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The first meeting of linguists working on Hokan and Yuman languages was held at the University of California, San Diego, in 1970 at the invitation of Margaret Langdon, who established the Yuman Languages Archives with the aid of a National Science Foundation grant. This meeting made it possible for various specialists working on these languages to get to know each other and to benefit from technical discussions of many problem points. Those attending this first meeting felt that the papers and discussions contributed so much to the advancement of the understanding of these languages that participants soon began asking when we would meet again. In 1975 Margaret Langdon again invited the Yumanists to meet at San Diego. It was felt that this and the previous meeting had contributed so much to the collective understanding of Hokan and Yuman that it was decided to meet every year if it could be arranged. In 1976 another workshop was held at UCSD, to which both Hokanists and Yumanists were invited. In 1977 Hokanists and Yumanists met at the University of Utah in Salt Lake City. In 1978 the meeting will again be at UCSD.

The participants of the 1977 Hokan-Yuman Languages Workshop gratefully acknowledge all the work done by Professor Mauricio Mixco and his assistants, which made the workshop run so smoothly and enjoyably.

Unfortunately, everyone who presented a paper at the 1976 Hokan-Yuman Languages Workshop was not able to prepare a final version for inclusion in this volume. All papers in this volume were presented in an earlier version of the 1977 workshop. The papers are arranged in the order that they appeared on the program at the workshop. The Yuman papers were given first, and papers from the other branches of Hokan followed.


The proceedings of the 1975 and 1976 workshops are now out of print, but copies may be obtained in microfiche or hard-bound copies from ERIC Clearinghouse on Languages and Linguistics, Center for Applied Linguistics, 1611 N. Kent Street, Arlington, VA 22209.

James E. Redden
Carbondale, May 1978
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The Walapai Intensive Prefixes /v(i)/ and /pi-/  
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The meanings of the Walapai prefix /v(i)/ have a rather wide referent range, but in all cases the meaning of /v(i)/ is some kind of intensity. 

1. yám  
2. viyám  
3. túi  
4. vitúi  
5. té  
6. vité  
7. nám  
8. vinám  
9. púl  
10. vipúl  

In some cases, it may be a bit difficult to isolate the intensity since a stem always or nearly always occurs with /v(i)/. 

11. vikópθ  
12. viyár  

/vikópθ/ seldom occurs without /v(i)/, no doubt reflecting the intensity of effort required for jumping. /viyár/ never occurs without /v(i)/, almost certainly because of the intensity of the movement of the wings required for flying. 

In some cases, /v(i)/ indicates a change of state or an unusual state. 

13. sikwi  
14. viskwí  

If 13 and 14 were referring to a dog, 13 would mean standing on all four feet, and 14, standing up on the hind legs. 

The have just or just as and very much so or really meanings can be seen in 15 and 16. 

15. vi-vá-pá-é-s kwí vó-k vá-v-yúm # We had just arrived home when it really started to rain. 
(intense-arrive-there-aorist-pl.-DS storm/cloud return-SS arrive-intense-be-abl.) 

16. vi-vá-k-yu # He just now got in. He has just arrived. 

The meanings just, only, or merely, and suddenly or right away can be seen in 17 and 18.
17. wáí vi-wá-ít-m vi-qáu-vi-k-yu # I was just sitting in the chair when suddenly it broke.
(chair intense-sit-prog.-DS intense-break-here-3-be)

18. vi-vá-n-m yimá-č-ai-k-yu # We are having a dance just as soon as he gets here.
(intense-arrive-perf.-DS dance-pl.-fut.-3-be)

/v(i)-/ can also indicate a state or condition that has just obtained in opposition to a state or condition that has existed for some time.

19. lályóyá kávkyu # The glass is cracked.

20. lályóyá vikávkyu # The glass has just cracked.

Sentence 19 just describes a condition that has existed for an indeterminate amount of time, and the speaker probably has no knowledge of how or when the glass broke. In 20 the speaker knows the the crack has just happened and quite likely witnessed the cracking. (Note accusative subjects.)

21. náč úkyu # I see/saw it. (close-by object)

22. náč viúkyu # I just saw it/caught sight of it/happened to see it.

21 is a matter-of-fact statement. 22 referred to a lizard that darted under some leaves when a Hualapai and I startled it while walking along U.S.66. We barely caught a glimpse of the lizard as it darted into hiding.

"Intensity" can mean "greater specification".

23. káñúm  how long? when?  24. vikáñúm  just how long? just when?

25. yá  this (one)  26. viyá  this (one) here

27. náč háma  I look at distant object.

28. náč vikáama  I look over/scan the landscape.

29. sipó  know 30. vis pó  remember, just think of/call to mind early in the morning, dawn

31. yékítm  during/in the morning 32. viyékítm  just who/what

33. ká  who, what 34. viká  just who/what

35. wífr  finish 36. vivífr  finish completely

37. tái  be grown/adult/old 38. vitái  grow up, become adult

39. kák  not at all 40. vikák  never on any occasion

23 through 34 give more exact specification or more complete information. 35 through 40 indicate a completeness and/or lack of exception.

In some cases, it is a bit difficult to indicate the intensity in an English translation. The best translation for some of these would be some sort of adverb like "around", as in "hang around, "wander around", "wait around".
41. ni-thá-č há-l vi-wá-v-k # They are walking/playing around in the water.
(intense-3-nom. water-in intense-sit/live/be-here-3)

42. čipáy-a-č vi-yá-r-ik wíl-a-l vi-wá-m-a # The bird flew into the tree and is just sitting/staying (around) there.
(bird-the-nom. intense-fly-SS tree-the-in intense-sit/live/be-abl.-aor.)

43. miči-n-a-č yá mát-m pái vi-wá-v-m-iú-č # The buffalo used to wander all over/around the country.
(buffalo-that-the-nom. here country-abl. all intense-sit/live/be-here-abl.-be-pl.)

44. há-k vi-skwi-k i-sívó-k-yu # I stood (around) there waiting.
(there-at intense-stand-SS l-wait-SS-be)

(The /v(i/- prefix is undoubtedly related to the morpheme /v-/ which occurs in /vá/, this (one), here, and /vá/, arrive (at this place).)

The intensive prefix /n(i)/ occurs either before /v(i)/ or before a stem and means "related to" and/or "subordinate to" but often translates "exactly" or "right".

45. yá this, here 46. viyá this (one) here
47. niyá this (one) right here 48. niv(i)yá this (one) just right here

The idea of "closeness of relationship and/or proximity" can also be seen in the use of /n(i)/ to indicate possession of nouns and subordination in verbs.

49. tál father 50. pitál someone's/his/her father

Older Hualapai use possessive /n(i)/ with all three persons, but younger Hualapai use it only with the third person.

51. yá ni-tó-p-m mún-a-mí-č-k-yu # When the sun goes down, it gets cool.
(sun subord.-be-not-yet-DS cool-aor.-hab.-distrib.-3-be)

52. kwí ni-vó-k-θó kák yám-č-a-tó-i-yu # If it rains, we won't go.
(rain/cloud/storm subord.-return-3-if not go-pl.-aor.-not-fut.-be)

Note that it is the possessed noun and the subordinate verb that receive the /n(i)/ prefix. However, sometimes both verbs take /n(i)/ when the meaning is when X happens, Y happens.
In this paper, we shall be describing certain kinds of adverbial and modal constructions in Tolka Pass Yavapai. The types of constructions considered here share various semantic or morpho-syntactic features. Semantically, the constructions involve the expression of certain relationships between propositions or between propositions and the expectations or knowledge of the speaker. These relationships include:

1) the relationship between propositions in which one proposition provides the temporal frame for the other (time clauses);
2) the relationship between propositions in which one provides a sufficient condition for the other proposition to obtain (conditionals);
3) the relationship between propositions whose expectations contrast with each other, or between a proposition and the expectations or knowledge established by context (contrast and counterfactuality).

Diverse adverbial and modal constructions are compared to determine whether a unitary semantic core can be assigned to the relevant morphemes as they are used in Tolka Pass.

I. Temporal Clauses

The various types of temporal clauses in Tolka Pass can be described as making use of a basic dichotomy between sequential and simultaneous occurrence of events. When this distinction is not central, the dichotomy is neutralized by the absence of distinctive morphology. Simple clausal conjunction with switch reference marking is neutral with respect to whether the events are consecutive or concurrent. When the temporal relationship between events is specifically at issue, the relationship can be morphologically and syntactically marked with one of the clauses assigned a subordinate status.

Simultaneous events in the past are related by assigning subordinate status to the proposition providing the temporal pivot, and main clause status to the proposition providing the main assertion.

<table>
<thead>
<tr>
<th>Simultaneous Events in the Past</th>
</tr>
</thead>
<tbody>
<tr>
<td>(At the time when X occurred, Y occurred)</td>
</tr>
</tbody>
</table>
| Subordinate Clause | Main Clause |...
| Top-verb SR |

The subordinate clause is marked by suffixing \( t \) to the rightmost verb or auxiliary of the clause, and following the \( t \) with appropriate switch reference marking. The main clause is marked like any independent sentence. The choice of which clause to mark as the temporal pivot is a function of discourse. Since both clauses describe actions which occurred at the same time, either could be temporally marked.

1) While I was sleeping, my sister took my money.

\[\text{'smaa-t-m} \quad \text{nys 'kel-ch} \quad \text{'wii ny-wii-wa} \quad \text{yoo-k} \]
\[\text{I-sleep-Tem-DS I} \quad \text{l-sibling-SJ money Rel-have-Dem take-SS} \]
\[\text{wi-o-k} \quad \text{wu-m} \]
\[\text{do-Ev/perf-SS do-Inc} \]
2) While I was singing, Heather danced.
    nya-ch 'swar-t-m Heather-ch ima-k yu-m
    I-Sj 1-sing-Tem-DS Heather-Sj dance-SS be-Inc

3) You were talking while you were sleeping.
    ma-ch m-smaa-t-k m-kwaw-k m-yu-m
    you-Sj 2-sleep-Tem-SS 2-talk-SS 2-be-Inc

The subordinate status of these clauses can be demonstrated, since they can be postposed or center-embedded, as in:

4) My father was sleeping while I ate the chicken.
    a. nya-ch qwaloyawa-ha 'maa-t-m nya tala-ch smaa-k
       I-Sj chicken-Dem 1/3-eat-Tem-DS I father-Sj sleep-SS
       yu-ny
       be-Com
    b. nya tala-ch smaa-k yu-ny nya-ch qwaloyawa-ha
       I father-Sj sleep-SS be-Com I-Sj chicken-Dem
       'maa-t-m.
       1/3-eat-Tem-DS

5) Heather danced while I sang.
    Heather-ch nya-ch 'swar-t-m ima-k yu-m
    Heather-Sj I-Sj 1-sing-Tem-DS dance-SS be-Inc

Tolkapaya employs several strategies for emphasizing the order of events as they occurred in real time, as English does in constructions using before and after. Although these Tolkapaya sentences usually correspond to English "before/after" constructions, they don't seem to rely on the same principal of specifying whether the order of clauses in the linear string reflects the order of events in the real world. There are two basic types of emphatic temporal constructions using the temporal marker t. One type uses the negative verb 'um, and the other uses the ordinal verb (hu)puk, 'be first'. The tense frame for the entire sentence is assigned by the main clause, thus these constructions can be used in any tense.

English sentences with "before" translate to Tolkapaya sentences which literally mean "While X is not, Y occurred." This construction explicitly uses the negative verb 'um and allows for the subordinate clause to be postposed.

6) Before the frost sets in, we'll gather the corn.
    kmun-v-ch vaa-h 'um-t-m tyach-va 'yoo-ch-a
    frost-Dem-Sj come-IR neg-Tem-DS corn-Dem 1/3-take-P1-IR

7) Jack always drinks beer before he eats.
    Jack-ch 'ich-maa-h 'um-t-k ha'maala thii-m wi-ch-k wu-m^4
    Jack-Sj s.t.-eat-IR neg-Tem-SS beer drink-DS do-P1-SS do-Inc

8) I cooked the chicken before it spoiled.
    a. qwaloyawa ssah-a 'um-t-m nya-ch 'onwir-k 'wu-m
       chicken spoil-IR neg-Tem-DS I-Sj 1/3-cook-SS 1-do-Inc
    b. qwaloyawa 'onwir-k 'wu-m ssah-a 'um-t-m
       chicken 1/3-cook-SS 1-do-Inc spoil-IR neg-Tem-DS
The semantic reading of simultaneity for t suggests the more literal translation "(At the time) when the chicken hadn't yet spoiled, I cooked it," for #8. The use of the t appears to be obligatory with this negative construction. It is not obligatory in the (hu)puk construction, as can be seen in #10 below:

9) Lynn is going to make me a basket first, then I'll pay her.
Lynn-ch k'u ny-yov-o puk-t-m 'wii '-e-h-k
Lynn-Sj basket 3/1-make-App first-Tem-DS money 1/3-give-Ir-SS
'-unu-k '-wu-m
1-Prob-SS 1-do-Inc

10) Jack always drinks beer before he eats.
Jack-ch ha'maalat hii puk-(t)-k 'ich-ama-m wi-ch-k
Jack-Sj beer 3/3-drink first-(Tem)-SS s.t.-eat-DS do-Pl-SS
wu-m
do-Inc

This construction is only interpretable as a temporal relationship, so the t marking, when it appears, is redundant. This use of t is inconsistent with the pattern of t = "at the time when"; these propositions are positive and emphatically sequential. The t appears to mark the clause only as temporal and subordinate.

Another kind of temporal construction marked with t involves the notion of continuing or habitual action up to a particular point in time or ensuing from a particular point in time. In English these are expressed by 'until' and 'since', respectively. The 'since' type construction is fairly common in Tolkapaya and makes use of the existing morphology in a predictable way. 'Since' clauses are formed by marking the predicate of the clause that is the temporal pivot or point of reference with the temporal t suffix and adding appropriate switch reference marking. The predicate of the second clause will then be marked with the distributive auxiliary construction. The t-marked clause is the dependent clause (as in all the above examples), since regardless of the order, the non-t-marked clause has the final independent tense marking of main clauses.

11) Jack has been a vegetarian since he was a child.
Jack-ch hmany-t-k 'wila havasu maa-ch-ch yu-m
Jack-Sj child-Tem-SS 'vegetables' eat-Pl-Sj be-Inc

12) Allen stays home taking care of the baby since JP was a little child.
Allen-ch 'wa wa-k hmany-ha vwe-m yu-ch-k yu-ny
Allen-Sj house sit-SS child-Dem care-for-DS be-Pl-SS be-Com
JP-ch hmany gech-t-m
JP-Sj child little-Tem-DS

In these clauses t seems to mean "from the time...", so #10 is literally "(From the time when) Jack was a child, he habitually, always eats vegetables."

'Until' clauses are infrequent, possibly due to their semantic complexity. These sentences often appear with three full clauses expressed. The semantics of the construction suggests reasons for why this should
be the case. What is implicit in this construction is that an action is/vas/will be performed or a state obtain up to a particular point in time, at which time the situation changes. Tolkapaya often prefers the overt expression of the new situation. The construction takes the antecedent action and marks it as progressive (with unuu) or continuous (by reduplication) and marks it with t and appropriate switch reference.

13) I sang until I shut up.
'swar-k 'swar-t-k 'nyathk-k 'yu-m
1-sing-SS 1-sing-Tem-SS 1-stop-SS 1-be-Inc

14) I'll work until you finish cooking then maybe we'll eat.
yaa-ch 'tarhar-k vak 'unu-u-t-m ma-ch 'ich-m-nwir-k
I-Sj 1-work-SS here 1-Prog-Tem-DS you-Sj s.t.-2-cook-SS
m-wir-m 'ich-'-maa-ch-ah yi-moo
2-finish-DS s.t.-1-eat-Pl-Ir Aux-Dub

The above temporal constructions all involve the temporal marker t. In its simplest usage, it appears to suggest simultaneity. At a deeper level, t seems to mark a clause as subordinate (and probably presupposed for its role in setting the scene) and temporally related to the main clause. The subordinate clause does not have to be the event which occurred first, so t can be used to mark any clause designated by discourse. The various kinds of temporal relationships we have discussed are implied by the combination of tense/aspect marking and temporal t marking.

Sequential actions in the past are typically indicated by attaching the prefix ny- (glossed 'when') to the verbal complex of the temporally antecedent clause, then takes appropriate switch reference marking and is usually followed by the main clause (though it can be postponed or centerembedded).

Sequential Actions in the Past
(When X had occurred, Y occurred)
Subordinate Clause Main Clause
...ny-y + v + sr independent sentence

If the order of events is not relevant or is obvious from context, simple juxtaposition of clauses with normal switch reference is sufficient, as in:

15) The rain stopped and the sun came out.
kwivo-k vki-yo 'i-m nyaa-ch vch'al-k yu-m
rain-SS stop Incep-DS sun-Sj come out-SS be-Inc

16) We went to Red Mountain and I saw my father.
kwalthk-yala-he 'yaam-ch-m nya 'tala 'u-k 'yu-m
Red Mountain-to 1-go-Pl-DS I 1-father 1/3-see-SS 1-be-Inc

With the ny- prefix:

17) When the turkey was done, Bonnie put it on the table.
'yaam-ch ny-ma-m Bonnie-ch 'ichmacho-k 'chwo-k yu-m
turkey-Sj when-ready-DS Bonnie-Sj table-Loc put-SS be-Inc
18) You came, then I went away.
ma-ch ny-m-vaa-m nyul '-yam-k 'yu-ny
you-Sj when-2-come-DS away 1-go-SS 1-be-Com

ny- can only mark the clause which is temporally prior (though sometimes
the events expressed in the two clauses overlap). ny- marked clauses
 can be postposed and center-embedded.

19) Heather sang, then I danced.
a. nya-ch 'ima-k 'yu-m Heather-ch ny-swalm
I-Sj l-dance-SS 1-be-Inc Heather-Sj when-sing-DS
b. nya-ch Heather-ch ny-swalm 'ima-k 'yu-m
I-Sj Heather-Sj when-sing-DS l-dance-SS 1-be-Inc

There are several ways to temporally relate unrealized clauses. Sequential
and simultaneous actions in the future can be expressed in
a construction utilizing the 'when' prefix ny- and the modal suffixal
particle -ktho (which appears in other constructions we will discuss
below). If this is used to mark sequential action, it marks the tem-
porally antecedent clause. The main clause is marked as unrealized in
the following ways: 1) with the progressive auxiliary (unuu) and the
irrealis marker (ha); 2) with the irrealis marker alone; 3) by some
other non-realized form (e.g. an imperative).

20) When you finish eating, we'll leave.
'ich-m-maa-k ny-m-wir-ktho 'pem-a-k 'unuu-k 'yu-m
s.t.-2-eat-SS when-2-finish-Mod 1-go-2-Ir-SS 1-Prog-SS 1-be-Inc

21) After drinking the medicine you'll feel better.
'sma ny-m-thii-ktho m-han-a-k m-unu-k m-yu-m
medicine when-2-drink-Mod 2-good-Ir-SS 2-Prog-SS 2-be-Inc

Sequential acts in the future can also be expressed using -o and
switch reference on the subordinate clause.

22) As soon as the chicken is ready, we'll eat.
qwaloyawa-ch ma-o-m 'maa-ch-a-k 'unuu-k 'yu-m
chicken-Sj ready-Q-DS 1/3-eat-pl-Ir-SS 1-Prog-SS 1-be-Inc

23) I'm going to give the cat food before I go.
nymi-nyu 'ichmava 'o-o-k nyul 'yaam-a-k 'unuu-k
cat-Dem food 1/3-give-o-SS away 1-go-Ir-SS 1-Prog-SS
 'yu-m
1-be-Inc

th can be used in unrealized clauses to express much the same mean-
ing t expresses.

24) When Pam hits me, I'm going to tell Jack.
Pam-ch ny-chqm-th-m Jack '-knavo-h-k 'unuu-k 'yu-m
Pam-Sj 3/1-hit-th-DS Jack 1/3-tell-Ir-SS 1-Prog-SS 1-be-Inc

25) I will sleep until I go to work.
'smaa-k 'smaa-m 'yu-ch-th-k 'tarhar-a-k 'unuu-k 'yu-m
1-sleep-SS 1-sleep-DS 1-be-pl-th-SS 1-work-Ir-SS 1-Prog-SS 1-be-
Inc
26) Before you come, I'm weavinyg you a basket.

\[ \text{m-vaa-h 'um-th-m nya-ch k'u m-wii-wa ny-puv-o-k} \]
\[ \text{2-come-Ir neg-th-DS I-Sj basket 2-have-Dem 1/2-weave-App-SS} \]
\[ \text{'-wu-m} \]
\[ \text{1-do-Inc} \]

th and o are both used with unrealized clauses to temporally relate them to the main clause. It is difficult to believe that these morphemes are totally unrelated, diachronically if not synchronically, to the ktho suffix.

II. Conditionality

Conditional sentences generally express some event or state which would have implied or will imply that some other event or state occurs. That is, if X occurs, Y will occur. The clause in which event X occurs is the antecedent clause or condition; the other clause is the consequent clause or the result of the condition being fulfilled.

Future conditionals in Tolkapaya typically look like the future 'when' clauses described above, without the ny- prefix. (More specifically, the antecedent clause is marked with the suffix -ktho alone.) Some variation is possible.

**Future Conditionals**

*(If X occurs, then Y will occur)*

**Antecedent Clause** \( \ldots V + \text{ktho} \)

**Consequent Clause** \( \ldots \text{Verb} + \text{Irrealis marking} \)

Future conditionals signify that the event expressed in the consequent is contingent on the condition stated in the antecedent. The time frame of the antecedent and, naturally, the consequent, is future—the condition has not yet been realized.

27) If you don't stop crying, I'm going.

\[ \text{m-mii m-nyathk-h 'um-ktho nyul '-yaam-a-k '-unuu-k '-yu-m} \]
\[ \text{2-cry 2-stop-Ir neg-Mod away 1-go-Ir-SS 1-Prog-SS 1-be-Inc} \]

28) If Pam hits me, I'll tell Steve.

a. \[ \text{Pam-ch ny-chqam-ktho Steve '-knavo-h-k '-unuu-k '-yu-m} \]
\[ \text{Pam-Sj 3/1-hit-Mod Steve 1/3-tell-Ir-SS 1-Prog-SS 1-be-Inc} \]
b. \[ \text{Steve '-knavo-h-k '-unuu-k '-yu-m Pam-ch ny-chqam-ktho} \]
\[ \text{Steve 1/3-tell-Ir-SS 1-Prog-SS 1-be-Inc Pam-Sj 3/1-hit-Mod} \]

In addition to this paradigm future conditional construction, there are other variations. The antecedent clause can be marked in several ways which relate to constructions we have seen elsewhere.

The antecedent clause can be marked in these ways:

- **V + th + SR**  (similar to the future temporal)
- **V + ktho**  (similar to the paradigm future conditional marking; h replaces th)
- **V + o + SR + Ir**  (future temporal marking with an element of IRREALIS added)
- **V + th + ktho**  (a combination of the future temporal marker and the modal particle)
29) If you're around, you'll see me.
   a. vak m-yu-ktho here 2-be-Mod
   b. vak m-yu-th-k here 2-be-th-SS
   c. vak m-yu-kho here 2-be-kho

   'm-'u-h-k m-unuu-na
   2/1-see-SS 2-Prof-Ir-SS 2-Prog-POSS

30) If the coffee is clear, drink it.
    kathve-v-ch qrye-o-m-h m-thli
    coffee-Dem-Sj clear-o-DS-Ir 2-drink-Imp

31) If you're around, come in.
    vak m-yu-th-ktho va-l m-yurk-i
    here 2-be-th-Mod here-loc 2-enter-Imp

Counterfactual conditionals have proven to be central to the analysis of the morphological elements constituting the adverbial structures that are to follow. Tolkapaya dialect shows some productive variety in these morphological arrangements that will hopefully contribute to the analytical questions raised for other Upland Yuman dialects (cf. esp. Kendall 1976, pp. 108-114).

Counterfactual conditionals are those which take as their antecedent clause some event which failed to occur and as their consequent clause the predicted outcome had the antecedent event actually occurred. Both propositions, then, are nonfactual and prior to the time of the speech event. The morphology is distinctive, but as we shall see, not unique to counterfactual conditionals.

Counterfactual Conditionals

(If X has occurred, Y would have occurred)
Antecedent Clause
...V + k (PM) + yuva
Consequent Clause
...V-h (PM) + yitha

This is the paradigm case. It is in fact possible, under appropriate semantic/syntactic conditions, to mark the antecedent with any of the existential auxiliaries combined with any of the demonstratives: Thus instead of yuva, the clause can be marked with yuwa, yuya, yuha, yutha, wiwa, wiwa, wiha, wiha, yitha, 'iva, 'iwa, etc. It is also possible to mark the antecedent with the same marking used to mark the antecedent of future conditionals (though this is not very common).

32) If you had come I would have seen you.
   a. m-va-a-k m-yu-va ny-'u-h yitha
      2-come-SS 2-be-Dem 1/2-see-Ir Mod
   b. m-va-a-th-m ny-'u-h yitha
      2-come-th-DS 1/2-see-Ir Mod

33) If Bonnie had said she would come, she would have come.
    Bonnie-ch vaa-h 'i-k 'i-va vaa-h yitha
    Bonnie-Sj come-Ir say-SS say-Dem come-Ir Mod

34) If I'd been a doctor, I'd really have been something.
   a. kthye-v-ch ('-yu-k) '-yu-va pa qyata-h yitha
      doctor-Dem-Sj 1-be-SS 1-be-Dem person emph-Ir Mod
If you had gone, I would have seen you.

The constituency of the primary morphological marker of the antecedent clause of a counterfactual conditional (yuva) is certainly yu = 'be' (auxiliary verb) + y(a) = demonstrative. The fact that yu can be replaced by the other auxiliary verbs 'i = 'say' and wi = 'do' and that va can be replaced by other members of the set of demonstrative suffixes confirms this analysis. That this construction is synchronically analyzable by Tolkapaya speakers is clear. However, the form yuva is by far the most commonly volunteered. Since yu can always be substituted for 'i or wi and appears to be the most neutral auxiliary, its prevalence is not surprising. As for the demonstrative suffixes, va is unquestionably preferred here. Only va and ya have occurred spontaneously to any degree. Whichever member of the demonstrative set is used, it has no deictic force. Nonetheless, this range of possibilities suggests that Kendall's tentative analysis of -v- as the demonstrative -v- for the equivalent construction in Yavpe is correct (Kendall, 1976).

Tolkapaya offers supporting evidence that, indeed, the 'counterfactual reading' does not come from the Auxiliary + demonstrative marker construction of the antecedent clause because Tolkapaya hypothetical conditionals use the same morphology for the antecedent clause (see below). The interpretation of conditionals as either hypothetical or counterfactual is determined by the morphology of the consequent clause. We will argue below that the 'counterfactuality' meaning is contributed specifically by the morpheme th.

Hypothetical conditionals are particularly interesting in Tolkapaya because they morphologically and semantically bridge the gap between future and counterfactual conditionals. Semantically, hypotheticals can be past or future in time reference, and make no claims as to their factuality. Morphologically they share features of both other types of conditionals, future and counterfactual.

### Hypothetical Conditionals

(If X were to happen, Y would happen)

<table>
<thead>
<tr>
<th>Antecedent Clause</th>
<th>Consequent Clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \ldots v \ (PM) + yuva )</td>
<td>( V + IRREALIS ) marking</td>
</tr>
</tbody>
</table>

The boundary between hypothetical and future conditionals, on the one hand, and counterfactuals on the other is not clearly defined in all cases. The semantics are such that, occasionally, a future time hypothetical will be translated as a simple future conditional. So for example "I would know her if I were to see her" may translate as either

<table>
<thead>
<tr>
<th>1/3-see-SS</th>
<th>1-be-Dem</th>
<th>1/3-know-Ir</th>
</tr>
</thead>
<tbody>
<tr>
<td>36) ' -u-k  ' -yu-va  ' -spoo-ha</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
37) If I see her, I will know her.
'-'u-ktho 'spoo-ha
1/3-see-Mod 1/3-know-Ir

The same semantic ambiguity can be true of counterfactuals, depending on the presuppositions involved, as in

38) If I weren't afraid of blood I would be a doctor.
a. hwatcha 'mshe-h 'um-k '-yu-va kthy-e-v-ch '-yu-ha
   blood 1/3-fear-I neg-SS 1-be-Dem doctor-Dem-Sj 1-be-Ir
b. hwatcha 'mshe-h 'um-k '-yu-va kthy-e-v-ch '-yu-h
   blood 1/3-fear-ir neg-SS 1-be-Dem doctor-Dem-Sj 1-be-ir
   'yitha
   1-Mod

For the most part, hypotheticals are rendered in the form schematically represented above, as the following examples show:

39) If Steve says it, it must be true.
   Steve-ch nyuv-'i-k yu-va 'i-ra-k 'i-ha
   Steve-Sj Dem-say-SS be-Dem say-Ints-SS say-ir

40) If I were you, I'd marry him.
   nya-ch ma-ch ('-yu-k) '-yu-va nyarmiy-ha
   I-Sj you-Sj 1-be-SS 1-be-Dem marry-ir

One explanation for the occasional use of -ktho (and other future conditional morphology) on hypotheticals lies with the structure of hypothetical conditionals in Tolkapaya. The free variation between ha and hi:tha/yi:tha as reported by Kendall for Yavpe (Kendall, 1976) is meaningfully distinctive in Tolkapaya. Tolkapaya has hypotheticals which act as an intermediary between future and counterfactual conditionals. Hypothetical conditionals might well provide a means through which the usage of certain morphological forms could transfer by analogy.

Looking at the syntax of conditionals, one can see that the -ktho (and yuva) marked clauses are subordinate to the consequent clause. For one thing, ha is a main clause final aspect marker (on the order of the compound Tense Markers) and yitha can plausibly be analysed as having the -a reflex of ha as its final component. Also, simple past conditionals (not counterfactual) such as the following, have main clause final tense marking on the consequent clause (and the antecedent clause is marked the same as counterfactual conditionals).

41) If Bonnie stayed, Jack went.
   Bonnie-ch va-k yu-k yu-va Jack-che yam-k yu-m
   Bonnie-Sj Dem-Loc be-SS be-Dem Jack-Sj go-SS be-Inc

42) If you (in fact) beat Steve, then you must really gamble.
   Steve m-tkwili-a-ktho m-tohv-k m-qyat-k m-okwa-na
   Steve 2/3-beat-Ir-Mod 2-gamble-SS 2-very-SS 2-feel-POSS
Additional support for -ktho clauses being subordinate is that they can be center-embedded to the main clause of the sentence, as follows:

43) If you go away, I won't be here.
   nya-ch ma-ch nyul m-yan-ktho va-k 'yu-ny-ah 'um-ak
   I-Sj you-Sj away 2-go-Mod Dem-Loc 1-be-Dem-Ir Neg-Ir-SS
   'unu-k 'yu-m
   1-Prog-SS 1-be-Inc

III Counterfactuality

Returning to the question of what makes a counterfactual condition-
al contrary to fact and the role that the morpheme -th- plays, we will now look at a different type of counterfactual sentence. The following discussion will concern sentences of the type that describes an event which might have occurred, but which failed to occur or cannot occur. In the complex sentences, only one proposition is contrary to fact; the other proposition describes what actually took place or provides some further explanation of the situation. The semantic domain includes failed attempts, unfulfillable wishes, clauses describing a state that formerly obtained, but which no longer does, and cases where the realization of one clause precludes that of the other.

A. "Failed attempts" imply that the action was attempted but not accomplished. The "failed attempt" is often juxtaposed to a statement of the true outcome of the situation, as in

44) Jack tried to shoot the rabbit and missed.
   Jack-ch hloa-ha kyaa-k unuu-th-k cham-k wu-m
   Jack-Sj rabbit-Dem shoot-SS Prog-Mod-SS miss-SS do-Inc

Alone, the th marked auxiliaries are sufficient to signify that the ac-
tion expressed in the sentence was unfulfilled, as in

45) I'm trying to make money.
   'wii 'yoov-a-k 'wi-th-k 'yu-m
   money 1/3-make-Ir-SS 1-do-Mod-SS 1-be-Inc

Thus th does not intrinsically mark the clause as subordinate. It marks the clause as contrary-to-fact. This marking cannot be used if the action is actually accomplished. It is not a mere negative however, because the structure implies that an attempt was made.

B. "Unfulfillable wishes" (or impossible dreams) refer to desires which cannot be realized. There is a desiderative construction which expresses possible desires. Compare the meanings of the following two sentences, with and without th:

46) I wish I were you.
   ma-ch 'yu-th-k wal 'yii-k 'yu-m
   you-Sj 1-be-Mod-SS * 1-wish-SS 1-be-Inc

47) I wish I were like you.
   ma-ch 'yu-k wal 'yii-k 'yu-m
   you-Sj 1-be-SS * 1-wish-SS 1-be-Inc

Nothing in the second sentence provides for the meaning "be like" which
is expressed with another verb in Tolkapaya. However, since this structure implies that the desire is potentially fulfillable, yu is metaphorically extended.

Th is used in another desiderative construction to express unrealizable wishes, e.g.

48) I wish I hadn't done it.
ny'-wi-th-a 'um-ra-ch yu-h '-yii-k '-yu-m
Dem-1-do-Mod-Ir Neg-Ints-Sj be-Ir l-think-SS l-be-Inc

These wishes are more than just unreal, they are impossible to realize.

C. "Used to" is expressed by suffixing th to the main (usually the distributive) auxiliary before the switch reference. "Used to" intrinsically implies that what "used to" be the case no longer holds. Thus, these clauses are presently counterfactual. They are often in complex sentences, where the second clause expresses the present state of affairs, e.g.

49) You used to be fat.
ma-ch m-se-ch m-yu-th-k m-yu-m
you-Sj 2-fat-Sj 2-be-Mod-SS 2-be-Inc

50) Jack used to eat meat; now he only eats vegetables.
Jack-ch qwqt-a maa-m wi-ch-th-k van 'wila havasu maa-m
Jack-Sj meat eat-DS do-P1-Mod-SS now vegetables eat-DS
wi-ch-k wu-m
do-Pl-SS do-Inc

-th can be marked on the verb itself without the habitual reading as in

51) I was dancing, but now I'm tired.
'-ima-th-k '-tlahv-k '-yu-m
1-dance-Mod-SS 1-tired-SS 1-be-Inc

-ktho is also used to mark the "used-to" clause in these complex sentences.

52) Jack used to eat meat, but now he only eats vegetables.
Jack-ch qwqt maa-m wi-ch-ktho vame 'wila havasu maa-m
Jack-Sj meat eat-DS do-P1-Mod now "vegetable" eat-DS
wi-ch-k wu-m
do-Pl-DS do-Inc

D. These sentences described as "might have, except that" express in the clause marked with yi + th (+ either Ir or Sr) something which cannot be true; the second clause expresses the true state of affairs which precludes the truth of the first clause.

53) Jeni would be here, but she's sick.
Jeni-ch vak yu-h yi-th-k 'ich-rav-k 'i-k i-m
Jeni-Sj Dem-Loc be-Ir Aux-Mod-SS s.t.-hurt-SS say-SS say-Inc
54) You could have (had) some beer, but we drank it all.
ha-maala m-thii-nya m-yi-th-a paya 'thii-k 'chav-k beer 2/3-drink-Dem 2-Aux-Mod-Ir all 1/3-drink-SS 1-finish-SS 'wum do-INC

55) We thought there were snakes around here, but we were wrong.
'lwi-v-ch vak huwav-ch-k 'yi-th-ch-m tuy3
snake-Dem-Sj here go around-PL-SS 1-Aux-Mod-DS wrong 'yu-o-k 'yum
1-be-Ev/Perf-SS 1-be-INC

The structure of these sentences involves the use of -th- to mark the auxiliary verb (often yi, as in conditionals) which is optionally person marked. The auxiliary is either appropriately switch reference marked (if the time frame is past) or marked with irrealis -a (if the time frame is referring to future events). In the cases marked with irrealis -h(a) (cf. 53), the event is not 'counterfactual' in the usual sense of a past possible event that failed to materialize, but rather that the speaker has reason to suppose that an event could not transpire in the future, circumstances being what they are. In fact all of these sentence types are expressing the speaker's opinion or speculation about "what might have been" or his wishes or desires that are contrary to reality. It is in this light that we can hypothesize that the root yi(i) found in so many examples of this type can be identified as the auxiliary use of a common root yi(i) found in certain 'cognitive' verbs (e.g., 'e yii 'like', wal yii 'want'). In a number of these examples the verb "think" is expressed in the translation (cf. 54).

It appears to be the case that in all the above examples involving -th- this morpheme is signalling that the -th- marked proposition is contrary to what is currently factual in the real world or that the speaker's predictions for the future doubt the possibility of the proposition's being actualized.

The morpheme -th- has another set of related uses that perhaps suggest a source for the verbal modal particle use of -th-; -th- occurs suffixed to numeral stems, as a member of the set of deictic demonstrative suffixes and in a frozen form on certain non-present time words.

Numerals, which are syntactically verbs, take -th as a verbal suffix to indicate "only". For example, the numeral 'sit = 'one', when suffixed with -th means "alone, once, only one'.

56) I went alone.
'sit-th-k 'yaam-i
one-th-SS 1-go-Tns

57) I have only three dresses.
'ya-ch tcek-va huw-th-m 'wii-k 'yu-m
I-Sj dress-Dem three-th-DS 1/3-have-SS 1-be-INC

This usage is semantically parallel to the 'used to' use of th; there it meant 'used to but no longer', here it means 'one (or any other number) but no more, no less.' It contrasts the actual number with every other possible quantity of items or events.

The th demonstrative refers to an object that was formerly present, but which is no longer here. When referring to people or
anthropomorphized things (e.g., a doll), the sense is that of "dear departed one"—one that has died or been lost. In these cases the salient feature is that the reference is to the past, with present relevance—in fact, with present absence (a kind of pseudo-counterfactuality). Compare this usage to the use of th to indicate a state that formerly obtained, but which no longer holds.

58) I saw my dear (lost) sister.
ny 'kel-th 'u-k 'wi-ny
I l-sibling-Dem l/3-see-SS l-do-Com

Th(a) is used in a temporal capacity as a demonstrative, either in combination with other deictics or as part of certain time adverbials with a fixed form:

59) 'then'
ny-tha-m
Dem-Dem-time

60) 'long ago'
'kur-tha
long-Dem

In all the various occurrences of -th- that have been catalogued above, a certain constant semantic element can be found common to all. The presence of -th- indicates that the current state of affairs is different from or contrasts with some other state of affairs (whether explicitly mentioned or implied) that existed in the past or that might exist in the future. Certainly the semantics and origin of this morpheme is worth pursuing, but a more definitive analysis of this topic is beyond the scope of this paper.

IV Contrast

The final adverbial construction to be considered here involves the modal yite which overlaps semantically with the preceding set of counterfactual and related sentences. The general semantic flavor of this construction fits well under the rubric "contrary to expectation." Upon closer examination of underlying presuppositions and the various uses of the construction, a slightly more complicated situation emerges. The syntax is fairly straightforward and reasonable analyses can be given for the morphology. It is also interesting to note that cognate constructions apparently exist only in Upland Yuman—the rest of the Yuman language family does not appear to have separated out this piece of semantic space from the larger class discussed above, at least not with a similar construction (cf. Crook, D. 1976, "Yuman "t").

It will be argued here that yite is in fact a modal auxiliary (comparable to lwi = 'should, supposed to'); several syntactic arguments can be given to support this claim. First of all, yite occurs in final position in its clause, as do all verbs; that is to say, it is a member of the clause it follows. Evidence for this is: (1) yite moves with the clause it follows when clausal order is reversed. Compare sentence 61 with 62:

61) You're very thin, but you are still pretty.
m-ruv m-yite ge m-hana m-qyat-k m-yu-m
2-thin 2-ModAux * 2-prettv 2-Emph-SS 2-be-Inc
62) You're pretty, even though you're thin.
qh m-hana m-qyat-k m-yu-m m-ruv m-yite
* 2-pretty 2-Emph-SS 2-be-Inf 2-thin 2-ModAux

(2) yite is person marked to agree with the subject of the clause it follows.

63) I will sing, even though you can't hear.
m-'ev-ch-ah 'um m-yite 'swar-k 'unu-u-k 'yu-m
2-hear-Pl-Inf Neg 2-ModAux 1-sing-SS 1-Incom-SS 1-be-Inf

Notice that yite is different from main verbs and auxiliaries in that
the verbs preceding it are bare stems without switch reference marking
or other verbal marking; the modal auxiliary lwi shares this property
with yite in Tolkapaya. Although yite is different in this respect
from most verbs in Tolkapaya, it can not properly be equated with any
other syntactic category (such as a contrasting conjunction like English
"but") because it can occur as a modal auxiliary in a single independent
clause. In the following such example, yite is followed by the final
auxiliary marker—(person marking) + yu/ i wi + m. Unlike other main
verbs and auxiliaries, yite does not take the suffix -k = same subject
marker before this final clause marker. This is a peculiarity of other
modals,8 which suggests that the compound (person marking) + yu/ i wi + m
is the main auxiliary verb itself and not the "compound tense marker"
that is suffixed to all main verbs in Tolkapaya. This hypothesis is
further born out by the fact that this final auxiliary yu/ i wi can be
suffixed with the plural subject agreement form -ch- when the subject
of the clause ending in yite + (person marking) + Aux + m is plural.
This is never the case with these auxiliaries when functioning as "com-
 pound tense markers" (cf. Chung 1976).9

64) Those girls think they're pretty, but they're not.
vquuya hana-k yi-ch-th-m 'um-chi yite yu-ch-m
girls good-SS Aux-pl-ModPrt-DS Neg-pl ModAux be-Pl-Tns

It can conceivably be argued that the yite that occurs between two
full clauses is not related to the construction with yite + Aux + m as
the final auxiliary construction of a simple clause.10 But the evidence
in favor of the association of these two instances of yite is
quite substantial in Tolkapaya. In the first place, the semantics are
identical, as can be seen in the examples given below. Both kinds of
clauses marked with yite express something the speaker is contrasting
with some expectations—either those established by context, or those
set up by the other clause. The sentences which use yite are either
ture or have the possibility of being true (unlike th-marked clauses).

Second, phonologically the two occurrences are equivalent, allowing
for reasonably conditioned phonetic variations (discussed below).
Let us first consider some typical examples of this construction.

65) Even though my house is small, I like it.
nyu'-wa-v-ch qech yite 'e-'yii-k 'yu-m
I-house-Dem-Sj small ModAux *-1/3-like-SS 1-be-Inf

66) Even though you will come, I won't be here.
ma-ch m-vaa m-yite vak 'yu-h 'uma-ha
you-sj 2-come 2-ModAux here 1-be-Inf Neg-Inf
67) I looked for rabbits, but there weren't any.
    hloo 'waala 'yite pem-k yu-m
    rabbit 1/3-seek 1-ModAux be lacking-SS be-Inf

With *yit(e) in a final auxiliary construction:

68) You just drank the medicine (but didn't know it!)
    ma-ch. 'amaa m-thii m-yite m-yu-m
    you-Sj medicine 2/3-drink 2-ModAux 2-be-Inf

69) You saw your husband a while ago (but didn't know it was him).
    'kur-tha pem-mii m-'u m-yite m-yu-m
    long-Dem man 2/3-see 2-ModAux 2-be-Inf

70) The girl who pretends she's so smart isn't really.
    vqi qyt-oo k-i'v-ch ich-spuh 'umi yite 'i-m/y
    girl very-Dub Rel-pretend-Sj s.t.-know-Inf neg ModAux say-Inf

The phonological situation that allows for the "disappearance" of
the final -e vowel on *yite seems to be primarily when there is no
intervening person marking before the -y- of *yu, as represented in

71) That girl is going to be better! (you say when everyone thinks
    vqi-ny-ch 'hana-h yiti yu-m
    girl-Dem-Sj good-Inf ModAux be-Inf
    she's going to die)

Since there is some variability in the presence of -e in this
construction (68-72), there is also a possibility that -e is a separate
morpheme not required in the position before the main auxiliary. In
any case, the relationship between these two types of *yite construc-
tions seems well-established here on semantic grounds alone.

The following construction having two instances of *yite proves to
be helpful in determining the semantics of this adverbial. In these
cases, all of which involve the verbs *iv = "pretend" or (v)lw =
"seem, appear, look/act like", after each of the two main propositions.

72) Jack acts nice, but he isn't.
    Jack-ch 'han-k yu-cha lvwi yite 'umi yiti yu-m
    Jack-Sj good-SS be-P1 seem ModAux Neg ModAux be-Inf

73) Lynn doesn't look sick, but she is.
    Lynn-ch ich-rav-ha 'um-k yu-cha lvwi yite 'ich-raya
    Lynn-Sj s.t.-hurt-Inf neg-SS be-P1 seem ModAux s.t.-hurt
    yiti yu-m
    ModAux be-Inf

74) Those men look like Indians, but they're not.
    pa-ch-ch yu-cha lvwi yite pa-ch-ha 'un-ch yu-cha
    Indian-P1-Sj be-P1 seem ModAux Indian-P1-Inf neg-Sj be-P1
    yiti yu-ch-m
    ModAux be-P1-Inf

In all the examples with two manifestations of *yite the pragmatic situa-
tion is that appearances are deceiving. The speaker is describing the
way things appear to be and then stating that the real situation is
other than this (appearances) would lead us to expect. The usage of
*yite "between" two clauses indicates that there is a contrast between
the sets of expectations established by one proposition and that of the other. Where yite + Auxiliary is used after a proposition, there is a contrast between the expectations created by that proposition and the expectations provided by the prior discourse and the extra-linguistic context. To emphasize this disparity, both instances of yite can be used as in the above examples. Since the speaker is actually expressing the "extra-linguistic context" in a sense, the second yite is appropriate. The decision to use both yite's seems to depend on how "unexpected" the speaker judges the situation to be. For instance, in the following examples which appear to parallel the three above, only one yite is employed. However, in both cases the information being imparted comes as no surprise, since it refers to people and their attributes that are part of both the speaker and hearer's knowledge about the world.

75) Jeni doesn't seem kind, but she is.
   Jeni-ch pa nmirva-h 'um -k yu-ch a vlwi yite pa
   Jeni-Sj person kind-Is Neg-SS be-Pl seem ModAux person
   nmirv-ch yu-m
   kind-Sj be-Inc

76) Steve doesn't act like a big shot, but he is.
   Steve-ch pa qyat-oo 'iv-ra-h 'umi yite
   Steve-Sj person Emph-Dub pretend-Inte-Is Neg ModAux
   pa qyat-ch yu-m
   person very-Sj be-Inc

The semantic unity of yite in its various uses has thus been demonstrated. As did many of the other adverbial types, this construction indicates a contrast between reality and some other mode. The expression of "contrary to expectation" in this distinctive way is apparently unique to Upland Yuman and thus is historically interesting. The morpho-syntactic strategies for indicating the range of adverbial expressions described here for Tolkapaya should provide valuable points of comparison for comparative studies of higher-level syntax in Yuman.

Footnotes

1Tolkapaya Yavapai or Western Yavapai belongs to the subgroup of the Yuman language family, Northern or Upland Yuman. Our sincere appreciation goes to Ms. Molly S. Fasthorse for the many patient hours devoted to teaching us her language and for her never-flagging sense of humor. Thanks also to Pamela Manro for her guidance, to Steve Anderson and Bill Bright for their detailed comments and to the other members of the UCLA Tolkapaya class for their suggestions--specifically Steve Anderson, Bonnie Glover, Jack Kriender, and Jeni Yamada.

Abbreviations used here in glossing morphemes are as follows:

<table>
<thead>
<tr>
<th>App</th>
<th>Aux</th>
<th>Com</th>
<th>Dem</th>
</tr>
</thead>
<tbody>
<tr>
<td>= applicative</td>
<td>= auxiliary</td>
<td>= completive</td>
<td>= demonstrative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DS</th>
<th>Dub</th>
<th>Emph</th>
</tr>
</thead>
<tbody>
<tr>
<td>= different subject</td>
<td>= dubitative</td>
<td>= emphatic</td>
</tr>
</tbody>
</table>
**Ev/perf** = evidential perfective  
**Imp** = imperative  
**Inc** = incontinuous  
**Incep** = inceptive  
**Ints** = intensifier  
**Ir** = irrealis (ha/h/a)  
**Loc** = locative case suffix  
**Mod** = modal particle  
**ModAux** = modal auxiliary  
**Neg** = negative verb  

\[ P1 = \text{plural subject agreement}  
P0SS = \text{possible}  
Poss = \text{possessive}  
Prog = \text{progressive auxiliary}  
Rel = \text{relative clause marker}  
Sj = \text{subject case suffix}  
SR = \text{appropriate switch reference marker}  
SS = \text{same subject switch reference marker}  
Tem = \text{temporal marker}  
Tns = \text{tense marker} \]

* = 1st part of separable verb  
s.t. = something, dummy object  
single numbers: for intransitive verbs, subject agreement in person  
1 = ' , 2 = m , 3 = $ (3rd person is unglossed)  
double numbers: for transitive verbs, 1st number = person of subject  
agreement, 2nd number = person of object agreement  
(1/3 is $ and not glossed)

In this paper, the examples are written in the practical orthography  
developed by the Yavapai Field Methods course.  
\[ \begin{align*}  
\text{ch} &= \check{c}  
\text{sh} &= \check{s}  
\text{th} &= \check{t}  
\text{ny} &= n^\check{v}  
\text{kw} &= k^w  
\text{ky} &= k^y  
\text{qw} &= q^w  
\text{'} &= ?  
\text{vv} &= \text{long v}  
\end{align*} \]

2 Switch reference marking in Yavapai in general is discussed in  
Kendall 1975. -k marks same subject, -m marks different subject on the  
subordinate clause or on the non-final clause. We are using the term  
switch reference (SR) to refer to the appropriate assignment of either  
-k or -m. Where only one is appropriate, the abbreviations SS or DS  
are used.

3 The -m/-k switch reference markers and the -ch subject marker  
can be followed by vocalic increments which appear to be semantically  
empty - - - k is -ka, - m is -me, and - ch is -che. These increments are  
never used before auxiliaries. These increments were first noted by  
Hinton 1977 for Havasupai.

4 This contains the distributive construction, used to express  
habitual or repeated action. This construction inserts one of the  
existential auxiliaries after the verb and before the final tense marking.  
The existential auxiliary is suffixed with the -ch plural marking.  
The entire construction is: V + m*Existential Aux + ch + k + Existential  
Aux + Tns.
yu can be used with any verb; wi can be used with active, transitive verbs; and 'i can be used with verbs of speaking or otherwise communicating or making noise.

Thanks to Brent de Chene for his help in sorting out these conditionals.

The demonstrative system of Tolkapaya has been analyzed in great detail by Glover.

Other modals of this type include lviya ("ought") and yiivch ("should").

The Compound tense markers first discussed by Chung (1976) are one of the ways of marking independent clauses. All matrix verbs can typically take this synchronically analyzable compound form which consists of the main verb + k, subject person marking, followed by one of the three auxiliary verbs yu, wi, 'i and then either m = incompletive or ny = completive. This morphology contrasts with the final marker found in many other Yuman languages, which is simply either k or m. The Tolkapaya marking system is particularly useful in deciding questions of subordination vs. coordination in complex sentences. The final tense marker seems to be a definite morphological indicator of main clause status for Tolkapaya. The compound tense markers do not permit plurality to be marked on their existential auxiliary.

Kendall, 1976, pg. 104 gives examples of both types (cf. examples 10-12 with 13). Although the examples aren't discussed specifically in any detail, the semantics of the two uses seem to be described in disparate ways and the glosses are not the same, suggesting that Kendall treats them as separate constructions.
The complexity of the Yuman personal agreement system is well known, and the analytical problems it presents have been clearly laid out (by Hinton and Langdon 1976). It is generally acknowledged that a set of prefixes marking object and subject (in that order, when relevant) may be reconstructed for Proto-Yuman, and that the subject prefixes used on intransitive verbs can appear on nouns to mark the possessor. As far as I know, only Crawford (1966) and Halpern (1946, 1947) have previously noted the existence of another sort of personal prefixation on nouns, used to indicate that the nouns in question stood in apposition to a pronoun (the Yuman 'we the people', and so forth). In this paper I will provide further examples of this rather restricted type of personal agreement, and will examine the consequences of reconstructing this system for Proto-Yuman.¹

I was led to this topic by the intriguing observation that an ordinary third-person noun may sometimes trigger non-third-person agreement on a verb, as in these examples from Mojave and Tolkapaya Yavapai:²

(1) MOJAVE: 6in'ok'ak-n'y-∅ k-pal'um 'We ladies should hit him'
   women-subj 1-hit=pl-should

(2) TOLKAPAYA: vquy-ch 'twak'-k 'wa-ny-l 'yu-ch-k'-yu-m
   women-subj 1-two-ss house-dem-in 1-be-pl-ss-l-be-inc

'There are two of us girls in the house'; 'We two girls are in the house'

The initial noun in each sentence clearly is the subject of the following verb or verbs (the number verb 'two' is a dependent modifier in the Tolkapaya example), as can be seen from the fact that each is marked with the subject case suffix. However, such nouns would be expected to trigger third-person subject agreement (marked in most Yuman languages including these) with no prefix at all, rather than the first-person subject agreement marked by the glottal stop prefixed to these verbs. Semantically, there is little problem—the speaker uses the subject-marked noun and the following verb to refer to herself (and others)—but such sentences are oddities, at least, syntactically.

In most cases, in languages for which I have data, however, the speaker would not normally leave the nouns in such sentences this way, but rather would indicate by prefixes the pronominal reference each one had. Thus, the nouns at the beginning of sentences (1) and (2) would commonly appear in such languages with some sort of first-person marking, to show that they referred to the speaker (and others—in this, as elsewhere in Yuman, personal agreement is independent of number agreement).³ Such agreement may also be found on the verbs of subject relative clauses (to use another English example, in the 'we who are about to die' construction), which are basically derived nominals.⁴ I will refer to all these person-marked nouns and relative clauses generally as "personal nouns."

Halpern's description of Yuma provides the first record of such constructions. He notes the use of two "referential pronominal prefixes", first-person ʔan'- and second-person ma:-, in such examples as
(3) YUMA: paʔi:pa: 'person', 'people'
    paʔi:pa: 'I (who am a) person', 'we people'
    maʔi:pa: 'you (who are a) person', 'you people'

(Halpern 1946: 210). As this example shows, many nouns do not inflect for plurality, and have their number determined only by context. The ma- and ma:- prefixes also appear on Yuma relative clauses:

(h) YUMA: avʔeʔk'amen'c 'I who pass by many places' (nom.)
    maʔik'ua:xec 'you who will remain here' (nom.)

(Halpern 1947: 163). Both these words are subject relative clauses (i.e., the referential head noun is the subject of the relative verb) bearing the standard Yuman subject relative prefix k'- (this k' sometimes alternates with k-; only k- is used in the languages of the Pai subgroup). The k'-verb word is treated as a complex nominal, and the personal noun prefixes appear at the front of it, before the k'.

A second description of such prefixation is given by Crawford (1966) for Cocopa. The Cocopa 'pronominal identity prefixes' are n'y- for first person and m- for second person. In Cocopa, further, a third-person pronominal identity may be marked with n'y- or (rarely) 0-, as Crawford's examples (1966: 100) show:

(5) COCOPA: (a) ap'á 'man'
    n'apá:s 'women', 'the men', 'they who are men'
    ma:apá:s 'we men'
    mapá:s 'you who are a man'
    ma:mpá:s 'you men'

(b) n'y:s?ák 'we women'; 'they who are women'
    ma:s?ák 'you who are women'; 'you who are women'

(c) k'awás 'you who sit in it'

(Cocopa 'man' and 'woman' are nouns which do have plural forms.) The Cocopa prefixes also sometimes occur on subject relatives, as in example (6), where the second-person prefix m- follows the criticized n'y- 'in it' and precedes the relative prefix k'-. (Crawford 1966: 152):

(6) COCOPA: k'awás 'you who sit in it'

I have recorded the use of special prefixes to mark personal nouns in three other Yuman languages on which I am currently doing field work. In two of these, Mojave and Maricopa (both closely related languages of the River sub-group of Yuman), the prefixes, first-person n'y- and second-person m-, are used only on the verbs of subject relative clauses, never on simple nouns:

(7) MARICOPA: (a) n'y-k'-xom k'ya-s ma ?-usev-k 'The three of us
    l-rel-three we-subj milk l-drink=pl-tns drink milk'

(b) n'y-s?ák n'?a-s yav?ipay m-k-ti:v-ə n'y-n'y-ttypy-um
    women we-subj Apache 2-rel-sit=pl-dem po-1/3-kill=pl-fut
    'We women will kill you [sitting] Apaches'

(8) MOJAVE: (a) in'e:č' čin?awák n'y-k-havik n'y-n'y-čeqamę-m
    us women l-rel-two-dem po-3/l-hit=pl-tns
    'He hit us two ladies'

(b) ma:č' čin?awák m-k-havik n'y-m-čeqamę-m
    you=pl women 2-rel-two-dem po-3/2-hit=pl-tns
    'He hit you two ladies'

(c) Brown n'y-k'-u:mul n'y-č'
    Brown l-rel-be-named=pl-dem-subj l-four=pl-ss in-l-be=at-tns
'There are four of us Browns here'; 'We four named Brown are here'
The words on which the underlined prefixes occur are kʷ- relatives—in
the first Maricopa example, for instance, kʷ-xmok is a relative on the
subject of the verb 'three', 'the ones who are three'. With the ?nʷ-
prefix, the word means 'we who are the ones who are three', 'we three',
or 'the three of us'. In the third Mojave example, the kʷ- marked
verb is u:mul⁷ 'be named'; Brown ?nʷ-kʷ-umul⁷ means 'we who are named
Brown'. This example and several preceding ones show that demonstra-
tive and case suffixes applying to the relative clause as a whole fol-
low the relative verb, a standard Yuman occurrence.⁸

In the Tolkapaya dialect of Yavapai, the only member of the Pai
subgroup for which I have seen this kind of data, the personal noun pre-
fixes (simply 2- (orthographic _-) for first person and m- for second
person) can appear on nouns, as in

(9) TOLKAPAYA: (a) "muuk-ch-va pa-ny-neh-a 'i:k'-i-m
1-Navajo-pl-dem po-3/1-kill-irr say-ss-say-inc
'She's going to kill us Navajos'
(b) m-muuk-ch-va pa-ny-nek-a-k 'unu-k'-yu-m
2-Navajo-pl-dem po-1/2-kill-irr-ss 1-aux-ss-1-be-inc
'I'm going to kill you Navajos'
(c) m-vqyu-ch m-hwak-k 'wa-ny-l m-yu-ch-k-m-yu-m
2-women-subj 2-two-ss house-dem-in 2-be-pl-ss-2-be-inc
'There are two of you girls in the house'

Such marking is, apparently, optional, as a comparison of these examples
with sentence (2) above will suggest. The same prefixes appear before
the k-marked verbs of subject relative clauses:

(10) TOLKAPAYA: (a) 'puy-a-k 'k-unu-v-che maa 'han-k-yu-m
1-die=pl-irr-ss 1-rel-aux-dem-subj you good-ss-be-inc
'yu-ch-k'-yu-m 'We who are about to die salute you'
1-think-ss-1-be-inc ('We...think you're okay')
(b) maa-ch-che Phoenix m-k-yaeam-ch-a-k m-k-unu-ch-che
you-pl-subj Phoenix 2-rel-go-pl-irr-ss 2-rel-aux-pl-subj
'ar-m-yaay-ee 'Those of you who are going to
glad-2-glad=pl-modal Phoenix should be glad!

These somewhat complex examples show that in Tolkapaya relative clauses
with more than one verb, either one or all verbs may be marked with the
subject relative prefix k- (for details of Tolkapaya relativization, see
Kriemler 1978).

The data we have assembled so far on personal noun marking may be
summarized as follows:

I. PERSONAL NOUN PREFIXES

<table>
<thead>
<tr>
<th>Cocopa</th>
<th>Yuma</th>
<th>Maricopa</th>
<th>Mojave</th>
<th>Tolkapaya</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td>n⁷-</td>
<td>?n⁷-</td>
<td>?n⁷-</td>
<td>?n⁷-</td>
</tr>
<tr>
<td>2nd person</td>
<td>m-</td>
<td>m-</td>
<td>m-</td>
<td>m-</td>
</tr>
<tr>
<td>3rd person</td>
<td>n⁷-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Only Cocopa seems to have a special prefix for third-person nouns. A
general point is that personal nouns are much more acceptable (or per-
haps simply much more common) if they are plural, perhaps because the
characteristics of a singular speaker and hearer are so well known and
easily determinable that they need not be mentioned.
Although we have data here only from five of the ten Yuman languages, I do not feel uncomfortable about proposing a reconstruction of the proto-system, because the three major subgroups within Yuman are represented here—Delta-California (Cocopa), River (Yuma, Maricopa, and Mojave), and Pai (Tolkapaya Yavapai). Since personal nouns are used only in restricted syntactic contexts, I hope that field workers on other languages may discover the same thing—or relics of it, such as the Dieguesño cases we will come to shortly.

I propose the following reconstructions of the Proto-Yuman personal noun prefixes: first person *?nV, second person *m-, and third person zero. The deviations from these reconstructions occur in Cocopa, Yuma, and Tolkapaya.

Although Crawford felt on Cocopa-internal evidence that it was the first-person *nV which was innovative, and the third-person *nV conservative, I think that the comparative data argues that the first-person prefix represents a predictable simplification of the reconstructed *?nV (quite reasonably, since Cocopa has deleted a number of initial *?V's, including, most relevantly, the first-person subject prefix *?V (modern Cocopa Ø)). Apparently the use of a zero prefix on some third-person personal nouns represented the original situation, and the current *nV- is an innovation, possibly on analogy with the first-person prefix.

The a vowel in the Yuma first-person *anV- is no problem. All Yuman languages insert a [a] to break up an initial 2-nV- cluster, and a is simply Halpern’s representation of prestress a. The long vowel in the Yuma second-person ma:- is the most serious problem for my reconstruction, since Yuma is often highly conservative about vowel length, and can provide valuable clues to the proto-situation. However, a number of cases of unexplained lengthening of prestress *a or even *e (or no proto-vowel) to a: in Yuma have been recorded, particularly in the numeral system (cf. Langdon and Munro, to appear). Mojave and Maricopa are very closely related to Yuma, and agree with Yuma in most matters of unstressed vowel length, but they both have m- for this prefix, suggesting that the Yuma long vowel may be an innovation. (I’ll return to this matter again below.)

Finally, Tolkapaya has lost the *nV from the first-person prefix, so that the Tolkapaya personal noun prefixes look just like the regular intransitive subject prefixes (discussed further below). The same loss of *nV from *?nV occurs in Tolkapaya in the complex prefix used to indicate a second person subject, first person object. This prefix is reconstructed as *?nV, clearly segmentable into *?nV 'first person subject' and *m 'second person subject' (cf. Hinton and Langdon 1976), but the Tolkapaya prefix is simply *m-

Perhaps now is the time to note that relic instances of what may reflect personal noun agreement do show up in some other languages. Langdon (1976), for instance, cites the following Dieguesño irregular verb paradigms (pp. 111-112):

(11) DIEGUESNO: (a) ?aw?in 'he is the same'
    *?anV?ax?in 'I am the same'
    mon?ax?in 'you are the same'
(b) ?e?pa:y 'he is a rascal'
    *?enV?e?pa:y 'I am a rascal'
    ma?e?pa:y 'you are a rascal'
The first example shows ?am'Ya- and men'Ya- instead of the expected first- and second-person subject markers ʔ- and m-; the second has ?am'Ya- and ma-. True, these are on main clauses, not constituent nouns, but since the "verb" marked could be argued to be nominal in character (they begin, for instance, with the nominal formative ʔa-), it is possible that they show some left-over use of something much like the personal noun prefixes. 10

The best thing to do at this point is to try to see what other sorts of pronominal marking the personal noun prefixes we have tentatively agreed upon look like most.

First we may consider two identical sets of prefixes used (as already noted) to mark the subjects of intransitive verbs and the possessors of inalienably possessed nouns (first and second person only): 11

II. SUBJECT PREFIXES FOR INTRANSITIVE VERBS;
III. POSSESSIVE PREFIXES FOR ALIENABLY POSSESSED NOUNS

Diegueno Cocopa Yuma Maricopa Mojave Tolkapaya Proto-Yuman

1st ʔ- ʔ- ʔ- ʔ-/?ʔ- ʔ- *ʔ-
2nd m- m- m- m- m- *m-

Both of these sets reconstruct, as shown, to first-person *ʔ- and second- person *m- (Hinton and Langdon 1976). Clearly, although semantically appropriate (since they seem to indicate a kind of subject reference), these prefixes aren't the same as those on personal nouns (except in Tolkapaya).

Next we can consider the prefixes used on alienably possessed nouns:

IV. POSSESSIVE PREFIXES FOR ALIENABLY POSSESSED NOUNS

Diegueno Cocopa Yuma Maricopa Mojave Tolkapaya Proto-Yuman

2nd mnY- mnY- mnY- mnY- mnY- mnY- *mnY-

Here we do find a reconstructed *ʔnY-, but not an *m-. (The *nY- marker of alienable possession is clearly segmentable; this set then becomes the same as set III.) 12

Finally, we can examine the set of prefixes used to indicate the object of a main clause verb (with a third-person (i.e., usually zero) subject):

V. OBJECT OF MAIN CLAUSE VERB WITH THIRD PERSON SUBJECT

Diegueno Cocopa Yuma Maricopa Mojave Tolkapaya Proto-Yuman

1st nY- nY- nY- nY/?nY- nY/?nY- nY- *ʔnY-
2nd m- m- m- m- m- m- *m-

At last we have a set which seems more comparable to the personal noun prefixes, and for which we can propose the same reconstructions. 13 The only problem here is Yuma (as noted, a usually conservative language), which has no ʔ in the first-person prefix.

However, Halpern has carefully documented a special set of Yuma object markers for use only on relative clauses—ʔanY- to mark a first- person object of a relative clause, and ma- to mark a second-person relative clause object (1947: 163):

(a) Yuma: nY'ʔanYk' u:xame:yc 'the one who procreated us'
ma:k' u:xami:n'c 'the one who procreated you'
(b) n'am?an'e:vn'a 'the one who bothers me' (voc.)
n'ammana?e:vn'a 'the one who bothers you' (voc.)

We now have two connections between personal noun prefixes and object prefixes—they have similar cognate sets for which the same reconstructions may be proposed, and they have been clearly connected in the minds of generations of Yuma speakers, either subject to the same innovations or preserving the same conservative structure.

In the remainder of this paper I will examine some of the possible reasons why personal noun prefixes should look like object prefixes.

First, however, I should note that I am not attempting to propose a unique reconstruction for a set of morphemes used both for personal noun prefixes and for all verbal objects. As a simple inspection of sets I and V shows, the sets are different, and were undoubtedly differentiated by speakers of Proto-Yuman. The Yuma evidence suggests the possibility of reconstructing a special set of prefixes for use on personal nouns and for the objects of the verbs of relative clauses. We will return to this idea again below.

Some might argue that it is merely coincidental that personal noun prefixes should look so much like object prefixes, but this seems unlikely and unsightful. There are three other motivated explanations, which I will examine in turn. It seems to me that, taken together, they all suggest the pressures which determined how personal nouns would be marked.

Perhaps the least satisfactory argument hinges on the structure of Yuman predicate nominal sentences, as exemplified by

(13) MOJAVE: ?ip?apa-n V w?a?ide-? idu:-m 'The man is a doctor'
man-dem doctor-subj be-tns

As I have shown elsewhere (Munro 1977d), such sentences are really (at least historically) complex—they consist of a simple NOUN NOUN predication embedded as the subject of the following existential 'be'. The personal noun phrases we are considering in this paper also have a NOUN NOUN semantic structure—the first noun is the pronoun realized as the personal prefix on the following noun, with which it stands in semantic apposition. Now, since the subject of a Yuman predicate nominal (like ?ip?apa-n in (13)) is generally unmarked—i.e., in nominal object rather than subject form—one might argue that the pronoun "subject" of a personal noun ought similarly to appear with object marking. I think this argument might work from a formal standpoint, but it's not wholly convincing.

The second argument is based on the role of the k^- relative prefix (exemplified many times above), which commonly occurs on the verbs of simple subject relative clauses like

(14) MOJAVE: ?ip?ap W aloyaw k^-tapu? 'the man who killed the chicken'
man chicken rel-kill

Now, subject relative clauses are not the only type encountered in Yuman. In non-subject (or oblique) relative clauses, the k^- prefix does not occur:

(15) MOJAVE: (a) (man?ep) W aloyaw ?-tapu? 'the chicken I killed'
me chicken 1-kill
(b) (man?) W aloyaw m-tapu? 'the chicken you killed'
you chicken 2-kill
Instead, the verbs of such relative clauses are marked with normal (main clause) subject prefixes. When \( ?\) and \( m \), the subject prefixes, are used on the verbs of relative clauses, then, they specifically deny that those relative clauses have first- or second-person heads (instead, the objects or some other nouns in those relative clauses must be the heads). On the other hand, when \( k^w \) is used on the verb of a relative clause, it not only shows that the subject of that clause is its head, but it also marks the fact that the subject of that clause is third person. Therefore, neither \( k^w \), \( ? \), or \( m \) is available for indicating a head which is also first or second person. Therefore, the only other available set of prefixes which can show such reference, the object prefixes, is used.

A final argument is based on the notion of position classes. A typical main-clause verb has the following structure in Yuman (ignoring suffixes, which are irrelevant here)—of course, not all slots need be filled:

\[
\text{pre-pronominal } + \text{ object } + \text{ subject } + \text{ verb}
\]

(Pre-pronominal prefixes include locative/demonstrative elements like the \( av \) in Yuma (1) or the \( \text{y} \) in Cogopa (6); plural object prefixes like Maricopa, Mojave, and Yuma \( m^w \) or \( n^w \) (7b), (8a), (12a) or Pai \( p\)a- (9a); and uninflected pre-prefixal elements of various verbs, like the \( \text{y} \) or Tolkeapa \( ?\)ar...yasa 'glad [pl.]' (10b).) The synchronic pronominal prefixes are not all readily segmentable into object plus subject morphemes, but the general feasibility of such an analysis of the prefixes is widely accepted (due probably to the efforts of Hinton and Langdon 1976). Now, it has occasionally been suggested that the \( k^w \) relative prefix fills the role (or slot) of a subject marker on the verbs of subject relative clauses, which otherwise conform to the structure above (for instance, in languages like Diegueño which have a third-person subject prefix, that prefix is replaced by \( k^w \) in subject relative clauses (Langdon 1970: 176-77)). In light of the previous discussion of the semantic contribution of \( k^w \) to the relative clause, this should not seem at all unreasonable. Therefore, one might argue, when trying to mark first- or second-person reference on a nominalized verb in \( k^w \), only the morphemes of the immediately preceding column (the column of object markers) can be available, since the subject column is already occupied.

Since a \( k^w \)-VERB relative nominal can function like any other full-fledged noun, any other noun is considered to have its subject slot already filled. In other words, nouns may be considered to be inherently specified for a third-person subject (by a \( \emptyset \) morpheme which acts as a place-holder in the subject position).

This argument may seem stronger if we suggest that instead of having grammatical relation labels the various position classes be simply numbered. We would then have a diagram something like

\[
\begin{array}{cccc}
\text{POSITION 3} & \text{POSITION 2} & \text{POSITION 1} & \text{POSITION 0} \\
\text{pre-pronominal} & 1 = \underbar{m}^w & k^w & \\
\text{prefixes} & 2 = m(a:) & \vdots & \text{VERB} \\
3 = \emptyset & & \text{NOUN} & \\
\end{array}
\]

A noun is considered to occupy both columns 1 and 0. Subjects on verbs are chosen, normally, from column 1, and objects from column 2, but if
column 1 is occupied, a subject may be represented by a prefix from column 2.

I have not so far dealt with the issue of whether there would ever be any confusion because of the fact that the same prefix in front of a k-marked verb can refer, apparently, either to a subject or to an object. In other words, can ?m-?y VERB, for instance, mean both 'the one who VERBS me/us' (with the object interpretation for the position 2 prefix) and also 'I/we who VERB' (with the "subject" or personal noun interpretation)?

Apparently, the answer to this question is no. Relative clause verbs marked as personal nouns are always intransitive, as can be seen from the examples cited above. Copular sentences with nominal predicates are also intransitive. It seems, then, that the prefixes ?y- and m- refer to subjecthood (in the sense that a pronoun can be considered the subject of a following appositive noun) when used with nouns or k-marked intransitive verbs, but to objecthood (the pronominal referent is the object of the verb used to describe the third-person head of the relative clause) when used with k-marked transitive verbs. The delicate balance of such a situation may be some explanation of why the personal noun construction cannot be used in relative clauses with transitive verbs (e.g., 'we who killed him' or 'we whom he killed') in any of the languages for which I have data.

All this discussion in which the formal and positional identity between personal noun markers and relative-clause object prefixes was so crucial may suggest that, after all, a single set of prefixes with just this use should be reconstructed. Once again, interpretation of the Yuma data (innovation or conservatism?) is of the greatest importance. If we do identify these two functions as reflections of a single original set of prefixes, however, we will have to account for the fact that they have diverged in the evolution of several languages. In Cocopa, for instance, a third-person personal noun prefix was innovated as y-; y- is not used, however, to mark third-person objects of either main or relative verbs in Cocopa (cf. Crawford 1966: 152-153 for one example of the use of the third-person object marker y- on a subject relative word). In Tolkapaya, the first-person personal noun prefix is ?- (presumably a reduced form of the original m-), but the first-person object prefix on both relative clause verbs and main verbs is n- and n-. All this suggests that, although the same set of prefixes may originally have served to mark both personal noun reference and relative clause objects (with no confusion), these two different functions were eventually separated in the minds of speakers of most daughter languages, and the prefixes followed different courses of development in these two different functions.

A few problems remain. One difficult one concerns the order of pronominal referent and appositive noun, which I have continually assumed to be PRONOUN NOUN (as with English 'we the people' or 'we women'/you women' in Mojave (3a-b)) at some underlying level. In Maricopa, however, as shown in examples like (7a-b), a pronoun may follow an appositional noun or relative clause. I believe this situation is exceptional, but I do not yet understand the reasons for it.

Another puzzle (less of a real problem) has to do with the relationship, in Yuman and perhaps also cross-linguistically, between what I have called personal nouns and vocatives. The following pair of sentences is interesting:
(16) TOLKAPAYA: (a) m-vqyu-a pa-ny-'u-k-\-yu-m 'I see you'
    \-women-den po-1/2-see-ss-l-be-inc woman'
(b) vqyu-\-ee pa-ny-'u-k-\-yu-m 'Women, I see you'
    \-women-voc po-1/2-see-ss-l-be-inc

The verb of each sentence is the same; the first word of sentence (a) is
marked as a second-person personal noun, while 'women' in sentence (b) is
marked with an -ee suffix which frequently appears on vocative nouns.

Vocatives in Tolkapaya (and also Mojave, I can report) never have a se-
cond-person prefix—cf. also the Yuma examples in (12b). A full compara-
tive survey of Yuman vocatives, and of the exact differences between sen-
tences like (a) and sentences like (b), is definitely needed.

FOOTNOTES

1. I thank the participants in the Workshop, particularly Margaret
   Langdon, for their many helpful comments. I am also grateful to the Na-
   tional Science Foundation Grant 80C74-18043, the UCLA Department of
   Linguistics, and the UCLA Academic Senate for supporting my recent work on
   Mojave, Tolkapaya, and Maricopa.

2. My Mojave data is from Nellie Brown, and my Tolkapaya data is
   from Molly Fasthorse; I can never sufficiently express my thanks to both
   of these friends.

   Abbreviations used in these and the following sentences include subj
   (subject case marker), pl (pl.), 1 (first person), 2 (second person), rel
   (subject relative prefix), demonstrative), ss (same subject subor-
   dinator), da (different subject subordinator), inc (incomplete), tns
   (tense), po (plural object), fut (future), irr (irrealis), voc (vocative),
   nom (nominative). / separates subject from object in complex prefixes,
   and = is used to separate parts of a complex gloss. I apologize for the
   inadequate gloss 'aux' (auxiliary) used for the Tolkapaya auxiliary verb
   unuu.

   Citations are presented in the orthography of the original sources,
   but underlinings are mine. Mojave and Maricopa data is cited in rough
   phonemic form, normalized from my notes; Tolkapaya data is cited in the
   orthography developed by the UCLA Tolkapaya group (to whom I wave grate-
   fully in passing).

3. Subject plurality is indicated by various changes in the verb
   stem; object plurality is sometimes indicated similarly, or may be shown
   in some languages by a special agreement prefix which precedes the person
   agreement prefixes on the verb stem.

4. This may be a somewhat controversial oversimplification.

5. The initial av- in (4a) is a prefix of demonstrative origin which
   always precedes the person-markers on the verb. The fact that the person-
   nal noun prefixes are no exception to this rule shows that the [k-\-VERB]
   string should probably not be viewed as just another (accidentally com-
   plex) noun.

6. Crawford notes that 'man' is the only noun in which third-person
   identity is marked by Ø. It would seem, however, that this does reflect
   the reconstructible system.

7. My Maricopa data is from Pollyanna Heath (thank you!), whose ac-
   quaintance I owe to the kindness of Henry O. Harwell.

8. I return below to the peculiar order of the k-\-marked verb and
'we' in Maricopa (7a)--note that the same order is followed with the
positional noun in (7b).

9. The analogical process followed may have been something like
this: in the personal noun process *?n7, the *? was known by speakers
of pre-Cocopa to mark first-person, so *n7 was interpreted (and then seg-
mented) as a personal noun marker. This *n7 was then combined with the
third-person prefix, *∅, to form a pre-Cocopa third-person personal
noun prefix *n7-∅, which survives as n7-. The other developments in the
first-person prefixes referred to in the text (personal noun prefix *?n7-
becoming modern n7- and ordinary subject *? becoming ∅-, both by loss
of initial *?-) followed this development of the third-person personal
noun prefix.

10. Margaret Langdon suggested at the Workshop that the a's at the
close of these prefixes provide support for the conservatism of the a: in
the Yuma prefix ma:-, but I believe it is true that these a's are predict-
able from Langdon's synchronic Diegueño rules (Langdon 1970: 71, rule
7a), and I think Langdon would agree with me. Of course, this regularity
does not at all eliminate the possibility that these a's might conceiv-
ably reflect historical *a's.

11. Halpern (1942) first noted the relationship of the subject/pos-
session conflation to the fact that many inalienable possession relation-
ships are expressed by verbs of which the possessor is the subject (i.e.,
'he is my father' is expressed as 'I call him father', in what we might
take to be a reversal of grammatical roles). See also Munro (1977b), pp.
57, 59, where I refer also to work by Margaret Langdon (this volume).

12. Jack Kriendler has observed to me that the n7- possessive prefix
is rare in Tolkapaya; this question merits further study.

13. Hinton and Langdon were unaware of the Maricopa and Mojave data
I cite here when they first proposed their reconstructions (in 1970), so
they did not reconstruct *?n7-, but rather simply *n7-, for the first-per-
son object prefix. However, they do propose a *?n7- prefix for an earli-
er stage of Yuman, and I believe that the Mojave and Maricopa data here
would convince them that this reconstruction is correct for Proto-Yuman.

14. Apparently this apposition can be either restrictive or nonres-

tive.

15. For Mojave, at least, one can argue that certain pronouns are, in
fact, marked as objects, rather than simply unmarked for subject. The
clearest case is the first-person singular ?in'eč (subject)/?in'ep (ob-
ject). 'I am a doctor' is ?in'ep kwaq?ide:-i ičui-? (me doctor-subj be-
tns). The origin of the -? on 'me' is somewhat obscure, but there are
arguments that it has other uses as an object marker (cf. Munro 1976,
chapter 2).

16. A somewhat disturbing fact is that although both personal nouns
and copular sentences with pronoun subjects may be argued to have a [PRO-
NOUN NOUN] structure, copular sentences do not normally show the same
pattern of agreement marking on the predicate noun as that found on per-
sonal nouns (cf. fn. 15). Margaret Langdon has recently given me an
example of a sentence with just this sort of marking, however, from the
Campo dialect of Diegueño: ?an'a:ba n7-ak'awa: (me n7-old=woman) 'I
am an old woman'. This sentence has the expected object pronoun gene-
rrally used for the subjects of predicate nominals (fn. 15) plus a pre-
dicate noun marked with the object/personal noun prefix n7-a. It seems
very likely that the "irregular verb paradigms" cited in (11) are Mesa
Grande Diegueño remnants of the same sort of thing.

17. The subjects of Yuman relative clauses, whether heads or not, are normally not marked with the subject case suffix (I believe this observation is originally due to Corbett (1973 and elsewhere)). This follows a general principle by which the subjects of many nominalized sentences are not subject-marked, among them (I have argued) the subjects of predicate nominal sentences (Munro 1977a). This fact might connect up somehow with the issue at hand, but I'm not sure.

18. Instead, in many relative clauses in many languages (among them Mojave; cf. Munro 1976, chapter 3), the verb is marked with one or more nominalizing morphemes. These are generally optional, and are omitted here for clarity.

19. There is another kind of relative clause with a third-person subject, of course--this example parallels (15a-b): k'alo-yaw tapuy (chicken kill) 'the chicken he killed'. Here, a verb marked with $\emptyset$ shows that (a) the subject of the relative clause is third-person, and (b) the head of the relative clause is not the subject.

20. Impressive logical arguments could be brought to support this idea (I won't try to do them justice here, but cf., as one example, Bach 1968), since non-proper nouns have frequently been analyzed as elliptical predications (The one that is a cat is on the thing that is a mat, and so on).

21. One might offer (8c), where the verb is 'be named', as a weak counterexample, but I don't believe that anyone could seriously formulate an argument that Brown is an object in this sentence. This is, however, the most transitive example of a personal relative that I can find.

22. Stephen Anderson has praised my restraint in passing up the opportunity to breathe the word "ergative" here. I don't know that it would help.

23. What this reminds me of is another strange pronoun-noun order problem in Yuman. In most Yuman languages, demonstratives follow the noun (e.g. Mojave ?i:pa hovan' (man that) 'that man'). In the Pai subgroup, however, independent demonstratives precede the noun (e.g. Tolkapaya vy a khar'-va (this dog-dem) 'this dog'--cf. Glover 1977). I am not aware of any convincing explanation for either this or the Maricopa problem. (Non-Yumanists may need a reminder here that there can be no very direct connection, since Maricopa is not Pai, and in Maricopa, therefore, independent demonstratives follow nouns.)
The Origin of Possession Markers in Yuman

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In a number of inflected languages of the world, affixes marking person on verb forms tend to have formal similarities with affixes marking possession on nouns. Implicit in this observation must be the assumption that these resemblances are not accidental, but are somehow motivated by more than vague semantic congruence. In addition, these markers often show similarities to independent personal pronouns as well. It is the intent of this paper to explicate this relationship in Yuman languages.

The relationship between independent pronouns and object–subject markers in Yuman has been demonstrated by Langdon and Hinton (1976) and will not be repeated here. Suffice it to say that verbal markers of person are the result of successive waves of pronoun incorporation deriving naturally from both the SOV nature of Yuman languages and general accentual conditions.

Various hypotheses could be entertained about the nature of the relationship between nominal possessive markers and verbal object–subject prefixes. They could be postulated to be derived one from the other in either direction, or a more remote relationship could be postulated such as analogical formation, or a combination of these. The direction to be assumed for Yuman points most clearly to the verbal function as primary, if for no other reason than the fact that the most productive aspect of Yuman structure centers unambiguously around verbs, that nominals can be derived freely from verbs, and that verbals can derive from nouns only under very rigidly prescribed conditions. This hypothesis does not deny the possible role of alternative trends, but simply states the verbal origin to be the most likely, and, as will be demonstrated below, the most general.

While the object–subject prefixes on verbs have been reconstructed in detail for Proto-Yuman (Langdon and Hinton 1976), the possessive prefixes on nouns, while well-known for each of the languages, have not been explicitly reconstructed. The reason seems to be that there are competing strategies for marking possession in various Yuman languages, the major differences residing in competition between simple prefixation and periphrastic, more complex, syntactic constructions. A treatment of the latter is beyond the scope of this paper. However, there is enough evidence from all branches of the family to allow the reconstruction of the following possessive prefixes for Proto-Yuman: *?– 'my', *m– 'your', *φ– 'his, her, its' (with no distinction of number), which are formally identical to the pronominal prefixes meaning 'first person subject/third person object', 'second person subject/third person object', and 'third person subject/third person object' respectively. These are the basic possession markers for inalienably possessed nouns. Other nouns are marked for possession
by inserting between these same prefixes and the stem an element *-n̂*. If such a system is reconstructed for Proto-Yuman, it can be assumed that the relationship between the possessive prefixes and the verbal pronominal markers has its source in pre-Proto-Yuman times, although the argumentation used in this paper makes use wherever possible of synchronically attested information of individual languages.

**Kinship terms**

The clearest evidence for the verbal origin of possessed forms is found in kinship terms, whose verbal nature is synchronically obvious in a number of languages, somewhat less transparent in others.

The analysis of kinterms as verbs is due, as so much else in Yuman structure, to the work of Abraham Halpern, whose "Yuma Kinship Terms" (Halpern 1942) is the source of major insights into the functioning of this section of the lexicon in Yuma. For our purposes, the basic notion to be emphasized in that by far the largest number of kinterms of Yuma are based on verb themes. The syntax of the particular sentence in which they are used then determines whether their surface function is a verbal or a nominal one. A particularly pleasing corollary of this analysis is that it explains in a natural way why kinterms have elaborate plural forms, a category typically absent from most nouns. The productivity of the processes involved may be illustrated with various forms of the theme 'to call someone younger brother':

**Nominal**

Yu: ašúc 'younger brother'  
ʔ-ašúc 'my younger brother'  
m-ašúc 'your younger brother'  
Ø-ašúc 'his younger brother'  
acšúc 'younger brothers'  
ašùcc 'their younger brothers'

**Verbal**

'whom one calls younger brother'  
'I call him younger brother'  
'you call him younger brother'  
'he calls him younger brother'  
'to call each one of them younger brother' (distributive object)

'a younger brother'  
'they call him younger brother' (collective plural)  
'to have a younger brother'

In their function as possessed nominals, these forms act as true nouns, taking the typical demonstrative and case endings, and their use is completely straightforward. Their verbal function may be illustrated in the following sentences (from Halpern 1942:428):

Yu:  
(1) makỴ-e-c nỴ-ašúc-ma-k (anyone-subject he/me-call=younger=brother-privative-tense) 'Nobody calls me younger brother (i.e. I don't have an older brother)'

(2) makỴ-enỴ nỴ-ašúc-ma-c nY-aʔ-ašú-v a (anyone=absolutive he/me-call=younger=brother-privative-subject when-I-be-perhaps) 'I am nobody's younger brother'
These sentences show clearly that, not only is the kinterm a verb, it is a transitive verb, where the type of kin relationship is denoted by the stem, the subject is the possessor, and the object the possessed. Therefore, the notion 'my younger brother' is more exactly 'I call him younger brother, I have him as a younger brother' rather than, as might be supposed from the evidence of languages like English 'he is my younger brother, he is a younger brother to me'. In Yuma therefore (and, by extension in other Yuman languages since they pattern similarly), the focus is on the possessor's active identification of his relationship to his kinsman, which elegantly reflects the cultural fact that each kinship relationship demands from the individual certain obligations towards the kinsman. The emphasis is clearly on duty toward the other rather than on the possessor's position as recipient of the rewards implicit in the relationship.

The analysis of kinterms as verbs also affords an explanation for the internal structure of the fully specified possessive phrase where the possessor is expressed by an independent nominal as well. Thus, the phrase meaning 'the man's younger brother' would take the form literally translatable as "possessor noun(unmarked for case) + possessed form of kinterm", i.e. 'man his-younger-brother'. This can be construed as derived from a genuine predication of the form "man-subject case + inflected verb form with 3rd person subject and 3rd person object", i.e. 'the man calls him younger brother'. This predication is nominalized and marked for its appropriate case function in the matrix sentence in which it occurs. There are, however, a number of nominalizing processes in Yuman, and it is important to specify which one is involved here. Without going into the full demonstration which would take us too far afield, it should be pointed out that the only process of nominalization which is semantically appropriate to account for the meaning of the possessive construction is a headless relative clause, so that 'the man's younger brother' really means '(he whom)the man calls younger brother'. As is normal in this construction, the underlying subject (man) is no longer marked for subject, and the noun phrase as a whole is marked for its syntactic function in the matrix clause by the appropriate case ending suffixed to its last word. This analysis helps clarify the structure of sentence (2) above, where mak'yen'na'sumac is the relativisation of sentence (1), mak'yen' being the non-subject form of the indefinite pronoun. The subject marker on the last word of (2), while strange at first since the verb adu 'be' is marked first person, is nevertheless appropriate when this sentence is identified as a predicate nominal construction, requiring just such morphology (for a full discussion of predicate nominals in Yuman, see Munro 1976). An exactly parallel sentence is attested in Diegueño:

(3) Di 'i'spa'n'ya-xu'may-c-yi-s (eagle he/me-calls=son-subject-he-emphatic) 'I am the eagle's son' [from underlying 'i'spa'-c n'ya-xu'may (eagle-subject he/me-calls=son) 'The eagle calls me son'.

With the verbal analysis of kinterms demonstrated for Yuma, it can now be shown that they have verbal forms in other Yuman languages as well, although the extent of the evidence suggests that not all possible forms are
productively used.

Mo: ʔinʾep -vuci-c (me 1-daughter-subject) 'I have a daughter.'
Ya: ʔnʔa -hwakva-c (me 1-brother-subject) 'my brother (subject)'
     -c-hwakva (1-plural=object-brother) 'my brothers' 4
Ki: nki: 'elder sister'
     nʔap nkʰu: 'my elder sister'
     h-nkʰu: 'she is elder sister to her'
Co: nʔʔa:  'my father (woman speaking)'
     pnʔuʔay  'she calls him father, he is her father'
     [p- is the marker of third person object, the infixed -u- is
      third person subject. Crawford (1966) identifies -y as a
      derivative suffix. While there is good evidence for such
      a suffix in Yuman, this particular form is also interpreta-
      ble as deriving from underlying nʔʔa:y since there is a rule
      in Cocopa deleting y and w after long vowels finally. The
      etymological presence of y in the noun is supported by cogna-
      tives in Mo and Ma which both have nʔay]
     knʔwi:  'my father's older brother'
     knʔwis  'my father's older brothers'
Di: nʔma:w  'father's mother'
     -nʔma:w  'my father's mother'
     m-nʔma:w  'your father's mother'
     pa-nʔma:w  'his father's mother'
     [The possessive prefix pa- indicating third person possession
      uniquely on kinterms, is unexplained synchronically in Die-
      gueño, but its source is clear when compared with Cocopa,
      where it is a productive part of verb paradigms to indicate
      third person object. It is thus a trace of the verbal nature
      of kinterms in Diegueño, though the verbal forms of 'father's
      mother' are not found in the language.]

Body parts

The demonstration that body parts can be analyzed as verbs (so that
their possessed forms may be accounted for in the same manner as kinship
terms) is not as straightforward and requires more circumstantial evi-
dence. In order for the argument to become clear, it is necessary to
bring in some general morphological information.

There is abundant evidence for the reconstruction of a Proto-Yuman
prefix *1- 'body part marker on nouns'. In some languages, e.g. Yuma,
most body-part terms do in fact have this prefix. In other languages,
however, only some body-part nouns show the prefix, but there is suffi-
cient evidence in all branches of the family to justify the reconstruc-
tion. The synchronic facts can be accounted for by a process of reduc-
tion which in many cases does not favor the retention of full vowels
in unstressed position. Examples of body-part terms with the prefix throughout the family are:

Yu:  
*to 'stomach'
*dó 'eye'

Mo:  
ime 'leg'
*sálv 'hand, arm'

Di:  
*cix 'heart, chest'
*wi 'shoulder'

Co:  
*xú 'my nose'
*šálv 'my hand, arm'

Pa:  
*ičer 'my chest'
*puk 'neck'

Ya:  
hiwil 'hip'
iwáya 'heart'

Wa:  
wa'y 'heart'
*póal 'tongue'

Ha:  
wiwáya 'heart'
*pála 'tongue'

It is now possible to raise the question of whether this is simply a totally isolated prefix or whether it can be related to other aspects of the structure of Yuman languages. Abraham Halpern (personal communication) has suggested a possible relation in Yuma of the body-part prefix *i- to a homophonous verbal prefix which typically (but not necessarily) cooccurs with a suffix *v to derive verbs from other verbs to mean 'to be worthy or capable of doing V, having V done to one' (Halpern 1947:27). This, in turn, contrasts with another process for deriving verbs from verbs by a prefix *u- also cooccurring with *v to mean 'to be one who does V, to have been doing V' (Halpern 1947:26). The common presence of *v accounts for the essentially medio-passive sense of these forms, and the remaining contrast between *u- verbs and *i-verbs is that the former focus on some activity directed to an object distinct from the subject, whereas the latter reflect attributes of the subject which are inherent, spontaneous, or self-induced. Although I am not positive of this, I believe that neither verb type allows overt objects because of the medio-passive component. Halpern's examples will illustrate these derivations.

Yu:  
*ušucv 'to have a younger brother' (from ašúc 'to call someone younger brother')
ku*nácv 'to be one who orders' (from kanác 'to order, summon')
a'cqi'dá'v 'to be slippery' (from a'cqá'y 'to slip')
wá-ñi'mí'lv 'to be a nuisance' (from nám'il 'to coax, urge')
maši'dé'v 'to be fierce, dangerous' (from mašádá 'to fear')
xi'nu'civ 'to be contagious' (from a'xnó 'to become infected')
ki'náp 'to be famous' (from kánáv 'to tell, relate')

There are also other verbs in Yuma which contain the prefix i-, and do not require the suffix -v. They also clearly belong to the class of verbs that focus on inherent, spontaneous, or self-induced states of their subjects. Thus:

Yu:  
nák'í'múy 'to be rich'
ní'na'm 'to be important'
mi'mar 'to be alone'
ní'xú't 'to make a confused noise'
i'má 'to dance'
tí'ná'm 'to be dark'
ní'ká'm 'to defeat'
k'as?i'dé 'to be a doctor'
i'sán 'to be pretty'
xí'púk 'to be first'
i'pá 'to be a man'
xí'pán 'to be near'

The semantic link between the category of body-part nouns and verbs containing the prefix i- should now be fairly obvious: it consists of the inherent (=inalienable for body parts) notion. They are both somehow self-centered.

The i- verbal prefix is attested in other Yuman languages as well, in semantic areas completely compatible with that described for Yuma. Thus:

Mo:  
i'doév 'to be sharp, have a sharp edge'
i'ma 'to dance'
i'we* 'do oneself, have one's own'
i'we*v 'pay attention to'

[The situation is complicated in Mojave by the fact that so many verbs begin in short i-, some of which, though certainly not all, may be related to the set in question. I have refrained from trying to sort them out. It is also possible that most of the Mojave examples (except 'dance') are ultimately derived from body parts.]

Di:  
i'ca 'to think'
i'xaì'yp 'to be in a hurry'
i'ya'wòp 'to be lost'
i'wałp 'to be clearly visible'
?omí'piłp 'to be dusty' (from ?ompíl 'ashes')
?omí'wáñ 'to be lazy'
i'xaš 'to be greedy' (from ?oxát 'dog, domestic animal')
i'ku 'to be big'
i'paq 'to be alive'
somiray'  'to be simple-minded' (cf. samray 'to be drunk')
xi'lay  'to be limp'
maykayaw  'to forget'
shi'yukp  'to be proud'

Co: Crawford (1966:112) defines the prefix i- as follows: "...denotes the subject of the verb as assuming the attributes of, or performing the action indicated by, the verb stem." Examples:

i'xay  'I get wet, it is soupy' (from xay 'be wet')
ški'mirq  'become slick, slippery' (from škimirq 'be slick, slippery')
mši'ya'yp  'it's frightening' (from mšyayp 'it is dangerous')
mi'xa'n  'it is good, pleasant' (from mxan 'to look at')
i'pax  'to rise, from the dead'
sri'wi'  'to compare, contrast'
xi'puk  'to be first'
i'x'a  'to be an enemy' (from x'a 'enemy')
ci'xay  'to be windy' (from cx'a 'wind')

Pa
i'kís  'to grab'
i'xan  'to saddle up'
i'ma  'to dance'
i'ko  'to have (someone) along'

Wa
yipar  'to learn'
yima  'to dance'
yapa'k  'to be dark'
yapal  'to be greedy'

Ki
hi'pat  'to project, draw out'
hi'híw  'to fly'

One interesting aspect of the above list is the fact that the i- prefix apparently can derive verbs from either verbs or nouns. While most body parts are not further analyzable after removal of the body part prefix, some suggest a derivation somewhat parallel to that of the verbs above. Thus *i-tu 'belly' can be related to a stem *tu meaning 'center', so that 'belly' can be interpreted as 'that which one has as one's center', and *i-xu 'nose' may be compared to a stem *xu 'hole, orifice', and 'nose', is 'that which one has as an orifice'. A fully specified possessed body-part phrase such as Yu i'pa: i'xu: 'the man's nose' can be interpreted in exactly parallel fashion to the kinship terms, i.e. 'that which the man has as an orifice', even though it is clear that the body parts have become reanalyzed as nouns a long time ago. Many body parts can, in fact, be reconstructed for Proto-Yuman, complete with the 'body part' prefix i-. There is also good evidence (Oswalt 1977) for a Proto-Hokan prefix **i associated with body parts. Whether the verbal prefix *i- of Yuman is attested in other Hokan languages as well is a question which needs investigation.
There is also within Yuman some evidence for relating the prefix *i* in 'soul, heart, breath, self', suggesting that the *i* prefix is a reduced form of this word. Independently motivated rules within the history of Yuman, and particular in Yuma (see Langdon 1976) would produce just this result. The prefix *i* could then be seen to represent an instance of the well-attested process of noun-incorporation, which in Yuman is specifically restricted to demonstratives, and some basic body parts.

A full demonstration of this hypothesis is well beyond the scope of this paper. Suffice it to point to alternations such as Di *iwi* ~ *iwi* and to the fact that in Havasupai, the normal Yuman reflexive *mat* (incidentally related to the word for body *i*mat) is replaced by an element *ya* (ye-v-m). In addition, there is evidence for a more recent instance of just the process of noun incorporation suggested above with the element *ya* in Diegueño verbs of emotion such as

\[
\text{\text{eyay} } ?\text{axan} \quad \text{'to be glad' (lit. 'his heart is good')} \\
\text{\text{eyay} } \text{wa\l\l c} \quad \text{'to be sad' (lit. 'his heart is bad')}
\]

which in some dialects become single words inflected like all other verbs.

**Alienably Possessed Nouns**

As noted above, nouns which are neither kintems nor body parts mark possession with the same prefixes followed by an element *n*-. If the base noun normally has the nominal prefix *a*, this prefix is lost in the possessed form. Thus

| Yu   | ?axat  | 'horse'   | n'axat | 'his horse' |
| Mo   | ?utis  | 'gun, bow' | n'utis | 'my gun'   |
| Di   | ?awaxa | 'knife'   | n'awaxa | 'my knife' |
| Co   | apa n'yawa | 'water' | n'yawa | 'your house' |
| Pa   | n'yamat | 'house'   | n'yamat | 'his homeland' |
| Ya   | n'ywa  | 'husband' | n'ywa  | 'your house' |
| Ha   | pa n'iwao | 'the man's wife' | pa n'iwa | 'the man's wife' |

note: All words are from different Yuman languages, with the exception of *iwi* which is a learner's pronunciation of *iwi*.

References:


The above examples are from various Yuman languages: Yu (Yuman), Mo (Mohave), Di (Diegueño), Co (Cahuilla), Pa (Pima), Ya (Yavapai), Ha (Havasupai)
It should come as no surprise at this point to find out that there is also a verbal derivative prefix ny- to which it is not always possible to give very precise semantic content but which, in Yuma at least, has been identified by Halpern (1946:212) as occurring in conjunction with the suffix -v to form verbal derivatives with the meaning 'to be possessed of' thus providing overtly the needed semantic link with the possessed noun. Thus

Yu  
ku·pet  'quiver'  n'aku·petv  'to be equipped with a quiver'
?uti·s  'bow'  n'uti·šv  'to be equipped with a bow'
xum·ar  'to be young'  n'axu·marv  'to have a child'

In addition, the prefix enters into the formation of the most common verb of possession which allows periphrastic constructions to indicate possession in competition with the formations discussed in this paper.

Yu  
n'yu·wic  'to own'
Mo  n'yu·?wic  'possession, belonging'
Di  n'wic  'to have'
Ki  n'y?i·  'to have'

The cognates in the Pai subgroup all lack the ny- prefix.

I therefore suggest that possessed nouns which are neither body parts nor kinterms are essentially verbs derived from the base nouns by the verbal prefix ny- 'to be possessed of', an analysis which is supported by the actual occurrence of at least some instances of these forms as overt verbs. Thus, in Diegueno, it is clear that there is a verb n'axat 'to have a pet', derived from ?oxat 'dog, domestic four-legged animal, pet', as shown in the sentence

Di  ṭoxat ṭon'oxatš  'I have a pet dog.'

where the suffix -š identifies the word it is attached to as the verb.

Conclusion.

There are many aspects of possession in Yuman languages that have not been treated in this paper and which require detailed comparative attention. The possession markers I have dealt with here are clearly the most archaic layer of the syntax of possession in Yuman. I hope to have shown that there is evidence for identifying forms which have typologically been called possessed nouns as underlying verb forms inflected for subject (and object in the case of kinterms) in such a way that the possessor is the subject. This accounts elegantly for the formal identity of markers of possession and markers of subject pronominal reference.
Footnotes

1 A first version of this paper was presented at the Hokan-Yuman workshop held in San Diego in June 1976. The research on which this paper is based was supported by NSF grant SOC 74-18043.


3 For a detailed discussion, see Halpern (1942:428).

4 Martha Kendall, personal communication.

5 Note that the position of the prefixes u- and i- is immediately preceding the stressed root, i.e., in the first prefix position.

6 Halpern (1946:212) actually identifies n'y- in these verbs as the third person possessive marker of nouns. While I agree with the identity of the two elements, I consider the verbal function as primary.
NOMINALIZATION IN COCOPA

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Nominalization processes in Cocopa do not differ greatly from those described by Gorbet (1976: 134-156) for Diegueño and by Munro (1976: 187-268) for Mohave. Like Diegueño and Mohave, Cocopa employs two techniques for marking a nominalized clause: (1) prefixation of kw- to a verb when the "head" is the subject of the verb and (2) absence of kw- when the "head" bears some relation to the verb within the nominalization other than that of subject. In both techniques the verb is frequently modified by processes resembling those which form plurals. Also, in both techniques the fact of nominalization is marked, like any noun, by affixation of the appropriate case suffix to the verb which terminates the clause. The formal presence of a head is not required in either type of nominalization. Unlike Diegueño and Mohave, Cocopa employs a third technique: the prefixation of ?a-.

1. In many of its occurrences in Cocopa, kw- can be treated merely as a noun-deriving prefix, one which can form a noun from any verb and which denotes that the subject of the verb performs the action or has the qualities expressed by the verb. ?a- also derives nouns from verbs, but is less productive than kw-. kw- has definite reference and can generally be translated as "the one who; the thing which". ?a- has indefinite reference and can generally be translated as "someone who; something which". With some verbs kw- and, more frequently, ?a- refer, not to the subject of the verb, but to its object, or even to the action of the verb itself. ?a- has a fixed prefixal position, which is before the consonant that precedes the vowel of the root syllable. The position of kw- is less rigid, but generally precedes all elements except the pronoun prefixes and p(a)- "here, this" and s(a)- "there, that". Quite frequently the phoneme /a/, which probably cannot be equated with ?a-, is employed along with kw-. The following illustrate the derivative function of kw-, both with and without /a/.

(1) kw-?a-más "the one who is sleeping" (šmas distributive plural of šma "sleep")

(2) š-c-kw-?a-má·p "the ones who are sleeping" (šcma·p collective plural of šma "sleep")

(3) kw-1y-a-cáš "the little one" (1ycaš "be little")
(4) $k^w$-m-a-xánx "the one(s) who will watch" (mxan "watch"; -x "future")

(5) $k^w$-r?ak "old man" (r?ak "be an old man")

(6) $k^w$-rar "the one who is working" (rar "work")

(7) $k^w$-a-más "the one who is eating" (mas distributive plural of ma "eat")

(8) $k^w$-yaw "those (things) which are located (somewhere)" (yaw plural of ya. "be located")

The following illustrate the derivative function of $\?a$-.

(9) $\?a$-pá-y "pillow" (pá-y plural of pay "lie on a pillow")

(10) $\?a$-rí-k "someone who is rich" (rí-k "be rich")

(11) s-a-yáw "song" (syáw distributive plural of sya. "sing")

(12) $\?a$-mán "airplane" (man "fly")

(13) $\?a$-šít "someone who is alone" (šít "be one [numeral])

(14) x-a-tú-p "someone who jumps" (tu-p distributive plural of xúp "jump")

(15) ný-w-a-?á:l "one's clothes" (nú?á:l "have clothes, put on clothes")

(16) w-a-x$^w$-a's "quirt" (-u-x$^w$-a's distributive plural of -u-x$^w$ "whip")

2. It is not adequate in all their occurrences to treat $k^w$- and $\?a$- as simply prefixes which make nouns out of verbs. It can be seen in the following that more elements have been nominalized than just the verbs to which the prefixes are attached.

(17) pan $k^w$-pa-p "baker" (pan "bread", pa-p "bake")

(18) ku.c p-k$^w$-ný-a-xá:$t$ "the one who keeps pigs as pets" (ku.c "pig", p- "3rd. obj.", nýxa:$t$ "keep as pets" [from ný-xá: "pet"; ný- "anim. poss.", xa:$t$ "dog"]

(19) nýawi. ?a-má:s "food" (nýawi. "thing", má:s plural of ma "eat"; lit., "things which one eats")

The nouns pan, ku.c, and nýawi. are objects of the verbs which follow them and belong to the nominalizations, respectively, of

(20) pan $\?u$-pa-p "he bakes bread" ($\?u- "3rd. subj.)

(21) ku.c p-ný-u-xá:$t$ "he keeps pigs as pets"
(22) n'awí. ?u-má "he is eating"

(20), (21), and (22) are complete sentences and (17), (18), and (19) are their nominalizations. However, pan, ku·c, and n'awí in (17), (18), and (19) are treated as objects on semantic grounds only. Grammatically, they are ambiguous. A noun before the verb of a nominalized sentence may be the subject of the verb, as in

(23) capáy p-kʷ-n'-a-xá't "the man who keeps pets" (capay "man")

which should be compared with (18). (23) is a nominalization of

(24) capáy-c p-n'-u-xá't "the man keeps pets" (-c "subj.")

The translation of (23) as "the one who keeps men as pets" is grammatically, but not semantically, acceptable. The possibility for ambiguity arises because the subject case suffix is never affixed to the noun which is the subject of a sentence nominalized by kʷ- or ?a- and because the object case suffix for nouns is zero. Such ambiguities probably cause little trouble for speakers. The contexts seem to resolve them without difficulty. The other case suffixes to nouns within the nominalization are retained, as illustrated by -'y in

(25) capáy sam-t-?y kʷ-a-mán "the people who start out in Somerton" (samt "Somerton", -?y "in", man "start out")

Ordinarily it is the last verb only in the clause which affixes kʷ-. All verbs occasionally affix kʷ-, as in

(26) k'ux:n kʷ-x-a-cál kʷ-a-yú-m kt-u-?á-c wa-...-yá-c...
boy the one who the one who how does he he is around is pitiful is

How did that pitiful boy...

(27) ma:k kʷ-wayáw kʷ-l'-a-cáš kʷ-?ás-pí-c
behind the one who the one who the one that is around is little he said
ša-...-yí'-c-a
she comes there

The little one in the rear that he spoke of was coming along there.

(28) kʷ-a-pák kʷ-a-rár kʷ-wa·c ·?u-xáp-m-xán'c-a
those who those who those who they really entered arrive work swarm

The swarming workers who were arriving really came in.

When several verbs affix kʷ-, it is the last one only which takes a case suffix, as in (27) and (28) where -c "subj." is affixed. In (26) -m, suffixed to k'wayú, is not the case suffix -m "away from a point of
The nominalization $k^w_xa^xal$ $k^w_awaym$ is the subject of a sequence of verbs beginning with $k^u^nac$, but the speaker arbitrarily chose to omit the subject suffix $-c$.

The head of a $k^w-$ nominalization is usually third person. If the head is second person, m- "2nd. pers." is not replaced, but immediately precedes $k^w$.

(29) $n^y-sxa^y$ $m-wat-iy$ $iy^y$-$m-k^w-s-was$ ...
girl you stay you who sit in it at home

You, the girl who always stays at home, ....

(30) $m-k^w-a$x-xiy $"each of you"$ ($xi-y$ distributive plural of $xi^n$ "be one")

$k^w-$ apparently is not used when the head is first person. Attempts to obtain it by elicitation were unsuccessful. (31) is the reply to (29), both of which are from texts. $n^y-$ seems to replace $k^w-$ for a first person head.

(31) $n^y-a-x$ waw-iy $iy^y$-$n^y-a-$-wá $pa-wá-s$ ...
I stay I who (?) sit I sit here, but at home in it

I do stay at home, but....

However, I am not certain that (31) is a nominalization.

$k^w-$ may be employed along with -x "future", as in

(32) $k^w-m-a-xan-x-pi-c$ $\?u-pá-k-c-a$
those who will watch they arrived

Those who are going to watch it have arrived.

Indeed, the only affix which cannot be employed simultaneously with $k^w-$ is, as far as I can determine, $\?u-$ "3rd. subj."

A nominalization, like any noun, which is in apposition with a following noun, or pronoun, does not take a case suffix. It is the following noun, or pronoun, which takes the suffix, as illustrated by $-y$ "at" affixed to $n^y-sa$- in

(33) $wi$ $k^w-yak$ $n^y-sa-y$ $n^y-u-wá$ $sa-$-wá-c ...
mountain which lies there he lived he sat there

At a mountain which lies there where he lived....

When affixed to $\?i$ "say", $k^w-$ may refer to the subject of the verb, as in

(34) $\?apá$ $k^w-$-s-pi-c $n^y$-way $pi^n$ man he who said his heart it is blocked

The man who said it is crazy.
More frequently the nominalization kʷas refers, not to the subject, but to the object, i.e., to what was said. A further peculiarity is the employment of the suppletive third person form of the verb, ʔa, rather than the stem, ʔi. The clause immediately preceding kʷas seems always to be in apposition with it.

(35) sʔa-r kʷ-ʔás-c-a
be dry what he said

It was dry like he said.

(36) nʔpá-pi-c ma kʷ-ʔas pu-wá-c yu-s
the wheat get ripe as he said it sits there it is

The wheat got ripe like he said.

(37) ʔu-rár kʷ-ʔas-m pa-yá.
he works as was said it happens now

So he's going to work like they said he would.

(38) wa kʷ-ʔas pa-wá
he sits as was said he sits here

So he's here, the one they said.

(39) kmiʔa-ká-p-ši-nʔ šu-ʔmán kʷ-ʔas-c ʔu-ʔá ʔa-c
that suitcase he opened like he said he did they said

They said he opened the suitcase like he said for him to do.

It is interesting that kʷas can be treated as a verb as well as a noun, i.e., by affixation of the verb suffixes -m "switch-referent", as in (39), and -c "present-past coordinating", as in (35) and (39). kʷas is also the nominalization of ʔaʔ "do", as in (40), which is to be compared with (44).

(40) nʔawí. kʷ-ʔas-pi-nʔ ʔu-ʔá-nʔ-x ʔa-c
thing what she does he will do too he says

Whatever she does, he wants to do too.

The nominalization kʷís, also from ʔi "say", is used in contexts very similar to those with kʷas. kʷís occurs only rarely in texts and was difficult to elicit. The number of examples recorded are not sufficient to determine its function and meaning. The following were volunteered by speakers as examples of kʷís.

(41) kʷ-ʔís-c yu-m ʔa-c
what he said it is she said

What he said, she said.
(42) miriká’n capáy ʔu-yús wa:m ʔis-pi-n’y
white man Indian he is in the what he said
beginning
1-awá’-m 1a.x
he does not know not

The white man doesn’t know what the Indians used to do.

(43) xy-u-púk kʷ-ʔis-pi-n’y sm-u-lá’yp
he is first what he said they were unable to do

They couldn’t do what the first one said.

(44) ʔáwí. kʷ-ʔis-pi-n’y ?a-n’y-x pa--wá-c
thing what she says he will say too he sits here
ʔá-n’y pa
he really says

Whatever she says, he wants to say too.

2. Nominalizations by means of the second technique, the absence
of kʷ-, are identifiable as nominalizations by the affixation of the
appropriate case suffix and/or by the modification of the verb stem by
a pluralizing process, usually that which forms the distributive plural
of the verb.11 A plural notion is not appropriate in all instances and
therefore a pluralizing process is not always employed. In such in-
stances the case suffix is critical for identification. Most nominali-
zations formed by this technique take, in addition to the case suffix
and preceding it, the reduced form of either pi-- "this" or ʔu-- "that".
The reduced forms of these pronouns consist of the consonants only. A
predictable transition vowel (/i/ before palatals, /a/ before other
consonants) is inserted between the reduced forms and any consonantal
case suffix. The case suffixes for pronouns are the same as those for
nouns, with the exception that the object is marked by -n’y, not by zero
as for nouns. Thus, the forms -pi’n’ and -si’n’ identify a nominalization
as being in the object case. If the nominalization can be recognized
as such by the plural stem, -pi’n’ and -si’n’ are often omitted and the
case of the nominalization is identified as object by the zero noun suf-
fix. The employment of a plural stem or a formal marker for the object
case is not a requirement. Also speakers frequently omit the subject
case suffix after consonants when there is no possibility for ambiguity.
Hence, it might be expected that nominalizations would occasionally be
produced in which the nominalizations lack any formal criteria for
identification. Such nominalizations do occur, but are rare. Except
for intonation, nominalizations of this sort are not distinguishable
from two juxtaposed predications. An illustration of a nominalization
without employment of a plural stem or a case suffix is

(45) u-yi’-x xcaq yu-m 12
you will come it is bad it is

Your coming will be bad.
This second type of nominalization is employed, as stated above, only when the head is not the subject of a verb within the nominalization. The head may bear any other sort of relation to the verb, or verbs, as denoted by the appropriate case suffix, or the action or condition expressed by the verb may itself be the head. In the following the objects of the verbs are heads.

(46) mat n^m-i-m-wayá:-c m-wayáw-pi-n^m m-śi-s-m y-u-?í:p
land you are around you are around you name he listens
in them

You name the lands you have visited and he will listen.

(47) prxa-w pi-?í p-m-cáp-pi-c xťpa-c ?u-yú-c pa-ː-wá-mpa
fox in this you put him coyote he is he really sits

The fox you put in here has really turned into a coyote.

(48) n^a:-c xmʔuk pkáy-pi-n^m syałk-x-ʔ...
I ashes I carry I will dump but

I will dump the ashes I am carrying, but....

(49) n^a-ʔ n^awí. ?u-yáw-pi-n^m m-aʔí-k m-ra-r-x-m
me, my thing I know you do you will work
pu-yá:-c yu-ʔ
it happens then it is

You will carry out the work that I know.

(50) n^awí: yu. pxʷay ?inʔa:m pa-wá-c yu-ʔ
thing I am it is good it is it sits it is
(designing) very much here

What I am doing is very good.

Sometimes the object as head is covert, as in

(51) kʷarkʷár ?as śwan yu-m
talk he says not nice it is

What he says is not nice.

(52) s-x-u-ťúš-si-n^m x^m-n-u-mák-m sá-wá-c ?i-c-a
she spit she left it in it sits there it says

The spit she left in it said it.

Heads which are the notions expressed upon affixation of the other case suffixes may be overt, as are xalʔ and makáy in
(53) xa-{\textsuperscript{y}} p-ca---núp-\textsuperscript{y} p-\textsuperscript{y}k-u-xáp-m ...
   in water they wash him in they put him in

   When they put him in the water they wash him in,....

(54) maká-y n'\textsuperscript{y} u-wá-y l-u'yá-\textsuperscript{m-\$} ...
   at where he lives I don't know but

   I don't know where he lives, but....

On the other hand, they are often covert, as in

(55) ?u-yíw-x-\textsuperscript{y} p-u-ká\textsuperscript{t}
   she will come he took a shortcut

   He took a shortcut to where she was coming.

(56) capá-y swam-\textsuperscript{y} p-ca-\textsuperscript{t}-káp
   people they are he mixed
       all in them up

   He got all the people into a group.

(57) spap-\textsuperscript{y} ?u-wá-c-a
   be in four she sits

   She is in the fourth grade.

(58) n'\textsuperscript{y}iy-u-pá-t-\textsuperscript{s}-i p-m-kmi-\textsuperscript{k} ...
   he lies there you bring him

   You bring him to his bed (the place where he lies)....

(59) n'\textsuperscript{y}i.-p-a-\textsuperscript{t}-xír-p-i p-a-\textsuperscript{t}-xír
   they tie him there they tie him

   They tied him at the place where they tie him.

(60) n'\textsuperscript{y}i.-ku-\textsuperscript{t}-yúm-\textsuperscript{a}-m n'\textsuperscript{y}m-u-xáp-m pá-\textsuperscript{t}-n'\textsuperscript{c}-a
   she went that way she passed by he went along too

   He went along too, the way she went and where she passed by.

In (60) the first word is the nominalization and the case suffix is -m "away from a point of reference". The second word in (60) is parenthetical or perhaps in apposition with the first. -m suffixed to the second word is not the case suffix -m, but -m "switch-referent".

Sometimes the head of a nominalization is the notion expressed by the verb. An example of this is (45). Some other examples are

(61) pa-yí-s-pí-c euwár
   I come it is tiring

   My coming was tiring.
(62) mapíl' y p-m-wás-pi-n' y pwa-y-x-m ?í'-x-a
now you sit here she will I will say
arrive again again

While you are here, she should come again, I'll say.

(63) n'y-a'-c n'y-akúr kí-xú-n-c m-yus ñ'wí'-n'y-c-a
I long ago I was a boy you are I was also like
m-yus ñ'wí'-n'y-c pa-yí'-c
you are I was also like I came here

Long ago I was also a little boy like you, I became like you.

(64) m-mspás-pi-c xcaq pu-yá'-c yú-n'pa
you die be bad it happens then it really is

Your dying will really be bad.

Munro (1976:194) states that the subject of an "oblique relative clause" (a nominalization which does not take k'w-) in Mohave "is not č-marked." This is usually true also in Cocopa. The only exceptions I have recorded are pronouns. In Cocopa the subject of the verb in this type of nominalization ordinarily takes the object case suffix—zero for nouns, -p for the first person pronoun, -n'y for other pronouns. An illustration of this is (49) where n'y-a-p is the subject of ñu-yáw. n'y-a-c in (48) appears to be an exception, but it is not. n'y-a-c is the subject of şyaík, not of pkay. n'y-a-p, I believe, would be acceptable, in which case it would be part of the nominalization and thus the subject of pkay, not of şyaík. n'y-a-c in (65) and şu-c in (66) are exceptions.

(65) n'y-a'-c mač ñu-yáw-pi-c-a vyu·linavaká:w ñ-y-1-u-yák-m
I land I know Vyu·linavaká:w it does not lie in
lá'x-ya
not again

Vyu·linavaká:w is still not among the lands I know.

(66) n'y-akúr ?awyá'-n'y şu-c n'y-ì-y-u-wá-x-pi-n'y-a
a long time he knows too that one she will sit in it

He also knew for a long time that she would be in it.

A noun which is the subject of the verb in a nominalization always takes a zero suffix, as in

(67) pírí: n'y-s'ak k'w-a-šít ?a-n'y n'y-sxa. k'árk'ár
parrot woman the same it said too girl talk

?ás-pi-n'y-a
she said
The female parrot said the same thing that the girl said.

(68)  \[k^w-\text{a-šít } \text{?á-n}^y-c-a \ u^\text{mca}. \ \text{?u-yúš-pi-n}^y \ \text{?á-n}^y-c-a\]

the same he said too lion he is he said too

He said the same thing, he said what the lion said.

(69)  \[\text{mca-wí-t } \text{n}^y-\text{awí. } \text{?u-má-x-pi-c pi-s si-t}\]

adults thing they will eat peso ciento

(Spanish) (Spanish)

\[\text{n}^y-\text{a-yú-c}\]
then it is

So what adults will eat will be one dollar.

3. Constructions with -m "switch-referent" somewhat resemble nominalizations semantically, as can be seen in two examples from a Cocopa text.\(^{14}\)

(70)  \[\text{wi- } k^w-\text{yak } \text{n}^y-\text{ša-y } \text{n}^y-\text{u-wáy } \text{ša- } \text{wá-c ...}\]

mountain which lies there he lived he sat there

At a mountain which lies there where he lived....

(71)  \[\text{wi- } \text{pu- } \text{yák-m } \text{n}^y-\text{ša-y } \text{?u-wá-m } \text{?a-c}\]

mountain it lies there there he sat they say

\[\text{n}^y-\text{ša-y } \text{p-k-u-mí-m-c-a}\]
there they took him

At a mountain where he lived, they say they took him there.

Switch-referent constructions differ grammatically in that their subjects take -c "subj.", in their inability to affix a case suffix, and in their employment of nonplural forms of the verb. -m "switch-referent" in Cocopa is a subordinating suffix. The only function it performs is to denote that the next verb has a different subject. There must be a next verb—this prefix cannot be affixed to the last verb of a sentence.

Switch-referent constructions, at least in Cocopa, cannot be treated as nominalizations as we normally think of them. I say this in spite of the occasional occurrence of sentences like (72) in which the subordination mapúc šm?im is embedded within the main clause.

(72)  \[\text{"n}^y-\text{a-c mapú-c } \text{s-m- } \text{?i-m } 1-\text{u- } \text{yá- } \text{m- } 1-\text{u- } \text{yá- } \text{m- } \text{mapíl-y}\]

I you say there I don't know but now

\[\text{?a-c } \text{pa- } \text{m } \text{p- } \text{a- } \text{?í-x } \text{pu- } \text{yá- } \text{m}\]
I go I arrive I will do to her it happens then he said

"I don't know what you were saying there, but now I'll go and do it to her," he said.
Embedding is not in itself an indication of nominalization. If -m "switch-referent" is to be treated as a nominalizing suffix, then so must -c "present-past coordinating", -k "future coordinating", and several other syntactic suffixes. But a consideration of this matter is beyond the scope of the present paper.

Notes

1. Financial support for field work on Cocopa was provided by the Survey of California Indian Languages (1963-65) and by faculty research grants from Idaho State University (1967) and the University of Georgia (1973).

2. By "head" I mean the semantic notion within the nominalization which has a syntactic relation to some element outside the nominalization.

3. The categories which these processes form might be called more accurately aspectual. I retain the use of the term "plural" since most Yumanists use this term and know what is meant by it.

4. Although I have tried to do so, I cannot justify identifying /a/ as the indefinite prefix ?a-. It is segmentable, but I am not yet able to define its function. For most verbs which employ /a/ along with kW-, its deletion is not permitted. Some verbs do not permit its employment with kW-. For the few verbs which along with kW- can take /a/ as well as omit it, its presence usually denotes animate reference and its absence inanimate reference.

5. The glottal stop of ?a- is present only in word initial position.

6. /u/ becomes /w/ before a vowel.

7. /u-/ becomes /w/ before a vowel. -u-xawi "whip" is a bound stem which requires a pronominal object prefix.

8. The glottal stop of ?u- is present only in word initial position. The position of ?u-, like that of ?a-, is always before the consonant which precedes the vowel of the root syllable.


10. The first person object prefix is nY-. However, I am doubtful that /nY/ here should be analyzed as this prefix.

11. Munro (1975:193) calls nominalizations of this type in Mohave "oblique relative clauses."

12. The nominalization myi-x is the subject of xcaq and could have been marked as such by -c, -pic, or -gic.

13. Yu "be, do" is a transitive verb in Cocopa, with nYawi "thing" its object in this sentence. Lengthening of the vowel of yu signifies continuative aspect.

14. Margaret Langdon once remarked that Diegueño speakers prefer constructions with -m "switch-referent" to nominalizations and avoid the latter if possible. In general, this is also true for Cocopa speakers.
OAXACA CHONTAL NOUN INFLECTION AND CLASSIFICATION

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O. Oaxaca Chontal (OC), also known as Tequistlateco, comprises two closely related languages spoken in the extreme south of the state of Oaxaca, Mexico: Highland Chontal (HC) and Lowland Chontal (LC). Although there is a high percentage of cognates and even some identical forms, differences of grammar are so great that speakers of the two languages communicate only through Spanish.

The OC phonological system has been tentatively described and some cognate sets have been presented. This paper describes grammatical features of noun inflection and classification.

As has been shown, the LC phonological system is more complex than that of HC, but with regard to the grammar LC shows a marked tendency toward regularization and simplification, whereas HC has retained most of the intricacies of the proto system in both nouns and verbs. In spite of this simplifying tendency, LC still preserves the basic outlines of the noun inflectional and classificational system. Only the gender distinctions have been lost.

In describing the OC system, no attempt has been made to reconstruct proto forms. Rather, the system is presented in broad outline. Then the HC system, which closely reflects the proto system, is given in detail with examples, followed by the description and examples of the LC system. For most examples cognate words are used so that reconstruction of proto forms should not be difficult.

1. OC nouns were inflected for SPECIFICATION, POSSESSION, and PLURAL. Specification was shown by definite article (DA) prefixes. Possession was shown by person possessor prefixes (PP) which followed DA prefixes. Pluralization was shown both by DA plural prefixes and by a complex array of pluralizing infixes, suffixes, suprafixed and combinations of these. Only specification and possession are germane to the classification system as here presented. Pluralization for both HC and LC has been described elsewhere, but that of OC remains to be reconstructed, since plural forms differ widely for some words both between HC and LC, and between villages and speakers in the HC area.

Crosscutting phonological criteria of free vs. bound and C-initial vs. V-initial determined the formation of the underlying stems to which DA and PP prefixes were added. Free stems prefixed DA's directly to the stem. Bound stems prefixed a- between the DA and the stem. This a- was prepended to stems beginning with consonants and with vowels i and u but replaced other initial vowels. C-stems, whether free or bound, prefixed PP's directly to the stem. V-stems prefixed a possessive combiner consonant (PPCC) between the PP and the stem in most forms but coalesced the third person singular PP with the stem vowel and deleted the PPCC in most bound V-stems (i.e., those using the PPCC {n-!}).

The criterion of free vs. bound was partly semantic in that many bound stems had basically possessed referents such as kin terms and body parts, but was largely phonological in that all bound stems, regardless of referents, prefixed a- between DA's and the stem in nonpossessed forms. See Table 1.

Along with these phonological criteria, grammatical gender of animate vs. inanimate determined the choice of DA prefix sets. Animate free nonpossessed C-stems occurred with one set of DA prefixes, singular and plu-
### Stem Formation

Table 1

<table>
<thead>
<tr>
<th>FREE</th>
<th>BOUND</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>C-initial</td>
<td>V-initial</td>
<td>C-initial</td>
</tr>
<tr>
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<td>root</td>
<td>root</td>
</tr>
<tr>
<td>possessed</td>
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<td>p + root</td>
</tr>
</tbody>
</table>

### Distribution of DA prefixes in HC

Table 2

<table>
<thead>
<tr>
<th>with C-initial root</th>
<th>with V-initial form</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg</td>
<td>pl</td>
</tr>
<tr>
<td>animate</td>
<td>kal- Set A0</td>
</tr>
<tr>
<td>inanimate</td>
<td>Set ICa el- kal-</td>
</tr>
<tr>
<td></td>
<td>Set ICb el- lan-</td>
</tr>
</tbody>
</table>

### Distribution of DA's in LC

Table 3

<table>
<thead>
<tr>
<th>C-initial root</th>
<th>V-initial form</th>
</tr>
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<tbody>
<tr>
<td>sg pl</td>
<td>sg pl</td>
</tr>
<tr>
<td>el- lan-</td>
<td>l-</td>
</tr>
</tbody>
</table>
ral, and inanimate free nonpossessed C-stems prefixed a different set. Animate V-initial forms, whether possessed forms, free nonpossessed V-stems, or bound nonpossessed C- or V-stems prefixed by a- occurred with a third set and the corresponding inanimate V-initial forms prefixed a fourth set.

The gender classification was partly natural, in that all animate beings were animate gender, but partly arbitrary, in that some inanimate beings were inanimate gender but others were animate gender. Possibly because of this arbitrary character the gender distinctions were lost in LC and now there is variation in gender indication from one village to another in some HC forms as well.

The present day HC system reflects the OC system just presented and is now described.

2.1. In HC the criterion of free vs. bound determines the underlying forms to which DA's are prefixed. Free stems show no stem formation process; they prefix DA's directly to the stem. Singular free C-stems prefix kal- if they are animate gender and el- if they are inanimate gender. Singular free V-stems prefix a- if they are animate gender and l- if they are inanimate gender.

(1) cece? 'squirrel', kalcece? 'the squirrel'; pana? 'river', elpana? 'the river'

(2) iINna 'pig', iINna 'the pig'; ipa? 'flower', lipa? 'the flower'

Bound stems do not prefix DA's directly to the stem. In nonpossessed forms, a- is prefixed between the DA and the stem. Bound C-stems and bound V-stems beginning with i prepose the a- directly to the stem. Bound V-stems beginning with c or u change the resulting sequences as to a and au to o. Since the resultant forms derived from both C-stems and V-stems are now V-initial, the DA's selected are those occurring with V-stems.

(3) -pepo, apeco 'younger relative', iapepo 'the younger relative'; -iwala, aiwala 'horse', iaiwala 'the horse'

(4) -ene, ane 'road', lane 'the road'; -uli, oli 'pitch pine', lolii 'the pitch pine'; -etu, atu 'fish', iatu 'the fish'

The criterion of C-initial vs. V-initial determines the kind of underlying form to which PP's are prefixed. C-stems, whether bound or free, prefix PP's directly to the stem. V-stems propose a possessive combiner consonant (PCC) to form a possessed base to which PP's are then prefixed. Free V-stems propose p-. A few bound stems also propose p- but most propose {n-}. PP's do not usually occur without DA's. When they do, the resultant form is a predication which no longer enters into noun constructions. When DA's are added, since PP's are V-initial, the DA's appropriate to V-initial forms are selected.

(5) cece? 'squirrel', aicece? 'I have a squirrel', iacicece? 'my squirrel'; -pepo, apeco 'younger relative', iapepo 'I have a younger relative', iaipepo 'my younger relative'

(6) ipa? 'flower', aiipapa? 'I have a flower', laipapa? 'my flower'

(7) -ene, ane 'road', sipene 'I have a road', laipene 'my road'

(8) -etu, atu 'fish', ainetu 'I have a fish', aiainetu 'my fish';
-uli, oll 'pitch pine', ainuli 'I have pitch pine', lainuli 'my pitch pine'

2.2. Specification is marked by DA prefixes. Grammatical gender plus the phonological criterion of C-initial vs. V-initial determines which DA set is selected. There are two genders, animate (A) and inanimate (I). All animate beings are animate gender. Some inanimate beings are also classed as animate; others are classed as inanimate. The choice appears to be arbitrary.

There are four basic sets of DA prefixes, three of which are divided into subsets, one of these into three subsets and the others into two. Each set and subset contains singular and plural forms. Two basic sets mark animate gender and two mark inanimate. Within each gender category one set precedes C-initial forms and the other precedes V-initial forms. See Table 2.

Set AC consists of kal- 'animate (C) DA sg' and lan- 'animate (C) DA pl' and is prefixed to free nonpossessed animate C-stems.

(9) šans 'man', kalšans 'the man', ţanuk 'men', lanšanuk 'the men'

(10) košak 'grain of corn', kalkošak 'the grain of corn', košá 'grains of corn', langošak 'the grains of corn'

Set AV consists of a- 'animate (V) DA sg' and l- 'animate (V) DA pl' and is prefixed to most animate V-initial forms, whether they are basic free V-stems, bound V- or C- stems prefixed by a-, or possessed forms prefixed by PP's.

(11) emes 'squash seed', ēmes 'the squash seed', emes 'squash seeds'; lemeč 'the squash seed'


(13) -pouhua, apouhua 'boss', ţapouhua 'the boss', -pouhmala, apouhmala 'bosses', lapouhmala 'the bosses', apouhma 'I have a boss', ţapouhma 'my boss', apouhmala 'I have bosses', lapouhmala 'my bosses'

Set AVb consists of a- 'animate (V) DA sg and pl' and is prefixed to a few animate V-initial forms.

(14) -paž, apaz 'tongue', ţapaž 'the tongue', -paž, apaž 'tongues'; ţapaz 'the tongues'; unga 'fire', ţunga 'the fire', ungay 'fires', ţungay 'the fires'

Set ICa consists of el- 'inanimate (C) DA sg' and kal- 'inanimate (C) DA pl' and is prefixed to an arbitrary class of inanimate C-stems, free nonpossessed. Set ICb consists of el- 'sg' and lan- 'pl' and is prefixed to a second arbitrary subclass of inanimate C-stems. Set ICc consists of el- 'sg' and both kal- and lan- 'pl' and is prefixed to a third arbitrary subclass of inanimate C-stems with separate sense discriminations for the separate plural forms in most cases. It may have been that in OC kal- had a more collective meaning and lan- was more distributive. In present day EC lan- is the most common of the two, with alternation between the two as second most used in Turner's material. But in our material many of these alternating forms occur only with lan-.

(15) pine 'plate', elpime 'the plate', piime 'plates', kalpiimee
'the plates'

(16) huti 'water jar', elhuti 'the water jar', hutili 'waterjars', lanjuulti 'the water jare'

(17) ?ek 'stick, tree', al?ek 'the stick, the tree', ?ek' 'sticks, trees', kal?ek, 'the trees, the woods', lan?ek' 'the sticks, the firewood'

Set IVa consists of l- 'inanimate (V) DA sg' and 1- 'inanimate (V) DA pl' and is prefixed to most inanimate V-initial forms, whether they are basic free V-stems, bound V- or C-stems prefixed by a-, or possessed forms prefixed by PP's.

(18) ipa? 'flower', lipa? 'the flower', iipa? 'flowers', lippa? 'the flowers'

(19) -ehu' 'house', alahu' 'the house', -hu'u, ahuhu' 'houses', ahahu' 'the houses'

(20) -taiki? 'word', atauiki? 'the word', -taikii? 'words', aitaiki? 'the words', aitaiki? 'I have a word', laitaiki? 'my word', aitaiki? 'I have words', alaitaiki? 'my words'

Set IVb consists of l- 'inanimate (V) DA sg and pl' and is prefixed to several inanimate V-initial forms.

(21) -mis, amis 'foot', lamis 'the foot', amici, almici 'feet', lamici 'the feet', laalmici 'my feet'

2.3. Possession is marked by person possessor (PP) prefixes which follow DA prefixes. Singular PP's are: ai- '1 sg', o- '2 sg', i- '3 sg'. Plural PP's are formed by postposing the pluralizer -a- to the singular (with 1 sg ai- > a-) resulting in ai- '1 pl', oa- '2 pl', ia- '3 pl'. PP's are prefixed directly to C-stems whether bound or free. They are preceded by DA's appropriate to V-initial forms: a- 'A sg' and l- 'A pl' for animate forms, and l-'l sg' and a- 'l pl' for inanimate forms. When possessed forms occur without DA's, they function as predications glossed as 'it is my (your, his)....' or 'I have a....'

(22) -?wa 'child, offspring', i?wa 'it is his child'

Full examples of possessed forms are given in the sample paradigms. PP's are not prefixed directly to V-stems. Rather, a possessive combiner consonant (PCC) is prefixed to the stem to form a possessed base to which PP's are then prefixed. There are two of these: -p- prefixed to all free V-stems and to a few bound V-stems, and -n- prefixed to the remaining bound V-stems. PCC -p- follows all PP's and has no change of form. PCC -n- undergoes a series of phonological rules which result in the following surface forms for PP's plus PCC plus stem V: ain?- '1 sg', oin- '2 sg', V '3 sg', aln- '1 pl', oln- '2 pl', iln- '3 pl'. Full examples of these possessed forms are given in the sample paradigms.


(24) -inaka, ainaka 'cornfield', lainaka 'the cornfield', laininaka
2.4. On the basis of the above characteristics HC noun stems are divided into four basic animate classes and four corresponding inanimate classes. These are: (1) Free C-stems, (2) bound C-stems, (3) Free V-stems, (4) bound V-stems. All but class 1A are divided into subclasses on the basis of the DA or FC0 subset they prefix. All features except the initial segment, which is inherently part of the stem, must be marked in the lexicon.

Class 1A, AFC (Animate Free C-initial) show no stem formation and prefix DA set AC kal- 'sg' and lan- 'pl' to nonpossessed forms and DA set AVa kal- 'sg' and lan- 'pl' to possessed forms.

(25) mehu, 'hammock', kalmehu, 'the hammock', mehu, 'hammocks', lammehu, 'the hammock', kaimehu, 'my hammock', lammehu, 'our hammocks' (see also 1, 5, 9, 10)

Class 2A, ABC (Animate Bound C-initial) prefix a- to the stem in nonpossessed forms, and has two subclasses. Subclass 2A1 prefix DA set AVa kal- 'sg' and lan- 'pl' to both nonpossessed and possessed forms. Subclass 2A2 prefix DA set AVb a- for both singular and plural in both nonposessed and possessed forms. Only one clear example has been found of subclass 2A2.

(26) -ay, a?ay 'older relative of opposite sex', laay, 'the o.r.o.s.', a?ay, 'older relatives of opposite sex', laay, 'the o.r.o.s.', laay, 'my o.r.o.s.', laay, 'my older relatives of opposite sex' (see also 3, 15, 22)

(27) -pul, apul, 'tongue', lapul, 'the tongue', apul, 'tongues', lapul, 'my tongue', lapul, 'their tongues'

Class 3A, AFV (Animate Free V-initial) prefix p- to the stem in possessed forms, and has two subclasses. Subclass 3A1 prefix DA set AVa kal- 'sg' and lan- 'pl' to both nonpossessed and possessed forms. Subclass 3A2 prefix DA a- for both singular and plural in both nonpossessed and possessed forms. Very few stems have been found of subclass 3A2.

(28) eses 'squash seed', lemes 'the squash seeds', emoc, 'squash seeds', lemes, 'the squash seeds', laipomoc, 'my squash seed', laipomoc, 'my squash seeds'

(29) uga 'fire', kauga 'the fire', ungay 'fires', kauga 'the fires', laipungay 'my fire', laipungay 'my fires'

Class 4A, ABV (Animate Bound V-initial) prefix a- to the stem in nonpossessed forms and consists of four subclasses. Subclass 4A1 prefix [a] to the stem in possessed forms, and DA set AVa kal- 'sg' and lan- 'pl' to both nonpossessed and possessed forms. Subclass 4A2 prefix [a] to the stem in possessed forms and DA a- for both singular and plural in both nonpossessed and possessed forms. Subclass 4A3 prefix p- to the stem in possessed forms, and DA a- for both singular and plural in both nonpossessed and possessed forms. The last three subclasses have few forms.

(30) -m, a?i 'bread' la?i 'the bread', -m, a?i, 'breads', la?i
'the breads', lainàsi 'my bread', lainàsi?i 'my breads'

(31) -um̥ahma? 'heart', ion̥ahma? 'the heart',
    -um̥awehma? 'hearts', ion̥awehma? 'the hearts',
    lainum̥ahma? 'my heart', lainum̥awehma? 'our hearts'

(32) -iwala, aiwala 'horse', ñaiwala 'the horse', -iwale, aiwale
    'horses', laiwale 'the horses', ñaipiwala 'my horse', laaipiwale
    'our horses'

(33) -itái, aitái 'wall', ñaitái 'the wall', -itayái, aitayái
    'walls', ñaitayái 'the walls', ñaipitái 'my wall', ñaipitayái
    'my walls'

Class 1B, IFC (Inanimate Free C-initial) shows no stem formation and
has three subclasses. Subclass 1B₁ prefix DA set IÇa el- 'sg' and kal-
'pl' to nonpossessed forms. Subclass 1B₂ prefix DA set IÇb el- 'sg' and
lan- 'pl' to nonpossessed forms. Subclass 1B₃ prefix DA set IÇc el-
'sg' and both kal- and lan- 'pl' (with separate sense discriminations)
to non-
possessed forms. All three subclasses prefix DA set IVa 1- 'sg' and 1-
'pl' to possessed forms. Subclass 1B₃ is the largest of the three.

(34) pena? 'river', elpana? 'the river', panay 'rivers', kalpanay
    'the rivers', laaipana? 'our river', laaipanay 'our rivers' (see I5)

(35) haña 'reed', elhaña 'the reed', haña 'reeds', lanhaña 'the
    reeds', laëhaña 'my reed', ñaëhaña 'my reeds' (see also 16)

(36) capo 'thick tortilla', elcapo 'the thick tortilla', caåpo
    'thick tortillas', kalcápọ or lancaåpo 'the thick tortillas', 13
    laaçapo 'my thick tortilla', ñaëcaåpo 'my thick tortillas' (17)

Class 2B, IBC (Inanimate Bound C-initial) prefix a- to the stem in
nonpossessed forms and has two subclasses. Subclass 2B₁ prefix DA set
IVa 1- 'sg' and 1- 'pl' to both nonpossessed and possessed forms. Sub-
class 2B₂ prefix DA 1- for both singular and plural to both nonpossessed
and possessed forms. There are relatively few members of either subclass,
most of which are body parts. Those of subclass 2B₂ are mostly those
body parts which are in pairs and which have distinctive plural forms.

(37) -po, apo 'tail', laço 'the tail', -po, apó 'tails', ñapó 'the
tails', lipo 'its tail', ñilpó 'their tails' (see also 20)

(38) -peke, apeko 'check', laapeko 'the check', peke, apekeko 'checks;
    laapeke 'the checks', laapeko 'my check', laapekeko 'my checks' (see
    also 21)

Class 2B, IFV (Inanimate Free V-initial) prefix p- to the stem in
possessed forms and DA set IVa l- 'sg' and l- 'pl' to both nonpossessed
and possessed forms. In our material several words are listed with l-
for both singular and plural, which would set up a subclass of this but
since every one of these is listed with l- for plural in turners' material
it seemed best to leave them that way.

(39) itak 'thorn', litak 'the thorn', itak 'thorns', ñitak 'the
    thorns', laipitak 'my thorn', ñaipitak 'my thorns'

(40) okā 'bone' lokañ 'the bone', okala 'bones', ñokala (or lokala)
    'the bones', laipokā 'my bone', ñaipokeñ (or laipekala) 'my bones'
Class 4B, IBV (Inanimate Bound V-initial) prefix a- to the stem in nonpossessed forms and has three subclasses. Subclass 4B₁ prefix \(\{n\}^-\) to the stem in possessed forms and DA set IVa 1- 'sg' and 2- 'pl' to both nonpossessed and possessed forms. Subclass 4B₂ prefix \(\{n\}^-\) to the stem in possessed forms and DA 1- for both singular and plural to both nonpossessed and possessed forms. Subclass 4B₃ prefix p- to the stem in possessed forms and DA set IVa 1- 'sg' and 2- 'pl' to both nonpossessed and possessed forms. Only one member has been found of this last subclass. The sequence a- actualizes as a, and au as o.

(41) -ukwis, okwis 'rope', lokwis 'the rope', -ukwis, okwis 'rope', \(\dot{\text{lokwi}}\)' the rope', \(\dot{i}a\text{nukwis}'my rope', \(\dot{i}a\text{nukwis}'my ropes' \\
(42) -engok, angok 'wart', langok 'the wart', -engok, angok 'warts', \(\dot{l}\text{a\text{ng}}\text{k}'the war\text{t}', \(\dot{l}\text{ai\text{ng}}\text{k}'my wart', \(\dot{l}\text{ai\text{ng}}\text{k}'my war\text{t}'s \\
(43) -ene, ane 'road', lane 'the road', -ene, ane 'roads', \(\dot{l}\text{a\text{ne}}\text{ya}'the roads', \(\dot{l}\text{ai\text{p}}\text{e\text{ne}}\text{ya}'our roads' \\

2.6. Before turning to LC we would like to note certain trends in HC language development, pointed up by a comparison of our material (E for Bispecc) and Turners' (SM for San Matias). It appears that E is conservative in retaining animate singular marking for stems referring to inanimate items for which SM prefixes inanimate DA's, but innovative in using 1- 'pl' for many items for which SM retains the conservative 2- pl. Both areas show a trend toward the loss of the animate-inanimate distinction which has now become a reality in LC.

(44) kalwoše (E), elwoše (SM) 'cactus fruit'; kalškwahi, elškwahi (op. LC laskwhahi) 'clay griddle'; ingwane, langušne (op. LC lanušne) 'tomato' \\
(45) lapone 'the nopal cactus', lapone (E), žapone (SM) 'the nopal cacti'; lišwa 'the town', lišelošwa, žišelošwa 'the towns'

Another feature of HC, lost in LC, is that of some homophonous stems differing only by prefix. Some show a type of relationship, others appear fortuitous.

(46) kaluWá 'the bee', elkuWá 'the honey'; kalmož 'the sheep', elmož 'the cotton' \\
(47) lašše 'corn dough', lašše 'corn gruel'; laššmas 'ear', laššmas 'earring', lawi 'sore', řawi 'laziness' \\
(48) žatu 'the fish', žatu 'the umbilicus'; kaltulu 'the turkey hen', eltulu 'the blister'; žene 'grinding stone', řene 'tumpline'

3.1. The LC system retains the basic OC system of stem formation for both nonpossessed and possessed forms as seen in Table 1. Phonological criteria of free vs. bound and C-initial vs. V-initial are still crucial. Bound C-stems and V-stems prefix a- in nonpossessed forms. LC also retains the basic system of inflection for specification by means of DA prefixes and for possession by means of PF prefixes which follow DA prefixes. Only the gender distinction has been lost, with a resultant coalescing and simplification of the DA prefix sets. The possessive combiner \(\{n\}\) has also been simplified and regularized following the analogy of possessive combiner p-.
3.2. DA prefixes have been greatly reduced as shown in Table 3. Animate sg DA kal- has been replaced by el- for all free C-stems, with lan- as its only plural. Animate sg DA 1- has been lost (also inanimate pl 2-), and l- has been retained for both singular and plural DA with all V-initial forms.

(49) eece 'squirrel', eloce 'the squirrel', lance 'the squirrels', pana 'river', elpana 'the river', lampanay 'the rivers'

(50) iinha 'wild pig', linha 'the wild pig', linhay 'the wild pigs'; ipa 'flower', lipa 'the flower', lipa? 'the flowers'

3.3. PP prefixes have remained the same: ai- '1 sg', c- '2 sg', i- '3 sg', with -i- as their pluralizer (with ai → a in first person). Possessive combiner consonant p- has been retained without change. FGC {n} has been regularized to /n/ with all persons, but with a morphophonemic change to h following PP's containing i.

(51) kosah 'grain of corn', elkosah 'the grain of corn', lankosah 'the grains of corn', laikosah 'my grain of corn', laikosah 'my grains of corn'

(52) -pepo, apo 'younger relative', lapepo 'the younger relative', lapepo 'the younger relatives', laiapo 'my younger relative', laiapo 'my younger relatives'

(53) ome 'squash seed', olme 'the squash seed', ome 'the squash seeds', laipomo 'my squash seed', laipomo 'my squash seeds'

(54) -etYu, atYu 'fish', letYu 'the fish', latYu 'the fishes', laiyetYu 'my fish', lometYu 'your (sg) fish', limetYu 'his fish' laiNetYu 'our fish', lcNetYu 'your (pl) fish', limetYu 'their fish'

3.4. The resultant system consists of four basic stem classes: (1) free C-stems, (2) bound C-stems, (3) free V-stems, (4) bound V-stems. The V-stems have two subclasses.

Class 1, FC, consists of free C-stems, which prefix DA's el- 'sg' and lan- 'pl' to nonpossessed forms, and l- 'sg/pl' to possessed forms.

(55) mehu 'hammock', elmehu 'the hammock', lamamehu 'the hammocks', laimehu 'my hammock', laimehu 'our hammocks'; epe 'thick tortilla', elo 'the thick tortilla', lana 'the thick tortillas', leopo 'my thick tortilla', leopo 'my thick tortillas'.

Class 2, BC, consists of bound C-stems which prefix a- to the stem in nonpossessed forms, and DA l- 'sg/pl' to both nonpossessed and possessed forms.

(56) -pa, apa 'tongue', lapa 'the tongue', lapai 'the tongues', laipa 'my tongue', liapa 'their tongues'; -mi, ami 'foot' lam 'the foot', lam'i 'the feet', lam'i 'my foot', laim'i 'my feet'.

Class 3, BV, consists of free V-stems which prefix DA l- 'sg/pl' to both nonpossessed and possessed forms. It has two subclasses. Subclass 3a prefix FGC p- to the stem in possessed forms. Subclass 3b prefix FGC{n} to the stem in possessed forms.
(57) unkwa 'fire', lunkwa 'the fire', lunkway? 'the fires', laipunkwa 'my fire', laipunkway? 'my fire'; eka? 'bone', leka? 'the bone' leka? 'the bones', laipeka? 'my bone', laipekala? 'my bones'


Class 4, BV, consists of bound V-stems which prefix a- to the stem in nonpossessed forms and DA 1- 'sg/pl' to both nonpossessed and possessed forms. It has two subclasses. Subclass 4a prefix PCC n- to the stem in possessed forms. Subclass 4b prefix PCC p- to the stem in possessed forms.


(60) -one, ano 'road', lance 'the road', laneya? 'the roads', laipene 'my road', liapene? 'their roads'

In addition to the changes already mentioned, many bound u-initial stems have become free in LC and occur with PCC p- rather than with n-.

(61) ukuwi? 'rope', lukuwi? 'the rope', laipukwi? 'my rope'; unšahma? 'heart (of a tree)', lunašahma? 'the heart' lipunšahma? 'its heart'

4. Sample paradigms of possessed forms are now given for both languages. The HC nonpossessed forms are given first for each class, with the corresponding LC form (where different) in parentheses following the HC form. Then the possessive paradigm is given, with separate columns for HC sg, LC sg, HC pl and LC pl respectively. No examples are given for very small subclasses. Listing follows the HC classification.

1A, AFC, ona (traana) 'hen', kaoana (altraana) 'the hen', lanašay (lantraanay?) 'the hens'

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<thead>
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<th>sg</th>
<th>pl</th>
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</table>
| 1 sg | laicana | laicany | laicany?
| 2 sg | laicana | laicany | laicany?
| 3 sg | nocaana | locany | locany?
| 1 pl | laicana | laicany | laicany?
| 2 pl | laicana | laicany | laicany?
| 3 pl | laicana | laicany | laicany?

2A, ABC, -pouhna, apouhna (apoyhna) 'boss', lapouhna (lapoyhna) 'the boss' lapouhna (lapoyhna?) 'the bosses'

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</tr>
</thead>
</table>
| 1 sg | lapouhna | laipoyhna | laipouhna? laipoyhna?
| 2 sg | lapouhna | laipoyhna | laipouhna? laipoyhna?
| 3 sg | lapouhna | laipoyhna | laipouhna? laipoyhna?
| 1 pl | lapouhna | laipoyhna | laipouhna? laipoyhna?
| 2 pl | lapouhna | laipoyhna | laipouhna? laipoyhna?
| 3 pl | lapouhna | laipoyhna | laipouhna? laipoyhna?

3A, AFV, iñna (inha 'wild pig') 'pig', iñna (inha) 'the pig', iñnay (inhay?) 'the pigs'
4A, ABV, -epik, spik (apih) 'stone', ḋapik (lapih) 'the stone'
lapik 'the stones'

1 sg ḍaapiNna laipinha laapiNnay laipinha?
2 sg ḍopinNa lopinha lopinNaay lopinhay?
3 sg ḍapiNnNa lipinNa lipiNnay lipinhoy?
1 pl ḍapiNnNa laipinha laapiNnay laipinhay?
2 pl ḍopiNnNa loipinha loopiNnay loipinhay?
3 pl ḍapiNnNa lipinNa lipiNnay lipinhoy?

4A, ABV, -iwala (-ywala), aiwala (eywala) 'horse' ḍaiwala (laywala)
'horse', laiwalo (laywalo) 'the horses'

1 sg ḍaiwala laipwala laipwalo leipwalo?
2 sg ḍoiwala lopwala lopwalo leopwalo?
3 sg ḍiwiwala lipwala lipwalo lipwalo?
1 pl ḍaiwala laipwala laipwalo leipwalo?
2 pl ḍoiwala lopwala lopwalo leopwalo?
3 pl ḍiwiwala lopwala lipwalo lipwalo?

1B, IFC, pime 'plate' elpime 'the plate', kalpiimee (lanpimë?)
'the plates'

1 sg laipime laipime laiipiimee laipimë?
2 sg lipime lipime ḍiipiimee lipimë?
3 sg lipime lipime ḍiipiimee lipimë?
1 pl laipime laipime laiipiimee laipimë?
2 pl lipime lipime ḍiipiimee lipimë?
3 pl lipime lipime ḍiipiimee lipimë?

2B, IBC, -taiki?, ataiki? (ataygI?) 'word', lataiki? (lataygI?)
'the word', ḍataiki? (lataygI?) 'the words'

1 sg laiitsaiki laitaygi ḍaitsaiki laitaygI?
2 sg lotaiki lotaygi ḍotaiki lotaygI?
3 sg litaiki litaigI ḍitaiki litaigI?
1 pl laitsaiki laitsaiki ḍaitsaiki laitaygI?
2 pl lotaiki lotaiki ḍotaiki lotaygI?
3 pl litaiki litaiki ḍitaiki litaigI?

3B, IFV, ipa? 'flower', lipa? 'the flower' ḍiipa? (lipa?) 'the flowers'

1 sg laiipa? laipipa? laiipiipa? laipipa?
2 sg lopiipa? lopiipa? ḍopiipa? lopipë?
3 sg lipipa? lipipa? ḍipipa? lipipë?
1 pl laiipa? laiipa? laiipiipa? laipipa?
2 pl lopiipa? lopiipa? ḍopiipa? lopipë?
3 pl lipipa? lipipa? ḍipipa? lipipë?
Footnotes

1 Data for Lowland Chontal were obtained by Waterhouse on field trips to the villages of Santiago Atitlán and San Pedro Huamelula, 1942-1966, and for Highland Chontal by both authors, 1967-1977, under the auspices of the Summer Institute of Linguistics. Highland data are mainly from Santa María Ecatepec, Santo Tomás Teipan and San Matías Petoatepec. We are indebted to Paul and Shirley Turner for data from San Matías, taken from their dictionary (1971). The second author is responsible for compilation and organization of HC data, the first for LC data and for the final writeup. For description of LC phonemes see Waterhouse and Morrison (1960), for HC see Turner (1967).

2 A possible third variety may have been that formerly spoken in Tequisistlán, from which the name Tequisistlán is taken. See deAngulo and Freeland (1925). When I first saw the article, while working in LC, I thought it to be HC, but Turner, working in HC, considered it to be LC.

3 Turner, 1959.

4 Waterhouse, 1976.


7 An alternative presented by Turner and Turner (1971, 327) considers the a- as part of the DA when they occur with these C-stems. This sets up additional DA's but makes a simpler statement of distribution. However, since the alternation of presence and absence of initial a with bound C-stems seems analogous to the alternation of a with some other vowel in bound V-stems, I prefer the analysis given here.

8 The n⇒m / n, p. In some villages the n⇒k actualizes as p written herein as ng.

9 These rules are as follows: (I am indebted to Barbara Hollenbach for their formulation.)

\[
\begin{align*}
\text{n} & \Rightarrow m / \_c_ \\
\theta & \Rightarrow \emptyset / \_v (\text{applies only to output of preceding rule}) \\
e & \Rightarrow a / \_n \\
i & \Rightarrow [\_\{x\}] / \_n \\
\{n\} & \Rightarrow \emptyset / \_v
\end{align*}
\]
10 An alternative used by Turner and Turner (1971, 327) considers these surface forms and also those with p- (which he writes as b in accordance with the voicing practiced in SM) as allomorphs of ai-, o-, i- etc. In view of the corresponding LC forms, I prefer to handle both p- and n - as PCC's, separate from the PP's, in both languages.

11 This classification differs slightly (in detail mainly) from that given by Turner and Turner (1971, 326-327).

12 This word is listed by Turners as having alternate plural forms with either l- or l-, but since our data have only 1- we included it for comparative purposes.

13 Turners give the alternation as kalcapo/lanaippo but our data show the form as given. The sense distinction of the alternatives is not clear. It may be idiolectal.

14 This classification differs somewhat from that given in Waterhouse 1962, 88-94. The chief difference is that in the earlier work I shifted the basis of the classification of V-stems to make choice of PCC primary and free vs. bound secondary. Here I am making the classification of C-stems and V-stems parallel in both languages. Whichever criterion is taken as primary (PPC or free vs. bound) one ends up with subclasses, but the present classification seemed more consistent.
ARTICLES IN SERI

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0. Introduction
1. The articles
2. Position of the article
3. Use of the definite article
4. Use of the indefinite article
5. Use of the general article
6. Notable omissions of the article
7. Use of the article with locative as demonstrative adjectives and pronouns
8. Relation between definite articles and similar verbs

0. The noun phrase in Seri is modified by numerous articles of three basic types: definite, indefinite, and general. The choice of definite article depends on the perceived position and the number of the noun which it modifies. The indefinite article also agrees in number with the noun. The role of the noun phrase in the sentence is marked by word order; the article does not function to mark case.

1. The articles are listed below and then discussed in the following sections.

Definite articles:
Non-specified position k? (sg.), koi (pl.)
Seated position kix (sg.), koi (pl.)
Prone position kom (sg.), koi (pl.)
Erect position kop/kap (sg.), koi (pl.)
Moving
toward, close ?ipmoka (sg.), ?i?mokat (pl.)
toward, distant timoka (sg.), tamokat (pl.)
away, close ?ipintika (sg.), ?i?intikat (pl.)
away, distant ?imintika (sg.), ?imintikat (pl.)
Indefinite articles:
Singular ?o
Plural and mass pak
General articles:
?ak; ka?

2. Nouns generally require an article, and the article occurs at the end of the entire noun phrase. Thus the article may be separated from the head noun by a noun, an adjective, or a relative clause (the main verb of which is always reduced to a nominalized form, although the relative
clause may still contain a subordinate clause as in (5) below, or a series of such.

(1) ásəa // ?a-xə ʔəekkəe k-óoppool ʔəo
sure abs-pet small nom-[be black] a
ʔ-yóoʔo //
[1 sub]-past-see

'Sure, I saw a small black dog.'

(2) ʔiX ?a-p-áʔiit ?-óoʔiit ki?
thing nom-pass-eat [1 poss]-nom-eat the
k-fippeeʔa //
nom-[be good]-decl

'The thing that is eaten that I ate was good, i.e., The food that I ate was good.'

(3) tóm me ?1-ʔ-á-íppoot
money [2 ref] [1 poss]-nom-ca-[be exchanged] the
me n-y-óʔə //
[2 ref] [2 sub]-past-take

'You took the money that I paid you.'

(4) ʔiX k'īke káil iptam lemóoyan ki? tok
thing person elder man Lemoyan the there
k'īk'ū //
[3 ref]-[perf=(be [seated])]]

'The deceased Old Man Lemoyan was there.'

(5) me ʔəo Xə? in-t-óółka
[2 ref] how just [2 sub]-inter-[look at] man hunger
in-t-óółk'ū ma ʔiX ʔəo me k-á-aʔiit kix //
[2 sub]-DP-die SCP thing a [2 ref] nom-ca-eat the

'Just how do you look at the man who caused you to eat something when you were dying of hunger?, i.e., Just what do you think of the man who fed you when you were hungry?'

(6) ʔiX t-pa-kta
thus DP-pass-[look at] SCP thing nom-pass-beat sun
kiʔ k-yáal tintika t-óoʔiit-in yoke //
the nom-[go to] the asser-intr-eat-rep [it is said]

'When it was seen like that, the thing that was beaten that was going to the sun ate them, it is said., i.e.,
Then the one who had been beaten and was going to the sun ate them, it is said.

3. There are several definite articles and the choice of the article to be used seems to depend on the actual or perceived position of the noun, as well as the number of the noun. Some nouns use only one of the positional articles since the position never changes. Some nouns use any of the positional articles, depending on the position at the moment. Some nouns use one or another depending on the meaning of the word in the particular context. In some cases there seems to be some degree of speaker discretion involved in the decision as to the position of an object.

3.1. The definite article for non-specified position ƙ? is used when the position of the noun is not evident physically or from the context of the narrative. The singular article has three allomorphs, ƙ?, ƙi?, and ƙ which are derived most easily from the underlying form ƙ by the following rules: ƙ → ₣ / — ? and ₣ → i / — ?i.

(The latter is a simplified version of a much broader and very widely used ƙ epenthesis rule.) The plural article is ƙol. The following examples illustrate the use of the definite article of non-specified position.

(7) Maƙfà ƙi? sîmmeet ƙi? k-àal-ƙa //
Mary the bread the nom-make-decl

'Mary is making bread.'

(8) y-a-sîmmeet Maƙfà ƙ //
past-ca-bread Mary the

'She made bread--Mary.'

(9) Xéppè ƙ? iti t-om ma / óx ?anso ?àal ƙ?
sea the on DP-lie SCP thus just wind the

i-m-ak-àttax //
trans-perf-ca-go

'When it was on the water, then just the wind made it go.'

(10) šîXkàm ƙ ?-óxà //
fish the imp-take

'Take the fish.'

(11) koukàak l?màa ƙo? ant š iki
people other the place a [(3 poss)=side]

m-îtóix //
perf-[go toward]
'The other people went to another place.'

(12) xʷáan k ʔo-xo-ŋíppaa-tim //
John the [1 sub]-emph-hit-rep
'I am hitting John.'

(13) kwíkke ʔ-itom kí? mípix in-t-aq //
person [3 poss]-talk the well [2 sub]-inter-know
'Do you know the Seri language well?'

(14) saξáapi k ʔe k-ámxk //
blanket the [1 ref] imp-bring
'Bring me the blanket.'

(15) ṭánt k? iti m-pó-c-taax / ʔóá? k? iti
land the on [2 sub]-DF-go sun the on
m-p-1?-x / ksál kom mi-íft kí?
[2 sub]-DF-be cond brush the [2 poss]-hair the
ko-n-s-áai-aʔa //
[3 ref]-[2 sub]-fut-do-TM
'You should always brush your hair in the daytime.'

The word for 'yesterday' usually takes the definite article.

(16) moξímmaa kí? xʷáan ʔa-X̣í kí? i-t-ak-atáax
yesterday the John the abs-pet the trans-DF-ca-go
šíx k-a-náao kí? mos 1-y-ak-áttaaX //
thing nom-ca-meow the also trans-past-ca-go
'Yesterday, when John took away the dog, he also took the cat.'

The definite article can be used when referring to something generically.

(17) šíxkáam k-kt?W kí? s-o-m-p-šxä ?á-a-ya //
fish nom-[be red] the fut-neg-pass-buy be-Q
'Won't red snapper be bought?'

(18) móosi ni kí? xo-mfí? //
turtle the emph-[not exist]
'Turtles are scarce!

(19) ʔe kʷšáx šíxkáam kí? kw-s-a-tíkpan kaʔa //
[1 ref] now fish the [3 ref]-fut-ca-work TM
'Now I will work with fish..., i.e., I'm going fishing now.
3.2. When the object is viewed as being seated, the definite article kix denoting this position is used. An allomorph kx often occurs when the following word begins with a vowel. The following examples illustrate the use of this article.

(20) sínmeet kix k-óatW-i?a //
    bread the nom-[be sweet]-decl

    'The bread is sweet.'

(21) ?ant kx iti yo-m-áttaaX //
    land the on past-neg-go

    'He didn't go on the land., i.e., He didn't walk around.'

(22) ġáa? kix k-ámxk //
    watch the imp-bring

    'Bring the watch!'

(23) tóotWkʷ kix kʷśáXá //
    cholla the [imp-neg-take]

    'Don't grab the cholla!'

(24) tóóWkʷ kix
    [Tiburon Island] the

    ko-nt-áa-ss-sat-a?g //
    [3 ref]-dir-[2 sub]-fut-[move=pl]-TM

    'We'll go to Tiburon Island.'

(25) t-ʔámmook ma / ?a-no? t-ʔáaiX kix
    DP-[be night] SCP abs-finger nom-put the

    i-t-ámxk / ġáa? kix
    trans-DP-bring sun the

    kʷ-1-t-ak-óo-??oo-t //
    [3 ref]-trans-asser-ca-intr-see-ben

    'At night he brought the ring and showed it to the sun.'

3.3. When the object is viewed as being in a lying or extended position, the definite article kom denoting this position is used. The allomorphs kon and kou occur due to an assimilation process in the language.

(26) kanóaa kom m-a-źíim //
    boat the perf-ca-enjoy

    'The boat is pretty.'
(27) Xēppée kon ŋixkám ki? k-átxo-ʔa //
    sea the fish the nom-[be many]-decl
    'There are many fish in the sea.'

(28) 1-náll kon t-mátx //
    [3 poss]-skin the inter-[be hot]
    'Is his skin hot?'

(29) ʔást kog ko-nt-ʃttaat yohe //
    stone the [3 ref]-dir-[move=pl] [it is said]
    'They went to the mountains, it is said.'

(30) ʔáXXox kog kW-t-ąškam ma /
    shore the [3 ref]-DP-[arrive=pl] SCP
    'When they arrived at the shore...'

(31) 1-k-ąspox kog k-ąmk //
    with-nom-write the imp-bring
    'Bring the pencil!'

3.4. When the object is viewed as being in an erect position, the definite article kog/kap denoting this position is used. The two allomorphs occur in free variation. The following examples illustrate the use of this article.

(32) ktám kog ʔá-xąg kog ŋixkám ki? kW-y-ą-aʔiliit //
    man the abs-pet the fish the [3 ref]-past-ca-eat
    'The man fed the dog the fish.'

(33) kWíkkee ktám kix ʔ-ąkkoo kog ano k-ľixx-ıʔ1 //
    person man the nom-[make house] the in nom-sit-decl
    'The man is (seated) in the house.'

This article occurs with some nouns which cannot be described as being erect, as examples (34)-(36) illustrate.

(34) ʔá1 kog ñapX t-ąp-X //
    1m-mátx //
    air the outside DP-stand-cond perf-[be hot]
    'When the air comes out, it is hot.'

(35) őX po-pa-kta ta-X šěmme kog thus DP-pass-[look at] SCP-cond sunset the
    in-skW őokta-ʔa //
    [2 sub]-[fut=neg=(look at)]-TM
'Whenever it is like that, you shouldn't look at the sunset.'

(36) psáak ik-ócXXi1 kòp i?-tk’iXXi1m-i?o // hunger inf-die the [1 sub]-[asser=neg=fear]-decl

'I'm not afraid of being hungry.'

3.5. When the object is viewed as moving or when the idea of "along" the object is intended, a definite article denoting movement is used. There are several of these articles and the choice depends on the location of the object and the relative direction of the movement. These articles, which have been listed in Section 1 above, are repeated below for convenience.

- moving toward, close: ?1pmoka (sg.), ?1šmokat (pl.)
- moving away, close: ?1šintika (sg.), ?1šintikat (pl.)
- moving toward, distant: timoka (sg.), tamokat (pl.)
- moving away, distant: ?1mintika (sg.), ?1mintikat (pl.)
- moving away, distant: tintika (sg.), tantikat (pl.)

The following examples illustrate the use of the definite articles denoting movement.

(37) kanoa kw’assočō tintika kanoa k-?eèl boat [nom=(be yellow)] the boat nom-[be red]

tintika ikì kw’-i?-fin the [(3 poss)-side] [3 ref]-[3 poss]-nom-[be near]
ak kanoa kw’assočō tintika gen boat [nom=(be yellow)] the

ya-xi t-ap k-áttaaX-i?a// [(3 poss)=nom=intr]-finish DP-stand nom-go-decl

'The yellow boat--compared to the red boat, the yellow boat standing last--goes,. i.e., The yellow boat followed the red boat.'

(38) Xéppē an ?ant t-oit / Xéppē timoka an ?ant sea into down DP-touch sea the into down t-oit /

DP-touch

'Falling into the sea, falling into the incoming sea....'

(39) ?ant ści t-fin ųoke place a on asser-[go toward] [it is said]

ktám tintika //

man the

'The man went away, it is said.'
(40) Xikkaa k-i-Xaašxox tamokat
things nom-with-[bullet=pl] the

KW-t-āškan yoke //
[3 ref]-asser-[arrive=pl] [it is said]
'The soldiers arrived, it is said.'

(41) ?ant t-fi ma-X // ?áptko ?ant timoka an
land DP-regain SCP-cond already land the in
1?-m-āgo //
[1 sub]-perf-travel
'When the land regains, I am already travelling in
the land. i.e., In the (early) morning, I'm already
up and around.'

(42) ?ánt tintika t-kóor őx ?a-pā-kta-ya //
land the DP-[be whole] thus nom-pass-[look at]-Q

'(Is it like that all along the shore?'

(43) Šaa? tantikat pt 1-m-miss-iʔa //
days the together nom-neg-resemble-decl

'Every day is different.'

(44) pásaʔ timoka ?eššiitim 1?máa ʔo ?ant k?
priest the camp other a land the
1-táasśćit 1?máa ʔ iki s-šektin
[3 poss]-name other a [((3 poss)=side] fut-[pass through]
t-a tok kW-ō-t-a /
DP-be there [3 ref]-dir-DP-move

'When the priest—who was going to pass through another
camp, a place with other name—arrived there....

(45) őx t-pa-kta ma/ Šix ?a-pé-šašil Šaa?
thus DP-pass-[look at] SCP thing nom-pass-beat sun
ki? k-yaai tintika t-ōo-ʔiit-in yoke //
the nom-[go to] the asser-intr-eat-rep [it is said]

'When it was seen like that, the thing that was beaten
that was going to the sun ate them, it is said., i.e.,
Then the one who had been beaten and was going to the
sun ate them, it is said.'

(46) Šikkaaʔiʔ ?išmokat k-őx ?ant
[bird-pl] the nom-[be all] down
'All of the birds came down to him.'

(47) táax iti kw-t-pa-kta
that on [3 ref]-DP-pass-[look at] 3CP coyote

?ipintika ≈-??-oom
the [3 poss]-nom-lie here the [3 ref]-DP-lie

yoke //
[it is said]

'On its being seen like that, the coyote lay down in his resting place., i.e., So then the coyote lay down in his resting place.'

4. The indefinite articles are ꙗo for singular nouns and pak for plural nouns and nouns of mass or liquid. The singular indefinite article has the allomorph ꙗ preceding a vowel and often before a glottal stop, especially in fast speech. The following examples illustrate the use of these articles.

(48) kanóaa ꙗo t1 ꙗ-Xó-aa //
boat a there dir-emph-move

'There comes a boat!'

(49) kanóaa-tax pak ta ꙗ-Xó-aat //
boat-pl some there dir-emph-[move=pl]

'There come some boats!'

(50) ptkámn pak ꙗa-yóo-?? //
lobsters some [1 pl subj-past-[see=pl]

'We found some lobsters.'

(51) ꙗáx pak ꙗe ꙗ-áas //
water some [1 ref] imp-[give to drink]

'Give me some water to drink!'

(52) ꙗe ꙗíxkám ꙗo s'ímmeeet ꙗi1k1
[1 ref] fish a bread a [(3 poss)=side]

k-f-??iít-?? //
nom-trans-eat-decl

'I am eating a fish with a (piece of) bread.'

These forms are also used as pronouns as in examples (53) and (54).
(53) pak ?áXXox 1-m-áškam-1?a Xo pak some shore nom-neg-[arrive=pl]-DECL but some ?áXXox k-áškam-1?a // shore nom-[arrive=pl]-DECL 'Some don’t arrive at shore, but some do arrive at shore.'

(54) moXímmaa ʔo ?-yóo-??o // yesterday a [1 sub]-past-see 'I saw one yesterday.'

When used as pronouns, these forms may follow a definite noun phrase to indicate one or some of the total as illustrated below.

(55) šíXkám koi pak ?a-t-onek/ ?ap i-pXássii fish the some [1 pl sub]-DP-carry deer [3 poss]-MEAT tá koi tāx mos pak ?a-t-onek/ tok there the those also some [1 pl sub]-DP-carry there kʷ-ʔa-m-ōii // [3 ref]-[1 pl sub]-PERF-[BE=pl] 'Carrying some of the fish, also carrying some of that deer meat, there we were.'

(56) tāx pak 1m-póo-XXk / that some [2 sub]-DP-bring 'If you bring some of that....'

(57) óX t-pa-kta ma / iʔmáa tantikat ʔa ?áa thus DP-PASS-[LOOK AT] SCP other the one there nti-t-a-X / třX i-mǐi-??o // dir-DP-move-cond [that one] TRANS-PERF-SEE 'It being seen thus, one of the others going along there, he saw it., i.e., Then one of the others, as he was going along there, saw it.'

The word ʔo is used in noun phrases with negative verbs as illustrated in examples (58)-(50) below. These noun phrases are singular and are equivalent to the English expressions "none", "anybody", "any", etc.

(58) ʔo ?ákX t-om-mi1? yoke one somewhere asser-neg-[not exist] [IT IS SAID] Xíkkaa tá koi // things there the
'None of those people died, it is said.'

(59) k'ɪk'ke'ē ɪ-s- kʷaʔ??o̱g t-a
    person a trans-fut-[neg=see] DP-be
    k-iy-aʔ-a //
    now-trans-know-decl

'He knew that he wasn't going to see anybody.'

(60) po-m-áfp ta-X / k'ɪk'ke'ē ɪk-s- aʔ??iit
    DF-neg-arrive SCF-cond person a inf-ca-eat
    ɪ-s-kʷaʔ-s-a //
    trans-fut-[neg=know]-TM

'If it doesn't arrive, no one will be able to fish.'

(61) sǐmmeet ŋ-ano t-m-fiʔ // Xίkkəa k-šəktW
    bread a in assér-neg-be things now-[be sweet]
    ŋ-ano t-m-čil //
    kafε ŋ-an i-m-fiʔ-1ʔa //
    a in assér-neg-[be=pl] coffee a in nom-neg-be-decl

'There isn't any bread (in my house)--there isn't any sugar (in my house)--there isn't any coffee.'

(62) tóm ŋ-ó-y-o-n-yáʔa //
    money a [l sub]-past-neg-have

'I don't have any money.'

A definite noun phrase occurs with the indefinite article ɪŋ in an interrogative sentence when the speaker denies a previous statement of another person. The verb is marked for future, and the denial particle tée occurs sentence final instead of a tense-mode marker. This is illustrated in (63).

(63) ɪŋ po-pa-kta ta / k'ɪk'ke'ē xʷáʔən ɪŋ ?ánt
    how DF-pass-[look at] SCF person John a land
    aʔrišənaʔ a-p-aʔ //
    ŋ-an o-maʔ-s-s-a tée //
    Arizona nom-pass-call a from dir-fut-move denial

'How would it be seen, a Seri John will come from a land called Arizona??-Ha!, i.e., How on earth would Seri John come from Arizona??--Of course he wouldn't!!'

When an indefinite noun phrase occurs in an interrogative sentence and the answer to the question is implied by the speaker to be obviously negative, the noun phrase is singular and contains the article ɪŋ, as illustrated below.
(64) ́fíx tóm ˇgo k-yáa-ya //
[that one] money a nom-have-Q

'He has money?--Ha!'

Compare example (64) with the following example in which a plural indefinite noun phrase occurs in a declarative sentence.

(65) ́fíx tóm pak i-yo-yáa //
[that one] money some trans-past-have

'He has (some) money.'

When the verb is negative, a definite noun phrase is often singular and contains the article ˇgo, thus adding emphasis to the negative statement. This is illustrated below.

(66) 2-o-yákx ˇgo ?é ?ant
[1 poss]-nom-[have brother] a [1 ref] place

kʷ-i-m-áíis-iʔa ˇx i-m-íl //
[3 ref]-nom-neg-[watch over]-decl thus trans-perf-say

'I don't take care of my brother!, he said to him.'

The article ˇgo is also used with nominalized verb forms which function as direct objects of negative verbs as illustrated below.

(67) 1-pá-kta
[3 poss]-[nom=pass]-[look at] a

1-t-kʷáʔo //
trans-asser-[neg=know]-decl

'He didn't know its appearance., i.e., He didn't know about it.'

(68) kʷ-1-ʔ-áal ˇgo ?-Xo-m-áa //
[3 ref]-[3 poss]-nom-do a [1 sub]-emph-neg-know

'I don't know its doing., i.e., I don't know about it.'

When the verb is not negative, the indefinite article ˇgo is replaced by the definite article kʔ. Compare example (69) below with (67) above.

(69) 1-pá-kta kʔ 1-míi-yyaa //
[3 poss]-[nom=pass]-[look at] the trans-[perf=know]

'He knows its appearance., i.e., He knows about it.'
5. The two general articles are ḏak and ḏak.

5.1. The article ḏak has several uses. It is used in a more definite sense with objects whose perimeters are ill-defined, e.g., the face, the back of a basket, the mouth, the stomach, the bottom of something, the back of the head, and with some locative expressions. The allomorph ḏak occurs when this article is preceded by a consonant. The following examples illustrate the use of ḏak as a definite article.

(70) in-yéen ak k-1?išik-i?a //
     [2 poss]-face gen nom-[be dirty]-decl

     'Your face is dirty.'

(71) ?e ?apá ak ko-ntí-ss-aa ka?a //
     [1 ref] outside gen [3 ref]-dir-fut-move TM

     'I am going outside.'

(72) táax ?íkp ak
     that [(3 poss)=side] gen

     'the side of that'

(73) ?íkp ak 1ti m-fix //
     here gen on perf-sit

     'There he is (seated).''

(74) ?-áaḵkoo k? án ak m-1-kóoppocí //
     nom-[build house] the inside gen perf-with-black

     'The house is dark inside.'

(75) ?áx ak kw-t-áḵam /
     water gen [3 ref]-DP-arrive

     'When they arrived at the water....'

(76) ?iš ak ko-?p-x-fix //
     here gen [3 ref]-[1 sub]-emph-sit

     'I am (sitting) here.'

(77) ġāa? k? fimmee ak
     sun the [(3 poss)=(dwelling place)] gen

     1-t-yai /
     trans-DP-[go to]

     'Going to the sun's dwelling place....'
(78) k'áax ?émmee ak
next [Camp ?émmee] gen
ko-nt-á-mm-aat //
[3 ref]-dir-[1 pl sub]-perf-[move=pl]
'Next we went to Camp ?émmee.

(79) tákkii ?ak míšx ?ant k-éap-ya //
where gen well land nom-stand-Q
'Which is correct?'

The article ?ak occurs with words which are used as
labels for ideas or concepts.

(80) elefáante ?ak táax šiX k-kámm-i?a //
elephant gen that thing nom-live-decl
"'Elephant'--that's an animal.'

(81) péső ?ak táax kóksar f-itom-i?a //
peso gen that outsider [3 poss]-talk-decl
"'Peso'--that's a Mexican word.'

?ak also occurs with nominalized verb forms referring to
the idea of the action expressed by that particular verb.

(82) xpeēgšoox kou k'w-i-?-šik ak táax
swordfish the [3 ref]-[3 poss]-nom-kill gen that
mos šiX i-m-fippee-i?a //
also thing nom-neg-[be good]-decl
'The killing of swordfish is also not a good thing.'

(83) ko-n-yá-fmox
[3 ref]-[2 poss]-nom-[gather firewood] gen
?/-yo-kéeppe //
[1 sub]-past-like
'I like it that you are gathering firewood., or, I
like the manner in which you are gathering firewood.'

(84) peš k-óitom 1?-n-yáa sa?mées pak
péső nom-[be five] [1 sub]-perf-have oranges some
1-š-éši ak //
[3 poss]-fut-pass-buy gen
'I have five pesos with which oranges are to be bought.'
(85) koukáak koi kw1-ʔ-oqktam ak people the [3 ref]-[3 poss]-nom-[ (look at)=pl] gen
táax šix mišx ?ant k-áap “ši ʔ-máaʔa/ that thing well land nom-stand a nom-[neg=be]-decl
'As the people saw it, that wasn't a good thing.'
(86) xéppée kom m-fippe // šáa? kop ?akx sea the perf-[be good] day the somewhere
kw1-ʔ-yá-it ak 1-m-fippe [3 ref]-[3 poss]-nom-touch gen nom-neg-[be good]
XaʔXáiiʔa // rather-decl
'The sea is good--the day's falling somewhere would not be a very good thing, i.e., The sea is calm--it would be a shame to waste the day.'

5.2. The article kaʔ occurs with singular nouns and nominalized verb forms and denotes the idea of totality, generality, and customariness.

(87) tał kaʔ 1-mf-itox // charcoal gen trans-perf-[eat=pl]
'They eat charcoal.'

(88) ʔást kaʔ iti m-ōkṣ // mountain gen on perf-grow
'It grows on mountains.'

(89) ʔi-ʔ-iʔxiiq kaʔ ʔp-iʔ-xápW // [1 poss]-nom-fear gen [1 sub]-perf-tremble
'Whenever I am afraid, I tremble.'

(90) šáaʔ kix ?ant 1-fi k-ōox kaʔ? sun the land [3 poss]-regain nom-[be all] gen
ʔapx kw1-k-áapp-iʔa // outside [3 ref]-nom-stand-decl
'Every morning the sun comes up.'

(91) xʷáx̑an k? enʔáxw1 kaʔ kw̓-ʔoʔ-ʔiʔit // John the metal clam gen [3 ref]-[perf=intr]-eat
'John eats with a spoon.'
(92) peš k-ôck x ka? šåa? k? iti 
peaso nom-[be two] gen day the on 
ko-?-m-fšš1 // 
[3 ref]-[1 sub]-perf-earn
'I earn two pesos a day.'

(93) Xtfip ka? iti yo-p-ákkiim // 
[clam (sp.)] gen in past-pass-put
This article also occurs following the article ?ak when the latter is used with a nominalized verb.

(94) kʷ-f1-fp ak ka? šiX Š 
[3 ref]-[(3 poss)=nom]-arrive gen thing a 
i-t-kʷâmkk-iʔo // 
trans-asser-[neg=bring]-DECL
'He never brings anything when he comes.'

6. Certain noun phrases are not accompanied by articles. These are described below.

6.1. In a simple sentence of identification consisting of a noun phrase followed by a tense-mode marker, the noun phrase occurs without an article as example (95) illustrates.

(95) ŠiX k-ak-âtcco-1ʔa // 
thing nom-ca-[be timid]-DECL
'It is a dangerous thing.'

The article occurs in the first sentence of (96) but not in the second.

(96) Xepe-án kom ʔåa-ya // III Xepe-ánn-iʔa // 
sea-area the [nom=be]-DECL agreement sea-area-DECL
'Is it the sea bottom? Yeah, it's the sea bottom.'

In (97) no article occurs in the first sentence but one does occur in the second.

(97) Xîmmee-ya // Xîmmee Š iʔmåa-ʔa // 
sardine-Q sardine a nom-[neg=be]-DECL
'Is it a sardine? It's not a sardine.'

6.2. The use of the article distinguishes constructions in which a noun is modified by a possessor (possessive noun phrases) from constructions in which a noun is modified by a relative clause containing a possessive noun phrase coreferent to the noun which is modified by that relative clause. The
article does not occur in the possessive noun phrase in the latter type of construction. These constructions are illustrated below.

(98) kwaam xap 1-pnal k-oii ki? woman the [3 poss]-skirt nom-[be blue] the X-a-fim // emph-ca-enjoy

'The woman's blue skirt is pretty.'

(99) kwaam i-pnal k-oii kop x-a-fim // woman [3 poss]-skirt nom-[be blue] the emph-ca-enjoy

'The woman whose skirt is blue is pretty.'

(100) yoox kix ek kix ?akx God the [(3 poss)=daughter] the somewhere t-o-m-fii? yoke // aser-neg-[not exist] [it is said]

'God's daughter (the sun) didn't die, it is said.'

In noun phrases modified by a relative clause or clauses, the article does not generally occur after each coreferent noun or nominalized form (see examples (2) and (4) above), though it will be pointed out later that this generalization does not always hold true.

The forms i?yaa, inyaa, and yaa are either irregularly derived forms of the verb /-yaa/ 'own, have' and mean 'that which I/you/he own(s)', or are possessed forms using the stem /-yaa/ in the sense of 'possession' and mean 'my/your/his possession'. They contrast with the plural forms which are regularly derived from the verb /-yaa/: i-o-yaa-t, m-o-yaa-t, o-yaa-t meaning 'that which we/you/they own'. Regardless of the actual analysis, these phrases function as relative clauses and so do not take the article if they modify a noun. These forms indicate possession and are used with nouns that cannot take the possessive prefixes. See examples (101) and (102) below.

(101) simaloon ki? troxok yiya k ?akfi Cimalon the truck [(3 poss)=possession] the where t-fi? // inter-be

'Where is Cimalon's truck?'

(102) tapapox ?-anokkaax simaloon ki? yaa paper nom-carry Cimalon the [(3 poss)=possession]
k ?ánt kom ano X-fi? //
the ground the in emph-be

'Cimalon's book is in the sand.'

Relative clauses as above and as in (103) below are apparently non-restrictive and function as adjectives.

(103) k'wágkkee ktám i-kanócą k-táppoočk-im k? person man [3 poss]-boat nom-[be broken]-rep the
[-mmocą] Xo-mést //
[3 poss]-heart emph-[be sad]

'The man whose boat is broken is sad.'

Sometimes the article occurs after the noun which is modified by a relative clause and, though it is not entirely clear that the analysis of these constructions is this simple, in these cases the relative clauses seem to be restrictive. This is illustrated by the following examples.

(104) šíixkám kį? k-šippee koi táax ?ää tёмme //
fish the nom-[be good] the those [nom=be] [perf=say]

'He said that the fish that are good--those are the ones (that will be bought).'

(105) k'wáakkoox kį? šää? kix óx t-ée
[old man] the sun the thus asser-[intr=say]

Yoke //
[it is said]

'Father Sun said thus, it is said.'

(106) šíix kį? k-šóx p ka ?-yo-kéeppe //
thing the nom-[be white] gen [1 sub]-past-like

'I like the thing that is white., i.e., I like white.'

5.3. The article does not occur after the first noun phrase of a complex noun phrase consisting of two noun phrases, the first of which indicates the material of which the object described in the second noun phrase is made.

(107) ?-a-šámt ?-áakkoo kį? in-t-áʔʔo //
nom-ca-adobe nom-[make house] the [2 sub]-inter-see

'Did you see the adobe house?'

(108) šíix k-šíį? ?a-pnáį? in-yáa kį?
thing nom-[be blue] abs-skirt [2 poss]-possession the
"Your blue denim skirt is pretty."

6.4. The article does not occur with non-specific nouns, as illustrated below.

(109) xʷáan k ?áX i-t-así kafé mos pak
John the water trans-DF-drink coffee also some
i-míi-así //
trans-perf-drink

'When John drank water, he also drank some coffee.'

(110) ?e ŋíx ?ap k-i-kʷ ŋ??í //
[1 ref] thing deer nom-trans-kill [past=decl]

'I was a killer of deer, i.e., I used to kill deer.'

(111) ?ant ñp ano ?-s-áal-a?a //
land [?] in [1 sub]-fut-do-TM

'I will put salt in it.'

6.5. Some noun phrases have become compound nouns whose meanings are either somewhat different or drastically different from the strict meaning of the words. The article does not occur with the individual nouns of these noun phrases.

(112) ŋot asáak ak tááX gíXkámm-i?a //
coyote [(3 poss)=son] gen that fish-decl

'Coyote's son—that's a fish.'

(113) ?e?e i-náí ?íp kíx k-áískan-i?a //
plant [(3 poss)=skin here the nom-[be hard]-decl

'This bark is hard.'

(114) gíx fíkkeet
thing [(3 poss)=child]

'pearl'

(115) xfíkkaa k-ñoxp
things nom-[be white]

'olivella shells, sparkplugs'

Likewise, there are numerous idioms that are composed of a verb and a noun phrase. The article does not occur with the nouns of these noun phrases. Example (116) illustrates this
type of idiom.

(116) kʰʰ̪ikkee ktám i-kan ḗa g k-táppoo-k-im k? person man [3 poss]-boat nom-[be broken]-rep the
i-mmoog Xo-mêt // [3 poss]-heart emph-[be sad]
'The man whose boat is broken is sad.'

6.6. The article does not occur with nouns which are used to describe the manner in which the action is done.

(117) kʰóksaʔ kʰ-ka-tikpan-iʔa // Mexican [3 ref]-nom-ca-work-decl
'He is working like a Mexican.'

(118) ?esʔee ?aX kʰ-w-t-apXw̪-iʔa ma-X / stick just [3 ref]-DP-[be broken]-rep SGF-cond
'Whenever it just breaks like a stick....'

(119) ?óoʔFa kʰ-oo-tt̪aX // mule [3 ref]-go
'Go like a mule!' This contrasts with the common use of the definite article with a noun, not necessarily definite, which indicates the instrument used, or the person or object associated with the action.

(120) éenniim kop ko-kw̪a kʰ // knife the [3 ref]-[imp=neg-kill]
'Don't kill it with a knife!'

(121) kʰóksaʔ k̪i? kʰ-w-ka-tikpan-iʔa // Mexican the [3 ref]-nom-ca-work-decl
'He is working with a Mexican.'

6.7. The article is not used with nouns joined by the particle Xaʔ 'and'. Compare the following sentences.

(122) pédéd̪o k̪iʔ yóo-fp // Peter the past-arrive
'Peter arrived.'

(123) pédéd̪o Xaʔ maʃfa Xaʔ ñeʃim ɨssoox ak ano Peter and Mary and camp huge gen in
míi-škan //
perf-[arrive=pl]

'Peter and Mary arrived at the big camp (Hermosillo).'

7. The article is used with certain locatives in expressions that receive a special stress. These expressions are used in demonstrative adjectives and take the place of the article. The articles denoting movement already contain a locative morpheme, as will be pointed out in Section 8, and so these receive only the stress. The following sentences illustrate these constructions.

(124) ?á-X̂i k-óoppooi ?fʊ kop
abs-pet nom-[be black] there the
'that black dog'

(125) ?ást ?fʊ kix
stone here the
'this stone'

(126) koqkáak ?fʊ koi ?a-s-éaaṅgə-aʔa //
people here the [1 pl subj]-fut-leave-TM
'We should go away from these people.'

(127) óX i-t-áli yoke X̂ikkáa tá koi
thus trans-asser-say [it is said] things there the
'She told those people thus, it is said.'

(128) ?ant tá ?ak ?áaʔa //
place there gen [nom=be]-decl
'It was in that place.'

(129) tix tok kʷ-ʔ-tə // ?ant t-oit /
[that one] there [3 ref]-dir-DP-move down DP-touch
?ant ?fʊmoka kʷ-t-áfp ma /
place this [3 ref]-DP-arrive SCP
'He (a bird) came there, landed, arrived at this place....'

(130) ?áąkkoo ≈fʊ ak ano yóo-p //
nom-[build house] here gen in past-[be (standing)]
'He was in this house.'

These expressions are also used as demonstrative pronouns and are used like the demonstrative pronouns ?iʔtix 'this
one', tíñax 'these', tfix 'that one', and táx 'those'.

(131) ñipinta koí 1-m-arfitto-mpi-ʔo  //
       [this one] still nom-neg-pull-still-decl

'This one (a boat) still isn't pulling it (a net).'

(132) tíš koí ʔáas-ʔi  //
       here the [nom=be]-decl

'These are they.'

8. There is a close phonological and semantical relationship between the definite articles and certain verbs. The following chart illustrates these relationships. The verbs are cited in the absolutive "subject" nominalized form.

<table>
<thead>
<tr>
<th>ARTICLE</th>
<th>VERB</th>
<th>GLOSS OF VERB</th>
</tr>
</thead>
<tbody>
<tr>
<td>kíʔ</td>
<td>k-íʔ</td>
<td>be (sing.)</td>
</tr>
<tr>
<td>kci</td>
<td>k-óii</td>
<td>be (pl.)</td>
</tr>
<tr>
<td>kep/kap</td>
<td>k-áap</td>
<td>be (standing, sing.)</td>
</tr>
<tr>
<td>kix</td>
<td>k-fíx</td>
<td>be (seated, sing.)</td>
</tr>
<tr>
<td>kom</td>
<td>k-óom</td>
<td>be (lying, sing.)</td>
</tr>
</tbody>
</table>

The articles denoting movement also correspond directly to two certain irregular verbs. The verb mó-kk-ʔa (toward-nom-move) may or may not be used with a locative. The plural form is mó-kk-ʔaat. The verb ntí-kk-ʔa (away-nom-move) is used with one of several locative morphemes; a common form is tok ko-ntí-kk-ʔa (there [3 ref]-away-nom-move). The plural form is ntí-kk-ʔaat.

Since the nominalized form above is the form always used in lieu of a relative clause when the subject of the relative clause is coreferential with the noun that the relative clause is modifying, it seems probable that the definite article is historically related to the corresponding verb. This thesis is also supported by the fact that the position of the article in respect to the noun also corresponds to the position of a relative clause (the nominalized verb form) in respect to the noun; they both occur after the noun. The rule governing the choice of article would be similar and historically identical to that governing the choice of verb of position or movement, whether the verb serves as a main predicate or in a relative clause.
The data for this paper were gathered by my husband Edward W. Moser and me during the past twenty-five years of residence in the Seri area under the auspices of the Summer Institute of Linguistics. I have worked with many Seri and extensively with Maria Thompson, Lorenzo Thompson, Armando Torres and Roberto Herrera T. I am grateful for their help. A concordance of Seri texts, produced at the University of Oklahoma under National Science Foundation grant GS-1605, Project for Computer Support of Linguistic Fieldwork, was used in the analysis. I am especially grateful to Steve Marlett for his insights and assistance in organizing this paper.

The Seri data is presented in a form that is quite close to the surface form. Square brackets are used to enclose a gloss containing more than one word. = joins a gloss of more than one word when the Seri form is complex. / marks division between clauses. // marks division between sentences. Hyphens mark morpheme boundaries. The following abbreviations are used:

abs, absolutive
asser, assertive
ben, benefactive
cs, causative
cnd, conditional
dcl, declarative
dir, directional
ddf, dependent future
ddp, dependent past
emph, emphatic
fut, future
gen, general article
imp, imperative
inf, infinitive
inter, interrogative
intr, intransitive

neg, negative
nom, nominalizer
pass, passive
perf, perfect
pl, plural
poss, possessive
q, question
ref, referent
rep, repetitive
scf, subject change future
scp, subject change past
sg, singular
sub, subject
tm, tense-mode marker
tns, transitive
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