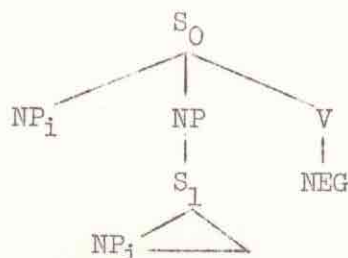
Examples of corresponding Mojave negative and affirmative sentences are

(33) ?-a:r- mo- t- m 'I don't want it'; cf. ?-a:r-m 'I want it'
l-want-neg-emph-tns

(34) n^Y- ay- mo- t- e 'I won't give it to you';
l=subj/-give-neg-emph-fut cf. n^Y-ay-e 'I'll give it to you'
2=obj

Mojave provides evidence for two of our previous claims: the segmentability of the m of the negative, and the derived negative structure (8).

(8)



The complex Mojave tense suffix -pč interacts with negative -mo-t- in a strange way:

- (35) ?-su:paw-m-p-o-t-č 'I don't know it'; cf. ?-su:paw-p-č
 l-know- 'I know it'

-pč is the reduced form of a discontinuous complement structure

- (36) [... [...]_{S1} - p ...]_{S0} - č

in which the higher (auxiliary) verb has been deleted. (This structure is used with the Mojave perfectives mentioned in section 2 above; cf., for instance,

- (37) ?-ičo:-p ?-a?wi:-č 'I made it'
 l-make- l-do-

--the full form corresponding to (36)--and its reduced counterpart

- (38) ?-ičo:-p-č 'I made it' .)

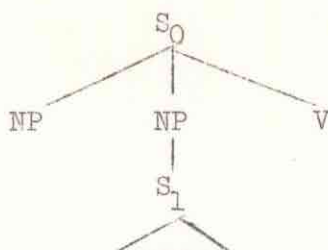
S₁ in (36), or any verb with the "tense" suffix -pč, is either perfective or a present stative. Negative sentences like (35) follow this generalization: the complement of a higher negative verb (i.e., a simple negative sentence) is generally stative in reference; a sentence like I didn't hit him is descriptive of a continuum of non-hitting points in time.

An example in which the verb of S₀ in (36) is non-auxiliary is

- (39) kʷəloyaw tapuy-p ?-iyu:-č 'I saw him kill the chicken'
 chicken kill- l-see-

Sentences with the ...-p...-č complement structure of (36) always have the following (derived) tree structure:

(40)



S_1 , the embedded sentence marked with -p, is always exhaustively dominated by the second NP of a string NP NP V. Thus, -p looks like an object marker, although the usual Yuman object marker is -ø. (40) is, of course, a more general case of (8). Thus, even though Mojave -mpotč is synchronically just a "negative suffix", its structure helps to confirm that (8) is a basic derived Yuman pattern.

Furthermore, the order of the elements in the suffix -m-p-o-t-č strongly suggests that the morpheme m is more tightly bound to the lower than the higher clause, as we would expect if it was originally associated with that clause rather than with the negative itself, since the clause-final marker -p follows m. The ordering of the elements m and p in this Mojave suffix fits in nicely with the proposed origin of m as a switch-reference marker on the lower clause.

As in Mojave, the negative in Kiliwa is augmented with an "emphatic" t:

- (41) ... komèéym ?-un^Víyu-ma- t 'We don't like the man'
 man l-like- neg-emph

(Kiliwa, like Diegueño and Cocopa, has no present tense marker.) Here, as in Mojave, Cocopa, and Maricopa, the negative is a suffix, not a full or auxiliary verb, as shown by the absence of person markers before it and by the fact that this suffix does not occur by itself as an independent verb.

All the modifications of the original negative that we have seen so far were made to reinforce a weakened negative. These modifications include moving the negative closer to the front of the sentence--by metathesis or rearrangement of morphemes, as in Cocopa, or by raising the lexical complement onto the negative verb (which then becomes a suffix)--which by decreasing the number of clauses in the sentence reduces the distance between the negative and its complement. Another device is the addition of emphatic markers to strengthen the negative, as in Yuma, Mojave, and Kiliwa. The third type of modification made was to mark the lexical complement of the negative as unreal, as in Diegueño and Yuma (and earlier stages of Maricopa and Cocopa). Each of these changes in the original structure represents a different strategy for combatting the unfortunate semantic fact about negative structures in SOV languages mentioned above: the conflict between the

listener's acceptance of a sentence and its subsequent denial. All the modifications of the Yuman negative we will consider may be seen as efforts to counteract this situation, by emphasizing the negative or giving it greater prominence, or by assuring the hearer that the negated sentence is not a real assertion.

4. Negatives in the Pai languages

These same sorts of changes occur in the remaining Yuman languages. Recall, for instance, that in Cocopa we hypothesized a rearrangement of the negative sequence *m - *aw. In the Pai languages, where the negative is augmented by t as in Mojave and Kiliwa, the three elements m - *aw - t were also rearranged--as in Walapai:

- (42) úteóm 'I haven't seen him before'
 see-emph-neg

or Havasupai:

- (43) kak ?-əwaa-ta- ?-oom-iyu 'I'm not sitting down'
 1-sit-emph-1-neg-be

or Paipai:

- (44) ma:-t- em 'He didn't eat'
 eat-emph-neg

Metathesis is very common in Yuman languages, but it seems better to regard this rearrangement of elements as a process which remains to be fully explained.¹⁰ Actually, it may be that "emphatic" t¹¹ was a prefix (as well as, or perhaps instead of, a suffix, as it has been described above) in Proto-Yuman. Evidence for a prefixed emphatic t comes from the Iñaja dialect of Diegueño, where this morpheme (an aspectual prefix in most Diegueño dialects) occurs with emphatic force on a great many verbs and even, in isolated cases, on nouns:

- (45) t- Juan-ǎ 'It's really Juan' [?]¹²
 emph-Juan-subj

Modern reflexes of *t function somewhat differently from language to language within the Yuman family, and it is hard to be sure what role this morpheme played in the proto-language.

At any rate, the rearrangement of the negative o (oo, e) and its associated elements m and t seen in (42)-(44) provides further support for the claim that these three elements are segmentable, not just one unanalyzable negative morpheme.

In addition, the fact that Havasupai, Walapai, and Paipai share

the same order for these elements may be syntactic evidence for the hypothesized aboriginal connection between Paipai (a language spoken in Baja California) and the Northern Pai languages (spoken in Arizona and separated from Paipai by most of the other members of the Yuman family). There is good phonological evidence for this connection, but its history is not known.¹³

In the remaining northern language, Yavapai, no t appears with the negative:

- (46) k^Wivo ke qeyat um- m 'Not much rain fell'
rain little neg-tns

5. Further elaborations of the negative

The moveable particle ke associated with the Yavapai negative in (46) and many other such sentences was apparently developed in a further attempt to reinforce a negative whose meaning was, once again, felt to be eroded. The use of this particle illustrates a new strategy for making a final negative more prominent: the addition of a pre-negative before the negated constituent. The unmarked position of Yavapai ke is immediately before the negated verb. However, ke may appear before any other constituent of the sentence to indicate a reduced negative scope:

- (47) ?ñač ke teyač ?-ma: ?-um- kəm 'I wasn't eating corn'
I corn 1-eat 1-neg-tns

In Walapai and Havasupai the cognate to Yavapai ke is kak (this word appears in the Havasupai sentence (43)). kak, like ke, may be moved to show negative scope. In Paipai the pre-negative particle is kos:

- (48) ?-i?i- so kos m-č'ev-tem 'Although I spoke, you didn't
1-speak-but 2-heed-neg heed'

(I have only one example of the use of this morpheme in Paipai, so I don't know if it can be moved the way ke and kak can.)

The k's in these negative augments are doubtless related to the interrogative prefix k- used to form interrogative verbs ('what-do?', 'what-say?', etc.), WH-question words, and indefinites in the majority of the synchronic Yuman languages.¹⁴ A Mojave example of this use of the morpheme k is

- (49) kuč k-?-a?wi:-i 'What should I do?'; cf. ?-a?wi:-i 'I'll
what -1-do- Q/fut do it'

The other elements of these negative particles are not so easily explained, although the s of Paipai kos is perhaps the "contrastive"

suffix whose use is illustrated in (48). (Further comparative work needs to be done here.)

In Kiliwa, k^W is used like the Pai k's to form a pre-negative k^Wat, as in

- (50) yú'n k^Wat phíyù-mat 'But they don't do anything'
 but do- neg

Like the other particles, k^Wat immediately precedes the negated constituent:

- (51) ... yú'n k^Wat pààq wun^Víyù-màtí? 'But there they don't like
 but there like- neg him either'¹⁵

In one Kiliwa sentence, k^W- was prefixed directly to negative -mat:

- (52) ʔ-élhàʔápá-cáw-k^W-màt ... 'We don't speak...'
 1-speak- pl.- -neg

This form may provide some support for the equation of the k-/k^W-initial elements of the pre-negative particles with the separable prefix k-, as discussed above. It is not clear, however, why the Kiliwa morpheme should be k^W- rather than k-. The history of the Kiliwa sound system is not yet understood, and it is possible that this correspondence is not anomalous.

In Diegueño, the negative may optionally be elaborated by the addition of the particles n^Vi: (in northern Diegueño) or may (in southern Diegueño). Again, these particles may be moved to show the scope of the negative--the unmarked position of these elements is directly before the negated lexical verb. The following example from the Mesa Grande dialect of Diegueño shows that n^Vi: may be quite a recent innovation, since it seems to retain a lot of emphatic force.

- (53) n^Vi: puwk- x u-ma:w¹⁶ 'He never came back'
 return-unreal. 3-neg

Campo Diegueño may, however, is probably an older, weakened emphatic (more like the Pai and Kiliwa particles); its optional presence does not have any intensifying effect:

- (54) ʔən^Va:č may ʔi:pač ʔ-ətim- x ʔ-ma:w 'I didn't shoot
 I man 1-shoot-unreal. 1-neg the man'

6. Derived negative morphemes

In this and the following sections some further elaborations and extensions of the simple proto-negative will be described. In

general, the phenomena to be discussed here are not strategically designed to emphasize the negative (as were the changes in the basic negative structure (1) discussed in the previous three sections); they rather are extensions of the basic system.

The originally non-negative morphemes that come to be associated with the negative verb **aw* in the various Yuman languages may acquire negative connotations of their own, so that in some cases they may be used alone to express negation without a reflex of **aw* being present. We have already seen examples of this phenomenon in Yuma, Maricopa, and Cocopa, where the negative verb may reduce to an unrecognizable *e* or be deleted. In these languages, however, it is reasonable to maintain that the negative is present in synchronic deep structure. In this section examples of negation accomplished solely by morphemes with only derived negative meaning will be presented.

The switch-reference *m* which appears in the Mojave negative *-mot-* can be used by itself, for instance, to negate a verb with the adverbial suffix *-ahay-* 'still':

- (55) *isvar-m- ahay- k* 'He's not singing yet';
sing-neg-still-tns

cf. *isvar-ahay-k* 'He's still singing'

Another use of *m* as a negative may be seen by comparing the Mojave conjoining particles *do-θ* (from *do* 'be' and *θ* "contrastive") 'but' and *do-m-θ* '[exclusive] or'. Both sentential conjuncts connected by *doθ* are true, as in (56)--

- (56) *ʔ-isam-mot-m doθ ʔ-aʔa:v-t- m* 'I couldn't see her, but
1-see-neg-tns but 1-hear-emph-tns I heard her'

--while with *domθ*, as in (57), one of the conjuncts must be false:

- (57) *valʔtay-e domθ valʔtay-mot-e* 'Is it big or not big?'
big- Q or big- neg-Q

One last example of the use of *m* alone to express negation in Mojave is its occurrence as a noun suffix, which seems to be an unusual and fairly recent innovation.¹⁷ The negation of a copular sentence like

- (58) *kʷaθəʔide:-č (ido-pč)* 'He's a doctor'
doctor- subj be-tns

(the copula is optional) is, for most speakers, the predictable

- (59) *kʷaθəʔide:-č ido- {mpotč } 'He's not a doctor'*
doctor- subj be- {motm } neg+tns

with the ordinary Mojave negative suffixes already discussed ((32)-(35) above). For some speakers, however, an acceptable variant is

- (60) k^waθəʔide:-m- ʃ 'He's not a doctor'
 doctor- neg-subj

where the predicate nominal is negated directly, with no intervening copula. Another example of this use of m to negate an NP is

- (61) m-n^yəhoʔa:k-m-n^y ʔ-su:paw-m 'I know you're not
 2-marry- neg-demon./ 1-know-tns married'
 specific

in which m negates a nominalized object complement. This m is never used to negate verbs not eventually dominated by NP.¹⁸

In other Yuman languages than Mojave, various elements associated with the basic negative themselves acquire negative force, and may be used to show negation without any reflex of *aw.

One example is the following use of Walapai t (originally an emphatic prefix on the negative):

- (62) n^yač yama-yi- t 'I would go, but I can't'
 I go-modal-neg

Havasupai kak...t may similarly show negation by itself:

- (63) kak n^yuk m-uwa:-t- e 'Don't sit down!'
 there 2-sit-neg-emph

A final example is this negating use of the Kiliwa particle k^wat:

- (64) yúʔn k^wat mǝáym 'But it is not well'
 but neg well

7. Independent negative verbs

In Yuma the negative occurs either as a separate independent verb (as in (16) and (19)) or as a suffix (as in (23)). Most Yuman languages have either both such possibilities, or, like Diegueño, have only the independent negative verb. Independent negative verbs may be used not only to negate lexical verbs, but also as pro-verbs (cf. English He's not; I didn't); they can also be used alone to mean 'no' (which thus seems to be elliptical) or 'there is/are not'.

In Mojave and Maricopa, where the negative only occurs as a suffix on the negated lexical verb, there is no way to use a reflex of negative *aw to express a [PRO] negative meaning. In these languages,

the negative pro-verb function was transferred to another verb stem, var, which appears to be unrelated to the proto-negative.¹⁹ The source of this verb, some proto-stem *war, may be related to the following cognate set for a proto-verb *p-war, with an unexplained prefix p-:

- | | | | | |
|------|-------------------|------------------------|----|------------------|
| (65) | Southern Diegueño | puwar | 20 | 'not to be able' |
| | Northern Diegueño | l ^y əpu:war | | |
| | Walapai | vəwar | | 'fail' |
| | Yuma | vava:r | | |

A Mojave example of the use of var as an independent negative is

- (66) ʔavi:-č var-k 'It's not expensive'; literally,
money-subj neg-tns 'There's no money [in it]'

Usually, however, the negative pro-verb appears with the k- prefix whose other uses in negative contexts were discussed in section 5:

- (67) hatčəq havasu:-č kavər-tahan-e 'There are no blue dogs'
dog blue-subj neg- really-assertive
- (68) vidan^y ʔači:yakuwumi:n^y-č ido-pč doθ hovan^y kavər-ptč
this catfish-subj be-tns but that neg-tns+emph
'This one is a catfish, but that one isn't'

The verb kva:r (always with the k prefix in the data I examined) is similarly used in Maricopa:

- (69) sya:l kva:r-k 'I have no money'; literally, the same as
money neg-tns (66)
- (70) kva:r-k '[It's] nothing'

A negative pro-verb was also added in Cocopa (la:x)--its source is obscure. Possibly it is historically derived from an augmented *aw.²¹ Usually Cocopa la:x follows an already negated sentence (for emphasis?), as in

- (71) l-n^y- k- nak- m la:x 'Don't kill me'
-l=obj-imper-kill- neg

(simple l...m negation in Cocopa is shown in (26) above). Occasionally, la:x may express negation on its own:

- (72) la:x kayuk kul^yx 'I can't
neg 'I-in-some-way-am' 'I-intend-to-climb' climb it'

James Crawford analyzes la:x as an "impersonal verb"--note that in

each of the examples above it fails to agree for person with the subject of the lower sentence. la:x might therefore be considered to take a sentential subject, in a structure like (1). If we hypothesize that la:x does reflect *aw, we may ascribe the -m on the preceding lexical verb (as in (71)) to a switch-reference indication of the change in subject between the two verbs--assuming that in some cases (like (26)) this main negative verb (la:x) is mysteriously deleted. Such an analysis will not, however, account for the l- prefixed to the negated verbs of (26) and (71), nor for the u (argued above to be a reflex of *aw itself) which follows that prefixed l in sentences like

(73) l-u-ʔa-m la:x 'He didn't do it'
do

It seems better to assume that Cocopa la:x is a comparatively recent development which mimics the behavior of the original Yuman negative.

Forms of the innovated negative verbs in Mojave, Maricopa, and Cocopa are used in those languages to mean 'no'.

8. p/m alternations in the negative

One problem with the Yuman negative that I have so far ignored is what appears to be an alternation between m and p in negative forms in Walapai, Havasupai, and Mojave. Since we have argued that the negative m originated as a switch-reference marker, such alternations must be carefully studied--there are certainly no non-negative contexts in which switch-reference m alternates with p. (I reject the idea that such m/p alternations could be phonological, since there seems to be no conditioning environment for denasalization, and there are no parallel examples of such a process in these languages.) If, however, we can suggest a syntactic source for a p which might substitute for switch-reference m in a negative construction, we may have further evidence for the segmentability of the m of the negative and for our hypothesis as to its origin.

Although the Paipai and Yavapai negatives appear to have no alternate forms, o(:)p is the commonest form of the negative verb (cited as o(:)m above) in Walapai and Havasupai. Apparently the p/m alternation occurs freely in all Havasupai negatives, with no apparent semantic distinction. In Walapai, the neutral form of

(42) úteóm 'I haven't seen him before'

is (74) úteóp 'I didn't see him'

When pressed for a distinction, Redden's Walapai informants reported that with final -m this sentence means 'I haven't seen him before',

while with final -p its meaning is more like 'I haven't seen him yet'. While this would be a valid distinction, I am somewhat suspicious: if the two sentences really differ in just this way, why should the 'yet' form (with -p) happen to be unmarked? Also, the difference between (42) and (74) does not seem to be paralleled by any similarly-expressed 'already'/'still' distinction in affirmative sentences. Undoubtedly there is a difference which the translators were trying to capture, but it may be even more subtle than the difference between 'before' and 'yet'--and Walapai may be losing the syntactic or semantic distinction, as Havasupai already has.

Some negative sentences in Mojave have a po negative rather than the normal mo(t). mo and po are not interchangeable, however, and considering the differences between them may shed some light on what could be a similar alternation in Havasupai and Walapai.

The Mojave verb ?a:v 'hear', 'sense', 'experience' may be used along with the ordinary -mot- negative to express the idea of 'never':

- (75) ?-samel^viw-k ?-a?a:(v)- mot-m 'I never have any
l-play-samesubject l-experience-neg-tns fun', 'I never
play'; literally, 'I don't experience playing'

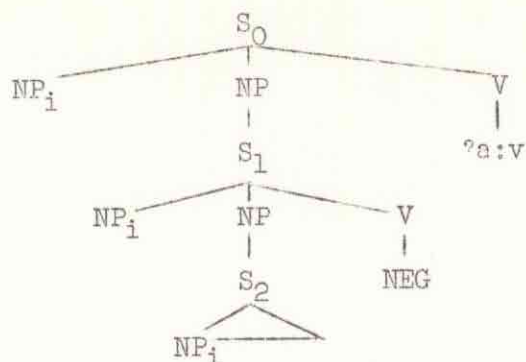
(?a:v becomes ?a: before a labial by a regular rule.) Frequently sentences like this contain indefinites. But there is another way to translate a sentence with an indefinite and the idea of 'never': a construction with ?a:v and negative po can also be used--

- (76) kuč ?-ičo:-po-?a:v-e 'I'm not making anything';
something l-make- 'I don't make anything (ever)'
- (77) makač čək^war-po-?a:v-e 'No one ever talks'
someone talk-

(The -e which usually follows negative po + ?a:v in such forms is a stylistic augment with, possibly, mild emphatic value.)

Notice that in (75) the negative follows the verb ?a:v (and is dominated by it in underlying structure), while in (76)-(77) ?a:v follows the negative. The last two sentences seem to have been derived by a predicate raising process from a structure like (78)--on the next page--while in a sentence like (75) the relative height of NEG and ?a:v in the tree is reversed. It is quite tempting to try and relate these two sets of structures by some process like Negative Transportation (by which (78) would presumably represent the basic structure for both surface constructions), but I have not discovered any semantic motivation for this suggested derivation. It is also not clear why predicate raising should collapse the whole structure (78) into one surface clause with the po negative (sentences (76)

(78)



and (77)), while with the mot negative (as in (75)) ?a:v retains its main verb status. Such problems merit further consideration.

A possible explanation for the appearance of p between S_2 and the negative o in (78) could be that S_2 is the object of the embedded negative verb. If the subtree dominated by S_1 was an unembedded surface sentence, the complement S_2 could be marked with p in the ...-p...-č complement structure discussed in section 3. (We have seen that the ...-p...-č construction combines with negative -mot- to form the complex Mojave negative suffix -m-p-o-t-č. But there should be no reason not to expect less elaborated *-p-o-č negatives in some contexts.) However, the final -č we would expect to appear after the negative verb o in this construction is missing in sentences like (76)-(77) derived from (78).

The -č of the ...-p...-č construction is probably identical with the Yuman subject case marker, so that in a linear string like

(36) [... [...] $_{S_1}$ - p ...] $_{S_0}$ - č

the whole sentence S_0 seems to be marked as the subject of some non-surfacing higher verb.²² If the p which appears in sentences like (76) and (77) is the p of the ...-p...-č construction, then S_1 of (78) should correspond to S_0 of (36). But the embedded sentence S_1 of (78) is not a subject, but rather the object of the higher verb¹ ?a:v. Therefore, in (78) S_1 is not marked with the subject case marker -č, but rather is unmarked, as are most Yuman object NPs.

This explanation may look somewhat ad hoc: why should two structurally identical object clauses (S_1 and S_2 in (78)) receive conveniently different case markings? The negative is known to occur as the higher verb in a ...-p...-č construction (in the -m-p-o-t-č negatives, e.g. (35)), so the occurrence of p on the lowest sentence in (78) is unremarkable. The reason why p does not also show up on S_1 , which also is an object, is a restriction on the types of verbs which may be the higher verb above a sentence marked with -p: such verbs must either be stative or perfective (for our purposes, simple

past. ?a:v 'experience', originally 'hear', is certainly an active verb, and its occurrences in (76)-(77)--and other such sentences--are non-past. This explains why the ...-p...-č complement structure would not be used to embed S_1 under ?a:v in (78).

I do not know of any other Yuman languages than Mojave in which object clauses are marked with -p, but there is evidence for reconstructing some kind of an object case marker *p for Proto-Yuman. Some of the relevant cognates include the object/possessive forms of the pronoun 'I' in Yuma (?n^yip), Cocopa (n^ya:p), and Mojave (?in^yep)--these forms ending in p contrast with subject pronouns in -č. Several verb prefixes should also be considered: Yavapai pa:- and Walapai pa- indicate the presence of a plural object of the verbs on which they appear, and Cocopa p- indicates a third-person object.

The development of negatives with p seems, from its very limited distribution, to be much more recent than the association of m with the negative, which clearly should be assumed for the proto-language. The Walapai data described above (concerning the contrast between sentences (42) and (74)), and the nonsubstitutability of m and p in the Mojave negatives indicate fairly strongly that there was some underlying difference in structure between negatives with m and negatives with p. The evidence of this section suggests that this difference may be related to derived constituent structure: occurrence of a p with the negative could show that some clause in the negative structure was specifically marked as an object. (The source we have argued for m, however, is consistent with any syntactic role for the m-marked clause; m originally showed that its clause had a different subject from that of some higher verb.) The use of p to mark an object clause associated with the negative would have to follow the creation of such a derived clause by the subject raising/copying process discussed in section 2. Mojave, Walapai, and Havasupai are in close geographical contact and have influenced each other lexically somewhat; for the time being, at least, we may suppose that the development of p negatives in these languages is a shared innovation.

If the p associated with the negatives in this section does in fact indicate that the negated lexical clause is an object complement, this final group of elaborations of the basic negative can be seen to be strategically similar to those discussed in sections 2-4.²³ Marking the embedded lexical clause with an overt complementizer which cannot be a surface tense marker is just another instance of the same process by which such lexical clauses were marked as unrealized in Diegueño and Yuma: the listener is reassured that he has not heard a complete assertion, that there is another verb (the negative) still to come before the end of the sentence.

9. A final comparative note

I have argued in this paper that many of the elaborations of an original simple negative structure in the Yuman languages arose from a need to avoid possible misunderstandings due to the position of the negative after the clause it negates. The Yuman modifications described here are of three basic types: bringing the negative (or part of the negative) closer to the front of the sentence, marking the lexical clause to be negated as an incomplete assertion, and emphasizing the negative itself.

The first two processes may well be commoner in verb-final than in other languages, but the last (intensification of a negative whose meaning has been weakened) is probably quite a bit more widespread. In Linguistique historique et linguistique générale Meillet describes the elaboration of the Indo-European negative:

La négation s'exprimait en indo-européen commun par un petit mot accessoire ne.... Mais ce petit mot très bref, qui tendait à être inaccentué..., est devenu rapidement très inexpressif. Là où l'on avait besoin d'insister sur la négation--et les sujets parlants éprouvent presque toujours le besoin d'insister, car on parle le plus souvent pour agir sur les autres en quelque manière, et l'on fait ce qu'il faut pour les toucher--, on a été conduit à renforcer la négation ne par quelque autre mot.... Les langues suivent ainsi une sorte de développement en spirale: elles ajoutent des mots accessoires pour obtenir une expression intense; ces mots s'affaiblissent, se dégradent et tombent au niveau de simples outils grammaticaux; on ajoute de nouveaux mots ou des mots différents en vue de l'expression; l'affaiblissement recommence, et ainsi sans fin.²⁴

This description is reminiscent of what seems to have happened to the original Yuman negative *aw, although there were more varied and extreme types of modification in Yuman than in Indo-European. Negatives generally may be particularly subject to weakening and consequent elaboration. As Meillet suggests, there are universal semantic motivations for emphasizing a negative--in addition to the structural pressures specific to verb-final languages.

FOOTNOTES

1. Ten languages of the Yuman family (Hokan stock) are spoken today in California, Arizona, and Mexico. These languages probably derive from a chain of dialects rather than a branching tree, but are often grouped into at least four sub-families: Kiliwa (perhaps the most divergent language); Diegueño and Cocopa; Yuma, Maricopa, and Mojave; and Walapai, Havasupai, and Yavapai. Paipai remains somewhat anomalous--this language looks most similar to the other "Pai" languages, but is geographically separated from them. Cf. Winter 1967.

This paper is a progress report on a continuing study. The data I cite is generally quoted as it appeared in my source, with occasional changes for ease in typing. My sources of data (and synchronic descriptions) for the various languages were--

Diegueño: the description and examples are from Langdon 1970, or were supplied directly by Margaret Langdon. Negation in another Diegueño dialect is described in Stenson 1970.

Cocopa: description and examples from James Crawford (1966 and n.d.).

Havasupai: the data were kindly supplied by Leanne Hinton.

Kiliwa: my examples are from a largely unanalyzed text in Mixco 1966.

Maricopa: my examples are from a xerox copy of field notes by Barry Alpher (in the Yuman archives, University of California, San Diego).

Mojave: all examples are from my field notes of work with the late Robert S. Martin of Ehrenburg, Arizona, and with Mrs. Nellie Brown of Parker, Arizona, to whom I am very grateful. I am also indebted to Judith Crawford for helpful discussions of negation (and everything else) in Mojave.

Paipai: the examples are from Joel 1966.

Walapai: the description and examples are from Redden 1966.

Yavapai: the description and examples are from Kendall 1972. I have profitably discussed Yavapai with Sandra Chung and Alan Shatterian.

Yuma: the examples and much of the synchronic analysis are from Baker (1970 and n.d.).

For various nonsyntactic (lexical and morphological) correspondences I have consulted Wares 1968 and slip files for different languages in the Yuman archives, University of California, San Diego.

An earlier version of this paper was presented at the 1973 meeting of the Southwestern Anthropological Association. Margaret Langdon, Allen Munro, Roderick Jacobs, Leanne Hinton, Donald Crook, and Nancy Stenson each made helpful comments on versions of this paper. I am especially grateful to Carol Baker Slater, whose insightful treatment of Yuma negation helped inspire my own investigations. Of course, none of these people will necessarily agree with all I say.

2. Many of the details of the development of modern Yuman vowels from a hypothesized three-vowel system are presented in Langdon (to appear). Some of the forms assumed in this paper to derive from a

Proto-Yuman syllable *aw would show fairly unusual sound correspondences--particularly the u's in Yuma and Cocopa. However, it should be noted that these somewhat anomalous Cocopa and Yuma u's are always (synchronically) unstressed. The vowel correspondences studied so far have concerned stressed vowels only.

Margaret Langdon suggested another idea about my hypothesized *aw. This sequence may not have been monomorphemic--perhaps *aw was really *a + *w (or *a + *u). The unexpected development of synchronic u's from the second of these proto-formatives (assuming deletion or nonoccurrence of the first) would then be less unlikely.

3. Switch-reference is further discussed in Winter (to appear).

4. Margaret Langdon has suggested that Diegueño a:wka 'hello'; 'how are you?' may provide some additional evidence for the proposed segmentation of m-a:w. a:wka is stressed most irregularly on the first syllable, which is especially odd for an unanalyzeable word in Diegueño; if that first syllable were an original root (e.g., our *aw), some reason could be suggested for the strange stress pattern. It seems possible that a fixed greeting word might contain a negative.

5. In Diegueño and Cocopa, a -č suffix on the verb of an embedded sentence shows that its subject is the same as that of some higher verb (in contrast with the different-subject marker -m already discussed). Sentential subjects marked with the subject case -č are apparently prohibited in these languages because of the possibility of confusion with the same-subject construction. In Yuman languages where the same-subject marker is -k no such problem arises. See Gorbet 1973.

6. The Mojave construction I describe in this paper will be treated in greater detail in my dissertation (Munro, in preparation).

7. The lack of a person marker on the verb here is puzzling; perhaps the first-person ?- was lost just because the following stem began with ?. Notice that the SUBJ does occur in (25).

8. Wares (1968), p. 70.

9. Disconcertingly, however, the position of the (obligatory) switch-reference/negative m (before the p of ...p...č) is not the same as that of the switch-reference m which may be inserted optionally, as in

- (1) kʷəloyaw tapuy-p-m ?-iyu:-č 'I saw him kill the
 chicken kill- p-diff.subj. 1-see- č chicken' (cf. (39))

--where the synchronic switch-reference m follows p. The m-p/p-m orders may reflect a difference in historic and synchronic rule order.

10. Margaret Langdon (1972) has shown that the types of metathesis permitted in Yuman languages are quite restricted phonologically. A change from -m-o-t- to -t-o-m- would not be expected.
11. The morpheme t is not used as an emphatic in the synchronic Pai languages, so far as I can tell, but puzzling (probably cognate) t's do show up in non-negative contexts in Havasupai, according to Leanne Hinton. Reconstructing the *t emphatic seems justified, but more comparative work should be done on this morpheme.
12. Data and analysis are from Jacobs (1969). The precise English translation for such an utterance is not really clear.
13. Cf. Winter (1967).
14. My conclusion about the source of these k's was reached independently by Leanne Hinton. Possibly this k is related to the mysterious -ka in Diegueño a:wka--cf. fn. 4. However, the equivalent of the interrogative/indefinite k- in Diegueño is m-.
15. The final -í? on the negative here is not explained.
16. This u- is one allomorph of a third-person subject prefix used with some Diegueño verbs. It seems clear that for Diegueño, as for Yuman generally, the basic third-person marker is \emptyset .
17. The following use of m never occurred in the speech of my main informant, but is often used by some people. It may represent a fairly recent innovation.
18. Note that the other contexts where m alone expresses the negative are not "simple" sentences. If the suffix -ahay- were a higher verb, the use of m to negate its (nominal) complement would be less mysterious; a similar argument might, I think, be made in the case of domə. The various uses of this m may not be as different as it first seems.
19. If negative *aw is segmentable into *a + *w (cf. fn. 2), it is tempting to regard *war as another instance of the process we have called "rearrangement"--although the appearance of the -r of *war does not help out this hypothesis. Weirdly, exactly the same *aw/*war correspondence can be seen in competing Yuman cognate sets for 'sing' (Wares (1968), p. 92, #380-1), for which the reconstructions *š-(i)aw and *š-war seem likely. (The meaning of *p-war does seem to include a negative.)
20. LYəpu:war may illustrate another case of the sort of reanalysis described for the Yuma negatives. The otherwise unexplained prefix LY- might have originated as an unrealized marker on the complement of 'be unable'--cf. the use of -LY in the Diegueño sentence (14).

21. A general rule deletes final glides in Cocopa, so a: could reflect a proto-diphthong. But the surrounding l...x must be explained if la:x is to be seriously related to *aw.

22. If we hypothesize that this verb is 'be', its deletion may be compared to other deletions of 'be' after an NP in -č̣ (as in (58)). 'Be' is also the Mojave auxiliary for stative verbs, and the higher verb in this construction must be either stative or perfective (in Mojave this seems to mean in the state of having done something).

23. The argument is more convincing for Mojave than for Havasupai and Walapai, where the position of p after the negative certainly makes it look a lot less like a complementizer on the lower verb. The Walapai/Havasupai p seems more like an indication that the negative verb has an object (cf. the cognates listed above). However, such object indicators are always prefixes in synchronic Yuman--which could be a further argument that the positions of the negative o and its associated m or p have somehow been "rearranged" in the Pai languages (cf. section 4).

24. Meillet (1921), pp. 140-141. I am grateful to Margaret Langdon for bringing this reference to my attention.

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