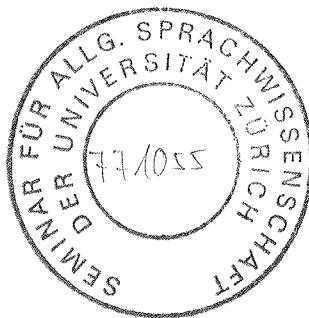


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PROTO POMO

BY

SALLY MCLENDON



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I. INTRODUCTION

The Pomoan family of the Hokan stock¹ consists of seven languages, formerly spoken between the Pacific Coast and the Sacramento Valley, in Northern California. These languages were assigned names by Samuel Barrett in 1908 according to their relative geographical location vis-à-vis one another (moving from a southwesterly point on the Pacific Coast to a southeasterly point on Clear Lake on the east side of the Coast Range, just west of the Sacramento Valley): Southwestern Pomo (Pk), Southern Pomo (Ps), Central Pomo (Pc), Northern Pomo (Pn), Northeastern Pomo (Pne), Eastern Pomo (Pe), and Southeastern Pomo (Pse) (see map frontispiece). Such a development of nomenclature was desirable since the speakers of these languages used no generic term to refer to each individual language. They commonly identified the language they spoke, instead, by the name of a particular locality, such as the Point Arena language, or the Big Valley language.²

Earlier, in the Powell classification of 1885-1886 (Powell, 1891), the Pomoan languages had been referred to as the Kulanapan family, Kulanapa being an anglicization of the Pe village name /qu·Lá na·pʰð/ "water lily-people/place," one of the apparently two largest precontact Eastern Pomo villages on the south shore of Clear Lake. This village had been visited by George Gibbs in 1851 with the expedition of Colonel Redick M'Kee. Word lists collected by him were published in Schoolcraft in 1853. This is apparently the earliest published work referring to the Pomoan languages, and thus was taken by Powell (following his "law of priority" used to standardize the nomenclature of American Indian languages) for the name of the whole family. Some sense of the actual nomenclatural

¹The California Hokan stock was first hypothesized in 1913 by Dixon and Kroeber. Subsequent research by Sapir (1917), Haas (1964), Bright (1954), Silver (1964), and McLendon (1964) seems to leave no question as to the relatedness of the languages hypothesized to be members of California Hokan.

²Interestingly enough, the boundaries of the geographical localities used to identify speech often roughly coincided with dialectal boundaries. Thus the 'Big Valley language' is one variety of Pe that seems to have formerly differed from that spoken around Upper Lake in a number of ways, while the 'Point Arena language' is one dialect of Pc differing from that spoken around Hopland.

practices of the Pomos, and their neighbors, both white and indigenous, in referring to speakers of these seven languages can perhaps be gleaned from Powell's list of thirty-one "tribes" which comprised his Kulanapan family (Powell, 1891:88). They are, in alphabetical order:

- Balló Kai Pomo "Oat Valley People"
- Batemdikáyi [= Pn]
- Búldam Pomo (Rio Grande or Big River)
- Chawishek [= Pn]
- Choam Chadila Pomo (Capello)
- Chwachamajú [a Russian appellation, = Pk? cf. Oswalt, 1964b]
- Dápisshul Pomo (Redwood Canyon)
- Eastern People (Clear Lake around Lakeport) [= Kulanapo, i.e., Pe]
- Erió (mouth of Russian River) [< Sp. 'él rio'? = Pk, cf. Oswalt, 1964b]
- Erússi (Fort Ross) [< Sp. 'el ruso'? = Pk, cf. Oswalt, 1964b]
- Gallinoméro (Russian River Valley below Cloverdale and in Dry Creek Valley)
- Gualálá (northwest corner of Sonoma County) [= Pk, cf. Oswalt, 1960, 1964b]
- Kabinapek (western part of Clear Lake basin) [= Pe]
- Kaimé (above Healdsburg)
- Kai Pomo (between Eel River and South Fork)
- Kastel Pomo (between Eel River and South Fork)
- Kato Pomo "Lake People"
- Komácho (Anderson and Rancheria Valleys)
- Kulá Kai Pomo (Sherwood Valley)
- Kulanapo [= Eastern People, i.e., Pe]
- Láma (Russian River Valley)
- Mísálamagún (above Healdsburg)
- Mitoám Kai Pomo "Wooded Valley People" (Little Lake)
- Poam Pomo
- Senel (Russian River Valley)
- Shódo Kai Pomo (Coyote Valley)
- Síako (Russian River Valley)
- Sokóa (Russian River Valley)
- Yokáya Pomo "Lower Valley People" (Ukiah City) [= Pn]
- Yusál (or Kámalel) Pomo "Ocean People" (on coast and along Yusal Creek)

Apparently Powers (1877) was the first to use the term Pomo to refer to this language family, and his practice is the one that has been followed in subsequent comparative work concerning this family, beginning with Dixon and Kroeber (1913).

Recently Robert Oswalt, who had done extensive field work on Southwestern Pomo, has replaced Barrett's Southwestern Pomo by the term Kashaya /kəšáyə/ Pomo (hence Pk), the term used by the speakers of this language in referring to themselves in English. He has in part been motivated by his feeling that the Barrett nomenclature, while logical, has consistently misled non-Pomoists into thinking of these languages as merely different dialects, whereas they are in fact quite distinct languages, each, at least formerly, with its own dialects.

Four classifications of the linguistic relationship between these seven languages have been advanced; by Barrett (1908:100), Kroeber (1925:227), Halpern (1964:90) and Oswalt (1964c:412).

Barrett based his classification, which is apparently not genetic, on the "number and the percentage of roots in each dialect held in common with each of the other dialects respectively, as well as the average percentage of such common roots in each dialect" and concluded that "the Central and Northern dialects . . . form a group, which may be taken to most nearly represent the type of the Pomo language as a whole." He diagrammed this relationship as:

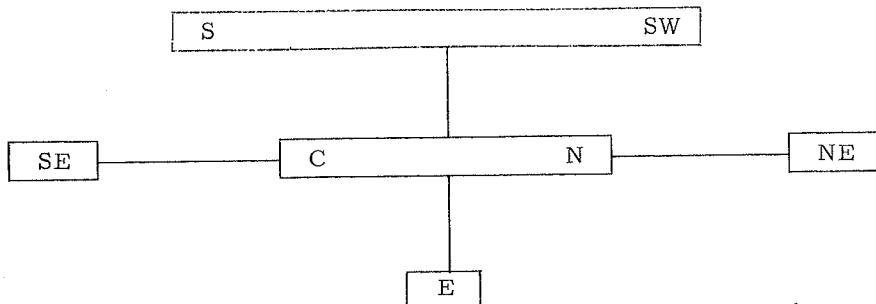


Figure 1

Without stating the basis for his conclusions, Kroeber proposed the genetic classification shown in Figure 2.

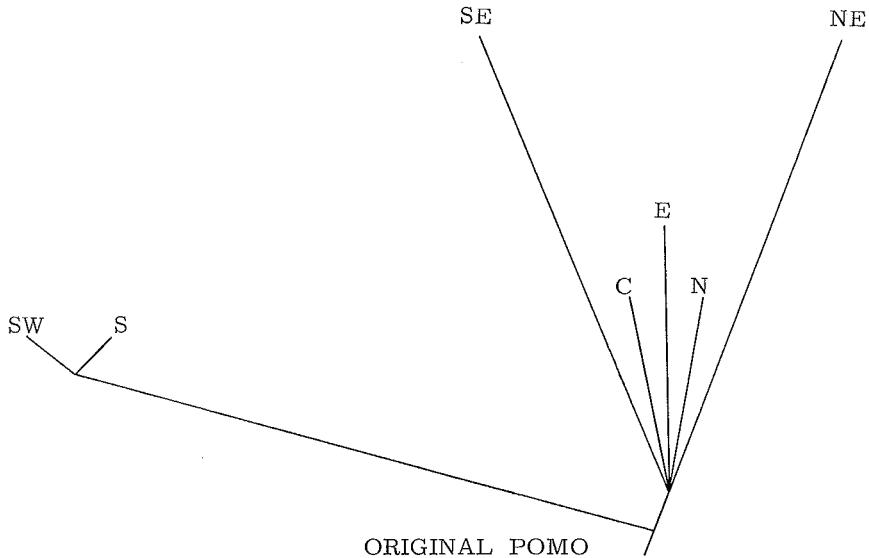
Proto Pomo

Figure 2

Having collected extensive materials on all seven languages, Halpern was able to base his classification on phonetic shifts. He arrived at a tripartite division: (1) SE Pomo, (2) E Pomo, (3) the other five as a group, which he designated the Russian River group. Although he could not state the relationships within the Russian River group with complete assurance, he felt able to state that "NE Pomo is the most individualized member and that Southern Pomo appears to preserve the largest number of archaic features" (Halpern, 1964:90). He summarized his conclusions in two alternative diagrams:

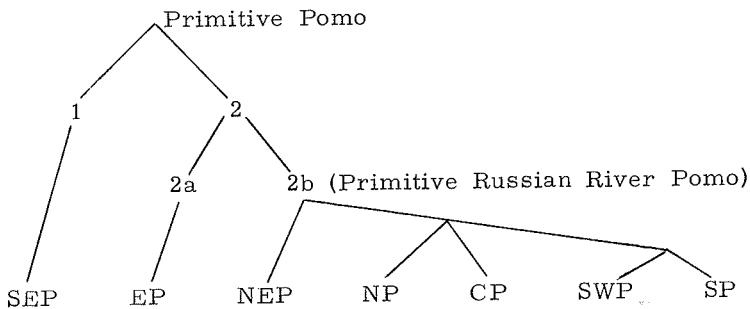
Possibility (a)

Figure 3

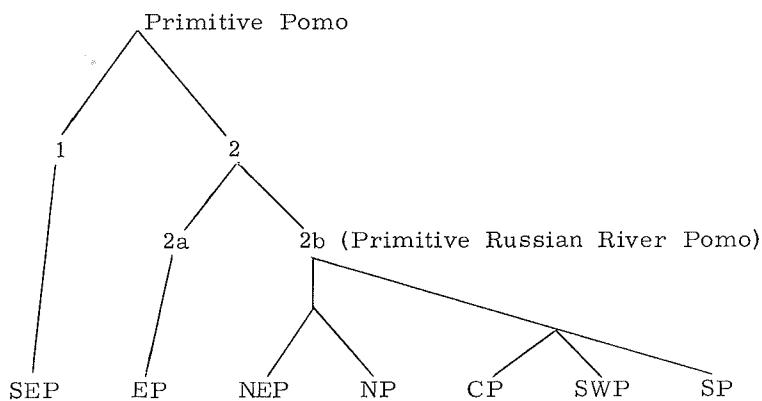
Possibility (b)

Figure 4

Oswalt has proposed the following classification of the internal relationships among the Pomo languages, based on a lexicostatistical analysis of a Swadesh 100-word list (which shows considerable divergence among the languages—from a minimum of 46 percent shared forms (presumably reflecting the effects of both genetic relationship and diffusion) between Pse and Pne to a maximum of 76 percent between Pk, Ps and Pc):

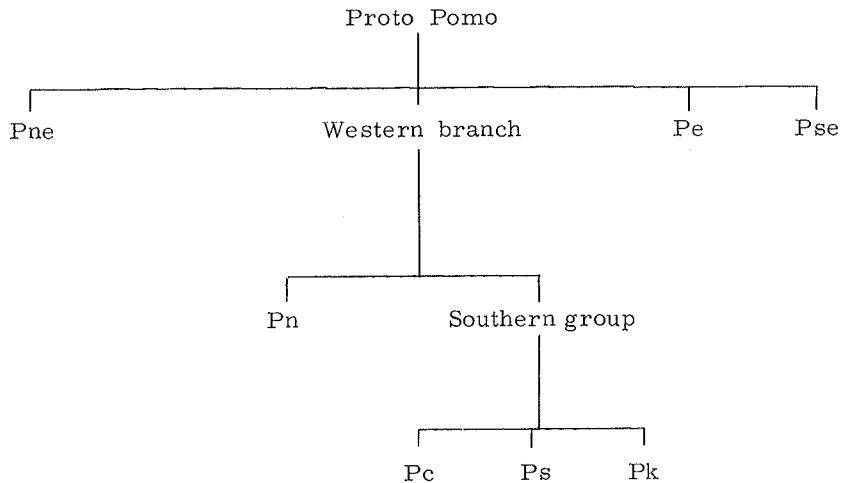


Figure 5

To the best of our knowledge, one of the seven languages, Northeastern Pomo (also formerly called Salt Pomo) is extinct, while another two, Southeastern (also called Sulphur Bank) and Southern, are spoken by only a few scattered speakers, who are, apparently, rarely in contact.

Grammars have been written of Eastern (McLendon, 1966 MS), Kashaya (or Southwestern) (Oswalt, MS), and Southeastern (Moshinsky, 1970b MS), and E. Vihman is presently writing a grammar of Northern Pomo. Extensive data were collected on all seven languages by Abraham Halpern during the course of a six-month field trip to the Pomo in 1939 and 1940. More recently, Robert Oswalt has also done extended field work with Central Pomo and Southern Pomo, while I carried out a month's field work on Northeastern Pomo before the last known surviving speaker died.³

While the relationship of these seven languages to one another was recognized as soon as they were first recorded (in the 1850s apparently), the reconstruction of Proto Pomo has been very slow, always being impeded by the lack of accurately recorded data, since the Pomoan languages are phonologically among the most complex of California Hokan languages. Their phonological systems differ radically from that of English, including glottalized consonants and stops as well as spirants with a post-velar point of articulation. It is small wonder, then, that many phonemic contrasts eluded the earlier nineteenth-century field workers. The phonological complexity of these languages led George Gibbs (Powers, 1877) to complain that it was "no light task to reduce to writing languages containing sounds so uncouth and unfamiliar to our ears as those of the Indians."

³The forms compared in this paper were generously supplied by Julius Moshinsky, Robert Oswalt, and Eero Vihman, or culled by me from the field notes which A. M. Halpern has kindly deposited with the Archives of the Survey of Californian and Other Indian Languages. The source(s) for each language are as follows: where there is more than one source, the first person listed is the main source, and forms from that field worker are unmarked. Forms from sources other than the main one are specifically identified as to source by the initial of the field worker's last name in parentheses following the form.

- Pn Eero Vihman, A. M. Halpern (H), Robert Oswalt (O)
- Pc Robert Oswalt, A. M. Halpern (H)
- Ps A. M. Halpern, Robert Oswalt (O)
- Pk Robert Oswalt
- Pne A. M. Halpern (H), S. McLendon (McL). If both collected a form with essentially the same shape and gloss, there is no indication of source. If forms collected by both show significant divergence in meaning and/or shape, each form is given, identified as to source. If a form was collected by only one, its collector is noted.

Forms from Halpern are in a largely phonemic transcription. Forms from McLendon, Moshinsky, and Vihman are phonemically transcribed, except for McLendon's transcription of Pne, which is only tentatively phonemic. Oswalt's recordings of Pk forms are morphophonemically transcribed, while his recordings of Pc and Ps are in a tentative phonemic transcription.

He added, "many of those sounds are not susceptible of representation by any characters of our alphabet, and there are others which present shades of distinction just attainable by an arbitrary use of them."

In this century, the number of phonemic contrasts in the Pomoan languages was rather well understood by field workers such as Kroeber and deAngulo. Even they, however, had difficulty frequently, in recognizing and recording these contrasts in their transcription of any given word.⁴

No reconstruction was attempted (or possible, in fact) until Halpern's field work during 1939 and 1940. Halpern himself began reconstructing Proto Pomo and has given at least two lectures on his research, but unfortunately has never published his conclusions. The first real step in the reconstruction of Proto Pomo was Robert Oswalt's comparison of Kashaya and Central Pomo in 1964. It is an excellent, detailed, careful comparison of great importance. The comparison involved only two of the seven languages, however, and therefore some conclusions, which seemed warranted when only two languages were examined, must be revised when all seven languages are considered.

The complete reconstruction of Proto Pomo depends, of course, on extensive, accurate descriptive work: grammars, dictionaries, and collections of texts of all seven languages. Although these have been, or are being prepared for four of the languages: Pk, Pe, Pn, and Pse, they are very much needed for Pc and Ps as well. It is doubtful that we will ever have ideal descriptive material for Pne, since the material collected by Halpern and myself before the language ceased to be spoken is relatively slight, rather resistant to analysis, and probably the least accurately recorded. Nevertheless the recent descriptive work on Pk, Pe, Pn, and Pse has produced recordings which permit the reconstruction of a considerable amount of Proto Pomo phonology as well as morphology. There are, thus, a number of characterizations which can be made of Proto Pomo with a fair degree of certitude.

⁴A recent comparison of the Pomoan languages (Webb et al., 1965-66) based on the Halpern field notes, also suffers from this problem, since the Halpern notes, while phonetically very good, are essentially unanalyzed, and therefore contain inconsistencies, misrecordings, and variant recordings, which are difficult to identify unless one is familiar with the languages.

II. PHONOLOGICAL INVENTORIES OF THE SEVEN POMO LANGUAGES

The segmental and suprasegmental inventories of the seven Pomo languages are charted in tables 1-4. The inventories of Pk and Pc, Pe, Pse, and Pn are given in the phonemic transcription of Oswalt, McLendon, Moshinsky, and Vihman, respectively. Those of Ps and Pne are given in a slightly adjusted version of Halpern's phonetic transcription, which is in the main phonemic. The adjustments have only been in the direction of replacing his [d, z, ž] and [g] by the symbols [t̪, c, č] and [k] respectively, and his [t̪, c, č] and [k] by [t̪ʰ, cʰ, čʰ] and [kʰ] respectively, since these are the symbols used to represent analogous sound ranges in the other Pomo languages, and greater ease in comparison is thus attained. Halpern also used a symbol [q] in recording Ps. Oswalt's practice of interpreting this [q] as representing an aspirated velar [kʰ] has been followed here, though it is always possible that Ps retains a trace of the proto post-velar series.

TABLE 1

Southwestern Pomo (Pk)									
b	d						i	u	
p	t	t̄	c	k	q	?	e	o	
p ^h	t ^h	t̄ ^h	c ^h	k ^h	q ^h		a		
	t̄	t̄̄	s̄	č̄	ķ̄		length /·/		
			s̄	s̄̄		h	raised tone /'/		
m	n								
	l								
w		y							
Southern Pomo (Ps)									
b	d						i	u	
	t	t̄	c	č	k	?	e	o	
p ^h	t ^h	t̄ ^h	c ^h	č ^h	k ^h		a		
p̄	t̄	t̄̄	č̄	č̄̄	ķ̄		length /·/		
		s̄		s̄̄		h			
m	n				ŋ				
	l								
w		y							

TABLE 2

Northern Pomo (Pn)								
b	d						i	u
p	t	t̄	c	č	k	?	e	o
p ^h	t ^h	t̄ ^h			k ^h		a	
پ	ت	ت̄	چ	چ	ک		length /·/	
		s		š		h	stress /'/	
m	n							
l								
w		y						

Central Pomo (Pc)								
b	d						i	u
p	t	t̄	c	k	q	?	e	o
p ^h	t ^h	t̄ ^h	c ^h	k ^h	q ^h		a	
پ	ت	ت̄	ش	چ	ک	؟	length /·/	
		s				h	stress /'/	
m	n							
l								
w		y						

TABLE 3

Northeastern Pomo (Pne)								
b	d					i	u	
[p]	t	č	k	?	e	o		
	t ^h	č ^h	k ^h		a			
	č	č	k		length /·/			
f	s	š	h		stress /'/			
m	n							
	l							
	r							
w	y							
Eastern Pomo (Pe)								
b	d					i	u	
p	t	č	k	q	?	e	o	
p ^h	t ^h	c ^h	č ^h	k ^h		a		
č	č	č	č	č	length /·/			
	s	š	x		h	stress /'/		
m	n							
M	N							
	l							
	L							
	r							
w	y							
W	Y							

TABLE 4

Southeastern Pomo (Pse)								
b	d					i	u	
[p]	t	t̄	c	k	q	?	e	o
p̄	t̄	t̄	c̄	k̄	q̄		a	
f	s	s̄		x	x̄	h	length /·/	
m	n							
l								
w			y					

III. CORRESPONDENCES AND RECONSTRUCTIONS

100. Introduction

The seven Pomo languages present an interesting paradox, diachronically. Impressionistically, they sound quite different from one another, they are mutually unintelligible, and they frequently demonstrate unexpected grammatical divergences. However, the correspondences demonstrated by the 321 cognate sets plus the 21 cognate instrumental prefixes are characterized by rather small phonetic shifts. This state of affairs results from the operation of two distinct types of sound change in the development of the seven Pomo languages from Proto Pomo. These Haas (1966) has insightfully distinguished under the labels paradigmatic and syntagmatic. That is, the phonetic content of the proto phonemes has changed, while the phonemes have split or merged in the various daughter languages (paradigmatic change). At the same time, many proto phonemes have systematically undergone changes uniquely in certain types of sequential environments, giving rise to adjustments which are classically referred to as assimilation, dissimilation, syncope, apocope, and aphesis (syntagmatic change). Paradigmatic changes of the first type have primarily affected consonants. Syntagmatic changes of the second type have primarily affected vowels. It is, of course, the syntagmatic changes which are the most obscuring of genetic relationship, often making the recognition of cognates difficult.

Syntagmatic change seems to account for a great deal of the divergence between the grammars of the seven languages in one of two ways: (1) phonological syntagmatic change seems frequently so to reduce the shapes of morphemes that they cease to be segmentable. New forms are then adopted or developed to express the grammatical meanings now no longer associated with isolable forms. (2) Grammatical syntagmatic change seems to affect the order in which suffixes are combined, so that reflexes of proto suffixes which are preserved in the daughter languages do not necessarily combine with other suffixes in the same order from one language to another (thus making the identification of cognate suffixes difficult if not impossible without extremely detailed, accurate grammatical descriptions).

110. Paradigmatic Changes

The paradigmatic sound correspondences are tabulated in 120, together with the proto phonemes which they are hypothesized to reflect. The choice of symbolization for these proto phonemes differs in some details from that proposed by Oswalt (1964a) for Proto Kashaya Central Pomo. The most significant differences are discussed below.

111. The Velar: Post-Velar Correspondences

Oswalt reconstructed the correspondence of a post velar series of stops, /q, q^h, q̄/, in Pk, to a velar series of stops, /k, k^h, k̄/, in Pc, as reflecting a proto velar series of stops, *k, *k^h, *k̄. An examination of the reflexes of these correspondences in the other five languages reveals strong evidence in favor of reconstructing this correspondence as a proto post-velar series of stops, *q, *q^h, *q̄.¹ The correspondences are given in Table 5.

TABLE 5

Pk	Ps	Pn	Pc*	Pne	Pe	Pse
/k/ - { /i/ /u/	? _#	/·/ _#	/·/ _#	? _#	/k ^h / _#?	q
/q/ - { /a/ /o/	/k/ E**	/k/ E	/k/ E	/k/ E	/q/ E	
/k ^h / _e/	k ^h	k ^h	k ^h	k ^h	x	/q / _t, c/
/q/ - { /h/ /C ^h /						/x / E
/q̄/ - { /a/ /o/						
k̄ _u/	k̄	k̄	k̄	k̄	q̄	q̄
/q̄/ - { /a/ /o/						

*Oswalt (personal communication) informs me that Pc in fact has a post-velar, /q, q^h, or q̄/, before /a, o/.

**E = Elsewhere.

Post-velars occur in four languages: Pk, Pc, Pe, and Pse. None of the four proposed classifications of the internal relationships among the Pomo languages have ever hypothesized that these four languages form

¹Oswalt (in press) has come to the same conclusion on considering the evidence of all seven languages.

a subgrouping within Pomo. On the contrary, three of the languages, Pk, Pe, and Pse, have always been hypothesized to be about as distantly related as is possible for members of the same family. Moreover, they are located geographically at the periphery of the former Pomoan territory—Pk being located on the Pacific Coast, at the extreme west of the former Pomoan territory, while Pe and Pse are located at the extreme east of that territory. If one were to reconstruct these correspondences as reflecting proto velars rather than post-velars, one would have to hypothesize independent innovation of post-velars in the same etyma for each of these languages. Those languages which consistently show velars corresponding to post-velars—Ps, Pn, and Pne, have, on the other hand, been hypothesized to constitute a subgroup within Pomo—all three of them, together with Pc and Pk, were hypothesized by Halpern to form a subgroup, which he called the Russian River group. If these correspondences are reconstructed as reflecting a proto post-velar series, then the Russian River languages (Pk, Ps, Pn, Pc, Pne) can be seen to have undergone a process of fronting (of post-velars to velars) which is still going on in Pk and Pc (Pk and Pc show velars instead of the expected post-velars before front vowels and /u/).

This hypothesis is further supported by additional evidence from Pk. Currently /i,e,u/ do not succeed a consonant of the post-velar position. Oswalt notes in his grammar (MS:37) "This restriction is true of all the informants, but Essie Parrish recognizes having heard some now deceased speakers use forms like /woqem/ where she employs /woqom/ "while flowing." Oswalt interprets this earlier behavior as a "regularization to the more commonly occurring phonemic allomorph /em/ which is employed by all Kashaya speakers after any consonant except those of the post-velar articulation." (Oswalt, MS:37). It seems to me equally plausible to hypothesize that it is the /om/ allomorph which is the innovation, and this deviation from the regularity of using /em/ after all consonants was motivated by the desire to preserve /q/ in such forms in the face of a sound change /q/ > /k/ /e/² (presumably the unimpeded operation of

²Other Kashaya morphemes containing the morphophoneme [̂v] suggest a similar change in the allomorphy of morphemes in order to block the operation of this same change (q > k) which now seems to operate in a broader environment, i.e., q > k /i,e,u/. The morphophoneme [̂v] has the shape /o/ after [q⁰], /a/ after other post-velars (and labials), but /i/ after all other consonants (except [d]). This morphophoneme corresponds to an unvarying /i/ in Pe in IMPERATIVE SINGULAR and OPTATIVE. SWEAT shows a similar phenomenon where Pk [a⁰] occurring before a post-velar corresponds to front vowels in all the other languages. A similar change in the allomorph of a morpheme following a post-velar, /q/, is found in Pe. The genitive suffix {-bax} has a set of phonologically

such a change would have produced too much homophony).³ It seems an unlikely hypothesis that an earlier generation would have innovated a regularization that a later, largely bi-lingual generation would reject in favor of more complex allomorphy. The tendency in the face of increasing bi-lingualism seems to be just the reverse—to introduce as much regularity as possible.

The reconstruction of these correspondences as reflecting post-velars rather than velars is also supported by a morphophonemic alternation found in at least two of the seven languages, Pe and Pk.⁴ In both languages only aspirated and glottalized stops may occur in word final position; unaspirated stops are replaced by homorganic aspirated stops in this position. Pe, however, has no /qʰ/ synchronically (PP *qʰ > Pe /x/); Pe /q/ alternates with the homorganic spirant /x/ in word final position. This alternation between Pe /q/ and /x/ seems most easily accounted for by assuming the earlier existence of a proto post-velar series, including qʰ (which later underwent a spirantizing shift in Pe⁵).

Further evidence that these correspondences reflect a proto post-velar series rather than a velar one, come from sets such as OLDER BROTHER, FATHER'S YOUNGER BROTHER, MOTHER'S SISTER, OLDER SISTER, in conditioned allomorphs beginning with /i/ or /y/ which occur with a single morphological class: kinship terms. When the kinship term ends in /q/ the shape of the suffix is /-abax/, not the /-ibax/ that occurs after all other consonants.

³The velar stops with which the post-velars would fall together (given the unimpeded operation of this sound change) seem, according to Oswalt (1964:157), to have been developed in Pk after the shift of the proto velar series, *k, *kʰ, *k̄, to Pk palatals /c, cʰ, c̄/. A new series of velars seems to have been developed through borrowing from Spanish, but more importantly, apparently, through borrowing from Ps (and, to a certain extent, Pc), where the shift of the proto post-velar series, *q, *qʰ, *q̄, to velars /k, kʰ, k̄/ had presumably already taken place. Doubts such as Pk /kʰomhca/ 'eight' (borrowed from Ps /kʰomhca/) in addition to Pk /qʰó· mihca/ 'two four' attest to this process. Thus a relative chronology of change can be tentatively hypothesized for Pk: (1) velars > palatals, (2) new velars borrowed, (3) post-velars > velars ____/i,e,u/. (Developments (2) and (3) are of course not necessarily ordered as listed.)

⁴This alternation seems likely to have been a feature of Proto Pomo—since Pe and Pk are not members of any subgroup within Pomo, they cannot be assumed to have undergone any shared developments after the proto language had become differentiated. Since they are not geographically contiguous, the possibility that the feature was diffused seems unlikely. It may even have been a feature of Proto Hokan; Yana seems to show a similar alternation.

⁵Aspirated stops in Pomo seem particularly vulnerable to such a spirantizing shift; all the Proto Pomo aspirated stops become spirants in Pse, while some of the proto aspirated stops become spirants in Pne, Pn, and Pc. This spirantizing tendency can still be observed synchronically in Pn where /kʰ/ is [x] ____/a,o/ (Vihman, personal communication).

which Pe and Pse show /q/ corresponding to Pk /k/ followed by a front vowel. It is difficult to hypothesize a plausible phonological motivation for the development of a post-velar before a front vowel if the correspondence is interpreted as reflecting a velar. It is clear that the same process of fronting is involved, when the correspondence is reconstructed as reflecting a post-velar.

112. The Palatal: Velar: Dental Correspondences

Oswalt also reconstructed the correspondence of a palatal series of stops in Pk to a palatal series of stops (or /š/) in Pc as reflecting a proto palatal series. Again, an examination of the correspondences demonstrated by all seven languages suggests a different reconstruction.⁶ The correspondences are given in table 6.

TABLE 6

Pk	Ps	Pn	Pc	Pne	Pe	Pse
∅ _# /c/ E	∅ _# /č/ E	? _# /č/ E	? _# /č ^h / { /h/ C /c/ E	∅ _# /t/ E	? _# /k/ E	/k/ _# /q/ _?(?) /c/ E
/c/ { /č ^h / E	č ^h	š	/č ^h /_V /š/ { /_V	č ^h	k ^h	/x/ _y (?) /š/ E
č	č	č	č	č	k	/č/ _/i/ /k/ E

⁶Oswalt (in press) still prefers to reconstruct this series as reflecting a proto palatal series: "It is possible that the protolanguage had velar stops for this correspondence, but a reconstruction as a palatal is favored because the palatal reflex occurs in the majority of languages, because a palatal is intermediate in position to the velar of Pe and the dental of Pne, and because use of the c symbol for this correspondence frees k and q for uses for the velar and uvular series evidenced in Pk and Pc." (Oswalt, in press:3-4). Oswalt's third motivation for adhering to a palatal reconstruction, the evidence of a velar and uvular series in Pk and Pc, is based on a few forms in which Pk and Pc agree in showing velars before the back vowels /a,o/ instead of post-velars, i.e., Pk bahkal : Pc ba·kál 'shoulder blade'. I personally suspect that these sets reflect diffusion between these two languages rather than the existence of still another proto series, since the Pe form for 'shoulder blade' is ču·qál, with the expectable post-velar rather than velar. (The discrepancy in the correspondences of the first syllable presumably reflects differing morpheme combination in Pe and Pk and Pc, both ču- and ba- being prefixes in Pe.)

If these correspondences are construed as reflecting a proto velar series, then the sound shifts involved in these correspondences can all be viewed as the result of the operation of the same process of fronting which affected the proto post-velar series discussed above; Pne carrying the process to its greatest extreme in developing /t/ < *k. (There is only one example supporting each of the instances of unexpected backing in Pse: *k > /q/ ____/, *k^h > /x/ ____/y/. It is possible that the two Pse forms for which these developments must be hypothesized, BEE and OCCIPUT, are not true cognates.)

Additional evidence for the assumption of a more backed proto articulation for the proto phonemes reflected by these correspondences again comes from the morphophonemics of Pk. Pk morphophonemic alternations classify consonants into two major classes, called by Oswalt "exterior consonants" (labials and post-velars) and "interior consonants" (those articulated between the labial and post-velar points of articulation). Pk [ʃ], although articulatorily an "interior consonant," behaves morphophonemically like an "exterior consonant" (Oswalt, MS: Section 280), which suggests an earlier, more backed, articulation.⁷

Finally there is some slight evidence of a correspondence of palatal stops to the spirant /s/ which suggests the possible existence in Proto Pomo of a palatal series of stops (*c, *c^h, *č) in addition to those which have been reconstructed as velars and post-velars. The reconstruction of a velar series rather than a palatal series leaves phonological space for these other correspondences and eliminates the possibility of having to reconstruct two proto palatal series.

113. The Correspondence of Spirants

Given the overwhelming pattern of fronting evidenced by the stops when proto velar and post-velar series are reconstructed, the correspondence of Pse /x/ to /š/ in the other languages has been construed as reflecting Proto *x, rather than the reconstruction suggested by Oswalt: *š. The preservation of the congruity of the pattern of sound change has been given precedence over the choice of a reconstruction which reflects the phonetic qualities of the reflex demonstrated by the majority of the languages. Pse is, of course, one of the three languages which preserves the post-velar series (with no restriction on the occurrence of post-velars before front vowels as exists in both Pk and Pe), and one of two languages

⁷The fact that Pk [ʃ] and [č] don't also behave like members of the class of exterior consonants suggests that the fronting of the proto velar series affected aspirated and glottalized velars before unaspirated velars.

which preserve some evidence of a proto velar series. It is not so unreasonable, then, that Pse should be the sole language to preserve a velar spirant which has become a palatal spirant in all the other languages.

The correspondence of Pse /χ/, Pe /χ/ to /h/ in all the other languages, which contrasts with a correspondence of /h/ in all the languages, has been reconstructed *χ.⁸

114. Correspondences Involving /·/

All seven languages have phonemic length /·/, and length has been reconstructed in the proto language. Only six of the languages, Pk, Ps, Pc, Pn, Pne, and Pe, preserve a reflex of proto length. Long vowels in Pk, Pn, Pne, and Pe always correspond to short vowels in Pse, and, when word final, to short vowels preceded by a long consonant in Ps. (Cf. also Section 145.4 for further details concerning Ps vowel length.)

In addition to /·/, Pk has a morphophoneme [l⁰] which never occurs in the first syllable of a word and represents an alternation in length conditioned by the shape of the syllable in which it occurs. The conditioning seems to be briefly as follows: If [l⁰] occurs in the second syllable of a word, and the next syllable is heavy, i.e., closed by a consonant or /·/, [l⁰] is in Oswalt's term "activated," that is, it is realized as /·/. If [l⁰] occurs in the third or any subsequent non-final syllable of a word, and that syllable is open, i.e., not closed by a consonant or /·/, and the preceding syllable is "light," [l⁰] is also activated. That is:

$$\begin{array}{ccc} \text{CVCV}^0\text{CVC} & \longrightarrow & \text{CVCV}\cdot\text{CVC} \\ \overline{1} \quad \overline{2} \quad \overline{3} & & \overline{1} \quad \overline{2} \quad \overline{3} \\ \\ \text{CVCV}^0\text{CV} \dots & \longrightarrow & \text{CVCV}^0\text{CV} \dots \\ \overline{1} \quad \overline{2} \quad \overline{3} & & \overline{1} \quad \overline{2} \quad \overline{3} \end{array}$$

This statement of the alternation of length in Pk has at least two interesting implications. (1) A sequence of two or more long syllables (i.e., syllables containing long vowels) may not occur. If two underlying

⁸Except for CLAM and the instrumental prefix WITH A SWINGING MOTION, this correspondence of Pse /χ/, Pe /χ/ to /h/ in the other languages always is preceded by another, apparently laryngeal increment /h/ in Ps, whereas the correspondence of /h/ in all the languages is never preceded by an additional /h/ in Ps. This near complementarity led Halpern to hypothesize that the correspondence of Pse /χ/, Pe /χ/ to /h/ in the other languages arose from a proto cluster *-hh-. Despite the attractive simplicity of this hypothesis, if CLAM and WITH A SWINGING MOTION are in fact true cognates, it seems untenable.

long syllables are juxtaposed, one will have to be shortened. (2) Two syllable words ending in [$\text{[]}^0\text{[]}$] will have a phonemically short second syllable, but if suffixed with a morpheme having a CVC shape, this syllable will become long. Thus there is a word final contrast in Pk between two syllable words ending in /·/, two syllable words ending in a short vowel which remains short when further suffixed, and two syllable words ending in a short vowel which becomes long with certain types of suffixation.

Pk /·/ is distributionally also somewhat limited: it may close a syllable, but it only occurs followed by a consonant in the same syllable, in certain verb forms and loan words (Oswalt, MS:40).

Therefore, the correspondence of Pe, Pc, Pn, Pne /·/ to Pk [·], [$\text{[]}^0\text{[]}$], or \emptyset in a syllable closed by a consonant is reconstructed as *·. The correspondence of Pe, Pc, Pn, Pne /·/ to Pk \emptyset in a syllable not closed by a consonant is reconstructed as *(·) (although it is always possible that Pk [$\text{[]}^0\text{[]}$] is present in such cases). The correspondence of /·/ in one of the five languages which preserve a reflex of *· to \emptyset in the other four languages which generally preserve a reflex is reconstructed as reflecting a proto alternation between stems with long and short vowels (CVCV ~ CVCV·). A correspondence of /·/ in two or three of the languages to \emptyset in the rest is reconstructed as reflecting two possible stem shapes (CVCV, CVCV·).

120. Sound Correspondences

The Proto Pomo phonemes with their reflexes in the various daughter languages are tabulated below, together with a listing, by English gloss, of each of the cognate sets included in Part I of the Lexicons supporting each proto phoneme.⁹

- | | |
|-----------------|--|
| *p ^h | Pk p ^h ; Ps p ^h ; Pn p ^h ; Pc h before /i/, p ^h elsewhere; Pne f;
Pse f; Pe p ^h .
BREAK WIND, EXCREMENT, FAT, TO FLY (2), SEVERAL TO GO, LEAF (2), MAGNESITE, MUSH OAK, PEOPLE/RACE,
SENTENCE CONNECTIVE (1) and (2), SKUNK, SLOW, SPRING. |
| (*p) | Pk p̪; Ps p̪; Pn ____ ⁹ ; Pc p̪; Pne ____; Pse ____; Pe p̪.
SLUG. ¹⁰ |

⁹A dash, ___, indicates that no reflexes of a given proto phoneme have been found in the language in question. Environments specified for Pn, Pne, Pe and Pse are proto environments and do not necessarily occur synchronically.

¹⁰The *p̪ of SLUG could result from sound symbolism, cf. SLOW.

- *b Pk b; Ps w before /o/, b elsewhere;¹¹ Pn w following /o/, b elsewhere; Pc p^h word-initially before an aspirated consonant, p̪ word-initially before a non-aspirated consonant, b elsewhere; Pne b; Pse w when intervocalic post-tonically, b elsewhere; Pe b.
- ACORN, ANGELICA, ARROW (2), BACK, PACK BASKET (OPEN-WOVEN), PACK BASKET (CLOSE-WOVEN), BEAR, BIG (sg.), BLOOD, BODY, BUCKEYE, TO CARRY IN HANDS, CLOUD (1) and (2), CREEK, DEER, FATHER'S FATHER, TO HUNT, LONG (2), BODY LOUSE, MAN (2), MANZANITA BERRY, MUD, WHITE OAK, ONION, PEPPERWOOD TREE, PEPPERWOOD NUT, INDIAN POTATO, ROCK, TAIL, THIRD PERSON MASCULINE OBJECT, TONGUE, ROUND TULE, TULE SPROUT, WEST (2), WHAT, WHISTLE, WORM (1).
- *-b? Pk m?; Ps n; Pn m; Pc __; Pne ?; Pse b; Pe p̄.
- COTTONWOOD, MAPLE, LIVE OAK, PEPPERWOOD TREE, SOAPROOT, THIRD PERSON MASCULINE SUBJECT.
- *t Pk Ø word-finally, t elsewhere; Ps Ø word-finally, t elsewhere; Pn ? syllable-finally, Ø word-finally, t elsewhere; Pc Ø word-finally, t elsewhere; Pne Ø word-finally and before a consonant, t before a vowel; Pse t; Pe Ø.
- BIRD, FIRST PERSON SINGULAR OBJECT, GRASSHOPPER, MUDHEN, OBJECT CASE, SECOND PERSON SINGULAR OBJECT, WOMAN.
- (*t^h) Pk t^h; Ps t^h; Pn t^h; Pc t^h; Pne __; Pse t; Pe __.
- HAND, NEGATIVE (1).
- (*t̄) Pk t̄; Ps t̄; Pn t̄; Pc __; Pne t̄; Pse t̄; Pe t̄.
- BRAINS, HOT.
- *-t? Pk [t]; Ps t̄; Pn t̄; Pc __; Pne t̄; Pse t; Pe __.
- EMBERS, ONION, SPIT.
- *d Pk d; Ps d; Pn d; Pc ?a- ~ ?- word-initially before any vowel except a reflex of *a, d elsewhere; Pne d; Pse ? word-initially before a consonant, d elsewhere; Pe r (< t̄ ?) morpheme-finally post-tonically, d elsewhere.¹²

¹¹ The cluster *b? > p̄ in Ps.

¹² Pk d corresponds to l in Pse and Pe in two verb forms which seem to contain the durative suffix, CARRY IN HANDS and WALK, as well as in the durative suffix itself. In addition, verbs which in Pk are marked for plural by means of

ACORN, ARMPIT, BACKBONE, BREAST, SOAKED BUCKEYE NUTS, TO CARRY IN HANDS, TO COME, COYOTE, CREEK, TO DREAM, DURATIVE, TO FLY (2), FOREHEAD, FOX (2), TO GIVE, GOOD, MOUNTAIN, NIGHT, PAIN, PATH, TO PICK UP NON-LONG OBJECT, RACCOON, TO SEE, OLDER SISTER, SIX, SKIN, SUN, THIRD PERSON FEMININE OBJECT, UPHILL, TO WALK, WILDCAT.

- *-d? Pk [d] (= n? word-finally); Ps n before consonants and pause, d before vowels; Pn n before pause, d before vowels; Pc __; Pne Ø word-finally, n before vowels; Pse d; Pe t.
DAUGHTER-IN-LAW (1), SISTER'S HUSBAND, THIRD PERSON FEMININE SUBJECT.

- *t Pk /t/ word-finally, t elsewhere; Ps lengthening of preceding consonant when word-final, t elsewhere; Pn /t/ word-finally, t before /a/, t before /u/, t before /i/, t before /o/; Pc /t/ word-finally, t elsewhere; Pne /t/ syllable-finally, t word-initially r intervocally; Pse d post-tonically, t elsewhere; Pe r.
BASKET, species (2), BEAR, ACORN BREAD, TO BREAK WIND, EARTH, FIVE, FROG, TO LIE, BODY LOUSE, MUD, POISON OAK, SALT (1), SAND, SKUNK, STORY (MYTH), WOODDUCK.

- *t^h Pk š before /u/ ?, t^h elsewhere; Ps t^h; Pn t^h before /a/, t^h before /i, e, o/; Pc t^h; Pne t^h; Pse š; Pe t^h.
ARROW (2), BIG (sg.), BIG (pl.), DOE, FEATHER (SMALL), MOTHER, MUSH, PAIN, SEAWEED, MOTHER'S OLDER SISTER, TULE SPROUT.

- *t^l Pk t^l; Ps t^l; Pn t before /a/, t before /i/; Pc t^l; Pne t^l; Pse t^l; Pe t^l.

LEAF (1), RECTUM, YOUNGER SIBLING, SPLEEN, TICK.

- *-t[?] Pk [t?]; Ps t[?]; Pn t following /a/? , t following other vowels; Pc t[?]; Pne t[?]; Pse ?; Pe ?.
PANTHER, SQUIRREL, STRING.

- *c Pk /t/ word-finally, s before /i/, c before /a, u/; Ps lengthening of initial consonant of the final syllable word-finally, h word-initially before a front vowel, c^h elsewhere before a front vowel,

{d>c} Plural Agent, correspond to verbs in Pe which translate as singular when suffixed with the continuative suffix {-l}, and as plural when suffixed with the distributive plural continuative suffix {-yk}. The phonological factors conditioning this correspondence of Pk d to Pse, Pe l are not clear, although they may hinge on the presence of /i/.

c before /a, u/; Pn /·/ word-finally, c word-initially, s non-initially before /i/; Pc /·/ word-finally, s before /i/, c before /a, u/; Pne Ø word-finally, č^h elsewhere; Pse s; Pe č^h word-finally, č ~ č^h elsewhere.

MOTHER'S BROTHER, COLD, FOX (2), BODY HAIR, TWO, WOLF.

*č
Pk š; Ps č; Pn ? word-finally in kinship terms, č elsewhere; Pc ? word-finally, š elsewhere; Pne č; Pse č; Pe č.
ARROW (1), BASKET, sp. (1), BIRD, MOTHER'S BROTHER, CLAW, DIRTY, FATHER'S FATHER, MOTHER'S FATHER, FLESH, FLY (n.), GRASS, JAY, KINSMAN, FATHER'S MOTHER, MOTHER'S MOTHER, MUDHEN, MUSHROOM (1), MUSH OAK, REED, sp., SHOULDER, MOTHER'S OLDER SISTER, FATHER'S SISTER, SKIN, SOUR, WINTER.

*k
Pk Ø word-finally, c elsewhere; Ps Ø word-finally, č elsewhere; Pn _ word-finally, č elsewhere; Pc _ word-finally, č^h word-initially before a consonant, c elsewhere; Pne Ø word-finally, t elsewhere; Pse k word-finally,¹³ q before /?/, c elsewhere; Pe _ word-finally, k elsewhere.
PACK BASKET (CLOSE-WOVEN), POUNDING BASKET, BEE, FATHER'S YOUNGER BROTHER, BUZZARD, COTTONTAIL, DAY, TO DRINK, DURATIVE, EAT (2), ENEMY, MOTHER'S FATHER, FLINT, TO FLY (1), GRAIN, HEAD, TO HEAR, HOUSE, LEG, LONG (2), HEAD LOUSE, MAN (1), NORTH, TO PICK UP, RAIN, TO SEE, SEMELFACTIVE, SISTER'S HUSBAND, TO SIT, TO SIT DOWN, SON-IN-LAW, SQUIRREL, TO TALK, ROUND TULE.

*k^h
Pk c before /h/ or an aspirated consonant, č^h elsewhere; Ps č before /h/ or an aspirated consonant, č^h elsewhere; Pn č before /h/? , š elsewhere; Pc č^h before a stressed vowel, š before a consonant or unstressed vowel; Pne č^h; Pse x before /y/ ?, š elsewhere; Pe k^h.
TO BE AFRAID, BASKET, sp. (2), BUMBLEBEE, BUZZARD, TO LAUGH, TO LEACH, LIVER, NEGATIVE (2), OCCIPUT, RAIN, SALT (2), SPIDER, SWEAT, WORM (2).

*k̩
Pk č; Ps č; Pn č; Pc č; Pne č; Pse č before /i/, k̩ elsewhere; Pe k̩.
ANGELICA, BACK, BACKBONE, EGG, HAWK, MUSHROOM (2), LIVE OAK, ONE, RECIPROCAL, REFLEXIVE, SIX.

¹³The development of PP *k > Pse q _ ?, and of PP *k^h > Pse x _ y is suspect since it is only supported by a single example in each case, PP *k > Pse q _ ? in BEE, PP *k^h > Pse x _ y in OCCIPUT.

- *-k? Pk []c[]; Ps y; Pn ?, ̄, t;¹⁴ Pc ̄; Pne t; Pse Ø before a consonant-initial suffix (?), k elsewhere; Pe k^h.
 EMBERS, FAWN, FROG, MAN (1), DIP NET, RIB, SAND.
- *q Pk []q[] word-finally, q before /a, o/, k before /i, u/; Ps _word-finally, k elsewhere; Pn /·/ word-finally, k elsewhere; Pc /·/ word-finally, k elsewhere;¹⁵ Pne _ word-finally, k elsewhere; Pse q; Pe k^h word-finally (?), q elsewhere.
 BEAR, TO BITE, OLDER BROTHER, FATHER'S YOUNGER BROTHER, BETWEEN TWO FORCES (prefix), BUSH, sp., CAUSATIVE, CHILD, COLD, COTTONWOOD, TO EAT (1), TO GIVE, GRASS, GRASSHOPPER, JACKRABBIT, LONG (1), LOOSE, MANZANITA, MANZANITA BERRY, MAPLE, MOTHER'S MOTHER, NAVEL, WHITE OAK, QUAIL, RAW/ALIVE, RECIPROCAL RELATION, YOUNGER SIBLING, FATHER'S SISTER, MOTHER'S YOUNGER SISTER, OLDER SISTER, SISTER'S HUSBAND, SKY, SPRING, SWEAT, TESTICLES, UMBILICUS, VALLEY, WHITE.
- *q^h Pk k^h before /e/, q before /h/ or an aspirated consonant, q^h before /a, o/; Ps k before /h/ or an aspirated consonant, k^h elsewhere; Pn k^h; Pc k^h,¹⁵ Pne k^h; Pse q before /t, c/, following /x/, or finally (?), x elsewhere; Pe x.
 BARK, PACK BASKET (OPEN-WOVEN), BELLY, BLACKFISH, ACORN BREAD, CLOUD (1) and (2), DANCE/SONG, DAWN, TO DREAM, FLINT, FOOT, MUDHEN, ONION, PITCH, QUAIL TOP-KNOT, RACCOON, ROCK, TO SAW APART, SPIT, SPRING, TEARS, TREE, TWO, WATER, WINTER.
- *q' Pk ̄ before /u/, ̄ before /a,o/; Ps ̄; Pn ̄; Pc ̄;¹⁵ Pne ̄; Pse ̄; Pe ̄.
 TO DIE, TO DRINK, DUCK, ELBOW, FOX (1), GOOD, MOON, MORTAR, MUSSEL, NECK, PHLEGM, POISON, SALT (1), TO SEPARATE, WHAT.

¹⁴Since there are few examples of each of these Pn consonants corresponding to reflexes of *-k?, it is difficult to determine which consonant is the true Pn reflex and which consonants reflect probable diffusion. There are no discernible conditioning factors which could account for this range of variant correspondences.

¹⁵Since finishing this comparison I have learned from Robert Oswalt that where I have given a stop in the /k/ series in Central Pomo, it is in fact in the /q/ series by his new phonemicization if the following vowel is /a/ or /o/. Thus my recording of Pc ka or ko in the Lexicon should actually be qa or qo. This information was unfortunately received too late to change any of the Pc forms compared in the Lexicon.

- *-q? Pk []q[]; Ps k̄; Pn k̄; Pc k̄;¹⁵ Pne ____; Pse ____; Pe x.
FROG, DIP NET, WOODRAT.
- ** Pk Ø word-initially in pre-tonic syllables in a sequence of three or more syllables (cf. Section 141.11), ? elsewhere; Ps ?; Pn Ø word-initially in pre-tonic syllables and before a consonant initial in the tonic syllable, ? elsewhere; Pc Ø word-initially in pre-tonic syllables and before a consonant initial in the tonic syllable, ? elsewhere; Pne Ø word-initially in pre-tonic syllables, except when followed by a syllable beginning with a nasal, semi-vowel, *x̄ or b, and before consonants initial in the tonic syllable except voiced stops and č, ? word-initially in pre-tonic syllables followed by a syllable beginning with a nasal, semi-vowel, *x̄ or b, before voiced stops and č and intervocally; Pse Ø word-initially in pre-tonic syllables and before a consonant initial in the tonic syllable, ? elsewhere; Pe Ø initially in any pre-tonic syllable, and before a consonant initial in the tonic syllable, ? elsewhere (cf. also Section 141.22).
ACORN, ARM, BACKBONE, BEE, BELLY, BELOW, BIG (pl.), BLANKET, BODY, BONE, TO BREAK WIND, CHEST, CLOVER, CREEK, DAWN, DIRTY, TO DREAM, EARTH, EAST, EXCREMENT, EYE, FAT, FATHER, FEATHER (SMALL), FEATHER (LARGE), FIRE, FIRST PERSON SINGULAR SUBJECT, OBJECT, and POSSESSIVE PREFIX, FIRST PERSON PLURAL, FISH, FLEA, FLESH, FOOD, GOOD, GOPHER, HAIR, HAND, HOUSE, TO HUNT, JACKRABBIT, JEALOUS, TO LEACH, LEAF (1), LONG (1), LOOSE, HEAD LOUSE, MAGNESITE, MAN (1), MAN (2), MOON, MOUTH, MUSH, MUSSEL, NAME, NAVEL, LIVE OAK, WHITE OAK, ONION, PHLEGM, POISON, INDIAN POTATO, QUAIL TOP-KNOT, RACCOON, RAIN, ROCK, SALT (1), SALT (2), SEAWEED, SECOND PERSON SINGULAR SUBJECT, SEED, SKIN, SLUG, SMOKE, SNOW, SOAPROOT, SOUTH, SPIDER, SPIT, SUN, TEARS, THING, TICK, TONGUE, TOOTH, TULE SPROUT, TWO, UMBILICUS, WATER, WHISTLE, WIND, WOMAN, WOOD, WORM (2).
- *s Pk s; Ps s; Pn s; Pc s; Pne Ø word-finally, š elsewhere; Pse c before /x/ (?), s elsewhere; Pe s.
BEHIND, BUCKEYE NUTS WHEN SOAKED, CHAPARRAL, CLOVER, ELBOW, EMBERS, LEAF (1), LOG, PHLEGM, RACCOON, RIB, SEED, TO SLEEP, SMOKE, SNOT, STRING.

- *_x Pk š; Ps š; Pn š; Pc š; Pne š; Pse x before or after /q/, x elsewhere; Pe š.
 ARM, BLACKFISH, BLANKET, BODY, BOW, BREAST, BUCKEYE, COTTONWOOD, DAUGHTER-IN-LAW (2), DEER/MEAT, EAR, EAST, FISH, FIVE, FOREST, GRASSHOPPER, TO HEAR, HEMP, LEG, BODY LOUSE, MOON, MOTHER-IN-LAW, NAME, NEW, BLACK OAK, LIVE OAK, QUAIL, RAW/ALIVE, REED, sp., RIDGE/MOUNTAIN, TO SAW APART, MOTHER'S YOUNGER SISTER, TO STINK, SUCKERFISH.
- *_x Pk h; Ps h; Pn h; Pc h; Pne h; Pse x; Pe x.
 CLAM, FIRE, MOUTH, PINOLE, SMOKE, WOOD.
- *_h Pk ø [environments given on p. 36], ? before an unstressed vowel followed by /m, n, l/, h elsewhere; Ps ø [environments given on p. 36], and when followed by C·, h elsewhere; Pn ø word-initially before an unstressed vowel or another consonant initial in the tonic syllable, h elsewhere; Pc ø word-initially before an unstressed vowel or a consonant, h elsewhere; Pne ø word-initially in a pre-tonic syllable not followed by /m, w, n/ or when followed by a voiced consonant initial in the tonic syllable, h elsewhere; Pse ø word-initially in pre-tonic syllables, and before a consonant initial in the tonic syllable, h elsewhere; Pe ø word-initially before an unstressed vowel, or before any non-sonorant consonant initial in the tonic syllable, [*h + a sonorant > Pe voiceless sonorant], h elsewhere.
 ARROW, ASHES, BARK, PACK BASKET (OPEN-WOVEN and CLOSE-WOVEN), BELLY, BIG (sg. and pl.), BIRD, BLANKET, BONE, BOW, BRAIN, BROTHER-IN-LAW, BUCKEYE, BUCKEYE NUTS WHEN SOAKED, BUMBLEBEE, TO BURN, BUSH sp., BUZZARD, CAUSATIVE, CLAW, CLOVER, COLD, TO COME, TO COOK, DEER, DOOR, TO DRINK, EARTH, TO EAT (2), EGG, ELBOW, EMBERS, ENEMY, EXCREMENT, EYE, FAT, FAWN, FEATHER (SMALL), FEATHER (LARGE), FIRE, FISH, FIVE, FLINT, TO FLY (1), FOX (1), TO GIVE, GOOSE, GRAIN, GRASSHOPPER, HAIR (OF HEAD and OF BODY), HEMP, HOLE, HORSE, HOT, HOUSE, LEAF (2), LEG, LIVER, LONG (1), LONG (2), HEAD LOUSE, MAN (2), MANZANITA BERRY, MOTHER, MOUTH, MUSHROOM, NAME, NAVEL, NORTH, NOSE, BLACK OAK, PAIN, PANTHER, PATH, PEOPLE/RACE, PEPPERWOOD TREE, PEPPERWOOD NUT, TO PICK UP NON-LONG OBJECT, PINOLE, PITCH, POISON OAK, INDIAN POTATO,

RACCOON, RAIN, RAW/ALIVE, RECIPROCAL, RECTUM, SAND, SINEW, TO SIT DOWN, SMOKE, SNOT, SNOW, SOAPROOT, SON-IN-LAW, SPIT, SPRING, TO STINK, TO STOP DOING, SUN, TAIL, TO TALK, TEARS, THIRD PERSON MASCULINE SUBJECT and OBJECT, THIRD PERSON FEMININE SUBJECT and OBJECT, THIRD PERSON SINGULAR POSSESSIVE PREFIX, THROAT, TONGUE, TOOTH, UMBILICUS, VALLEY, TO WALK, WATER, WEST (1), WHITE, WIND, WOLF, WOOD, WOODRAT.

*m Pk m; Ps m; Pn m; Pc b word-initially before /a/, m elsewhere; Pne m; Pse m; Pe m.¹⁶

ARMPIT, POUNDING BASKET, BROWN BEAR, BOW, OLDER BROTHER, BROTHER-IN-LAW, TO BURN, COTTONTAIL, DAUGHTER-IN-LAW (2), DAY, DOE, DOVE, EAR, EARTH, EMBERS, ENEMY, FATHER, FLEA, FLY (n.), FOOD, FOOT, GOPHER, GRAIN, BODY HAIR, HEMP, HOLE, TO BE HOT, IMPERATIVE (sg.), JACKRABBIT, TO LIE, LOG, FATHER'S MOTHER, MOTHER-IN-LAW, PANTHER, PLURAL ACT (2), POISON OAK, RECIPROCAL, RIB, SAND, SECOND PERSON SINGULAR SUBJECT, OBJECT, and POSSESSIVE PREFIX, SECOND PERSON PLURAL SUBJECT and OBJECT, SINEW, FATHER'S SISTER, TO SLEEP, SOUR, SPIDER, SPLEEN, SQUIRREL, TO STINK, STORY/MYTH, STRING, SUCKERFISH, SWEAT, THING, THIRD PERSON MASCULINE SUBJECT and OBJECT, THIRD PERSON FEMININE SUBJECT and OBJECT, THIRD PERSON SINGULAR POSSESSIVE PREFIX, THROAT, WEST (1), WILDCAT, WOLF, WOMAN, WOODRAT.

*hm Pk hm; Ps hm (or mh); Pn m; Pc m; Pne m; Pse m; Pe M. BOW, EARTH, ENEMY, BODY HAIR, PANTHER, POISON OAK, RECIPROCAL, SAND, WOLF.

*n Pk l word-initially, n elsewhere; Ps n; Pn m before /w/, n elsewhere; Pc d word-initially before a vowel (Coast or 'Boya' dialect), n word-initially before a vowel (interior or 'Yokaya' dialect), m before a labial, n elsewhere; Pne /-/ word-finally (?), l word-initially (?), n elsewhere; Pse m before /f/, n elsewhere; Pe n.
ASHES, BIG (sg.), TO BITE, BUSH, sp., COTTONTAIL, DUCK, FAWN, HAND, HEAD, MOUNTAIN, NEGATIVE (1), WHITE OAK, ON/ON TOP, PEOPLE, PREGNANT, SEAWEED, SENTENCE CONNECTIVE (3), SIX, SKUNK, UPHILL.

¹⁶The proto sequence *hm > Pe M.

- *_n^y¹⁷ Pk Ø; Ps Ø; Pn Ø; Pc Ø; Pne Ø; Pse n; Pe /·/.
BIG (pl.), BREAST, EAR, FOOT, HEAD LOUSE, INDIAN POTATO,
SKY, TO SLEEP, THROAT.
- *hn Pk hn; Ps nh when the proto syllable was closed by *, hn else-
where; Pn n; Pc n; Pne n; Pse n; Pe N.
BUSH, sp., TO TALK.
- *l Pk l; Ps n word-finally, l elsewhere; Pn l; Pc l; Pne l; Pse l;
Pe l.
ARM, PACK BASKET (OPEN-WOVEN), BROWN BEAR, BEHIND,
BLACKFISH, BLOOD, TO BURN, CLAM, COLD, COTTONWOOD,
TO DIE, DIRECTIONAL, FIRST PERSON PLURAL OBJECT,
FLEA, FOREHEAD, SEVERAL TO GO, GOOSE, GOPHER, JACK-
RABBIT, JEALOUS, LEAF (1), LONG (1) and (2), MAPLE, MOON,
MORTAR, MUSHROOM (2), MUSSEL, NORTH, NOSE, BLACK OAK,
WHITE OAK, OBJECT CASE, PAIN, PHLEGM, PLURAL ACT (1),
SECOND PERSON PLURAL OBJECT, SENTENCE CONNECTIVE
(1), SIX, SKY, SLOW, SLUG, SNOT, STRING, THIRD PERSON
MASCULINE SINGULAR OBJECT, THIRD PERSON FEMININE
SINGULAR OBJECT, TICK, TREE, WEST (1), WHISTLE, WILD-
CAT, WORM (1).
- *hl' Pk hl; Ps lh when the proto syllable was closed by *l^y, hl else-
where; Pn l; Pc l; Pne l; Pse l; Pe L.
TO BURN, GOOSE, LIVER, RACCOON, WHITE.
- *l^y¹⁷ Pk /·/; Ps /·/ following the initial consonant of the syllable which
in the proto language was closed by *l^y unless this syllable is no

¹⁷The reconstructions *_n^y and *l^y, unlike the others proposed, are merely cover symbols for correspondences involving Pse /n/ and /l/ corresponding to Pe /·/ and /l/ and to Ø or /·/ in the other languages. The two correspondences are limited to word final position of occurrence, but contrast in this position with other sets of correspondences involving /n/ and /l/ in all of the languages. Since the correspondence of Pse /l/: Pe /l/: /·/ in all the other languages (except Ps) occurs in two sets for which there are Yuman cognates ending in /l^y/, the symbol l^y was chosen because of its mnemonic value. Although no Yuman cognates are known for the Pomo sets demonstrating the correspondence of Pse /n/: Pe /·/: Ø in the other languages, the symbol n^y has been used to emphasize the pattern congruity of these two correspondences. It is vaguely possible that the correspondence here reconstructed *_n^y may in fact be simply the word final reflex of proto *n, since only two forms, DUCK and PESTLE, provide evidence for a contrasting correspondence involving /n/ in most of the languages (Pk /l/: Ps /n/: Pn /n/: Pc /?/: Pne Ø: Pse /n/: Pe /n/), and PESTLE demonstrates some aberrant correspondences.

longer the final syllable; Pn /·/; Pc /·/; Pne /·/; Pe l; Pse l. ARM, BARK, BEAR, BEE, CHEST, DAY, TO DIE, FLY (n.), HEAD, LIVER, LOG, MAGNESITE, MORTAR, RIDGE, SNOW, SUCKERFISH, TESTICLES, TONGUE, WORM (2).

*w Pk w; Ps w; Pn b word-initially,¹⁸ w elsewhere; Pc b word-initially,¹⁸ w elsewhere; Pne w; Pse w; Pe w. Cf. Section 144 for development of *w word-finally.

ANGELICA, BELOW, CHILD, TO COME, COYOTE, DAUGHTER-IN-LAW (2), TO EAT (1), FIRST PERSON SINGULAR OBJECT and POSSESSIVE PREFIX, FIRST PERSON PLURAL SUBJECT and OBJECT, FOX (1), FROG, TO LAUGH, LOCATIVE (1), NEGATIVE (2), DIP NET, NEW, NIGHT, OAK, sp., ON/ON TOP, PREGNANT, REED, sp., RIDGE/MOUNTAIN, SHOULDER, TO TALK, TO WALK, WOLF, WOODDUCK.

*hw Pk hw; Ps w· when the proto syllable was closed by *l^y, wh when the proto syllable was closed by *·, hw elsewhere; Pn w; Pc w; Pne w; Pse w; Pe W.

BARK, TO COME, DOOR, FAWN, PITCH, TO WALK, WOLF.

*y Pk y; Ps y; Pn d word-initially, y elsewhere; Pc y; Pne y; Pse ? or Ø word-initially (?), y elsewhere; Pe y. Cf. Section 144 for development of *y word-finally.

TO BE AFRAID, ARMPIT, ARROW (2), BASKET, sp., (1), BELOW, BIG (pl.), BIRD, BLOOD, BOW, BUMBLEBEE, CHEST, DOE, DOVE, DUCK, EYE, FAT, FIRST PERSON PLURAL SUBJECT

¹⁸Pn and Pc /b/ for *w in initial position is attested in only two examples: DIP NET and RIDGE. Three other forms—the almost homophonous verbs COME and WALK and the word for FROG seem to contradict this pattern, having /w/ rather than the expected /b/. However, in Pn FROG, *w is no longer initial, a new initial syllable, /ca/, having been added presumably before the shift of initial *w to Pn /b/, and it is hypothesized that the initial /w/ in Pc reflects a similar sort of interference, i.e., either another syllable was present initially at the point when initial *w>b, or this form reflects a reshaping or even borrowing under the influence of Pk or Ps. Analogously, the unexpected initial Pc and Pn /w/ in COME and WALK (both verb forms) could reflect the presence of additional initial material when *w>Pn, Pc /b/, which blocked the operation of this sound change. This suspicion is supported by the anomalous position of these verbs in all the languages—most roots primarily occur with instrumental prefixes in all of the Pomo languages. COME and WALK are among a small number of roots which deviate from this dominant pattern. Moreover, in Pe, COME and WALK may occur with a class of directional preverbs (such as /x6l/ 'inside') consisting of a root plus one of four locative or directional suffixes which are typically preposed to verbs (to which they are phonologically bound by an open transition).

and OBJECT, FOREST, HAIR (OF HEAD), HAWK, JAY, JEALOUS, TO LAUGH, LOOSE, MAN (2), MANZANITA, MANZANITA BERRY, MUDHEN, NECK, DIP NET, NEW, BLACK OAK, OAK, sp., OCCIPUT, ONION, PANTHER, PINOLE, PLURAL NUMBER, POISON OAK, QUAIL TOPKNOT, SECOND PERSON PLURAL SUBJECT and OBJECT, SON-IN-LAW, SOUTH, TEARS, TESTICLES, THIRD PERSON MASCULINE SINGULAR SUBJECT, THIRD PERSON FEMININE SUBJECT, THIRD PERSON SINGULAR POSSESSIVE PREFIX.

*hy Pk hy; Ps ·h when followed by reflexes of *V[l^y], hy elsewhere; Pn y; Pc y; Pne y; Pse y; Pe Y.
BONE, SNOW, TO STOP DOING, THROAT, WIND, WOODRAT.

*i¹⁹ Pk i; Ps i; Pn i; Pc i; Pne i; Pse i; Pe i.
ACORN, TO BE AFRAID, ARM, ARROW (1) and (2), ASHES, BACKBONE, BASKET, sp. (2), PACK BASKET (CLOSE-WOVEN), POUNDING BASKET, BROWN BEAR, BEHIND, BELOW, BIG (pl.), BIRD, BLANKET, BODY, BONE, BOW, TO BREAK WIND, BREAST, MOTHER'S BROTHER, OLDER BROTHER, FATHER'S YOUNGER BROTHER, BUCKEYE NUTS (SOAKED), BURN, BUZZARD, TO CARRY IN HANDS, CHILD, COLD, TO COOK, COTTONTAIL, COYOTE, CREEK, DAUGHTER-IN-LAW (2), DAY, DEER, DURATIVE, EAR, EGG, EMBERS, FAT, FATHER'S FATHER, MOTHER'S FATHER, FEATHER (LARGE), FIRST PERSON SINGULAR OBJECT and POSSESSIVE PREFIX, FLEA, FLESH, TO FLY (2), FOREHEAD, FOREST, TO GIVE, SEVERAL TO GO, GOOD, BODY HAIR, HAWK, HEAD, TO HEAR, HOLE, IMPERATIVE SINGULAR, JAY, KINSMAN, LEAF (1) and (2), TO LIE, LONG (2), HEAD LOUSE, BODY LOUSE, MAGNESITE, MAN (2), FATHER'S MOTHER, MOTHER'S MOTHER, MUDHEN, MUSHROOM (1), NAME, NEGATIVE (1), NEW, NOSE, BLACK OAK, LIVE OAK, MUSH OAK, OAK, sp., ON, OPTATIVE, PATH, TO PICK UP NON-LONG OBJECT, POISON OAK, INDIAN POTATO, PREGNANT, RAIN, REED, sp., REFLEXIVE, RIB, RIDGE, SAND, SECOND PERSON SINGULAR OBJECT and POSSESSIVE PREFIX, SEED, SEMELFACTIVE, SENTENCE CONNECTIVE (1) and (2) and (3), YOUNGER SIBLING, SINEW, FATHER'S SISTER, MOTHER'S YOUNGER SISTER, OLDER SISTER, TO SIT DOWN, SIX, SKIN,

¹⁹ Vowels have been primarily affected by syntagmatic changes involving assimilations, dissimilations and deletions which have not been itemized here, but are discussed in detail in Sections 141-141.30 and 143.1-144.2.

SKY, TO SLEEP, SNOT, SNOW, SOUTH, SPIDER, SPIT, TO STINK, STRING, SWEAT, TAIL, THIRD PERSON MASCULINE SINGULAR SUBJECT and OBJECT, THIRD PERSON FEMININE SINGULAR SUBJECT and OBJECT, THIRD PERSON SINGULAR POSSESSIVE PREFIX, THROAT, TULE SPROUT, WEST (1), WHISTLE, WIND, WOLF, WOMAN, WOODRAT, WORM (1) and (2).

*e

Pk e; Ps e; Pn e; Pc e; Pse e; Pe e.

POUNDING BASKET, BIG (sg.), BITE, TO BREAK WIND, MOTHER'S BROTHER, OLDER BROTHER, FATHER'S YOUNGER BROTHER, BUMBLEBEE, CHAPARRAL, CHEST, CLAW, DANCE/SONG, DEER, DOE, FATHER, SMALL FEATHER, FLEA, FOREHEAD, GOPHER, HAIR (OF BODY), HAIR (OF HEAD), JEALOUS, TO LEACH, BODY LOUSE, MANZANITA BUSH, MOTHER, MUSHROOM (1), NEW, NIGHT, PEPPERWOOD TREE, PEPPERWOOD NUT, PHLEGM, PITCH, QUAIL TOPKNOT, RAIN, ROCK, SALT (2), FATHER'S SISTER, MOTHER'S YOUNGER SISTER, OLDER SISTER, SKUNK, SON-IN-LAW, SPECULATIVE, SPIT, SPLEEN, TO STINK, TO STOP DOING, SWEAT, TREE, TULE SPROUT, WHITE, WOLF.

*a

Pk a; Ps a; Pn a; Pc a; Pne a; Pse a; Pe a.

AFRAID, ANGELICA, ARM, ARMPIT, ARROW (2), BACK, BARK, PACK BASKET (OPEN-WOVEN), BEAR, BROWN BEAR, BEE, BELLY, BIG (sg.), BIG (pl.), BIRD, TO BITE, BLACKFISH, BLOOD, BODY, BONE, ACORN BREAD, BROTHER-IN-LAW, BUCKEYE, BUCKEYE NUTS (SOAKED), TO BURN, CAUSATIVE, CHILD, CLAM, CLOUD (1) and (2), COLD, TO COME, TO COOK, COTTONWOOD, CREEK, DAWN, DAY, TO DIE, DIRECTIONAL, DIRTY, DOE, DOOR, DOVE, DREAM, DUCK, EAR, EARTH, EAST, EAT (1), ELBOW, EMBERS, ENEMY, EXCREMENT, FATHER'S FATHER, MOTHER'S FATHER, FAWN, FEATHER (SMALL), FIRST PERSON SINGULAR SUBJECT, OBJECT, and POSSESSIVE PREFIX, FIRST PERSON PLURAL SUBJECT and OBJECT, FISH, FLEA, FLINT, TO FLY (1), FLY (n.), FOOD, FOOT, FOX (1) and (2), FROG, TO GIVE, SEVERAL TO GO, GOOSE, GOPHER, GRAIN, GRASS, GRASSHOPPER, HAND, HAWK, HEAD, HEMP, HORN, TO BE HOT, HOUSE, JACKRABBIT, JAY, JEALOUS, TO LAUGH, LEAF (1) and (2), LEG, LIVER, LONG (1) and (2), LOOSE, HEAD LOUSE, MAN (1) and (2), MANZANITA BUSH, MANZANITA BERRY, MAPLE, MOON, FATHER'S MOTHER, MOTHER'S MOTHER, MOTHER-IN-LAW, MOUTH, MUDHEN,

MUSHROOM (2), NAME, NEGATIVE (2), DIP NET, NORTH, NOSE, LIVE OAK, MUSH OAK, WHITE OAK, OBJECT CASE, OCCIPUT, ON/ON TOP OF, ONE, ONION, PAIN, PANTHER, PATH, PEPPERWOOD TREE, PEPPERWOOD NUT, PITCH, PLURAL ACT (2), PLURAL NUMBER, POISON OAK, QUAIL, QUAIL TOPKNOT, RACCOON, RAW/ALIVE, RECIPROCAL, RECIPROCAL RELATIONSHIP, RECTUM, RIB, RIDGE, ROCK, SALT (1), SAND, TO SAW, SECOND PERSON SINGULAR SUBJECT, SECOND PERSON PLURAL SUBJECT and OBJECT, TO SEE, SENTENCE CONNECTIVE (1), TO SEPARATE, SHOULDER, YOUNGER SIBLING, SINEW, TO SIT, TO SIT DOWN, SIX, SKIN, SKY, TO SLEEP, SLOW, SLUG, SMOKE, SNOT, SOAPROOT, SPIDER, SPLEEN, SPRING, SQUIRREL, STORY/MYTH, STRING, SUCKERFISH, SUN, TAIL, TEARS, THING, THIRD PERSON MASCULINE SUBJECT and OBJECT, THIRD PERSON FEMININE SUBJECT and OBJECT, THIRD PERSON SINGULAR POSSESSIVE PREFIX, THROAT, TICK, TONGUE, TREE, ROUND TULE, TWO, VALLEY, TO WALK, WATER, WEST (1), WHAT, WHITE, WIND, WINTER, WOLF, WOMAN, WOOD, WOODDUCK, WORM (1).

*^a Pk o; Ps o; Pn a; Pc a; Pne a; Pse a; Pe a.
BUSH, sp., MOUNTAIN, MUD, MUSSEL, PEOPLE, TO TALK,
TESTICLES, TOOTH, UPHILL, WILDCAT.

*^u Pk u; Ps u; Pn u; Pc u; Pne u; Pse u; Pe u.
ACORN, ARROW (1), BASKET, sp. (2), PACK BASKET (OPEN-
and CLOSE-WOVEN), BEAR, BELLY, BOW, MOTHER'S BRO-
THER, BUZZARD, CLOUD (2), TO COME, DOVE, TO DREAM,
TO EAT (2), ELBOW, ENEMY, EYE, FAT, FAWN, FIVE, TO
FLY (2), FOX (2), GRAIN, TO BE HOT, TO LAUGH, LEG,
LOG, NECK, NIGHT, NORTH, BLACK OAK, OAK, sp., PAIN,
PHLEGM, PINOLE, POISON OAK, INDIAN POTATO, RACCOON,
TO SAW, SHOULDER, MOTHER'S OLDER SISTER, FATHER'S
SISTER, SKUNK, SNOT, SNOW, SQUIRREL, STORY/MYTH,
STRING, TEARS, WHISTLE, WINTER.

*^o Pk o; Ps o; Pn o; Pc o; Pne o; Pse o; Pe o.
ANGELICA, ASHES, BACK, BASKET, sp. (1), BEE, BELOW,
BRAINS, ACORN BREAD, BREAST, BUSH, sp., CLOVER,
COTTONTAIL, COYOTE, DAUGHTER-IN-LAW (1) and (2),
DOOR, TO DRINK, EAST, EGG, ELBOW, FIRE, FIRST PERSON

SINGULAR OBJECT, FIVE, FLY (n.), FOREST, GOOD, GRASS-HOPPER, HEAR, HOLE, TO HUNT, LONG (1), LOOSE, MAGNESITE, MORTAR, MOUNTAIN, MUD, MUSH, MUSSEL, NAVEL, NECK, NEGATIVE (2), OBJECT CASE, PANTHER, PEOPLE, POISON, POISON OAK, RAW/ALIVE, SALT (1), SEAWEED, SECOND PERSON SINGULAR OBJECT, SEED, SISTER'S HUSBAND, SMOKE, SOUR, SOUTH, SUCKERFISH, TO TALK, TESTICLES, TOOTH, ROUND TULE, TWO, UMBILICUS, UP-HILL, VALLEY, WEST (2), WHAT, WILDCAT, WOODRAT, WORM (2).

130. The Proto Pomo Prosodic System

Synchronously, the seven Pomo daughter languages have the following prosodic systems.

In Pse and Ps the position of stress is phonologically conditioned. In Pse, stress always occurs on the first syllable. In Ps, according to Halpern, stress always occurs on the penult (on the penult of clauses according to Oswalt [personal communication]).

Pk has a prosodic feature of "raised tone" which is almost phonologically predictable. This raised tone rarely occurs on the initial syllable of a phrase, occurring instead on subsequent syllables, the precise syllable being determined by whether the second syllable in the phrase is (1) open, (2) closed with a consonant, (3) closed with length ([·]) or variable length ([⁰]).

Pn, Pc, Pne, and Pe have a phonemic accent that occurs mostly on the first or second syllable of a word. It is primarily a pitch accent (tone) in Pn and stress in Pc, Pne, and Pe. In Pe its location is partially predictable morphologically: stress always occurs on the root in verbs. There is, however, no synchronic basis for identifying roots in most nouns. Halpern (MS) suggests that the same pattern of partial morphological predictability also exists in Pn, Pc and Pne. Interestingly enough, according to Halpern, the position of the Pn tone is partially conditioned by the structure of the syllable on which it occurs: Closed syllables seem to take precedence over light ones and syllables closed by /·/ do not occur with tone (high tone in Vihman's recordings),²⁰ just as in Pk, the only other Pomo language in which the prosodic accent also involves pitch rather than stress. The hypothesis that some sort of

²⁰A detailed statement of Northern Pomo prosodics has become available since the completion of this manuscript: Eero Vihman "Accent in Northern Pomo," Hokan Studies, edited by Margaret Langdon and Shirley Silver. Le Hague: Mouton (in press).

pitch-stress accent was phonemic in Proto Pomo (although probably morphologically predictable—presumably occurring on the root syllable) seems best to account for what is known of the synchronic prosodic systems of the daughter languages and the cognate sets assembled in this paper. Oswalt's hypothesis (1964a) that a high tone (pitch-stress accent) predictably occurred on the second syllable of proto forms is not tenable in the light of the 29 forms²¹ included in the lexicon for which initial syllable accent must be assumed (either because the evidence only permits the reconstruction of a single syllable form, or because Pe and Pse consistently show loss of a second syllable vowel in such forms—a loss that can only be accounted for by assuming that the vowel was unaccented since not all second syllable vowels are lost), as well as the three forms (ARM-PIT, BEE, and DREAM) for which an accent must be reconstructed on the third syllable. This pitch-stress accent seems to have occurred primarily on the second syllable, but not exclusively.

A secondary accent is also used in the reconstruction of two forms which are apparently old compounds: ASHES, TEARS.

135. Development of the Daughter Language Prosodic Systems

The predictable location of stress in Pse appears to have arisen through the operation of a simple phonological rule (cf. 141.1) that seems also to have applied in Pc, but not as completely: pre-tonic vowels are deleted. Thus proto forms with accented initial syllables remain with initial stress. Proto forms which were accented on the second syllable lose the vowel of the first syllable. The proto second syllable thereby becomes the Pse first syllable, and consonant clusters, which were non-existent word initially in the proto language, are incidentally introduced.

It is not clear what the precise conditions were that gave rise to the development of a predictable penult stress in Ps. One possible hypothesis

²¹They are: OLDER BROTHER, FATHER'S YOUNGER BROTHER, CLAW, COME, DIRTY, FATHER'S FATHER, MOTHER'S FATHER, FIRST PERSON PLURAL OBJECT, HEAR, JAY, TO LIE, FATHER'S MOTHER, MOTHER'S MOTHER, MUD, NECK, ONE, SECOND PERSON SINGULAR OBJECT, SECOND PERSON PLURAL OBJECT, SECOND PERSON PLURAL SUBJECT, TO SEE, YOUNGER SIBLING, MOTHER'S OLDER SISTER, FATHER'S SISTER, OLDER SISTER, SISTER'S HUSBAND, TO SIT, SOUR, THING, WEST (2). The sets for this last proto form come uniquely from languages which regularly lose a pretonic *? or *h initial syllable.

Although many of the reconstructed forms are kin terms which regularly occur with prefixes in the daughter languages, they can all occur unprefixed in both Pk and Pe in the vocative. There seems no reason not to assume that proto kin terms were also unprefixed in the vocative, and would therefore demonstrate initial syllable accent, at least in the vocative.

is that the patterns of suffixation of stems were regularized in Ps to such an extent that all root vowels were always followed by an additional syllable, and no more, at one point in time, thereby making the location of stress quite mechanical.

Pn, Pc, Pe, and to some extent, Pne, on the contrary, preserved the phonemic status of the proto prosodic feature of accent, developing more instances of contrast through the operation of a slightly different but equally simple rule (cf. 141.1) affecting pre-tonic syllables. While Pse, and to a certain extent Pc, deleted all pre-tonic vowels, the pre-tonic deletion in Pn, Pc, Pe, and Pne deleted whole syllables, but only those pre-tonic syllables beginning with *? or *h. Thus many proto forms which were accented on the second syllable became Pn, Pc, Pe, and Pne initially accented syllables.

In Pk, not only were a few initially accented proto forms preserved with initial accent, but the instances of contrast were increased through the loss of certain pre-tonic syllables beginning with *? or *h in tri-syllabic forms. (Traces of these initial pre-tonic syllables still remain synchronically in Pk and are represented morphophonemically by Oswalt's []^o[], cf. 141.2 for further details.) In addition, forms seem to have been borrowed with initial stress, as Oswalt mentions in his article (1964a), further strengthening the contrast.

The conditioning function of the structure of the second Pk syllable in the location of the Pk raised-tone accent is tantalizing. Assuming that the accented syllable in the proto language was always a root, the shift in the location of the Pk raised-tone accent from this second syllable when it is not closed by a consonant suggests that there might have been some kind of tonal morphophonemics in the proto language, with some suffixes either conditioning accent displacement (as is found synchronically in Pk) or perhaps having their own accent, which then suppresses that normally occurring on the root. We need to know a great deal more about the morphophonemics of the daughter languages and their morphology, especially their verb morphology, to understand with certainty both the Pk prosodic developments, and the complete details of the proto prosodic system.

140. Syntagmatic Change

The syntagmatic change evidenced in the comparative sets amassed is the most interesting, the most complex, the most obscuring of genetic relationships, and the most difficult to understand. It is, as one might expect, frequently correlated with the location of the proto prosodic accent. The reconstruction of the full range of syntactic changes characterizing the Pomo languages must clearly go hand-in-hand with the reconstruction of the full details of the proto prosodic system. At the present stage of

reconstruction, four major types of syntagmatic change have been identified: (1) unaccented vowel or syllable deletion; (2) dissimilation of aspirates in successive syllables; (3) vowel assimilation and less frequently, dissimilation; (4) a small amount of consonant assimilation and reduction, of which the most interesting is undoubtedly that affecting final stops and sequences of stop plus ?.

141. Unaccented Vowel or Syllable Deletion

There are three types of unaccented vowel or syllable deletion: (1) aphesis, i.e., deletion of a word-initial unaccented vowel or syllable; (2) syncope, i.e., deletion of a word-medial unaccented vowel or syllable; (3) apocope, i.e., deletion of a word-final unaccented vowel or syllable.

141.10. Aphesis

Two types of aphesis have operated in the daughter Pomo languages: syllable aphesis and vowel aphesis.

141.11. Syllable Aphesis

Syllable aphesis seems to have operated to varying degrees in all seven of the daughter languages. Unaccented, pre-tonic word initial syllables beginning with *? or *h are regularly deleted in Pn, Pc, Pe, Pse, and frequently in Pne. (Pne seems to maintain such syllables before nasals, semi-vowels, x and b.)

This diachronic development is attested synchronically in Ps and Pk where words beginning with such initial syllables show deletion of this syllable when another morpheme precedes it, i.e., in compounds.

It seems as if suffixation may formerly also have conditioned such a deletion in Pk and Ps. In Ps, words which have a final syllable more than is probably reconstructable for the proto language, lack an initial syllable which can be inferred to begin with *? or *h (cf. ARROW, MAGNESITE BEAD). In Pk, the first person possessive morpheme {?a-}, which occurs with kin terms, has two allomorphs: [] occurs in dysyllabic roots and terms suffixed with {-s} [< {-*ci}], and [?a-] occurs elsewhere. Thus a syllable beginning with *? is deleted when it occurs in forms which would otherwise consist of three syllables.

SECOND PERSON SINGULAR SUBJECT and TWO suggest that such initial syllable deletion may formerly have operated in certain types of frequently occurring phrases in Pk.

Aphesis of pre-tonic word-initial proto syllables beginning with *h is attested in ARROW, ASHES, BACKBONE, BRAIN, DOOR, DRINK, EGG, EYE, FEATHER, TO FLY (1), FOX (1), HAIR, HOLE, MAN (2), MUSHROOM (1), NOSE, PATH, INDIAN POTATO, RECTUM, SINEW, SNOT, SOAPROOT, SUN, TAIL, TEARS, THIRD PERSON MASCULINE SUBJECT and OBJECT, THIRD PERSON FEMININE SUBJECT and OBJECT, THIRD PERSON POSSESSIVE PREFIX, TONGUE, TOOTH.

Aphesis of pre-tonic word-initial proto syllables beginning with *? is attested in ARM, BELLY, BELOW, BIG (pl.), BLANKET, BONE, BREAK WIND, CLOVER, COOK, EARTH, EAST, EXCREMENT, FAT, FEATHER (SMALL), FIRE, FIRST PERSON SINGULAR SUBJECT and OBJECT and POSSESSIVE, FIRST PERSON PLURAL SUBJECT, FISH, FLEA, GOPHER, HAND, HOUSE, JEALOUS, LONG (1), HEAD LOUSE, MAGNESITE, MAN (1), MOUTH, NAME, QUAIL TOPKNOT, RAIN, SECOND PERSON SINGULAR SUBJECT, SEED, SMOKE, SNOW, SPIDER, SOUTH, SPIT, TWO, UMBILICUS, WATER, WIND, WOMAN, WOOD, WORM (2).

141.12. Vowel Aphesis

Vowel aphesis has operated uniquely in Pse and Pc. All unaccented, pre-tonic proto vowels in the initial syllable of the proto word are deleted in Pse. Unaccented *i, *e, *u, *o, and *a preceded by the post-velars *q^h and *q̥ are deleted in Pc. *a not preceded by the post-velars *q^h and *q̥ becomes Pc /a·/ (Oswalt, 1964a). This deletion produces consonant clusters in both languages which are otherwise virtually unknown in Pomoan languages. (These clusters frequently undergo subsequent processes of assimilation, dissimilation, and metathesis.)

141.13. Rules Summarizing Aphesis

The two types of aphesis of course overlap in Pc and Pse. Their operation could be subsumed under two rules of the following sort: (1) deletion of pre-tonic vowels in word-initial syllables, obligatorily followed by (2) the deletion of ? or h when either is the first member of a pre-tonic consonant cluster. The preservation of *a in Pc under certain conditions would necessitate a revision of the statement of the conditions under which *a is lost in Pc, i.e., unaccented *i, *e, *u, *o, and *a preceded by the post-velars *q^h and *q̥ and the glottals *? and *h are deleted in Pc, while *a not preceded by the post-velars *q^h and *q̥ or the glottals *? and *h becomes Pc /a·/.

However, from a diachronic point of view, more information about the extent to which certain changes are shared by all the languages or characteristic of only a small subgroup of them is conveyed by a two-rule formulation which assumes the following sequence of changes: (1) Syllable deletion of unaccented pre-tonic word-initial syllables beginning with *? and *h. This rule operated as formulated in Pn, Pc, Pse, and Pe. In Pne its operation was blocked before nasals, semi-vowels, *x and *b. In Ps and Pk it operated only in sequences of three syllables or more, or if preceded by another morpheme (perhaps better described as a type of syncope). (2) Vowel deletion of remaining unaccented pre-tonic word-initial vowels. All such vowels were deleted in Pse, and all but *a preceded by any consonant except *q^h or q were deleted in Pc.

141.20. Syncope

Two slightly different types of syncope can be identified in Pk, Ps, Pse, and Pe, which affect primarily vowels, and secondarily a preceding consonant. The operation of syncope is dependent on (1) the relative position of a syllable in a sequence of syllables—it is only observable in sequences of three or more syllables, and (2) either the position of the syllable vis-à-vis the tonic syllable or the type of initial consonant in the syllable.

141.21. Syncope of the Third Post-tonic Vowel in a Sequence of Four or More Syllables

There is both synchronic and diachronic evidence of the deletion of a third, post-tonic, unaccented vowel in a sequence of four or more syllables in Pk and Ps. There is also evidence to suggest that this deletion must operate in these two languages before those deletions involved in aphesis.

Synchronously, Ps is characterized by a stem alternation in a number of kin terms, which involves the deletion of a vowel. This vowel seems to have been post-tonic and unaccented in the proto language, in which it would have been the third syllable of a form of four or more syllables. For example, the Ps stem /kamed-/ occurs in

kamede? 'daughter, vocative'

'your daughter', however, is:

miht^hikmen (< †miht^hi-kamen; Ps d > n word-finally).

The Ps stem /dak^han/ occurs in:

ma?dak^han 'his own wife'

'his wife', however, is:

miyat^hk^han (< †miyá-dak^han).

The stem /t̪iki/ occurs in:

mit̪iki 'your younger sibling'

but has the shape /t̪ki/ in

mihcut^hki 'his sister's child (man speaking)'
(< †mi-cú-t̪iki 'your-mother's brother-younger sibling').

This development is paralleled by Pk /-t̪iki-/ 'younger sibling' but /-cu^hki-/ 'brother's son.'

Diachronically, evidence for the deletion of the same vowel under the same conditions is found in JACKRABBIT, POISON OAK, and THIRD PERSON SINGULAR MASCULINE and FEMININE OBJECT.

141.22. Syncope of Medial Syllables Beginning with the Semi-Vowels /w/ or /y/

In Pne syncope seems to affect medial syllables beginning with the semi-vowels /y/ and /w/ in sequences of three or more syllables, cf. ARMPIT, FIRST PERSON SINGULAR and PLURAL, FIRST PERSON POSSESSIVE, THIRD PERSON.

In Pse and Pe syncope affects only unaccented syllables beginning with the semi-vowel /y/ (both pre- and post-tonically) in sequences of three or more syllables, cf. ARMPIT, THIRD PERSON SINGULAR MASCULINE and FEMININE.

In addition, Pe shows syncope of pre-tonic unaccented syllables beginning with /?/ in BEE and DREAM.

FIRST PERSON SINGULAR OBJECT and FIRST PERSON SINGULAR POSSESSIVE suggest that a similar syncope of medial syllables beginning with /w/ in a sequence of three or more syllables operates in Pk and Ps.

FIRST PERSON SINGULAR POSSESSIVE suggests that the syllable-deleting syncope actually involves two stages of change: (1) the deletion of a vowel in a medial syllable beginning with a semi-vowel in a sequence of three or more syllables, followed by (2) the reduction of the resultant V[y]C sequence to V·C (and then VC in Pne).

The two types of syncope characteristic of the Pomo languages can therefore be described in terms of the operation of two stages of change which must be assumed to have operated in a fixed order relative to one

another: (1) the deletion of medial vowels, (2) the reduction of sequences of V [y]C > V·C (> Pne VC). The conditions under which medial vowel deletion takes place vary from language to language: vowels in medial syllables beginning with /w/ in a sequence of three or more syllables are deleted in Pk, Ps, and Pne, without regard to the position of the proto accent. All other medial vowel deletions involve unaccented vowels, and are of two types: (1) deletion of unaccented pre- or post-tonic vowels in syllables beginning with /y/, in sequences of three or more syllables. This type of deletion is found in Pse, Pe, and Pne. (2) Deletion of unaccented post-tonic vowels in sequences of four or more syllables. This type of deletion is found in Pk and Ps.

141.30. Apocope

Evidence of apocope is consistently found only in Pse and Pe. Unaccented post-tonic proto vowels which occur in word-final open syllables are deleted. Vowel apocope in Pse and Pe is attested in ANGELICA, BIRD, MOTHER'S BROTHER, OLDER BROTHER, FATHER'S YOUNGER BROTHER, DIRTY, FATHER'S FATHER, MOTHER'S FATHER, FIRST PERSON SINGULAR OBJECT, FIRST PERSON PLURAL SUBJECT, FLEA, GOOSE, GOPHER, HAND, HEAR, JAY, KINSMAN, TO LIE, MOON, FATHER'S MOTHER, MOTHER'S MOTHER, MUD, MUSSEL, NECK, ON/ON TOP OF, QUAIL, QUAIL TOPKNOT, SAND, SECOND PERSON PLURAL SUBJECT, YOUNGER SIBLING, FATHER'S SISTER, MOTHER'S YOUNGER SISTER, OLDER SISTER, SNOT, SON-IN-LAW, THING, WOLF, WOMAN.

142. Dissimilation of Aspirates in Successive Syllables

There is evidence in Pk and Ps of the dissimilation of aspirates in successive syllables, similar to the dissimilation of aspirates found in Greek and Sanskrit (among Indo-European languages), which is commonly referred to as Grassman's Law. The process is still operative, but on a somewhat reduced scale in Pk. Oswalt (MS:74) identifies this process of dissimilation as affecting only four Instrumental Prefixes which begin with either [c^h] [< *k^h] or [p^h] [< *p^h]. If the prefix (which invariably has a CV shape) is followed by an aspirated stop or /h/, the prefix-initial aspirated stops, [c^h] and [p^h], will be /c/ and /p/ respectively.

The diachronic evidence suggests this process formerly affected initial *q^h (when followed by an aspirate) as well.²² In Oswalt's comparison of

²²There is also additional diachronic evidence of Pk and Ps dissimilation of *k^h (> Pk and Ps /c^h/) in LIVER and BUMBLEBEE.

Pk and Pc he found it necessary to reconstruct *ka- as well as *ka- to distinguish those correspondences in which Pc loses the following vowel (reconstructed by him as *ka-) from those in which it doesn't (reconstructed by him as *ka-). He gives two of the three forms that necessitate this double reconstruction: Pc /k^hcá/ 'knife': Pk /qahca/, Pc /k^hwé-/ 'pitch': Pk /qahwe/ (the third set is probably 'bark' Pc /k^hwá-/: Pk /qahwa-/). Pse and Pe cognates exist for all three sets and demonstrate that the initial consonant must have been *q^h rather than *q, since Pse and Pe show /x/ and /x/ respectively instead of the /q/ which would indicate *q. Thus *q^h must have been dissimilated in Pk before a following aspirate, in this case, the precursor *h. The Pc vowel development can now be seen to be quite consistent: *a is lost after both *q^h and *q' but not after *q.

This dissimilation of aspirates seems to have been limited to Ps and Pk (Ps shows dissimilation of *q^h under the same conditions in these sets). It is difficult to determine whether this process of dissimilation represents shared retention or shared innovation.

143. Vowel Assimilation and Dissimilation²³

Most of the examples of vowel assimilation identified so far involve unaccented, pre-tonic vowels in a word-initial syllable assimilating to a following, generally accented, vowel (presumably a root vowel). The assimilation is in terms of both tongue height and position.

143.1. Assimilation of *a to a Following *o in Pk and Ps

One of the most pervasive types of vowel assimilation was already identified and discussed by Oswalt (1964) in his earlier paper. In BEE, BUSH, sp., MOUNTAIN, MUD, MUSSEL, PEOPLE, TALK, TESTICLES, TOOTH, UPHILL, and WILDCAT. Pc, Pn, Pne, and Pe show /a/ (/a·/ in the case of Pc) in the first syllable and /o/ in the second syllable corresponding to /o/ in both syllables in Pk and Ps, i.e.:

*CVCo > CoCo in Pk, Ps
CaCo in Pn, Pc, Pne, Pse, Pe

²³Of the deviant vowel correspondences that seem to be predictable in terms of the surrounding environment, only those that occur more than once are discussed here. Single instances of presumed assimilation or dissimilation are discussed in the lexicon at the point where the affected form is compared.

This correspondence contrasts both with sets such as GRASSHOPPER²⁴ in which all seven languages agree in having /a/ in the first syllable and /o/ in the second, and FLY, in which Pe shows /a/ in both syllables corresponding to /a/ in the first syllable, /o/ or /u/ in the second, in the other languages, i.e.:

*CaCo > CaCo in Pk, Ps
CaCo in Pn, Pc, Pne, Pse, Pe

and:

*CaCo > CaCa in Pe
CaCo/u in Pk, Ps, Pn, Pc, Pne, Pse

The correspondence of Pk, Ps /o/ in both syllables to /a/ in the first syllable, /o/ in the second in the other languages also contrasts with sets like ACORN MUSH, in which all seven languages agree in showing /o/ in both syllables, i.e.:

*CoCo > CoCo in Pk, Ps
CoCo in Pn, Pc, Pne, Pse, Pe

There are three possible explanations for these overlapping correspondences: (1) there were more than five proto vowels, (2) the variation in correspondence is conditioned by factors as yet unidentified, (3) at least some of these sets represent interference with the regular operation of sound change, probably due to borrowing between the Pomo languages.

It is probable that (2) or (3) is the correct explanation, but since neither can presently be demonstrated, Oswalt's interim solution has been followed. He symbolized the correspondence of Pk, Ps /o/ in both syllables to /a/ in the first syllable, /o/ in the second in the other languages as *ā, in contrast to the correspondence of /a/ in the first syllable, /o/ in the second in all the other languages, symbolized *a, i.e.:

*ā : /o/ in Pk, Ps
/a/ in Pn, Pc, Pne, Pse, Pe

in the sequence *CaC6,

while:

*a : /a/ in all languages

in the sequence *CaC6.

²⁴Fifteen sets, in addition to GRASSHOPPER, contradict this pattern of Pk and Ps assimilation: ANGELICA, BACK, BREAD, EAST, FLY (n.), LONG (1), LOOSE, PANTHER, RAW, SALT, SUCKERFISH, ROUND TULE, TWO, VALLEY, WHAT.

That is, technically the first hypothesis is followed, and a sixth vowel symbol is introduced. However, a shape was chosen to represent this sixth vowel which reflects the expectation that another explanation can be found.

143.2. Assimilation of Proto Back Vowels to Following Front Vowels in Pn

The next most frequent type of vowel assimilation is found in Pn. PACK BASKET (CLOSE-WOVEN), BEAR, COYOTE, ENEMY, TO FLY (1), GOOD, HOT, LOG, NIGHT, BLACK OAK, PAIN, PHLEGM, and SQUIRREL show that pre-tonic proto back vowels in a word-initial syllable, followed by accented front vowels, become Pn /i/, i.e.:

$$C \begin{bmatrix} *o \\ *u \end{bmatrix} \quad C \begin{bmatrix} *i \\ *é \end{bmatrix} \quad > \quad Pn \quad CiC \begin{bmatrix} i \\ é \end{bmatrix} .$$

143.3. Assimilation in Terms of Tongue Height to a Following Front Vowel

Two types of assimilation in terms of tongue height to a following front vowel have been identified, one involving a proto sequence *Co(C)Ci, the other involving a proto sequence *Ci(C)Cé.

BUZZARD, COTTONTAIL, COYOTE, and BLACK OAK suggest that the proto sequence *CoCi (preserved in Ps) becomes Pk, Pne, Pe uCi. The proto sequence *CoCCi, as in GOOD, remains unaffected in Pk and Pe, becoming uCi only in Pne. That is:

$$\begin{aligned} *CoCi &> uCi \text{ in } Pk, Pne, Pe \\ *CoCCi &> o(C)Ci \text{ in } Pk, Pe \\ &\qquad u(C)Ci \text{ in } Pne \end{aligned}$$

DEER, BODY HAIR, NEW, STINK, and TULE SPROUT suggest that *i assimilates completely to a following *e in Ps and Pne. That is:

$$*Ci(C)Cé > Ce(C)Ce \text{ in } Ps, Pne.$$

143.4. Assimilation to a Following Central Vowel in Pe

FLEA, BIRD, and FIRST PERSON PLURAL SUBJECT suggest the assimilation in Pe of a preceding front vowel to a final unaccented *a which is then lost through apocope (141.30). That is:

$$* \dots \begin{bmatrix} i \\ é \end{bmatrix} Ca > \dots áCa > \dots áC \text{ in } Pe.$$

143.5. Assimilation to a Preceding *i

There is one instance of assimilation to a preceding rather than a following vowel. In BODY LOUSE and WOLF *e assimilates completely to a preceding *i in Pn. Thus:

*CiCe... > Pn CiCi...

143.6. Dissimilation

Only one instance of apparent dissimilation has been found. TO FLY (2) and STRING show *i > /e/ following *u in Pk, Ps, Pn and Pc (in TO FLY (2)). Thus:

*CuCi > uCe in Pk, Ps, Pn, Pc.

144. Development of Vowel plus Semi-Vowel Sequences

A sequence of a vowel plus a semi-vowel followed by another consonant becomes a sequence vowel plus length plus consonant. The assumption of this development is supported by diachronic evidence discussed in 141.22. Such a development still operates synchronically in at least Pk (cf. 145.2 p. 47 for a detailed discussion). Word-final sequences of vowel plus semi-vowel show a somewhat different development.

144.1. Word-final Sequence of Vowel plus *w

TALK and NEGATIVE (2) suggest that the proto sequence *ow was preserved in Pk, reduced to /u/ in Pe, Pse, and (when not word-final) in Ps. Pse shows an analogous development of the proto sequence *ew to /u/ in WOLF following the expected Pse deletion of an unaccented word-final proto vowel.

FOX (1) suggests that *aw was preserved in all the languages, while FIRST PERSON SINGULAR suggests that *aw > /a·/.

144.2. Word-Final Sequences of Vowel plus *y

Word-final sequences of vowel plus *y are generally preserved in the daughter languages. Several of the languages, however, show a tendency to reduce some such sequences to V·, a tendency most characteristic of Pne.

There are two examples of each proto vowel followed by *y, except for *ay, for which there are four examples, and *ey, for which there are three.

Only *oy is preserved in all seven languages, cf. BASKET, sp., and LOOSE.

*ay is preserved in all seven languages in BLOOD, LAUGH, and MANZANITA BERRY. In WOOD it is preserved in all the languages except Pne, which develops /a'/.²⁵

*uy is preserved in all seven languages in EYE, but in FAT, Pne again develops a long vowel (/i·/ rather than the expectable /u·/), perhaps under the influence of the *i in the preceding syllable), which alternates morphophonemically with a sequence of vowel plus /y/.²⁶

*ey shows a more considerable divergence in development in BUMBLE-BEE, DOE, and NEW. In NEW and BUMBLEBEE the sequence is preserved in all the languages except Pne which deletes *y in NEW (but without any compensatory lengthening). In DOE, only Pk and Pn preserve the sequence *ey. Pne again deletes *y without compensatory lengthening, as do Ps and Pe. Pe additionally develops /i/ for *e (perhaps a development parallel to that of *ow > Pe /u/ mentioned in 144.1).

*iy is preserved in Pk, Pe and (oddly enough) Pne, while Pn develops /·/, and Ps and Pse delete *y without compensatory lengthening.

BLACK OAK and BOW demonstrate the correspondence of front vowels in the Russian River languages to a sequence /uy/ in Pse and Pe. This correspondence has been assumed to reflect two earlier competing stem forms.

145. Consonant Assimilation and Reduction

145.1. Word-Final Voiceless Stops and

Sequences of Stop plus *?

Most of the forms reconstructed for Proto Pomo end in vowels. There are relatively few examples of proto forms which must be reconstructed as ending in consonants. The few forms that provide evidence for word-final stops, however, demonstrate a range of reflexes within each point of articulation which are amazingly consistent from one point of articulation to the next. Moreover, within each point of articulation there seems to be evidence of two consistently different types of developments—one with a component of glottalization, and one without. Those correspondences

²⁵This correspondence is reminiscent of the morphophonemic alternation found in Pe in SECOND PERSON PLURAL, where /a'/ occurs word finally, but /ay/ occurs medially.

²⁶As in Pe SECOND PERSON PLURAL, the long vowel, /i·/, occurs finally, while the vowel plus semi-vowel sequence, /iy/, occurs medially.

involving a glottalitic component are reconstructed as reflecting a proto cluster of stop plus *?.

The decision to analyze such correspondences as reflecting a cluster rather than a glottalized stop was in part influenced by the synchronic evidence from Pk. In Pk, the voiceless stop morphophonemes [c, q, q^o, t̄, t] all demonstrate a curious alternation in word-final position. All are phonemically unaspirated if followed by a phonemically realized vowel. Word-finally, they may be phonemically realized as aspirated, glottalized, or simply /?/. The difference in realization reflects a difference in the underlying morphophonemic environment. When the voiceless stop morphophonemes [c, q, q^o, t̄, t] are morphophonemically word-final, they are all realized as /?/. When morphophonemically followed by the morphophoneme [ă] (primarily occurring in the suffixes {-ă} 'Factual', and {-qă} 'Circumstantial'), they are phonemically realized as word-final /c^h, q^h, q^o^h, t̄^h, t^h/ respectively, [ă] being deleted word-finally before juncture. When morphophonemically followed by the defective verb {'-} Assertive, they are phonemically realized as word-final /č, k̄(or q̄), k̄(or q̄), t̄, t̄/ respectively. Thus the occurrence of a final voiceless glottalized or aspirated stop in Pk indicates the morphophonemic presence of a following, phonemically deleted, suffix.

Such Pk stops correspond to Pe word-final aspirated stops, with one exception, EMBERS, which is probably not a true cognate in all the languages, since it is deviant in more than one correspondence. They correspond, however, to two different types of reflexes in Ps, Pn, and Pc, thus necessitating the reconstruction of two different proto sources. Since the component of glottalization characteristic of one set of correspondences can always be analyzed in Pk (the most extensively described of the languages preserving a component of glottalization) as arising from a sequence of morphemes, a reconstruction was preferred for the proto language which symbolized maximally the distinctive separateness of the component of glottalization.

The correspondences involving final voiceless stops are charted in table 7, together with the glosses of the forms in which they occur. Dashes indicate the absence of a cognate form to compare. Those final correspondences reconstructed as *lY and *nY, involving /l/ and /n/ in Pse and Pe have also been charted for ease in comparing the very similar developments.

Pse always preserves a single final stop. Only final *t̄ and *q show any trace of reflexes in the other daughter languages, however. Final *t̄ becomes Pe and Pne /r/, /·/ in Pk, Pn, Pc, and Pne. Final *q becomes

TABLE 7

	*t?	*t̪	*q?	*q	*k?	*k	*t?	*t	l ^y	n ^y
Pk	∅:0	/·/	∅q:0	∅q:0	∅c:0	∅	∅t:0	∅	/·/	∅
Ps	∅	∅	k̪	—	y	∅	t̪	∅	∅	∅
Pn	∅	/·/	k̪	∅	č, t̪, ∅	—	t̪	∅	/·/	∅
Pc	∅	/·/	k̪	/·/	č	—	—	∅	/·/	∅
Pne	∅	/·/	—	—	t̪, (?)	∅	t̪	∅	/·/	∅
Pse	—	t̪	∅	q	∅, k	k	t̪	t̪	l	n
Pe	—	r	x	∅	k ^b	—	(?)	∅	l	/·/
	PANTHER	EARTH, SKUNK	FROG, DIP NET, WOODRAT	SWEAT	EMBERS, FAWN, MAN (1), RIB	COTTON-TAIL	WILD ONION, SPIT	GRASS-HOPPER		

Pk [∅q:0] and Pc /·/. No trace of final *t and *k is preserved in any of the other six languages.²⁷

Final stop clusters with *? as the second member characteristically have a single consonant reflex: glottalized stops in Ps, Pn, Pc, plain stops in Pne and Pse, aspirated stops in Pe, and morphophonemically plain stops in Pk.

The loss of *t preceding a deleted proto final unaccented vowel in Pe (in BIRD, FIRST PERSON SINGULAR, SECOND PERSON SINGULAR OBJECT, and WOMAN) suggests that the deletion of final consonants operated after the deletion of final unaccented vowels, at least in Pe.

145.2. Word- and Morpheme-Final Voiced Stops and Sequences of Stop plus *?

The reconstruction of word and morpheme final voiced stops is complicated by the fact that the voiced stops /b/ and /d/ cannot occur word or syllable finally in at least three languages, Pk, Pn, Pe.²⁸ The morphophonemics of Pk, Pn, Pe, as well as Ps, however, suggest that voiced

²⁷The difference in development of *t̪ and *q as opposed to *k and *t is paralleled by the difference in development of final sonorants, symbolized *l^y and *n^y (cf. Section 120). *l^y is /·/ in those languages in which *t̪ becomes /·/; /l/ in Pe and Pse (which preserve a consonant reflex of *t̪ as well). *n^y has no reflex in five of the languages, Pk, Ps, Pn, Pc, Pne, which also preserve no reflex of *k or *t. It is preserved in Pse as are *k and *t, but unlike *k and *t, *n^y has a reflex still in Pe, /·/.

²⁸The alveolar voiced stop, /d/, does occur syllable finally in two Pk morphemes /'ešéddu/ 'feathered dance skirt' [< Ps], and the negative of the enclitic Independent Intentive.

stops did occur word and morpheme finally in Proto Pomo and developed in the daughter languages in ways analogous to the voiceless stops.

In Pk, Ps, and Pn, /d/ alternates with /n/ (/n?/ in Pk). There is no such alternation in Pe, but forms characterized by such an alternation in Pk, Ps, and Pn, such as DAUGHTER-IN-LAW (1), SISTER'S HUSBAND, and THIRD PERSON FEMININE SUBJECT and OBJECT, correspond to Pe forms in which /tʃ/ alternates with /r/. The basic conditions for the alternation seem to be identical in all the languages: Pk, Ps, Pn /d/, Pe /r/ occur intervocally, Ps, Pn /n/, Pe /tʃ/ occur word finally. Pk is characterized by two possible alternates word finally, /n?/ or /?/. The difference, as was the case with the voiceless stops, reflects a difference in the underlying morphophonemic structure. The occurrence of /n?/ always indicates the presence of a following morphophoneme (which is phonemically deleted), either [ʃ] or [č]. Thus Pe /mí·ʃ/ 'she', corresponds to Pk /man?/, Pn /man/, while Pe /mí·čal/ 'her' corresponds to Pk /ma·dal/, Pn /má·dal/. (There does not seem to be a cognate third person feminine form in Ps.) The five comparative sets demonstrating a correspondence between lexical items which undergo this morphophonemic alternation in Pk, Ps, Pn, and Pe—DAUGHTER-IN-LAW (1), SISTER'S HUSBAND, SEE, THIRD PERSON FEMININE SINGULAR SUBJECT and OBJECT—show the alternation limited to morpheme-final, post-tonic position. It is thus in complementary distribution with a pre-tonic correspondence involving /d/ (/?/ in the case of Pse and Pc) and could therefore also be reconstructed as *d. A cluster *d? is nevertheless reconstructed in word-final position—although unlike the voiceless stops, *d and *d? do not contrast in this position—to account for the component of glottalization that appears word finally in Pk and Pe.²⁹

The Pe alternation of /r/ and /tʃ/ is paralleled by an alternation between labials, /p/ and /p/ under exactly the same conditions, and even in a semantically similar environment: the third person masculine singular. This Pe alternation between plain and glottalized labials has no known analogue in any of the other Pomo languages. However, full morphophonemic descriptions exist for only two of the seven languages, so the possibility of synchronic support for the hypothesis to be proposed cannot be ruled out.

²⁹These clusters of stops plus *? may well have been segmentable in the proto language, although it is of course equally possible that this component of glottalization reflected a junctural feature of some sort. Curiously enough, the Miwok languages all show a final glottal stricture which can be reconstructed for Proto Miwok, and which is either the nominative case suffix of nouns or a feature of word juncture in the daughter languages.

The Pe alternation is limited (as far as is known) to one morpheme: the masculine singular suffix {-p} occurring in the third person singular masculine pronoun, /mí·p/, and a kin term for the relationship between grandson and grandfather, /qa·wélep/. The Pe third person masculine singular object form is /mí·pal/ which corresponds to Pk /mu·bal/ (the less frequently used, and thus apparently somewhat more archaic of two third person masculine object forms), and Pn /mowal/. The Pe third person masculine singular subject form is /mí·p/ which corresponds to Pk /mu·kid/, and Pn /mo·/. In addition, word-final Pe /p/, for which no alternation is documented, corresponds to word-final Pk /m?/, Pn /m/, Pse /b/ in PEPPERWOOD TREE and SOAPROOT³⁰—a correspondence recalling the morphophonemic alternation between alveolar voiced stop and nasal in Pk and Pn which corresponded to a Pe alternation between a voiceless alveolar glottalized stop and /r/.

The correspondences of Pk /b/ : Pn /w/ : Pe /p/ in THIRD PERSON MASCULINE SINGULAR OBJECT, of Pk /m?/ : Pn /m/ : Pe /p/ (and Pse /b/) in PEPPERWOOD TREE, and of Pk /·/ : Pn /·/ : Pe /p/ in THIRD PERSON SINGULAR SUBJECT³¹ all occur in what would have been a proto post-tonic position in a word, and thus are in complementary distribution with pre-tonic correspondences involving /b/ in all languages. They are therefore reconstructed as reflecting *b (*b? word finally).³²

³⁰Pe /p/ also corresponds to Pk /m?/ in MAPLE, and to Pse /b/ in COTTONWOOD. The final consonant or consonant cluster is still synchronically segmentable in PEPPERWOOD TREE in all four languages, and corresponds to a Hokan suffix found on names of plants, trees and bushes, which has been discussed in more detail by Silver (MS) and reconstructed as Proto Hokan *h/*i·p^hu.

³¹The differences between the correspondences in PEPPERWOOD TREE and THIRD PERSON MASCULINE SINGULAR SUBJECT are assumed to be conditioned by the preceding labial vowel in THIRD PERSON MASCULINE SINGULAR SUBJECT.

³²The assumption that the final component of glottalization found in Pe /p/ and /f/ reflects an underlying proto cluster is supported, at least partially, by comparative evidence from Hokan languages outside the Pomoan family in the set for the tree, bush suffix given by Silver (MS):

Achumawi	ò· [< Proto-Palaínnihan *o·p]	Karok	?i·p
Shasta	hi·hú	Yana	?i
Atsugewi	u·p	Yuman	?ipa ~ ?i·

from Proto Hokan *h/*i·p^hu

Proto Pomo *-b? seems to involve a metathesis of an older, Pre-Pomo ||-?b (which resulted from the deletion of the Proto Hokan vowel *i—such deletions are, of course, characteristic of the Pomoan languages). This type of metathesis is attested synchronically in Pk.

Since the voiced labial stop, /b/, does not occur syllable finally in Pe, Pn, or Pk,³³ a proto alternation between *b? finally and *b non-finally (analogous to that between *d? and *d) is assumed to have been represented at an earlier stage of Pk, Pn, and possibly Ps, by an alternation between †m? finally (still preserved in Pk), and, non-finally, Pn /w/, Pk †w syllable finally, /b/ syllable initially. Synchronously, in Pk, a morphophonemic sequence Vw automatically becomes V· before [k], hence Pk /mu·kid/ < †muwkid.³⁴

In Pe, post-tonic proto voiced stops became voiceless stops, and the sequence †p? was reduced to /p/.³⁵

145.3. Medial Consonant Sequences with *h or *? as First Member

The next most striking and pervasive type of consonant assimilation and reduction is that affecting medial consonant sequences in which the first member is either *h or *?. This pair of sounds constitutes a class which Oswalt called "precursors" in his grammar of Kashaya (MS), but which he now prefers to call "laryngeal increments." These laryngeal increments in the proto language seem always to occur with the initial consonant of the tonic syllable (in forms for which an accent can be reconstructed).

Only Pk and Ps agree in preserving all such sequences of laryngeal increment plus consonant. The laryngeal increment is deleted without a trace in Pn, Pc, and Pse. In Pne, if the laryngeal increment is *? it is preserved if the next consonant is a voiced stop or /č/, otherwise *? is also deleted in Pne. If the laryngeal increment is *h it is preserved in Pne before the voiceless consonants, /t, t, k/ and /š/ when non-initial in a word. It is deleted when word-initial or when followed by any other consonant. In Pe, if the laryngeal increment is *? it is completely lost. If it is *h and followed by a voiced nasal, a lateral, or a semi-vowel,

³³In fact, no labial stops occur syllable finally in Pk.

³⁴Interestingly enough, Silver (personal communication) has pointed out that a similar reduction also occurs in Karok, but only following back vowels, i.e.,

a		VC	->	a'		C.
o				o.		

³⁵This hypothesis is supported by synchronic evidence from Ps which shows the sequence /bV?/ alternating with /p/ in ACORN, /bi?du/ ~ /-pdu/ (< †b?du, presumably, when vowel deletion produces the underlying cluster †b?). Pc also shows *b becoming /p/ word initially when there is evidence that the next syllable of the proto form began with a precursor *?, and the regular operation of pre-tonic vowel deletion in Pc would have presumably produced a sequence †b?.

the sequence of laryngeal increment plus voiced consonant reduces to a voiceless nasal, lateral, or semi-vowel.

145.4. Southern Pomo Reflexes for Forms not Reconstructed with a Laryngeal Increment

An examination of the Southern Pomo reflexes for proto forms reconstructed without a laryngeal increment with the initial consonant of the tonic syllable reveals a curious pattern: the large majority of Southern Pomo forms show /·/ occurring before (or in a few cases, after) the initial consonant of the tonic syllable, exactly as /ʔ/ and /h/ do in other forms. This length cannot at present be interpreted as an automatic Ps development in the absence of one of the laryngeal increments, however, since BACK, ACORN BREAD, DOE, SLOW, TAIL, and WEST were recorded by Halpern without any such /·/. It is possible, of course, that the absence of /·/ in these forms reflects a slight mishearing on Halpern's part, or a predictable feature of Ps morphophonemics. However, since Halpern was in general an excellent phonetician, and there is as yet no description of Ps morphophonemics, and since, moreover, this /·/ patterns like the laryngeal increments, *h and *ʔ, forms which have Ps reflexes containing /·/ before or after the initial consonant in the tonic syllable have been reconstructed with */·/ in the same position.³⁶ This reconstruction suggests that there were in fact three laryngeal increments in the proto language: *ʔ, *h, and */·/; a hypothesis that Halpern himself first partially implied in an unpublished lecture on Proto Pomo given in Berkeley in 1951.

145.5. Assimilations Involving Nasals

Both Pc and Pse show assimilation of an initial nasal to a following labial in SKUNK presumably as the result of vowel aphesis (141.12), while Pc shows the same assimilation in FAWN.

That is:

$$*nV \begin{bmatrix} w \\ p \end{bmatrix} > +n\emptyset \begin{bmatrix} w \\ p \end{bmatrix} > m \begin{bmatrix} w \\ p \end{bmatrix} \text{ in } \text{Pc, Pse}$$

Pn shows assimilation of *w to a following nasal, *n, in ON, PREGNANT, and SUMMER, i.e.

$$*wVn > mVn \text{ in Pn.}$$

³⁶The absence of a laryngeal increment in a reconstruction does not necessarily imply its absence in the proto language. Forms for which there is no Ps reflex are of course reconstructed without */·/.

IV. SUMMARY OF PROTO POMO STRUCTURE

200. Proto Pomo Phonemic Inventory

The following inventory of proto phonemes has been reconstructed.

*b		*d				
	*t	*t̪	(*c)	*k	*q	*?
*p ^h	*t̪ ^h	*t̪ ^h		*k ^h	*q ^h	
(*p̪)	*t̪	*t̪	*c̪	*k̪	*q̪	
		*s		*x	*x̪	*h
*m		*n		*-n ^y		
		*l		*-l ^y		
*w				*y		

and

*i	*u
*e	*o
*a	

stress *//, *//
length *//

210. Proto Allophony

Members of the aspirated series were probably strongly aspirated—perhaps even spirantalized, since the entire series (with the exception of *t) has undergone a spirantalizing shift in Pse. In addition, *p^h has also been spirantalized to /f/ in Pne, and to /h/ (before /a/) in Pc, *t̪^h has been spirantalized to /š/ before /u/ in Pk, *k^h has become /š/ in Pn, and, before a consonant or unstressed vowel, in Pc, while *q^h has become /x/ in Pe.

The two voiced stops, *b and *d, may have been characterized by rather lenis closure of either the nasal passage (they become nasals word finally in Pk, Pn, and Ps), or the oral cavity (post-tonic *b becomes /w/ in Pn and, probably, when syllable-final, in Pk, while post-tonic morpheme-final *d becomes /r/ in Pe).

*k, *k^h, *k̄, and *x seem to have been characterized by a rather palatal, pre-velar articulation in at least some environments. The series has undergone a process of fronting in all of the daughter languages except Pe and, to some extent, Pse. (The fact that Pse alone preserves *x as /x/ rather than /š/ may indicate that the spirantализation of aspirated stops took place before the palatalization of the pre-velar series. Thus *k^h became Pse /š/, blocking *x from becoming an expectable ſ in Pse as it did in the other daughter languages.

The post-velar series may have been fronted before front vowels and *u as it is synchronically in Pk.

Voiceless non-glottalized stops in word-final position seem to have been quite lenis in articulation; so much so that word-final voiceless, non-glottalized stops have been lost in most of the daughter languages.

220. Distribution of Proto Phonemes

220.1. Syllable Canon

The overwhelming majority of forms reconstructed are characterized by a CV(G)CV structure (where G = *?, *· or *h). Some examples of (CV)(G)CVC(G) structures have been reconstructed, and a few longer sequences, up to four syllables. Such longer sequences demonstrate the same type of CV structure as the shorter ones, however.

220.2. Distribution of Single Proto Consonants

Only voiceless stops seem limited in their distribution. The limitations uniquely affect consonants occurring in post-tonic syllables. Syllable initially in post-tonic syllables, no aspirated or glottalized voiceless stops have been reconstructed. Only the plain voiceless stops /t, t̄, k, k̄, ?, /, the voiced stops /b/ and /d/, the spirants /s, x/ and the continuants /m, n, l, w, y/ occur. Word finally the situation is parallel: no contrast between aspirated and unaspirated stops can be reconstructed. Only a single series of voiceless, non-glottalized stops has been reconstructed (which does, however, contrast with a series of clusters of stop plus *?). This series has been reconstructed as plain, but was undoubtedly phonetically aspirated, as it is synchronically still in both Pk

and Pe—unaspirated stops not occurring word finally in these two languages. (Final aspirated stops alternate with unaspirated stops when followed by a vowel in both languages.)

220.3. Distribution of Proto Consonant Clusters

The only clusters reconstructable for the proto language have one of the two laryngeal increments (cf. 145.3) *h or *? as one member.

There is almost no evidence for reconstructing word-initial consonant clusters.

There is extensive evidence for reconstructing clusters of *? or *h plus another consonant initially in the tonic syllable. Oddly enough the distribution of *? and *h in such clusters is almost complementary: *? occurs followed by the glottalized voiceless stops /t̚, t̚, c̚, k̚, q̚/, the voiced stops /b/ and /d/, and the continuant /l/. *h occurs followed by the aspirated stops /pʰ, tʰ, cʰ, kʰ, qʰ/, the plain voiceless stops /k, q/, the spirants /s, x, ɬ/ and the continuants /m, n, l, w, y/. *h and *? contrast in the forms reconstructed so far only by virtue of their ability to co-occur with *l,¹ except for the nearly homophonous forms *muhtám- TO BE HOT versus *mu?ta- TO BE COOKED.

Only final clusters of stop plus *? have been reconstructed (cf. section 145).

230. Morphology: Introduction²

Proto Pomo was an agglutinative language. The verb morphology was apparently extensive and characterized by an unusual type of semantic specialization.

The most important processes were suffixation and affixation, but there is also evidence of compounding, consonant syncopation and loss, vowel harmony, and reduplication.

¹A similar situation exists synchronically in Pk. Only /ʔ/ occurs before glottalized stops, /s/, and voiced stops. Only /h/ occurs before aspirated stops. Primarily /h/ occurs before plain stops and sibilants, but /ʔ/ and /h/ commonly occur before sonorants, i.e., before /m,n,w,y/ as well as /l/.

²This grammatical sketch relies primarily on the grammatical descriptions of Pk and Pe (the only two Pomo languages for which such descriptions exist at the time of writing) for interpreting the Proto Pomo sequences which have been reconstructed. Additional synchronic analysis, will, of course, permit the reconstruction of greater detail, and may change some of the details proposed.

235. Stem.

The basic morphological unit was probably a stem for which verbal or non-verbal functions could be specified by means of syntactic relations and/or the addition of suffixal material.

The majority of stems seem to have been composed of one of a class of Instrumental Prefixes with the shape CV- indicating the physical agent/instrument of an action or state, and/or the patient of that activity or state, plus a root with the probable shape C \bar{V} (·) specifying activities or states, plus probably one or two position classes of suffixes with the shape C, CC or /·/ marking various sorts of aspects and manners. Twenty-one Instrumental Prefixes have been reconstructed. They are listed separately in Part II of the Lexicon.

There were also a number of stems which do not at present seem to have been analyzable, as well as a few stems which must be reconstructed without an instrumental prefix, consisting uniquely of a root, or a root plus suffix.

240. Word Classes.

At the present stage of reconstruction it is possible to distinguish three classes of words on the basis of differences in the types of affixation which different sets of stems undergo: Verbs, Animate, and a group of residue forms. Members of this group of residue forms have reflexes in Pe which can be formally identified as members of various subclasses of substantives, such as personal nouns, nouns, adjectives and numerals. There is unfortunately virtually no substantive morphology in Pk. Grammatical descriptions of the other Pomo languages are needed to determine whether this reflects Pe innovation, Pk loss or perhaps even both.

241. Animate.

Animate, unlike Verbs, distinguished subject and object function. Animate could be suffixed with the object case suffix *{-to} ~ *{-al}. Verbs could not. Animate also occurred with the plural suffix *{-aya}. There are two subclasses of Animate: Pronouns and Kinship Terms.

241.1. Kinship Terms.

Kinship Terms, unlike Pronouns, could be suffixed with *{-a(·)q} RECIPROCAL RELATIONSHIP. In Pk and Pe, Kinship Terms are additionally distinguished by their ability to occur with a special set of pro-

nominal prefixes (which cannot as yet be completely reconstructed) as well as a vocative suffix (which is also not presently reconstructable—having the shape /-a/ in Pe, but []de[] ~ []·[] in Pk). Some Kinship Terms also occurred with the suffix *{-·ci} indicating one's own kinsman in generation(s) above ego. Five of the Kinship Terms reconstructed end in the sequence *-qi and refer to siblings of some sort: ego's own older siblings, or the younger siblings of one's parents (cf. OLDER BROTHER, FATHER'S YOUNGER BROTHER, YOUNGER SIBLING, MOTHER'S YOUNGER SISTER, OLDER SISTER).

Five Kinship Terms indicating affinal relationships have been reconstructed: MOTHER-IN-LAW, DAUGHTER-IN-LAW (2 terms), SON-IN-LAW, SISTER'S HUSBAND, and BROTHER-IN-LAW (i.e., WIFE'S BROTHER?).

Fourteen terms referring to consanguine relationships have been reconstructed: FATHER'S FATHER, FATHER'S MOTHER, MOTHER'S MOTHER, MOTHER'S FATHER, FATHER, MOTHER, FATHER'S YOUNGER BROTHER, FATHER'S SISTER, MOTHER'S BROTHER, MOTHER'S OLDER SISTER, MOTHER'S YOUNGER SISTER, OLDER BROTHER, OLDER SISTER, YOUNGER SIBLING.

241.2. Pronouns

A paradigm of the pronouns which have been reconstructed is given in tables 8a and 8b. Their reconstruction has been discussed in detail in McLendon (in press).

TABLE 8a

	PROTO POMO PRONOUNS	
	First person	Second person
	Singular	
Subject ¹	* <u>ha?</u> <u>áw</u> stem *[ha?á·]	*? <u>a·má</u> stem *[?a·má]
Possessive prefix	* <u>ha?</u> <u>áw</u> + <u>-í</u> stem + oblique case *[?awi-]	* <u>má</u> + <u>-í</u> stem + oblique case *[mí-]
Object	* <u>ha?</u> <u>áw</u> + <u>-í</u> + <u>-to·</u> stem + oblique + object case *[?awító·]	* <u>má</u> + <u>-í</u> + <u>-to</u> ~ -to ~ -tó stem + oblique + object case *[mí·to] ~ *[mito] ~ *[mitó]

TABLE 8a (continued)

Plural		
Subject	*ha?áw + <u>-áya</u> stem + plural *[?awáya]	*?a·má + <u>-áya</u> stem + plural *[?a·máya]
Object	*ha?áw + <u>-áya</u> + <u>-al</u> stem + plural + object case *[?awáyal]	*?a·má + <u>-áya</u> + <u>-al</u> stem + plural + object case *[?a·máyal]

¹The underlying morpheme or sequence of morphemes proposed for each noun is listed first, followed by the hypothesized surface form in square brackets. Six rules derive the proto surface forms charted from the underlying forms:

- 1) Vowel Deletion in y Initial Syllable
- 2) Vowel + Semi-Vowel Reduction
- 3) Aphesis
- 4) Accent Deletion
- 5) Vowel Cluster Reduction
- 6) Vowel + w Contraction

These rules are discussed in detail in McLendon (in press).

TABLE 8b
PROTO POMO PRONOUNS
Third person singular

	Masculine	Feminine
Subject	*hamíya·- + <u>-b(?)</u> stem + masculine *[hamíyab?]	*hamíya·- + <u>-d?</u> stem + feminine *[hamíyad?]
Possessive	*hamíya·- stem	*hamíya·- stem
Object	*hamíya·- + <u>-b</u> + <u>-al</u> stem + masculine + object case *[hamí·bal]	*hamíya·- + <u>-d</u> + <u>-al</u> stem + feminine + object case *[hamí·dal]

242. Verbs

Verbs were morphologically the most complex and syntactically the most important class, being in Pk and Pe the only obligatory members of a surface independent clause. Thirty-two verb stems have been reconstructed.³

³They are:

*k ^h i·yá, *k ^h iyá·	BE AFRAID	*muhtám-	BE HOT
*qa·né	BITE	*mu?tá-	BE COOKED
*?ip ^h éṭ	BREAK WIND	*k ^h uwáy	LAUGH
*ma·lí- ~ *mahlá-	BURN	*k ^h e?é-	LEACH
?bi-?dí-·d(i)	CARRY IN HANDS	*mí·ti-	LIE

242.1. Verb Affixes

Thirteen verb affixes have been reconstructed.⁴ They are, in alphabetical order: CAUSATIVE *{-hqa}, DURATIVE *{-kid-}, IMPERATIVE SINGULAR *{-im}, OPTATIVE *{-ix}, PLURAL ACT (1) *{-IV-} (pre-

*wá·du-	COME	*dihki-	PICK UP NON-LONG OBJECT
*?ihp ^h á-	COOK, BAKE UNDER ASHES	*xuq ^h á·	SAW APART
*qalál ^y ~ *qalá-	DIE	*kád-, *ká·d-	SEE
*q ^h a?ad·ú-	DREAM	*qá(·)	SEPARATE FROM SOMEONE
*ho?qók-	DRINK		
*qawá-	EAT (1), CHEW	*kahkí	SIT DOWN
*kuh·ú-	EAT (2)	*si·mán ^y	SLEEP
*hak·á-	FLY (1)	*mihxé-	STINK
*p ^h udi-	FLY (2)	*-hyé-	STOP DOING
*dihqá-	GIVE ROUND OBJECT	*matú·	TELL STORIES/MYTHS
*p ^h ilá-	SEVERAL TO GO	*káhnów	TALK
		*hwá·d-, *wá·d-	WALK

⁴Oswalt [in press], in a paper available to me after the completion of this monograph, reconstructs thirty-two Proto Pomo affixes. Ten of the affixes he reconstructs coincide with verb affixes herein reconstructed, although we differ on the precise form which we hypothesize for eight of these affixes. The differences in our reconstructions are of three types. (1) Oswalt prefers to use his morphophonemic symbol \hat{v} in affixes where I reconstruct *i. His \hat{v} , in Kashaya at least, is /i/ in most environments, becoming backed to /o/ after $[q^0]$, to /a/ after post-velars and labials, and to /u/ after $[d]$. I have discussed in Chapter III, pp. 15-16 and footnote 3 my feeling that the presence of back vowels after post-velars reflects a shift in vowel quality triggered by the post-velars, rather than the reverse. I suspect that this more extensive vowel alternation found in some of the Russian River languages reflects a post-Proto Pomo development. (2) Oswalt reconstructs *c, *c^h, *c̄ where I reconstruct *k, *k^h, *k̄ (cf. Section 113). (3) Oswalt prefers to insert vowels in certain environments following affixes which he would reconstruct as consisting of a single consonant, while I prefer to delete them. His reconstructions for the ten affixes which we both reconstruct are listed below.

Causative	*-hqa-
Imperative Singular	*- $\hat{V}m$
Optative	*- $\hat{V}s$
Local Plural (= my Plural Act (2))	*-m-
Reciprocal	*-mu ⁰ c̄-
Reflexive	*-c̄-
Semelfactive	*-c-

and the sentence connectives:

- | | |
|---------------------------------------|----------------------|
| (1) Future precedes (different agent) | *-p ^h ila |
| (2) Future precedes (same agent) | *-p ^h i |
| (3) Simultaneous (same agent) | *- $\hat{V}n$ |

fixed between instrumental prefix and root), PLURAL ACT (2) (with extent?) *{-ma}, RECIPROCAL *{-(h)ma(-)k} REFLEXIVE *{-i(-)ki}, SEMELFACTIVE *{-ki-}, SENTENCE CONNECTIVE (1) *{-p^hila}, SENTENCE CONNECTIVE (2) *{-p^hi}, SENTENCE CONNECTIVE (3) *{-in}, SPECULATIVE *{-xe}.

Hypotheses as to relative order of occurrence of these morphemes in a proto verb construction can only be drawn at present from agreements in relative order between Pk and Pe. The order of occurrence of these morphemes in Pe and Pk is charted in table 9.

TABLE 9

Pe RELATIVE ORDER OF VERBAL SUFFIXES WHICH HAVE BEEN RECONSTRUCTED

REFLEXIVE + PLURAL ACT (2)	+	CAUSATIVE + SEMELFACTIVE	+	RECIPROCAL + DURATIVE +	OPTATIVE SENTENCE CONNECTIVES
					IMPERATIVE SINGULAR SPECULATIVE

Pk RELATIVE ORDER OF VERBAL SUFFIXES WHICH HAVE BEEN RECONSTRUCTED

SEMELFACTIVE +	REFLEXIVE + CAUSATIVE +	DURATIVE +	OPTATIVE SENTENCE CONNECTIVES
PLURAL ACT (2)	RECIPROCAL		IMPERATIVE SINGULAR SPECULATIVE

Both languages agree in showing the OPTATIVE, SENTENCE CONNECTIVES, and the SPECULATIVE following all the other suffixes reconstructed (they are in fact the final suffixes that can occur in any verb string in both languages). In Pk the IMPERATIVE SINGULAR also occurs finally in a verb string; in Pe the IMPERATIVE SINGULAR may be followed by the SPECULATIVE. In both languages the REFLEXIVE and PLURAL ACT (2) precede the CAUSATIVE but in different absolute orders in the two languages. The SEMELFACTIVE precedes the RECIPROCAL in both languages, but the sequence of the two suffixes follows the CAUSATIVE in Pe while it precedes the CAUSATIVE in Pk.

242.2. "Switch-Reference" and Sentence Connectives

Both Pk and Pe have an elaborate set of verb subordinating suffixes (cf. table 10). These not only mark the verb suffixed as syntactically dependent on another verb form in the same sentence, but distinguish notions of sequentiality, prior necessity, or simultaneity, while simultaneously indicating that the subjects of the subordinated and main verb are different or the same. This last function has been called "switch-reference" by Jacobsen (1967).

TABLE 10

SUBORDINATING AND
"SWITCH-REFERENCE" SYSTEM IN Pk

SUBORDINATING AND
"SWITCH-REFERENCE" SYSTEM IN Pe

Relative Timing of the Two Actions	Same agent	Different agent		Subject unchanged	Subject changes
Subordinate Act will precede Main Act	{-p ^h i}	{-p ^h ila}	Action of suffixed verb prior to, and a pre-requisite for, the realization of the action expressed by the main verb	{-p ^h i}	{-p ^h ila}
Simultaneous	{-v ⁿ }	{-êm}	Action of suffixed verb (1) explains, justifies that of main verb, (2) is simultaneous with that of main verb	{-in}	{-sa}
Subordinate Act has preceded Main Act	{-ba}	{-li}	Action of main verb continues over same period or begins with time specified by suffixed verb	{-baya}	{-iday}
			Action of verb suffixed precedes in time that of main verb	{-iy}	{-qan}

Jacobsen also pointed out that Washo, another Hokan language spoken in the Sierras considerably east of the Pomo languages, had such "switch-reference" subordinating suffixes, and raised the interesting question as to the source of this resemblance. That is, is this resemblance the result of genetic relationship or diffusional spread?

Recently Winter (1970) has demonstrated that a rather simplified system of switch-reference exists in virtually all the Yuman languages for which descriptions are available.

It is interesting, then, that three subordinating suffixes having switch-reference functions have been reconstructed for Proto Pomo: *{-p^hila}, *{-p^hi}, and *{-in}. Two more suffixes in Pk and Pe are perhaps related: Pk {-ba} : Pe {-baya}, and Pk {-êm} : Pe {-iday}, while Pse {-qat} 'when' and Pe {-qan} seem also tantalizingly similar. A system of sentence connectives indicating syntactic subordination, temporal ordering, and switch-reference seems to have existed, then, in Proto Pomo. On the other hand, diffusional pressures seem also to have operated in the similar elaborations of the switch-reference systems in at least some of the daughter languages, using genetically unrelated affixal material.

250. Compounds

Four analyzable compounds have been reconstructed: ASHES, NAVEL, SPRING, TEARS. ASHES seems to consist of elements meaning DUST-FIRE. NAVEL seems analyzable as UMBILICUS-HOLE, while TEARS is literally EYE-WATER.

260. Additional Affixes

Some residue forms occur with a suffix that seems to have marked plants, trees, and bushes, and which has here been reconstructed with the shape *-b?. This suffix appears to have cognates throughout California Hokan languages (cf. Silver MS).

270. Semantic Domains

The forms reconstructed seem impressionistically to fall into a number of domains which are inventoried below.

271. Animals, Fish, Insects

Forty-six names for various animals, birds, fish, and insects have been reconstructed. The animals are in alphabetical order: BEAR, BROWN BEAR, COTTONTAIL, COYOTE, DEER, DOE, FAWN, FOX (2 terms), FROG, GOPHER, JACKRABBIT, PANTHER, RACCOON, SKUNK, SQUIRREL, WILDCAT, WOLF, WOODRAT.

Among birds, names for the following types have been reconstructed: BIRD, BUZZARD, DOVE, DUCK, GOOSE, HAWK, JAY, MUDHEN, QUAIL, and WOODEDUCK.

Names for the following types of fish and shellfish have been reconstructed: BLACKFISH, CLAM, FISH, MUSSEL, SUCKERFISH.

Names for the following insects have been reconstructed: BEE, BUMBLE-BEE, FLEA, FLY (n.), GRASSHOPPER, HEAD LOUSE, BODY LOUSE, SLUG, SPIDER, TICK, WORM (2 terms).

272. Body Parts

A variety of terms referring to parts of the body and bodily excretions have been reconstructed: they are in alphabetical order: ARM, ARMPIT, BACK, BACKBONE, BELLY, BLOOD, BODY, BONE, BRAINS, BREAST/MILK, BEHIND/REAR, CHEST, CLAW, EAR, ELBOW, EXCREMENT, EYE/FACE, FAT, FLESH, FOOT, FOREHEAD, HAIR OF HEAD, HAIR OF BODY, HAND, HEAD, LEG, LIVER, MOUTH, NAVEL, NECK, NOSE,

OCCIPUT, PHLEGM, RECTUM, RIB, SHOULDER, SINEW, SKIN, SNOT, SPLEEN, TAIL, TEARS, TESTICLES, THROAT, TONGUE, TOOTH, UMBILICUS.

273. Plants, Trees, and their Products

Names for the following types of plants, trees, and their products have been reconstructed: BARK, BUSH, sp., CHAPARRAL, COTTONWOOD, GRASS, HEMP, LEAF (1) and (2), LOG, MANZANITA BUSH, MAPLE, BLACK OAK, WHITE OAK, MUSH OAK, LIVE OAK, OAK, sp., PEPPER-WOOD TREE, POISON OAK, REED, sp., SOAPROOT, TREE, ROUND TULE, TULE SPROUT.

273.1. Edible Plants and Foods

Names for the following edible plants and foods have been reconstructed: ACORN, ACORN BREAD, ANGELICA, BUCKEYE NUTS, BUCK-EYE NUTS WHEN SOAKED, CLOVER, EGG, FOOD, GRAIN, MANZANITA BERRY, ACORN MUSH, MUSHROOMS (2 terms), WILD ONION, PEPPER-WOOD NUT, PINOLE, INDIAN POTATO, SALT (2 terms), EDIBLE SEA-WEED, SEED.

274. Manufactured Goods

Terms for the following types of manufactured goods or materials used for manufacturing tools and other objects were reconstructed: ARROW (2 terms), BASKET, sp. (2 terms), OPEN-WOVEN PACK BASKET, CLOSE-WOVEN PACK BASKET, POUNDING BASKET, BLANKET, BOW, DOOR, FLINT/KNIFE, HOUSE, MORTAR, MAGNESITE (used for beads), DIP NET, STRING, WHISTLE.

275. Ritual

Terms for a DANCE or SONG and POISON or a POISONING SONG can also be reconstructed.

276. Directions and Locations

Terms for the four cardinal directions, EAST, NORTH, SOUTH, and WEST (2 terms) plus ON/ON TOP OF and BELOW have also been reconstructed.

277. Numbers

The numbers ONE, TWO, FIVE, and SIX have been reconstructed.

278. Celestial Bodies, Weather

Terms have been reconstructed referring to the MOON, SUN, SKY, CLOUDS (2 terms), RAIN, SNOW, and WIND, DAY, NIGHT, WINTER, and SUMMER.

279. Local Terrain

The following terms referring to the local terrain have been reconstructed: CREEK, EARTH, FOREST, HOLE, MOUNTAIN, MUD, PATH, RIDGE/MOUNTAIN, ROCK, SAND/GRAVEL, SPRING (of water), VALLEY, and WATER.

280. People

Terms for MAN (2 terms), WOMAN, CHILD, PEOPLE, and ENEMY have been reconstructed.

281. Descriptive Terms

The following descriptive terms have been reconstructed: WHITE, BIG (sg. and pl.), COLD, DIRTY, GOOD, LONG (2 terms), LOOSE, NEW, PREGNANT, RAW/ALIVE, SLOW, and SOUR.

285. Inferences

The range of domains reconstructed, and the terms reconstructed in each domain do not provide any evidence which would force one to assume that the natural environment or cultural organization of the speakers of Proto Pomo was radically different from that of speakers of the daughter languages. The evidence is consonant with the hypothesis that the Proto Pomo speakers were hunters and gatherers, living in an environment similar to that in which most of the speakers of the daughter languages live or lived at the time of contact, that is, where they knew both summer and winter, rain, snow and heat, mountains and valleys. There is, at least, no evidence that suggests that they were formerly in a different location.

The Proto Pomo speakers probably subsisted on a combination of seafood, game, and vegetable stuffs (nuts, grains, berries, tubers, etc.). The

game was hunted with bow and arrow (and perhaps traps), the fish were caught with nets and traps, the vegetable material was gathered with, stored, and cooked in baskets. Dancing and singing presumably had some ritual importance, and poisoning (by both magical and pharmacological means) was practiced (or at least feared). They had beads, and at least one musical instrument.

The anatomy of the human body was quite well distinguished. At least three internal organs were known (perhaps only in terms of game): the liver, the spleen, and the brain.

The kinship system was also well developed, distinguishing relative age, sex, and generation.

V. LEXICONS¹

PART I: GENERAL VOCABULARY

ACORN *bi?dú Pk bi?du, Ps bi?du ~ -pdu, Pn bidú 'tan oak',
Pc pdu, Pse bdu, Pe bu·dú.

AFRAID, TO BE *k^hi·yá, k^hiyá· Pk c^hiya-, Ps t^hi·ya-(O), Pn t^hiya-,
Pc šyá-, Pe k^hi·yá· [occurring in /ká·yk^hi·yá·/, a term descriptive of
the mountainous wilderness beyond areas of settlement, called /qa·qó·/,
which was always entered with elaborate ritual care and considered
to be fraught with supernatural as well as real dangers. /ká·y/ means
'land', and presumably the form in question means literally: 'frighten-
ing land'; archaic]; Ps, Pn t^h < *k^h instead of the expected /č^h/ or
/š/ is uniquely aberrant.

ANGELICA *ba?kówa Pk ba?cowá, Ps ba?cowha, Pn bacówá, Pse
?kób, Pe ba·kó·. The Pse form is deviant in two ways: the initial /?/,
which is a unique reflex of *b (perhaps conditioned by the following
/k/), and the final /b/ for *w, which could reflect the metathesis of
initial *b, but more probably indicates the independent suffixation in
Pse of an old Hokan suffix of names of plants, bushes, and trees (dis-
cussed by Silver, MS), which has the shape /-·p ~ -Vp/ in Pe and
/-m?/ in Pk. The suffix is present and segmentable in all three lan-
guages in PEPPERWOOD.

ARM *?i·xál ~ *?ixály Pk ?iša·, Ps ?i·šan, Pn šá·, Pc šá·, Pse
xal, Pe šál 'wing.' Ps -n reflects *-l, Pk and Pn -·, Pse and Pe
l reflect * -ly.

ARMPIT *da·yamá- Ps da·ya[hmo](O), Pn damá (Redwood Valley),
damák^hamó (Potter Valley), Pc da·mák^hma·, Pne dáma, Pse ?má[nyo],
Pe da·má, da·má[mò] [lit.: 'armpit hole']. Haplology of the third proto
syllable before the similarly shaped additional morpheme /hmo/ is
assumed in Ps. Haplology of a second syllable beginning with /y/ which

¹Evidence of the existence of at least twenty-one instrumental verb prefixes in the proto language has been found. The comparative sets for these prefixes are presented separately by alphabetical order of the reconstructed proto prefix at the end of the lexicon. They are not included in the lexicon, because of the difficulty of alphabetizing in any useful way the rather long definitions they require.

Brackets around portions of lexical items enclose material not being compared.

- is followed by a tonic syllable is assumed in Pe, Pse, and Pne. Cf. BEE and DREAM for a similar haplology of pretonic second syllables beginning with /?/.
 ARROW (1) *hicú· Pk hisú·, Ps čú·?u(O,H), Pn čú·, Pne čú·, (Pe čú· ? 'verb root of directed motion toward a sharp focus').
 ARROW (2) *bačíy Pse bčí·, Pe bačíy.
 ASHES *hi·nó, *hinóxó Pk ?ino 'dust' [?inoqoc 'ashes'], Ps hi·no, Pc no (B), Pn nō 'dust', nohó 'ashes', Pne hinow 'dust, sand', Pse noxo 'dirt, dust' [xó 'fire', but no- is not analyzable (Moshinsky, personal communication)], xoyo noxo 'ashes', Pe nō 'ashes', nóxó 'warm ashes'. The lack of semantic agreement suggests two hypotheses. (I) *hi·nó may have originally meant 'dust', and *hinóxó 'ashes', i.e., 'dustfire'. (II) Pk, Pne illustrate a trend to generalize from ashes to ashlike material, i.e., dust (probably ashes constituted most of the dust in a pre-contact semi-subterranean house with its central fire, smoke hole, and lack of windows), necessitating a new construction for ashes, involving the morpheme for 'fire'—a trend which Pse carries even farther with its new compound for 'ashes'.
 BACK *bačo· Pk bačo·, Ps bačo[či] 'flesh meat next to back bone'.
 BACKBONE *hičí, *kidí Pk hičí 'fishbone', Ps hičí 'back', Pn čidí[-yáa], Pc čí, Pne čidi, Pe ki·dí.
 BARK (of tree) *qahwál^y Pk qahwa·, Ps k̄aw·a, (Pn šéwa ?), Pc k̄wá·, Pne k̄áwa·, Pse xwal, Pe xa·Wál. The Pn form is aberrant. It could either reflect a proto form *k̄e(h)wa or *xe(h)wa, or an early borrowing of such a similarly shaped form from Pc or Pse before the Pn shift *k̄ > š took place.
 BASKET, sp. (1) *có·y Pn čoy 'open-woven pack basket', Pne [mihil] čó·y 'baby basket', Pse čoy 'small basket', Pe čó·y 'pack basket'. It is suspected that the absence of a Pn reflex for *- can be explained in terms of morphophonemic developments in Pn.
 BASKET, sp. (2) *k̄itú· Pk čitu· 'an ornate basket', Pc štú· 'an ornate basket', (Pe šá·ri 'basket, generic'). The Pe form appears to be a borrowing from Pn (in which *k̄ normally becomes /š/ and *u > /i/).
 BASKET, MORTAR, cf. BASKET, POUNDING
 BASKET, PACK (open-woven) *buhq̄ál Pk buhq̄al, Pn bok̄ál, Pc p̄k̄ál, Pse [fáli] bxál 'open-woven pack basket', Pe buxál 'fish trap basket (open-woven and elongated)'. The Lake Miwok form bák̄al 'fish trap' seems to reflect a borrowing from Pse or Pe (the gloss agreement indicates Pe) before PP*q̄ > Pe x, Pse x. (Lake Miwok

has no post-velar series, nor a velar or post-velar spirant, but it does have an /h/ which seems a more likely choice to approximate a velar or post-velar spirant had it been developed by then.) The lack of agreement between Lake Miwok and Pe or Pse in the position of stress is not understood. Pn /o/ < *u is aberrant and suggests a diffused source.

BASKET, PACK (close-woven) *buhkí ? Pn bičí, Pne búhti, (Pse bkí), Pe buhkú. This set has many problems. The Pse form is aberrant, and is likely to be a borrowing from Pe. The expected genetically inherited form in Pse would be †bci. The Pe form is also anomalous, however. Pe assimilation of *i to a preceding back vowel is unexpected, unique, and contrasts with the preservation of a presumably identical proto sequence in BUZZARD.

BASKET, POUNDING *miké Pn mičé, Pne mí·ti, Pse mcé, (Pe mi·čé). The Pe form is aberrant and probably borrowed from Pn. (The expected genetically inherited Pe form would be †mi·ké.) Pne /i/ < *e is also aberrant. The normal pattern of assimilation in Pne is *iCe > Pne eCe (cf. p. 00).

BEADS, cf. MAGNESITE

BEAR *butáqalý ~ *bu·táqa Pk buṭaqā, Ps buṭaka, Pn bitá·, Pc ptáka, Pne bóroka·, Pe bu·ráqal. Pk, Ps and Pc reflect a reconstruction of the second type, the other languages one of the first type. The lack of a reflex for the third proto syllable in Pn is unexplained. This is the only example of this type of vowel development in Pne.

BEAR, BROWN *limá ~ *limá· ? Pk mima, Pn limá·, Pc mmá·, Pe li·má· 'bear of some kind, perhaps brown'. Assimilation of the lateral to a following nasal in the cluster †lm has to be assumed for Pc. Pk m < *l- is aberrant and suggests contamination from Pc.

BEE *ko?óly ~ *ka?olý ~ *ko?ó ? Pk co?o 'yellow jacket', Ps čo?o(O), Pn čo?ó·, Pne to?ó[-ka·], Pse q?ól, Pe ka·ló. The Pn, Pne, and Pse forms reflect the first reconstruction, the Pe form the second, and the Pk and Ps the third. (Cf. Section 141.22 for a discussion of the syncope of pre-tonic unaccented syllables beginning with /?/ in Pe.)

BEHIND, REAR *si·lí, *sili· Pk sili· 'rear', Ps sí·li 'butt' (O,H), Pn silí·, Pne šíli [in /kama šíli/ 'heel'; /kama/ 'foot'], Pe si·lí.

BELLY *?uhqʰá, *?uhqʰá· Pk ?uhqʰa, Ps ?ukʰ·a, Pn kʰa[šé], Pc [m]kʰá·, Pse xá 'stomach, entrails, paunch, tripe', Pe yu·xá 'paunch, tripe, stomach, guts'. Pc and Ps reflect the second reconstruction, all the other languages the first.

BELLOW *?iyów Pk ?iyow, Pn yów, Pne ?íyo· 'down', Pse yow 'under', Pe yow 'down'. Pne /o·/ for /ow/ in the other languages may be a misrecording of Pne /ow/.

BIG, sg. *bah^té, *bah^tén Pk bah^te, Ps bah^te 'big, many', Pn bah^té 'many' (O), Pc ba·t^hé, Pne -t^hi, (Pse btén[ik] 'big', bté[qá-] 'many' (G)), Pe ba·t^hín. The Pse form is somewhat deviant—the expected reflex would be /š/ instead of /t/, which suggests that the contemporary forms are borrowings from another Pomoan language, perhaps Pe. Pe /i/ < *e only occurs in this form and GOPHER.

BIG, pl. *?ah^tíy, *?ah^tíyn^y Pk ?ah^tiy, Ps ?ah^ti, Pn t^hí, Pne t^híy[in], Pse tín-ay (-ay 'plural'), Pe t^híy-a (-a 'plural suffix'). Pse /t/ for PP */t^h/ instead of /š/ is aberrant.

BIRD *čiyítá ~ *čihtá Pk šihta, Ps čihta, Pn čít, Pc tá, Pne čiyit[-ka·], Pse čta, Pe či·yá ~ či·yá. Pn /t/ < *t and Pne /t/ before a consonant are unique, and not presently explainable.

BITE, TO *qa·né- Pk qane-, Ps ka·ne-, Pn kané-, Pc ka·né-, Pse qne-, Pe qa·né-.

BLACKFISH *xaq^hál Pn šak^hál, Pse xqál, Pe ša·xál.

BLANKET *?ihxí(·) Pk ?ihši, Ps ?iši, Pne ši·[kó], Pe ši·[c]. The Ps form is perhaps a misreading of ?iš·i.

BLOOD *ba·láy Pk balay, Ps ba·lay, Pn baláy, Pc ba·láy, Pe ba·láy.

BODY *xi?bá Pk ši?ba, Ps ši?ba, Pn šibá, Pc šbá, Pne ši?bá, Pse xbá, Pe ši·bá.

BONE *?ihyá·, *?ihyá Pk ?ihya·, Ps ?i·ha, Pn yá·, Pc yá·, Pne hiya, Pse ya, Pe Ya. Pk, Pn, and Pc reflect a proto form of the first type, Pe and Pne one of the second type.

BOW *xihmúy, *xi(?)-mi Pk šihmi, Ps ?ahay-šmi (?aháy 'wood'), ší?mi 'gun' (Pn šé?emay), Pne šimí·, Pe šu·Múy. Pk and Pe reflect a proto form of the first sort, Ps and Pne of the second sort. Assimilation of *i to a following *u is assumed for Pe. Assimilation of *u to a following *y or preceding *i is assumed for Pk. (The Ps and Pne forms could actually involve the same sort of alternation, and could arise from a proto stem *xi?muy (which alternated with *xihmuy). The Pn form, while tantalizingly similar, shows divergences from the other members of the set (/ay/ for *uy or *i, /-e?e-/ for *-i(?)-) which are at present without parallel.

BRAINS, HEAD, PROTUBERANCE *ho?tó Pk ho?to 'head, brain', Ps ho?to 'brains', Pc tó, Pse fo 'outside front of throat' (i.e., Adam's apple?), Pe tó 'brains'.

BREAD, ACORN *q^hatō, *q^hatō· Ps k^hatō 'white oak acorn bread',
Pse qtō, Pe xa·rō·.

BREAK WIND *?ihp^het- Pk ?ip^he·, Ps ?ehp^het-(O), Pn p^hé·-, Pne
fer-én (-en 'infinitive suffix'), Pse féd, Pe p^hér.

BREAST, MILK *xi?dōnY Pk ši?do, Ps ši?do, Pn tō, Pc šdō,
Pne tō, Pse xdon, Pe si·dō·. Pn and Pne show a unique loss of
initial syllable and reduction of cluster ?d > t̪, possibly as the re-
sult of contamination with the verb root 'to suck' which has the
shape /t̪ō-/ in Pe. This is the only instance in which PP *š be-
comes /s/ in Pe. The Pe form was probably reshaped to resemble
the prefix si- associated with sucking (the second syllable probably
being associated with the root {do}, which refers to a circular
motion or shape with a small circumference).

BROTHER, MOTHER'S *cú-·či ~ *cé-·či Pk cu^os ~ tu, Ps cúc-
~ tu-, Pn -cú~, Pne -čhú·[y], Pse -sen, Pe c^hé·č ~ čé·č ~ c^hé· ~ čé·.
MOTHER'S BROTHER and FATHER'S SISTER are unique in reflect-
ing two differently shaped proto stems, in both cases, one having
a high back vowel is reflected by the Russian River languages, and
one having a mid front vowel is reflected by Pe and Pse. The
final consonant in Pk, Ps, and Pe is a suffix occurring with kin-
ship terms. The final /n/ in Pse reflects a different suffix.

BROTHER, OLDER *mēqi Pk -ki-, Ps -ki-, Pn -kí, Pne míki-,
Pse -meq, Pe mé·q- ~ mé·x. The first syllable of the proto form
was presumably lost in Pk, Ps, and Pn through haplology of the
second person possessed form *mi-miki and subsequent reanalysis
of the stem as -ki which was then substituted throughout the para-
digm by analogy.

BROTHER, FATHER'S YOUNGER *kéqi Pk -ce^oki- ~ ciki-, Ps
čiki, Pn -čé·, Pne -té·ki, Pse -cex, Pe ké·q- ~ kē·x. Pse x < *q
is aberrant.

BROTHER-IN-LAW (i.e., WIFE'S BROTHER?) *mahá-, *há·
Pk ha·, maha-, Pn há· 'wife's brother', Pe -há·, ma·há·; cf. also
SISTER'S HUSBAND.

BRUSH, cf. CHAPARRAL

BUCKEYE *bahxá Pk bahša, Ps bahša, Pc ba·šá, Pne [dí]hša,
Pse bxá, Pe ba·šá.

BUCKEYE NUTS WHEN SOAKED *dihsá Pk dihsa, Pn disá 'buck-
eye nut and tree', Pne díhša 'buckeye', Pe di·sá[·y] (?) 'redbud'.

BUMBLEBEE *k^he·héy Pk cehéy, Ps če·hey(O), Pn čehéy, Pc
c^hhéy, Pe k^he·héy.

BURN *ma·lí- ~ *mahlá- Pk \square ma[c-], Ps ma·li, Pn malí- 'burn, intransitive', Pc mléy, Pse mla- in / \dot{x} o mlamkiya/ 'fire burning progressively along an area', Pe ma·Lá-. The final consonant of Pk is not compared.

BUSH, sp. *qáhnó- ~ *qánó- Pk qohnó- 'hazel bush', Ps konho, Pn kanó- 'chemise, greasewood', Pe qa·nó- 'chemise, hairpin made of chemise'.

BUTTOCKS, cf. BEHIND and RECTUM

BUZZARD *kuhk^hi Pk cuhc^hi, Ps čohč^hi, Pc c^hc^hi, Pe ku·k^hi; cf. also BASKET, PACK (close-woven).

CARRY IN HANDS, TO *bi-?dí-·d(i)- Pk bide·du 'to carry in both arms' [< bide- + -v^Od- 'durative' + \hat{v}], Ps bi?di-(O), Pse bdéy[čit] [< bdi- + li 'durative' + či 'pl. subject' + t], Pe bi·dí·l 'carry several things bunched together in hands' [< bi·dí- + ·l 'continuative'].

CAUSATIVE *{-hqa} Pk {-hqa-} : []hqa[] following a vowel, []qa[] following a consonant, Pn -ka, Pse -qa, Pe -qa.

CHAPARRAL *se?é Pk se?e, Ps [čih]se, Pn se?é, Pc s?é, Pne [hám?]še, Pse s?e, Pe sé 'brush'. The factors conditioning the loss of *-e? in Pe are not understood.

CHARCOAL, cf. EMBERS

CHEST *ye?ély Pn ye?é·, Pne yé?e· ~ t^hé?e·(H), Pse w?él, Pe ye·?é·l. Pse /w/ < *y- is aberrant, as is Pn /y/ instead of the expected word-initial reflex, /d/.

CHEW, cf. EAT, CHEW

CHILD *qa·wí Pk qawi 'small', Ps ka·wi 'child', Pn kawí, Pc ka·wi, Pse qwí 'baby', qwík pl., Pe qa·wí 'boy, child', qa·wík^h pl. [< qa·wí· 'bear children' ?]

CLAM *xalá (possibly *xalú) Pk hala[ti·] 'meat of clam', Pn k^halá 'freshwater clam', Pse xlú 'freshwater clam', Pe xa·lá. The aberrant Pse /u/ < *a may reflect contamination from /lúq/ 'ocean clam'. This is the only instance of *x > Pn k^h instead of h, and may reflect a reshaping of CLAM under the influence of the word for WATER *?ahq^há > Pn k^há.

CLAW *hé·č Pk \square he^Oč, Ps he·č, Pn héč, Pc ?é·č, Pne hé·ča, Pe hé·ča (?) 'let me see' [< {hé-·} verb root 'to penetrate, frequently with a glance, by looking']. This is one of three forms in which Pk shows /č/ as the reflex of PP *č, rather than /š/. The other forms are MUSHROOM (1) and FATHER'S SISTER. Pc č < *č is also aberrant.

CLOUD (1) *q^ha?bá·, *q^ha?bá Pk q^haba·, Ps k^hab?a, Pn k^habá·, Pc k^hbá·, Pne k^há?bá· 'fog', Pse xbá 'fog', Pe xa·bá 'fog'.

CLOUD (2) *q^ha?bú Pne k^há?bo, Pse xbú, Pe xa·bó. There is at least one hypothesis which could explain the existence of two sets of forms for CLOUD: PP distinguished 'fog' *q^ha?bá· from 'cloud' *q^ha?bú. Pne, Pse, Pe preserve the distinction which was lost in the four Russian River languages—Pk, Ps, Pn, Pc—through the operation of vowel assimilation in 'cloud' [*q^ha?bú > †q^ha?bá] making 'fog' and 'cloud' nearly homophonous, and encouraging the development of a new form for 'fog' in these languages. This hypothesis is, unfortunately, unsupported by other instances of the same type of vowel assimilation operating in Pk, Ps, Pn, and Pc. On the contrary, proto sequences of á(C)Co demonstrate just the opposite type of vowel harmony; Proto á(C)Co sequences becoming oCo in Pk and Ps.

CLOVER *?ohsó Pk ?ohso, Ps ?ohso, Pn só, Pc só, Pne šó, Pse so, Pe so.

COLD *qahcíl ~ *qac·i Pk qahsil, Ps kac^h·i, Pn kasíli, Pc ka·síl, Pse qsíl-, Pe qa·c^híl ~ qa·číl.

COME, TO *wá·du- ~ *hwá·du- Pk wa^od-, Ps hwa·du, Pn wá·di, Pc wá·d-, Pe wádu·kì- 'go'.

COOK, BAKE UNDER ASHES, TO *?ihp^há- Ps ?ihp^ha-, Pn p^há-, Pe p^há-.

COOKED, TO BE, cf. HOT

COTTONTAIL (RABBIT) *nó·mik Pk numi, Ps no·mi, Pne lúmi[-ka·], Pse nómik. This is one of three examples in which Pk and/or Pne show assimilation of a mid vowel to a following high vowel in terms of tongue height.

COTTONWOOD *qaxálab? ~ *qáxalab? Pse qxálab, Pe qášalap.

COYOTE *do·wí Pk duwi, Ps do·wi (O,H), Pn diwí, Pc ?a·wí ~ ?wí, Pse [kl]jiwi-n (?).

CREEK *bi?dá Pk bi?da, Ps bi?da[-k^ha] 'river' [k^ha 'water'], Pn bidá, Pne bí?da, Pse bdá, Pe bi·dá- 'creek, stream' [bound stem form of bi·dámi 'creek' occurring in bi·dáw 'downstream', etc.]

CROWN, cf. HEAD

DANCE/SONG *q^hé Pn k^hé, Pc k^he, Pne k^hé, Pse xé, Pe xe.

DAUGHTER-IN-LAW (1) *-?ód? Pk -?o^od-, Pn ?on ~ ?od-, Pse -?od, Pe -?ót; cf. Section 145.2 for a detailed discussion of the reflexes of *d?, illustrated in this set.

DAUGHTER-IN-LAW (2) *xowmi(-·či) Pk šome- 'younger sister', Pe šówmič. The exact semantic reference of the proto form is not clear. It is obvious that *šowmi(-·či) referred to a female kinsman, but whether she was an affinal or consanguine relative is hard to

specify. It is assumed that Pk has deleted *w following a back rounded vowel, and preceding another labial, *m, without the expectable development of *ow > /o·/.

DAWN, MORNING *q^haʔ·á Ps k^haʔ·a-, Pn k^haʔá, Pne k^haʔá·[wi], Pse x^há-, Pe xa·ʔá-.

DAY *makílY ~ *ma·kí Pk mací, Ps ma·či, Pn mačí, Pc ba·čí, Pne má·ti, Pse mcil, Pe (dá)mal(?) [dá 'sun', -mal perhaps contracted from †makil in the phrase dámal mi·t^héy 'every day' (in which it uniquely occurs) analogously to the contraction of the possessive morpheme -ibax to -ix in allegro speech?]. The Pk, Ps, Pn, Pc, and Pne forms reflect the second reconstruction.

DEER/MEAT *bihxé Pk bihše, Ps behše, Pn bišé, Pc pšé, Pne běhše, Pse bxé, Pse bi·šé.

DESIDERATIVE, cf. OPTATIVE and SUBJUNCTIVE

DIE, TO *q̓alálY ~ *q̓alá- Pk q̓alaw 'very sick', Pn k̓alá- 'to die', Pc k̓lá- 'to die', Pse q̓lál- 'to be sick, dead', Pe q̓a·lál 'extremely sick'. It is assumed that the shift in meaning to 'very sick' is the result of hyperbole (as in English "I'm dying" meaning "I feel very sick"), since the metaphors currently used by Pomo speakers to refer to the act of dying—a semantic domain much affected by linguistic taboo among the Pomoan languages as in English—usually refer to various ways of conceptualizing the event (as in English "pass on or over") rather than possible causes. Pk and Pc reflect a proto form of the second type.

DIRECTIONAL *{-lal} Pk {-Xl} '-ward', Pe {-lal} 'movement towards/in the direction of the goal specified'. In Pk {-Xl} is limited in its occurrence to terms for common geographic features and for the cardinal directions. In Pe {-lal} is freely suffixed to nouns, demonstratives, and directionals, including terms for common geographic features and for the cardinal directions. In Pe {-lal} has the shape /-lal/ after unstressed vowels, /-al/ after consonants, and /-l/ after stressed vowels. (The portion -la of *{-lal} has presumably been lost in Pk through the operation of third post-tonic vowel syncope (141.21) or a similar type of syncope of post-tonic unaccented syllables.) The Pk morphophoneme [X] indicates that a preceding laryngeal increment is deleted when this suffix is affixed. In Pe {-lal} may follow both {-·} (< *{-·}) and {-w} (< *{-w}).

DIRTY *čáʔčá Pk šaʔša, Ps [la]ʔčá, Pn čacá, Pne čá·ča-, Pe čá·č. Pn č for PP *č is aberrant.

DOE *mathéy Pk mathey, Ps miyathe[n] 'doe, mother', Pn mathéy, Pne bathéy, Pe māthi. Pe th for PP *t^h is aberrant. It is likely that some sort of dissimilatory reshaping has taken place, due to an overlap with the stem for 'other's mother', Pe -t^hé. [A third person's own mother would be Pe /ma·t^hé./.] Some sort of similar reshaping of the word for 'doe' influenced by the word for 'mother' is evidenced in Ps where the PP initial sequence *ma- has been reshaped to Ps /miya-/ presumably on the model of the third person singular possessive prefix Ps /miya-/, occurring in Ps /miy·a t^hé/ 'his mother'.

DOOR *hohwá Pk hohwa, Ps [hi?da] 'door, road', Pn dáw (O), Pne háwa, Pse dáwa 'door, road', Pe Wá. Pn and Pse reflect compounds of the PP forms for 'path' + 'door' : *hi?da + *hohwa (with predictable loss of initial proto syllables beginning with *h). The Ps gloss suggests the same type of composition in Ps, with total loss of the second syllable †wa.

DOVE *ma·yú, *ma·yú· Pk ma·yu, Ps ma·yu, Pn ma·yú (Redwood Valley), ma·yúkuču (Potter Valley), Pk ma·yú·, Pne mayú-, Pse myú, Pe ma·yú·. Pe and Pne reflect the second type of reconstruction, Pk and Pn the first. Pk /m/ instead of /b/ < *m before /a/ suggests that the Pk form is a borrowing rather than a true cognate.

DREAM, TO *q^ha[?]ad·ú- Pk q^ha[?]a[dij]du, Ps k^ha[?]ad·u, Pn k^ha[?]án, Pne k^ha[?]ár[-an] [-an 'infinitive suffix'], Pse xdú[ymal], Pe xa·dú [-m]. Pne /r/ is the normal development of post-tonic *d, when followed by a vowel. (Cf. Section 141.22 for a discussion of the syncope of pre-tonic unaccented syllables beginning with /?/ in Pe.)

DRINK, TO *ho[?]qó(k) Pk o[?]qo-, Ps ho[?]koy, Pn kó, Pk kóc-, Pne kót[-on] [-on 'infinitive suffix'], Pe qó·[-x].

DUCK *qá·yán (~ qaya·n?) Pk qayal, Ps ká·yan, Pn káyán, Pk kýá·n, Pne káyá·[-ka·], Pse kýá·n, Pe qá·yá·n.

DURATIVE *{-kid-} Pk {-ci⁰d-} 'durative', [{-ci⁰d-} + {-ci⁰d-}] = 'habitual'], Pse -li- 'durative, habitual', Pe {-kil} 'habitual', [{-l} 'durative']. The correspondence of Pk []d [] to Pse, Pe /l/ also occurs in CARRY IN HANDS.

DUST, cf. ASHES

EAR *xi·mánY Pk šima, Ps ši·mo[-mo][mo 'hole'], Pn šimá, Pk šmá, Pne šíma, Pse xmán[ca], Pe ši·má·.

EARTH *?ahmáṭ ~ *?amáṭ Pk ?ama· 'thing, earth, dirt, land', Ps ?am·a, Pn má·, Pk má·, Pne ?áma·, Pse máṭ verb prefix 'down to ground', Pe Már 'down to land' [Má 'land as opposed to water'].

EAST *?axó· Pk ?aš·o· 'south', Ps ?aš·o, Pn šó·, Pne šó· ~ šó·w-, Pse xa[mal], Pe šó·. The Pse form presents a number of problems.

(1) This is the only instance of *?aCo > Pse Ca. (2) Pse x̄ is the normal reflex of *x only in the environment of velars and post-velars. If the Pse form under consideration is in fact cognate, then glottal stop must be assumed to have the same backing effect as velars and post-velars, and the following development sequence is likely: *?axo· > †?xa· > †?xa· > †?xa > †xa [or †?xa· > †xa· > †xa].

EAT (1), CHEW, TO *qawá- Pc ka·wá-, Pse qwá, Pe qa·wá.

EAT (2), TO *kuh·ú- Ps čuh·u- (O,H), Pe ku·hú.

EGG *híko·, *hikó Pk hičo·, Ps hič·o, Pn čó·, Pc čo·, Pne čó, Pse kó, Pe kó.

ELBOW *qo/uhsá Pk qohsa, Pe qu·sá. Cognates from the other languages are needed to determine which proto vowel was present in the first syllable.

EMBERS, CHARCOAL *mahsík?/t? Pk mahsit, Ps mahsi·, Pn masit, Pc ba·síc, Pe ma·sík^h. Pc, Pe (and possibly Ps) reflect *k?; Pk and Pn reflect *t?. PP *k? and *t? here probably reflect different possibilities of morpheme combination.

ENEMY *kuhmá Pk cuhma, Pn čumá (Redwood Valley), čimá (Potter Valley), Pe ku·Má.

EXCREMENT *?ahp^há Pk ?ahp^ha, Ps ?ihp^ha 'intestines', Pn p^há, Pne fa, Pse fa, Pe p^há. The correspondence of Ps ?i- to Pk ?a- is aberrant and presumed to be somehow connected with the different gloss in Ps.

EXPECTATIVE, cf. SPECULATIVE

EYE, FACE *hu?uy Pk hu?uy, Ps hu?uy 'face', Pn ?uy, Pc ?uy 'face', Pne ?uy, Pse ?uy, Pe ?uy.

FAT *?ihp^húy Pk ?ihp^huy, Ps ?ihp^huy, Pn p^húy, Pc p^húy, Pne fiy[in] 'grease', fí· 'animal fat', Pse fuy, Pe p^húy.

FATHER *me?·é Pk me?e 'your father', Ps me?·e 'your father' (O), Pn -?é 'father', Pne -me?é-, Pse m?e 'father', Pe me?é 'your father'. Pk, Ps, Pn, and Pe have all apparently reshaped the proto morpheme by segmenting the initial syllable, identifying it with the second person singular prefix *mi-, as in OLDER BROTHER.

FATHER, FATHER'S *bá-·či Pk ba-, ba·š, Ps -bač, Pn bá?, Pne bá·či, Pse -bač, Pe bá·(file) [file is not synchronically segmentable in Pe, occurring uniquely in this form. However, file in Pk means 'old man (respectful)' and suggests that the Pe form was formerly segmentable.]

FATHER, MOTHER'S *-ká-·či Pk -ca·š-, Ps -č·ač-, Pn -cá?, Pne tá·či, Pse -ce[n], Pe ká·č. This is the only example of Pn /c/ for PP *k instead of /č/.

FAWN *nuhwák? Pk nuhwac, Ps muhway, Pn duwáč, nuwáč, Pc mwáč, Pe nu-Wák^h. The assimilation of *n to a stop before a non-nasal in Pn, paralleling the development of initial *n to /d/ in the Point Arena dialect of Pc (cf. Oswalt 1964:156), combined with the lack of the expected development *u > Pn /i/, suggests a borrowing from Pc. Ps m < *n is aberrant and also suggests contamination from Pc.

FEATHER, SMALL/DOWN *?ah^hé ~ ?ah^hén? Pk ?ih^he 'feather (medium-sized)', Ps ?eh^he 'down', Pn t^hé 'feather', Pc t^hé, Pne t^há (H), Pse fán < ?tan(?), Pe t^hé 'down'. Assimilation of the first syllable to the second is assumed for Pk and Ps; assimilation of the second proto syllable to the first is assumed for Pse. The difficulty with this hypothesis is the existence of another proto form, hypothesized to have an almost identical shape, *?ah^hi'y 'big, pl.', which does not have reflexes in any of the daughter languages which show assimilation. However, SMALL FEATHER/DOWN can not be reconstructed as *?iht^há (assuming assimilation of the second syllable to the first in Pk and Ps), since there are five other proto forms reconstructed with the vowel sequence *...i(h)Ca... (ARM/WING, BONE, SPIDER, WIND, WOMAN) which do not show such an assimilation in Pk and Ps, so it is assumed that *e behaves quite differently from *iy. Pse f < *t^h is aberrant.

FEATHER, LARGE *hi?·i Pk hi?i, Ps hi?·i, Pn ?í 'feather', Pc ?í, Pne ?í 'wing', Pse ?i 'feather', Pe yi?í 'feather'.

FINGERNAIL, cf. CLAW

FIRE *?ohxó Pk ?oho, Ps ?oh·o, Pn hó, Pc hó, Pne ?óho, Pse xó, Pe xo.

FIRST PERSON SINGULAR SUBJECT *ha?á· Pk o?á·, Ps ?á·?a, Pn ?á·, Pc ?á·, Pne ?á·, Pse ?a, Pe há·.

FIRST PERSON SINGULAR OBJECT *?awí-to· Pk o to· ~ o to {(-wi}
'first person object verb suffix'), Ps ?at·o, Pn tó·, Pc tó·, Pne ?áhto, Pse wit, Pe wi.

FIRST PERSON SINGULAR POSSESSIVE PREFIX *?awí- Pk {?a·-} allomorphs: [] o [] with disyllabic roots and terms suffixed with {-o's} (< *-·ci), [] ?a·- [] elsewhere, Ps ?a·- ~ ?a-, Pne ?a- before the labials, /u,m/ ~ ?an- elsewhere, Pse wi-, Pe wi- ~ wi[ma·-]. In Pk the sequence Vw > V· before consonants, thus Pk {?a·-} is assumed to come from an underlying †{?aw-}.

FIRST PERSON PLURAL SUBJECT *?awá-ya Pk o ya, Ps ?a·ya, Pn yá, Pc yá, Pne ?áya, Pse wiy, Pe wá. The Pse form seems to be a new analogical formation (McLendon, in press).

FIRST PERSON PLURAL OBJECT *?awá-ya-l Pk \square yal, Ps ?a·yan, Pn jál, Pc yál, Pse wil, Pe wál. The Pse form seems to be a new analogical formation (McLendon, in press).

FISH *?ahxá Pk ?ahša, Ps ?ahša, Pn šá, Pc šá, Pne šá-, Pse xá, Pe šá.

FIVE *tuhxo Pk tuhšo, Ps tu·šo, Pne tóhšo 'hand'. Assimilation of the first syllable vowel to the second is assumed for Pne. Ps ·š < *hx is unique and suggests some reshaping has occurred.

FLEA *?i·mélá Pk ?imela, Ps ?e·me·la, Pn ?é·mala [loan from Ps?] Pc málá, Pse míl, Pe (beré)mal. The retention of an initial ?V- sequence in Pn is aberrant and suggests that the Pn form may well be a borrowing. Assimilation of the second to the third syllable is assumed for Pn, Pc, and Pe. Assimilation of the second to the first syllable is assumed for Pse. The loss of the final unstressed vowel in Pe and Pse is, of course, normal. Pc /m/ rather than /b/ < *m preceding /a/ suggests that *m > Pc /b/ initially preceding /a/ before the operation of syllable aphesis (141.11).

FLESH *čí?·í Pk ší?i, Ps čí?i, Pn či?í, Pc ša·?i, Pse [s]čí; cf. also SKIN.

FLINT *q^hahká Pk qahca, Ps kahča, Pn k^hačá, Pc k^hcá, Pne k^háhta, Pse qcá, Pe xa·ká. PP *q^h > Pse q _/t, c/.

FLY, TO (1) *hak·á- (?) Pk \square ca-, Ps hač·a-, Pse cal-, Pe ká- (?) 'to move with energy, intensity, rapidity, frequently against resistance'. This is one of two examples of the correspondence of an initial h/?V syllable in Ps to nothing in Pk. The other example, SMOKE, involves a proto compound of more than two syllables in length. Perhaps the initial syllable of the Pk root 'to fly' was lost under similar conditions.

FLY, TO (2) *p^hudí- Pk p^hude- 'be blown so as to move', Pn p^hidé-, Pc p^hdé-, Pse -di- 'float, glide, fly', Pe p^hu·dí- 'float, fly'.

FLY, n. *čamolý Pk šamo·, Ps čam·u (O), Pn čamó·, Pc ša·mó·, Pne čamó·-, Pe čá·mal. It is assumed that *o > Ps /u/ following the labial nasal /m/ in an open, word-final syllable, i.e., after the loss of *lý.

FOG, cf. CLOUD (1)

FOOD *ma?á Pk ma?á 'food, eat', Pn ma?á 'food, acorn (generic), to eat', Pc ba?á, Pne má?á 'food, acorn!', Pse m?á- 'eat (archaic)', Pe ma?á[y].

FOOT *q^ha·máný Pk q^hama, Ps k^ha·ma, Pn k^háma, Pc k^hmá, Pne k^háma, Pse xman, Pe xa·má..

FOREHEAD *di·lé Pk lile, Ps lé·le, Pn dilé, Pc lé (Halpern records both le and lle), Pe di·lé. Assimilation of *d > l is assumed for Pk, Ps, and Pc, with subsequent predictable loss of the first V in Pc.

- FOREST, DEEP, DENSE (hence SHADED) *xi·yó Pk šiyo 'dense forest', Ps ši·yo 'thick timber', Pc šyó 'dense forest', Pe ši·yó 'shade'. The final length in Pe probably represents an additional morpheme: {-} specifying culturally conventionalized location or area as in /qa·qó/ 'valley, meadow, clearing' : /qa·qó/ 'wilderness' (the wild and uncontrollable outside world as opposed to inside the confines of the village and its immediate vicinity).
- FOX (1) *haqáw Pk haqaw, Pn káw, Pc kaw, Pne káw-, Pe [qa·]qáw.
- FOX (2) *du·cá Ps du·ca, Pse ?sá.
- FROG *wa·tak/?q? Pk waṭac, Ps wa·ṭák 'frog', wa·ṭáča 'small blue frog' (?), Pn čawátak, Pc waṭák, Pne wára?-, Pe ča·wátak [given for 'frog' by one informant who also spoke Pn]. The Pe form would seem to be a loan from Pn, from before the change of *t > Pn t before /a/.
- GIVE ROUND OBJECT *dihqá- Pk dihqa-, Ps dihka-, Pn diká-, Pc da·ká-, Pse ?qa-, Pe di·qá-. According to Oswalt (1964:161) Pc da- reflects *da- rather than the expected *di-.
- GO, SEVERAL TO *pʰilá- Pk {pʰiĺ̩} [] represents a vowel identical with that in the next syllable], Pn pʰili-, Pc ha·l ~ hl-, Pe pʰi·lá.
- GOOD *qo?dí Pk qo?di, Ps ko?di, Pn kídí, Pc kdí, Pne kúdi, Pe qo·di[y]. Pne d < *?d is aberrant—it may indicate a misrecording.
- GOOSE *lála, *hlá·la Pk lala, Pn dalá, Pc da·lá, Pne lá·la[-ka·], Pse lálaq, Pe Lá·l. Dissimilation of initial *l before a second l is assumed for Pn and Pc. The final Pse consonant is assumed to have been present at the period when final unstressed vowels were lost and to have prevented the operation of this rule. Its origins are unclear.
- GOPHER(?) *?a·láme Pk ?alame, Ps ?a·lame, Pn lamó, Pc lám, Pne ?a·lím[-ka·], Pse ?lab, Pe lámi. This set presents a number of problems. There are no other examples of PP *e > Pn /o/ (presumably this change reflects a reshaping influenced by /mo/ 'hole', the use of which is an important characteristic of gophers), a dissimilatory raising of final PP *e to /i/ must be assumed for Pne and Pe in this form (and in BIG, sg.), followed by assimilation of the preceding syllable to this final syllable and its subsequent loss in Pne. It is not clear why the final unstressed vowel was not lost in Pe, however, or why it was lost in Pc. This is also the only example of PP *m > Pse -b.
- GRAIN, GRAIN PLANT *muhká Pk muhca 'grain', Ps muhča 'pinole plant', Pne muhta 'pinole' [támuhta 'plant'], Pse mká [loan from Pe?] 'grain', Pe mu·ká 'grain'. PP *k > Pse /c/ not /k/, hence the suspicion that Pse mká might be a borrowing from Pe.

GRASS *qač·á Ps kač·a (O), Pn kačá, Pne kačá, Pse qčá, Pe qa·čá.
 [There is a Pk form with an appropriate shape: qa?ša 'lymph?', but the meaning seems unrelated.]

GRASSHOPPER *xahqót Pk šahqo, Ps šahko, Pn šakó, Pc ša·kó,
 Pne šahkó[-ka·], Pse xqot, Pe ša·qó.

HAIR, OF HEAD *he?·é, he?ey(?) Pk he?e, Ps he?·e, Pn ?é·, Pc ?é·,
 Pne héle (?), Pse ?éy. It is not clear to what should be attributed Pne
 héle instead of the expectable †he?e.

HAIR, OF BODY, FUR *cihmé ~ *ci·me Pk sime, Ps he·me, Pn
 cimé, Pc smé, Pne čémé, Pse -smi, Pe či·Mé.

HAND *?at^há·na ~ ?at^haná Ps t^ha·na (O,H), Pn t^hána, Pc t^hná (O),
 t^ha·ná (H), Pse ?tán. PP *?a- is assumed to be lost in Ps words which
 would otherwise be tri-syllabic. [The initial Pse cluster ?t attests to
 the former presence of such a syllable.]

HAWK *kiyá· Pk čiya· 'red-tail hawk', Ps čiy·a 'red-tail hawk', Pc
 čyá·, Pne čiyá·[-ka·], Pse kiyá· 'red-tail hawk', Pe ki·yá·.

HE, cf. THIRD PERSON, MASCULINE SUBJECT

HEAD *kiná·lý, *xiná·/lý (or *k^hiná·?) Pk šina· 'head' (elegant), Ps
 šin·a, Pn šiná·, Pc šná·, Pne tína·, Pe ki·ná·l 'crown'. The Pk, Ps, Pc,
 and Pn forms reflect PP *xiná·/lý; the Pe and Pne, PP *kiná·lý, since
 the expected developments in Pk, Ps, Pc, and Pn of PP *kiná·lý would
 be: Pk †cina·, Ps †cín·a, Pn †cina·, Pc čná·; cf. also OCCIPUT.

HEAR, TO *xó·ki- Pk □ šo^oc-, Ps šo·či-, Pn šó·-, Pc šó·c-, Pse
 xko, Pe šó·k^h. Assimilation of the second vowel to the first which was
 then lost is assumed for Pse. The second vowel although unstressed
 was not lost, since it would always have been followed by at least one
 more suffix and would never have been utterance final. Pse k < PP *k
 is aberrant, however, and suggests a borrowing.

HEMP *mahxá Pk mahša 'tree rings (probably)' (?), Ps mahša, Pn
 mašá, Pe ma·šá.

HILL, cf. MOUNTAIN

HOLE *hi·mó Pk ?imo, Ps hi·mo, Pn mó, Pne hímo, Pse mo, Pe mó.

HORN *ha?·á Pk ha?a, Ps ha?·a, Pn ?á, Pc ?á, Pne ?á, Pse ?a,
 Pe ?á.

HOT, TO BE *muhtám-; **COOKED, TO BE** *mu?tá-; **SUMMER**
 *mu?táwinal Pk muṭam 'to be hot'; mu?ta[w] 'to be cooked', Ps
 muṭama 'to shine (as of sun)'; mu?ta- 'to be cooked', Pn mífa·minál[mu]
 'summer', Pne múhtá[k-an] 'to roast meat' [-an 'infinitive suffix'],
 mu?ta-· 'to shine (as of sun)', mu?tali 'summer', Pse mta- 'to cook',
 mítalal 'summer', Pe mu·tá· 'the sensation of warmth created by being
 in a strong sun' [generally translated as 'to shine (of sun)'], mu·tá·winal

'summer'. Only the glottal precursor /ʔ/ can occur before glottalized consonants in Pk, hence *muhtám- > Pk muṭam. Presumably a similar kind of synchronic limitation accounts for the absence of a reflex of *h in Ps muṭama. The sets for TO BE HOT, TO BE COOKED, and SUMMER are presented together here since the absence of reflexes of precursors before *t in Pse, Pn, and Pe, and the evidence of some semantic reshaping makes it difficult to identify, unambiguously, into precisely which set forms in these languages fit. The development of the Pse and Pne forms for SUMMER is not understood, although it is clear that haplology is involved.

HOUSE *?ahká Pk ?ahca, Ps ?ahča, Pn čá, Pne ta, Pe ká.

HUNT, TO *bo·?ó Pk bo?o, Ps bo·?o-, Pn bo?ó-, Pne bó?o[-ka·]
'elk (?), horse', Pe bo·?ó.

I, cf. FIRST PERSON SUBJECT

IF, cf. SENTENCE CONNECTIVE (1) and (2)

IMPERATIVE SINGULAR *{-im} Pk {-v̑m} 'Formal Imperative', now employed by myth characters in prayers and invocations, Pn -m, Pe {-im}. The Pe morpheme has the allomorphs /-m/ following vowels and /-im/ following consonants. The Pk morpheme has the allomorphs /-m/ following vowels, /-um/ after [d], /om/ after [q^o], /-am/ after post-velars and labials, and /-im/ after all other consonants. Cf. Chapter III and its footnote 2 for a possible explanation of the development of additional Pk allomorphs for the Imperative following post-velars.

INDIAN, cf. MAN

JACKRABBIT *?a·má·qala Pk ?ama·la, Ps ?a·ma·la, Pc máka·la,
Pne ma·kála[-ka·].

JAY *cáyi ~ *cá·yi Pk šayi, Ps ča·yi, Pn čáy, Pc šáy, Pne čayí[t-],
Pse čáycay, Pe čá·y.

JEALOUS *?ayél Pk ?ayel, Pn yél-, Pc yél, Pse yel, Pe yé·l-.

KINSMAN, ONE'S OWN, IN GENERATIONS ABOVE EGO *{-·ci} Pk
{-o's}, Pne -·či, Pe {-č}.

LAUGH, TO *k^huwáy Pk c^huway-, Pc šwáy-, Pe k^hu·wáy.

LEACH, TO *k^he?é- Pk c^he?e-, Pn še?é-, Pc š?é, Pse š?é-, Pe
k^he?é-.

LEAF (1) *si?tál Pk si?tal, Pn sitál, Pc stál, Pne [tú]?ta, Pse
[kiq]ta, Pe si?tal. The lack of a reflex for *-l in Pne and Pse perhaps indicates that this *-l was a separate, segmentable morpheme in Proto Pomo.

LEAF (2) *xihp^há Pk šihp^ha, Pn šap^há.

LEG *xahkú ? Pk šahku, Pc ša·kú, Pe ša·kó. This set has a number of problems. Pk and Pc k < PP *k are aberrant, as is the correspondence of Pe /o/ to Pk, Pc /u/.

LIE, TO *mi·tí- ~ *mí·ti- Pk mití-, Ps mi·ti-, Pn mití-, Pc mtí-, Pne mé·re-, Pse mtí, Pe mér.

LION, MOUNTAIN, cf. PANTHER

LIVER *k^hahlály Pk cahla·, Ps čalha, Pn šalá·, Pc ša·lá·, Pne čála·, Pse šlal, Pe k^ha·Lál. Ps -lh- is aberrant. The expectable reflex would be †-l-.

LOCATIVE (1) *{-w} Pk {-w} 'in', Pe {-w} 'locative'. In Pe {-w} is a suffix of rare occurrence which has only been found in combination with six stems: /ká/ 'house', /xó/ 'fire', /wi·ná-/ 'on top', /bi·dá-/ bound form of /bi·dámi/ 'creek', /xá-/ bound form of /xá·cidá/ 'mouth', /ná-/ 'other side, aspect, half'. In Pk the suffix seems also limited in its occurrence (Oswalt (MS:130) describes it as occurring "suffixed to a few nouns"), but, interestingly enough, it occurs with a cognate of at least one of the stems with which the suffix occurs in Pe—the stem for 'house'. The semantic range of this suffix is somewhat uncertain. In Pk it is glossed as 'in'. In Pe it seems to indicate location away from with three stems ('fire', 'on top', 'creek'), while it seems to agree with the Pk form in indicating location within with three other stems ('water', 'house', and 'other side, aspect, half').

LOCATIVE (2) *{-·} Pk {-X·} 'in, at, to', Pe {-·} 'location at a culturally conventionalized direction or location'. Both the Pk and Pe reflexes of this suffix are limited in their ability to combine with stems. The Pe suffix has been identified in only fourteen forms (McL., 1966 MS:Section 912). The Pk morphophoneme [] X [] indicates that a preceding laryngeal increment, /h/ or /ʔ/, in the same word, is deleted with the affixation of this suffix.

LONG (1) *?ahqó1 Pk ?ahqol, Ps ?ahkon 'singular', ?ahko·n-ha 'plural', Pn kól 'singular', kó·l-ay 'plural', Pc kól, Pne kól-, Pe qó1-a 'long, plural'.

LONG (2) *bahkíl Pk bahcıl 'far', Pse bcıl[-in] 'long, tall' [-in nominalizing suffix?], Pe ba·kíl 'long (sg.)'.

LOG *musúl^y Pk musu·, Ps musu· 'burnt log', Pn misú·, Pe mu·súl.

LOOSE *qa?boy Pk qa?boy, Pc ka·bóy, Pe qa·bóy in /wi·t^há qa·bóy/ 'soaked acorn meal' [wi·t^há 'acorn meal'].

LOUSE, HEAD *?ahkín^y Pk ?ahci, Ps ?ahči, Pn čí, Pc cí, Pne tí[-ka·], Pse cin, Pe kí·.

LOUSE, BODY *bitéx Pk biteš, Pn bitíš, Pc p̄téš, Pne t̄uhšu-[ka·], Pe p̄e·réš(?). The Pe form is anomalous, and probably to be explained

as an early loan from Pc, before Pe \dot{t} > r, and after the loss of unstressed Vs in word-initial syllables which produced clusters in which PP *b became devoiced in Pc. The genetically related form in Pe is probably to be found in the first two syllables of the word for 'flea' beré-mal, since only the last syllable corresponds to the PP set for 'flea'. The Pne form is problematical. It seems to imply a PP alternate *tehxu.

MAGNESITE *^hip^hol^y ~ *^hip^hó·l^y Pk ?ip^ho·, Ps p^ho·[?o] 'magnesite', 'pollen from wild rose, red clay used by dancers', Pn p^hó·, Pne fó·, Pse f^hol [with metathesis < †?fol?], Pe p^hó·l.

MAN (1) *^haká·k? Pk ?aca^hc 'person, Indian, man', Ps ?ač·ay, Pn čá? 'man, person', Pc cá·c 'person', Pne tá·t[-ka·], Pse ca-wi, Pe ká·k^h 'man, Indian'. The reflexes of *-k? in Pn are not clear. Here *-k? > Pn /?, in FAWN *-k? > Pn /č/, in RIB *-k? > Pn /t/.

MAN (2) *hi^hbaya Pk hi^hbaya, hi^hbayá[yac] 'son-in-law', Ps hi^hba·[ti-] 'father-in-law', Pn bá·, Pc báya, Pne hí·baya, Pe hí·baya 'men'. The Pe form is aberrant; it seems likely to be a loan from Pne. Pne b < *b is aberrant—it may result from a misrecording.

MANZANITA BUSH *qa·yé, *qayé· Pk qaye, Ps ka·ye, Pn kayé, Pne káye·, Pe qa·yé·.

MANZANITA BERRY *bahqáy Pk bahqay, Ps bahkay, Pn bakáy, Pc ba·káy, Pne báhkay 'berry', Pse bqay (H), Pe bá·qay. The position of Pe stress on the first syllable is anomalous.

MAPLE *qá·lab? ~ *qalá·b? Pk qala·m?, Ps kal·an (O), ka·lan 'black willow' (H), Pe qá·lap.

MEAT, cf. DEER

MILK, cf. BREAST

MOON *qalá·(xa) ~ *^halá·(xa) Pk qala·ša, Ps ?al·a·ša (O) ~ -la·ša 'month, moon', Pc lá·ša, Pne ̄kalá·[ma?an] 'sundown', Pe lá· 'sun, moon'. The Pne and Pk forms are descended from the first stem, all the forms in the other languages from the second.

MORTAR *qolol^y Pk qolo· 'mortar basket', Ps ̄kol·o 'mortar basket', Pse ̄qlol; cf. also BASKET, POUNDING.

MOTHER, OTHER PERSON'S *-ht^hé Pk -ht^he-, Ps -ht^he, Pn -t^hé, Pne [fá·]ht^he (?) 'sister-in-law', Pse -še, Pe -t^hé.

MOTHER, FATHER'S *má-·čí Pk -ma-, ma^hs-, Ps -máč-, Pn -má?, Pne má·či-, Pse ma, Pe má·č, -má·.

MOTHER, MOTHER'S *qá-·čí Pk -qa-, -qa^hs-, Pn -ká?, Pne ká·či-, Pse -qa, Pe qá·č, -qá·.

MOTHER-IN-LAW *ma-xá· Pk -ša·-, ma-ša·- 'be in a mother-in-law relationship, call someone mother-in-law', Pn -šá· 'mother-in-law',

Pse -mxa, Pe -šá· 'parent-in-law', ma·šá· 'be in an in-law relationship, call someone parent-in-law'.

MOUNTAIN *dá·nó Pk dono, Ps do·no, Pn danó, Pc da·nó, Pne dóno, Pse kno, Pe da·nó. Pse k for PP *d- instead of ? is not understood; cf. also UPHILL.

MOUTH *ahxá Pk ?aha 'interior of mouth', Ps ?ah·a, Pn há, Pc há, Pne há-mo 'mouth, lip', Pse xá[sto], Pe xá-čí·dá 'mouth' [xa-bound form of 'mouth'].

MUD *bá·to Ps wo·to 'dust, kʰawo·to 'muddy water' [kʰá 'water'], Pn baṭó, Pne kʰábo[t], kʰabo[s] (H), Pse bot, Pe bór.

MUDHEN (?) *qʰá-čiyát ~ *qʰa-čít Pn kʰaciya, Pse xáčit, Pe xáci·ya. The PP form seems to consist of the morphemes for WATER and BIRD. The differences in the daughter language reflexes in MUDHEN and BIRD presumably is the result of a difference in the prosodic patterns associated with BIRD in compounds and as a free form.

MUSH, ACORN *tʰo?ó(·) Pk tʰo?o, Ps tʰo?o, Pn tʰo?ó, Pc tʰ?ó, Pne tʰo?ó (McL), tʰó?o· (H), Pse š?o, Pe tʰo·?ó·.

MUSHROOM (1) *hicé· Pk hicé·, Ps [bimmu]čé[?e], Pn če?é· (?), Pc čé·, Pne če·, Pe čé·. The Pn form has several problems. Pn č for *č is unique. Pn also has an additional final syllable unattested in another language, or other sets. It could be a loan from Ps where in other sets, such as MAGNESITE and ARROW, Ps has a final syllable, ?+harmonic vowel, and no initial syllable, h/?+vowel—corresponding to Pk forms beginning with h/?+vowel. This is one of three forms in which Pk shows /č/ as the reflex of PP *č, rather than the expected /š/. The other forms are CLAW, and FATHER'S SISTER.

MUSHROOM (2) *ka·lá· Pk čalal, Ps ča·lan 'white mushroom', Pn čalál 'species of mushroom', Pc ča·lál, Pse klál 'variety of mushroom'.

MUSSEL (OCEAN CLAM?) *lá?qó Pk no?qo, Ps no?kó(O), Pn lakó 'ocean clam', Pc la·kó, Pse luq 'ocean clam', Pe la·qó 'Washington clam'. The presence of /u/ rather than /a/ or /o/ in Pse is not understood. The loss of the final vowel in Pse suggests an alternative stress location in the underlying proto form, i.e., *lá?qo. Pk and Ps n- < *l- are aberrant.

NAME *?ahxí Pk ší[hcima^oč] 'to name', Ps ?ahši[·yaw], Pn ší, Pc ší, Pne [?awi]-šé[m] 'my name' (H), Pse xi- 'to name', xin 'name', Pe ší.

NAVEL *?ohqó-hmo Pk ?ohqo mo, Ps ko(ko) hmo, Pn kómo, Pc kómo, Pne kómo, Pse [bu]xa, Pe qó. Pse x reflects PP *qh rather than *q, and the presence of /a/ rather than /o/ is puzzling; it may not be a true cognate. The proto form seems to consist of two morphemes: the bi-syllabic stem for UMBILICUS and the morpheme for HOLE.

NECK *q̥óyu Pk kuyu 'windpipe', Pn kʰú (?), Pse qoy, Pe q̥y.

Assimilation of *o to a following /u/ is presumed for Pk, but there are no supporting examples.

NEGATIVE (1) *-tʰin ? Pk -tʰin 'not', Ps -tʰ verb suffix, tʰot̪ 'not' (enclitic with nouns and adjectives) (O), Pn -tʰin 'not'. Pk -n < *-n instead of -l is aberrant.

NEGATIVE (2) *kʰów ~ *?akʰ·ów Pk cʰow, Ps ?ačʰ·ow 'be absent' (O), Pn šó- 'not to be/have', Pc cʰow 'not', Pne čó·[t-on], Pe kʰú-.

DIP NET *wa·yák?/q?, *wayá·k?/q? Pk wayac, Ps wa·yač (O), Pn bayák, Pc ba·yač, Pse wya, Pe wa·yá·x. Pk reflects *-k?; Ps, Pn, Pc, Pse, and Pe *-q?.

NEW *xi·wéy Pk šiwey, Ps še·wey (O), Pn šiwéy, Pc šwéy, Pne šéwey, Pe ši·wéy.

NIGHT *duw·é Pk duwe, Ps duw·e, Pn diwé, Pc ?a·wé, Pne dúwe, Pse ?we, Pe du·wé.

NORTH *kuh·úla (?) Pk cuhula, Ps čuh·ula (O), Pn čuhúla, Pne tuhúl, Pe kuhúla. It is not clear why the final unstressed vowel in Pe was preserved when other such unstressed syllables were lost in Pe and Pse. It perhaps reflects an early layer of borrowing (after the loss of final unstressed vowels, but before the fronting of velars in the Russian River languages).

NOSE *hi·lá Pk ?ila, Ps hi·la[m?da], Pn lá, Pc lá, Pne límo [mó 'hole'], Pse lá, Pe lá[babo].

OAK, BLACK *yuhxíy, *lixúy Pk yušiy 'black oak acorn', Ps yohši, Pn diší, Pc šíy 'pin oak (?) acorn', Pne núhši, Pse xuy, Pe li·šúy. The Pe and Pse forms reflect a proto form of the second type, the other languages reflect a proto form of the first type, with Pc and Pse providing no evidence of the existence of an initial syllable demonstrated in the other languages. Pse /x/ < *x is aberrant.

OAK, LIVE (?) *xa?ki(b?) Pk ša?čam?, Ps ša?čan, Pn šačám, Pc [m]čí, Pne šá?ča?, Pse [li]ke. PEPPERWOOD TREE suggests Pk -m?, Pn -m, are reflexes of the tree suffix *{-b?}.

OAK, MUSH *cipʰá, *čapʰ·a Pk šapʰa 'acorn (large, long kind)', Ps čapʰ·a (O) 'white oak acorn', Pn čipʰá 'oak species', Pc ša·pʰá, Pne čáhfa, Pse čfá, Pe či·pʰá.

OAK, sp. *wiyú Pk wiyi 'acorn of Quercus Garryanna', Pse wyu 'oak, sp.' (H), Pe wi·yú 'oak, sp.' [deAngulo collected the form with the gloss 'Douglas oak']. Presumably *iyu > Pk /iyi/, but there are no other examples of this development.

OAK, WHITE *qa?ban/1- Ps ka?ba 'post oak', Pse qbán[du xle] 'white oak acorn tree' [perhaps from qban bdu xle? : bdu 'acorn']

Pe qá·bal-ap̄, qá·bay-ap̄ [< {-Vp̄}] ? an archaic suffix for plants and bushes found throughout Hokan (cf. Silver MS), mostly occurring with bound stems of unique occurrence in Pe, but still segmentable because of: /be·hé/ 'pepperwood nut', /be·hé·p̄/ 'pepperwood tree'. Cf. COTTON-WOOD for another occurrence of this morpheme in Pse as well as in Pe.]

OBJECT CASE *-al ~ *-to Pk [] to [], [] l[], [] el[], Ps -to, Pn -to, -al ~ -l, Pc __, Pne -to, -l, Pse -1, Pe -al ~ -l. The conditions governing the alternation between *-to and *-al are not clear. In Pk, the reflexes of these morphs are morphologically conditioned; the conditions governing the occurrences of reflexes of these morphs in the other languages which preserve both are unknown. Reflexes of *-to seem always to be associated with singular forms; reflexes of *-al seem to occur with both singular and plural forms. Languages which show an alternation between -Vl and -l, seem always to show -Vl following a consonant, and -l following a vowel.

OCCIPUT *k^ha·yá Pk c^ha·ya, Ps č^ha·ya, Pne č^háya, Pse xyá, 'top of head', Pe k^ha·yá 'head'.

ON, ON TOP OF, ABOVE *wína ~ *winá· Ps winá-tow 'back of the hand', Pn miná·, Pne wí·na[1] 'straight up', Pse win 'on', Pe wi·ná 'on top of'. Pse suggests the first reconstruction, Pe and Pn the second.

ONE *ká-, *ká··- Pk [ná·n]čá 'eleven' [literally 'plus + one'? cf. Pe for a similar construction], Ps čá·[?a], Pn čá·, Pne čá· ~ čá·[ki] (H), Pe ká[li] [ná·káli 'eleven', literally: 'plus + one'].

ONION, WILD *q^ha?bat?/y Pk q^ha?bat, Ps k^ha?bat, Pn kabáy ?, Pse kbot?, Pe xa·báy. Pn and Pse k for PP *q^h are aberrant. These reflexes are perhaps conditioned by the following proto glottal increment.

OPTATIVE *{-ix} Pk {-v̄š} Optative, 'I hope' [if {tí·qa} 'could, might' is present in the same construction, {-v̄š} takes on a desiderative function, 'I wish']., Pe {-iš} 'Desiderative' [always occurs with the subjunctive particle {ti}]. The Pe morpheme has the allomorphs /-š/ after vowels, /-iš/ after consonants. The Pk morpheme has the allomorphs /-š/ after vowels, /-uš/ after [] d [], /-oš/ after [] q^o [], /-aš/ after post-velars and labials, and /-iš/ after all other consonants. Cf. Chapter III and its footnote 2 for a possible explanation of the development of additional Pk allomorphs for the Optative following post-velars.

PAIN *duht^hál Pk duht^hal 'pain, disease', Ps duht^han, Pn dit^hál- 'pain, disease, to ache', Pc ?a·t^hál ~ ?t^hál, Pse ?šal- 'be sick', Pe du·t^hál 'to be in pain, hurt'.

- PANTHER *yahmót? Pk yahmot, Ps yamhoṭ, Pn damót 'panther, mountain lion, cougar', Pc ya·móṭ, Pne yamóṭ[-ka·].
- PATH *hi?dá Pk hi?da 'trail', Ps hi?da 'road, outside', Pn dá, Pc dá, Pne dá, Pse dá[wa] [cf. DOOR for -wa], Pe -dá, dáday.
- PEOPLE, GROUP OF PEOPLE [hence VILLAGE], RACE *nâhp̄ó Pk nohp̄o, Ps nop̄o 'rancheria, indigenous village', nohpko 'to live at a place', Pn nap̄ó 'people, village', Pc na·p̄ó [Hoplard or 'Yakaya' dialect], da·p̄ó [Point Arena or 'Baya' dialect], Pse mfo, Pe na·p̄ó 'village'.
- PEPPERWOOD TREE *bah·éb? Pk behem?, Ps beh·e kle (-kle 'tree') (O), Pn behém, Pc ba·hé·m, Pse bheb 'pepperwood plant (archaic)', Pe be·hé·p.
- PEPPERWOOD NUT *bah·é Pk behe, Ps beh·e (O), Pn behé, Pc ba·he, Pne béhe 'seeds of bush sp.', Pse bhe, Pe be·hé.
- PHLEGM *qu?lés Ps kú?les, Pn kílés, Pne kúlu, Pse les 'snot', Pe qu·lés.
- PICK UP A NON-LONG OBJECT, TO *dihkí Pk dihci-, Ps dihči-, Pc ?a·cí- ~ ?cí-, Pe di·kí 'pick up one round object'.
- PINOLE *yuhhú(·) or *yuhxú(·)?, *yuhhúy or *yuhxúy? Pk yuhu, Ps yuh·u, Pn yuhú·, Pc yhu·, Pse nxuy, Pe yu·húy. There are a number of problems with this set, which suggest extensive borrowing. The Pse and Pe forms provide conflicting evidence for the reconstruction of the second proto consonant: Pse reflects *x, while Pe reflects *h. The Pn form seems clearly to be a loan: *u should become Pn /i/, not /u/; moreover in two other instances in which a reflex of *y- is preserved in Pn, BLACK OAK and PANTHER, *y- > Pn /d/, not /y/. Pse n < *y is also aberrant. This is one of only four examples of *y occurring initially in an unstressed syllable; in BLACK OAK *y > Pse Ø, in TESTICLES *y > Pse ?, while there is no Pse cognate for PANTHER.
- PITCH *q^hahwé·, *q^hahwé Pk qahwe·, Ps kawhe, Pn k^hawé·, Pc k^hwé·, Pse xwe, Pe xa·Wé.
- PLURAL ACT (1) *{-1V-} Pk []-l̄v[] prefixal allomorph of plural act suffix {-Xt-}. [Pk []-l̄v[] is the same as the vowel of the next syllable.] {-Xt-} indicates that an act is plural either because the object undergoing the action is plural or because the act is performed on the same object more than once,² Pe {-1V-} plural action prefix indi-

²At least two, and probably three proto morphemes indicating various types of plurality seem to have fallen together in Pk as the Plural Action morpheme {-Xt-}. Some slight internal evidence of this coalescence survives in Pk in the co-existence

cating that a span of action is repeated, either by or affecting a single individual, or several individuals, each of whom is doing or experiencing the same activity. [V is identical with the vowel of the next syllable, which is inevitably the root. This root vowel is subsequently deleted.]

PLURAL ACT (2) (with extent?) *{-ma} Pk [] Xm [] [m] allomorph of the plural act suffix whose meaning is given in the entry above; [] X [] deletes a precursor, /?/ or /h/, occurring not more than two syllables before it], Pse -ma 'plural subject', Pe {-ma} 'extensive plural' indicating that plural subjects, each acting individually, are involved in an extended action or a continuing state. {-ma} has the shape /-m/ following vowels, and /-ma/ following a consonant.

PLURAL NUMBER *-aya Pk -ya, Ps -ey, Pn -ay in kó·lay 'long, pl.', Pse -y, Pe {-aya}. Pe {-aya} has the shape /-ya/ after vowels, /-aya/ after consonants in kinship terms, and /-a/ after consonants with personal nouns and adjectives.

POISON, POISONING SONG *qo·?ó ~ *qo?ó· Pk qo?o 'song', qo?o-ya 'doctor', Ps ko·?o 'song', Pn ko?ó 'poison' (= 'snake'), Pse xqó-wi 'doctor', Pne kó?o, Pe qo·?ó·.

POISON OAK *hma·tíyu ~ *ma·tíyuho ? Pk ma·ti·ho, Ps ma·tuihe, Pn miṭhú·yuhó [< +muthú·yuhó < +mathúyuhó < +maṭiyuho?], Pse mtíyi ~ mtíy, Pe Máriyup'.

POTATO, INDIAN *hi?bún^y Pk hi?bu 'potato', hi?bu?la 'Indian potato', Ps hi?bu- ~ hi?bu·la, Pn bú, Pc [bá]bu, Pne bú, Pse bun 'kidney, potato' (literally: 'round thing'), Pe bú·.

PREGNANT *wi·ní Pk [ki]wili 'waist' (?), Ps wi·ni, Pn miní, Pe wi·ní. Assimilation of /b/ to a following nasal is assumed for Pn. The Pk form is temptingly similar, but probably not in fact cognate. There are no other examples of *n > Pk l medially, although that seems to be the normal development word finally.

QUAIL *xaqá·qa Pk šaqa·qa, Ps šaka·ka, Pn šaká·ka, Pc ša·ká·ka, Pne šahká·ka[-ka·], Pse xqaq, Pe ša·qá·x.³

of two plural act forms for some verbs involving two different allomorphs of the Plural Action morpheme. For example, both

/dalowṭow/ 'to peel several' (with prefixal allomorph [lV] and stem [da-to⁰] "to peel with fingers")

and

/da?ṭowa·du/ 'to peel several' (with suffixal allomorph [w] plus the Durative suffix {-ci⁰d-} allomorph [wa⁰d])

³Mauricio Mixco suggests (Moshinsky, personal communication) that Pomoan QUAIL might be diffused from Spanish chacuáca "quail". If this hypothesis is true,

QUAIL TOPKNOT *q^héya ~ ?ehq^héya Pk k^heya, Ps ?ehk^heyá ~ -k^heya, Pn k^héya, Pse xe, Pe xéy. (Cf. Section 141.11 for loss of initial syllable in Pk.)

RABBIT, cf. COTTONTAIL and JACKRABBIT

RACCOON *q^ha?dús ~ q^hahlús? Pk q^ha?dus, Ps k^ha?dus, Pn k^hadús, Pc k^hdús, Pse xlús, Pe xa·Lús ~ xo·Lús. This is the only example of Pe /L/, Pse /l/ corresponding to /d/ in the other languages, although there are examples of /l/ in Pe and Pse corresponding to /d/ in the other languages.

RAIN *kehk^hé(·) ~ *ihk^hé Pk ?ihc^he, Ps čehč^he, Pn [bi]šé-, Pc cé, Pe k^hi·ké. The Pe form suggests metathesis of the consonants of *PP kehk^hé.

RAW/ALIVE *qa(h)xó- Pk /qašo·q^h/ 'he is getting well', Ps kahšo, Pn kašó, Pne kašóy, Pe qa·šóy 'raw, alive, well'. The final consonants in the Pk and Pe forms seem to represent different morphemes. [In Pe {-y} is the perfective manner suffix which forms stems; in Pk /-q^h/ could represent the circumstantial morpheme {-qă}. Not enough is known about the morphology of Pne to determine if Pne /-y/ is also segmentable.]

RECIPROCAL *{-(h)ma(·)k-} ~ *{-ma(·)k-} Pk {-mu^oc-}, Pse {-mku-} [<> muč before vowels], Pe {-Mak} 'reciprocal with verbs, committative with animates and substantives'. Assimilation of *a to a preceding labial, *m, is assumed for Pse and Pk, and perhaps also found in THIRD PERSON MASCULINE SINGULAR.

RECIPROCAL RELATIONSHIP *{-a(·)q} Pk {-a^oq-} (suffixed to the reflexive form of the kin term to acknowledge the relationship expressed by the root), Pe {-x} 'reciprocal kinship suffix' [> /q/ before vowels].

RECTUM *haťá·, (*ťí?) Pk haťá·, Pn ŭá·, Pse [f] ŭí 'buttocks, behind' [< fa 'excrement' + ŭí ?], Pe ŭá·.

REED, sp. *čiwíx Pk šiwiš, Pn čiwiš 'black bullrush root', Pc šwiš, Pe či·wiš 'root used for making black motif in baskets'.

it would seem that the deletion of word-final unaccented vowels in Pse and Pe is a rather late development, occurring after the arrival of a sizable contingent of Spaniards in Northern California (presumably around the time of the establishment of the mission of San Francisco, founded in 1776). It seems likely, in fact, that the majority of the Pomo did not have much, if any, contact with Spanish speakers until the beginning of the nineteenth century.

If QUAIL is in fact borrowed from Spanish it would also indicate that *x should be reconstructed as *š, and that the development of *š > Pse /x/ also took place rather late, certainly after contact with Spanish, and the borrowing of this form.

- REFLEXIVE *{-i(·)ki} Pk {-^oč-} [with allomorphs ^oyid], ^oč, ^oč, ⁱč, ⁱč, ^vč, ⁱy^oč, Pse {-či}, Pe {-k̄}.
- RIB *mis·á(·)k? Pk misac, Ps mis·ay, Pn misáč, Pc msáč, Pe mi·sá·k̄. The reflexes of *-k? in Pn are not clear. Here, *-k? > Pn /t/, in FAWN *-k? > Pn /č/, in MAN (1) *-k? > Pn /ʔ/.
- RIDGE/MOUNTAIN *wixál^y Pk wišali 'east' [lit.: 'mountain/ridge-towards'?], Ps wiša, Pn bišá, Pne wiša· 'mountain', Pe -wišál archaic morpheme occurring in place names such as /qákúl-xa-le-wišal/ which Barrett (1908) glosses as 'white oak-tree-ridge', but which contemporary speakers can no longer define.
- ROCK *q^ha?bé Pk q^ha?be, Ps k^ha?be, Pn k^habé, Pc k^hbé, Pne k^há?be, Pse xbe, Pe xa·bé.
- SALT (1) *ta?qó Pk ta?qó, Ps ta?ko.
- SALT (2) *k^he?é Pn še?é, Pne č^he?é, Pe k^he?é.
- SAND/GRAVEL *mi·ták? ~ *hmíta- (?) Pk mitac, Ps mi·tay, Pn mičáč (< †mitač ?), Pc mcáč (< †mtač ?), Pne [ka]tát, Pse mták, Pe Már 'red dirt used as baking powder in making one type of bread'. The Pn and Pc forms seem to involve metathesis of *t and *k in *mi·ták?.
- SAW APART, TO *xuq^há- Pk šuq^ha^o 'to pull off, saw off', Pe šu·xá- 'to saw in two'.
- SEAWEED, EDIBLE *?o·t^hono Pk ?o^hono, Ps ?o^hono (O), Pn t^húnuk (?) , Pc t^hón, Pe t^hó·no. The preservation of the final unstressed vowel in the Pe form strongly suggests that it is a borrowing from another Pomoan language.
- SECOND PERSON SINGULAR SUBJECT *?a·má Pk a·ma, Ps ?a·ma, Pn má, Pc má, Pne ?áma, Pse ma, Pe má. Cf. Section 141.11 for loss of initial syllable in Pk.
- SECOND PERSON SINGULAR OBJECT *mí·-to ~ *mí-to ~ *mi-tó Pk mi-to, Ps mi·-to, Pn mitó, Pc mtó, Pne míhto, Pse ti, Pe mí. Pne and Ps reflect the first reconstruction, Pk and Pe the second, and Pc, Pn, and Pse the third. Assimilation of *o to the preceding *i is assumed for Pse.
- SECOND PERSON SINGULAR POSSESSIVE PREFIX *mi- Pk mi-, Ps mi-, Pc m-, Pne mi-, Pse ti-, Pe mí·-. The Pse and Pe forms seem to be new analogical formations (McLendon, in press).
- SECOND PERSON PLURAL SUBJECT *?a·má·ya Pk maya, Ps ?a·máya, Pn má·, Pc máya, Pne ?ámay, Pe má·.
- SECOND PERSON PLURAL OBJECT *?a·má·ya-l Pk mayal, Ps ?a·máyan, Pn mál, Pc máyal, Pse mal, Pe má·l.

SEE *kád-, *ká·d- Pk □ cad-, Ps ča·d-, Pn čadi- (O), Pe ká·r- 'see, watch'.

SEED *?isó·, *?isóy Pk ?iso·, Ps so·[?o], Pn só·, Pe [qá]soy. (Cf. Section 141.11 for loss of initial syllable in Ps.)

SEMELFACTIVE *{-ki-} Pk {-c-} [with allomorphs: [] c[], [] ^oc[], [] ci[], [] hei[], [] cci[], [] v^oc[]], Pse -ki-, Pe -ki. Pse k < PP *k is aberrant and suggests borrowing.

SENTENCE CONNECTIVE (1) *{-p^hila} Pk {-p^hila} 'action of subordinated verb has not taken place, but if and when it does, it precedes that of main verb and two verbs have different Agents', Pe {-p^hila} 'action of verb suffixed, prior to, and a prerequisite for, the action of the main verb and the subjects of the two verbs are different'. It is not clear why the final unstressed vowel has not been lost in Pe.

SENTENCE CONNECTIVE (2) *{-p^hi} Pk {-p^hi} 'action described has not taken place, but if and when it does, it precedes that of the main verb and the two verbs have the same Agent', Pe /hi/, Pe {-p^hi} 'action of suffixed verb is prior to, and prerequisite for, action of the main verb, and the subjects are the same'. It is not clear why the final unstressed vowel has not been lost in Pe.

SENTENCE CONNECTIVE (3) *{-in} ? Pk {-vñ} 'action denoted by subordinated verb simultaneous with that of main verb and both have the same Agent', Pe {-in} 'action of suffixed verb simultaneous with, or a motivation for, action of main verb, and the subjects are the same'. Pk {-vñ} has the allomorphs /-n/ after vowels, /-un/ after [] d[], /-on/ after [] q^o[], /-an/ after other post-velars and labials, and /-in/ after all other consonants. Pe {-in} has the allomorphs /-n/ after vowels, /-in/ after consonants. Cf. Chapter III and its footnote 2 for a possible explanation of the development of additional Pk allomorphs for this Sentence Connective following post-velars.

Pk -n < *-n instead of the expected -l is aberrant.

SEPARATE FROM SOMEONE, TO *qá(·) [hence frequently to divorce, with the reciprocal : *qá-(m-)(h)mak] Pk {qá^o} 'to leave (alone)', qá·mu? 'to leave each other, to separate (of a married couple)', Pn ká- 'separate, leave', Pse qá- 'leave home, leave your wife', Pe qá-m-Mak 'divorced'; cf. also RECIPROCAL.

SHADE, cf. FOREST

SHE, cf. THIRD PERSON FEMININE

SHINE, cf. HOT, TO BE

SHOULDER *čuwá· Pk šuwa·, Ps čuw·a, Pc ūwá·, Pne čáwa· 'arm', Pse čwa-ya [-ya 'bone'], Pe ču·wá· 'arm'. Pc ū for *č, and Pe, Pne /a/ for *u occur uniquely in this form.

SIBLING, YOUNGER *t̄áqi Pk -t̄iki, -[cu]t̄ki-, -[šu]t̄ki- 'brother's son', Ps -t̄iki-, Pn -t̄í, Pne -t̄iki, Pse [du]t̄aq 'younger brother', t̄aq ~ t̄x- 'younger sister', Pe t̄áq- ~ t̄áx 'sister's son' [= 'younger sibling's son' ? x > q before vowels].

SICK, TO BE VERY, cf. DIE, TO

SINEW *hi·má Pk ?ima, Ps hi·ma, Pne hími, Pse ma, Pe yi·má.

The conditions under which PP *hi- becomes Pe yi· rather than Ø are not understood.

SISTER, FATHER'S *múči ~ *mú·či ~ *wé·qi Pk mu^oc, Ps -muč, Pn -mú?, Pne wé·ki, Pse -we(-), Pe wé·q-.

SISTER, MOTHER'S OLDER *t̄hú·č Pk -šuš-, Pse -šu[d]- 'mother's younger sister', Pe t̄hú·č.

SISTER, MOTHER'S YOUNGER *xé·qi Pk -še^oki-, Ps -šiki, Pn -šé·, Pne -šé·ki, Pe šé·q-.

SISTER, OLDER *dé·qi Pk -de^oki-, Ps -diki, Pn -dé·, Pne dé·ki-, Pe dé·q-.

SISTER'S HUSBAND *kó·d?, *qó·d? ? Pk -ko^od-, Ps -kon before consonants and pause, -kod- before vowels, Pn -kan before pause, -kod- before vowels, Pne -tóno, Pse -kon, Pe kó·t̄. Two hypotheses can be developed to explain the deviant initial correspondences: (1) Pk, Ps, Pn, Pse reflect *qo·d?, Pe and Pne reflect *ko·d?, or (2) this set reflects extensive borrowing, with the Pk, Ps, Pn, and Pse forms being borrowed after the shift of *k > /č/ and the Pne form being borrowed before *k > /t/. It is interesting that the Proto Miwok reconstruction for Sister's Husband is *ka·w-.

SIT, TO *ká- Pk a ca-, Pe ká-.

SIT DOWN, TO *kahkí- Ps čahči-, Pc ?a·c^há- 'to sit', Pse sca 'to sit', Pe ka·kí-. The Pc and Pse forms do not correspond perfectly, and may not in fact be reflexes of *kahki-. (The expected development of *kahki- would be to Pse t̄cci and Pc t̄ca·c^há-.) It is possible, however, that Pse /s/ develops from *k when deletion of word initial pre-tonic vowels produces initial clusters of identical consonants.

There are unfortunately no other examples of the Pse development of *k in this particular environment which could be referred to in order to confirm or reject the hypothesis. The Pc form suggests either a similar reshaping of an initial cluster of identical consonants, or the combination of the root *-hkí- with a different prefix, perhaps *di- or *du- (which both become Pc ?a··~?·). Pc /c^h/ presumably arises from the proto sequence *hk.

SIX *lanká, *kádi Pk lanča, Ps la·nča, Pn cá·di, Pc šá·di, Pne čadé·[yen] (Pe cá·di). Barrett (1908) gives tsadi for Pn, tsadi for Pc

as well as Pe, and tcadeíka for Pne. Pe *cá·di* 'six' appears to be a borrowing from a Russian River language, either Pn or Pe. PP SIX appears to contain the PP morpheme ONE **ka-* plus one of two additional elements of unknown meaning, **lan-* or **-di*.

SKIN **cí?dá* Pk *ši?da*, Ps *cí?da*, Pc *šdá*, Pse *čda* 'cover, fruit peeling, blanket', Pe *či·dá*.

SKUNK **nupʰé̄t* Pk *nupʰē*, Ps *nupʰ·e* (O), Pc *mpʰé̄*, Pne *fé̄[-ka]*, Pse *mfēt*, Pe *nu·pʰér*.

SKY **qalí*, **qalín^Y*; UP **qali·* Pk *qali* 'above' [qali qʰa?le 'sky'], *qali·* 'up', Ps *kal·i* 'up' (O), Pn *kalí*, Pc *ka·lí*, Pse *qlin*, Pe *qa·lí*.

SLEEP, TO **si·mán^Y* Pk *sima^O[q]-*, Ps *si·ma*, Pn *simá-*, Pc *smá*, Pse *sman*, Pe *si·má·*.

SLOW **pʰalá* Pk *pʰala* 'again', Ps *pʰala* 'softly, slowly', Pse *fla* 'behind, after', Pe *pʰa·lá* 'slow, behind, after'.

SLUG **pa?lá·* Pk *pa?la·*, Ps *pal·a*, Pc *pa·lá·*, Pe *pa·lá·*.

SMOKE **?ohxósa(xà)*, **saxá* Pk *o hosa*, Ps *?oh·osa*, Pn *sahá*, Pc *hosáha*, Pne *šáha*, Pse *cxa*, Pe *sa·xá*. This is the only instance of PP **s* > Pse *c* rather than /s/. Possibly the following /x/ conditions this divergent development. PP **?ohxosaxa* seems to consist of two morphemes **?ohxo* 'fire' + **saxa*, which presumably means 'smoke'. Pn, Pne, Pse and Pe forms reflect PP **saxa*, Pk, Ps, Pc reflect PP **?ohxosa(xa)*. (Cf. Section 141.11 for loss of initial syllable in Pk.)

SNOT **hi·lásu* Pk *?ilasu* 'drippy snot', Ps *hi·lasu*, Pse *les*, Pe *lés*.

SNOW **?ihyúl^Y* Pk *?ihyu·*, Ps *?i·hu*, Pn *yú·*, Pc *yú*, Pne *hýyu·*, Pse *yul*, Pe *Yúl*.

SOAPROOT **ha?·á(·)b?* Pk *ha?am?*, Ps *ha?·an* (O), Pn *?ám*, Pc *?ám*, Pe *?á·p.*

SON-IN-LAW **hkéye* Pk *-hceye*, Ps *-hčeye*, Pn *-čéya*, Pne *té[kʰaw]*, Pe *-kéy-*.

SOUR **móć* ~ **mó·ć* Pk *moś*, Ps *mo·ć*, Pn *móć*, Pse *m[dóyo-]*, Pe *mó·ć*.

SOUTH **?iyó* Ps *?iyo[qo]*, Pn *yó·*, Pne *?íyo* 'north', Pe *yó·* 'south (as location)', *yó* 'south (as direction)'. Barrett gives *yō* for 'south' in Pe, as well as in Pn and Pe. The similarity in form and meaning between SOUTH and BELOW [**?iyow*] suggests that both SOUTH and BELOW are segmentable, consisting of **?iyó-* plus LOCATIVE (1), *{-w} or LOCATIVE (2), *{-·}.

SPECULATIVE *{-xe-} Pk {-še} 'speculative', i.e., the speaker is speculating or theorizing about the action, Pe {-še?} 'expective' (?), i.e., a kind of future, not specifically translated.

SPIDER *[?]ik^há·, *mik^há·, *[?]ik^há Pk ?ic^ha·, Ps ?ic^h·a (O), Pn mišá·, Pc mc^há·, Pe k^há. Pk, Ps reflect the first reconstruction, Pn and Pc the second, Pe the third.

SPIT *[?]ihq^het? Pk ?ihk^het, Ps [ka]hk^het, Pn k^hé̄t, Pne k^hé̄t, Pse [c]xé̄t.

SPLEEN *maťé· Pk maťe·, Ps mat·e (O), Pc ba·té·, (Pe ma·té 'pancreas'). The correspondence of Pe, Ps t̄ to Pk, Pc t̄ is aberrant. The Pe form may be a borrowing from Pn in which both t̄ and t̄ correspond to Pk, Pc t̄.

SPRING (OF WATER) *(q^ha) qahp^há Pk qahp^ha 'fern', Ps ka·p^ha, Pse xaqfa, Pe xá qa·p^há. Ps ·p^h < *hp^h is unique and suggests some reshaping has occurred.

SQUIRREL *ku·mát?, *qumát Pk cumat̄, Ps ču·mať 'tree squirrel', Pn čimáť 'tree squirrel', Pc čmáť, Pse kmat̄ (H), Pe qu·már. Pk, Ps, Pn reflect the first reconstruction, Pe the second. The Pse form may be a mishearing of qmat̄ and also reflect the second reconstruction.

STINK, TO *mihxé Ps mehše- 'to smell, transitive or intransitive, good or bad' (O), Pn mišé-, Pse mxe-, Pe mi·šé-.

STOP DOING, TO *-hyé-· Pk -hye⁰-, Pn -yé-, Pc -yé--, Pe -Yé--.

STORIES, MYTHS, TO TELL *matú· Pne ma·rú·[-n], Pe ma·rú·.

STRING *su·límat̄? Pk sulemať, Ps su·lémeť, Pc slímať, Pe fásulim 'string' [with metathesis?].

SUBJUNCTIVE, cf. OPTATIVE

SUCKERFISH *xamóly Pn šamó·, Pne šamó·[-ka], Pse xmol, Pe ša·mó·.

SUMMER, cf. TO BE HOT

SUN *ha?dá Pk ha?da, Ps ha?da, Pn dá, Pc dá, Pne dá[-ka·], Pse da, Pe dá [archaic. Collected by Kroeber for 'sun' in 1904; a former usage confirmed by contemporary speakers, who claim to no longer use it because of its homophony with /dá/ 'woman'].

SWEAT *mik^h·éq Pk mic^ha⁰q, Ps mac^h·ak (O), Pn mišé-, Pc mc^hé·, Pse mše⁰q, Pe mu·k^hé. The Pe initial syllable has probably been reshaped from {mi·k^hé}, to make it analyzable as containing the instrumental prefix {mu·-} 'from internal energy or motivation, etc.'. The factors operating in the development of *e > Pk /a/ before a post-velar are discussed in more detail in Section 111 and footnote 2 of Chapter III.

TAIL *hibá· Pk hiba·, Ps hiba[?ak^hle], Pc ba·, Pne [ší?]ba·, Pse bá, Pe yi·bá·. The conditions under which PP initial *hi- becomes yi- or Ø in Pe are not understood.

TALK, TO *káhnów Pk cahnow- 'to sound', Ps čáhnu 'to instruct young', Pn čanó-, Pc cá·now 'to voice', Pne táno·[-n], Pse cnú 'word', Pe ka·Nú· 'speak, say, talk' [ka·Nú 'word'].

TEARS *hu?úy-qʰá(·) Pk ?ú·qʰá [< †hu?úyqʰá presumably], Ps hu?uykʰa, Pn ?úykʰá·, Pc ?úykʰa·, Pse ?uyxa, Pe yu·xá·. TEARS appears to be a compound of *hu?úy EYE + *-qʰá the bound form of *?ahqʰá WATER.

TESTICLES *yáqol^y Pk yoqo·, Ps yok·o (O), Pc ya·kó·, Pse ?qol, Pe ya·qol.

THING *?á(·)ma· Pk ?ama·, Pe ?á·m.

THIRD PERSON MASCULINE SINGULAR SUBJECT *hamíyab? Pk mu·[kid], Ps ham·u, Pn mó·, Pc mú·l, mól, Pne hamú·, Pse yíwi 'displaced third person masculine subject', uyi 'non-displaced masculine subject', Pe mi·p. The Pc form appears to be a back formation from the third person masculine singular object form. The expectable cognate is †mú·. The other forms are all characterized by vowel syncope in a y initial syllable (141,22) followed by the reduction of the resultant Vy sequence to V (p. 39) giving hypothetically †hamí·b?. In Pk, Ps, Pn, and Pne the accented vowel assimilates to the surrounding labial environment, becoming Pk, Ps, Pne, u, Pn o. Aphesis of the initial syllable ha- is blocked by the following nasal in Ps and Pne, but not in Pn and Pe. An additional element -kid is suffixed to the Pk form. Pre-tonic initial syllables beginning with ? or h are deleted in Pk in tri-syllabic forms (cf. FIRST PERSON SINGULAR OBJECT, FIRST PERSON POSSESSIVE, SECOND PERSON SINGULAR SUBJECT, SMOKE, TEARS). Synchronously in Pk, the labials /p, p̄, b/ and /pʰ/ do not occur syllable finally, in what Oswalt has called the "coda", except in a few obvious loan words (Oswalt, MS:37); post-tonic *b is assumed, therefore, to become Pk †w in this position. Synchronously in Pk, the sequence Vw > V· before [k] : mu·kid. In Ps, Pne, and Pn the sequence Back Vowel + b? is presumed to reduce to Back Vowel. (Actually a two-stage development analogous to that in Pk is more likely, i.e., BVb? > BVw > BV). The Pse form seems to involve a back formation from the third person masculine singular object form.

THIRD PERSON MASCULINE SINGULAR OBJECT *hamí·b-al Pk mu·bal (rarer, more archaic of two forms), Ps ham·ban, Pn mówal, Pc mú·l-to, Pne hamú·l, Pse yiwil, Pe mí·pal. The accented vowel again assimilates to the surrounding labial environment in Pk, Ps, Pn, Pc, and Pne. Pne and Pc delete the unaccented, post-tonic syllable ba. Post-tonic intervocalic *b > w in Pn, Pse. Aphesis is blocked by the following nasal in Ps and Pne, but operates in Pk, Pc, Pn, Pse, and

Pe. Pse deletes an initial sequence /mi-/ followed by a second CV syllable in SECOND PERSON SINGULAR OBJECT, and the same deletion is assumed to have operated here, with a y developing before the now initial i. (The a of the proto suffix has presumably been reshaped to i in Pse to conform with a synchronic rule of post-tonic vowel epenthesis.)

THIRD PERSON FEMININE SINGULAR SUBJECT *hamiyad? Pk
 [] \square mad [] = /mán?/, Ps ham·an, Pn mán, Pc (no form currently exists for this gloss), Pne hamá·, Pse -med, Pe mí·t. Pk fails to show the expected length indicative of syllable contraction, presumably because synchronically /·/ is only followed by a syllable-final consonant in certain verb forms and in loan words (Oswalt MS:40). Otherwise the daughter language developments are parallel to those discussed under THIRD PERSON MASCULINE SINGULAR SUBJECT.

THIRD PERSON FEMININE SINGULAR OBJECT *hamí·d-al Pk
 ma·dal, Ps ham·adan, Pn má·dal, Pne hamá·l, Pse [yi-]mdil, 'displaced third person feminine object', [o-]mdil 'non-displaced third person feminine object', Pe mí·ral. The daughter language developments are analogous to those discussed under THIRD PERSON MASCULINE OBJECT.

THIRD PERSON SINGULAR POSSESSIVE PREFIX *hamiya- Pk
 { \square miya-}, Ps miy·a-, Pc míya-, Pn ba-, Pe há·mi-. The Ps, Pc and Pn forms are aberrant.

THROAT *mihyán^y Pk mihya 'neck', Ps mihya 'neck', Pn miyá 'throat, voice', Pc myá 'neck', Pse myan, Pe mi·Yá·.

TICK *ta?lá· Pk t̪a?la·, Ps t̪al·a, Pn t̪ilá·, Pc t̪a·lá·, Pne t̪alá·[-ka], Pe t̪a·lá· 'tick when small, before it has sucked blood'.

TONGUE *ha?bály ~ *hawba(·) ~ *hib?a Pk ha·ba, Ps hib?a, Pn habá·, Pc hágba·, Pne hú?ba·, Pse bál, Pe bal. Pk, Pc and Pne reflect a proto form of the second type. The Ps form suggests either the third type of reconstruction or a reshaping of TONGUE under the influence of TAIL *hibá·.

TOOTH *hà?·o Pk ho?·o, Ps ho?·o, Pn ?ó, Pc ?ó, Pne ?ó, Pse ?ó, Pe ya?·ó. The conditions under which PP *ha- becomes Pe ya- or \emptyset in Pe are not understood.

TREE *qʰa·lé Pk qʰale, Ps kʰa·le, Pn kʰalé, Pc kʰlé, Pne kʰáli, Pse xle, Pe xa·lé. *e > Pne /i/ here and in BASKET, POUNDING.

TULE, ROUND *bakó· Pk baco·, Ps bač·o, Pn bačó·, Pe ba·kó·.

TULE SPROUT *t̪i?bé· Pn t̪ibé·, Pne t̪é?be· 'round tule', Pse šbe (H), Pe t̪i·bé·.

- TWO *?aq^hóč Pk q^ho·, Ps ?ak^h·o, Pn k^hó·, Pc k^ho·, Pne k^ho?ó·-[kai],
Pse xos, Pe xoč^h. (Cf. Section 141.11 for a possible explanation for
the loss of the initial syllable in Pk.)
- UMBILICUS *?ohqó Pk ?ohqo 'umbilical cord', Pn kó, Pe qó.
- UPHILL *dánó· Pk dono·, Pe da·nó·.
- VALLEY, CLEARING *qahqó Ps kahko, Pn kakó 'valley, meadow',
Pc ka·kó, Pse xqo 'land, earth, wilderness', Pe qa·qó.
- WALK, TO *hwá·d-, *wá·d- Pk o w-, Ps hwad-, Pn wá·di-, Pc wa-,
Pse wal-, Pe wá·l-; cf. also TO COME.
- WATER *?ahq^há Pk ?ahq^ha, Ps ?ahk^ha, Pn k^há, Pc k^há, Pne k^há,
Pse xá, Pe xá. (Cf. SPRING for the probable bound form.)
- WE, cf. FIRST PERSON PLURAL
- WEST (1) *mihila or *mixila Pk mihila, Ps mihiла 'west, ocean',
Pne mihiл 'south'. The correspondence of Pk h : Ps h : Pne h is
ambiguous, reflecting both *x and *h.
- WEST (2) *bó· Pn bo·, Pne bó·, Pe bó·.
- WHAT *(ba·)qo(·) Pk baqo·, Ps ba·kó, Pn kó, Pc kó[wa] [-wa is a
separate interrogative particle in Pk].
- WHISTLE *li(?)bú· Pk libu·, Ps lib?u, Pne lí?bu· 'windpipe, whistle',
Pe li·bú·.
- WHITE *qahlé Pk qahle, Ps kahle, Pn kalé, Pc ka·lé.
- WILDCAT *dá·lóm(?) Pk dolom?, Ps do·lom, Pn dalóm, Pc da·lóm,
Pse ?lom, Pe dalóm.
- WIND *?ihyá Pk ?ihya, Ps ?ihya, Pn yá-, Pc yá, Pne híya, Pse ya,
Pe Yá.
- WING, cf. ARM
- WINTER *q^hu(?)cá- Pk q^hośa·, Pn k^hećá[ma·], Pne k^hu?ćá[ti], Pe
xu·ćá·[y].
- WOLF *cihméwa ~ ciméwa Pk simewa, Pn ciméwa, Pc sméwa, Pne
č^hómeya-[-ka·], Pse smu, Pe či·Méw ~ či·Méw. The proto form for
WOLF appears to consist of two morphemes: *cihmé ~ *ci·me BODY
HAIR + a suffix -wa (possibly an agentive).
- WOMAN *?imá·ta Pk ?ima·ta, Pn má·ta, Pc má·ta, Pne himá·ta,
'women', Pe má·- archaic bound stem, 'women'.
- WOOD *?ahxáy Pk ?ahay, Ps ?ah·ay, Pn háy, Pc háy, Pne ?ahá·,
Pse xay, Pe xáy.
- WOODDUCK *watá- [with different types of reduplication] Ps wata·ta
'fish duck', Pne waráwara[-ka], Pe waráwarà[-w].
- WOODRAT *mihyóq? Pk mihyoq, Ps mihyok, Pc ba·yók.
- WORM (1) *bi·lá Pk bila, Ps bi·la (O,H), Pn bilá, Pc p̄la, Pse bla,
Pe bi·lá.
- WORM (2) *?ik^hóly Pk ?ic^ho· 'larva', Pn šó·, Pne č^hó·[-ka], Pe k^hól.

PART II

INSTRUMENTAL PREFIXES⁴

- *ba- 'with or affecting the top, top end, or front, frequently the head, and by extension, with the mouth'. Pk ba 'with the lips (of human beings), the snout (of animals), the beak (of birds). The meaning includes both the organ that produces speech, the mouth, and the organ that detects speech, the ear, thus English translation often rendered speaking or hearing', Pc ba⁻⁴, Pse b- 'with the mouth or tongue', Pe ba⁻ 'with or affecting the top, top end or front end, the important part, frequently the head, and by extension, with speech'.
- *bi- 'draw together, group, collect, frequently by means of a thin sharp object, such as a nail or needle'. Pk bi- 'by encircling (with both arms, by sewing, by eating)', Ps bi- occurring in /bi?di/ 'to pick up', Pc (Oswalt could find no cognate), Pse b- 'projection sticking out, shooting, sewing, growing', Pe bi⁻ 'draw together, group, collect, often by means of a thin sharp object such as a nail or needle. Frequently with the sense of grouping or collecting material in a certain externally imposed form, which separates the material thus grouped from the original, unorganized mass' [/bi·dí/ 'pick up/carry several things grouped in hands'].
- *da- 'with or affecting the hand'. Pk da- 'with the hand, with fingers opposed to the palm, with paw of animals, by waves', Ps da- 'by means of hands', Pc da⁻, Pse ?- 'with the hands', Pe da⁻ 'with or affecting the hand or forepaw for animals'.
- *di- 'by natural or unseen forces, e.g., gravity, motor activity, mental processes'. Pk di- 'by gravity, by falling, or from a heavy weight, Pc ?a⁻ ~ ?-,⁵ Pe di⁻ 'by natural or unseen forces, e.g., gravity, motor activity, mental processes, and hence frequently by throwing, or involving the shoulder'.
- *du- 'with the fingers, with the fingers opposed to the thumb'. Pk du- 'with the fingers, with the fingers opposed to the thumb', Pe ?a⁻ ~ ?- 'with fingers or arms', Pe 'with or affecting the fingers, frequently

⁴All Pc forms are taken from Oswalt (1964a), where separate Pc glosses are not given. Presumably the Pc meanings are rather close to those given for Pk, but of course the complete range of meaning associated with each prefix is not known.

⁵Oswalt notes that both *du- and *di- would become Pc ?a⁻ ~ ?a-, which exists, meaning "with fingers and arms," but not unequivocally meaning "by gravity."

with fingertips acting together to pull (as opposed to da⁻ where the whole of the hand is involved, frequently to knock or brush').

*ka- 'with or affecting a blob-shaped ovoid mass or body, generally in movement, such as a (flint) knife, buttocks, or torso'. Pk ca- 'with the rear end, with a massive or bulky object, with a knife', Pc ca⁻, Pse c- 'short scraping, dabbing motions', Pe ka⁻ 'with or affecting a blob-shaped, ovoid mass or body, generally in movement, such as a knife (originally an ovoid-shaped flint knife), the buttocks, or torso'.

*ku- 'with a rounded object (or flat surface?), with flowing water'. Pk cu- 'with a rounded object, with flowing water, by shooting, with front end', Ps ču-in čuhkayhi 'brush off (with bunch of grass)', Pc c^h-, Pse c- 'paint in short strokes, stir or leak', Pe ku⁻ (1) 'with a flat surface, such as a palm, iron, buttocks, (2) achieve an optimal state/goal/arrangement/relationship'.

k^hi- 'by holding the small or constricted part of a larger, long, thin, generally flexible agent'. Pk c^hi- 'by holding a small or constricted part of a larger object, often by an instrument with a handle', Pc š-, Pse š- occurs in verbs meaning 'for snake to shed its skin, or to wrap itself around something, to weave', Pe k^hi⁻ 'with a long, thin, generally flexible agent (particularly with the side of such an agent), e.g., a rope, needle, paintbrush, or carrying strap, and by extension, movement or transport by means of an agent (nowadays frequently a sack)'.

*ma- 'with or affecting the foot or something round and long, or to induce expansion to such a shape'. Pk ma- 'with sole of foot, with foot or claws of bird, with butt of hand', Pc ba⁻, Pse m- 'with tension of the oral cavity?' (occurs in the verbs meaning 'to whistle, holler, and smack the lips'), Pe ma⁻ 'with or affecting the foot or something round and long, such as the penis or a sausage, or to induce expansion to such a state'. This prefix also occurs in a number of forms descriptive of states such as 'hate', 'think', 'want/desire/like', and 'search for something'.

*mi- 'with a small projection, point, end of a longish object'. Pk mi- 'with a small projection near the end of a long object, with the toes, with the nose, by kicking, by smelling, by counting, by reading', Pc m-, Pse m- 'with the fingers, the foot, or many sticklike objects', Pe mi⁻ 'with the initial segment, point, end, e.g., with the tip of the foot, the nose, or a pin of some sort'.

*mu- 'with internal energy—thermal, photo, or psychic—or with internal effect; from the inside out'. Pk mu- 'with energy—kinetic, thermal, photo, or psychic; by a quick movement, with something moving quickly,

with heat, with light, or with the mind or emotions', Pc m-, Pse m- 'explode, burn, become hot', Pe 'from internal energy or motivation, or with internal effect, from the inside out'.

*p^ha- 'from kinetic energy in various manifestations, e.g., striking with long objects, water, fire, expanding air'. Pk p^ha- 'with the end of a long object, with the fist, by wrapping (by extension from to cover by poking)', Pc ha- ~ h-, Pse f- occurs in verbs meaning 'dent', 'knock nuts off tree', 'whip or beat', Pe p^ha- 'from kinetic energy in various manifestations, e.g., water, heat'.

*p^hi- 'from motion which cleaves/divides by piercing, generally to separate, but sometimes to arrange in a new unity'. Pk p^hi- 'with the side of a long object, with the eyes, with an axe, or hammer', Pc p^h-, Pe p^hi- 'from motion which cleaves/divides by piercing, generally in order to separate the remaining portions, but sometimes in order to arrange them into a new unity. The agent used is frequently an axe, spike, or hoe, and by extension, the eyes, but no agent need be involved'.

*p^hu- 'with energy of a moving current of air as medium or locus'. Pk p^hu- 'by blowing', Pc p^h-, Pe p^hu- 'with energy of a moving current of air as a medium or locus, particularly with the explosive force resulting from the sudden release of air, or other medium that behaves similarly, such as spurting liquids'.

*qa- 'between two strongly opposed, sharp-pointed or gripping forces, such as the jaws and teeth'. Pk qa-, Ps ka-, Pc ka-~, Pn ka-, Pse q-, Pe qa-~.

*sa- 'to separate?' Pse s- occurs in verbs meaning 'to cut', 'split', 'peel fruit', 'gnaw (of a mouse)', Pe sa-~ occurs in verbs meaning 'to cut hair', 'for animals to escape from their pens', 'to finish washing clothes'.

*si- 'with or in water or a liquid medium'. Pk si- 'by water, because of its physical and chemical properties, not because of its flowing . . . including: by wetting, dissolving, slipping (because of slickness of wet objects), floating, by rain, and many actions of the tongue', Pc s-, Pse s- occurs in verbs meaning to 'gargle', 'dissolve', 'swallow', 'melt', Pe si- 'with or in water or a liquid medium, the ingestion of water, or with or involving similar mediums, such as smoke, ice cream, etc., or moving, flowing, in a continuum like water'.

*xa- 'with a long object, generally in close contact with the affected material, moving lengthwise into or out of something; by sifting'. Pk ša- 'by a long object moving lengthwise into or out of something, with a mesh, by sifting, leaking', Pc ša-~, Pse x- occurs in verbs

meaning 'dip water out of a bucket', 'to sift', 'get hoarse', Pe ša- 'with a long object, particularly its point, in close contact with the affected material, generally using a thrusting, poking motion'.

*xu- 'involving a simultaneous pull in two opposite directions along an axis, generally between two polarities of tension/force/pull'. Pk Šu- 'by pulling, alternately pushing and pulling, with a long, flexible object', Pc š-, Pse x- occurs in verbs meaning 'to empty a sack', 'to ride or climb on a horse', as well as 'to ask', 'to want', 'to stutter', 'to hear', 'to scar', Pe šu- 'involving simultaneous pull in two opposite directions along an axis, generally between two polarities of tension/force/pull. If the pull involves motion with direction, a counter-pull or tension in the other direction is always implied'.

*xa- 'with a swinging motion'. Pk ha- 'with a swinging motion', Pc, Pse x- occurs in six stems meaning 'to unwind, tear down', 'to raise', 'break into', 'fell a tree', 'snore', 'snag', Pe xa- 'approaching, bringing together, into contact'.

PART III

PROTO POMO RECONSTRUCTIONS

Alphabetical listing by the first consonant of the reconstructed form.

*?ahká	HOUSE	*?a·má	SECOND PERSON
*?ahkín ^y	LOUSE, HEAD		SINGULAR SUBJECT
*?ahmáṭ ~ *?amáṭ	EARTH	*?a·má-ya	SECOND PERSON
*?ahp ^h á	EXCREMENT		PLURAL SUBJECT
*?ahqó1	LONG (1)	*?a·má-ya-1	SECOND PERSON
*?ahq ^h á	WATER		PLURAL OBJECT
*?ah ^h íy, *?ah ^h íyn ^y	BIG, pl.	*?á(·)ma-	THING
*?ah ^h é ~ *?ah ^h én?	FEATHER, SMALL/DOWN	*?a·má-qala	JACKRABBIT
*?ahxá	FISH	*?aq ^h óč	TWO
*?ahxí	NAME	*?at ^h á·na ~ *?at ^h aná	HAND
*?ahxá	MOUTH	*?awá-ya	FIRST PERSON
*?ahxáy	WOOD		PLURAL SUBJECT
*?aká·k?	MAN (1)	*?awá-ya-1	FIRST PERSON
*?ak ^h ·ów, *k ^h ów	NEGATIVE (2)		PLURAL OBJECT
*?a·láme	GOPHER (?)	*?awi-	FIRST PERSON
*?a·lá·(xa) ~ *qalá·(xa)	MOON		SINGULAR POSSESSIVE
		*?awí-to-	FIRST PERSON
			SINGULAR OBJECT

*?axó· EAST	*bá-·čí FATHER'S FATHER
*?ayél JEALOUS	*bah·é PEPPERWOOD NUT
*?ehq ^h éya ~ *q ^h éya QUAIL	*bah·éb? PEPPERWOOD TREE
TOPKNOT	*bahkíl LONG (2)
*?ihk ^h é ~ *kehk ^h é(·) RAIN	*bahqáy MANZANITA BERRY
*?ihp ^h á- COOK, BAKE UNDER	*bah ^h é, *bah ^h én BIG, sg.
ASHES	*bahxá BUCKEYE
*?ihp ^h ét- BREAK WIND	*bakó· TULE, ROUND
*?ihp ^h úy FAT	*bakó· BACK
*?ihq ^h et? SPIT	*ba·láy BLOOD
*?ihxí(·) BLANKET	*(ba·)qo(·) WHAT
*?ihyá WIND	*bá·to MUD
*?ihyá·, *?ihyá BONE	*bat ^h íy ARROW (2)
*?ihyúl ^y SNOW	*bi- DRAW TOGETHER, GROUP,
*?ik ^h á·, *mik ^h á·, *?ik ^h á SPIDER	COLLECT, FREQUENTLY BY
*?ik ^h ol ^y WORM (2)	MEANS OF A THIN, SHARP
*?imá·ta WOMAN	OBJECT
*?i·méla FLEA	*bi?dá CREEK
*?ip ^h ol ^y ~ *?ip ^h ó·ly MAGNESITE	*bi?dú ACORN
*?isó·, *?isóy SEED	*bi-?dí-·d(i)- CARRY IN HANDS
*?i·xál ~ *?ixál ^y ARM	*bihxé DEER, MEAT
*?iyó· SOUTH	*bi·lá WORM (1)
*?iyów BELOW	*bitéx LOUSE, BODY
*-?ód? DAUGHTER-IN-LAW	*bó· WEST (2)
*?ohqó UMBILICUS	*bo·?ó HUNT
*?ohqó-hmo NAVEL	*puhki ? BASKET, PACK
*?ohsó CLOVER	(CLOSE-WOVEN)
*?ohxó FIRE	*puhq ^h ál BASKET, PACK
*?ohxósa(xà), *saxá SMOKE	(OPEN-WOVEN)
*?o·t ^h óno SEAWEED, EDIBLE	*butáqal ^y ~ *bu·táqa BEAR
*?uhq ^h á, *?uhq ^h á· BELLY	*cihmé ~ *ci·me HAIR, OF
*-al ~ *-to OBJECT CASE	BODY, FUR
*{-a(-)q} RECIPROCAL	*cihméwa ~ címéwa WOLF
RELATIONSHIP	*cú-·čí ~ cé-·čí MOTHER'S
*-aya PLURAL NUMBER	BROTHER
*ba- WITH OR AFFECTING THE	*cá·ča DIRTY
TOP, TOP END, OR FRONT,	*camol ^y FLY (n.)
FREQUENTLY THE HEAD, AND	*cái ~ *cá·yi JAY
BY EXTENSION, THE MOUTH	*{-čí} ONE'S OWN KINSMEN
*ba?kówa ANGELICA	IN GENERATIONS ABOVE EGO

*čí?dá SKIN	*hamíyab? THIRD PERSON
*čí?í FLESH	MASCULINE SUBJECT
*cipʰá, *capʰ·a OAK, MUSH	*hamíyad? ~ *hamiyad- THIRD PERSON FEMININE SUBJECT
*čiwíx REED, sp.	*hamí·b-al THIRD PERSON MASCULINE OBJECT
*čiyítá ~ *čihtá BIRD	*hamí·d-al THIRD PERSON FEMININE OBJECT
*có·y BASKET, sp.	*haqáw FOX (1)
*cuwá· SHOULDER	*haťá·, (*fi ?) RECTUM
*da- WITH OR AFFECTING THE HAND	*he?·é, he?ey (?) HAIR, OF HEAD
*dá·lóm(?) WILDCAT	*hé·ć CLAW
*dánó· UPHILL	*hi?baya MAN (2)
*dá·nó MOUNTAIN	*hi?búnY POTATO, INDIAN
*da·yamá- ARMPIT	*hi?dá PATH
*dé·qi OLDER SISTER	*hi?·í FEATHER, LARGE
*di- BY NATURAL OR UNSEEN FORCES, e.g., GRAVITY, MOTOR ACTIVITY, MENTAL PROCESSES	*hi?ki, *kidí BACKBONE
*dihkí TO PICK UP A NON-LONG OBJECT	*hibá· TAIL
*dihqá GIVE ROUND OBJECT	*hicé· MUSHROOM (1)
*dihsá BUCKEYE NUTS WHEN SOAKED	*hicú· ARROW (1)
*di·lé FOREHEAD	*hiko·, *hikó EGG
*do·wí COYOTE	*hi·lá NOSE
*du- WITH THE FINGERS, WITH THE FINGERS OPPOSED TO THE THUMB	*hi·lásu SNOT
*du·cá FOX (2)	*hi·má SINEW
*duhʰál PAIN	*hi·mó HOLE
*duw·é NIGHT	*hi·nó, *hinóxó ASHES
*há·, *mahá- BROTHER-IN-LAW	*hkéye SON-IN-LAW
*ha?·á HORN	*hlá·la, *lála GOOSE
*ha?á· FIRST PERSON SINGULAR SUBJECT	*{-(-h)ma(·)k-} ~ *{-ma(·)k-} RECIPROCAL
*ha?·á(·)b? SOAPROOT	*hma·tíyu ~ *ma·tíyuho? POISON
*ha?bálY ~ *hawba ~ *hib?a TONGUE	OAK
*ha?dá SUN	*hmíta- (?) ~ *mi·ták? SAND/ GRAVEL
*ha?·ó TOOTH	*ho?qó(k) DRINK
*hak·á-(?) TO FLY (1)	*ho?tó BRAINS, HEAD, PROTUBERANCE
*hamíya-· THIRD PERSON SINGULAR POSSESSIVE PREFIX	*hohwá DOOR
	*{-hqa} CAUSATIVE
	*-htʰé MOTHER, OTHER PERSON'S

- *hu?^húy EYE
 *hu?^húy-q^hà(·) TEARS
 *hwa·d-, *wa·d- TO WALK
 *hwá·du- ~ *wá·du- TO COME
 *-hyé- TO STOP DOING
 *{-i(·)ki} REFLEXIVE
 *{-im} IMPERATIVE, SINGULAR
 *{-in} SENTENCE CONNECTIVE (3)
 *{-ix} OPTATIVE
 *ka- WITH OR AFFECTING A BLOB-
 SHAPED OVOID MASS OR BODY,
 GENERALLY IN MOVEMENT
 *ká- TO SIT
 *ko?^hlý ~ *ka?^holý ~ *ko?^h ? BEE
 *-ká-·ci MOTHER'S FATHER
 *kád-, *ká·d- SEE
 *kahkí- TO SIT DOWN
 *káhnów TO TALK
 *kehk^hé(·) ~ *?ihk^hé RAIN
 *kéqi BROTHER, FATHER'S
 YOUNGER
 *{-ki-} SEMELFACTIVE
 *{-kid-} DURATIVE
 *kiná·lý, *xiná·/lý HEAD
 *kó·d?, *qó·d? ? SISTER'S HUSBAND
 *ku- WITH A ROUNDED OBJECT
 (OR FLAT SURFACE?), WITH
 FLOWING WATER
 *kuhkí BUZZARD
 *kuhmá ENEMY
 *kuh·ú- EAT (2)
 *kuh·úla (?) NORTH
 *ku·mát?, *qumát SQUIRREL
 *k^hahlálý LIVER
 *k^ha(·)yá OCCIPUT
 *k^he?^hé- TO LEACH
 *k^he?^hé- SALT (2)
 *k^he·héy BUMBLEBEE
 *k^hi- BY HOLDING THE SMALL OR
 CONSTRICATED PART OF A LARGER
 LONG, THIN, GENERALLY FLEXIBLE
 AGENT
- *k^hítú· BASKET, sp.
 *k^hi·yá, *k^hiyá· TO BE AFRAID
 *k^hów ~ *?ak^h·ów NEGATIVE (2)
 *k^huwáy TO LAUGH
 *ká-, *ká-· ONE
 *kádi, *lanká SIX
 *ká·lál MUSHROOM (2)
 *kiyá· HAWK
 *lá?^hó MUSSEL
 *{-lal} DIRECTIONAL
 *lála, *hlá·la GOOSE
 *lanká, *kádi SIX
 *li(?)bú· WHISTLE
 *limá ~ limá· ? BEAR, BROWN
 *lixúy, *yuhxíy OAK, BLACK
 *{-IV-} PLURAL ACT (1)
 *{-ma} PLURAL ACT (2)
 (with extent ?)
 *ma- WITH OR AFFECTING
 THE FOOT OR SOMETHING
 ROUND AND LONG, OR TO
 INDUCE EXPANSION TO
 SUCH A SHAPE
 *ma?^há FOOD
 *má-·ci FATHER'S MOTHER
 *mahá-, *há· BROTHER-IN-LAW
 *mahsík/?t? EMBERS, CHAR-
 COAL
 *mahxá HEMP
 *makílý ~ *ma·kí DAY
 *ma·lí- ~ *mahlá- BURN
 *ma·tíyuho, *hma·tíyu ?
 POISON OAK
 *matú· TO TELL STORIES,
 MYTHS
 *maté· SPLEEN
 *mat^héy DOE
 *ma-xá· MOTHER-IN-LAW
 *ma·yú, *ma·yú· DOVE
 *me?^hé FATHER
 *méqi OLDER BROTHER

- *mi- WITH A SMALL PROJECTION, POINT, END OF A LONGISH OBJECT
- *mi- SECOND PERSON SINGULAR POSSESSIVE
- *mihila or mixila WEST (1)
- *mihxé TO STINK
- *mihyán^y THROAT
- *mihyóq? WOODRAT
- *miké BASKET, POUNDING
- *mik^há·, *?ik^há·, *?ik^há SPIDER
- *mik^h·éq SWEAT
- *mis·á(·)k? RIB
- *mí-to ~ *mí·to ~ *mi-tó SECOND PERSON SINGULAR OBJECT
- *mi·ták? ~ *hmiṭa-(?) SAND/ GRAVEL
- *mí·ti- ~ *mi·tí- TO LIE
- *móč ~ *móč' SOUR
- *mu- WITH INTERNAL ENERGY —THERMAL, PHOTO, OR PSYCHIC—OR WITH INTERNAL EFFECT; FROM THE INSIDE OUT
- *mu?tá- TO BE COOKED, cf. HOT
- *mu?táwinal SUMMER, cf. HOT
- *múci ~ *mú·ci ~ *wé·qi FATHER'S SISTER
- *muhká GRAIN, GRAIN PLANT
- *muhtám- TO BE HOT; *mu?tá- TO BE COOKED; *mu?táwinal SUMMER
- *musúl^y LOG
- *náhp^bó PEOPLE, GROUP OF PEOPLE (hence VILLAGE), RACE
- *nó·mik COTTONTAIL (RABBIT)
- *nuhwák? FAWN
- *nup^héč SKUNK
- *p^ha- FROM KINETIC ENERGY IN VARIOUS MANIFESTATIONS, e.g., STRIKING WITH LONG OBJECTS, WATER, FIRE, EXPANDING AIR
- *p^halá SLOW
- *{-p^hi} SENTENCE CONNECTIVE (2)
- *p^hi- FROM MOTION WHICH CLEAVES/DIVIDES BY PIERCING, GENERALLY TO SEPARATE, BUT SOMETIMES TO ARRANGE IN A NEW UNITY
- *p^hilá- GO, SEVERAL TO
- *{-p^hila} SENTENCE CONNECTIVE (1)
- *phu- WITH ENERGY OF A MOVING CURRENT OF AIR AS MEDIUM OR LOCUS
- *p^hudí- TO FLY (2)
- *pa?lá· SLUG
- *qa- BETWEEN TWO STRONGLY OPPOSED, SHARP-POINTED OR GRIPPING FORCES, SUCH AS THE JAWS AND TEETH
- *qa?ban/l- OAK, WHITE
- *qa?boy LOOSE
- *qac·á GRASS
- *qa··ci MOTHER'S MOTHER
- *qahcíl ~ *qaci COLD
- *qahlé WHITE
- *qahnó· ~ *qanó· BUSH, sp.
- *(q^ha) qahp^há SPRING (OF WATER)
- *qahqó VALLEY, CLEARING
- *qa(h)xó- RAW, ALIVE
- *qá·lab? ~ qalá·b? MAPLE
- *qalí, *qalín^y SKY
- *qa·né- TO BITE
- *qawá- EAT (1), CHEW
- *qa·wí CHILD

- *qaxálab? ~ *qáxalab? COTTON-
WOOD
- *qa·yé, *qayé MANZANITA BUSH
- *qó·d?, *kó·d? ? SISTER'S HUSBAND
- *quumat̄, *kumat̄ SQUIRREL
- (*q^ha) qahp^há SPRING (OF WATER)
- *q^ha?·á DAWN, MORNING
- *q^ha?ad·ú- DREAM
- *q^ha?bá·, *q^ha?bá CLOUD (1)
- *q^ha?bat?/y ONION, WILD
- *q^ha?bé ROCK
- *q^ha?bú CLOUD (2)
- *q^há-čiyat̄ ~ *q^ha-čit MUDHEN ?
- *q^ha?dús ~ q^hahlús? RACCOON
- *q^hahká FLINT
- *q^hahwál^y BARK (OF TREE)
- *q^hahwé·, *q^hahwé PITCH
- *q^ha·lé TREE
- *q^ha·mán^y FOOT
- *q^ható, *q^ható· BREAD, ACORN
- *q^hé DANCE/SONG
- *q^héya ~ *ehq^héya QUAIL TOPKNOT
- *q^hu(?)cá-· WATER
- *qa(·) TO SEPARATE FROM SOME-
ONE [hence frequently TO
DIVORCE, with the reciprocal:
*qa-(m-)(h)mač]
- *qalál^y ~ *qalá- TO DIE
- *qalá·xa ~ *al·á·xa MOON
- *qa·yán (~*qaya·n?) DUCK
- *qo?dí GOOD
- *qolél^y MORTAR
- *qo?ó ~ *qo?ó· POISON,
POISONING SONG
- *qó·d?, *kó·d? ? SISTER'S
HUSBAND
- *qóyu NECK
- *qo/uhsá ELBOW
- *qu?lés PHLEGM
- *sa- TO SEPARATE ?
- *saxá, *ohxósa(xà) SMOKE
- *se?é CHAPARRAL
- *si- WITH OR IN WATER OR
A LIQUID MEDIUM
- *si?ál LEAF (1)
- *si·lí, *silí· BEHIND, REAR
- *si·mán^y TO SLEEP
- *su·límáč STRING
- *-to ~ *-al OBJECT CASE
- *-t^hin NEGATIVE (1)
- *ta·qo SALT (1)
- *tuhxo FIVE
- *ti?bé· TULE SPROUT
- *t^ho?6(·) MUSH, ACORN
- *t^hú·č MOTHER'S OLDER
SISTER
- *ta?lá· TICK
- *táqi YOUNGER SIBLING
- *tí ?, *hatá· RECTUM
- *{-w} LOCATIVE (1)
- *wa·d-, *hwa·d- TO WALK
- *wá·du- ~ *hwá·du- TO COME
- *watá- (with different types of
reduplication) WOODEDUC
- *wa·tak?/q? FROG
- *wa·yák?/q?, *wayá·k?/q? DIP
NET
- *wé·qi ~ *mú·ci ~ *mú·či
FATHER'S SISTER
- *wína ~ *winá· ON, ON TOP
OF, ABOVE
- *wi·ní PREGNANT
- *wixál^y RIDGE/MOUNTAIN
- *wiýú OAK, sp.
- *xa- WITH A LONG OBJECT,
GENERALLY IN CLOSE CON-
TACT WITH THE AFFECTED
MATERIAL, MOVING LENGTH-
WISE INTO OR OUT OF SOME-
THING; BY SIFTING

*xa?ki(b?) OAK, LIVE (?)	*xowmi(-·či) DAUGHTER-IN-LAW (2)
*xahkú ? LEG	
*xahqót GRASSHOPPER	*xu- INVOLVING A SIMULTANEOUS PULL IN TWO OPPOSITE DIRECTIONS ALONG AN AXIS, GENERALLY BETWEEN TWO POLARITIES OF TENSION/FORCE/PULL
*xamóly SUCKERFISH	
*xaqá·qa QUAIL	
*xaqʰál BLACKFISH	
*{-xe-} SPECULATIVE	
*xé·qi MOTHER'S YOUNGER SISTER	*xuqʰá·- TO SAW APART
*xi?bá BODY	*xa- WITH A SWINGING MOTION
*xi?d6nʸ BREAST, MILK	*xalá (possibly *xalú) CLAM
*xihmúy, *xi(?)mi BOW	*yahmót? PANTHER
*xihpʰá LEAF (2)	*yáqolʸ TESTICLES
*xi·mánʸ EAR	*ye?ély CHEST
*xiná·, *kiná·lʸ HEAD	*yuhhú(·) or *yuhxú(·)?, *yuhhúy or *yuhxúy? PINOLE
*xi·wéy NEW	*yuhxíy, *lixúy OAK, BLACK
*xi·yó FOREST, DEEP, DENSE (hence SHADED)	*{-·} LOCATIVE (2)
*xó·ki- HEAR	

PART IV

PROTO POMO RECONSTRUCTIONS

Alphabetical listing by the first consonant of the accented syllable of the reconstructed form.⁶

*ma?á FOOD	*he?·é, *he?ey (?) HAIR, OF HEAD
*ha?·á HORN	
*ha?·á· FIRST PERSON SINGULAR SUBJECT	*kʰe?·é- TO LEACH
*qʰa?·á DAWN, MORNING	*kʰe?·é· SALT (2)
*ha?·á(·)b? SOAPROOT	*me?·é FATHER
*?á(·)ma· THING	*se?é CHAPARRAL
	*ye?élʸ CHEST

⁶Reconstructions are here listed alphabetically by the first consonant of the accented syllable, unless it is one of the laryngeal increments *? or *h (which only occur followed by another consonant). Reconstructions containing laryngeal increments are filed by the consonant following the laryngeal increment. Forms in which an accent cannot be unambiguously reconstructed have been arbitrarily filed by the first consonant (again excepting laryngeal increments) of the second syllable. Affixes are excluded since they are rarely more than a syllable long.

*čiʔ·í	FLESH	*čiʔdá	SKIN
*hiʔ·í	FEATHER, LARGE	*haʔdá	SUN
*-ʔód?	DAUGHTER-IN-LAW	*hiʔdá	PATH
*boʔ·ó	HUNT	*dé·qi	OLDER SISTER
*háʔ·ó	TOOTH	*pʰudi-	TO FLY (2)
*qoʔ·ó ~ *qoʔ·ó	POISON, POISONING SONG	*qoʔdí	GOOD
*tʰoʔ·ó(·)	MUSH, ACORN	*biʔdí-·d(i)-	CARRY IN HANDS
*koʔóly ~ *kaʔolý ~ *koʔ·ó ?	BEE	*xiʔdóny	BREAST, MILK
*huʔ·úy	EYE	*biʔdú	ACORN
*huʔúy-qʰá(·)	TEARS	*qʰaʔad·ú-	DREAM
*hibá·	TAIL	*qʰaʔdús ~ qʰahlús ?	RACCOON
*qʰaʔbá·, *qʰaʔbá	CLOUD (1)	*há·, *mahá-	BROTHER-IN-LAW
*xiʔbá	BODY	*bah·é	PEPPERWOOD NUT
*bá·-čí	FATHER'S FATHER	*bah·éb?	PEPPERWOOD TREE
*bá·to	MUD	*hé·č	CLAW
*haʔbály ~ *hawba ~ *hib?a	TONGUE	*kʰe·héy	BUMBLEBEE
*qaʔban/1-	OAK, WHITE	*mihila or *mixila	WEST (1)
*qʰaʔbat?/y	ONION, WILD	*kuh·ú-	EAT (2)
*hiʔbayá	MAN (2)	*yuhhú(·) or *yuhxú(·) ?, *yuhhúy or *yuhxúy ?	PINOLE
*qʰaʔbé	ROCK	*kuh·úla (?)	NORTH
*tʰiʔbé·	TULE SPROUT	*ká-	TO SIT
*bó·	WEST (2)	*ahká	HOUSE
*qaʔboy	LOOSE	*hak·á-(?)	TO FLY (1)
*hiʔbúnY	POTATO, INDIAN	*muhká	GRAIN, GRAIN PLANT
*li(?)bú·	WHISTLE	*qʰahká	FLINT
*qʰaʔbú	CLOUD (2)	*-ká·-čí	MOTHER'S FATHER
*du·cá	FOX (2)	*kád-, *ká·d-	SEE
*qahcíl ~ *qac·í	COLD	*aká·k?	MAN (1)
*cú·-čí ~ cé·-čí	BROTHER, MOTHER'S	*miké	BASKET, POUNDING
*qac·á	GRASS	*kéqi	FATHER'S YOUNGER BROTHER
*qʰu(?)cá·-	WINTER	*hkéye	SON-IN-LAW
*cá·čá	DIRTY	*buhkí ?	BASKET, PACK (CLOSE-WOVEN)
*cáyi ~ *cá·yi	JAY	*dihkí	TO PICK UP A NON- LONG OBJECT
*hicé·	MUSHROOM (1)	*kahkí-	TO SIT DOWN
*có·y	BASKET, sp.	*bahkíl	LONG (2)
*hicú·	ARROW (1)	*makílY ~ *ma·kí	DAY
*biʔdá	CREEK	*ahkínY	LOUSE, HEAD

- *bak⁶· TULE, ROUND
 *kó·d[?], *qó·d[?] ? SISTER'S HUSBAND
 *xahkú ? LEG
 *?ik^há·, *mik^há·, *?ik^há SPIDER
 *?ihk^hé ~ *kehk^hé(?) RAIN
 *mik^h·éq SWEAT
 *kuhk^hí BUZZARD
 *?ik^hóly WORM (2)
 *k^hów ~ *?ak^h·ów NEGATIVE (2)
 *ká-, *ká-· ONE
 *lanká, *kádi SIX
 *hi?ki, *kidí BACKBONE
 *xa?ki(b?) OAK, LIVE (?)
 *bakó· BACK
 *hiko·, *hikó EGG
 *ba?kówa ANGELICA
 *xalá (possibly xalú) CLAM
 *bi·lá WORM (1)
 *hi·lá NOSE
 *mahla- ~ *ma·lí- BURN
 *-p^hila ? SENTENCE CONNECTIVE (1)
 *pa?lá· SLUG
 *p^halá SLOW
 *p^hilá- SEVERAL TO GO
 *fa?lá· TICK
 *lála, *hlá·la GOOSE
 *qá·lab[?] ~ *qalá·b[?] MAPLE
 *ka·lál MUSHROOM (2)
 *k^hahlál^y LIVER
 *qalál^y ~ *qalá- TO DIE
 *?a·láme GOPHER (?)
 *hi·lásu SNOT
 *qalá·(xa) ~ *?al·á·(xa) MOON
 *ba·láy BLOOD
 *di·lé FOREHEAD
 *qahlé WHITE
 *q^ha·lé TREE
 *qu?lés PHLEGM
 *ma·lí- ~ *mahlá- BURN
- *qalí, *qalín^y SKY
 *si·lí, *sili· BEHIND, REAR
 *su·límat(?) STRING
 *qolóly MORTAR
 *dá·lóm(?) WILDCAT
 *má··ci FATHER'S MOTHER
 *?a·má SECOND PERSON
 SINGULAR SUBJECT
 *da·yamá- ARMPIT
 *hi·má SINEW
 *kuhmá ENEMY
 *limá ~ limá· ? BEAR, BROWN
 *?a·má·qala JACKRABBIT
 *q^ha·mán^y FOOT
 *si·mán^y TO SLEEP
 *xi·mán^y- EAR
 *ku·mát[?], *qumát SQUIRREL
 *?imá·ta WOMAN
 *?ahmát ~ *?amát EARTH
 *?a·má-ya SECOND PERSON
 PLURAL SUBJECT
 *?a·má-ya-1 SECOND PERSON
 PLURAL OBJECT
 *cihmé ~ *ci·me HAIR, OF BODY, FUR
 *?iméla FLEA
 *méqi OLDER BROTHER
 *cihméwa ~ *ciméwa WOLF
 *mi- SECOND PERSON
 SINGULAR POSSESSIVE
 *xi(?)mi, *xihmúy BOW
 *xowmi(-·ci) DAUGHTER-IN-LAW (2)
 *nó·mik COTTONTAIL (RABBIT)
 *mi·to SECOND PERSON
 SINGULAR OBJECT
 *hmíta- (?) ~ *mi·ták? SAND/ GRAVEL
 *mi·tí- ~ *mi·tí- TO LIE
 *hamíya-· THIRD PERSON
 SINGULAR POSSESSIVE
 PREFIX

- *hamiyab? THIRD PERSON
MASCULINE SUBJECT
- *hamiyad? THIRD PERSON
FEMININE SUBJECT
- *hamí·b-al THIRD PERSON
MASCULINE OBJECT
- *hamí·d-al THIRD PERSON
FEMININE OBJECT
- *hi·mό HOLE
- *móč ~ *mό·č SOUR
- *ćamolý FLY, n.
- *xamolý SUCKERFISH
- *yahmót? PANTHER
- *múči ~ *mú·či ~ *wé·qi
FATHER'S SISTER
- *xihmúy, *xi(?)mi BOW
- *winá· ~ *wína ON, ON TOP OF,
ABOVE
- *xiná·/lý, *kiná·lý HEAD
- *kiná·lý, *xiná·/lý HEAD
- *qa·né- TO BITE
- *wi·ní PREGNANT
- *dánó· UPHILL
- *dá·nó MOUNTAIN
- *hi·nó, *hinóxð ASHES
- *qáhnó· ~ *qánó· BUSH, sp.
- *káhnów TO TALK
- *?ahpʰá EXCREMENT
- *?ihpʰá- COOK, BAKE UNDER
ASHES
- *cipʰá, *ćapʰ·a OAK, MUSH
- *(qʰa) qahpʰá SPRING (OF WATER)
- *xihpʰá LEAF (2)
- *?ihpʰét- BREAK WIND
- *nupʰét SKUNK
- *náhpʰó PEOPLE, GROUP OF
PEOPLE (hence VILLAGE),
RACE
- *?ipʰóly ~ *?ipʰó·ly MAGNESITE
- *?ihpʰúy FAT
- *qá-·či MOTHER'S MOTHER
- *dihqá GIVE ROUND OBJECT
- *qá·lab? ~ *qalá·b? MAPLE
- *xaqá·qa QUAIL
- *qáxalab? ~ *qaxálab? COTTON-
WOOD
- *bahqáy MANZANITA BERRY
- *qahqó VALLEY, CLEARING
- *qó·d?, *kó·d? ? SISTER'S
HUSBAND
- *?ohqó UMBILICUS
- *?ohqó-hmo NAVEL
- *?ahqól LONG (1)
- *yáqolý TESTICLES
- *xahqót GRASSHOPPER
- *?ahqʰá WATER
- *?uhqʰá, *?uhqʰá· BELLY
- *xuqʰá- TO SAW APART
- *qʰá-čiyát ~ *qʰa-čít MUDHEN?
- *buhqʰál BASKET, PACK
(OPEN-WOVEN)
- *xaqʰál BLACKFISH
- *qʰé DANCE/SONG
- *?ihqʰet? SPIT
- *qʰéya ~ *?ehqʰéya QUAIL TOP-
KNOT
- *?aqʰóc TWO
- *qá(·) TO SEPARATE FROM
SOMEONE
- *haqáw FOX (1)
- *(ba)·qo(·) WHAT
- *lá?qó MUSSEL
- *ta?qó SALT (1)
- *ho?qó(k) DRINK
- *qóyu NECK
- *dihsá BUCKEYE NUTS WHEN
SOAKED
- *qó/uhsá ELBOW
- *mis·á(·)k? RIB
- *mahsík?/t? EMBERS, CHAR-
COAL
- *?isó·, *?isóy SEED

*?ohsó CLOVER	*hohwá DOOR
*musúl ^y LOG	*qawá- EAT (1), CHEW
*?at ^h á-na ~ *?at ^h aná HAND	*hwa·d-, *wa·d- TO WALK
*mu?tá- TO BE COOKED, cf. HOT	*wá·du- ~ *hwá·du- TO COME
*muhlám- TO BE HOT	*nuhwák? FAWN
*mu?táwinal SUMMER, cf. HOT	*q ^h ahwál ^y BARK (OF TREE)
*ho?tó BRAINS, HEAD, PROTUBER-	*k ^h uwáy TO LAUGH
ANCE	*?awá-ya FIRST PERSON
*waṭá- (with different types of reduplication) WOODDUCK	PLURAL SUBJECT
*wa·tak?/q? FROG	*?awá-ya-1 FIRST PERSON
*butáqal ^y ~ *bu·táqa BEAR	PLURAL OBJECT
*biṭex LOUSE, BODY	*wé·qi ~ *múci ~ *mú·ci
*mi·ták? ~ *hmíta- (?) SAND/ GRAVEL	FATHER'S SISTER
*mi·tí- ~ *mí·ti- TO LIE	*duw·é NIGHT
*hma·tíyu ~ *ma·tíyuho? POISON OAK	*q ^h ahwé·, *q ^h ahwé PITCH
*mi·tí- ~ *mí·ti- TO LIE	*xi·wéy NEW
*q ^h ató, *q ^h ató· BREAD, ACORN	*do·wí COYOTE
*k ^h itú· BASKET, sp.	*qa·wí CHILD
*matú· TO TELL STORIES, MYTHS	*wína ~ *winá· ON, ON TOP OF, ABOVE
*duh ^h ál PAIN	*?awí- FIRST PERSON SINGU-
*?ah ^h é ~ *?ah ^h én ? FEATHER, SMALL/DOWN	LAR POSSESSIVE
*bah ^h é, *bah ^h én BIG, sg.	*?awí-to· FIRST PERSON
*-hi ^h é MOTHER, OTHER PERSON'S	SINGULAR OBJECT
*maṭhéy DOE	*ciwíx REED, sp.
*?ah ^h íy, *?ah ^h iyn ^y BIG, pl.	*?ahxá FISH
*baṭhíy ARROW (2)	*bahxá BUCKEYE
*?o·t ^h óno SEAWEED, EDIBLE	*mahxá HEMP
*t ^h ú·c MOTHER'S OLDER SISTER	*ma·xá· MOTHER-IN-LAW
*hafá·, (*ti ?) RECTUM	*saxá, *?ohxósa(xá) SMOKE
*si?fá· LEAF (1)	*?i·xál ~ *?ixál ^y ARM
*fáqi YOUNGER SIBLING	*qaxálab? ~ *qáxalab? COTTON-
*maté· SPLEEN	WOOD
*ti ?, *haṭá· RECTUM	*wixál ^y RIDGE/MOUNTAIN
*cuwá· SHOULDER	*bihxé DEER, MEAT
	*mihxé TO STINK
	*xé·qi MOTHER'S YOUNGER SISTER
	*?ahxi NAME
	*?ihxí(·) BLANKET
	*yuhxiý, *lixúy OAK, BLACK

*?axó· EAST	*wa·yák?/q?, *wayá·k?/q? DIP NET
*qa(h)xó- RAW, ALIVE	*qa·yán (~*qaya·n?) DUCK
*tuhxo FIVE	*mihyán ^y THROAT
*xó·ki HEAR	*-hyé- TO STOP DOING
*lixúy, *yuhxíy OAK, BLACK	*qa·yé, *qayé MANZANITA
*?ahxá MOUTH	BUSH
*?ahxáy WOOD	*?ayél JEALOUS
*?ohxó FIRE	*ciyítá ~ *cihtá BIRD
*?ohxósa(xà), *saxá SMOKE	*?iyó· SOUTH
*yuhxú(·) or *yuhhú(·) ?, *yuhhúy or *yuhxúy PINOLE	*?iyów BELOW
*ihyá WIND	*xi·yó FOREST, DEEP, DENSE (hence SHADED)
*?ihyá·, *?ihyá BONE	*mihyóq? WOODRAT
*kʰa(·)yá OCCIPUT	*ma·yú, *ma·yú· DOVE
*kʰi·yá, *kʰiyá· TO BE AFRAID	*wiyú OAK, sp.
*kiyá· HAWK	*?ihyúl ^y SNOW

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