SURVEY REPORTS

1981

Report #1
Survey of California and Other Indian Languages
SURVEY REPORTS

1981

DEPT. OF LINGUISTICS
UNIV. OF CALIFORNIA
BERKELEY, CALIFORNIA 94720
Reports from the Survey of California and Other Indian Languages

Edited by Alice Schlichter, Wallace L. Chafe, and Leanne Hinton

Report 91

copyright © 1981 by the Survey of California and Other Indian Languages
cover design (Santa Barbara Chumash rock painting) by Leanne Hinton
Contents

Michael J. P. Nichols

Old California Uto-Aztecan .......................... 5

Kenneth W. Whistler

Ablaut in Hill Patwin ............................... 42

Alice Schlichter

Notes on the Wintu Shamanistic Jargon ............... 95

Wallace L. Chafe

Differences between Colloquial and Ritual Seneca
or How Oral Literature is Literary .................. 131

Jesse O. Sawyer

The Wappo Glottal Stop ............................. 146
Old California Uto-Aztecan

Michael J. P. Nichols

San Francisco, California

Linguistic reconstruction of California languages is complicated by the pervasive intersection of linguistic forms and conventions that transcend genetic boundaries throughout the California linguistic area (cf. Haas 1964). The areal spread of phonological features, patterns of sound symbolism, shared onomatopoeic and other oral cultural traditions, and whole grammatical systems of pronouns, instrumentals, and affixes is accompanied by massive lexical borrowing. Californianists are at last emerging from a restrictive stage analogous to that of the geologists of a few years ago. When the geologists were confronted with evidence of previous contact among distant continents, the majority reacted by postulating now-completely-lost land bridges that spanned the oceans, or by denying the validity of the contact evidence. It has since been proven that the continents themselves had moved, and not just once, but many times. Linguists have the exact counterpart in their attempts to span the geographic separation of related languages by postulating lost dialect chains based only on the separation, or by denying the relationship where the physical separation appears too great for any particularly intimate contact. Now we are rediscovering population mobility.

Long distance population movements in short periods of time are amply reported in contemporary ethnographic studies, and it must be remembered that the size of most hunter-gatherer groups was never very large. Rather they were small bands, often in relatively separated
locations, who were capable of complex and sophisticated movements on an annual basis. Exploitation of different seasonal resources often extended over wide altitudinal or geographic ranges. There is no reason to believe that the prehistoric picture was greatly different. Interior California and the Great Basin, solidly covered with blocks of color on all linguistic maps, were not solidly populated. Rather, most areas were dotted with moderate-sized groups centered on the lakes, sinks, streams, and mountain springs; with selective use, but not primary occupation, of the surrounding mountain or desert scrub areas. Boundaries between neighboring groups fluctuated on both social and ecological variables.

The reconstruction of the linguistic prehistory of the California linguistic area is being changed to reflect new discoveries about population movements and the nature of prehistoric occupations. Consequently, patterns of social contact very different from those of the historic era must be recognized and their effects on the developing languages analyzed. In order to avoid confusion with the modern California linguistic area, the reconstructed contact patterns or proto-linguistic areas will be called Old California. Temporally, Old California subsumes several distinct stages, but until the relative order of the stages becomes better known, it is least misleading to group together all of the stages prior to the present contact pattern. The picture emerging of Old California is one so full of movement that the complete analysis will be a lengthy process. The geographic extent of Old California includes the Central Valley and surrounding mountains together with much of coastal California, equivalent to the heartland of the modern linguistic area. Old California shows a longstanding
cultural connection with the proto-linguistic area to the north, here called Old Oregon. Earliest Old California correlates spatially with the area occupied by the ancestors of the modern California Hokan peoples. Similarly, Old Oregon was probably the area occupied by speakers of the proto-languages for groups identified as Penutian. The nature and extent of involvement of other linguistic families in the areas are still in dispute.

Fortunately, recent linguistic reconstructions of the proto-languages in several California and nearby languages have now made it possible to provide the beginnings of a relative chronology for the network of lexical borrowings that have long mired lexical reconstruction at the Hokan and Penutian levels. Reconstructing the order of development of particular sound changes is particularly useful for recognizing and dating loan words. Attempts to relate the new linguistic evidence to new developments emerging from archaeology and ethnology are also providing new directions for linguistic investigation.

The most drastic and most useful of the recently proposed revisions of Old California is the hypothesis of multiple entries by individual California Penutian families (cf. Whistler 1977, 1980 ms; Shipley and Smith 1979). This hypothesis has had the effect of opening the center of Old California to other groups whose reasonable physical access might have been blocked by a stationary and monolithic California Penutian kernel. An obvious proposed addition to central Old California is Uto-Aztecan (UA) which has often been suggested as a source for some of the areal features noted in Central California languages even from its present peripheral location (see Jacobsen 1966a, b).
The wide distribution of UA languages from Wyoming well into
Central America is indicative more of the mobility of the speakers than
of the degree of divergence, since all of the UA languages are closely
related. The binary division of the family into the geographically de-
ined Northern Uto-Aztecan (NUA) and Southern Uto-Aztecan (SUA) areas
is useful for the following discussion, but it may eventually be dis-
carded in favor of a larger number of coordinate units. NUA includes
the four groups north of Mexico: Hopi, Numic, Takic, and Tübatulabal.
SUA includes Pimic on the Arizona-Sonora border, Aztec in central
Mexico and south into northern Central America, together with a number
of separate divisions in northwestern Mexico. The late expansion of
Aztec into the heart of Mexico and the diversity of languages to the
north has always suggested a more northerly origin for the family as a
whole. A PUA homeland somewhere near Pimic is often suggested as a
geographical compromise. Reanalysis of the evidence based on the pat-
terning of Old California contacts is now indicating a more radical
solution to the problem of locating the UA homeland.

In order to understand the proper relationship of UA and Old
California it is necessary to trace backward the NUA population move-
ments based on internal linguistic evidence. The source area for the
dispersal of the four NUA groups is in southern California. This is
the area of greatest linguistic diversity for the NUA languages as well
as the area indicated by ethno-biological reconstructions (see in parti-
cular Fowler 1972 for a discussion of previous conclusions and the
current opinion). Roughly, the NUA homeland included the southeastern
foothills of the Sierra Nevada and Tehachapi ranges and neighboring
desert scrublands.
Tūbatulabal is still located in what is traditionally assumed to be its original position in the homeland. However, fragmentary evidence of groups like the Bankalachi living among the Yokuts to the north suggests a previous extension of Tūbatulabal into the southern San Joaquin Valley and western Sierra foothills.

The Takic group is also in or near its presumed homeland position except that most researchers would agree that the Takic were not originally a coastal people (cf. Bright and Hill 1967). Some Takic subgroups apparently spread south and west over the coastal ranges from the original homeland after the differentiation of proto-Takic from the other NUA proto-languages. All of the Takic languages are still geographically a single unit.

The Hopi moved off by themselves to northern Arizona and have acquired the pueblo agricultural complex (see Shaul 1980 ms for discussion of recent theories of Hopi movements and internal linguistic development).

Some languages of the Numic group have remained in the homeland area, but others have spread through a vast area of the west with maintenance of dialect chains and social connections even over hundreds of miles. The Numic spread is relatively recent and continued even after European contact. Comanche, the only Numic language geographically separated from the main block of Numic, looks phonologically different, but the changes are actually only superficial. Originally, the Comanche were part of northeast Shoshoni who obtained the horse from linguistically unrelated groups to the east, adapted to the plains equestrian culture, and ended up in Texas and Oklahoma.

Ute-Southern Paiute-Chemehuevi is a single language spoken by three
groups that have become ethnographically distinct only recently. Like the Comanche, the Ute became plains equestrians and raided the pueblos and plains, and also the remaining Southern Paiute. The Chemehuevi have diverged from the Southern Paiute as they came into closer contact with the Yuman-speaking Mohave.

Some Northern Paiute bands have spread north beyond the range of the pinenut, but they have retained all of the pinenut mythology intact. Some of this same group of Northern Paiute occasionally moved east to hunt bison with the northern Shoshoni. Some settled there and became known as Bannock. However, individuals often moved back and forth between the two areas. In fact there was a constant contact and interchange along the Northern Paiute interface with the western and northern Shoshoni. Another recent extension of Northern Paiute was the offshoot of the Pyramid Lake band who occupied the Honey Lake Valley in northeastern California, apparently replacing Maidu speakers.

Although they maintained contact with the eastern Mono, western Mono crossed west over the Sierras and were in intimate contact with their Miwok and Yokuts neighbors. The Northfork Mono, whose dialect is most often cited as Mono in comparisons, also spoke Southern Sierra Miwok and Chukchansi Yokuts.

Intensive Euro-American contact occurred only within the last hundred years and often only in the generation just before that of the oldest living speakers. Most of the linguistic contacts between Numic languages and their unrelated neighbors is assumed to have been independent of direct Euro-American contact, and to reflect aboriginal patterns of contact.

All of the recent adjustments above are assigned to the late Numic
period. The middle period of Numic development is defined by the split of the inner and outer languages, that is, the divergence in Western Numic (WN) of Northern Paiute from Mono, in Central Numic (CN) of Shoshoni from Panamint, and in Southern Numic (SN) of Southern Paiute from Kawaiisu. The middle phase was apparently triggered by the intensive infiltration of the Great Basin by peripheral bands of the inner languages, who then expanded into the Basin as separate languages. The earliest period of Numic would be the division of Proto-Numic (PN) into the three branches, WN, CN, and SN, which presumably occurred in approximately the positions of the inner languages today within the NUA homeland.

Prior to the movements described above, the proto-languages of the four NUA groups were clustered about their common center of dispersal at the southeastern corner of Old California. Early direct contact with the Oregonian and Californian languages who are now the neighbors of Northern Paiute is implausible for PN or common NUA. The previous explanation of resemblances between UA and the northern neighbors of Northern Paiute has been to assume a source in or through Northern Paiute. This is clearly no longer possible except for late Numic contacts; anything inconsistent with late contacts must have another explanation.

Unfortunately, the close relationship of the UA languages also extends to the phonology. Identical sound correspondences between NUA and SUA are generally expected, e.g. NUA\textsuperscript{n}:SUA\textsuperscript{n} \textless PU\textsuperscript{n}; NUA\textsuperscript{a}:SUA\textsuperscript{a} \textless PU\textsuperscript{a}. Therefore the majority of loans from UA into another language or into a UA language from outside cannot be dated relative to a particular stage of UA unless the forms have unusual distribution or
unusual correspondences. In most cases a recent exchange cannot be
ruled out because the forms lack any criterial features, However, a
few sound correspondences between NUA and SUA are useful for dating
loans relative to the time NUA and SUA separated. The traditional
PUA sound inventory includes: *p *t *c *k *kw *?

* s *h

*i *u

*m *n *-ŋ-

*a *o

*w *-l- *y

The correspondence of NUA (and Pimic) *e: SUA (except Pimic) *e < PUA *e
which was always troublesome has had to be discarded since Campbell and
Langacker 1978 traced Proto-Aztecan to *e rather than the *e that had
been assumed from Classical Aztec. The PUA alternations of *k/*w, *c/
*s, and *s/*h do not follow the NUA-SUA isogloss but appear scattered
throughout the family. There remain only three NUA: SUA non-identical
correspondences, and these are defective in that they occur only
medially:

NUA*ŋ: SUA*ŋ, usually called PUA*ŋ-

NUA*n: SUA*ŋ1, usually called PUA*ŋ-

NUA*y: SUA*c, which might well be called PUA*ŋ- except that the
correspondence occurs only in two sets, NUA*kíyu: SUA*kícu 'fish' and
NUA*míya: SUA*míca 'moon', which are usually treated as special cases.

The restricted medial distribution of these non-identical corre-
respondences has led to speculation that PUA*ŋ- and *-l- could be derived
from other reconstructed sounds. Langacker 1976 suggested that the de-
fective sets may be related to stress-affected consonant gradation.
Miller (p.c.) believes the CN and PN*hC medial series to have been
originally conditioned by stress placement. There is a similar problem
in other Old California languages; Langdon 1979 discussed the apparent
relationship of Proto-Pomo preconsonantal augments *h and *w (cf.
McLendon 1973:45-54) and stress placement on the root. Nichols 1974
remarked on the apparent correspondence of vowel length in other NUA
languages to the first element of PN complex medials. The details re-
main uncertain, but the frequent association of vowel length and stress
may well be the main clue to linking stress with medial development in
several UA groups.

Although phonemic /l/ occurs in three of the four NUA groups, ab-
sent only in Numic, none of these /l/ correspond to the PUA*-l-. Most
are found in obvious loans or are derived from other PUA sources, e.g.
1 < PUA*t in Takic and Tubatulabal (compare Aztec t1 < PUA*t), and Hopi
1 < PUA*n. The consensus now is that PUA*-l- is ultimately from PUA
*n, although the conditioning is unclear.

Reconstruction of PUA*-ŋ- was initially reinforced by the wide-
spread occurrence of velar nasals in NUA as well as reconstruction of
*ŋ for PN and Proto-Cupan, a subdivision of Takic (cf. Nichols 1971b,
1974; Bright and Hill 1967). Most PUA*-ŋ- developed in NUA as /ŋ/ in
those languages with phonemic /ŋ/ and as /n/ in languages like Shoshoni
which lack /ŋ/. Langacker reexamined the evidence for PUA*-n- and used
a synchronic alternation in Numic of lenis medial /m/ > [m~ʊ~n~ʊ~ʊ]
(see Nichols 1974:64-67) as a model for a sporadic special evolution of
the PUA*-ŋ- from PUA*m:

* m > m, the normal initial and medial development
* m > ʊ > w, frequently from medial gradation
* m > ʊ > ŋ > n, as a sporadic alternate from medial gradation.
The intermediate stages are all synchronically attested in Numic. The last stage would be the languages which have no phonemic /n/, such as Shoshoni and all of the SUA languages. One of the examples cited by Langacker which always had to be treated as a special case because of the Numic reflex now seems more regular:

PUA*kuma 'husband' (formerly reconstructed *kuŋa)
PN*kuhma
other NUA*kuga
SUA*kuna

Note that this set also shows the association of a complex medial in PN with an exceptional development in the correspondences.

Langacker also proposed that PUA*kʷ developed to *w in a similar fashion, but the evidence is much more complicated since the proposed change was regularly reversed by PN morphophonemics. The rule is still operating in WN but appears only in lexicalized form in CN, e.g. w > kʷ, ñʷ; parallel to y > č/t, ň which recalls the unusual correspondence in 'fish' and 'moon' noted above (see Nichols 1974:53-64).

Even in forms which lack the criterial phonological correspondences, some loans can be identified as occurring in the late Numic period because of their distribution within Numic. In order to remove from consideration as possible early loans many shared forms with suspicious distributions, the following observations are offered.

Nichols 1971a noted the very small number of lexical borrowings along the northern rim of Numic where Northern Paiute and Shoshoni are in contact with Sahaptian languages. Some borrowings into these Numic languages are shared with Chinook Jargon and other languages of the Columbia Plateau. Most are ultimately from French, although they
probably antedate direct European-Numic contact. Nez Percé, one of the Sahaptian languages, has only two loans for which a source in Numic is presumed (cf. Aoki 1975). Similarly, most of the shared items between UA and Washo are compatible with late contact between modern Northern Paiute and Washo since most of the presumed UA forms are exactly like Northern Paiute, and most of the presumed Washo forms are found only in Northern Paiute. A typical late borrowing into Northern Paiute only is mo'ko 'shoe', cf. Washo mokgo (similar forms are found in other Sierran languages and the ultimate source is unknown). Other apparent loans are consistent with a comparatively recent association of the languages of the California Sierras with WN and northern Shoshoni and is evidenced by chains of borrowings. Presumably these borrowings reflect the patterns of contact and trade that are ethnographically attested. Similar contact chains occur at the southern and southwestern edges of Numic territory. The evidence for native borrowings matches closely the pattern of absorption of Spanish loans into Numic reported in Nichols 1973. Johanna Nichols analyzed five examples of a California-type of sound symbolism which appears to have diffused from California in the late Numic period since its distribution is limited in UA to the same WN-Shoshoni contact zone where late Numic lexical borrowings are found; cf. J. Nichols 1971.

A few examples that might date to middle or early Numic, or possibly to PN, indicate an association of Southern Sierra Miwok (SSM), or possibly Sierra Miwok as a whole, with Numic speakers different from their modern WN neighbors. WN has lost a series of phonological distinctions preserved in both CN and SN and reconstructed for PN; therefore, shared forms with Sierra Miwok that reflect these distinctions
cannot be from WN. In other sets the Sierra Miwok forms are shared with CN or SN, but lack a WN attestation. Two such examples:

\[ \text{PN(CN/SN)*taku} 'thirst': \text{SSM tak}"Hp, takp 'thirst, to thirst', \]

where the final element in SSM is the common Numic participial ending *-p₉.

\[ \text{PN(WN/CN)*ci(')ku > WN*ci'ku, Shoshoni ciŋku 'type of seed beater'} \]

> 'snowshoe' (from the similar shape): SSM ciŋku.

For many years the WN languages, Northern Paiute and Mono, were poorly attested, and the correspondences between Numic and the other UA languages were unsystematic. Resemblances between words of general distribution in UA and forms in non-UA languages bordering WN had been explained as modern contact or early contact between the neighboring languages. As more data on the UA languages and their reconstruction became available, this explanation became untenable. Although the placement of the NUA homeland remains secure, the evidence for earliest contacts with Old California comes not from the south and does not involve NUA as might be expected. Rather, earliest contacts were with languages far to the north and involved the complete UA family including SUA. Compare the following loan correspondences:

\[ \text{PN*sana} 'pitch, gum' < \text{NUA*sa·na : SUA*sala; Washo ʔála?} \]

\[ \text{PN*P}_w\text{'ono 'large pack basket': Maidu wóló 'any large, cone-shaped basket'} \]

\[ \text{PN*huna(') 'badger' < NUA*hu·na 'badger' > 'bear' (with augment): Washo hōʔla? 'badger or raccoon'; Maidu hōhlə 'badger'} \]

The phonological irregularities in these interfamily borrowings
correspond to exactly parallel irregularities within UA. If a source in UA is postulated for the borrowing, then the phonological correspondences require a source in various UA stages prior to the modern NUA languages, probably no later than common PUA prior to the departure of SUA. If borrowing into UA is assumed, then reconstruction of the borrowed form in PN, NUA, or PUA insures that the contact occurred at a significant time depth. Additionally, distributional evidence from the attestation of typical Old California words in the SUA groups like Pimic and Aztec makes an early contact between Old California and SUA the only way to explain the modern UA distribution of the forms. With both NUA and SUA in contact with Old California, a complete revision of the presumed PUA homeland and UA movements is required.

Although there are several possible ways by which the UA contact with Old California could have occurred, most alternatives involve extrapolations not supported by the data. Accordingly, in the absence of concrete evidence for any of the complicated alternatives, it is reasonable to take the simplest solution as a working hypothesis, i.e., movement by UA at the level of PUA is simpler than moving all of the other languages in an unbelievably complex manner. It is interesting to observe that the hypothesis of UA movements presented here is completely compatible with movements by other groups suggested by Whistler 1977, 1980 ms and Shipley and Smith 1979.

All of the evidence for UA contacts is consistent with the assignment of the PUA homeland to northern Old California or southern Old Oregon followed by a gradual southerly displacement and fragmentation that led to the modern UA distribution. As a working hypothesis, the
contacts might have occurred as follows:

1. PUA (or pre-PUA) is at the northern edge of Old California. PUA drifts south as early Penutian groups follow or accompany the PUA speakers into Old California. (Period of contact with several Old Oregon groups, Proto-Miwok-Costanoan, Proto-Maidu, and probably Yukian and some Northern Hokan.)

2. PUA dialect differentiation is well underway as primary occupation is in central California including part of the Central Valley and the central and southern Sierras. (Period of contact with Proto-Pomo, some Northern Hokan, and possibly Proto-Chumash and some early Yokuts.)

3. SUA separates immediately after a period of direct contact with Eastern Miwok, Washo, and Maidu, resulting in UA displacement from central California and the central Sierras. SUA leaves the Old California area.

4. NUA occupies the southern San Joaquin Valley and southern Sierras, with NUA gradually moving over the Tehachapis and into the NUA center of dispersal. (Period of contact with Esselen, Yokuts, Plains and Sierra Miwok, Obispeño Chumash, and possibly other Chumash languages.

5. NUA divides and begins dispersal as abandonment of the southern San Joaquin Valley and the southern Sierras continues. Sierra Miwok is in contact with PN for a time.

6. WN expands north up the east side of the Sierras and Northern Paiute resumes a UA contact with Washo, Maidu, Achomawi-Atsugewi, Klamath, and Sahaptian.

The new evidence of the involvement of UA as a full participant in early exchanges among the Old Oregon and Old California languages also
permits rejection of certain previous hypotheses as unworkable. For example, a previous occupation of the Great Basin by PUA or other early UA groups to explain the contacts with the Sierran languages would not explain the evidence of UA interaction with Proto-Pomo and much of Northern Hokan or with the coastal block of Esselen, Salinan, and Chumash. Ad hoc reconstruction of a lost PUA or NUA branch with SUA features or a lost SUA population travelling a circuit in northern Old California cannot explain the attestations in surviving and very distant SUA. Our knowledge that the majority of Old California groups were small precludes population of more than a small area by PUA speakers at any one time; hence, long dialect chains would be improbable. It is also unlikely that population by UA speakers over a wide area would produce the apparent old in the north and more recent in the south contacts without concomitant population movement. At present the available lexical materials from Oregon and California are more from the montane areas than from the lower areas that were the earliest occupied by Euro-American settlers. The montane bias is also apparent in the evidence for UA contacts. As more data becomes available from the languages of the large valleys, details may force modifications in our hypothesis. Even though the sets for which an early date must be assigned, either from the few phonological criteria available or from internal distribution within UA, would necessarily be only a small fraction of the total number of terms which would have been borrowed, the number of sets which can be identified as early is too large to explain except by prolonged and intimate direct contact.

Ideally, justification for all of the proposed UA contacts and movements would require reference to all the data at once. The huge
number of potentially intersecting forms make complete discussion of each possibility an interminable task. This is especially true since the fact of contact or relationship cannot be assumed, but is rather the goal of the investigation. The intent here is to demonstrate a degree of involvement by PUA on a par with the other Old California languages, rather than be dogmatic about what does or does not constitute a good comparison. To that end several correspondences have been noted that are marginal at best, since we do not yet have the methodology to securely exclude them. It is only to be hoped and expected that the refinement of the details of this intense contact will alter or exclude some of the etymologies presented.

The large number of mutually loaned forms makes it certain that reborrowings of the same term have occurred, leading to attestation of similar and ultimately related forms in a single language. Borrowings of cognates from related languages also must have occurred, giving the same result of multiple attestation of a single base form within a language. The overwhelming, area-wide popularity of generating folk-etymologies, puns, and elaborate "just-so" stories insure that some completely foreign terms have assumed native guise either with or without phonological alteration. There can be no a priori exclusion of a word as a borrowing just because it has an "etymology" as a native construction. There is no doubt that the vast majority of early loans are undetectable as such without resort to external comparison. Even then, the direction of borrowing may never be determined.

In order to demonstrate the wide range of possible and probable contacts, a single representative set has been selected from the context of a larger investigation of Old California words for 'house'.
The semantic developments of 'house' encountered in the set are comparatively straightforward. Some words for 'house' simply mean 'dwell-ling place' and may be applied to animal as well as human habitations. A particular reinforcement is provided by the resemblances between the distinctive semi-subterranean pit-houses which were often mound over with earth, and the similar hummock of soil thrown up by a rodent around the entrance to its burrow. Glosses of 'house' and 'hole' for the same linguistic form result in several languages. Often the pit-houses or roundhouses were built for specialized ceremonial purposes, and glosses of 'roundhouse', 'ceremonial house', 'dance house', 'sweat house', and 'menstrual hut' all may refer to similar structures as well as to other types of construction. The close contact of one group with another whose style of building or method of using a building differed from its own provides a rationale for the common borrowing or terms for 'house' and other buildings.

The phonological differences in the various forms are described here as regular where the same correspondence occurs in several other sets as well. Often the correspondences approach the regularity traditionally used to demonstrate a genetic relationship, and in fact the resemblances of some terms may well have a genetic basis. The determination of a genetic relationship would only alter the type of contact proposed and not the fact of contact.

One of the several words reconstructable in PUA for 'house' appears below:

PUA       *kani 'house' (formerly reconstructed *kali)
SUA       *ke₁/ᵣ 'house'
NUA: *kani 'house'
PN(CN/SN): *kahni 'house'
Hopi: *kâni > -qani 'home, place'
Tb: *kani > *qani > *hani > l 'the house'

If *kani is a borrowing into UA, it can be no later than PUA since
it is attested in SUA as well as NUA. If *kani has been loaned into
any of the other Old California languages, it cannot have been trans-
mittted via Northern Paiute or Mono since the PN term was lost and re-
placed by an unrelated word in Proto-WN. The WN languages completely
lacked attestation of *kani until Northern Paiute borrowed Shoshoni
kähni as ka(·)ni in a few dialect areas where it is still perceived as
adapted from Shoshoni by the native speakers. The optional length
appears to reflect the Shoshoni position of the stressed vowel. Any
suggested contact with UA for *kani would have to reflect early contact
only from internal UA evidence.

The Hopi word, cited usually in the expression meaning 'my house,
my place', has been replaced by a different PUA root in the regular
meaning 'house'. The Hopi replacement is shared also by other UA groups
such as Takic and Pimic who lack reflexes of PUA*kani.

The development of PUA*kani is phonologically irregular in that
both PN and SUA reflect secondary changes which could have been con-
ditioned by the same or related factors in PUA. Since the details re-
main unclear, it is most reasonable to maintain the PN and SUA shifts
as joint exceptions from *kani. As was discussed previously, the
traditional reconstruction of PUA*1- obscures the secondary quality
of the SUA development by implying a regular *1 > 1 while treating PN

22
as the sole unusual development in several sets beside this one. Reconstruction of PUA*kani should be considered provisional until the details of the UA shifts are defined.

In common with other languages in the area, NUA had a general phonological rule backing *k to *q before *a and *o. Later developments in Hopi, Takic, and Mono which altered the quality of the conditioning vowels led to a secondary phonemic distinction between *k and *q not present in NUA. Tübatulabal (Tb) reflects NUA*k before *a as h presumably from a sequence similar to that reconstructed for several Old California languages including Proto-Pomo and Proto-Chumash of *q > x > h (~ʔ~ ø).

Two Old California languages have borrowed nearly identical forms of PUA*kani together with an associated *-p£, the participial and noun class marker noted previously. The suffix is very common in both Numic and Tübatulabal and occurs in several combined forms with other suffixes. One such combination common to both NUA groups is *-p£(n)ci, an affective used originally on words for animals to mark the animal as a mythical character. Usage has often generalized to that of a noun class marker for animal words, and was absorbed with that meaning into Esselen (see Beeler 1978 for several examples). Presumably, these UA borrowings occurred at the same general time as the Esselen contact when UA groups were in the northern San Joaquin Valley:

Obispeño Chumash qʰni pu 'house' (also recorded qʰnipo, knipu, qnipu)

Plains Miwok hané-pu- 'house, roundhouse: dancehouse (in comp.)'

The long vowel and stress of Plains Miwok and the choice of which vowel
to retain in Obispeño suggest a common origin in UA*kanɨ-pə which is not phonologically irregular enough to date securely within UA. However, considering the location of the recipient languages, an early common NUA would probably be the latest possible source. Klar (p.c.) notes that Obispeño consistently shows more UA influence than the other Chumash languages although it is now one of the farthest from the current position of any UA language. The word for 'house' cited here is not attested in the other Chumash languages. The several sets for which a case for PUA contact with Proto-Chumash could be made clearly belong to an earlier period than the borrowing of Obispeño Chumash 'house' unless the contact was indirect through an intermediary language for which there is no evidence.

Broadbent and Callaghan 1960 linked Plains Miwok hané-pu- with a Proto-Sierra Miwok *han(·)i- 'house' based on the following forms from Northern, Central, and Southern Sierra Miwok:

- NSM haŋ·i-, haŋi- 'house; sweathouse, dancehouse'
- CSM haŋ·i-, haŋî- 'roundhouse, ceremonial house'
- SSM haŋ(·)i- 'dancehouse'

They reconstructed a Proto-Eastern Miwok form with a medial *ŋ in the 1960 article, but by Callaghan 1972 *ŋ was reconstructed only for Proto-Sierra Miwok, and this set was omitted from the discussion.

Although UA influence has been suggested for the source of *ŋ in Miwok based on the Sierra Miwok attestations, the majority of forms that contain Sierra Miwok *ŋ do not have correspondent forms in UA. However, there is a striking similarity in the distribution with both Miwok and UA *ŋ relatively rare and generally restricted to root medial
or suffix initial position. The Sierra Miwok words for 'house' show
the same type of vowel and consonant length variation with stress that
in Numic and NUA occurs with medial irregularities in the cognate sets.
Since attempts to derive Sierra Miwok *n from Proto-Miwok *n are uncon-
vincing, it is possible that a source in *m similar to the development
in UA should be sought. In any case Sierra Miwok *hani- shows the
specialized meanings often associated with loans and probably reflects
a Proto-Sierra Miwok borrowing. If UA is the source, then the presumed
PUA antecedent for a UA*hani would be PUA*kami 'house', rather than the
PUA*kani reconstructed on internal UA evidence.

Recalling the sporadic development of PUA*m > n, it is probable
that the process has been present throughout most of UA prehistory; it
is presumed for PUA and for synchronic descriptions of the Numic lan-
guages. It would not be surprising that some original PUA*m fell to-
gether with PUA*n prior to the derivation of SUA*-l- from PUA*-n-.
Similar environments are presumed for the changes of *m > *ŋ and *n > *l
so that the crossover of *m to *n would not alter the inherent suscep-
tibility to the sporadic change. The time at which pre-NUA*kaŋi from
revised PUA*kami became NUA*kani is uncertain because neither Plains
Miwok nor any of the Chumash languages have /ŋ/, and the UA source for
those languages could equally well be *kaŋi or *kani.

The proposed revision of PUA leading to the reconstruction of
*kami rather than *kani is confirmed by reference to languages farther
to the north where an early PUA contact is suggested. Several of the
examples show a morphological link with Takic and Tübatulabal in that
the borrowings show the association of the PUA absolutive *-t- (see
Steele 1979) which becomes -l in the modern languages with the recon-
structured word for 'house'; cf. modern Tübatulabal hani'-l 'the house'.

The northernmost contact proposed for PUA in this set involves the Sahaptian languages where the reconstructed Proto-Sahaptian form shows the PUA*-t* absolutive as *t. All of the more southern languages show *l only. Unfortunately Proto-Sahaptian also lacked *n so that the Sahaptian forms could reflect either *n or *n. The intermediate UA form could be *hunj'-t or *hanj'-t.

Proto-Sahaptian *?anj'-t 'house' (reconstruction mine)
Nez Percé *inj'-t 'house'
North Sahaptin ?anj'-D 'house'

In North Sahaptin diminutive root reduplication with the diminutive sound shift n > l introduces an interesting parallel to the *l from the SUA variant of the root:

North Sahaptin ál'-Dál-D 'little house'²

Washo has borrowed -ájal 'house; v.i. to house' from a UA source similar to *hunj'-l. The Washo form has been previously interpreted as an irregular development from Proto-Hokan,³ but the identification of the Washo form as a UA loan removes the problem of explaining the medial /ŋ/ and final /l/ which do not appear to be typically Hoking. Possibly Washo kája 'cave' could be traced to a similar UA source as well. The vowel assimilation in Washo, as in Sahaptian, is of the unstressed vowel to the stressed vowel, but it is unclear whether the stress assignment derives from the donor or from the recipient language.

PUA*kamí-l > *kawi-l is a likely source for a likely pre-Proto-
Wintun *qawil based on:
Proto-Wintun *qewel 'house' (reconstruction mine)\(^6\)

Wintu qewel
Nomlaki kel, k'el
Patwin kewel, k'ewel

The source of Proto-Wintun *q is unexplained without reference to the
UA*a of the source where a back allophone of *k would be expected from
internal evidence. Notice too that the PUA reconstruction *kam\(\i\) and
not *kan\(\i\) is required for both Washo and Proto-Wintun. An apparent
borrowing from UA in Yawelmani Yokuts ka-wiy 'tent' is presumed to
have had a development similar to Wintun.

An interesting example of an early possible borrowing from PUA
*kan\(\i\) is found in the Acomawi dialects. In the Acomawi-Atsugewi
materials available most of the segmentation and grammatical analysis
is uncertain, but the following examples appear well explained by the
proposed segmentation.

Astrariwai (Achomawi) meka\(\i\)-mi 'menstrual lodge, a small sweat-
house of bark large enough for three or four women' is clearly
related to
Achomawi timakamit 'sweathouse' which in turn appears to be
derived as a deverbal noun from a single verb stem attested
in three shapes:
Achomawi - maqam- 'to sweat'
\(\rightarrow\)am qam- 'to take a sweat bath'
\(\rightarrow\)amaqam- 'to build a fire in a sweathouse'

The combination of the three shapes suggests a revised gloss 'to
use a sweat house' which appears on internal evidence to contain a verbal root *ama 'to use' and the nominal root *kāmī 'sweathouse' borrowed from PUA *kāmī 'house'. Compare:

Achomawi -amasjə 'to sweat'

anjuy 'ceremonial or winter house; winter'

cf. anjē- 'cold'

This second verb 'to sweat' appears to be exactly comparable in formation with the first with *ama 'to use' followed by a root for a sweat house-like structure from a different source.

The postposed -1 absolutive from PUA *-tj is matched in Takic not only by -1 but also by a series of affricates and spirants which usually appear with a palatal, retracted, or fully retroflexed articulation. Interpenetration within Takic and levelling in the individual languages make it difficult to reconstruct a Takic root noun with a unique development of the absolutive. A Takic CVCV root noun may occur with a postposed l, s, č, ŋ, č, or a reasonable approximation in other orthographies. There is an areal tradition in much of western North America for affective markings on nouns in storytelling, a tradition especially related to animal speech or to names for animals (see J. Nichols 1971 and Langdon 1973). A general pattern of attaching an overt marker to noun roots of all types with a sort of absolutive function appears to have been an Old California trait. A strikingly similar phonological shape is shared by most of the Old California languages for this absolutive. UA languages postpose their absolutes, but the corresponding forms in Hokan languages are preposed where they have often amalgamated with the root and are no longer segmentable. In spite of the
generally recognized tendency of the Penutian languages for suffixation (see Silverstein 1979), some of the languages show that at least the common Old California absolutive was frequently prefixed. Some languages show evidence of the absolutive on both ends of the root. It is presumed that the intense borrowing among languages in Old California would lead to frequent borrowing of the common Old California absolutive as part of the root resulting in multiple attestation on a single form when the productive form of the absolutive was also attached.

The Old California absolutive might be reconstructed as variants of a **l or **t with reflexes in the individual families of laterals, retroflexes, and palatals predominating. Some notable examples:

Obispeño Chumash ƚ- is almost completely segmentable and intra-Chumash comparison additionally reveals an otherwise unexplained proposed t- as one of the group of relic noun prefixes (Klar, p.c.).

Salinan is rife with historically segmentable initial t- and s/s/ʃ- on nouns, and especially on animal names (Turner, p.c.).

Several sets of presumed cognates in Hokan involving the comparison of Proto-Pomo and Proto-Yuman show unexpected initial problems which might be possible to trace to old prefixed *l and *t that amalgamated with the original root initial in one or both of the groups. Specifically, this may include the occurrence in Proto-Pomo of some voiced initial stops and unexpected examples of initial *n.

The troublesome correspondences in Penutian initials when the rest of the form appears not to be cognate is sometimes due to the initial reflex of the Old California absolutive: Klamath ƚ-, Wintun ƚ-, Costanoan r-, and Yokuts ṭ(t/c/ʃ). Shipley 1966 traced these to Proto-Penutian initial *r as part of the root together with Maidun h-. 

29
Miwok n−, and Klamath s−. The dual reflex in Klamath is paralleled by
Wintu where ː varies with s morphophonemically. The identification of
the Maidun and Miwok reflexes may be erroneous since the prefixal re-
flex in these languages is usually lacking. Broadbent and Pitkin 1964
reconstructed *-tV− as an 'animate classifier' from postposed elements
in Wintun and Miwok which appear to be a reflex of the Old California
absolutive. The sets for another word for 'house' in Penutian in
Shipley 1957 and 1966 are cited incorrectly with the absolutive as the
root initial.

The Numic languages of UA show a large number of suffixed ele-
ments which may ultimately prove to be relatable to the Old California
absolutive. However, because of the high degree of homophony among
suffixes in Numic, it is safer to wait until the details of the Old
California areal system are better known before attempting an iden-
tification of the particular Numic suffixes which correspond to it
historically. Synchronically, the Numic system differs from that of
Tubahulabal and Takic.

Returning to the group of possible intersections with PUA*kami,
there are several examples where the initial is segmentable as an old
prefixed Old California absolutive. These include several forms from
Hokan where the medial −m− might be a problem for Proto-Hokan recon-
struction.

Western Miwok lámA 'sweathouse, roundhouse' with a preposed l−
Salinan tá: m 'house' with a preposed t−
Obispeño Chumash ĥimi 'house, tent, any house' with the preposed i.

The Lake and Bodega Miwok languages of Western Miwok appear to
have borrowed the basic form from a Hokan language. Compare Shasta *ám’a- 'house'. The correspondence of the medial *m- and the vocalism of the borrowings suggest that a relationship with PUA may be just as deep within Hokan as the alleged Proto-Hokan word for 'house' (cf. footnote 4).

Chukchansi Yokuts saˈmɪʃ 'dance house' also recorded wasam’, shows the *-aˈmɪ- from PUA with the Old California absolutive on each side. The glottalized m of the second variant represents the amalgamation of the last two consonants following loss of the second vowel of the initial borrowing (see footnote 5 for a parallel development in Chumash). The proposed wa- is unexplained. The reconstruction of Proto-Yokuts *tʰiʔ~*tʰi– 'house' (adaptation mine) strengthens the identification of Chukchansi saˈmɪʃ and Yawelmani kaˈwiy as loans but provides further problems.

If the initial *t of the Proto-Yokuts form is segmentable, the remaining *-h₁- might be compared with Proto-Maidu *hɛ- 'house' and Chukchansi Yokuts xoʔ 'house', but the shortness of the forms compared leaves the relationship in doubt. One recording of Chukchansi Yokuts (CY) [xon] may link this group to PUA if the questioned gloss 'home?' is confirmed. The development might be as follows:

PUA*kaˈmi > pre-CY*kaˈm > CY xoʔ 'house, home?' recast as CY xoʔ
parallel to: PN(and PUA?)*kaˈm > Proto-Yokuts*xoˈm > CY xoˈm 'jackrabbit'.

The PN form shows a fortis medial *m retained in Proto-Yokuts as m. Rounding of *a before *m regularly may produce *o. A tendency to shorten the word for house occurs also in modern Shoshoni kaˈ which may
substitute for kahmi 'house' in compounding. The Proto-Yokuts, Proto-Maidun, and Chukchansi Yokuts forms might result from a generalization of the shortened form of an earlier stage of UA.

Proto-Maidun shows a rounding parallel to that proposed for Chukchansi in a set more clearly relatable to PUA*kami. The glosses suggest a possible loan, but the initial glottalized consonant is unexplained.

Naidu k'ùm 'house'
k'ùm-h' 'sweathouse' (a compound with the other word for 'house')
k'umá 'community dwelling, dancehouse'
Kono k'ùm 'roundhouse'
Nisenan k'um 'roundhouse, gopher mound, hump'

If the initial ʔi- of Yana ʔiigun(na) 'sweathouse' is segmentable, then the medial *-gun- may be relatable to PUA as well via a development similar to that just proposed for Maidun. Similarly, the Yukian forms below were suggested to intersect with Penutian (Shipley 1957) and UA (Schlichter, in press). The forms are not phonologically identifiable to a particular UA stage, but the location of Yukian and the PUA intersections with other languages in the area would suggest an early contact with PUA*kami, perhaps via *kagi.5

Yuki han, hə^n 'house'
Huchnom hūn, hən 'house'
Coast Yuki hēn 'house'

The Pacific Coast Athabaskan languages show varying words for 'house', one of which resembles the nearby Yukian languages in an
apparently coincidental way. Hupa xon-tah 'house' is one of a series of Athabaskan constructions which have come to be most easily translated as 'house', but which appear to be old descriptive phrases. Several have an initial velar with a nasal component following, but the initial correspondences point to different velars. For example Southwestern Athabaskan Navaho -gán 'house, home', a potential intersection with later UA in its current location, cannot be cognate with the Hupa form. The fact that these Athabaskan forms have internal etymologies is a minor factor in their rejection as loans from UA. The crucial factor is the distribution of cognates for both the Navaho and Hupa forms in far away Northern Athabaskan and the known late arrival of the two Athabaskan groups in their current areas. The accidental nature of the resemblance extends only to the fact of their different origin from Old California Uto-Aztecan. There is no way of determining whether the choice of these particular Athabaskan phrases of the many available for the meaning 'house' might or might not have been influenced by the presence of similar sounding words with the same meaning in their new home areas (Colla, p.c.).

The similarity between the various related forms in the Hokan languages and UA*kami and its phonological derivatives is suggested to derive from PUA since there are phonological mechanisms for eroding the initial PUA*k but no secure ways to produce the velars. If additional examples of the relic prefix *q or *k of Proto-Chumash could be identified and linked with this set of PUA*kami 'house', then the alternative derivation of the items in the above set from Hokan could be presented. With early UA securely in the Old California area, there would have been plenty of time for numerous exchanges in both directions.
It is hoped that this brief exposure from a UA bias will stimulate additional comparisons among the Old California languages. There is no chance that these languages developed in isolation from one another. In the case of PUAkami 'house' the correct reconstruction is only possible by reference to languages outside UA. However, the resultant revision is internally acceptable with known UA phonological processes operating in the same way as in internally reconstructed sets. The selection of the form most acceptable from evidence from borrowings in neighboring languages in the Old California stages can only enhance the accuracy of our internally based reconstructions in all of the families in the area. A model for the approach is present not only in Uralic-indoeuropean linguistic convergence but also in the recovery of early Chinese loans from the neighboring, culturally associated Japanese, Korean, and Vietnamese languages. External Old California comparisons must then take their rightful places alongside internal reconstructions.

Footnotes

1Most of the linguistic data used in this paper are from published sources. Because these are so well known and so easily recognizable, the sources are listed only in the bibliography at the end. Additionally, unpublished sources and personal compilations, including both published and unpublished material, have been made available through the generosity of the following: Madison Beeler (Chumash), Victor Golla (Athabaskan), William Jacobsen Jr. (Washo), Kathryn Klar (Chumash), Alice Schlichter (Yuki and Wintun), David Shaul (Hopi), William Shipley (Yokuts), and Katherine Turner (Salian). The
financial support of the Survey of California and Other Indian Lan-
guages of the University of California, Berkeley for research in
Northern Paiute is gratefully acknowledged. Manuscript material
archived at the Survey and used to supplement the published sources
include: Sylvia Broadbent and Catherine Callaghan (Miwok), Karl Teeter
(Wiyot), and Shirley Silver (Shasta). Previous discussions with
several investigators on related subjects have had a significant effect
on my conclusions here: Madison Beeler (Esselen and Yokuts), Geoffrey
Gamble (Yokuts), Harry Hoijer (Athabaskan), Ronald Langacker, Wick
Miller, and Pamela Munro (Uto-Aztecan), Johanna Nichols (areal features),
and Kenneth Whistler (population movements); additionally Golla, Klar,
Schlichter, and Turner read an earlier version of this paper and pro-
vided many appreciated detailed comments and opinions. However, the
interpretation of these discussions and comments of my colleagues is
mine alone, and they are responsible for none of the errors that re-
main.

A portion of the material in this paper was presented to the Group

2There is some evidence for dialect diversity in early UA, but
the evidence is also consistent with borrowing via an intermediate
language. For example, SSM 'en·i- 'house' and SSM heni·-t 'to move
house (to move campsite?)' show a different stage or source of deri-
vation of original PUA*kami from SSM haŋ(·)i 'dance house'. Evident
phonological similarity to the Sahaptian forms above confirms the
identification of the source but further obscures the temporal assign-
ment of the borrowing contact. Achomawi -a·nīʔ-j- and -iŋiŋu·j- 'to
move camp' may also contain the PUA borrowing as the first elements.
In the course of discussion of the potential PUA contacts several references will be made to forms that have been suggested as developments of Proto-Hokan 'house', usually reconstructed as something like *iwa, *awa, *va, or *avi, with alleged reflexes of *w including w, v, p, m, n, and ŋ. Since more than one reflex may occur in the same language, the Hokan developments, if indeed all are in fact Hokan, cannot be described as linear. The primary intent is to provide alternate associations to help explain the cited marginal or troublesome reflexes whose exclusion would not alter the basic Hokan reconstructed form.

Intersection with several Hokan languages and the Algonkian-related Yurok and Wiyot has also been observed. If the borrowings in these languages are related to PUA then a medial development of *m > *w > v, ŋ > p must be assumed. Hokan requires a similar hardening process to that noted for Proto-Chumash ?awa? 'house' (reconstruction mine) where the loss of the unstressed second vowel presumably led to a sporadic hardening of the cluster *w to *p. Compare Inezeño and Barbareño Chumash ?ap 'house': Island Chumash ?awa 'house'. The Proto-Chumash form could be from Proto-Hokan or from a PUA *kawi from earlier *kami with later erosion of the initial, as has been noted in other languages, and the common harmony to the stressed vowel. Compare the following examples some of which also show -l:

Karok xav-[ra-m] 'house pit?', cf. ?i·v= 'house'
Yurok kep'ok 'house pit'
Wiyot ñool 'house'
Achomawi apūlí 'house of 2 upright poles supporting the roof and walls of cedar bark'

36
Madesi (Achomawi) apu-li 'rat's nest'
apu-le? 'cocoon'

5 This Yukian set is undoubtedly one of the resemblances noted by Swadesh when he compared Yukian with some of the southeastern languages; compare Chitimacha hana 'house'; cf. Schlichter, in press.

References

IJAL International Journal of American Linguistics
JC(GB)APL Journal of California (and Great Basin) Anthropology
Papers in Linguistics
Lg Language
UCPL University of California Publications in Linguistics
VFPA Viking Fund Publications in Anthropology


---, and Jane Hill. 1967. The Linguistic History of the Cupeno.


GOLLA, VICTOR K. 1964. Comparative Yokuts Phonology. UCPL 34.54-66.

HAAS, MARY R. 1964. California Hokan. UCPL 34.73-87.


SAPIR, EDWARD and MORRIS SWADESH, ed. by MARY R. HAAS. 1960. Yana
Dictionary. UCPL 22.

SCHLICHTER, ALICE. In press. Roots of Yuki. To appear in the Fest-
schrift for William Elmendorf, ed. by Emanuel J. Drechsel and Robert
Rathburn.


SHIPLEY, WILLIAM. 1957. Some Yukian–Penutian Lexical Resemblances.
IJAL 23.269–274.


——. 1966. The Relation of Klamath to California Penutian. Lg 42.
489–498.

——, and Richard Alan Smith. 1979. The Roles of Cognition and Diff-
fusion in a Theory of Maidun Prehistory. JCGBAPL 1.65–73.

and Mithun 1979.650–691.

STEELE, SUSAN. 1979. Uto-Aztecan: An Assessment for Historical and

SWADESH, MORRIS. 1946. Chitimacha. Linguistic Structures of Native

ULDALL, HANS JØRGEN and WILLIAM SHIPLEY. 1966. Nisenan Texts and
Dictionary. UCPL 46.


WHISTLER, KENNETH W. 1977. Wintun Prehistory: An Interpretation
Based on Linguistic Reconstruction of Plant and Animal Nomenclature.
Proceedings of the Third Annual Meeting of the Berkeley Linguistics

WOODWARD, MARY F. 1964. Hupa Phonemics. UCPL 34.199-216
Ablaut in Hil Patwin

Kenneth W. Whistler

University of California, Santa Barbara

This paper presents, in synoptic and somewhat preliminary form, a morphological analysis of the verbal ablaut system in Hil Patwin, a native language of Central California. Patwin constitutes the southern division of a small family of languages referred to as Wintun, and the Wintun family has, in turn, traditionally been affiliated with several other small language families in a linguistic (sub-)stock known as California Penutian.

The exposition in this paper is limited to the Rumsey dialect of Hil Patwin (WPCC), for which I have the most reliable grammatical data. WPCC constitutes just a single subdialect within the complex of dialects known collectively as "Hil Patwin". However, the characterization of ablaut in WPCC can be taken as representative of the system for the Cortina (WPC) and Tebti (WPT) subdialects of Hil Patwin as well. The Lodoga or kabalme'nm dialect of Hil Patwin (WPK) and the River Patwin dialects (WPR) differ in some details of verbal ablaut, but not significantly in the overall structure of the system; however, a full characterization of the differences must await separate discussion elsewhere.

Ablaut: General Considerations

Ablaut, as first defined in the study of Indo-European languages, is a morphological process of root mutation, most often involving changes in the length and/or quality of vowels in a verb (or noun) root,
whereby a number of formally distinct stems are created. Ablaut differs from various types of reduplication and/or affixation, as well as from umlaut, which usually refers to more or less automatic phonological adjustments of a root conditioned by the phonetics of an affix, and harmony, which involves matching sets of vowels (or rarely consonants) between roots and affixes.¹ By contrast, ablaut in general refers to phonologically arbitrary root mutations (shortening, lengthening, zeroing, epenthesis, qualitative shifts, etc.) which are morphologically conditioned, and which often show up in parallel cycles for roots of different basic phonological shapes. In the Indo-European language family, ablaut came to be applied to a particular set of verbal (and nominal) root mutations, also called "vowel gradation", presumed to be relatively productive in Proto Indo-European but mostly archaic, irregular and unproductive in the modern descendants of PIE and even in the classic Indo-European languages, Latin, Greek, Sanskrit, etc. An example of ablaut (or vowel gradation) is seen in the following Attic Greek verb stem alternations:

\[
\begin{align*}
\tau \rho \varepsilon \nu \omega & \quad \text{'I turn'} \\
\tau \rho \rho \varepsilon \nu - \nu & \quad \text{'rout'} \\
\epsilon - \tau \rho \varepsilon - \nu & \quad \text{'I was put to flight'} \quad (Smyth 1920:16)
\end{align*}
\]

Modern German also shows ablaut in the conjugational patterns of irregular verbs. Thus, for instance, treffen 'to meet' has inflectional stems of the form trif-\(r\), traf, getroffen, etc.

The Semitic language family also evinces a system of ablaut, genetically distinct from that of PIE, generally more exuberant in the types of root mutations involved, and still productive in most modern Semitic languages.
One of the striking typological characteristics of most of the California Penutian families is the presence of highly complex verb inflectional systems that each involves, to a lesser or greater degree, a system of verbal ablaut reminiscent of Indo-European or Semitic ablaut.\(^2\) Ablaut is most rigidly elaborated and formalized in the languages of the Yokutsan family, as described by Newman (1944); all of the languages of that family have complex formal patterns of ablaut bearing some resemblance to Semitic ablaut. The Maidun languages, on the other hand, have a much more limited kind of verb inflection, with minimal manifestation of root mutations. Miwok-Costanoan (or Utian) languages have a relatively complex system of quantitative ablaut of both root vowels and root consonants, with the unique characteristic of morphologically productive metathesis of root consonants in some contexts.\(^3\) As the analysis in this paper shows, Patwin has a system of verb stem ablauting which is structurally most analogous to that of Yokutsan languages, albeit somewhat less elaborate. This structural analogy in a complex morphological system suggests the possibility of a special affinity between Wintun and Yokuts within the California Penutian stock, an issue which I return to at the end of the paper. The grammatical analysis of Patwin ablaut presented here should help in the evaluation of any special Yokuts-Wintun connections.

The Ablaut System in Patwin Grammar

Verbal ablaut is here viewed as the morphological bridge between roots and stems in Patwin. While in a sense ablaut is only one part of the overall system of inflection of verbs in Patwin, its formalized and rather rigid structure makes it natural to consider ablaut separately.
and somewhat independently of the inflection, through affixation and other morphological processes, of stems proper (as constituted by ablaut of the roots).

Viewed as an independent morphological process, ablaut in Patwin takes as input a series of phonologically defined verbal root classes and for each type of root produces a set of formal verb stems. These stems are organized into stem classes, each of which is functionally and syntagmatically defined by an associated suffix class. The process of stem formation through root mutation (= ablaut) is completely mechanical and predictable, however, given the identity of the root class of the verb involved.

This paper, then, aims at a sufficient characterization of root types and of the ablaut patterning in Hill Patwin, so that stem formation in the language can be understood. Stem classes and suffix classes are the two major types of covert grammatical category in Patwin verbal morphology, and it is only by showing how ablaut in the language works that those classes' categorial constitution and thus the principles of stem formation become clear. Clarifying Patwin stem formation is, in turn, the key to the historical reconstruction of Proto-Wintun verb morphology, since it enables the sorting out of layers of old and new morphology in the verbs and helps distinguish innovations from old, well-entrenched patterns.

Some issues of Patwin verb morphology are not addressed here. First, root-derivational processes are not covered, except marginally, insofar as it is necessary to distinguish derived roots in the typology of Patwin root classes. Second, the recursive application of derivational and/or inflectional processes at various levels of the verb is
also not covered. Recursive derivation can lead to rather complex predicate words or phrases in Patwin, some of which involve more than one implicit application of ablaut. The principles regarding ablaut in such instances are relatively straightforward extensions of the basic ablaut pattern (in a somewhat degenerate form), but explaining them would require a full analysis of root derivation and of verb phrase structure.

The Patwin Morphological Analytic System

Overview and Definitions

The choice of analytic categories in Patwin verb morphology is made so as to maximize the comparability of terminology and categories with the Yokuts analyses of Stanley Newman and of Geoffrey Gamble. This choice seems only reasonable, since one of the purposes of the analysis is eventually to provide a basis for long-range historical comparisons with Yokuts. However, since Newman and Gamble employ the terms "base", "theme" and "root" in somewhat specialized senses peculiar to Yokuts, I will first go over these terms to make their meaning as used here for Patwin clear, before going on to the detailed typology of roots in the language.

Roots and stems: Roots are language-specifically defined in Patwin as verbal forms which have not yet "undergone" the effects of verbal ablaut, whereas stems are the various forms that a particular verb root takes after "application" of ablaut. (The quotation marks here are intended to indicate that in some sense ablaut is not a normal morphological process formalizable as a rule, but rather is the linguist's analytic summary of the entire pattern of automatic verb form
alternations which, taken together, constitute the covert categories of stem classes.) The root in Patwin is thus treated as a kind of abstract archiform. However, rather than to adopt a formally abstract representation of roots (e.g. with \( \sqrt{ } \) notation), it has proved expedient to adopt a particular stem class (Stem IV as defined below) as a standard citation form for Patwin roots.

**Primary roots and lexical roots:** When it is necessary to distinguish roots in Patwin as just defined from the more standard sense of a root as a synchronically unanalyzable, minimal morphological unit, I reserve the term primary root for the latter sense of root. The unit which serves as input to ablaut in Patwin can then be termed, by contrast, a lexical root. The lexical root in Patwin thus may or may not be derivationally complex—the criterion is not complexity per se but rather whether it serves as input to ablaut. Thus, for example, \('tori\(\)api\(\)ma\) 'to stick two things together along a flat surface' is a lexical root, but it can be broken down morphologically into the secondary theme \('tori\(\)a\) 'stuck on' (itself a derived form in \(\sqrt{\)a\(}\) 'to have' (verbalizer)) and the auxiliary bases \(-pìr\) (reciprocal) and \(-mà\) (causative).

**Bases and themes:** Lexical roots in Patwin can be divided into two major types, distinguishable on phonological grounds. Bases are one- or two-syllable verb roots of certain canonical phonological forms (which are enumerated below). Bases comprise the majority of common Patwin verbs and collectively serve as the prototype forms for the patterning of ablaut. Themes are certain two-syllable verb roots whose phonological forms do not match the canons for bases, as well as all roots of three or more syllables. Themes, too, are subject to ablaut,
but their patterning can be seen as working on structural analogy to
the various base types. Note that this use of the term theme is non-
standard—it does not refer to a level of morphological structure above
the root or the base, but rather to a particular class of non-canonical
(i.e. non-base) roots.

Primary, secondary and virtual bases: Patwin bases, in turn, can
be seen as consisting of three distinct subtypes. Primary bases are
derivationally simplex (thus constituting a kind of primary root); both
one- and two-syllable forms occur. Secondary bases are morphologically
derivative forms which nevertheless conform to the phonological canon
for bases. Virtual bases are a special subclass of bisyllabic secondary
themes whose second syllable is a segmentable -CV and which mimic the
phonological canon for bases. 4 Examples of each type of base are given
below.

Primary and secondary themes: Primary themes, like primary bases,
are synchronically unanalyzable roots. In Patwin many primary themes
fall into fairly regular trisyllabic patterns, some of which could be
considered thematic phonological canons. Secondary themes are deriva-
tionally complex, involving various derivational processes, including
suffixation, prefixation, compounding and reduplication of bases (and/or
primary themes). The forms of secondary themes can be rather complex,
and except for regular patterns of reduplication show no particular
phonological canons.

Stem classes and suffix classes: Whereas root classes (types of
base or theme) are defined in terms of formal phonological canons and
simplex vs. complex morphological status, stem and suffix classes are
co-defined covert categories based on syntagmatic and functional
criteria. Briefly, a stem class is that ablauted form of a verb root which co-occurs with a particular suffix class and which generally has a specifiable functional status as well, e.g. absolutive stem or imperative stem or subjunctive stem, etc. Conversely a suffix class is that set of inflectional (and occasionally derivational) suffixes which are used with a particular stem class and which generally are characterized by related grammatical functions, e.g. past tense suffixes (Stem II) or hortatory personal suffixes (Stem IVa), etc. A given stem of a verb root is appropriate only for the associated suffix class and vice versa. To add a suffix of a different suffix class, the root must change to exhibit the stem appropriate for that suffix. Such changes constitute the ablaut system itself. These relations will become clear below, once the full pattern of ablaut and of stem classes is laid out in tabular form.

Summary of Patwin Verb Morphological Analysis

Figure 1 gives, for reference, a chart summarizing the overall relation between Patwin root types and stems. The chart is simplified—recursive derivational processes are not represented in it, and the criteria for distinguishing bases and themes, for example, are not included. However, the chart should give a general sense of what the analysis intends. A full description of base- and theme-derivational processes is deferred to another paper, as is the justification for referring to theme-derivational processes as "semi-lexical".

The analysis differs in one important respect from that proposed by Newman (1944) for Yokuts. Reduplication is here treated tentatively as a theme-derivational process, whereas in Yokuts it is analyzed as
Figure 1: Patwin Verb Morphology
base-derivational. This decision may have to be reconsidered eventually if canonical themes of CV\textsubscript{1}CV\textsubscript{1} ‐ Co/u form and base reduplications are to be analyzed as special kinds of multisyllabic bases in Patwin.

**Hill Patwin Base Types**

The verbal bases of Hill Patwin, as mentioned above, can be divided into primary, secondary (derived) and virtual base types. The primary bases comprise the largest class of verbal bases in Patwin; they have several distinct subtypes defined by simple phonological canons. The typology is presented here first in terms of the general canons and then exemplified extensively from the Patwin lexical files. Remember that the primary bases are morphologically simplex; that is, they are all synchronically unanalyzable minimal units, even though there is occasional internal or comparative evidence for the historically derivative status of some of the bisyllabic bases.

The designations given to primary base types are chosen to give a rough typology of bases, on analogy with Newman's (1944:38) designations for Yokuts base types. In the Patwin base designations, I vs. II indicates consonant vs. vowel bases (referring to the last segment of the base). A vs. B indicates a structural length distinction; A bases are structurally "short" and can take a long final stem vowel (for certain stems), whereas B bases are structurally "long" and take only short final stem vowels. For details, see Table 3 below, which shows the overall ablaut pattern for each base type.

The secondary bases are much more limited in variety. The attested types are: IIB\textsubscript{1} derived plurals; IIA\textsubscript{1} miscellaneous derivatives; IIB\textsubscript{1} miscellaneous derivatives; and IIB\textsubscript{2} derived transitive
<table>
<thead>
<tr>
<th>Designation</th>
<th>Canon</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consonant bases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td>CVC</td>
<td>short root vowel</td>
</tr>
<tr>
<td>IB1</td>
<td>CV·C</td>
<td>long root vowel</td>
</tr>
<tr>
<td>IB2</td>
<td>CV₁CV₁C</td>
<td>bisyllabic with harmonic vowels</td>
</tr>
<tr>
<td>IB3</td>
<td>-CVC</td>
<td>auxiliary, theme-derived suffixes</td>
</tr>
<tr>
<td>Vowel bases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIA1</td>
<td>CVCa·, CVCo·</td>
<td>short initial root vowel; final V qualitatively invariant</td>
</tr>
<tr>
<td>IIA2</td>
<td>CVCu</td>
<td>short initial root vowel; final V shows qualitative ablaut</td>
</tr>
<tr>
<td>IIA3</td>
<td>CV·</td>
<td>monosyllabic bases</td>
</tr>
<tr>
<td>IIB1</td>
<td>CV·Ca, CV·Co</td>
<td>long initial root vowel; final V qualitatively invariant</td>
</tr>
<tr>
<td>IIB2</td>
<td>CV·Cu</td>
<td>long initial root vowel; final V shows qualitative ablaut</td>
</tr>
<tr>
<td>IIB3</td>
<td>-CV</td>
<td>auxiliary, theme-derived or inflectional suffixes</td>
</tr>
</tbody>
</table>

Table 1: Summary of Primary Base Types
object plurals, the largest subclass of secondary bases. The IIA1 secondary bases are interesting in that in addition to CVCa· and CVCo· forms as attested for primary bases, there are also a few CVCe· and CVCi· forms which also show qualitatively invariant final vowels.

The virtual bases are few in number. Attested examples are:

IIA1  ye=ho· 'to name' (<"yet 'name' -ho (verbalizer))

IIB1  p=ho· 'to light a fire' (<"p=ho· 'fire' -ho)
  ba·ma 'to feed' (<"ba· 'to eat' -ma (causative))
  so·ma 'to make listen' (<"so· 'to listen' -ma)

IIB2  A number of themes of the form CV=−t̂ho (see listings under secondary themes below).

The following sections provide WPCC examples of each of the primary and secondary base types. The listing is fairly extensive, including most of the nonproblematical examples from my WPCC lexical file, so as to give an idea of the phonological character of bases and of the relative numerical representation of each type. Data from other Hill Patwin subdialects will eventually serve to extend these lists considerably.

Primary Base Subtypes

Consonant bases: IA (canon: CVC)

These are best divided into five groups, depending on the root vowel.

čam 'white'  ham 'to sit'  hap 'to gather up'
har 'to go' (irreg.)  kap 'to be caught'  kar 'to cut the ends
ṭal 'rotten; to rot'  tal 'to fall'  off, mow'
'at 'to precipitate'  sat 'to grope for'
ben 'big'
deč 'to climb'
h'er 'to scrape off; shave'
ţel 'to weave baskets'
ţey 'to smile'
tew 'to fly'
tew 'to talk'
ţey 'to bite'
bil 'to burn off, to fire'
hit 'to wear around the neck'
liw 'to fan'
win 'to see'
ções 'to wander about'
hen 'to arrive'
ţet 'to rake'
ţey 'to put'
ţem 'to hold, grasp'
ţep 'to hit'
wer 'to come' (irregular)
dil 'to lose'
lip 'to fall off'
ţir 'to twist (in the fingers)'
ţ-spek 'to move with hand by pulling'
(a bound form, requires prefix)
ţok 'to drip (once)'
ţcop 'to chop'
dor 'to put into the mouth'
k'ôn 'dry'
ţkom 'big'
ţ'on 'to dance'
yoh 'to melt'
duh 'to carry on back'
hur 'to sew'
huy 'pretty'
jup 'to drink soup'
juk 'to gut'
mug 'to bud out'
mut 'to hear'
tjup 'to wade across'
yuy 'tall'
ţuţ 'to catch'

Consonant bases: ıbı (canon: CV.C)

These are likewise divided into five groups by the root vowel.
ha·k 'jealous'
ma·t 'to bake (acorn bread) in an earth oven'
he·r 'to reach'
pe·l 'fire glowing or dying back'
bi·r 'to wipe'
i·t 'cool (intr.)'
yi·r 'to slice into strips'
lo·r 'to hand to'
to·n 'to snore'
mo·n 'to recover, get back'
so·s 'icy, frosty'
t·h·o·r 'fire to burn'
bu·y 'to wrap'
hu·m 'fat'
lu·m 'dead; to die'
mu·l 'to eat pinole (dry)'
p·h·u·r 'to rest'

yu·r 'to rain' (irregular)

Consonant bases: IB2 (canon: CV,CV,VC)
Divided into five groups by the root vowel.
čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'

dalak 'thin, flat'
kʰaway 'to choke (intr.)'
samal 'to ring; reverberate'
hešek 'loose'

čapay 'to flee'
halak 'to whisper'
ťakal 'to play'
čeřek 'thin (of liquid)'
hepek 'light (in weight)'
tipil 'to roast meat in an earth oven'

lewis 'to gig; to stab' (irreg., a virtual base)

winič 'to get up, wake up'
holow 'to spook; to haunt'
močok 'to move, move around'
humuk 'warm'
yuduk 'to pity'
Consonant bases: IB3 (canon: -CVC)

These are all theme-deriving voice suffixes.

-\text{n}an \{reflexive\} \quad -\text{h}er \{passive\}
-\text{pir} \{reciprocal\}

Vowel bases: IIA1 (canon: CVCa\textsuperscript{,}, CVCo\textsuperscript{,})

These bases are subdivided by the final vowel, and in the case of \text{a} verbs, must be further subcategorized in terms of transitivity and patterns of reduplication and plural formation.

1. \text{-a} intransitives:
\quad 'čupa\textsuperscript{,} \ 'to be ready; finished' \quad 'kana\textsuperscript{,} \ 'to sleep'
\quad 'p\text{h}ola\textsuperscript{,} \ 'to swell up' \quad 'pera\textsuperscript{,} \ 'cold'
\quad 'poka\textsuperscript{,} \ 'to pop; crackle' \quad 't\text{h}ela\textsuperscript{,} \ 'liquid to spread out'
\quad 'toba\textsuperscript{,} \ 'to flake off; blister' \quad 'yoha\textsuperscript{,} \ 'to be destroyed'

2. \text{-a} transitives with normal reduplication (CVC-CVCa\textsuperscript{,}):
\quad 'd\text{a}la\textsuperscript{,} \ 'to roll string' \quad 'hu\text{ya}\textsuperscript{,} \ 'to store away'
\quad 'kopa\textsuperscript{,} \ 'to cut or break in two' \quad 't\text{ila}\textsuperscript{,} \ 'to shoot'
\quad 't\text{h}iya\textsuperscript{,} \ 'to call' \quad 'tera\textsuperscript{,} \ 'to be proud of'
\quad '\text{a}pa\textsuperscript{,} \ 'to carry a person on the back'

3. \text{-a} transitives with irregular plural (CV-C):
\quad 'čura\textsuperscript{,} \ 'to tear'

4. \text{-a} transitives with CVCu plural affected object forms and CVCa-CVCa reduplication:
\quad 'bora\textsuperscript{,} \ 'to break (tr.)' \quad 'k\text{he}ba\textsuperscript{,} \ 'to knock a piece off'
\quad 'k\text{h}oba\textsuperscript{,} \ 'to cut off' \quad 'kača\textsuperscript{,} \ 'to cut off'
\quad 'tu\text{pa}\textsuperscript{,} \ 'to prick' \quad 'lab\text{a}\textsuperscript{,} \ 'to break (sg.) into pieces'
\quad '\text{le}ba\textsuperscript{,} \ 'to chip' \quad '\text{ler}a\textsuperscript{,} \ 'to punch a hole in'
mina: 'to extinguish'  

p'ita: 'to squash'

soba: 'to pull off'  

teba: 'to nick'

5. -o- transitis and intransitives:

hero: 'to help'  

kaho: 'to hide (tr.)'

kawo: 'to get together; gather'  

paro: 'full'

sewo: 'to bury (a person)'  

thano: 'to win'

thiko: 'to measure'  

tiko: 'to put in a sack'

yayo: 'to start'

Vowel bases: IIA2 (canon: CVCu)

These are the most common of all Patwin base types.

botu 'to smoke'  

čeru 'to be gone'

čoyu 'to get sick; to ache'  

česu 'to sneeze'

čodu 'to walk upslope'  

doyu 'to give'

hali 'to think'  

hasu 'to cool off'

hinu 'reluctant; hesitant'  

hohu 'to pant'

holu 'to make a hole'  

horu 'to save'

hulu 'to block; to dam'  

hutu 'to get warm (from fire)'

huyu 'to shake (tr.)'  

kapu 'to dig'

ketu 'to stir'  

koru 'to grind'

kowu 'to swim; bathe'  

k'olu 'to scrape; to plane'

kayu 'to walk'  

kayu 'to want'

kidu 'to forget'  

koru 'to hollow out'

kuhu 'to cough'  

lahu 'to cook'

lelu 'to make'  

lomu 'happy; satisfied'

loru 'to grind sharp or smooth'  

lahu 'to look for'

lomu 'to store; save'  

loru 'to poke; nudge'

loču 'to storm; to be bad'  

loču 'to grab a hold of'
malu 'to doctor'
muhu 'to sing'
nili 'to flush (an animal)'
peru 'to swallow'
potu 'to boil (intr.)'
p'uku 'to sweat'
puru 'to seep out'
siku 'to drill'
sudu 'to smoke out'
taxu 'to feed (an animal)'
tepu 'to come out; emerge'
toyu 'to stop (intr.)'
t'ulu 'to swim'
tatu 'to dawn; to clear and brighten'
t'odu 'to scratch with hand'
moyu 'angry; indignant'
naru 'to scold'
noku 'ripe; cooked'
pihu 'to wrap around'
puçu 'to be well; to get away'
pisu 'to bother'
sayu 'light to shine in dark'
sonu 'to shinny up'
suyu 'to suck'
tatu 'to braid hair'
toku 'to pound acorns'
teru 'to leach'
tiçu 'to cover with dirt'
toku 'to lean against (tr.)'
wotu 'to twirl (tr.)'
yoru 'to tell to; to direct one to'
?emu 'to hug'

Vowel bases: IIA3 (canon: CV-)

These are very few in number and mostly irregular in one way or another.

ba- 'to eat' (regular)
be- 'to be (inanimate locational)' (irregular, <<beh)
bo- 'to be (animate locational)' (irregular, <<boh)
so· 'to listen' (irregular; cf. so·ru 'to listen' under IIB2 bases)
'i· 'to do; to use' (irregular, *i·iy)

Vowel bases: IIB1 (canon: CV·Ca, CV·Co)
si·da 'to clear off with hands'
yi·la 'to send'
bo·lo 'to soak'
ka·do 'to rake up'
ta·yo 'to light a fire'
su·la 'to spread out over (tr.)'
?a·wa 'to behave as a spoiled child'
ha·yo 'to reply to a call'
lah·o 'to touch'

Vowel bases: IIB2 (canon: CV·Cu)
či·du 'to stretch out (tr.)'
čo·du 'to crawl; to climb'
di·hu 'to be awake'
ho·lu 'to ride'
kul·lu 'to pull ends of branches down'
ču·ru 'to lie on one's side'
čo·wu 'to watch' (irregular)
he·du 'to stand tiptoe'
ka·ku 'to refuse'
ča·ru 'to parch (seed)'
či·ču 'to cave in'
li·ku 'pain to diminish'
mu·ku 'to lie prone'
se·du 'to stoop'
so·ru 'to listen' (irregular)
to·lu 'to poke head out'
tu·du 'wind to blow'
wu·ku 'to nod head forward'

Vowel bases: IIB3 (canon: -CV)

These all consist of auxiliary suffixes. They can be divided into two types: theme-deriving and inflectional. Many of the theme-deriving
suffixes are represented among the various secondary themes listed in the following section.

Theme-deriving:

-\(\text{-ma}\) \(\) (causative) \hspace{1cm} -\(\text{-pa}\) \(\) (benefactive)

-\(\text{-əa}\) \(\) 'to have' (verbalizer)

-\(\text{-me}\) \(\) (comitative)

-\(\text{-ho} \ (-\text{-so} -\text{-o})\) \(\) (verbalizer) \hspace{1cm} -\(\text{-ho}; -\text{-to}; -\text{-ko}\) \(\) (plurality and temporality "distributives")

-\(\text{-tʰu}\) \(\) (semelfactive) \hspace{1cm} -\(\text{-ču}\) \(\) (resultative stative)

-\(\text{-ʔu}\) \(\) 'to do' (verbalizer) (irregular invariant vowel)

Inflectional:

-\(\text{-be}\) \(\) 'to be (inanimate)'

-\(\text{-bo}\) \(\) 'to be (animate)'

-\(\text{-ʔi}\) \(\) 'to be' (copula)

Secondary Base Subtypes

Consonant bases: IBI (canon: CV-C)

This is a small class of derived plural bases, all involving iterated actions or states.

\(\text{ke·l}\) \(\) 'to fold' \(\) (plural of \(\text{ke·ltʰu}\))

\(\text{tʰe·p}\) \(\) 'to hit many times; to whip' \(\) (plural of \(\text{tʰap}\))

\(\text{kʰo·n}\) \(\) 'dry weather' \(\) (plural (?) of \(\text{kʰon}\) 'dry')

\(\text{lo·p}\) \(\) 'to fill' \(\) (plural of \(\text{loptʰu}\) 'to put in')

\(\text{ču·r}\) \(\) 'to tear' \(\) (plural of \(\text{čura·}\))

\(\text{pʰu·ɾ}\) \(\) 'to whistle; blow into' \(\) (plural of \(\text{pʰutʰu}\))

Vowel bases: IIA1 (canon: CVGa·)

A small class of derived plural bases.

60
\v{e}ya· 'to put' (plural of \v{e}y)
lela· 'to make' (plural of lelu)
puta· 'to jump up and down' (plural of putt\h 'to jump')
p\h o\h ble\h a· 'to clap' (plural of p\h o\h -kt\h)

**Vowel bases:** IIAI (canon: CVCe·)

A small class, mostly involving inanimate possession or comitation.
čeme· 'to get; to own'
ko\h te· 'to borrow'
wer\h e· 'to bring (inan.); to bring back' (cf. wer 'to come')
'ele· 'not to have'

**Vowel bases:** IIAI (canon: CVCi·)

A small class, mostly involving animate possession or comitation.
čeli· 'to get; to own (animate?)'
har\h i· 'to take along (animate)' (cf. har 'to go')
wer\h i· 'to bring along (animate)' (cf. wer 'to come')

**Vowel bases:** IIAI (canon: CVCa· ~ CVCo·)

A small class of miscellaneous derived forms with obvious derivations from simple CVC nouns.
maya· 'to track' (<\h may 'foot')
nuno· 'to draw back a bow' (<\h nun 'bow')
'tu\h po· 'to sharpen to a point' (<\h tup 'awl')

**Vowel bases:** IIBI (canon: CV·Ca)

Rare, derived plural bases.
t\i· ba· 'to sweep' (plural of t\i· bt\h 'to brush off')
Vowel bases: IIB1 (canon: CV·Co)

A few miscellaneous derivatives.

phi:'to press hard on' (cf. phit'a: 'to squash')
tu·so 'to go first' (<tu· 'first' + -ho verbalizer)
bako 'to count' (This form is unusual, with an initial short vowel. It is apparently derived from *pak 'bead' (?)< 'bone' + -ho. In some dialects of Patwin, 'to count' is regularized to a IIA1 base: bako'.)

Vowel bases: IIB2 (canon: CVCu)

These are the plural affected object counterparts of the IIA1 (CVCa·) transitive primary vowel bases listed above. Some are attested in WPCC only in the plural.

boru 'to break (pl.)'
čebu 'to chip pieces off'
dobu 'to cut a row of notches in'
čupu 'to prick (pl.)'
lebu 'to chip (pl.)'
minu 'to extinguish (pl.)'
sobu 'to pull off (pl.)'
t'etu 'to shave off (pl.)'
čaku 'to split (pl.)'
čihu 'to cut slices off'
ko'obu 'to cut off (pl.)'
kaču 'to cut up (pl.)'
albu 'to break (pl.) into pieces'
leru 'to punch holes in'
po'itu 'to squash (pl.)'
tažu 'to knock off (pl.)'

Hill Patwin Theme Types

The typology of Patwin verb themes is complex, and a full exposition is beyond the scope of this paper. However, presenting at least the two- and three-syllable types will provide some perspective on the base types already listed. The types and subtypes are organized under
the same general designations as for bases (see Table 2). These designations indicated the significant base class distinctions for the purposes of ablaut. (For the stem classes themselves see Table 3 below.) Themes form their stems analogously to bases, and the designations of theme types show which base type to look under for the ablaut pattern appropriate to a particular type of theme. Reduplicated bases or themes pose a separate set of problems which are covered only very briefly following the exposition of primary and secondary theme types.

The following sections provide WPCC examples for all the theme types and subtypes summarized in Table 2. The listing is fairly complete for the primary themes. However, for secondary themes I have limited the selection somewhat. Omitted are prefixed themes, all themes of four or more syllables, consonant themes of three syllables, voice suffix (e.g. -ma [causative]) derived vowel themes of three syllables, and some types of compound forms. The emphasis is on complete coverage of bisyllabic forms, so that the contrast with bisyllabic bases is clear, on forms derived in -?a 'to have' [verbalizer], which may have some bearing on the historical development of bases from themes, and on the trisyllabic primary themes, which have a flavor all their own in Patwin and which are involved in some unique patterns of plural theme-formative processes.

Primary Theme Subtypes

Vowel themes: IIB1 (canon: CV1.CV1.Co)

These are "canonical" themes; they bear some resemblance to CV1.CV1.C bisyllabic consonantal bases (q.v. above), in that they show harmonic vowels. They fall into at least two subclasses. The first
<table>
<thead>
<tr>
<th>designation</th>
<th>canon</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consonant themes</td>
<td>none attested</td>
<td></td>
</tr>
<tr>
<td>Vowel themes</td>
<td>IIB1</td>
<td>CV₁CV₁·Co harmonic, with final vowel invariant; a &quot;canonical&quot; theme</td>
</tr>
<tr>
<td></td>
<td>IIB2</td>
<td>CV₁CV₁·Cu harmonic, with qualitative ablaut in final V; a &quot;canonical&quot; theme</td>
</tr>
<tr>
<td></td>
<td>IIB1</td>
<td>CVCV·Co nonharmonic</td>
</tr>
<tr>
<td></td>
<td>CVCCu</td>
<td>irregular form with invariant final V</td>
</tr>
<tr>
<td></td>
<td>IIB2</td>
<td>CVCV·Cu nonharmonic, with qualitative ablaut in final V</td>
</tr>
<tr>
<td></td>
<td>CV₁CV₁Cu</td>
<td>harmonic, but with second V short; qualitative ablaut in final V</td>
</tr>
<tr>
<td></td>
<td>CV(·)CCu</td>
<td>regular form with qualitative ablaut in final V</td>
</tr>
</tbody>
</table>

Table 2A: Summary of Primary Theme Types
<table>
<thead>
<tr>
<th>designation</th>
<th>canon</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consonant themes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IB</td>
<td>CVC-nan</td>
<td>reflexives</td>
</tr>
<tr>
<td></td>
<td>CVCa-l</td>
<td>derived intransitives</td>
</tr>
<tr>
<td></td>
<td>CVC+CVC</td>
<td>prefixed directional compounds</td>
</tr>
<tr>
<td></td>
<td>CV(·)C-CV</td>
<td>suffixed compounds of iterative motion</td>
</tr>
<tr>
<td></td>
<td>CVCi(·)1</td>
<td>misc. compounds</td>
</tr>
<tr>
<td>Vowel themes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIB1</td>
<td>CV·Cko</td>
<td>theme plurals</td>
</tr>
<tr>
<td></td>
<td>CVCV·Co</td>
<td>theme plurals</td>
</tr>
<tr>
<td></td>
<td>(CV)CV(·)(C)-ʔa</td>
<td>'to have' verbalizations</td>
</tr>
<tr>
<td></td>
<td>(CV)CV(·)(C)-CV</td>
<td>misc. suffixally derived forms</td>
</tr>
<tr>
<td></td>
<td>various</td>
<td>misc. compounds</td>
</tr>
<tr>
<td>IIB2</td>
<td>CV(·)(C)-t^h_u</td>
<td>semelfactives</td>
</tr>
<tr>
<td></td>
<td>CV(·)C-ču</td>
<td>resultative statives</td>
</tr>
<tr>
<td></td>
<td>CVC-CV·Cu</td>
<td>suffixed compounds of motion and emotion</td>
</tr>
<tr>
<td></td>
<td>various</td>
<td>misc. compounds</td>
</tr>
</tbody>
</table>

Table 2B: Summary of Secondary Theme Types
consists of forms in -ko or -to which all have plurals of the form

CV.C-ko:

liwiko 'to beckon (sg.)'
alitiko 'to squeeze (sg.)'

lutuko 'to scratch (sg.)'
nalsko 'to take a taste of'

sutuko 'to inhale (sg.); to cure by sucking'

hele.to 'to slice off (sg.)'

The second subclass is more miscellaneous; it contains both descriptive
statives and various active predicates:

dalato 'flat (surface)'

hasako 'draft to be blowing;

lotoro 'bumpy'
drafty'

sikito 'skinny'

lereto 'to shout (sg.)'

koyowo 'to carry in both arms'

xyxtoto 'to slide'

telewo 'to encircle'

witi.lo 'to run' (In some dialects this appears as witi.lu, a IIB2

theme.)

Vowel themes: IIB2 (canon: CV, CV.Cu)

These themes comprise the other "canonical" theme type.

hiriku 'dizzy'

kobolu 'to pay'

łubuku 'to gulp down' (cf. łup mana'yu 'to miss'

'to drink soup')

polaru 'to knot on tightly'

ticimu 'to pinch'

tihitu 'to ask'

wicisu 'to pull'

łubuthu 'to pull out' (This form is unusual in having two aspirated

consonants; the final -thu may be segmentable. Cf. the IIB2

semelfactives under secondary themes below.)
Vowel themes: IIB1 (canon: CVCV-Co)

Only one example; possibly derivative or borrowed.

lupa'ko 'angry'

Vowel themes: IIB1 (canon: CVCCu)

Another very unusual verb, with the final -u invariant. This is almost unheard of in Patwin verbs other than derivatives in -gnu 'to do'.

muylu 'to injure'

Vowel themes: IIB2 (canon: CVCV-Cu)

These are rare, but the single exemplar adduced here is of undoubted Proto-Wintun pedigree. (Cf. Wintu hika'ya 'to stand'.)

p'hec'yu 'to stand up' (plural: p'etphec'a'ya)

Vowel themes: IIB2 (canon: CV1CV1Cu)

cililu 'healthy'

karasu 'to scratch'

Vowel themes: IIB2 (canon: CV(-)CCu)

likku 'to hurry'

mo-nhu 'to tell'

Secondary Theme Subtypes

Consonant themes: IB (canon: CVC-nan)

These are all more or less lexicalized reflexive derivatives.

kh'ernan 'to shave'

koknan 'to cut oneself'

liwnan 'to fan oneself'

moknan 'to fix oneself up, dress up'

tiwan 'to buy'

t'hakn 'to get dressed up'

There is also an irregular, lexicalized formation based on the reflexive of co'wu 'to watch': co'nan 'to be careful'

67
Consonant themes: IB (canon: CVCa-1)

These are derived intransitives. They are related to the IIA1 (CVCa-) transitive bases which take CVCu plural affected object forms (see above).

sobal 'to come off' total 'to bump against'

Consonant themes: IB (canon: CVC+CVC)

These are prefixed directional compounds, which are relatively numerous in Patwin. A few examples:

k'alley 'to throw away' (cf. ley 'to put; to throw')
qelhar 'to go in' (cf. har 'to go')
qolkir 'to pick up with the hand' (cf. -kir 'to move with hand by pulling')

Consonant themes: IB (canon: CV(·)C-CVC)

Suffixed compounds of iterative motion or appearance.

hoybok 'to bob up and down' pe'lbok 'to glance at intermittently'
wa'lbok 'lightning to flash' tolbak 'to limp'
limbak 'to flash at intervals; to blink (pl.) at intervals'
huylak 'to sway' wudbay 'to nod head forward and back'

Consonant themes: IB (canon: CVCi(·)1)

These are miscellaneous, rather ill-defined compounds and/or derivatives.

bohil 'to retain; keep' tok'hl 'to gather firewood'

Vowel themes: IIbj (canon: CV.Cko)

These are the theme plurals of IIbj canonical themes (q.v. above).
liwko 'to wave at (pl.)'
li·tko 'to squeeze (pl.)'
łu·tko 'to scratch (pl.)'
su·tko 'to inhale; puff (pl.)'
he·lko 'to slice off (pl.)'
p'elko 'to spread on (pl.)'

Vowel themes: IIB1 (canon: CVCV:Co)

These themes all involve circular motion or curves. The exact sense of plurality varies by subclass.

1. Active plurals of singular themes in -to:
dapir·ro 'to twist (pl.)'
sibi·ro 'to spin (pl.)'

2. Active forms which imply relatively slow motion; compare the fast motion counterparts in -ho below.
hela·yo 'to swing the arms'
siwa·yo 'to swing slowly'

3. Statives:
sopi·ro 'round'
ćuwi·lo 'crooked (pl.)' (cf. ćuwi·l'a 'bent; curved')

Vowel themes: IIB1 (canon: CVCV-to)

These themes are all singulars.

dapirto 'to twist (sg.)'

sibirto 'to turn around (sg.)'
topelto 'to raise oneself up'

Vowel themes: IIB1 (canon: (CV)CV(·)(C)-?a)

These are derivatives in -?a 'to have' {verbalizer}. -?a can be suffixed to virtually any shape of root—including nouns and various kinds of imitatives. Its use constituted the most productive source of new verbs in Patwin.

1. Bisyllabic themes of the shape CV-?a:
te·?a 'to give birth'
wi·?a 'to have a husband'
2. Bisyllabic themes of the shape CV(·)C-ʔa:

bala 'to lie'          duká 'bad' (<q>duk-ʔa)
huláa 'to howl'        k̓osʔa 'foggy'
kiʔra 'cloudy'         kotʔa 'dirty'
kulá 'widowed; orphaned' kunʔa 'muddy; roiled'
laʔwá 'weak'           monʔa 'to be like'
paká 'hard'             p̃urʔa 'stingy'
seká 'green'           thiča 'to know' (<u>thič-ʔa ?)
wala 'to flame'         yelʔa 'late; last'

3. Bisyllabic plural themes:

sulʔa 'to kill (pl.)' (cf. sult̓u 'to kill (sg.)')
tepʔa 'many to come out' (cf. tepu 'to come out')

4. Trisyllabic themes of the shape CV(·)CV-ʔa:

holeʔa 'dried out'      husaʔa 'ripples'
k̓uʔ�eʔa 'blind'         lopʔa 'muddy'
saniʔa 'daytime'        selaʔa 'afraid; scared'
toriʔa 'stuck on'       tukeʔa 'strong; brave'
yoriʔa 'to work'        ʔoliʔa 'deaf'

5. Harmonic trisyllabic themes of the shape CV, CV(·)C-ʔa:

honoka 'lonesome'       hopomʔa 'rough; dry rotted'
taʔaʔka 'bald'          tulukʔa 'red'
witilʔa 'to be fast'    ʔonokʔa 'to have a wife'

6. Nonharmonic trisyllabic themes of the shape CVCV(·)C-ʔa:

čui̱.lʔa 'bent; curved (sg.)' heriča 'sharp'
k̓asi.1ʔa 'cross-eyed'   ʔole.1ʔa 'to be way up high'

7. Imitative trisyllabic themes of the shape CV(·)Ck̓-ʔa:

čiʔtk̓aʔa 'to squeak'    ʔerk̓aʔa 'to groan'

70
8. Miscellaneous trisyllabic themes of the shape CV(-)CCV-?a:

hayba?a 'to have a pain'
λerta?a 'to shout (pl.)'
so·rto?a 'deaf'
ta·pse?a 'to clap the hands'
yelti?a 'late'

Vowel themes: IIB1 (canon: CV(·)(C)-ma)

1. Bisyllabic causatives of the shape CV(·)-ma. These constitute virtual bases. (Cf. the section above re base types.)

ba·ma 'to feed'
so·ma 'to listen to'
'uma 'to quit' (In some dialects this is regularized to a IIA1 base: ?uma'.)

2. Bisyllabic derivatives of the shape CV(·)C=ma. These are of two semantic subtypes. First, there are true, transitive causatives:

hi·ma 'to put on around kapma 'to trap'
the neck'
ţalma 'to spoil (tr.)'

ţ'o·rma 'to set fire to'
ţalma 'to drop (tr.)'

Second, there is a class of stative verbs which imply personal impact, i.e. a caused sensation, feeling or judgement in one:

hu·yma 'pretty'
'
kakma 'hot'
porma 'bad'
yi·ma 'heavy'

Vowel themes: IIB1 (canon: CV(·)(C)-me)

1. Derivative themes of clear comitative force:

bome 'to keep'
harme 'to take (inanimate)'
hemme 'to bring (inan.)'

2. Obsolete derivatives:

p'ume 'to roast meat over fire' (cf. p'o· 'fire')
tewme 'to roll around in pain' (cf. tew 'to fly')

71
ha:me  'to yawn'

Vowel themes: IIB₁ (canon: CV(·)(C)-pa)

These themes all show either full benefactive force or action
directed toward a goal:
bopa  'to wait for'  detpa  'to climb for'
hampa  'to sit on'  harpa  'to go after'
henpa  'to discover'  he:rpa  'to reach out for'
kʰadpa  'to uncover'  ťelpa  'to weave for'
ትeypa  'to throw at'  ţonpa  'to kick; stomp'
?pʰepa  'to heat up'

Vowel themes: IIB₁ (canon: CV(·)(C)-ho – CVCVC-ho)

1. Bisyllabic themes of the shape CV(·)(C)-ho. These seem mostly to be
verbalized nouns, and some of them comprise virtual bases.
pʰ-o:ho  'to build a fire'  (c<ṁ:pʰ-o:  'fire')
bako  'to count'  (cf. discussion above under IIB₁ secondary
vowel bases.)
yetʰ-o:  'to name'  (cf. discussion of virtual bases above.)

2. Trisyllabic themes of the shape CVCVC-ho. Some of these are the
fast action counterparts of CVCV-Co themes:
he:ləho  'arms pumping fast'  aiwayne 'to swing fast'

Others are sound or movement imitative verbalizations:
čonirho  'to waddle'  dibilho  'to roll around'
لحirho  'to hurry up'  sawarho  'to be rattling'
soholho  'waterfall'  tʰetʰurho  'to stagger'
tʰuburho  'to snort (of horses)'  yedilho  'to totter'
3. Miscellaneous derived trisyllabic themes in -ho ~ -o:

hačiho 'to winnow' (<hači 'sieve')
kobahō 'to paint' (<koba 'paint')
ši-maho 'to faint' (<ši-ma ?)
leliho 'to do slowly' (<leli-'slowly')
sikahō 'to paint black' (<sika 'black paint')
tine-lo 'sound of drumming' (<tine-l 'drum')
'useloh 'to poison' (<'usel 'poison'; attested in WPK)

Vowel themes: IIB1

Miscellaneous compound themes:
subto-ko 'to happen by accident'
lubčupa 'to fall into a deadfall'

Vowel themes: IIB2 (canon: CV(·)(C)-tʰu)

This is a very large class of themes in Patwin. They are often marked singulars and seem to show an orientation towards an action itself rather than its result. However, many seem to be neutral in orientation, and there are quite a few statives represented as well.

The term semelfactive is intended as merely a tentative catch-all label to refer collectively to -tʰu derived themes. 6

1. Bisyllabic semelfactives of the shape CV-tʰu. These seem to oscillate somewhat in usage between acting as IIA2 or IIB2 virtual bases.

patʰu 'viscous; thick'
petʰu 'to hunt (game)'
tetʰu 'to drink'
totʰu 'to be short of; poor'
watʰu 'to cry'

2. Bisyllabic semelfactives of the shape CV--tʰu. These act as IIB2 virtual bases.
ka·tʰu "to hide (intr.)"  lo·tʰu "to hang (intr.)"
yo·tʰu "to move; change residence"

3. Bisyllabic semelfactives of the shape CV(·)C-tʰu:

diktʰu 'burned up'  diktʰu 'to rub'
dortʰu 'to push'  duytʰu 'to press hard on'
hattʰu 'to pick (plants)'  kattʰu 'to open'
kurtʰu 'to break up'  kʰaptʰu 'to be half'
ke·ltʰu 'to fold (sg.)'  kohtʰu 'to scrape up'
'koptʰu 'cut off; broken off'  kortʰu 'to grab up; gather'
lartʰu 'to tie up'  lektʰu 'tired'
libtʰu 'to sink (intr.)'  lirtʰu 'to rub on'
šantʰu 'to blister'  šartʰu 'to tie a knot'
šoptʰu 'to join'  šaptʰu 'wet'
šoptʰu 'to put in (sg.)'  maktʰu 'quiet'
mintʰu 'dark; fire to go out'  putʰu 'to jump down (sg.)'
pʰoktʰu 'to swell up'  pʰo·ktʰu 'to clap (sg.)'
pʰoltʰu 'to swell up'  pʰužtʰu 'to blow on (sg.)'
pʰoltʰu 'to swell up'  pʰulʰu 'to swell up'
pitʰu 'to skin; peel'  siltʰu 'black'
siptʰu 'stiff'  sobtʰu 'to come off'
soytʰu 'to lie down'  sultʰu 'to kill (sg.)'
tortʰu 'cramped up and stiff'  tʰežtʰu 'streams to flow together'
tʰoptʰu 'tight; stuck'  tʰurtʰu 'thick'
ti·btʰu 'to brush off (sg.)'  yuktʰu 'to pat off; to shake'
yurtʰu 'lined up'  yuktʰu 'clean'
šo·ktʰu 'to vomit'

Vowel themes: IIB2 (canon: CV(·)C-ču)

This is another large class of themes. Nearly all of these are
resultative statives, clearly related to semelfactive forms and/or to IIA1 (CVCa·') transitive bases.

<table>
<thead>
<tr>
<th>Patwin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>borču</td>
<td>'to be broken'</td>
</tr>
<tr>
<td>kurču</td>
<td>'fragile; friable'</td>
</tr>
<tr>
<td>k'obču</td>
<td>'to be cut off'</td>
</tr>
<tr>
<td>labču</td>
<td>'broken into pieces'</td>
</tr>
<tr>
<td>liscu</td>
<td>'bent'</td>
</tr>
<tr>
<td>sikču</td>
<td>'to have had too much of'</td>
</tr>
<tr>
<td>toču</td>
<td>'to get bumped'</td>
</tr>
<tr>
<td>kokču</td>
<td>'skinny'</td>
</tr>
<tr>
<td>k'ebču</td>
<td>'to be shattered'</td>
</tr>
<tr>
<td>k'uwcu</td>
<td>'sated; tired of'</td>
</tr>
<tr>
<td>lebcu</td>
<td>'chipped'</td>
</tr>
<tr>
<td>ph'okču</td>
<td>'sound of clap'</td>
</tr>
<tr>
<td>sobču</td>
<td>'to have come off'</td>
</tr>
<tr>
<td>tirču</td>
<td>'tight-fitting'</td>
</tr>
</tbody>
</table>

Vowel themes: IIB2 (canon: CVC-CV·Cu)

These are compound themes which all seem to have something to do with sudden or unexpected action and/or emotions.

- čiplo·ku 'to pull up when released (as a snare); to whip back'
- heṭba·ku 'startled; surprised'
- limba·ku 'to blink (sg.)' (cf. limbak 'to flash; blink (pl.) at intervals')
- tirbi·ču 'to wink'
- tirla·ku 'to splash; splatter'
- yerbe·ku 'excited'
- 'alba·ku 'to strain a muscle'

Reduplicated Theme Structures

The semantic analysis of verb reduplication in Patwin is rather complex, involving an interplay of transitivity vs. intransitivity and activity vs. stativity of the predicate, plurality of participants vs.
plurality of actions, and for certain transitive predicates, a distinction between unaffected, affected and effected patients. Some of the details remain to be worked out.

However, the formal patterns of base and theme reduplication are rather clear and predictable, mostly involving a straightforward and regular initial CV(•)C reduplication (sometimes with minor morpho-phonemic adjustments), so here I list just the formal patterns without exact syntactic functions. To avoid cumbersome numbering of segments, I adopt the following conventions: In the unreduplicated canons below, the segments which are reduplicated are underlined; the same segments as reduplicated are set off with a hyphen in the reduplicated theme forms.

<table>
<thead>
<tr>
<th>base/theme designation</th>
<th>unreduplicated</th>
<th>reduplicated</th>
<th>example</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>CVC</td>
<td>CVC-CVC</td>
<td>hamham 'many to be sitting'</td>
</tr>
<tr>
<td>I31</td>
<td>CV•C</td>
<td>CV(•)C-CV•C</td>
<td>t\textsuperscript{h}e(•)pt\textsuperscript{h}e•p 'to whip many'</td>
</tr>
<tr>
<td>IB2</td>
<td>CVCVVC</td>
<td>CVC-CVCVVC</td>
<td>tewtewis 'to keep poking'</td>
</tr>
<tr>
<td>IIA1</td>
<td>CVCV•</td>
<td>CVC-CVCV(•)</td>
<td>kankanana(•) 'many to sleep'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>l\textsuperscript{a}lw\textsuperscript{a}o 'devouring'</td>
</tr>
<tr>
<td>IIA2</td>
<td>CV\textsuperscript{Cu}</td>
<td>CVC-CV•Cu</td>
<td>?il?i•lu 'to be dazzled'</td>
</tr>
<tr>
<td>IIB1</td>
<td>CV•CV</td>
<td>(CV•C-CVCV) ?</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>CVCho</td>
<td>CVC-CVCho</td>
<td>yoryorho 'to teach'</td>
</tr>
<tr>
<td></td>
<td>CV•Cpa</td>
<td>CVC-CV•Cpa</td>
<td>herhe•rpa 'to reach repeatedly for'</td>
</tr>
<tr>
<td>IIB2</td>
<td>CV•Cu</td>
<td>CVC-CV•Cu</td>
<td>sedae•du 'to be stooped over'</td>
</tr>
<tr>
<td></td>
<td>CVCV•Cu</td>
<td>CVC-CVCV•Cu</td>
<td>witvi\textsuperscript{č}i•su 'to pull many'</td>
</tr>
</tbody>
</table>

Note that for reduplicated IIA1 bases such as kankanana(•) 'many to sleep' kana- 'to sleep', there is a tendency to shorten the final
vowel, which tendency is consistent with the general rarity of trisyllabic or longer themes with final long vowels. On the other hand, when IIA2 bases are reduplicated, the second of the three vowels in the reduplicated form is lengthened, whereas IIB2 bases shorten the initial vowel of the reduplicated form. These patterns then fit the vowel length frame of Patwin canonical themes: -V-V-V-

Some IIA1 transitive primary bases show a special, rather poorly attested reduplicative pattern which seems to indicate a plural resultative stative sense. Typically these involve transitive change-of-stative predicates of the 'cut, slice, break, prick, punch holes in' variety which affect a patient by effecting its change into smaller pieces (or by leaving marks, holes, cuts, etc. in it). The IIA2 plural secondary bases of these IIA1 primary bases generally indicate plurality of action (either numerous objects affected or numerous pieces effected), whereas the reduplicated bases express the plural resultative stative.

The formal pattern is:

IIA1 CVCa CVCa-CVCa
soba 'to pull off' sobasoba 'many to come off'
' laba 'to break (sg.)' labalaba '(all) broken up'
into pieces'
'teba 'to nick' tebateba 'chips to come off'
' kopa 'to cut or break in two'
kopakopa '(all) broke off'

The Ablaut System

Now that I have discussed and exemplified the root types, it is a relatively simple task to describe the ablaut patterns proper. The
various base and theme types fit into six general ablaut categories, definable by the changes in (or lack of) the final vowel of the stems, before addition of suffixes. All but a very few irregular roots in Patwin fit exactly into one of these six patterns of quantitative and/or qualitative ablaut of stem vowels.

Table 3 shows these six patterns in columns, with the nine stem classes defined by crossmatching stem form and function with the suffix classes. The suffixes associated with each stem are listed in Table 5 below.

The use of -V or -V_ in columns 1 and 2 of Table 3 indicates that for consonant bases in stems I and II a harmonic (or copy) vowel is inserted before addition of the appropriate suffixes. For stems III to V no vowel is added; the suffixes appear directly after the final consonant of the root.

In column 3, -a_ is chosen merely as the most representative vowel for IIA1 bases. For IIA1 bases ending in vowels other than -a_ (e.g. CVCo-, CVCe-, or CVCi-), the final vowel behaves analogously to bases of the form CVCa-, staying qualitatively invariant and long for all but stem III. The same observation holds, mutatis mutandis, for IIB1 bases in column 5, except that for those the final root vowel is completely invariant in length for all stems.

Regular IIA3 monosyllabic bases (actually only ba_ 'to eat') pattern like IIA1 bases. Most of the IIA3 bases are irregular, and their stem formation is covered in Table 4 below.

IIB3 auxiliary base suffixes (cf. list above under primary base subtypes) are all length-invariant. -hM (semelfactive) and -M (resultative stative) form stems on the pattern of IIB2 bases; all the
### Base Types (regular)

<table>
<thead>
<tr>
<th>Stem Classes</th>
<th>IA</th>
<th>IB</th>
<th>IIA1</th>
<th>IIA2</th>
<th>IIB1</th>
<th>IIB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVC</td>
<td>CV·C</td>
<td>CV·C</td>
<td>CVCa</td>
<td>CVCu</td>
<td>CV·Ca</td>
<td>CV·Cu</td>
</tr>
<tr>
<td>-CVC</td>
<td>CVCo</td>
<td>etc.</td>
<td></td>
<td></td>
<td>CV·Co</td>
<td>CV·Cu</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$t^h_u, -^x_u$</td>
</tr>
<tr>
<td>Ia. Absolutive</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
</tr>
<tr>
<td>Ib. Future</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
</tr>
<tr>
<td>Ic. -s stem</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{i}$</td>
</tr>
<tr>
<td>II. -sa stem</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{V}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
<tr>
<td>III. Imperative</td>
<td>$-$</td>
<td>$-$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
<tr>
<td>IVa. Hortatory</td>
<td>$-^*$</td>
<td>$-$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
<tr>
<td>IVb. Modal</td>
<td>$-^*$</td>
<td>$-^*$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
<tr>
<td>IVc. Subjunctive</td>
<td>$-$</td>
<td>$-$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
<tr>
<td>V. Participial</td>
<td>$-^*$</td>
<td>$-^*$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
<td>$-\mathbf{a}$</td>
<td>$-\mathbf{u}$</td>
</tr>
</tbody>
</table>

$ $ Primary bases

$^\S$ Plural secondary bases

$^*$ Bases ending in coronal consonants are subject to various morphophonemic changes before suffixes beginning in $t$.

$^{**}$ haŋ 'to go' and weŋ 'to come' drop their $r$ before all hortatory personal suffixes and the irrealis mode clitic $-\text{ka}$.

Table 3: Stem Classes in Hill Patwin
other vowel-final auxiliary base suffixes pattern as IIBI bases.

Note that only stem V shows distinct forms for column 4 (IIA2 bases) and column 6 (IIB2 bases). Stem V forms are thus diagnostic of whether a verb root of the basic shape CVCu is a primary base (IIA2) or a secondary, plural base.

In a more general vein, from the overall structure of Table 3 it would seem that there is an overdifferentiation of stem distinctions made, and that several of the stem subclasses could be lumped together (e.g. Ia and b, or IVa, b and c). The reason for not doing so is two-fold. First, there are comparative considerations not entirely obvious from the WPCC data alone. The stems are divided so as to give a maximally differentiated framework appropriate for the analysis of ablaut in all Patwin dialects. Second, some stem subclasses are kept apart on functional grounds. Thus, for example, the subjunctive stem (IVc) is functionally distinct enough to warrant consideration independent of the more miscellaneous suffixes and functions of the modal stem (IVb).

The formation of stem classes in Patwin bears some general resemblance to ablaut in classical Indo-European languages. The vowels in the stem class table are the structural equivalents of the "theme vowel" of the Indo-European verb stem. (This use of the term "theme" is distinct, of course, from that applied in the Patwin analysis to certain types of verb roots.) Furthermore, it is even meaningful to talk about vowel grades of the stem. For CVC bases in Patwin, stems Ia and Ib represent the "long-grade" theme vowel, stems Ic and II the "short-grade", and stems III, IV and V the "zero-grade". For vowel bases, however, a separate set of grades emerges; for primary vowel bases in -u particularly, we could say that stems Ia-c constitute an i-grade,
stems II, III, and IV an u-grade and stem V an u'-grade of the base. 7

The following examples show the concrete operation of ablaut in actual bases with various suffixes added.

IA base
ham 'to sit' ti:la· 'to shoot'
Ia hama·ta ti:la·ta
'when he sat' 'when he shot'
Ib hama·tis ti:la·tis
'he will sit' 'he will shoot'
Ic hamas ti:la·s
'he is sitting' 'he is shooting'
II hamasay ti:la·say
'is he sitting?' 'is he shooting?'
III ham ti:la
'sit down!' 'shoot!' 'sing!'
IVa hamse ti:la·se
'let's 2 sit' 'let's 2 shoot' 'let's 2 sing'
IVb hamta· ti:la(·)ta·
'did he sit?' 'did he shoot?' 'did he sing?'
IVc hammu'u ti:la·m'u
'he didn't sit' 'he didn't shoot' 'he didn't sing'
V hamtaro ti:la·ro
'sitting and...' 'shooting and...' 'singing and...'

' -ta· (past interrogative), the only common suffix in WPCC with an inherently long vowel, tends to trigger secondary shortening of a preceding long vowel, especially in rapid speech.

A few highly irregular verbs remain unaccounted for. The most

81
important of these are shown in Table 4 on the next page.

The first column in Table 4 shows the stem formation for bo: 'to be (animate locative)' and be: 'to be (inanimate locative)'. The pattern for be: is exactly like that for bo:, with o substituted everywhere for o. The irregularities in the stem formation for those bases derive from two sources. First, bo: and be: are historically descendant from forms of the shape *boh and *beh (and possibly also *boy and *bey). They thus show some remnant traits of consonant-final bases in their stem-formation. Second, they are very commonly used in auxiliary formations, where they are subject to vowel-shortening processes.

The same general considerations apply to ?i: 'to do, to use', which is even more irregular. ?u 'to do, to say', however, shows a totally invariant final u vowel. muulu 'to injure' follows this same invariant pattern.

so:ru 'to listen' and ko:wu 'to watch' are very irregular. Some confusion of singular and derived plural bases may be involved here, but even that would not explain all of the observed variations.

Suffix Classes

Table 5 (immediately following Table 4) gives a brief summary of the suffixes which are associated with each stem class. With the addition of a few morphophonemic rules and some information on semantic cooccurrence constraints, this completes all of the apparatus needed for stem formation in Hili Patwin.

The suffixes of Table 5 fall into two major subtypes. Some are themselves auxiliary bases which undergo regular ablaut processes. Of these auxiliary bases, the voice suffixes (stem IVb) and -mut 'to feel'
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-o -</td>
<td>?i -</td>
<td>?u</td>
<td>so·ri</td>
<td>čo·wi</td>
<td>-</td>
<td>-</td>
<td>so·ri</td>
<td>čo·wi</td>
</tr>
<tr>
<td></td>
<td>-oh/ V</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>?i</td>
<td>?u</td>
<td>so·ri</td>
<td>čo·wi</td>
<td>so·ru</td>
<td>-</td>
<td>-</td>
<td>so·ru</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>?i</td>
<td>-i</td>
<td>?u</td>
<td>so·</td>
<td>?</td>
<td>-</td>
<td>so·</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>?i</td>
<td>?u</td>
<td>so·</td>
<td>čo·</td>
<td>*</td>
<td>-</td>
<td>so·</td>
<td>čo·</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>-</td>
<td>?u</td>
<td>?</td>
<td>čo·</td>
<td>-</td>
<td>-</td>
<td>so·</td>
<td>čo·</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>?</td>
<td>?u</td>
<td>?</td>
<td>čo·wu</td>
<td>-</td>
<td>-</td>
<td>čo·wu</td>
<td>(sg.)</td>
</tr>
<tr>
<td></td>
<td>-o</td>
<td>?</td>
<td>?u</td>
<td>?</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>čo·</td>
<td>(sg.)</td>
</tr>
</tbody>
</table>

* These shortened forms appear in use as auxiliaries.

Table 4: Stem Classes in Hill Patwin (Irregular Forms)
Stem class | Suffixes
---|---
Ia Absolutive | 1. -∅  generic nominalization
2. auxiliary bases:
   a. -bo/-be 'to be' auxiliary (functions to mark: imperfective aspect; evidential (a other suffixes), 'should', 'might', 'could' modal; attributive relativizer 'who/which is'; and in WPR only, interrogative)
   b. -koyu 'to want, to be about to, to start to' auxiliary base
   c. -mut 'to feel', auxiliary base of personal affect
3. -ma animate objective case (embedded object clause)
4. -ta locative case (conditional and temporal clause)
5. -(h)ym relativizer

Ib Future | 1. -to (functions to mark: definite future tense; non-first person intentional; inceptive 'to be about to'; subordinate purposive)
2. -ti (<<-to?i) definite future tense auxiliary (can be followed by auxiliaries or other tense suffixes)

Ic -a stem | 1. -g ongoing or completive aspect (i.e. non-inceptive aspect; neutral with respect to tense)
2. nominalizers:
   a. -a, -(a)tu (?) b. -aok instrumental, locative
   c. -men 'thing' d. -vin 'person'

Table 5 (part 1): WPCC Verbal Suffix Classes
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>II -sa stem</td>
<td>1. -sa definite past tense</td>
<td>2. -say present (or unmarked tense) interrogative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III Imperative</td>
<td>1. -Ø imperative</td>
<td>2. -? emphatic imperative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVa Hortatory</td>
<td>1. hortatory personal suffixes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. -le(da) 1 sg. 'I'll...'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. -se 1 du. incl. 'let's...'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. -bu(da) 1 pl. incl. 'let's all...'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. -hi 2 du./pl. 'you all...!'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. -di 3 sg./du./pl. 'let him/them...'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. -ka irrealis mode clitic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVb Modal</td>
<td>1. theme-deriving auxiliary bases of voice (valence-changing):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. -ma causative b. -pa benefactive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. -me comitative d. -nan reflexive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. -pir reciprocal f. -her passive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. modal suffixes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. -les 'can' (used also as a 'come and..., go and...' imperative)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. -len 'should' c. -zin 'might; lest'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. past tense suffixes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. -ta- definite past interrogative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. -nisa remote past</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. -nita- remote past interrogative</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVc Subjunctive</td>
<td>1. -m (_V)/-mu (_C) (functions to mark: purposive; negative (+ aux. -?u); evidentials (+ auxiliaries))</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 (part 2): WPCC Verbal Suffix Classes
V Participial

1. -ro (_V)/-taro (_C) (a auxiliary -bo/-be)
   (functions to indicate related predicates sequential in time, or simultaneous predicates where one
   is background to the other)

2. -t subordinate object form of -ro (?)

3. -n (_V)/-ni (_C) (functions to mark: adverbials;
   imperfectives (a auxiliary -?i))

4. -nol 'to be always doing' (?)

Table 5 (part 3): WPCC Verbal Suffix Classes

[text continues from page preceding Table 4]

(stem 1a) are theme-derivational, whereas the various other auxiliary
bases listed under stems 1a and 1b are mostly inflectional—not forming
lexicalized units. The rest of the suffixes, whether inflectional or
derivational (e.g. nominalizers), do not constitute verb roots and
therefore do not feed back into ablaut as do the auxiliary suffixes.
The full elaboration of cooccurrence constraints on inflectional suffixes
is complex, however, and cannot be covered here.

Towards Deep Comparison with Yokuts

It remains to point out the structural analogies between Yokuts and
Wintun verbal ablaut. Of course, in the absence of a reconstruction of
the full ablaut system for Proto-Wintun and for Proto-Yokuts, such com-
parisons are somewhat premature. However, by at least beginning the
matching up of root type categories in both families it should be pos-
sible to see the most promising areas for future exploration, comparison
and reconstruction.
Table 6 lists the Yokuts base types:

<table>
<thead>
<tr>
<th>I. biliteral bases</th>
<th>II. triliteral bases</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1 CWCW</td>
<td>A.1 CWCCW</td>
</tr>
<tr>
<td>A.2 CSCW</td>
<td>A.2 CSCCW</td>
</tr>
<tr>
<td>B CWCS</td>
<td>B CWCCS</td>
</tr>
</tbody>
</table>

Table 6: Yokuts Base Types [Gamble (1978:33)]

In Yokuts bases, S and W refer to the "strong" and "weak" members respectively of harmonic vowel series. In Yawelmani Yokuts there are four harmonic vowel series (Newman 1944:38):

<table>
<thead>
<tr>
<th>series</th>
<th>weak</th>
<th>strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>i</td>
<td>i</td>
<td>e</td>
</tr>
<tr>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>u</td>
<td>u</td>
<td>/o·/</td>
</tr>
</tbody>
</table>

Wikchami (Gamble 1978:16) adds a fifth series: weak /i·/ vs. strong /i·/ (= /U·/). Both vowels in a given Yokuts verb base must be from the same series.

Note that Patwin (and Wintun in general) departs from Yokuts in having a large number of vowel-final bisyllabic bases with non-harmonic vowels. The patterning of these non-harmonic bases in Patwin suggests, however, that while synchronically unanalyzable, most of these are historically secondary—derived from older roots of the form CVC ~ CV·C and base-formative suffixes *-a·-*a, *-o·-*o. Even the very large class of verb bases of the form CVCu could conceivably be similarly analyzable in terms of a base-formative suffix *-u.

*-*a·-*a would presumably be historically related to the auxiliary
base -ʔa 'to have', which functions quite productively in Patwin as a theme-derivational suffix.

*ʔ-o-ʔo would presumably be historically related to the auxiliary base -bo, which functions, considerably less productively than -ʔa, as a theme-derivational suffix.

*ʔ-u may be historically related to the auxiliary base -ʔu 'to do, to say', which shows up in a few instances as a theme-derivational clitic, but this historical equation is much shakier than the previous two.

Each of the four harmonic vowel series for Yokuts verb bases (five for Wikchamni) undergoes a set of complex, morphologically conditioned quantitative and qualitative mutations which constitute a formal system of verbal ablaust. As Silverstein (1979:664) summarizes it, "Each combination of [Yokuts] root-plus-suffix uses one from among a set of 'dynamic vowel formulas' (Newman 1944:38–53) which specifies the quantity and (partly by automatic phonological rules) the quality of the resulting vowels of the derived inflectional stem."

In order to get an idea of how Yokuts verbal ablaust compares with that of Patwin, I have reorganized the Yokuts 'dynamic vowel formulas' as analyzed for Wikchamni by Gamble (1978:28–29, 33–38) into a tabular format showing stem classes for each base type. Instead of using the Yokuts 8 vs. 7 notational convention, I list the ablausted forms with underlying long or short vowel, so that the comparability of the forms with Patwin stems stands out. (Recall that any two 7 symbols in a single Yokuts stem must represent harmonic vowels.) Yokuts stem classes are traditionally labeled according to formal characteristics of their mutation, since most have no obvious functional content, but each stem
class is firmly associated with a definite list of grammatical suffixes, just as in Patwin.

<table>
<thead>
<tr>
<th>Yokuts Base Type</th>
<th>IA1</th>
<th>IA2</th>
<th>IB</th>
<th>IIA1</th>
<th>IIA2</th>
<th>IIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem Class</td>
<td>CWCW</td>
<td>CSCW</td>
<td>CWCS</td>
<td>CWVC</td>
<td>CSCWC</td>
<td>CNWSC</td>
</tr>
<tr>
<td>Reduced</td>
<td>CVC-</td>
<td>CV·C-</td>
<td>CVCV'-</td>
<td>CVCC-</td>
<td>CV·CC-</td>
<td>CVCV·C-</td>
</tr>
<tr>
<td>Strong Reduced</td>
<td>---</td>
<td>---</td>
<td>CV'-</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>A-induced</td>
<td>CVCa-</td>
<td>CVCa-</td>
<td>CVCa-</td>
<td>CVCa-</td>
<td>CVCa-</td>
<td>CVCa-</td>
</tr>
<tr>
<td>Strong A-induced</td>
<td>---</td>
<td>CVCa'-</td>
<td>---</td>
<td>CVCa·C-</td>
<td>CVCa·C-</td>
<td>CVCa·C-</td>
</tr>
<tr>
<td>Zero</td>
<td>CVC-</td>
<td>CVC-</td>
<td>---</td>
<td>CVCC-</td>
<td>CVCC-</td>
<td>---</td>
</tr>
<tr>
<td>Strong Zero</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>CV·CC-</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Strong</td>
<td>CVCV'</td>
<td>- CVCV'-</td>
<td>CVCV'</td>
<td>- CVCV·C-</td>
<td>CVCV·C-</td>
<td>CVCV·C-</td>
</tr>
<tr>
<td>Strong-Glottal (Causative)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>CVCV·?C-</td>
<td>CVCV·?C-</td>
<td>CVCV·?C-</td>
</tr>
<tr>
<td>Full</td>
<td>CVCV-</td>
<td>CV·CV-</td>
<td>CVCV'</td>
<td>- ---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Table 7: Stem Classes in Wikchamni Yokuts

In Table 7 we can see that certain of the Wikchamni base types show structural parallels in their mutation to Hill Patwin base types. Tentatively I suggest that the association of Yokuts base types with Hill Patwin base (or theme) types as listed below may reflect significant historical connections between these types.

<table>
<thead>
<tr>
<th>Yokuts Base Type</th>
<th>Hill Patwin Base (or Theme) Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA1 CWCW</td>
<td>IA consonant bases CVC</td>
</tr>
<tr>
<td></td>
<td>IIA1,2 vowel bases CVCa·/o'; CVCu (in part)</td>
</tr>
<tr>
<td>IA2 CSCW</td>
<td>IIB1 consonant bases CV·C</td>
</tr>
<tr>
<td></td>
<td>IIB1,2 vowel bases CV·Ca/o; CV·Cu (in part)</td>
</tr>
<tr>
<td>IB CWCS</td>
<td>no association proposed</td>
</tr>
</tbody>
</table>

89
IIA1 CWWC

\{  
\begin{align*}  
\text{IIA1 vowel bases} & \quad \text{CVCa} \quad \text{(in part—mostly trans.)} \\
\text{IIB2 vowel themes} & \quad \text{CVC-}^{h}u; \text{CVC-}^{\acute{\text{c}}}u \quad (\text{in part}) 
\end{align*}
\}

IIB2 CSCWC

\{  
\begin{align*}  
\text{IIB1 vowel bases} & \quad \text{CV-Ca} \quad (\text{in part—mostly trans.}) \\
\text{IIB2 vowel themes} & \quad \text{CV-C-}^{h}u; \text{CV-C-}^{\acute{\text{c}}}u \quad (\text{in part}) 
\end{align*}
\}

\begin{itemize}  
\item IIB1,2 trisyllabic canonical themes \text{CV}_1\text{CV}_1\cdot\text{Co/u}
\end{itemize}

The formal similarity of Patwin and Yokuts verb base types, including harmonic constraints on vowels (rigid in Yokuts, an archaic tendency in Wintun); the participation of base (and theme) classes in both languages in complex vocalic mutations (expressed in stem class tables in my analysis of Patwin, and as 'dynamic vowel formulas' in Newman's or Gamble's treatments of Yokuts); and the codefinite of covert inflectional stem and suffix classes—each of these characteristics suggests the kind of detailed structural parallel between Yokuts and Wintun which presumably results from deep genetic connection between the families, rather than diffusion or chance resemblance.

Proving this connection would require systematic reconstruction of the ablaut system in Proto-Wintun and in Proto-Yokuts, as well as a search for formally cognate bases, rather than just structurally analogous base types. The prospects for Proto-Wintun at least look good; preliminary work makes it apparent that a system of verbal ablaut is reconstructible for Proto-Wintun, although difficulties abound in the detailed reconstruction.

If a demonstration of cognacy between the verbal ablaut systems of Wintun and of Yokuts is forthcoming, then the attested patterns of Yokuts and Patwin (and Wintu) ablaut could be accounted for in terms of divergent development of roots in each family, speculatively as follows. Yokuts has presumably rigidified an original system of harmonic vowel
verb bases and extended ablaut formulas originally traceable to rhythmic alternations in stems. Wintun, on the other hand, by adopting productive verbalizing strategies that produced themes which tended to morphologically merge (first as virtual bases, then as regularized true bases) with the bases, gradually relaxed restrictions against non-harmonic vowels in bases; this development seems to have contributed as well to simplification of the system of verbal ablaut in Wintun. In Wintu proper the simplification has proceeded further than in Patwin, and the pattern is obscured by the innovative development in Wintu of a kind of umlaut which raised mid vowels in roots (PW *o > WNW i; PW *o > WNW u) before certain suffixes.

The similarity of the verbal ablaut systems in Wintun and Yokuts, when added to the evidence of similarity of reconstructed pronominal systems and of reconstructed nominal case systems, of certain suggestive deep morphological connections between reconstructed kinterms in both language families, and of scattered lexical resemblances noted by early comparativists, makes a reasonably good though not yet proven case for Wintun genetic affiliation with Yokuts. The Wintun-Yokuts connection, in my opinion, certainly looks better in detail than Wintun connections to either the Haidun or the Utian language families.

Acknowledgements

Research for this paper was supported by the Survey of California and Other Indian Languages, Berkeley, and by a post-doctoral fellowship at the Department of Anthropology, Smithsonian Institution. I am especially grateful to Rev. Harry Lorenzo of Brooks, California, who provided the information about his language on which this description
Footnotes

1Harmony is also often applied to root canons involving identical vowels; in this sense harmony is also a prominent characteristic of Patwin verb roots, as it is of the verb roots of many "Penutian" languages. Cf. Sapir (1921).

2Silverstein (1979:663-667) discusses at some length the "many types of inner stem change" that Sapir (1929[1949]:175) noted as a typological characteristic of languages of his proposed Penutian super-stock. The types of stem processes involved go beyond those characterizable as ablaut. Thus, for example, in Takelma, "the verb stem alternations are fairly independent of the suffixal apparatus..., having inherent grammatical value in and of themselves." (Silverstein 1979:663). However, most of the California Penutian families do show formal ablaut systems, with stem alternations closely tied to suffixal sets.

3Eastern Miwok has also elaborated a system of synthetic person-number desinences on the verb which uncannily resemble Indo-European person-number paradigms (Callaghan 1980); such endings are, however, uncharacteristic of the other California Penutian languages and have little bearing on ablaut per se.


5Typical directional prefixes attested in Patwin compound verbs are: ?el- 'in'; pat- 'out'; ?ol- 'up'; ?en- 'down'; sum- 'here, hither'; khal- 'away'; daw- 'out, in front'; yel- 'back, behind'; ser- 'across'. Other Patwin directional do not generally occur as verb
prefixes.

The Patwin -thu (semelfactive) is cognate with the Wintu suffix -č, which Pitkin analyzes as a transitive root-deriving suffix, occasionally with medio-passive force. Note the following cognate sets, for example:

<table>
<thead>
<tr>
<th>Wintu</th>
<th>Hill Patwin</th>
</tr>
</thead>
<tbody>
<tr>
<td>pʰuṭča 'to blow away'</td>
<td>pʰuṭʰu 'to blow on (sg.)'</td>
</tr>
<tr>
<td>minču-na 'a close relative</td>
<td>mintʰu 'dark; fire to go out'</td>
</tr>
<tr>
<td>to die'</td>
<td></td>
</tr>
<tr>
<td>daqča 'scorched; hot'</td>
<td>diktʰu 'burned up'</td>
</tr>
<tr>
<td>-soptča 'to slip off'</td>
<td>sobtʰu 'to come off'</td>
</tr>
<tr>
<td></td>
<td>(clothes)'</td>
</tr>
<tr>
<td>pʰovča 'to blister; swell'</td>
<td>pʰoltʰu; pʰoktʰu 'to swell up'</td>
</tr>
</tbody>
</table>

Of course, such general structural comparisons between Indo-European and Patwin ablaut are intended only as typological observations and should not be taken as supporting any of the various claims of genetic connection between Wintun and one or another Eurasian language family. The comparison with Yokuts ablaut developed below does, however, support an hypothesis of distant genetic connection within California Penutian, since the structures of the systems match in rather extensive detail, rather than just in general type.

References


NEWMAN, STANLEY. 1944. Yokuts language of California. Viking Fund

SAPIR, EDWARD. 1921. A characteristic Penutian form of stem. IJAL
2.58-67.

——. 1929. Central and North American languages. Encyclopaedia
works of Edward Sapir, ed. by D. Mandelbaum, 169-178. Berkeley:
University of California Press.

SILVERSTEIN, MICHAEL. 1979. Penutian. The Languages of Native
America, ed. by Lyle Campbell & Marianne Mithun, 650-691. Austin:
University of Texas Press.

Press.

IJAL Native American Text Series 2(2).158-178. [Northern Cal-
fornia texts, ed. by V. Golla & S. Silver.] Chicago: University
of Chicago Press.

——. 1978. Mink, Bullethawk, and Coyote (a Patwin text). IJAL
Native American Text Series, Monograph 1.51-60. [Coyote stories,
Notes on the Wintu Shamanistic Jargon

Alice Schlichter

University of California, Berkeley

The religious practices of the Wintu and other native California groups centered around shamanism. The shamans or "Indian doctors", as informants prefer to call them, were both priests and doctors, working with the supernatural, influencing and being influenced by good or evil spirits. They could predict the future, see unknown past or present events, change the weather, cure the sick, and kill enemies by supernatural means.\(^1\) In order to do these things they had to be in a state of trance, reached by self-hypnosis and drugs. In that condition they frequently spoke more than one language depending on the type of spirit they controlled, one of them being a more prestigious form of their native language which is occasionally mentioned as having existed by informants and field workers.\(^2\) To my knowledge no data have ever been presented to investigate its nature.

In the 1930's Dorothy Lee collected many myths, legends, and ethnographic texts from several Wintu speakers and her best informant, Sadie Marsh, remembered some of the shamanistic language. Lee published a paper entitled "Some Indian texts dealing with the supernatural" (1941) where she presents in English and discusses a prayer, a shamanistic prophecy, two accounts of doctoring, and a text in which a shaman recounts his initiation. Since I have found unpublished Wintu versions of all but the last text I would like to present here one complete text which is a particularly good example of Wintu shamanistic speech, comparing it to the other accounts where useful.\(^3\) Lee (1941:407) assures us of Sadie Marsh's
phenomenally accurate memory so that we can assume that most of her rendering was identical with the shaman's speech.

The data

Mrs. Marsh called her story "Charlie Klutchiehun ḥahi", 'doctoring by Charlie Klutchie'. The shaman's Indian name was Qorit and Lee's (ibid. p. 408) title is "Qorit doctors Mrs. Fan." I will now give this text collected by Lee, rewriting it in the orthography I have been using for Wintu and adding an interlinear morpheme-by-morpheme translation. My free translation differs from that given by Lee (ibid. pp. 408-11) in only a few details.

1. qor-i-t Missus Fan-um wini'n-a ḥi-kila-k tu-ṃ tun-seed-sd-p Mrs. Fan-obj doctor-sd do-con-com eye- Matthews ahead popil, Harry-h t'erm-e-s-to'-t. 2. ḥuna-ken-wan-i year Harry-p interpret-sd-g-dp-p and down-get-sd (evening)

?uk-in ḥah-a- ḥi-kila-k ne-le'-n hen-e-t'-a. 3. ḥuna-then-loc doctor-sd do-con-com we-pl-gen arrive-sd-p-after and

pu-t wini'n-a ḥi-kila-k pu-t Missus Fan-um. 4. ḥuna- she-obj doctor-sd do-con-com she-obj Mrs. Fan-obj and

k'eč-i ni-s yur-a- ḥi-kila-k. 5. ḥut ni win-e-har-a- fern-sd I-obj send after-sd do-con-com and I see-sd-go-sd

?i-kila-k k'eč-i pu-r yum-u-s ḥel-t'ub-e'-wer-e-s ḥuni-buha do-con-com fern-sd he-pos saliva-sd-g in-spit-sd-rel-sd-g cot-and

ya-pay-tu- doq-o-s-um. 6. ḥuna- lo'1 bih-e ḥi-kila- evil spirit-being arrow-sd-g-obj and tobacco smoke-sd do-con-

k, lo'1 hisa-m-hon-da bih-e-buha t'un-in dil-e ḥi-

com tobacco some-g-long time-ts smoke-sd-and whole-loc fall-sd do
kila-k.
con-com

7. ṭuna· po·-qa-t č'a·w-a-buha ṭi-kila-k hon-da.
and now-as for-p sing-sd-and. do-con-com long time-ts

8. pe-h-pé-h yup-a'-buha. 9. "ha·haq", ṭuni. 10. "k'ay-i-s-
thing-pl-p speak-sd-and look! quot healthy-sd-g-
koy-i-kuy-a-r mi-s ho·la mi-s t'il-a·-bih-e ṭi-
want-sd-want-sd-sub you-obj pipe. you-obj eat with-sd-smoke-sd do
bi·-da, ṭoq-ti-t k'ay-i-s-kuy-a suk-en-so", ṭuni t'erm-
impf-I same-at-p healthy-sd-g-want-sd stand-I'll-before quot inter-
a-r.
11. ṭu-he-t'an ṭel-ew pe-h tip-n-s-min-a
pret-sd-sub do-id-though exist-priv thing-p know-refl-sd-not
ni pu-r lah-a'-r ti'n-he-t'an, ṭil-e·-s nom-ke'n-
exist-sd I he-pos doctor-sd-sub say-id-though be-sd-g west-down-
su·-m lah-u·-t.
be-obj doctor-sd-p

12. ṭuna· pu-t lah-a kerum-a-buha pu-r-kur-u-r
and he-obj doctor-sd finish-sd-and he-pos-son-sd-pos
lees-um lah-a' ṭi-kila-k. 13. ṭuna· hisa-m č'a·w-a kerum-
spirit-obj doctor-sd do-con-com and same-g sing-sd finish-
a-buha po·-qa-t ṭuni, "me·m čal-i bol-o-s-ku-da
sd-and now-as for-p quot water good-sd drink-sd-g-want-I
len-da ne-le·-n bol-o-s-to· sačaq-me·m." 14. ṭut lah-u-
ancient-ts we-pl-gen drink-sd-g-dp red rock-water and doctor-
her-e-s-to·-t, "ne-t-o-me-n boh-e-h yo· xat-al-a-har-a'·be'
sd-pas-sd-g-dp-p I-pos-al-one-gen big-sd-p emp weak-stat-sd-pro-sd-
way-ti-q'ede, no-ti-q'ede. 15. hesta-r pu-r naq-al-min-a
impf north-at-arm south-at-arm how-sub he-pos pity-stat-not-
?el-ew-a-r  ?iy-e  ?i-biy-a-m?  16. te’d-i-me’m  wer-e
sd exist-priv-sd-sub do-sd do-impf-sd-dub  red-sd-water come-sd
bol-en.”  17. ?una·  po-qa-t  bul-a  ?i-kila-k.  18. ?una·
drink-I’ll and now-as for-p drink-sd do-con-dom and
hi-we-hi  č’a’w-a  ?i-kila-k  hon-da.  19. ?una·  pi-?uni  ti’n,
id-sd-id  sing-sd  do-con-com  long  time-ts  and  that-cot  say
"win-t’h-u’-n-un  pe’h-um  wi’n-le’-s-p’in-a’-da,  ?il-e’s  ni
person-being-gen-obj  thing-p-obj  see-can-g-can’t-sd-I  be-sd-g  I
win-t’h-u’-h  ?uwe-puk-i-t,  ?il-e’s  ?ila’h  ni  ku’t’e-t
person-being-p  just-raw-sd-p  be-sd-g  baby-p  I  little-only-p
biy-a-r.  20.  pe’h  po’ni  t’ip-n-a-le’s  21. ?uni-r  ni
be-sd-sub  thing-p  now  I  know-refl-sd-can-g  cot-sub  I
win-t’h-u’-n-un  t’h-ors-in-pan-a-t  hen-um-a’  ni  wi’n-le’-s-p’in-
person-being-gen-gen  camp-loc-get-sd-p  how-dem-sd  I  see-can-g-can’t-
a’-bà’-k,  ?il-e’s  ni  ?ila’h  q’o’t-?ila-h.  22. ?el-ew
sd-dur-com  be-sd-g  I  baby-p  body  dirt-dim-p  exist-priv
?i-se’-da  ne-t  ?uni-were-s  ni  t’ip-n-u-min-a  ma’qa
be-per-I  I-pos  cot-refl-sd-g  I  know-refl-sd-not-sd  hence
ne-t  ?uni-were-s  biy-a-kir-[r]e’m.
I-pos  cot-refl-sd-g  be-sd-com-inf-dub

23. ?ut  be’-di  win-t’h-u’-h,  "?uk-in  hadi
and  be-don’t  person-being-p  there-loc  (exclamation)
t’h-ors-in-pan-a-r  q’il-u-n-a’-kila  mod-u-m-a-he-le-ba’-da”,
camp-loc-get-sd-sub  paint-sd-refl-sd-com  heal-sd-g-sd-pas-can-dur-we
?una·  be’-di  se‘-a’m-ah-n-a-min-a,  ?il-e’s  ne-t-o-
thus  be-don’t  around-think-sd-refl-sd-not  exist-sd  be-sd-g  I-pos-al-
me-n  boh-e-h  xat-al-a-har-a’  ?i-be,  ?ol-k’ok-u-wil-
one-gen  big-sd-p  weak-stat-sd-pro-sd  be-impf  up-lift-sd-with

98
31. pe'-'h ni-s ma'n leweq-a-r ?iy-e-'el. 32. ?ut čiri'k-thing-p I-obj now tell-sd-sub be-sd-exp and fright-a-da. 33. ni-qá-t-i pe'-'h ma-le-'t leweq-a-le-'s ened-sd-I I-as for-p-sd thing-p you-pl-obj tell-sd-can-p

p'in-a-da ?il-e-'s ?uwe-puk-i win-t' u-h, ?ila-'h po ni can't-sd-I be-sd-g just-raw-sd person-being-p baby-p still I

?il-e-'s. 34. ?el-ew-qa-t kila-'el ?ila-wí hi-da-ko- m be-sd-g exist-priv-as for-p con-exp baby-pl id-emp-all-g

t'ip-n-a-suk-min-a. 35. ?uni-r ni ma'n pe-'h mal-n-a-wir-know-refl-sd-per-not-sd cot-sub I now thing-p make-refl-sd-a ?i-be-wi-". ?uni ?i-kila-k č'a-w-a kerum-a-buha.
rel-sd do-impf-int quot do-con-com sing-sd finish-sd-and

36. ?uta po-'qa-t Missus Fan dollar-and-a-half mutm-a and now-as for-p Mrs. Fan pay-sd

?i-kila-k. 37. "?e-be mi-s ?e-wí-n se-qí-1-u-n-a-š-do-con-com this-be you-obj this-g-with around-paint-sd-refl-kuy-a-r ?iy-e ?i-bí-'da tu-m kuy-a-r, pe'-'h win-sd-g-want-sd-sub do-sd- do-impf-1 eye-g hurt-sd-sub thing-p see

le'-a-p'in-a- ?i-bí-'da. 38. pe-'h-un ni ma'n X'om-u-t X'itíq-can-g-can't-sd do-impf-I thing-p-gen I now kill-sd-p do-refl-n-a- ?iy-e biy-a-šel. 39. ?uni-r mod-i-kuy-a-r mi-s sd do-sd be-sd-exp cot-sub heal-sd-want-sd-sub you-obj

wini'n-u-n-a-r ?iy-e-bí-'da. 40. hi-baqí ni ḱah-i-n doctor-sd-refl-sd-sub do-sd-impf-I id-or I doctor-sd-gen

keneh-a X'om-u-t ?iy-e biy-a-šel. 41. ?uni-r mi ni-s hem-maybe-sd kill-sd-p do-sd be-sd-exp cot-sub you I-obj how

?u-le's xan-puí-u-min-a hi-baqí pu-t ni-s X'om-i-tó-n-um do-can-g off-blow-sd-not-sd id-or he-obj I-obj kill-sd-dp-g-obj
neq-u-wil-kila war pu-t-am yi·l-a", ʔuni-ki-ntʰi-k.
find-sd-with-con imp he-obj-obj send-sd quot-com-nvs-com

42. ʔuta pu-t, "daw·in ʔe-w-in ken·k-a", ʔuni
and she-obj front-loc this-g-loc down-sit-sd quot
ʔi-kila-k. 43. ʔuni-buha po·qa-t ʰp'oyq ʔin·e·-buha pu-t
do-con-com cot-and now-as for-p head take-sd-and she-obj
hay-a·-buha ʔi-kila-k hon-da. 44. hay-a·-buha-r-kel·t'an
look-sd-and do-con-com long time-ts look-sd-and-sub-long-though
pu-t, "ho·", ʔuni ʔi-kila-k. 45. "ma·t-a ma·n po·loyme-s-
she-obj yes quot do-con-com you-pos-sd now young-girl-g-
a-r ba·s-biy-a-ntʰ-e·; hi-baqi ma-t ʔila·m se-tep·ʔu-n-
sd-sub eat-g-impf-sd-nvs id-or you-pos baby-obj around-come to
a·-biy-a-r ba·s-s. 46. ʔel·ew·qa-t kila-
life-mp-sd-refl-sd-impf-sd-sub eat-g exist-priv-as for-p con-
ʔel len·da-da ʔuma· Nitiq-n-a-mi·n-a win·ʔu·h loyome-
exp ancient-ts-emp thus do-refl-sd-not-sd person-being-p girl-
s-a-be·t'an, hi-baqi ʔila·m se-tep·ʔu-n-a·-biy-a-r",
g-sd-be-though id-or baby-obj around-come to life-mp-sd-refl-sd-impf-
ʔuni. 47. "ma·t-a ʔe-w ba·s q'omih-n-a·-s koy-i-
sd-sub quot you-pos-sd this-g eat-g full-refl-sd-g want-
biy-a-ntʰ-e·. 48. tu·n·ʔila·n ni ma-t ʰt'o·s-in-pan·a-paq-
sd-impf-sd-nvs first-dim-loc I you-pos camp-loc-get-sd-or-
a-t hen·ʔu·le·s. 49. po·qa-t ' mi hi-da kuy-a-wenem·dil-
sd-p how-do-can-g now-as for-p you id-emp sick-sd-mid-fall-
m-a-be·sken. 50. ʔel·ew·qa-t-kila ʔe-h le·n-da iah-
g-sd-be-you exist-priv-as for-p-con this-p ancient-ts doctor-
a·-r win·ʔu·h, 'hi-da mod·u-mah-le·ba·da ʔume·na',
sd-sub person-being-p id-emp heal-sd-caus-sd-can-dur-I like that
Free translation

1. Qorit doctored Mrs. Fan's eyes last year; Harry was the interpreter. 2. And he doctored in the evening after we had arrived. 3. And so he worked on her; he doctored Mrs. Fan. 4. Then he sent me after fern. 5. And so I went to get the fern into which he was going to spit his spittle and the supernatural arrows. 6. And he smoked tobacco; he smoked tobacco for quite a while and fell into a trance.

7. So now he was singing for a while. 8. He spoke prophetically.

9. "Look upon me", he said. 10. "I smoke a pipe in your company because I want you to be healthy, so that I can be healthy in the same way."

Thus the interpreter. 11. But I did not understand any of his doctoring
as he spoke in the language of the northwesterners.

12. Then he finished commanding this spirit and addressed the spirit of his son. 13. Having finished singing a little he now said, "I want to drink the good water, our drink of red-rock water from long ago." 14. Then he who was in the shaman's command said: "My father's arms are getting weak. 15. Why don't you show pity for him? 16. Get red water so that I may drink." 17. And now he drank. 18. And again he sang for a long time. 19. And the same spirit spoke: "I am unable to help anyone as I am a person who has not been perfected, a little baby. 20. What can I know now? 21. Thus when I come to people's camps, how can I attend to them, as I am a baby, a little body-dirt baby. 22. I never thought that this would be my destination; for this, I gather, has been my destination.

23. "So, you people, say not in your thoughts 'when we go to his camp and he rubs us with spittle, we shall be healed'; for my father is getting weak and can give no support to anyone. 24. She who was his supporter has recently relinquished her hold. 25. And so my father, left alone, is weak of heart and his breath is getting weak. 26. I have been exhorting my father, saying 'when you go north and when you go south, do not drink so much liquor', I have been telling him. 27. But my father does not understand me. 28. Thus only recently he went a short distance to the north. 29. He mingled with the white people, drank quite a bit, and so now he is getting weak and his breath is getting short.

30. "When I was running, coming here a short distance from the west, I heard something whisper into my northward ear. 31. It told me something. 32. And I was frightened. 33. As for myself, I cannot tell you anything since I am an unperfected person, being still a baby."
34. Kids do not know everything. 35. Thus what am I to achieve?" Thus he spoke after he had finished singing.

36. And now Mrs. Fan gave him a dollar and a half. 37. She said: "Here, by means of this I want to be rubbed with spittle, as I ail in my eyes; I cannot see anything. 38. I am being done to death by someone, I think. 39. So, wishing to be healed, I come to you to be doctored. 40. I consider that perhaps it is a shaman who is killing me. 41. If so, can you blow the evil force away for me; or, if you find what is killing me, send it back to the one who sent it." I heard her say.

42. And so he said to her: "Sit here in front of me." 43. And now he took her head in his hands and looked at her for a long time. 44. After looking at her he said, "Yes", he said to her. 45. "It is your own doing. I know that when you were pubescent, you kept eating; furthermore, when you brought your child to life, you were eating. 46. In the old days, people did not behave like that when they reached puberty or when they brought children into being." he said. 47. "This disease is your own doing, your desire to eat yourself full of food. 48. If I had come to your camp earlier, I might have done something. 49. Now you have fallen too deep into illness. 50. Neither did the doctoring people in the old days say, 'I promise a complete cure'; on this understanding let me doctor you."

51. And now he took hold of her and sucked her eyes. 52. Then he said to her: "You will never see again with your eyes. 53. It is said that eyes cannot be doctored. 54. There is something like a thin cover growing on top of them." 55. And after he had sucked her for some time he was finished.

56. And that fall Qorit died.
Speaking in tongues

The first point to note in this text is that in sentence 10 Qorit speaks in a language other than Wintu. Wintu shamans always had interpreters with them to translate those parts of the speech for monolinguals in the audience. The interpreter traveled with the shaman to other tribes and thus learned the languages the shaman learned (Du Bois 1935: 107). The first spirit speaking through Qorit only says one sentence; as we learn later, Qorit is not well and is losing his power to command spirits. The nomyoh are particularly powerful spirits (Lee 1941:408) and apparently Qorit loses control of the first spirit before he can tell him anything. He is not able to cure the patient in the end because of this weakness. I believe this first spirit was the evil spirit that made Mrs. Fan ill. In another text only available in English (Lee 1941: 408) Qorit says that his "yoh" spirit power is killing him. Shamans would let the evil spirit speak through them to find out what it did to the sick person, hoping to find a cure knowing the cause and location of the disease. This spirit speaks in the language of the nowme-nau-s which is another name for the nomyoh. Lee explains (ibid., p. 408, footnote 14): "The yoh, or, as they are commonly called, nomyoh (yoh of the west) are the potent spirits of the Indians of the northwest coast of California, who turned themselves at will into beasts. Children were warned: 'Never say nomyoh at night; say west-coast-beings instead.' yoh—old-man was a term applied to a great doctor."

My informant Grace MacKibben identifies the nomyoh as Hupa Indians who have turned into beasts and poison doctors by spending a lot of time out in the woods. Her "Hupa" does not necessarily refer to the Hupa
tribe. The Wintu identified most tribes by the direction they lived in seen from Wintu territory, often applying the same name to several groups all of whom were in the same general direction. The name is then translated into an English tribal name so that that name, too, comes to apply to more than one tribe. Thus Qorit could have been speaking in the language of any group west or northwest of Wintu territory. Sadie Marsh told Du Bois (1935: 95) that when Qorit was "half-crazy" mourning his son's death he was helped by a nomke-nsu's doctor at Fort Jones and that for that reason he sometimes talks nomke-nsu's when he doctors. Du Bois thinks that this doctor was "probably a Shasta Indian."

Other shamans used other languages, whichever they happened to know. Du Bois (ibid., p. 91) tells us that the shaman Albert Thomas, when in trance, spoke Achomawi or "the language of any western group", or English when being helped by a white man's spirit. It is possible that especially evil spirits always spoke through the shaman in a language other than Wintu. The Wintu language is a symbol of tribal identity and pride and as such could not be spoken by evil spirits. Evil comes from outsiders.

Wintu shamanistic register

The second spirit Qorit addresses is that of his dead son. According to Du Bois, the Wintu could become shamans in two ways: through initiation and formal instruction in the sweathouse (ibid., pp. 88-90) and through grieving over a dead relative. Qorit had become a shaman in the latter way when his son died at the age of ten or eleven and thus uses his son's spirit as a familiar and helper. As pointed out by Lee (ibid., p. 409, footnote 17) Sadie Marsh was able to tell that Qorit
was addressing his son's spirit because he switched from the nomyoh language to Wintu. The son's spirit speaks through Qorit in what follows; that is, Qorit speaks as if his and his son's personalities had merged into one.  

How does the shaman's language differ from colloquial Wintu? The body of data is so small that whatever we can discover must remain speculative, but I believe that it can give us a few general ideas which point in the right direction.

First of all, Qorit obviously avoids the use of direct words when referring to taboo concepts such as body functions and death. In sentence 24 yaleqta 'to let go' is used instead of minel 'to die'. In sentence 45 po-loymesa 'to be a young girl' and in 46 loymesa 'to be a girl' replace bâša 'to be pubescent, menstruate for the first time'. In the same two sentences ?ila'm se-repçuna 'to bring a baby to life' is used as a substitute for ku'ra 'to give birth'. In 47 ba's q'omihna 'to fill oneself with food' is probably more formal than ba's ba 'to eat food'.

Further, there are paraphrases for two kinship terms, as already noted by Lee. In sentence 14 we find netom en boheh 'my alienable particular big one' for netta'n 'my father'. The reason for the alienable possessive pronoun may be that the son is dead, but boheh is not the usual way of referring to one's father. The second kinship reference is in sentence 24: ?ol-k'okuwilisto't, literally 'one who lifts someone up', i.e. 'supporter', instead of p'uqat 'wife'.

Other "idioms" or "ceremonial phrasings", as Lee calls them, are ha'hag 'look upon me!' (sentence 9), an exclamation used only by shamans and not related to the word for 'to see, look'; and sa'gaqme'n 'red-rock
water' in sentence 13. In sentence 16 there is te·dime·m 'red water' which may have referred to the same thing. I am not sure what is meant by it. My informant Renee Coleman now uses it for 'alcohol' but I do not believe that that was its original meaning. She says saqaq refers to rocks used to heat liquid in cooking, so the 'red' might be that of the glowing hot rocks. Another kind of red rock is iron oxide clay which can color the water of springs. Du Bois (ibid., p. 116) reports the existence of red-clay water "used in burials and to propitiate souls which manifest themselves in swirls of dust." She also mentions (p. 117) "red-rock water" as part of the regalia of a shaman but since she does not give the Wintu terms, it is not clear if that is supposed to be identical with red-clay water. According to Du Bois (p. 104) the shaman used red-rock water to moisten his lips for sucking out pains; perhaps it also served to facilitate trance.

Further expressions part of the register of shamanism are hō·sin·pana 'to get to someone's bed or camp' (sentence 21) and ma·qa 'hence, it follows' (sentence 22) which is now obsolete and was rare at Lee's time. Sadie Marsh, in order to explain its meaning, told Lee a story she had heard from her mother. About ?uniweres (sentence 22) Lee has the following to say (ibid., p. 409, footnote 26): "The term destination here is not to be taken as the equivalent of fate. The -weres of personal intention is used, not the -les of impersonal necessity, or the inescapable future. Perhaps he implies that his father, through his excessive mourning, deliberately made him into a spirit power."

In 26 saqme·m means 'alcohol, intoxicating liquor'. me·m is 'water', saq must be an archaic word for 'blood', perhaps related to the above-mentioned saqaq 'red rock'. My informant Grace MacKibben is
not familiar with *saq* but knows that the male proper name *sa·qa* once meant something like 'blood stain' or 'color of blood'.

In sentence 52 eyes are called *tu-winherestopi*, literally 'used for that which is seen ahead', i.e., 'those with which what is ahead is being seen'. In 49 *3el-wana* 'to get in, enter' is used instead of *ja·ha* or *wini·na* 'to doctor'.

Lee also points out *wi·nle·sp'ina* 'not to be able to see' (sentence 19) instead of 'not to be able to help', noting that the form of the verb is obsolete. I am not quite sure which part of the verb she refers to but I believe it is *p'ina* 'not to be, to be without' which is used frequently in this text in favor of the negative *telew* ... *wina*. It is also used by informants who are not shamans in Lee's texts, but my informants do not use it. I conclude that obsolescent expressions survive longer in shamanistic speech.

A third class of characteristic features of shamanistic register comes under the heading of understatement: "ceremonial speech is given to self-belittling and understatement" (Lee ibid., p. 409, footnote 25). Qorit's son speaking through Qorit refers to himself as *3ila·h*. Lee translates this as 'child', but my informants say it means 'baby'. 'Child' would have been the truth—Qorit's son was about ten years old when he died—'baby' is an understatement. He continues to emphasize how little he knows while it is clear that he knows more than his father, advising him not to mix with white people and not to drink. He also calls himself *q'o·t'ilah* (21) 'little body dirt' which may imply a reference to the way babies leave the mother's body.

When Qorit's son calls himself *3uwe-pukir* 'just a raw one' (19, 33) he is also speaking for Qorit who was one of the "raw" doctors (Du Bois
ibid., p. 98, 103) because he did not go thorough the sweatbath initiation and instruction but became a doctor by grieving. However, Qorit was considered the greatest doctor of his time and ḫuwe-pukit remains self-belittling.

Lee (p. 410) further notes ṭel-bula'īlaya 'to drink in a little', in sentence 29, meaning 'drink a lot'. Another special expression is waytiq'ede notiq'ede 'northern arm, southern arm' in sentence 14. The son's spirit says that his father's arms are getting weak which may be true but has nothing to do with shamanistic powers. What matters is that Qorit's mind and concentration are weakening making it hard for him to cure people. His health is so bad that he has less power than his son. Qorit feels like a powerless baby which may be why he chose to address the spirit of his son. However, the idiom about weakening arms may have been a general expression not only used by shamans.

The list of special vocabulary used by shamans can be expanded with expressions found in other texts. In Ida Fan's prophetic speech (Lee ibid., p. 411) we find wayk'oho'la nok'oho'la 'wandering to the north, wandering to the south'. Lee notes (p. 411, footnote 36) that k'oho'la is obsolete and only used by shamans. The same is true for wayhami'la nohami'la 'drifting to the north, drifting to the south'.

In "Doctoring" (Lee ibid., p. 411), it is tu-k'udawirabintʰe. 'she will go onward, I sense' meaning 'she will die' and putun ḫest'o-t yel.ta'nk'uda sukebintʰe. 'her spirit stands a short distance behind her, I sense' meaning 'she is close to death'. From the last two examples we can infer that the shaman was free to choose among several possible variants when using circumlocutions.

Only a few of the ceremonial phrasings replace direct words for...
taboo concepts such as death and body functions while others must simply be part of the special register of shamanism. This aspect of the register was artistic, coming close to poetic style. As shown, for example, by Emeneau (1964, especially pp. 336-40) for the Todas, poetry is universally characterized by the enigmatic and allusive, marked by suggestions and implications. Perhaps the closest parallel to the metaphors used by the Wintu shaman is found in the "kennings" of Anglo-Saxon and especially Norse skaldic poetry. Gordon (1957: xxxvi-xliii) explains that the kennings are logically metaphors but do not represent the emotional or highly imaginative perception frowned on in English as "poetic diction." Rather they are devices for introducing descriptive color and for suggesting associations without distracting attention from the essential statement. The kenning has the meaning of a subordinate clause but expresses it in a briefer space and with less emphasis. The Wintu were able to do just that because of the synthetic structure of their language. What would be a clause in a language with little morphology and much syntax (e.g., "used for that which is seen ahead" or "one who lifts someone up") can be a single word in Wintu (tu-winerestopi or ?ol-k'okuwilistoi-t).

A parallel to this allusive character of the jargon's lexical material is found in Wintu myths: the main protagonist often remains unnamed and is referred to only by descriptive formations (e.g., g'arawah 'one who is in the fields' replaces sedet 'Coyote').

Another characteristic of shamanistic register is repetition. In the text given above we find k'ayiskoyikuya ... k'ayiskuya (sentence 10); holoskuda ... holosto; (13); ?ile's ... ?ile's (19); wi'nle's-p'ina-da (19) ... wi'nle'sp'ina'ba·k (21); ?ile's ?ila·h ni (19) ...
While we usually avoid repetition in elevated styles of English, Wintu shamanistic register favored it. One reason was certainly emphasis; perhaps repetition was also part of the Wintu concept of euphony.

In the construction of the repeated phrases alliteration and assonance may play a role. For example, netomen boheh favors bilabials, nasals, and the vowels o and e; ?ile's ni ?ila'h (q'o't'ilah) has ?il-; wint' u'h ?uwe-pukit has the vowels i and u and the consonants w - w - p; ?ol-k'okuwile'sp'ina- or ?ol-k'okuwilisto't has two l, two k, and two or three o. There may be other examples but they are not convincing. Especially assonance is difficult to tell apart from words in which ablaul has caused certain vowels to cooccur.

An alternative interpretation is echoism which characterizes glossolalia (Samarin 1973:79). Observe the vowels in the following expressions: netomen boheh, ?ol-k'okuwilisto't, xatalahara-, waytiq'ede, notiq'ede, wint' u'h ?uwe-pukit, and many others. Echoic devices, as noted by Samarin (ibid., p. 81), figure also in poetic discourse.

A second phonological characteristic of Qorit's speech—more obvious than alliteration and assonance—appears to have been the favoring of certain vowels and consonants. A calculation of the frequency of vowels
shows a to be the most often used by both Sadie Marsh and Qorit; i follows at about the same distance for both. The next most frequently used vowel is u for Sadie, occurring almost as often as i, but e for Qorit, used almost as often as i; Sadie uses e only about half as often as i while Qorit uses u about half as often as i. Thus the ratios of e and u per total number of vowels used are reversed. o is the least frequently used vowel for both, but its frequency is 1/3 of that of a for Qorit, 1/4 of that of a for Sadie. In short, the shaman's speech is characterized by greater frequency of the vowels e and o.

There are two interpretations of the increase of e and o. One goes as follows. Many Wintu i and u are derived historically from *e and *o. Patwin, the only extant cognate language, has e and o where Wintu has the morphophonemic alternation i~e and u~o. The Wintu innovation may have been quite recent, at any rate later than the split from Proto-Wintun. Perhaps shamans were instructed to use as many words with e and o as possible to give their register an archaic "flavor" reminiscent of a time when e and o were the most frequent Wintu vowels together with a. (If vowels were used for emphasis one would expect a preference for i – a – u, the extremes of the vowel system.)

A second explanation for Qorit's favoring of e and o is based on the argument made earlier that shamanistic speech in Wintu is an art form. The vowels e and o are also preferred in the linguistically meaningless syllables used in some Wintu songs. As pointed out by Hinton (1976:67ff), the high aesthetic value placed on low vowels is an almost universal phenomenon in singing. Havasupai songs show an increase of low vowels as part of the preference for the "maximization of resonance" (Hinton ibid., p. 76) but in this language the increase is achieved by
phonological rules, such as vowel lowering and insertion, while in Wintu the same effect is reached only by the selection of lexical items containing the desired vowels. 10

In contrast to the characteristics of the vocalic inventory, a calculation of the frequencies of consonants brings us to a major difference between the jargon and glossolalia. 11 In producing glossolalia, the speaker maximizes what is already common in his primary language (Samarin 1972:84). When the frequencies of stops and fricatives are compared for English and glossolalia, the number of fricatives decreases for glossolalia while the number of stops, more common than fricatives in English, increases. There is no evidence for any such trend in the shamanistic register. Instead we find an increase in the number of voiced consonants (m and w increase by 4%, d, l, and n by 2%, y and b by 1%) and a 3% increase for s, 1.8% for tʰ, 0.5% for x, 0.3% for ꝏ, while the frequency of the other voiceless consonants decreases (k by 9%, p by 5%, ð and h by 3%, ò by 1.7%, t by 1.1%, c' and q by 1%, x by 0.4%, c by 0.1%). The shaman favors the greater "resonance" (following Hinton 1976) of voiced consonants, just as he prefers e, a, and o, and the high frequency components of s, x [ʃ], tʰ, and ꝏ. 12

There are other aspects of Wintu shamanistic jargon which can be compared and contrasted with glossolalia. Samarin 1972:122 defines glossolalia as "unintelligible extemporaneous post-babbling speech that exhibits superficial phonologic similarity to language without having consistent syntagmatic structure and that is not systematically derived from or related to known languages." Wintu shamanistic jargon certainly does not fit this definition. However, the jargon has several elements in common with glossolalia as described in detail by Samarin 1972,
1973, and since Samarin argues that glossolalia is continuous with other marginal linguistic phenomena, "anomalous speech", I would like to suggest that shamanistic jargon is part of the same continuum and not too far removed from glossolalia.

Samarin (1973:79) notes that glossolalia is not "meaningless" or "gibberish." Although it is unintelligible, the speaker or an interpreter can translate it into normal languages. The same is true for the shaman's speech when he uses languages other than Wintu.

Another feature the jargon shares with glossolalia is that the physiological state of trance is not the only causation for its characteristics. As noted by Samarin (1973:85), a person can use glossolalia in a fully conscious, normal state if he wants to. A speaker of Wintu can use a register similar to the shaman's for different purposes, such as praying (see below).

Glossolalia is learned behavior (Samarin 1969b, 1973:87). The speaker learns that he must produce some form of it to be accepted as a member of the Pentecostal Society. He learns favored phonological and paralinguistic features; and he learns to use certain sequences of syllables he hears from other glossolalists. The same three things must be learned by the shaman.

From a sociolinguistic point of view, glossolalia is just another "language" in the Pentecostalists' linguistic repertoire (Samarin 1972: 121, 124). The glossolalist selects from this repertoire according to his needs in the same way as a bilingual switches codes depending on the subject under discussion. On the one hand, shamanistic jargon is one of the shaman's registers; on the other hand, it is a point in the Wintu stylistic continuum sharing many features with other registers.
Samarin rejects trance as causation of glossolalia and favors defining it as regressive speech: "the speaker returns to processes that characterized his language learning in early childhood, at a time when he was first learning the part of language most obvious to a child—its phonetic representation" (1973:85). At this point the jargon has nothing in common with glossolalia. Even though the shaman is in trance when using his jargon while the Christian using glossolalia is rarely in a state of trance (Samarin 1972:123), he does not return to a more primitive stage of his language. Rather, the jargon represents an elevated style of Wintu. It comes close to poetry in its use of metaphors and echoic devices. It seems ironic that in a "primitive" culture the religious register is the most elevated style while in advanced civilizations religious glossolalia returns to the primitive "post-babbling" stage. "... it may be safely said that the inspired prophet and seer is the leading intellectual and artistic influence in primitive and backward society" (Chadwick 1942:57).

There are differences between shamanistic Wintu and colloquial Wintu beyond the use of special vocabulary. An obvious one is that in the text given above almost every single sentence spoken by Sadie Marsh when she is not imitating Qorit begins with the connective ?una: 'and, and then'. A few begin with ?ut which has the same translation but implies change of subject. When she is speaking for the shaman, ?ut is used three times (23, 25, 32), ?una: never; other connectives used by Qorit are ?unir 'thus' (23, 25, 32) and ?uhet'an 'however, but, although' (27). ?una: is the unmarked connective having no meaning other than 'connective' while ?ut, ?uhet'an, and ?unir have added meanings. Thus the main function of ?una: is to give the speaker an
extra second to think of what to say next while keeping the floor. Sadie Marsh uses it when telling her own experiences at the seance as long as it is up to her to decide what to mention and what to leave out, or to try to remember as much as possible. The shaman's speech she reports is fixed. She remembers it literally or as she heard it and understood it and is not free to choose what to say. 'una' is used only as an aid in the reconstruction of a sequence of events (cf. Chafe 1973:269) and, of course, it not used within a quote unless the speaker being quoted used it.

If one function of 'una' is to signify to the audience that one is not ready to give up the floor yet, a shaman need not use it since no one would interrupt him. Other reasons why Qorit did not use 'una' will become clear below.

Another feature of shamanistic speech as exemplified in our text is the greater length of some of the sentences. I counted the number of words per sentence for Sadie Marsh's own speech (sentences 1-8, 11, 12, 17, 18, 36, 43, 51, 55, 56) and for Qorit's speech (sentences 13-16, 19-35, 45-47, 50, 52-54) excluding of course the parts of those sentences spoken by Sadie Marsh introducing the quotations). I did not count the interpreter's or Mrs. Fan's sentences. The ratio of words per sentence for Sadie Marsh is 6.9 (and that includes the repetitive 'una'), the ratio for Qorit is 7.6. For the same sentences, I counted the number of morphemes per word; Sadie Marsh's ratio is 2.4, Qorit's ratio is 3.1.13

It now looks as if the relation of shamanistic Wintu to conversational Wintu is somewhat similar to that of written to spoken language in literate cultures and so we can look for other differences in the same direction. We know, for example, that in spoken English coor-
dination and right-branching subordination prevail while subordination and left-branching are more prevalent in written language (Pawley and Syder 1976). When Sadie Marsh is speaking for herself she uses right-branching subordination 14 in sentence 2 (nele'n henne't'a 'after we had arrived'); in sentence 5 (pur yumus ?el-t'ube'wes . . . 'into which he was going to spit his spittle . . .'); in 11 (?ile's nomke'nsu'm lahu't 'doctoring in the nomke'nsu's language'). Left-branching subordination is used twice, in sentence 43 (haya'buharkelt'an 'having looked for a long time') and in 55 (xun-t'u'ya'a 'after he had sucked'). In both cases the left, subordinate verb describes an event which is temporally anterior to that of the right, superordinate verb. Qorit uses right-branching subordination in sentence 19 (?ile's ni wint'h-u'h ?uwe-pukit 'as I am just a raw person' and ?ile's ?ila'h ni ku'tet biyar 'as I am a small baby'); in 21 (?ile's ni ?ila'h q'o't'ilah 'as I am a little body-dirt baby); in 23 (?ile's netomen boheh xatalahara ?ibe 'as my father is getting weak'); in 33 (?ile's . . . ); and in 46 (loymesabe'-t'an . . . and se-tep'una'biyar . . . ). He uses left-branching subordination in 21 (wint'h-u'un ?o'sinpanat 'approaching people's camps'); in 23 (?o'sinpanar q'i'luna'kila 'getting to his camp when he rubs us with spittle'); in 25 (netomen boheh piyoken hora-r 'my father being left alone'); in 26 (way-k'odut nor-k'odut 'going to the north, going to the south'); in 30 (net weresin 'when I was coming'); and in 45 (po'- loymesar . . . se-tep'una'biyar 'being a girl . . . bringing to life').

It looks as if Qorit uses more subordination and left-branching than Sadie Marsh, but the difference is unfortunately not statistically significant because she speaks as herself much less than as Qorit.

When her own sentences consist of more than one clause, she prefers
conjoining by the suffix -buha 'and' to subordination (sentences 6, 7, 12, 13, 35, 43, 44, 51); as Qorit she never uses -buha.

Other types of speech

Before drawing final conclusions about shamanistic Wintu, let me digress briefly to look at other special registers of this language.

Aside from the work of the shaman, the Wintu had little division of labor: there were people whose job it was to spank children, a man for the boys, a woman for the girls; only authorized individuals were allowed to make headdresses out of eagle feathers; and only certain middle-aged women were assigned the job of splitting elderberry sticks to make rattles. No special registers are reported for these professions. However, Du Bois (ibid., p. 11) mentions "circumlocutions" characteristic of bear hunt such as "let us visit our friends" meaning 'let us hunt bear', and "here is one of my people" or "I see that my friend has been here" meaning 'I see tracks of a bear'. (She does not give the Wintu equivalents.) The same type of hunting taboo is responsible for our word bear which is derived from an expression originally meaning 'brown one' which replaced the Indoeuropean word for 'bear'.

There may have been similar expressions for deer hunting, gathering, war, and other activities, but they have, to my knowledge, not been preserved. The only one I was able to collect from Grace MacKibben is a little poem her grandmother used to say when showing her wild potatoes (of a species called ko-'nat) she had dug:

'oltepum xi', 'el yo' siktut.
pomisim xi', xan yo' siktut.
'Spring sleep, sweep in for me (meaning 'let me sleep well').

Winter sleep, sweep away from me.'

Another register was that used in prayer. There were probably no formalized prayers, according to Du Bois (ibid., p. 73), but qo·l ċulu·li's prayer (Lee ibid., p. 407) shows that praying was not identical with colloquial Wintu. It seems to represent a register intermediate between ordinary and shamanistic Wintu. Sadie Marsh explains (Lee ibid.) that her grandfather, qo·l ċulu·li (literally 'mouth black'), used to get up early in the morning, wash his face and pray. It is not clear whether he said the same prayer every morning or made up a new one each time, so we cannot be sure to what extent his prayer was memorized and formalized. He uses a few circumlocutions similar to those of shamanistic speech: mi baheresas suke'el 'you whose nature it is to be eaten' instead of mi no:p 'you deer' when addressing deer, but he uses the usual terms when addressing other animals. He also speaks of wayti-q'ede notiq'ede 'north arm south arm' like Qorit above to describe himself as getting weak. Further, neto ι'o·li'n ni ma·n ken-diler 'iye ?ibya'el 'I am falling back into my cradle (basket) is used to mean 'I am dying', and neto qomosto·t ho'n tu-k'odito·t 'my ancestors who have already gone ahead' for 'have already died'. He also employs the obsolescent p'ina: found in Qorit's speech. His average number of words per sentence is 7.4; that of morphemes per word is 3.04; both are intermediate between Qorit's and Sadie Marsh's figures. Left-branching is favored over right-branching. Coordination is without the use of conjunctions. The most characteristic feature of the prayer is frequent repetition of certain clauses, especially the repetition of frames for clauses with the substitution of single words for one another. For
example: If you are rock, look at me; I am advancing in old age. If you are tree, look at me; I am advancing in old age. If you are water, . . .

Another example of speech intermediate between Sadie Marsh's conversational Wintu and Qorit's shamanistic register is found in a prophetic speech by the shaman Ida Fan in a trance; she is speaking for the spirits of dead Wintu (Lee ibid., p. 411). The text is very short (eleven sentences) and we can't really say anything about it with certainty. Her special vocabulary has been mentioned above. The average ratios of words per sentence and morphemes per word are 7 and 3.12, respectively. The latter is almost identical with Qorit's, but Ida Fan's sentences are somewhat shorter than his. Left- and right-branching subordination are used with equal frequency.

Wintu who were not shamans could, of course, switch register depending on the topic they were discussing. Du Bois (ibid., p. 75) reports that Kate Luckie once paid two shamans to speak about the end of the world and, in repeating their prophesies, she switched to a high poetic style. (The prophesy is given in English only.)

Another type of specialized speech consists of a set of formulas spoken at the end of an evening of myth-telling. My informants do not use these but Lee was able to collect the following.

1. pomisimyus pat-hubu! 'Winter mosquitoes swarm out!
   po-pilyus ?el-hubu!  Summer mosquitoes swarm in!
   witil ?ol-t'ipt'ipa war! Be spring soon!

2. witil ?ol-t'iwa war! 'Be spring soon!
   witil saniha war! Be daylight soon!
   witil bohema' war! Grow up quickly!'
Both of these are wishes that winter may be over soon—myths were told only in the winter. (I am not sure what the last part of the second formula refers to.) A third formula must have had a similar significance but its exact meaning was not determinable as early as Demetracopoulou [Lee] and Du Bois's *Study of Wintu mythology* (1932).

3. huh 'una' ʃanpumpu'mču ('Blow it away!')

Another form of speech different from colloquial Wintu must have been that used by chiefs when making speeches. There is a special term for that activity, *se-tina* 'to talk in all directions'. There are not enough good examples of this style for discussion. The other two styles I can think of are the one used in songs whose discussion merits a separate paper; and the form of Wintu used in telling myths which has already been discussed by Demetracopoulou [Lee] and Du Bois 1932.

**Conclusions**

I have shown that Wintu shamans used more than one language when in trance, depending on the spirit they controlled. They were not interested in concealment and thus did not use an unintelligible glossolalia as many other religions. When they spoke in a language other than Wintu, interpreters were present to translate for monolinguals in the audience. The other languages functioned to make the switch from one spirit to another explicit, to represent evil spirits, and perhaps to impress with one's knowledge and number of spirit helpers and languages.

The shaman's special register of Wintu represents a point in two different continua. One is the continuum extending from normal to
abnormal speech, on which the jargon shares features with glossolalia but shows some important differences. The other is the Wintu stylistic continuum extending from ordinary speech used in everyday conversation to fixed formulas. Shamanistic register differs from the former by special idioms and metaphors, more "polite" words for concepts considered taboo, understatement, archaisms, repetition, a preference for certain vowels and consonants, perhaps alliteration and assonance, the lack of the hesitation-type connective *una*, longer words and sentences, and more subordination and left-branching.

Each of these differences has a different cause. Archaisms and special lexical items are learned from older shamans as part of the sweathouse initiation or, if they are used by an uninitiated "raw" shaman, they were probably heard from other shamans and remembered because of their impressiveness. These lexical items and the preference for words with low vowels and voiced and high frequency consonants are simply the speech of shamans, just as today every profession has its own register.

The lack of *una* is due to the fact that a shamanistic ceremony is not a type of conversation. It is a monolog—except when the shaman speaks another language at which time the interpreter may ask questions—and the speaker need not struggle to keep the floor.

The greater length of sentences and words, the increase of subordination, and left-branching, elsewhere characteristic of written language, have their origin in the nature of the trance. When we write we have time to think, nobody is interrupting us, we are concentrating on what we are doing and on the subject we are writing about, and we can go back and look at what we have already written to change it or refresh our
memory. The shaman is in a similar situation: he is not being interrupted, he can speak as slowly or fast as he wishes, and he is completely concentrated.

The state of trance is adduced by singing, concentrating, and smoking, especially by "swallowing" rather than inhaling the smoke of the potent Indian tobacco (Nicotiniana; Du Bois ibid., p. 108). The degree of dissociation and the nature of the trance appears to differ widely in different parts of the world (Chadwick 1942) and I would like to suggest that the Wintu shaman's trance was very similar to hypnosis and by no means involved an unhealthy loss of control. Under hypnosis people are often able to remember things they cannot otherwise recall and this may also explain why the shaman can speak other languages well when in trance. He may never have actively learned to speak them; just hearing them spoken, understanding what is being said may be enough for storage in those parts of the memory activated by hypnosis. The shaman Fanny Brown told Du Bois (ibid., p. 94): "I don't know how or when I learned doctor's language. It is just my spirit talking to my heart." Being in trance may also be compared to dreaming. When asleep we are unable to monitor the output of the subconscious computer: it can put out things from our memory in any way they can be associated, whether it makes sense or not. But the shaman has more control in his trance: the output usually makes sense. It is conditioned by the contents of his subconscious storage space. The input consists of the knowledge acquired in the initiation or the memories and feelings of grief about the dead relatives whose spirits he controls; his knowledge of what is expected from him as part of his work; and everything else stored in his mind: experiences, memories, knowledge, wishes, hopes, fears. The concen-
tration on a particular kind of spirit he knows to be in his power influences the shaman's voice quality, language, and behavior—he can behave like an animal when contacting as animal spirit. Possibly the shaman also has more extrasensory perception in his condition of hypnosis, a type of knowledge not functioning too well and usually ignored as nonsensical in a fully conscious state. He may be able to "read the mind" of the patient and get clues as to the cause of the disease. This would be similar to the merging of minds of shaman and spirit: Qorit speaks as if he and his son were one person. What he said about his own illness when influenced by his son's spirit may have helped him to diagnose Mrs. Fan's illness. Qorit knows in his trance that he is drinking too much and losing his powers; Mrs. Fan is ill because she ate too much at the wrong time. Both are suffering from the ways of the white man.

Acknowledgements

For many valuable comments on earlier versions of this paper I am grateful to Wallace Chafe, Leanne Hinton, Carol Justus, Kathryn Klar, Robert Oswalt, and everybody who attended the meeting of the Berkeley Group in American Indian Languages on November 4, 1980.

Footnotes

1 There was no division of labor among shamans as in some other areas of North America. The same shaman could perform all these tasks if he wished.

Du Bois 1935 provides a detailed account of Wintu shamanism (especially pp. 88-117) and I will not paraphrase her findings but rather look at the linguistic aspects of shamanism.
A special shamanistic language, usually called "high language" by informants, has been reported for other tribes of the area, e.g. by Elenddorf 1980 for Wappo (p. 4) and Yuki (pp. 7, 8, 13). He points out that in a situation of language obsolescence stylistic variation is always one of the first things to disappear.

The Wintu versions of the texts published in English by Lee are on microfilms in the possession of the Survey of California and Other Indian Languages, Department of Linguistics, University of California, Berkeley.

Some of the observations about vocabulary differences have already been made by Lee, but since she was mostly concerned with the expression of supernatural ideas, much remains to be said.

Abbreviations used in the interlinear translation are: al(ienable), com(plicative aspect suffix or auxiliary), con(ditional aspect auxiliary), con(nective), dem(onstrative), dim(inutive), dp(disjunctive postclitic), dub(itative), dur(ative), emp(hatic), exp(eriential evidential), r(eneric aspect), gen(itive case), id(interrogative-demonstrative root), imp(licative), impf(imperfective aspect), inf(erential evidential), int(errogative), loc(ative), mp(medio-passive), nvs(nonvisual sensorial evidential, obj(ective case), p(ar ticulate aspect), pas(sive), per(fective aspect), pl(ural), pos(sessive case), pot(ential), priv(ative), pro(gressive aspect), quot(ative), refl(exive), rel(ational aspect auxiliary), sd(stem-derived) suffix, stat(ive), sub(ordinating suffix), ts(temporal-)locative suffix.

The grammatical analysis relies on Pitkin 1963.

In a story told by my informant, Grace MacKibben of Hayfork, a
werewolf speaks through a shaman allowing him to decide that the disease it gave to the patient is incurable.

6 I am using jargon for the shaman's speech including other languages he uses, while register refers to his variety of Wintu; style will be reserved for written language except when quoting other writers.

7 Some Wintu shamans had animal spirit helpers and when in trance would impersonate the animal in their control. The impersonation of the dead or of animals has a parallel in Uganda, as reported by Chadwick 1942:32-3.

The dead are universally the most common source of inspiration (Chadwick ibid., p. 50).

8 Du Bois (ibid., p. 93) reports that shamans cannot cure white men's diseases and that alcohol makes them lose their powers (p. 115).

9 The close relationship of poetry and manticism has been described in detail by Chadwick 1942. "Poetry and Prophecy are the expression of human thought at its most intense and concentrated moments, stimulated by excitement, and expressed in artistic form" (p. x1). "Over a wide area of the earth poetry and prophecy are the two essential elements in the coordination and synthesis of thought and its transmission" (p. xiii).

10 However, lowering in Havasupai is undergone most often by "grammatical" lexical items, not "content" words (Hinton ibid., p. 79).

11 The percentage of consonants per total number of consonants are as follows. For Sadie March: p 9%, pʰ 0.2%, p' 0, b 5%, t 8%, tʰ 0.2%, t' 2%, d 2%, l 9%, r 2%, ʰ 0, m 6%, n 16%, w 3%, y 3%, s 4%, l 13%, k' 0.5%, q 3%, q' 0, r 5%, x 0.5%, ʰ 0.2%, ʰ 14%, h 11%, ʰ and ʰ' 1%.
For Qorit: p 4%, p̂ 0.4%, p' 0.9%, b 6%, t 8%, t̂ 2%, t' 0.9%, d 4%, l
11%, 1 0.3%, N 0.3%, n 10%, n 18%, w 7%, y 4%, a 7%, k 4%, k' 0.5%, q
2%, q' 0.9%, r 5%, x 0.1%, x 0.7%, ? 11%, h 8%, ẹ 0.9%, ẹ' 0.

12 I have no explanation for an increase in the shaman's speech of p
by 0.9%, q' by 0.9%, p̂ by 0.2%. It may be the result of the repetition
of favored words. The frequencies of t, k', and r remain the same.

13 From these figures I would expect an increase in the number of
different morphemes used for Qorit and I have no explanation for the
opposite result. The percentage of different morphemes per total number
of morphemes used is 19% for Qorit, 27% for Sadie.

I realize that distortions are possible because Sadie Marsh had to
dictate the text to Lee. However, it is possible most of the time to
write as fast as the informant talks, with the help of a few abbrevia-
tions. If the text had been tape-recorded, we could also check for dif-
fferences in the length of pauses, the nature of hesitations, voice quali-
ty, etc. Further, Wintu shamans appear not to have chanted, but only a
tape-recording could tell us whether Qorit was employing a normal speak-
ing voice, assuming that Sadie Marsh would have imitated him.

14 Verbs subordinated to their auxiliaries do not count as sub-
ordination.

15 These formulas are not to be confused with phrases used to indicate
that one has finished telling a particular story.

16 The first hypnosis happens during the initiation in the sweathouse
(Du Bois ibid., p. 89). Indians for whom it does not work drop out and
give up their plans to become doctors. Thus only those easily hypnotized
become shamans.

The external conditions helpful in adducing trance in the Wintu shaman are universal. As reported by Chadwick 1942, ecstacy is usually stimulated by intoxicating food, drink, or fumes, and the first prerequisite for purposes of concentration is solitude and quiet. "A large proportion of seers have been drawn from the shepherd class all over Europe and Asia" (p. 59).

The use of other languages by the Wintu shaman is not unusual. Chadwick 1942:18 reports that shamans in northern Siberia speak khorro, 'shaman's language'. "Khorro is generally the language of a neighboring people which the shaman does not himself understand. A Tungus shaman will sometimes speak, during his fit of inspiration, in Koryak, though he is said to be normally quite ignorant of the language."

References


LEE, D. DEMETRACOPOULOU. 1941. Some Indian texts dealing with the supernatural. The Review of Religion V.403-11.


Differences between Colloquial and Ritual Seneca
or How Oral Literature is Literary

Wallace L. Chafe

University of California, Berkeley

In recent years we have come to realize more clearly that languages with a long written tradition have evolved a kind of language that is quite different from ordinary spoken language. Any language is characterized by a variety of styles appropriate to different uses, but a tradition of writing, when it is present, leads to a special style all its own. It is true that written language is no more homogeneous than spoken language; different kinds of writing are appropriate to different uses. And a particular sample of either spoken or written language may contain a mixture of spoken and written features. Nevertheless, for a language like English there are certain features which belong predominantly to writing. I have recently been looking at two rather extreme language types: the kind of English that is used in dinner-table conversations and the kind used in academic journals. The objective has been to isolate differences between these two styles as part of a larger goal of understanding many of the ways in which written language is different from spoken (see Chafe, in press, for a preliminary report).

For many years I have also been interested in Seneca, a language which has essentially no written tradition whatsoever. One might expect that such a language would lack the stylistic differentiation brought about by the long existence of writing in a language like English. In fact, however, there appear to be styles in Seneca which
in various interesting ways parallel the spoken-written distinction in English. I refer to the difference between colloquial, conversational Seneca on the one hand, and on the other hand the kind of Seneca that is sometimes called "oral literature". I want to suggest that this etymologically peculiar term is in fact appropriate, to the extent that oral literature exhibits some of the same features that characterize written language in languages where writing has had a significant influence. I will focus in this preliminary study on the differences between colloquial Seneca and the kind that is used in certain ritual speeches, in particular the kind of speech that is called the *gan'nyuk*, or Thanksgiving Address (Chafe 1961, Foster 1974). For a different look at other, related aspects of ritual language see DuBois (in press).

I will suggest that written and ritual language have six traits in common which set them apart from colloquial spoken language. First, they tend to be more conservative, where colloquial language is more innovative. Second, they tend to be more polished, where colloquial language is rougher. Third, they tend to be more integrated, where colloquial language is more fragmented. Fourth, they tend to be more stylized and constrained, where colloquial language is freer. Fifth, they tend to be more detached, where colloquial language is more involved. Sixth and finally, they tend to be more authoritative in their assertions, where colloquial language is more hesitant. I will discuss each of these traits in turn, giving examples from spoken and ritual Seneca where appropriate.
Conservatism

Colloquial spoken language is evanescent. It is produced and then is gone. We are more likely to remember the gist of a conversation than the particular words that were used. Only under peculiar circumstances would we memorize or record a conversation in writing. Even when it was a good one, we do not normally repeat a conversation over and over so that we can enjoy it anew each time. Both written and ritual language, on the other hand, have a kind of permanence. Written material can last indefinitely. Rituals also are performed again and again, often over many centuries or even millennia. In the ritual we are considering as an example, no two performances are identical in wording. Nevertheless, both performers and listeners believe that the same thing is being repeated each time, and there is a certain level of content and wording at which in fact there is identity. Associated with their relative permanence is the judgment that rituals are intrinsically valuable objects; their value is thought to transcend that of conversation or other everyday uses of language. Such value, of course, is the reason they are repeatedly performed.

One result of this permanence of written and ritual language is that they both tend to be the repositories of conservative lexicon and grammar. Colloquial language, not being pinned down either by writing or by frequent repetition of the same linguistic performance, is more of an arena for language change. Compare written English child, for example, with spoken English kid, or written must with spoken have to. It is well known that ritual language preserves archaisms, and that ordinary speakers of a language may even have lost the ability to understand various items that appear in rituals. Seneca examples range
from words whose referents are no longer identifiable, like \textit{sga:nék?neh}, a kind of tree, to the incorporation of noun roots in ways that are no longer familiar to everyday speakers of the language; for example, \textit{o7gi0?-kd?} 'I finish the matter' (referring to the end of a ritual), not now something that is said in everyday speech. Innovation in colloquial Seneca remains to be systematically studied, but as one example I might cite the use of a new counting pattern, as illustrated by \textit{sk niwáshú}: \textit{sqa:d} 'thirty-one' in place of earlier \textit{sk niwáshú: sgá:sgae?} (literally 'thirty-eleven'). Both written language and ritual language thus appear to follow a tendency toward lexical and grammatical conservatism, while colloquial language tends to be the vehicle for innovation.

\textbf{Polish}

The relative permanence of written language and rituals allows them to be planned and polished in ways unavailable to fleeting conversations. Normal spoken language is full of false starts, repetitions, and afterthoughts, which in spontaneous spoken language are quite acceptable, and normally fail even to be noticed:

\begin{quote}
Cause .. um .. there were ... four fam .. four? Yeah four families.
\end{quote}

Or from a Seneca conversation:

\begin{quote}
\textit{Ne?ho nó: neh,}
That's maybe,
\textit{sk niwáshú:h,}
thirty,
\end{quote}
dekhni: nö: khoh,
and maybe two (i.e. thirty-two)

keyútkathwūh,
miles,

niyo:we? někho̱h,
how far to there,
ohi:yɔʔ,
(from) the Allegany Reservation,

někho̱h,
to there,

niyo:weʔ,
how far

ne ga:núwoqû:h.
(to) Warren.

That is, "It's maybe thirty-two miles from the Allegany Reservation to Warren." In contrast we find the polished language of English academic prose:

Rules are seen as abstract representations of the generative capacity of the language and do not necessarily pertain to questions about what people are actually doing.

or of a Seneca ritual:
Tgaye:i? wai hawe:ʔêh,
In fact he decided,
ne:ʔ di neh,
that also
hâ:][_wê ɬy̱eʔdza:de:g,
on the earth,
ne:ʔ n ɬyotʔeohdûnî:ag.

plants would be growing.

That is, "In fact he decided that plants would also be growing on the earth." Both written language and ritual language thus appear to be smoother, while colloquial language is full of rough edges.

Integration

Besides the absence of disfluencies from written language and ritual, both show a higher degree of integration as compared with the fragmentation of spoken language. Spontaneous spoken language is characteristically produced in a series of spurts, or "idea units" (Chafe 1980):

It was ... it .. had .. evidently ... been under snow, 
and just recently melted off, 
and the mosquitoes were ... incredible. 
... So we also left.

Written language has a variety of devices for integrating more information into idea units and sentences: devices such as nominalization,
attributive adjectives, and various means for embedding clauses within other clauses. Note the characteristic use of multiple nominalizations in the following example:

One tendency is the preference of speakers for referring to entities by using words of an intermediate degree of abstractness.

The following example of spoken Seneca shows the fragmentation typical of spoken language. Each line, or idea unit, stands more or less independently:

Da: ne?: di neh,
And so,

ga:n̕wawh: gaya: ahh,
it's called ga:n̕wawh:h.

jʊ̯ɹɛ̯sy̯<ə ty: s hadi: ya: s nónihjih.
joedze’ syo? they used to call it long ago.

Ne?: ne’hoh wa’agwanbdayh?:.
We camped there.

Dedzá: ūgwa: n̕y̯g̯úh<ə di wa:yáhwe?.

There are berries on both sides of the river.

In the following ritual example, on the other hand, there is a tight dependence of the idea units on each other. To describe this dependence in English terms, the second line explains the it in the first line, the third and fourth lines give temporal modifications, the fifth line explains the we of the second line, and the last line gives a
spatial modification. The information is coherently interdependent as that in the spoken example above is not.

Da: ne?: wai ne tga.ye:i?,
And so in fact it's true:

 décwajú: dah∂h, we are using it,

ha?dewÉ:nísharGe:h, every day,

ha?dewahsbídare:h, every night,

ne?ho dey décwadawénye:h, we who are moving about,

hÉ:we yódzade?.
where the earth is.

Seneca does not have the same kind of nominalization devices that were illustrated in the written English example above. It does, however, have a particle ne which functions in part like the definite article in English, in part as a way of nominalizing a following constituent; thus it integrates information into a larger structure as English nominalization does. It is interesting that 69 examples of ne were found in a thousand word sample of conversation, but 110 examples, almost twice as many, on one thousand words of ritual. In the following ritual excerpt note that every idea unit except the last
one contains a ne:

nej? wai ne ngaye:i?,
In fact it's true:

nej? ne lyodehadjuni:ag,
the forests will be growing,

nej lyagoya?dagehashil?gili:g,
they will be a help,

nej l:sgweh,
(to) the people,

nej yildzengeh,
on the earth

ojydawel:nye?:
they move about.

Written and ritual language, then, both show devices for integrating
information into idea units and sentences through subordination,
nominalization, and the like, whereas colloquial spoken language is
more fragmented in its structure.

Stylization

Spoken and written language differ obviously in the fact that the
first is visual and the second auditory. These differences in com-
munication channel and sensory modality constrain the resulting product
in certain ways. For example, spoken language makes considerable use
of prosodic devices like intonation, pausing, and changes in voice quality which written language is hard put to capture effectively. On the other hand written language does well with punctuation, footnotes, tables, and diagrams, devices which are unavailable to spoken language. Differences in the medium cause differences in the product.

Spoken Seneca, of course, makes use of prosodic resources just as other languages do. Speakers vary their pitch, hesitate, laugh, and so on. Ritual Seneca of the kind I am discussing is constrained by a prosodic style which I have called "chanting" (Chafe 1961:147-148). This style consists of a series of short phrases, each ending in a rising intonation contour, at the end of which there is a final phrase with a falling pitch contour. Almost no intonational variety is possible. Occasionally a speaker lapses momentarily into a more varied intonation pattern, usually near the beginning or end of a ritual, but normally the chanting pattern prevents significant intonational elaboration. At the end of each paragraph-like section of the ritual there is a longer than normal pause before the next section begins. In one version of the ritual there is in fact a period of dancing at such points. It can be said, then, that chanting, like writing, flattens out the intonational possibilities which are available in colloquial speech, limiting these possibilities to a stylized marking of phrases, sentences, and paragraphs. Written language, interestingly enough, does something very similar with commas, periods, and paragraph indentations.
Detachment

Spoken language normally entails direct contact of the speaker with the addressee. The context of the conversation is shared, the speaker can monitor the effect of what he or she is saying on the addressee, and the role of speaker can easily be exchanged. Writing, on the other hand, normally involves an isolation of the writer from the audience. What is written is going to be read later and elsewhere, and there is no ongoing monitoring or feedback during the writing process.

Although rituals are recited with an audience present, they involve a similar kind of isolation. In the Seneca ritual being discussed, the speaker stands at one end of the longhouse, sometimes with his eyes closed, and performs the ritual as a total monologue. It would be unthinkable for a member of the audience to interject a comment, except that each paragraph-like unit is answered by some of the audience with the exclamation nyoh, (like the amen in some Christian rituals). Like writing, therefore, the ritual performance lacks the interactive possibilities normally associated with spoken language. The result is that, whereas colloquial language exhibits various manifestations of speaker-audience involvement, both with the addressee and with the subject matter, written and ritual language show a corresponding detachment.

The involvement characteristic of colloquial Seneca is manifested especially in the use of particles with interactional functions. In a thousand words of colloquial text the word ḗ:hn 'yes' occurred twelve times, while it was entirely absent from the ritual. Something similar is true of first and second person singular references. Words meaning
I and you are frequent in conversation, but present in rituals only in introductory and closing remarks. Particles expressing a speaker’s involvement with his subject matter include agwaś ‘really’ and do:gaš ‘for sure’, which were present five and four times respectively in one thousand words of conversation, but were entirely absent from a corresponding sample of ritual. Involvement is also expressed by the contrastive particle ni: as in tehisekšaʔá: nehá? ni: ni:ša ‘you were a child’ (rather than an adult). This particle occurred 39 times in a thousand words of conversations, only twice in a thousand words of ritual. If we assume that particles tend in general to express a speaker’s involvement, then it is significant here that the thousand word sample of conversation included 60 different particles, whereas one thousand words of ritual showed only 27 different ones, less than half as many.

Seneca has an indefinite verb prefix translatable as ‘one’, as in ɘyóddaw:ṇye:ʔ ‘one will move about’. This prefix is used to avoid reference to a specific agent, and is thus a manifestation of a speaker’s detachment from specific participants in specific events. It is a way of avoiding involvement with the particular person who did something. Of interest, then, is the fact that this indefinite prefix occurs 36 times in one thousand words of ritual, and only twice in one thousand words of conversation.

In summary, the kind of speaker’s involvement expressed by first and second person singular references and by many particles is conspicuously present in colloquial Seneca and conspicuously absent in ritual. The reverse holds for the kind of detachment expressed by the indefinite prefix; it is common in ritual, but not in conversation.
Authority

Writers, and especially writers of academic prose, are likely to be conscious of the fact that they are producing something for which they will be held responsible. There is, as a consequence, a drive for accuracy of statement which casual users of spoken language do not feel. Although hedging takes place in both spoken and written English, spoken hedges like "sort of" and "kind of" express a subjective evaluation of how well what one is saying matches what one is thinking, whereas written hedges like "virtually" and "normally" express more objective judgments of probabilities and trends, perhaps even statistically measured.

Spoken Seneca is full of evidential particles like:

gyë:ib̊h  "it is said"

në:h  "I guess"

á:yi:  "it seems"

giʔshëb̊h  "maybe"

i:wi:h  "I think"

c:  "oh"

gë:ib̊jeʔ  "about"

Note, for example, the use of four of these particles in the following spoken sentence:

Ω:,  ne:?  nëb̊̊h  neh,  sga:sgaeʔ  giʔshëb̊h  gë:ib̊jeʔ  tshiwaqoshíyaʔgëb̊h.

Oh, I guess when I was about maybe eleven.

These particles occur hardly at all in ritual Seneca, which is instead
dominated by particles expressing certainty:

waieh    "in fact"

tgaye:i?  "it's true"

The following phrase is extremely common in the ritual being discussed:

Da: ne:7 wai ne tgaye:i?,

And so in fact it's true,

These particles, in turn, are much less common in speaking. Thus, both written and ritual language appear to express a confidence in the truth of what is being said which contrasts with the more tentative tone of much of spoken language. We can say that rituals express beliefs about which the speaker is certain, whereas no such certainty is present in everyday conversations.

Conclusion

I have presented some evidence that ritual language, like written language and in contrast with colloquial language, is conservative, polished, integrated, stylized, detached, and authoritative. This study has been based so far on a fairly small sample of data, which is nevertheless, I think, typical of the styles in question. In the future I hope to be able to report more fully on the properties of a wider range of Seneca oral literature as well as a broader sample of Seneca conversation, and to be able to compare the results with an extensive study of spoken and written English which is now in progress.
Acknowledgments

I am grateful to Jane Danielewicz for her collaboration in the study of differences between spoken and written English, sponsored by Grant NIE-G-80-0125 from the National Institute of Education, and to Jack DuBois for his many relevant insights into the special properties of ritual language.

References


The Wappo Glottal Stop

Jesse O. Sawyer

University of California, Berkeley

Wappo, like its associate language Yuki, uses the glottal stop and voiceless h to an extent that is surprisingly beyond the level of usage that one would expect of sounds that are generally very low in amplitude. The skewed frequency was noted by Uldall and Kroeber when they first worked on these languages, but nothing has been said about the problem since that time, and whatever grammatical complexities result from the frequency of h and ? , no one has either discussed or accounted for the occurrences in Wappo.

The questions a grammarian might ask about the phenomena are particularly these two: (1) are h and ? in Wappo each morphemes or are they two or more, and (2) what historical conditions could have combined to bring about such an unreasonably heavy functional load for the laryngeals ? and h? It is probably too late to know the exact details leading to the phenomenon, yet there are many tantalizing pieces of evidence. Both h and ? have special onset and offglide functions in Wappo. Moreover Wappo has a rich supply of voiceless sounds and limits voice in its phonemes to vowels and the vowel-like sonorants. There are no voiced stops, fricatives, or affricates except for one or two borrowings of Spanish origin. Looked at in another way the Wappo sound system consists of a group of sounds

\[ p \, t \, \dot{t} \, c \, \dot{c} \, k \]

\[ m \, n \, l \, y \, w \]
all of which may occur either glottalized or aspirated—that is, with an accompanying ’ or h. ’ and h function like free agents which triple the phonemic distinctions made by the language. There are few restrictions on the stop series except for some gaps in syllable final aspiration, but the combinations of glottalization and voicelessness with m, n, l, w, and y are limited to syllable final position. It is also true that the Wappo sound system resembles that of some of its neighbor languages rather closely. None of this answers our question. In fact the overuse of h and ’ arises out of a variety of pressures, no one of which may have been decisive.

In these notes I will not try to analyze the historical situation. I will limit the discussion to the description of the phenomena of the glottal stop in Wappo, and will consider its morphemic status briefly.

In Wappo the glottal stop may occur initially, medially, and finally: ?ocóniš 'acorn bread', ṭiʔe 'grass', and phéʔ 'foot'. To say that ’ occurs medially is somewhat inaccurate, in that the syllabic canon for roots is most commonly CV'C where the ’ may fill the position of either C. Affixes accompanying the roots have a variety of noncanonical shapes. The glottalized sounds include all of the stops, affricates, and fricatives, as well as the sonorants:

\[
p' \ t' \ t' \ c' \ č' \ k' \\
m' \ n' \ l' \ y' \ w'
\]

These are mentioned again here because each of these sounds occurs un-glottalized and the pairing, together with the fact that the m', n', l', w', and y' occur only syllable finally suggest that all of the glottalized sounds may have originated particularly out of the environment of
consonants preceded or followed by morphemes beginning or ending with a ?'. Initial p', t', t', etc., could have been generalized by assimilation in the following way: (1) CVC + ?VC → CVC' + ?VC. Then (2)
CVC_1 ?VC_2 → CVC'_1 + CVC'_2. (The + is a word boundary.) The latter formula is unsatisfactory as it does not seem to take care of the highly frequent and various glottalized initial consonants. Those probably arose also out of the following kind of situation: (3) CV? + CVC → CV? + C'VC.

If the validity of these formulae can be demonstrated—and I think it can—then it is apparent that all of the glottalized consonants must originally have been clusters of consonants and glottal stops, ?C or C?. This argument is hampered by the fact that all intermediate *?C sequences generated by formula (3) above are realized as C?, i.e., C'.

The fact is that in Wappo the glottal effect is phased slightly after the consonant. *?C occurs only across morpheme boundaries as -? + C-, so that the development of the glottalized initials must be viewed rather as a progressive assimilation in which the glottal friction is carried into the following consonant and results finally in a full scale glottalized consonant.

In the preceding paragraphs I have stated enough of the distribution of the glottal activity in Wappo that the reader need not be surprised by such forms as ḥahkhi' 'drowned', ḥa'pa'ta' 'finished', or k'ūm'i?hi? 'is it boiling? is it cooking?' The simple fact of frequency, however, does not alone exhaust the complexity of the glottal stop in Wappo.

The glottal is used in a variety of forms which in the usual grammatical analysis would result in its being assigned morpheme status and
given a meaning. The meanings, however, are various and confusing and
the distributions are regular in some ways and highly irregular in others.

In a few cases the fruit or seed of pines is marked with the ?.
Thus návo 'digger pine' consists of a root náy- and the suffix -o 'tree',
an ancient contraction of hol, the generic term for all 'trees, wood,
sticks'. The pine nut of this pine is náy'. The glottalization of the
root is the sole addition or difference.

Or take the case of the vocative. 'Father' is náya, but if you
wish to call him, you call náya?. Just as the glottalization of the y
or náy- 'digger pine' produces the pine nut, here the added ? produces
the vocative. The use is complicated by the fact that not all kinship
terms can be used vocatively. One assumes that the restriction, how-
ever, is one of politeness, of cultural rather than linguistic limi-
tation.

The most pervasive use of the glottal stop is in the verb. All
verbs end in a glottal stop: for example, nèyk'i thái-?e? 'The baby is
squalling!' There is only one exception. If verbs are strung together
into one compound form, only the last in the series has the final ?.
For example: nathikéyi? nàh tè hól mehyasephéklehyàmi? literally
'tomorrow I him tree up-climb-watch-will-verb'; 'Tomorrow I'll watch
him climb the tree'. If mehyase 'climbing up' occurred as the sole
verb in a sentence, it would, of course, have the concluding ?. As a
member of a compound verb it does not have it. A further fact: although
word order is largely nonfunctional in Wappo, the verb with its ultimate
? is normally the last word in most sentences.

Related to the ? marking of the verb is a somewhat different phe-
omenon in which demonstratives become verbs by the simple addition of
the ?. Thus cé 'that' becomes ce? 'that is'. cè? chûya 'That's the house' becomes a sentence although it does not contain the usual verb. cè chûya is 'that house'. The expected surprise here is that the make-
do status of the cé? 'that is' is emphasized by the fact that the ce? does not occur at the sentence final as the verb should. It keeps the place before the noun that it normally holds as a demonstrative.

Still another aspect of the verb final ? exists in a set of dever-
bal nouns which have such a ?. nah-tûyhiy'se? 'wheel' seems to carry its idea of motion into its nominal state by retaining the unusual-for-a-noun final ?. I find in my notes a plaintive complaint that a "number of games include a final -ly'." It is the verb-like nature of games and game names, I suppose, that is involved. The note was attached to nah-
tûyhiy'se? 'plays tag' which is marked as a verb by its -se- and ? but carries with it a further almost-verb-marker in the glottalization of the y of nah-tuyhiy 'the game of tag'.

Another unusual use of ? appears in names in which the ? is inser-
ted at the end of the descriptive part of the name. ?unu?cawa is the gloss for the common toyon and it occurs as part of the name for the last settlement the Wappo have had, the rancheria above Geyserville, which they called ?unu?cawa?hóldmanoma literally 'toyon-woods-camp'. A handful of surviving names incorporate this appearance of ?.

McLendon has discussed (1969) another use which the Wappo share with most of their neighbors: loan words are marked with a final ?.
The Wappo use the device for loans from Spanish, of course, as in kältu? 'soup, stew', Sp. caldo, but also on words they have borrowed from other groups. híwol' Sp. 'fríhol' was borrowed from their neighbors as was ña? 'tea', ultimately from Russian, and both probably had the final -C'
or -? at the time of borrowing. t'úku? 'sack, bag' may not have had the -? before it was borrowed. Its origin is obscure. In any case the native speaker is usually aware that these words are borrowed and will tell you that the word is not really Wappo. The signal that marks these forms seems to be the -?. The number of such words in the vocabulary is quite large. One of the surest marks of very ancient borrowings in Wappo is the absence of the final ʔ on a form which you know to be borrowed. The spread of -? may be of relatively recent origin.

Finally there is a group of words which probably contain the final -ʔ, but which do not fall easily into any of the several categories I have described. Examples are khón' 'said, heard, reported' and táw' 'way, tradition, custom'. There are a number of others!

These examples serve to establish the unusual quality of -ʔ in Wappo. It occurs in the fruit of pines, in the vocative, as a verb marker, in deverbals and verbs made from demonstratives, as a mark of loan words, and as a special mark in names. Its distribution is disturbing in that it occurs as a final in most of the grammatical categories of the language. Chafe 1959 discusses similar problems in Seneca and suggests possible solutions. The most obvious question still remains. Can one place all of these forms especially in view of the grammatical categories involved in one morpheme? I believe that the -ʔ is indeed one unit and that it means something like 'assertive, assertion' or 'verb, verblike'. I leave to the reader, however, the final choice!

There may be a solution to the problem. Chafe argues convincingly for including as elements in one morpheme morphs that have very wide ranging meanings. He does not suggest, however, abandoning Harris's and Hockett's nonuniqueness of the total range of environments, but he does
suggest that the nonuniqueness criterion, while desirable, should not be part of the definition of the morpheme (1959:2). In the case of Wappo $-$ we have not only widely ranging meanings but also a unique set of environments. The Wappo $-$ appears with nouns, nouns of address, demonstratives, verbs, exclamations, and a few unclassifiable particles. No other morpheme in the language has such a distribution. If a morpheme is not allowed such a unique distribution, then the $-$ of Wappo would have to be assigned to two or more morphemes.

There is one condition, however, in which the uniqueness becomes much less focal. Our position in this paper has been that Wappo is a language having nouns, verbs, particles, possibly adjectives, and adverbs, exclamations, a whole panoply of Indo-European categories. We seem to be viewing the language through the glass-eye of classic grammar, darkly. And we may be wrong. Like many American languages, this one shows strong evidence of consisting of a series of CVC roots and CVCV stems in which a former monosyllabic state is only a short time away.

I suppose we could say that Wappo is far along the process of developing a large set of grammatical categories. Nevertheless it still has not smoothed out, eradicated, lost the evidence of its former state. For a language of roots, stems, and modifying particles, there is no particularly surprising uniqueness in the distribution of the Wappo $-$. Such a solution and the description of this morpheme suggest that in some cases a language can be in the middle of a vast reformation that makes the selection of a grammatical model difficult.
References

