'How', and 'Thus' in UA: Cupan and Yuman: A Case of Areal Influence

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Prefixation onto verbal roots is unusual in Cupan Luiseño\(^2\). Excepting prefixes resulting from reduplication, Luiseño normally only allows pronominal prefixation onto verbs. Although the other Cupan languages, notably Cahuilla, allow some prefixation on verbs, there is within Cupan, and most notably in Luiseño, a general predilection for suffixation onto verbal roots. The Cupan verb ſāx-, 'be, do, say' is unusual in that it allows the affixation of a number of prefixes. These prefixes include a proximal definite 'i-', a distal definite 'a-', and two indefinite prefixes \(m-\) and \(h-\). In this paper we will see that both Yuman and Cupan show evidence of multiple prefixation onto a verb meaning 'be, do' in Yuman, and 'be, do, say' in Cupan. In particular, it will be demonstrated that the morphological analyses of the Cupan words for 'how' and 'thus' closely parallel those for Yuman Diegueño 'how' and 'thus'. In both Cupan and Yuman Diegueño, 'how' and 'thus' are derived from a verb meaning 'be, do' (or 'say' in the case of Cupan). It will then be shown that while prefixes 'a-', 'i-' and \(h-\) are of family-internal UA origin, \(m-\) is an intrafamiliar areal phenomenon of Southern California, attested most strongly in Yuman Diegueño and UA Cupan.

In Section I of this paper, we will examine the prefixation processes possible in conjunction with the Cupan verb ſāx-. We will then explain how the Cupan languages have developed causative verbs from ſāx-. These derived causative verbs bear the meaning of 'do somehow', or 'do thus', and are used in forming the Cupan words for 'how' and 'thus' respectively.

In Section II we will discuss the interrogatives of a non-Cupan UA language, Serrano. It will here be shown that the common element in all Serrano interrogatives is the indefinite prefix \(h-\).

In Section III we will discuss the interrogatives of the Cupan languages. Here we will see that both \(m-\) and \(h-\) are present.

In Section IV we will concentrate on Diegueño, Cupan's Yuman neighbor. It will be seen that Diegueño possesses an indefinite (interrogative) morpheme whose onset is /m/. Diegueño further possesses a verb yuu, 'be'. It will be shown that yuu is used in forming the Diegueño words for 'how' and 'thus'. A parallel development for 'how' and 'thus' may be observed between Yuman Diegueño and UA Cupan. Evidence from UA Serrano will be provided to demonstrate that this parallel development for 'how' and 'thus' may not be mirrored outside UA Cupan.
In Section V we will provide evidence from other Yuman languages to show that the pervasiveness of \( m^- \) as an interrogative marker is unique to Diegueño within Yuman.

In Section VI we will draw our conclusions based on the evidence provided in Sections I through V.

**Section I: Prefixation Onto \( ý\acute{a}x^- \)**

All three Cupan languages possess a verb \( ý\acute{a}x^- \) with the meaning 'be, say, do'.

When unprefixed (except with pronominal prefixes), the verb \( ý\acute{a}x^- \) generally means 'say':

1. **Luiseño:** \( ý\acute{a}x^-wun-pum \)
   
   be/say-PR:PL-3pl
   
   They say

2. **Cahuilla:** \( h\acute{e}m-ýax-we(n) \)
   
   3pl-be/say-PR:PL
   
   They say

Common to both surviving Cupan languages is a series of four verbs derived from \( ý\acute{a}x^- \). Note that Non-Cupan UA Serrano\(^4\) diverges from its Cupan relatives:

<table>
<thead>
<tr>
<th>(A)</th>
<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
<th>(E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>be, say</td>
<td>be this way</td>
<td>be that way</td>
<td>be some way</td>
<td>say what</td>
</tr>
<tr>
<td>( ý\acute{a}x^- )</td>
<td>( 'iyax^- )</td>
<td>( 'âax^- )</td>
<td>( miyax^- )</td>
<td>( hi(y)x^- )</td>
</tr>
<tr>
<td>( ý\acute{a}x^- )</td>
<td>( 'iyx^- )</td>
<td>( 'ââx^- )</td>
<td>( miyx^- )</td>
<td>( hi(y)x^- )</td>
</tr>
<tr>
<td>( Mah, kîy )</td>
<td>( pana' Mah )</td>
<td>( pana' Mah )</td>
<td>( hamin Mah )</td>
<td>( kîy hiiti' )</td>
</tr>
</tbody>
</table>

The Cupan verbs (B) through (E) are all derived from verb (A). We will now examine more closely the morphology of the Cupan verbs (B) through (E), using Cahuilla examples as representative for Cupan in general.

Verb (B) is analyzable as:

1. \( 'i^-yax^- \)
2. PDEF-be
3. be this way

The prefix \( 'i^- \) is nearly identical with one form of the proximal demonstrative in Cahuilla:

4. \( 'i' \)
5. this
Verb (C) is analyzable as:

(5) 'á-yax-
DDEF1-be
be that way, seem, resemble

An independent distal demonstrative *'á' is not extant in Cupan. Serrano, however, has:

(6) 'i-p
PDEF-LOC DDEF1-LOC
here there

'i-m
PDEF-PL DDEF1-PL
these those

Verb (D) is analyzable as:

(7) mi-yax-
IND1-be
to be somehow

Prefix m(i)− is abundantly attested elsewhere in Cupan (see Section III below).

Verb (E) is analyzable as:

(8) hi-yax-
IND2-be
say what

The indefinite prefix h(i)− is also well attested in other UA languages, including Cahuilla, Luiseño and Serrano (see Section II below).

Causatives of 'i-yax- and mi-yax-

Cupan Luiseño and Cahuilla have developed causative verbs 'cause to be' (= 'do') by affixing a causative suffix to a derivative of yáx-:

(9) Cahuilla ........................................ Luiseño
   'éxan-
   do thus
   'axán'í-
do thus, cause to resemble
   'axán'a-
   be done thus, be done likewise
These causative verbs are analyzable as:

(10) 'é-x-an-
DDEF1-be-CAUS
do thus

'a-x-á'n-'i-
DDEF1-be-CAUS-TRANS
do thus, cause to resemble

'a-x-á'n-'a-
DDEF1-be-CAUS-INTR
be done thus, be done likewise

Cahuilla 'éxan- is presumably from:

(11) *'á-yax-an-
*'á-yx-an-
*'é-yx-an-
*é-x-an-

Cahuilla further developed the following from yáx-:

(12) mé-x-an-
IND1-be-CAUS
do somehow, do something ('cause to be like something').

Similarly, Luiseño developed from yáx-:

(13) ma-x-án-'a-
IND1-be-CAUS-INTR
become, happen (i.e. 'be caused to be somehow')

ma-x-án-'i-
IND1-be-CAUS-TRANS
bring, gather, get. (i.e. 'cause to be somehow')

Luiseño maxán-'a- and maxán-'i- presumably underwent historical changes something similar to:

(14) *m-yax-án-
*ma-yax-án-
*ma-ax-án-
ma-x-án-

The /a/ of ma- is epenthetic and may be harmonic with the /a/ of yáx-. Initial consonant clusters are almost non-existent in Luiseño.
Note that Luiseno maxán′a/i- have undergone considerable semantic shifts. Whereas a native speaker of Cahuilla would be prone to translate méxan- as 'do something' or 'do somehow', the native speaker of Luiseno would not at all be likely to translate maxán′a- as anything close to 'be somehow'. For the Luiseno speaker, maxán′a- simply means 'become' or 'happen', and maxán′i- 'bring', 'gather' or 'get'.

Although no longer common in everyday speech, Luiseno retains in archaic texts two words which are much closer in meaning and form to Cahuilla méxan- and 'éxan-:

(15) mí-x̂-an-
    IND1-be-CAUS
    do somehow, do something

    'i-x̂-án-′i-
    PDEF-be-CAUS-TRANS
    say, do again

Returning to Cahuilla as the (in this instance) semantically more conservative Cupan language, we see that méxan- is analyzable as:

(16) mé-x-an-
    IND1-be-CAUS
    do somehow, do something (cause to be like something),

Cahuilla méxan- may have undergone historical changes something like:

(17) *m-x̂-an-
    *mí-x̂-an-
    *mí-x-an-
    mé-x-an-

We see that from a base verb yáx-, Cahuilla has developed the following derived forms:

(18) BASE          BE THUS       DO THUS
    BE SOMEHOW     DO SOMEHOW
    yáx-           "i-yáx-      "é-x-an-
    mí-yáx         mé-x-an-
Section II: Serrano Interrogatives

Representative of the majority of UA languages, the interrogatives of Serrano all begin with /h/:

(19) who  hamí’
what  hiit
where  haayp
when  haaypa’n
which  hye’chat
why  hamín  ñaawnk
how  hamín
how  hamya’qaT
how much  hifiiki’

Serrano hamí’ and hamín may share a common base, #ami(‘):

(20) h-ami’     h-ami-n
    IN2-?     IN2-?-INST
who        how

This base #ami(‘) may be related to the third person singular pronoun ‘ama’.

Serrano haayp probably contains the locative suffix -p:

(21) h-aay-p
    IN2-?-LOC
where

Serrano hamín ñaawnk, ‘why’ translates literally as ‘by means of doing what’:

(22) h-ami-n     ñaaw-wnk
    IN2-?-INST  do-SSP
why (‘by means of doing what’)

Serrano hamya’qaT ‘how’ contains both the prefix h- and probably the verb ‘be’ qaT:

(23) h-amya’-qaT
    IN2-?-be
how
Section III: Cupan Interrogatives

Like Serrano, the Cupan languages have interrogatives beginning with /h/:

(24) Luiseño Cahuilla Cupéño

who háx háxi' háx
what hiycha hicha' hish

Other Cupan interrogatives begin with m-:

(25) Luiseño Cahuilla Cupéño

where michá' miva' mivi'aw
when miïkinga mipa' mipa
why (hiyngay\textsuperscript{10}) miyaxwe mivingax\textsuperscript{12}
how michá' 'axáninik mëxannuk\textsuperscript{11} mixanuk\textsuperscript{13}

Thus far, we have seen in Cupan examples of both the indefinite prefixes, h- and m-. In each instance, Luiseño and Cahuilla have concurred in their choice of either h- or m- for a given interrogative. For 'how much', however, we find in Luiseño and Cahuilla:

(26) Luiseño Cahuilla

how much hik mik

The existence of both h-\textit{ik} and m-\textit{ik} suggests that one of the two indefinite prefixes, h- or m-, is an innovation which partially supplanted the other, original indefinite prefix. As h- is almost universal elsewhere in UA, the innovation in Cupan is more likely to be m-.

Section IV: Mesa Grande Diegueño Interrogatives

Mesa Grande Diegueño possesses an indefinite (interrogative) morpheme whose onset is /m/.

Mesa Grande Diegueño (Couro: 1973) reveals the following set of interrogatives:

(27)

who maap
what 'uuch
where maay\textsuperscript{13}
when ma'yum
what kumyum
why mu(u)yuu/mu'yuu\textsuperscript{14}
how mu(u)yuu/mu'yuu\textsuperscript{14}
how much muuyum/mu'yum
We see that Mesa Grande Diegueño interrogatives largely begin with /m/, the only exceptions being 'uuch and kumyum.

Mesa Grande Diegueño kumyum may be composed of the common nominalizing prefix, ku-, added to a form beginning in m-.

Langdon (PC) suggests for kumyum the following possible analysis:

(28) ku-m-yu-m
    NOM-INDF2-be-DS?
    when

Mesa Grande Diegueño 'uuch is closely related to the word for '(some)thing':

(29) 'uuchuch
    (some)thing

Langdon (PC) points out that most Mesa Grande Diegueño interrogatives may also be used as indefinites.

Based on the evidence in (27), we can posit an indefinite prefix m- for Diegueño.

We see that Diegueño 'how' is mu(u)yuu. Compare:

(30) mu(u)yuu           puyuu
    (be, do) how        (be, do) thus

Note that mu(u)yuu means both 'how' and 'be/do (some)how', and puyuu means both 'thus' and 'be/do thus'.

Langdon (1978:104) confirms that $yuu, 'be', may also be reconstructed for Proto-Yuman.

The Diegueño verb puyuu, '(be, do) thus' is also prefixed with a reduced form of the independent demonstrative:

(31) p-uu
    DEM-3sg
    that (he, she, it)

According to Langdon (PC), mu(u)yuu and puyuu may be analyzed as follows:

(32) m-u-yuu
    IND2-3sg-be/do
    (be/do) somehow

    p-u-yuu
    DEM-3sg-be/do
    (be, do) thus
Besides both showing evidence of the prefix m-, Yuman Mesa Grande Diegueño and UA Cahuilla, representative of all Cupan, also show some morphological similarities in rendering ‘how’ (‘what way’) and ‘thus’ (‘that way’)¹⁷:

(33) How: Thus:
Diegueño  muyuμ puyuμ
Cahuilla  méxannuk  ‘éxannuk

The initial morphemes of Cahuilla méxannuk and ‘éxannuk correspond nicely to the Diegueño mu(u)yuu and puyuu (with the exception of a third person marker, absent in Cahuilla, and present in Diegueño -u-):

(34)
Cahuilla: Diegueño:
mé-x-an-nuk  m-u-yuu
IND1-be-CAUS-SSP  IND1-3sg-be
how?  how?

‘é-x-an-nuk  p-u-yuu
DDEF1-be-CAUS-SSP  DEM-3sg-be
thus  thus

UA Serrano also shows some evidence of alternating a demonstrative prefix (or root) with an indefinite prefix (or root):

(35) h-aay-p  ‘i-p  ‘a-p
IND2-?-LOC  PDEF-LOC  DDEF-LOC
where  here  there

In set expressions, Serrano reveals a series of two-word constructions, the first indefinite, signalled by h-, the second definite, signalled by ‘i-’. These set expressions all translate as ‘some X or another’¹⁴:

(36) h-amy’a'-qaT  ‘iv-ya’-qaT
IND2-?-be  PDEF-?-be
somehow or another

h-ami  ‘ivi
IND2-?  PDEF=this
someone or another

h-aay-p  ‘i-p
IND2-?-LOC  PDEF-LOC=here
somewhere or another
The Serrano definite forms 'ivi' and 'ip' may be used independently to translate 'this' and 'here' respectively. The native Serrano speaker is, however, adamant about 'ivya'qaT occurring only in this set expression following hamya'qaT. The form 'ivya'qaT cannot be used independently to express 'thus' or 'this way'.

Although we have some evidence of Serrano alternately prefixing an indefinite n- and a definite 'i-' to the same base qaT ('be'), in the set expression 'somehow or another', there is no evidence in Serrano of prefixing a definite affix to the existential verb qaT to form 'thus'. Recall that Cahuilla (34) prefixes a definite affix and suffixes a causative affix to the existential verb yax to form 'thus':

(37) 'é-x-an-nuk
      DDEF1-be-CAUS-SSP
      thus
      'Thus' in Serrano is either an independent word, or a compound:

(38) tìngik
      pana' Naa-w nk
      thus be/do-SSP
      thus ('by being/doing thus')

There are further examples of indefinite Cupan m- alternating with a definite prefix 'i-'. Note the Cahuilla:

(39) mi-ngki-sh 'i-ngki-sh
      INDI1-kind-ABS PDEF-kind-ABS
      some kind this kind

In a few set expressions, Cahuilla even has forms which alternate between m- indefinite, and p- definite, reminiscent of the Diegueño mu(u)yuu, puyuu in form, and of the Serrano hamya'qaT 'ivya'qaT, 'somehow or another', in meaning:

(40) me-m-ik me-p-ék
      RDUP-INDI1-amount INDI1-DEM-amount
      a few (i.e. 'some amount or another')

      mi-ñiki' pè-Miki'
      INDI1-kind DEM-kind
      some relative or another

Santa Ysabel Diegueño (Ponchetti; PC) also has a set expression reminiscent of Serrano hamya'qaT 'ivya'qaT, 'somehow or another':

(41) m-u-yuu p-u-yuu kinemi'
      INDI1-3sg-be DEM-3sg-be perhaps
      somehow or another
The $p(\tilde{i})$- of these Cahuilla set expressions (40) is probably related to the Cahuilla third person singular pronoun $p\tilde{a}'$, corresponding to Luiseño $p\tilde{a}'$.

In contrast to Cupan and Mesa Grande Diegueño, recall that Serrano reveals for 'now' and 'thus':

(42) Serrano  

**how:**  
$h$-ami-n  
IND2-?-INST  
how  

**thus:**  
pana' (Maa-wnk)  
thus be/do-SSP  
thus  

$h$-amy-a'-qaT  
IND2-?-be  
how  

**tingik**  
thus  
thus

Section V: Yuman Interrogatives

We have seen that $m-$ is absent (or at least marginal) in Serrano interrogatives, as well as being almost universally unattested in all other UA languages.

It is common knowledge that the indefinite prefix $h-$ of Cupan and Serrano is of Proto-Uto-Aztecan origin. If the indefinite prefix $m-$, pervasive only in Cupan within UA, were universal in Yuman, the existence of $m-$ in UA Cupan could be explained away as a borrowing from Yuman which would have entered Cupan through the Yuman language representative spoken directly adjacent to the Cupan-speaking territory. This Yuman language is Diegueño.

We find, however, that $m-$ as an indefinite marker is pervasive only within one sub-branch of Yuman³⁸, namely among the California (Diegueño) languages of Delta-California:
### (43) Delta-California:

<table>
<thead>
<tr>
<th></th>
<th>M Grande</th>
<th>Barona</th>
<th>Jamul</th>
<th>Campo</th>
<th>Cocopa</th>
</tr>
</thead>
<tbody>
<tr>
<td>who</td>
<td>maap</td>
<td>maap</td>
<td>ma'ap</td>
<td>ma'ap</td>
<td>lu:nyp</td>
</tr>
<tr>
<td>what</td>
<td>'uuch</td>
<td>'uuch</td>
<td>maayiit</td>
<td>maalich</td>
<td>lu:nyp</td>
</tr>
<tr>
<td>when</td>
<td>kumyum</td>
<td>nyamu:'yumchu</td>
<td>maayum</td>
<td>maayuum</td>
<td>nyimuulum</td>
</tr>
<tr>
<td>where</td>
<td>maay</td>
<td>maay</td>
<td>ma'ay</td>
<td>ma'ay</td>
<td>0</td>
</tr>
<tr>
<td>why</td>
<td>muuyuu</td>
<td>muuyuu</td>
<td>0</td>
<td>muluum</td>
<td>0</td>
</tr>
<tr>
<td>how</td>
<td>muuyuu</td>
<td>0</td>
<td>0</td>
<td>me-m-luu (how can it be?)</td>
<td>km'ap</td>
</tr>
<tr>
<td></td>
<td>mu'yuu</td>
<td></td>
<td></td>
<td>te-m-paa (how are you?)</td>
<td></td>
</tr>
<tr>
<td>which</td>
<td>maayvech</td>
<td>maay</td>
<td>0</td>
<td>ma'ay</td>
<td>0</td>
</tr>
<tr>
<td>h.much</td>
<td>muuyum</td>
<td>muu'yum</td>
<td>chu'i</td>
<td>mu' lum</td>
<td>kla'âm</td>
</tr>
</tbody>
</table>
The River branch of Yuman languages shows evidence of both \textit{m-} and \textit{k-} as an indefinite prefix:

(44) River:

<table>
<thead>
<tr>
<th></th>
<th>Mojave</th>
<th>Yuma</th>
<th>Maricopa</th>
</tr>
</thead>
<tbody>
<tr>
<td>who</td>
<td>maka-ch (SJ)</td>
<td>makvé-</td>
<td>mki-sh (SJ)</td>
</tr>
<tr>
<td></td>
<td>maka-ny (OJ)</td>
<td></td>
<td>ki-sh (SJ)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mki-ny (OJ)</td>
</tr>
<tr>
<td>what</td>
<td>kuch</td>
<td>ka-</td>
<td>kawit-sh (SJ)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>kawish (OJ)</td>
</tr>
<tr>
<td>when</td>
<td>kanya:du:im</td>
<td>kanya:mathú:-cém (When-does-he)</td>
<td>0</td>
</tr>
<tr>
<td>where</td>
<td>maki</td>
<td>0</td>
<td>mki-ly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mki-ii</td>
</tr>
<tr>
<td>why</td>
<td>ka:du:k i-m</td>
<td>ka:thúntek</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(he-does-why)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how</td>
<td>0</td>
<td>kai:étám (What-does-it say?)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ka’athóm3k</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>’athúwú:m (How shall I do it?)</td>
<td></td>
</tr>
<tr>
<td>which</td>
<td>makapch</td>
<td>makyip</td>
<td>kip-sh (SJ)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mkip-sh (SJ)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mkip (SJ)</td>
</tr>
<tr>
<td>h,much</td>
<td>k+ly3vi</td>
<td>kai:lyaví:m</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(What-does-it-resemble)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further to the north, we have the Pai branch of Yuman languages, in no known direct historic contact with UA Cupan. Here we find that Walapai, Yavapai, and Havasupai exhibit only \textit{k-} as an interrogative prefix. Paipai, although a member of the Pai branch of Yuman, is now located directly south of the California-Delta branch of Yuman in Baja California and is known (Langdon: PC) to have borrowed a number of Diegueño traits. Paipai also exhibits both \textit{k-} and \textit{m-}. Note that Hualapai and Havasupai /g/ is an orthographic convention for an unaspirated [k]:
(45) Pai Branch:

<table>
<thead>
<tr>
<th></th>
<th>Hualapai</th>
<th>Yavapai</th>
<th>Havasupai</th>
<th>Paiapi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>who</strong></td>
<td>ga vga</td>
<td>vka</td>
<td>gaj ga’a</td>
<td>mka</td>
</tr>
<tr>
<td><strong>what</strong></td>
<td>gwègayu: gyu: gwègayyu:</td>
<td>kweθ</td>
<td>gwee’e</td>
<td>0</td>
</tr>
<tr>
<td><strong>when</strong></td>
<td>ganyüm</td>
<td>0</td>
<td>gañyum</td>
<td>qwas=ka-v 1+wi-m-e</td>
</tr>
<tr>
<td><strong>where</strong></td>
<td>ge vge</td>
<td>vke</td>
<td>ge’e vge’e</td>
<td>mke</td>
</tr>
<tr>
<td><strong>why</strong></td>
<td>gavyu:im gavyu:yim gavyu:im gavyu:yim</td>
<td>kavyum</td>
<td>gavyuim gavyum</td>
<td>kavyuyum</td>
</tr>
<tr>
<td><strong>how</strong></td>
<td>ga ge gav</td>
<td>kavwik kavvim</td>
<td>ga’a</td>
<td>0</td>
</tr>
<tr>
<td><strong>which</strong></td>
<td>gayu:j (2 or more) gâv(gi)yus:j</td>
<td>kavkyuchiva</td>
<td>gavyuj gayuj</td>
<td>0</td>
</tr>
<tr>
<td><strong>h.much</strong></td>
<td>0</td>
<td>kavolik kavolim</td>
<td>gavlwim gavlwig</td>
<td>kablui</td>
</tr>
</tbody>
</table>
Finally, the Kiliwa branch, represented historically only by Kiliwa in Baja California, shows evidence of *p*- and *ʔ*- as interrogative prefixes:

<table>
<thead>
<tr>
<th>(46)</th>
<th>Kiliwa</th>
</tr>
</thead>
<tbody>
<tr>
<td>who</td>
<td>0</td>
</tr>
<tr>
<td>what</td>
<td><em>ʔ+kwit</em></td>
</tr>
<tr>
<td>when</td>
<td><em>ʔ+mat p+ʔim</em></td>
</tr>
<tr>
<td>where</td>
<td><em>ʔap-</em></td>
</tr>
<tr>
<td>why</td>
<td><em>p+yu-m</em></td>
</tr>
<tr>
<td>how</td>
<td><em>p+yu-m</em></td>
</tr>
</tbody>
</table>
| which | *p+ʔkwiiit*  
   | *ʔapu-win* |
| how much | *p+ʔyuu-(t)* |

**Section VI: Conclusion**

Note the following map charting the distribution of *k*-*, *m*-  
and *h*- among Yuman and Takic (UA) in the Southwest:
The map reveals that the California sub-branch of Yuman is probably the epicenter of the $m-$ indefinite morpheme. The California sub-branch of Yuman California-Delta is the only language group in either UA Cupan or Yuman where $m-$ is the interrogative marker par excellence. From this epicenter, $m-$ appears to have migrated out to both UA Cupan (Luiseno, Cupeño and Cahuilla), where it partially supplanted the UA indefinite marker $h-,$ to fellow Yuman Mojave, Yuma, Cocopa and Paipai in adjacent areas, and perhaps into non-Cupan UA Serrano where we have some traces of an indefinite $m-.$ The interrogative $m-$ therefore most likely originated in the territory occupied by Diegueño speakers. The ultimate source of $m-$ is still a mystery.

Further evidence of intra-familiar influence between Yuman Diegueño and UA Cupan is found in the parallel morphological analyses of Cupan and Diegueño 'how' and thus:

\begin{verbatim}
(47)
UA Cupan (Cahuilla): Yuman Diegueño:

$m\text{-}x\text{-an-nuk}$  
IND1-be-CAUS-SSP  
how?

$m\text{-}u\text{-yuu}$  
IND1-3sg-be  
how?

'\text{'e}\text{-}x\text{-an-nuk}$  
DDEF1-be-CAUS-SSP  
thus

'\text{'p}\text{-u}\text{-yuu}$  
DEM-3sg-be  
thus
\end{verbatim}

Intra-familiar influence between UA Cupan and Yuman Diegueño is thus two-fold:

1) In the sharing of the indefinite morpheme $m-$

2) In the sharing of the concept of affixation of definite and indefinite prefixes onto a verb meaning 'be, do' (or in the case of Cupan, also 'say') to form words for 'thus' and 'how' respectively.
Notes:

1. The abbreviations used are the following:

- CAUS  Causative
- DDEF  Distal Definite
- DEM   Demonstrative
- DS    Different Subject
- HAB   Habitual
- IND1  Indefinite Type 1
- IND2  Indefinite Type 2
- INST  Instrumental
- INTR  Intransitive
- MC:PR Modifying Clause Present
- NOM   Nominalizer
- OJ    Object
- PC    Personal Communication
- PDEF  Proximal Definite
- PL    Plural
- PR:PL Present Plural
- PR:SG Present Singular
- Q     Question Marker
- RDUP  Reduplicated
- SJ    Subject
- SSP   Same Subject Participle
- TRANS Transitive
- UA    Uto-Aztecan

The orthographic conventions for the Takic languages discussed in this paper are the following:

- 'ch' for /c/
- 'kw' for /k/
- 'll' for /l/
- 'ng' for /n/
- 'qw' for /q /
- 'sh' for /s/
- '*' for /s/
- 'T' for /c/
- 'th' for / /

Long vowels are represented by two adjacent identical vowels. The acute accents signals primary stress.

2. Luiseño is a member of the Cupan branch of Uto-Aztecan. The Cupan languages are all indigenous to Southern California. There were originally three Cupan languages: Cupéño, Luiseño, and Cahuilla. Cupéño has recently become extinct. The Cupan languages are not the only Uto-Aztecan languages of Southern California; a higher sub-classification of Uto-Aztecan, Takic, includes other Uto-Aztecan languages of Southern California:
Uto-Aztecan
(So. California Branch)


Takic


Kitanemuk Serrano


Cupan

Gabrielino-Fernandeño


Luiseño


Cupeno Cahuilla

The above tree has been adapted from Jacobs (1975).

3. **Cupeño** has:

mixe- happen
ixe- to do a certain way, to say
hixe- say (Hill 1973)

4. Langacker (PC) notes that the Numic branch of UA shows evidence of /y/ becoming nasalized to /ŋ/ through the influence of certain prefixes. It is possible that the onset /m/ of Serrano *mah* is also the result of the nasalization of /y/. The meaning of this possible nasal prefix cannot be ascertained at this point. If Serrano *mah* was once historically /yah/, then the divergences between Serrano and Cupan would be greatly reduced. If *mah* = *N*-yah, then Serrano yah would be a cognate of Cupan yáx. Serrano *pana*- *mah* is already analyzable as:

*pana*’ *mah*
thus be/do
be (do) thus (i.e. ‘this way’ or ‘that way’)

Serrano *pana*- *mah* would therefore differ from Cupan (Cahuilla) ‘i-yax- and ‘á-yax- only by not directly prefixing a demonstrative, and by not distinguishing between the proximal and distal demonstrative.

Serrano would furthermore differ from Cupan in not having for *mah* the meaning ‘say’, and by not having indefinite forms for *mah* meaning ‘be somehow’ (Cahuilla mi-yax-) and ‘say what’ (Cahuilla hi-yax-).
5. Whereas Cahuilla has maintained the more original meanings given for (A) through (D) above, the Luiseño counterparts have undergone semantic shifts.

   In Luiseño, the form 'īyx- is now most commonly used to translate '(be) also', as in:

   Nöön kūp-lowut  'īyx-lowut.
   1sg  sleep-gonna  also-gonna
   I'm going to sleep too.

   The form 'āáx-', now normally means 'resemble', or 'seem that way', as in (note the deletion of /x/ before /q/, as described in Elliott (1993)):

   Nē-yk  'āá-qat  'āá-q.
   1sg-to  seem-MC:PR  seem-PR:SG
   It seems that way to me.

   The form mīyx- is now used most often in the copulative sense (note once again deletion of /x/ before /q/):

   Nöónil soldado mīy-qu$.
   1sg  soldier  be-PAST
   I used to be a soldier.)

6. We saw above (2) that the verb 'á-yax- is still attested in Cahuilla. In some instances the second /a/ of 'á-yax- also deletes synchronically:

   'á-yx-anuk
   DDEF-be-SSP
   being that way, resembling

   The second syllable of #'á-yax-an- was apparently also eliminated historically through the deletion of its nucleus /a/).

7. We posit an intermediate #'é-yx-an-. There is at least one synchronic example where the Desert Cahuilla dialect has /ay/, and the Mountain Cahuilla dialect /ey/. Note:

   Seiler (1979:250) gives kút yáy'al, 'whirlwind' for Desert Cahuilla. The Mountain Cahuilla equivalent is kút yéy'al.
8. Listed below are the UA interrogatives containing a bilabial (Langacker: PC):

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHERE</th>
<th>WHICH</th>
<th>HOW MUCH</th>
<th>HOW</th>
<th>WHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono</td>
<td>pi'i</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopi</td>
<td>pi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopi</td>
<td>himi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarahumara</td>
<td>piri</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kawaiisu</td>
<td>-(mi)yi'i</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Papago</td>
<td>hibai</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubatulabal</td>
<td>maa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopi</td>
<td>haqam</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarahumara</td>
<td>kami, kabu, kumi, kamu, kabe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Tepehuan</td>
<td>ma-kli</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huichol</td>
<td>kee-mi-‘aane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubatulabal</td>
<td>maa-t-wa-n</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarahumara</td>
<td>kipu, chu kipu, mapu kipu, kipu chi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huichol</td>
<td>keepaime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubatulabal</td>
<td>manhigish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pochula</td>
<td>kiskom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pochula</td>
<td>ke(m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aztec</td>
<td>keenin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubatulabal</td>
<td>mash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note the high frequency of a possible prefix ma- in Tubatulabal.

9. Some Serrano words expressing uncertainty do however have /m/ initially: mit, 'perhaps', mermerher', 'any (old) X', 'any X at all'. Serrano mit is probably analyzable as:

mi-t
IND1-Q
perhaps

Whether or not the /m/ of such words is related to the indefinite m- of Cupan cannot be determined yet.
Further note that the /m/ of *hami’, hamin*, and *hamya’qaT* is also reminiscent of the /m/ of the indefinite Cuan m-. Note that Cahuilla has *mi’, ‘which’*. If we accept the /m/ of the Serrano forms as related to the indefinite Cuan m-, we could analyze the three /m/-bearing Serrano interrogatives as:

\[
\begin{array}{lll}
\text{ha-mi’} & \text{ha-mi-n} & \text{ha-m-ya’qaT} \\
\text{IND2-IND1} & \text{IND2-IND1-INST} & \text{IND2-IND1-be-be} \\
\text{who} & \text{how} & \text{how}
\end{array}
\]

10. Luiseño *hiŋgay* is analyzable as:

*hiŋ-ngay*

what-ABL

why (i.e. ‘from what’)

11. /nn/ of *mēxannuk* reduces to /n/ in actual speech. We write /nn/ to stress the morphological make-up of *mēxannuk*, for which see (34).

12. Cupeño has for both *mīvīŋax* and *mīxanuk* the alternate *hīŋax* (Hill: 1973).

13. Compare with Serrano *h-aay-p*:

\[
\begin{array}{ll}
\text{h-aay-p} \\
\text{IND2-?-LOC} \\
\text{where}
\end{array}
\]

14. Langdon (PC) notes that *mu(u)yuu* means ‘how’ when used with the same subject suffix, ‘why’ when used with the different subject suffix.

15. Luiseño *hīycha* also does double duty as ‘what’ and *(some)thing*: in fact, like Mesa Grande Diegueno, all Luiseño interrogatives double as indefinites: *mīchá’, ‘where?’*, ‘somewhere’ etc.

16. Langdon (PC) notes that *mu(u)yuu* is a full-fledged verb which can be inflected for person:

\[
\begin{array}{ll}
\text{me-me-yuu} & \text{te-me-waa?} \\
\text{IND2-2-be} & \text{AUX-2-sit} \\
\text{How are you?}
\end{array}
\]

17. Such morphologically related pairs for ‘how’ and ‘thus’ are by no means rare in other languages, for example Russian *kak* and *tak*.

18. Compare this construction to Cahuilla *mīhiki’ pēhiki’* below in (40).
19. Recall from Note 9 the alternative analysis of hamyā'qaT:

ha-m-ya'-qaT
IND2-IND1-be-be
somehow

In this analysis, we would accept the sequence /ya'/ as a vestige of the verb iyān hypothesized above in Note 4, to which both the indefinites m- and h- would have been prefixed.

20. For all Yuman data I have used the source orthography.

21. Cahuilla also has an indefinite prefix qa- used in forming indirect questions, such as:

Kill pen'é'nanqa qa-mexannuk pish pe'külve'.
not I:know indirect-how that you:did:it
I don't know how you did it.
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REPORT 8

SURVEY OF CALIFORNIA AND OTHER INDIAN LANGUAGES

Proceedings of the Meeting of the Society for the Study of the Indigenous languages of the Americas
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Volume Editor

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cover design by Leanne Hinton (Santa Barbara Chumash rock painting)
This volume is dedicated to

JAMES E. REDDEN

on the occasion of his retirement

for his enduring commitment to the publication

of the results of research on Yuman, Hokan, Penutian and

other American Indian languages

and also

for his contributions to the

documentation of the Hualapai language
INTRODUCTION

This volume includes a number of papers presented in conjunction with the 1993 Linguistic Institute at Ohio State University in Columbus, Ohio, at two conferences on American Indian Languages: the meeting of the Society for the Study of the Indigenous languages of the Americas, held July 2-4, 1993, and the meeting of the Hokan-Penutian Workshop, held on the morning of July 3, 1993.

This continues a tradition initiated during the Linguistic Institute at the University of Arizona in 1988, of offering conferences on American Indian languages during the summer Linguistic Institute of the Linguistic Society of America, which is held every two years on the campus of the host institution. The interaction thus afforded between students and faculty of the Institute and specialists in American Indian languages has proved mutually profitable.

We gratefully acknowledge the dedication of Catherine Callaghan in making these meetings thoroughly enjoyable, as well as the hospitality of Ohio State University.

The Hokan-Penutian Conference has a tradition of meetings dating as far back as 1970, when the first Hokan Conference was hosted by Margaret Langdon at UCSD. Since 1976, the Hokan (and later Hokan-Penutian) Conference proceedings were published most years by James Redden, as part of the series Occasional Papers on Linguistics, out of the department of Linguistics at Southern Illinois University at Carbondale. Beginning this year, with James Redden’s retirement, the reports of these conferences are being published as part of the Survey Reports out of the Survey of California and Other Indian Languages at the University of California at Berkeley.

Margaret Langdon
Volume Editor

Leanne Hinton
Series Editor
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