

CULTURE ELEMENT DISTRIBUTIONS: IV

POMO

BY

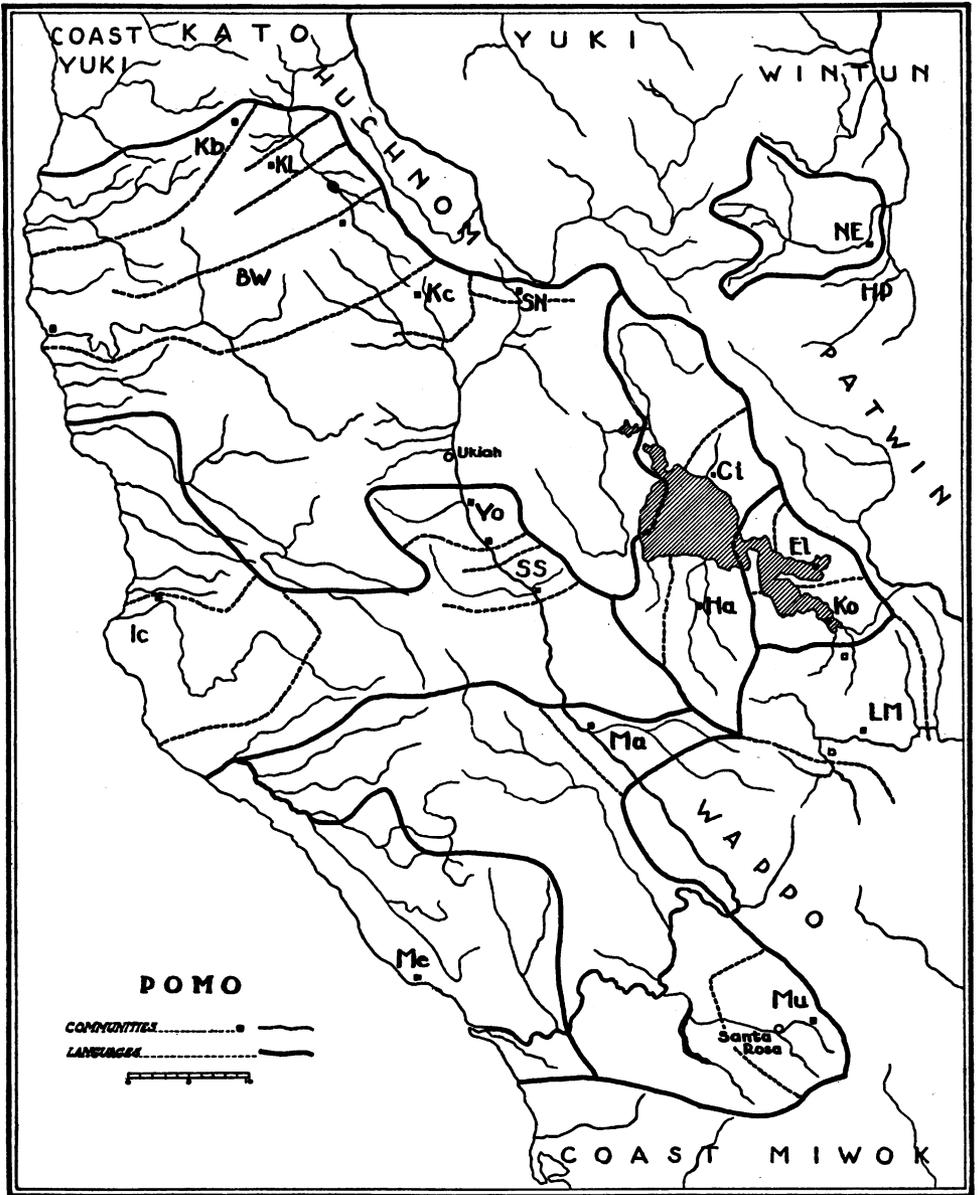
E. W. GIFFORD AND A. L. KROEBER

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POMO COMMUNITIES

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INTRODUCTION

THE WORK on which this paper is based, and its objective, plan, and method, have been outlined in the Preface to No. II: Yana, of the series of contributions which bear the same title as this one. The Yana report was detached for separate treatment because of the geographical separateness of its material, and being briefer, and unencumbered by time-consuming computations, was finished first. Its preface applies to Pomo as well as Yana.

In the present study, the data are by Gifford, the analysis by Kroeber.

PART I: DATA

By E. W. GIFFORD

POMO COMMUNITIES

THE POMO are a nationality speaking seven recognized related languages or dialects, usually designated, following Barrett, by directional terms, such as Northern, Southeastern, and so on. They were divided into a number of small groups, which at one time or another have been called tribes, villages, village-communities, or tribelets. Each of these was completely autonomous and owned a tract of land which might or might not be exactly defined but was substantially recognized by all neighboring communities. According to most informants, nearly every community also spoke a slightly but perceptibly distinct subdialect. Each normally possessed a main settlement or central village, which in many of the groups appears to have remained fixed for generations. This permanent settlement was ordinarily in some valley, and the community's territory comprised this valley and the adjacent tracts of hill land, most often as defined by drainage. If the valley was of some length, like Potter and Ukiah valleys, it might hold two or three communities, the territories extending across and beyond it. The Russian river, which flows through the heart of Pomo land, does not possess a single continuous valley, but a series of smaller ones, separated by canyons. On Clear lake, the scheme was modified among the Southeastern Pomo, whose three communities—Koi, Elem, and Kamdot—had their permanent towns on islands in the southeastern arms of the lake, although their hunting and gathering was done on the mainland, apparently largely in defined family tracts or strips.¹ With the Eastern Pomo on the main body of Clear lake, however, settlement conditions were more like

¹ Gifford, Pomo Lands, UC-PAAE 20:77-92, 1923.

those described as general. Shigom, for instance, was situated in a small valley, where Lucerne now stands, facing the lake from the northeast. On the south side was a larger area, Big valley, which housed two communities, the Kuhla-napo and Habe-napo, or water-lily and stone people. On the coast, which is precipitous, with exposed and unattractive beach terraces, valley residence was again departed from. Some of the settlements were at stream mouths, where the canyon sometimes opens into a small lagoon; more often they seem to have been in shelter a few miles back in the hills.

At the central or permanent settlement of each community there lived the chief or chiefs, for not infrequently there were two or three. Also here there stood an earth-covered assembly or dance house, shane', where all major ceremonies were performed, and around which all invitational festivities and intercommunity gatherings centered. So far as known, every community possessed such a ceremonial building and not more than one. The erection of a second would presumably have been construed as an attempt at secession and autonomy.

To what degree the entire population normally lived at the central settlement, and for what part of the year, it is difficult to ascertain at present. It probably varied locally. The island villages in the lake seem to have included the entire population of their communities; and even when these moved en masse to visit a ceremony elsewhere, they may have left a few aged people behind. Elsewhere, the central settlement may often have stood empty for half the year or more, as people scattered for camping, gathering, and hunting in their own territories, or went on prolonged visits to the coast. Also, in some communities, families or groups of families at times built their houses, permanently or for some years, away from the central village: perhaps a fraction of a mile or several miles distant. This does not imply severance of relations with community activities, but might be a result of minor quarrels, fear of witchcraft, convenience in obtaining food, or mere preference. For an important ceremony, or if one of the infrequent wars broke out, or when they wished, they would return to the central town. In this way several spots, or in the course of time many, within the territory of one community might come to be inhabited and classed as "Indian rancherias," without impairment of the feeling for communal solidarity and distinctiveness as expressed by autonomy, territory, chief, central settlement, and ceremonial house.

These conditions were not incompatible with prevailing friendly relations with neighboring communities. Perhaps half the marriages, more or less, were intercommunal, and residence usages were such that normally each spouse would live at least for a time in the community of the other. If warfare broke out over poaching or witchcraft, it might involve two or several communities, but each would retain friends. There is no record of any community hostile to all its neighbors. At the limits of Pomo speech, relations were generally similar with "aliens"—that is, with people not markedly different, and not felt as significantly different, except in speaking another language.

In short, what we call Pomo—the Indian had no word for it—refers to no

definable cultural entity, but only to a sort of nationality expressed in speech varying around a basic type. The Pomo would have said he was among "non-Pomo" only when the language of a locality changed from being partly intelligible to being nonintelligible. There was therefore no Pomo culture except as an abstraction made by ethnographers and other white men. There was a series of highly similar but never quite identical Pomo cultures, each carried by one of the independent communities or tribelets just described.

It has been necessary to go into this description because in the present study the aim was to depart from the convenient non-entity of "Pomo culture" and to obtain information instead on the series of cultures borne by the only true societies existing in the region in native times, the communities or tribelets. The word tribelet has the merit that tribe, when it means anything definite at all, normally implies autonomy, territory, and a distinguishable set of customs or culture. In this sense, the Pomo communities, however small, were tribes. The Pomo as a whole might be called a nation, if that term could be used without its modern dominant implication of political unity; or, less ambiguously, a nationality or ethnic entity. The problem in the present study was to ascertain how a series of local cultures supported by very small but independent societies within the vaguer framework of a "nationality" varied and were related.

The number, size, and territories of Pomo communities will never be known with authentic accuracy. In Barrett's day, the concept of the community as a definite sociopolitical unit had not emerged, and the fundamental and valuable data of his *Ethnogeography* refer mainly to speech or to settlements. Kroeber, in his *Handbook*, made an attempt to extract the communities from Barrett's information. For some, the data sufficed, or have subsequently been corroborated. For others, the reconstruction is a frank guess, which in a high percentage of conjectures will presumably be shown to have been wrong if ever supplementary information comes in. Kroeber's map in particular must be used with extreme caution: it cannot express the qualifications and doubts of his text, and is nothing more than a commitment with respect to conjectures.

The number of Pomo communities was estimated by Kroeber at about seventy-five. He is now inclined to consider this figure too high, and to believe that there were about fifty, probably more rather than less. This would mean that a bare third of the Pomo communities are represented in the present study. The total Pomo population Kroeber estimated in the *Handbook* at 8000, or at a little more than 100 per community, on the average. The latter is too low a figure. I obtained a census of 235 inhabitants for former Shigom. Kroeber is ready to revise the estimate upward, to 75 to 300 per community, with the average perhaps approaching 200. The total Pomo area has not been computed, but is perhaps not far from 6000 square miles. This would give a territory of somewhere around 100 square miles to the average community: say a block of land averaging ten or a dozen miles in diameter, or perhaps half a dozen by twenty if in the form of a strip.

These figures, approximate as they are, give some idea of the size of the communities we are dealing with. They are truly small societies—remarkably

small for groups possessing distinguishable cultures. Another point that needs bearing in mind is that they are represented in the present study by only a minority fraction of their original number. Most of those dealt with, accordingly, were not immediate neighbors. As one followed any line drawn at random over the map of Pomo speech, one would encounter two unsurveyed communities for every one surveyed by us, on the average.

The present-day Pomo settlements represent the former native communities very imperfectly. They are fewer, much mixed in origin, and settled on new sites. Probably not one group now inhabits its old central dance-house settlement. These stood mostly on fertile land, which white settlers appropriated. Almost all surviving Pomo have been shuffled from one place to another at some time in their careers, even though a good many have ultimately returned to a "reservation" or government-bought piece of land within their natal territory. Lower Lake, Upper Lake, Ukiah, Willits, Sherwood, Hopland, Cloverdale, Point Arena, Fort Ross, and so on, therefore mean little in terms of aboriginal occupancy: they are consolidations of much shrunken and battered remnants of several communities each. A painstaking census would be required to learn how many of the fifty or more communities are still represented by some living descendants or part-descendants. The number from which one or more aged persons survive, capable of giving tolerable information about the old culture, might reach twenty-five or thirty. The sixteen here described probably constitute a majority of these; as they constitute a decided minority of those there once were.

Such in general were the communities, tribelets, or social entities with which this study is concerned. The particular sixteen investigated will now be listed.²

Northern Pomo on Eel River Drainage

Kabedile (abbreviated *Kb* hereafter). The northernmost Pomo community, adjoining the Kato and Coast Yuki. Not recognized by Kroeber as a community, but was one. Listed by Barrett, *Ethnogeography*, 148, and map, as a settlement—like all other communities here dealt with unless contrary is mentioned. The permanent village called Kabedile and its assembly house stood on clear space in forest at extreme head of Sherwood v., 3½ mi. NW of Sherwood. From here the community owned a strip to the coast just N of Ft. Bragg, main summer camp being at Kayanbidax on north shore of lagoon at mouth of Pudding cr. They had their own half-day trail from Kabedile to Kayanbidax, distinct from Mato and Kalekau trail to Ft. Bragg. Caught salmon in Pudding cr., N fork Noyo r., head of S fork Tenmile r. Dialect different from those of Mato and Kalekau in Sherwood v.; inclined to be hostile to them, friendly to Coast Yuki and Kato.

Kaleka'u (*Kl*), Barrett's and Kroeber's Kulakai. Main village by a wet-weather pond in Sherwood v., at E edge of redwood belt, ca. 2 mi. S of Sherwood and 4 from Mato, a probably independent community between this and preceding. Kalekau or Mato, or both, owned a strip through to coast, not merely to ridge as shown by Kroeber. Friendly to Little Lake and Willits communities to SE (who allowed acorn gathering), but at war with Kato and Coast Yuki.

² The following abbreviations are used in this paper. Geographical: cr.=creek; id.=island; nr.=near; r.=river; v.=valley. Direction: N=north; S=south; E=east; W=west. Family relationships: br=brother; dtr=daughter; f=father; gr f=grandfather; gr m=grandmother; h=husband; inf=informant; m=mother; pts=parents; sn=son; ss=sister; w=wife.

Buldam-Willits (BW). Name of central village not recorded, but in vicinity of Willits; prob. owned to coast at Buldam at mouth Big r.; Indians settled there when expelled from Willits by whites. Barrett mentions trail from Buldam to Little lake N of Willits. In spite of inft's denial of independent or permanent settlement at Buldam (see note 792), Barrett (133, 134) has villages at Buldam and Kalaili, mouths of Big and Little rs. But were these year-round or seasonal by inlanders? My infts make Ft. Bragg (betw. Pudding cr. and Noyo r.) subdialectically different from Sherwood (Mato, Kalekau), and Kalaili from Buldam-Willits. Does this indicate certain purely coastal communities besides Eel r. drainage ones owning to coast and seasonally occupying it?

Northern Pomo of Russian River Drainage

Kacha' (Kc); more fully Kacha-bida, "K-creek." Barrett puts Kacha-bida, also called Dapishu, near head of Redwood Canyon cr. Kacha inft spoke of himself as of Walker v., on adjoining Forsythe cr. On Mill cr., affluent of Forsythe, is Kacha-ke. Possibly all territory of one community; or this dislocated by whites. Kacha had feud over deer-snare poaching with Willits over divide to N. Possessed 4-door ghost-society ceremonial house besides regular assembly house.

Shane'l (SN), Shanel-North, to distinguish from Shanel S in Central Pomo area), head of Potter v. Sedam and Pomo a few miles down valley were independent, subdialectically distinct communities.

Central Pomo of Coast

Icheche (Ic) (or Pdahau), on Garcia r. 4 mi. above mouth, or 5 mi. NE of Pt. Arena town. Ancient Pda-hau ("river-mouth") was near Garcia r. mouth. In 1902 old Icheche abandoned, and population moved few hundred yards downhill to Manchester reservation, to which Pdahau then applied. Probably one community; possibly two, merged since whites. One inft claimed C Pomo territory N only to Greenwood cr., as against Barrett extending it to include next stream N (Navarro r.). Wars with N Buldam and SW Danaga remembered; also with C Bokeya people of Yorkville; allies of next.

Central Pomo of Russian River

Yokaia (Yo), a modern village resulting chiefly from the fusing of the villages of Shokadjal and Tatem.⁸ C subdialects of Yokaia, Shanel (SS), Bokeya (westerners) of Yorkville (Late ?), and Icheche all slightly different, yet all intelligible among speakers. Between Yokaia and Shanel another autonomous village: evidently Shiego. Yokaia (or Shokadjal ?) territory was said according to inft to include: W to Gunsite near Boonville; N to State Hospital at Talmage, and Cow mt.; E to include Lost and Eight-mile valleys and to top of ridge from which Clear lake visible; S to Largo (Shiego). Eagle aerie near Boonville (coast drainage) owned by Yokaia chiefs. Icheche allowed Yokaia access to coast for sea foods. The Shokadjal chief Kalanoi accepted shell-bead money proffered by Icheche for Yokaia aid against midway Bokeya of Yorkville. This led to Yokaia-Bokeya feuds over fishing and hunting rights. Also under Kalanoi in 1850 Yokaia Indians massacred by soldiers (Barrett, 176). Our Yokaia data evidently refer to two or three ancient communities since fused, but probably derived chiefly from ancient Shokadjal.

Shane'l (South, hence SS) near modern Hopland (Barrett, 171; Powers, 168, fig. 19). "On Russian river from 1 mi. S of Pieta to Largo." War with S Pomo Makahmo from hunting and acorn gathering in Makahmo territory without permission. No data obtained on C Pomo communities (3 conjectured by Kroeber) on Russian r. between Shanel and Makahmo. Friendly relations with C Pomo communities to N.

Southwestern Pomo of Coast

Meteni (Me), near old Russian settlement of Ft. Ross, founded 1812. Represented today by many of Indians on reservation 5 mi. inland from Stewart's point. Meteni had an assembly house and was no doubt the seat of an autonomous community. Nothing learned or perhaps still learnable of extent of Meteni territory.

⁸ Kroeber, Handbook of the Indians of California, BAE-B 78:232, 1925. Cited: Hdbk.

Southern Pomo

Muka'nno (Mu), perhaps the most sE Pomo village, with Wappo and Coast Miwok neighbors. At present Rincon schoolhouse in Rincon v. E of Santa Rosa, on N. fork Santa Rosa cr. (draining into Russian r.). May be Wilok of Barrett, which perhaps Miwok name for Mukanno. Inft's m's f was Tongkliu, chief of Mukanno. Ammataio (Barrett's Amatio, on Mill cr., nr. Healdsburg) had own chief, was friendly with Mukanno, and spoke "same language." Mukanno had assembly house. Culture recorded is likely to be much eroded by early Caucasian settlement.

Ma'kahmo (Ma), near Cloverdale, most northerly S Pomo village on Russian r. According to Kroeber, 233, Makahmo "a group most frequently referred to as Musalakon," which used as surname by my inft. Barrett, 221, makes Makahmo principal village in N part of S Pomo area. Possessed assembly house.

Eastern Pomo of Clear Lake

On Clear lake there were about eleven communities. Two of these spoke Northern, six Eastern, three Southeastern Pomo.⁴

Habe'napo (Ha), "rock-people," is the name of a group, not of a village site. They shared Big v. with "water-lily people," Kuhla'-napo, Adobe cr. being dividing line. Main Habenapo village site apparently shifted, Nonapoti being best known.

Following Barrett, most maps give E edge of Big v. to a Wappo group, the Lile'ek. I have previously shown that Lile'ek were probably not an aboriginal community, but transient intruders.⁵ List inft had not heard of them. Another, Jo Augustin, volunteered that Lile'ek, "mixed speech," were assembly of Geyserville Wappo, Lake Miwok, Cache cr. Wintun, SE Pomo Elem, and Habenapo, with chief of their own, and houses at Nonapoti, near steel bridge NW of Kelseyville, on E side Kelsey cr. They were given hunting and fishing privileges by Habenapo. They were renegades—presumably from missions, or perhaps in conflict with Spaniards. This seems finally to eliminate the anomalous Wappo "island" from our ethnic maps.

Shi'gom (Cigom, Ci), at Lucerne, on NE side of lake.⁶ Subdialect different from Habenapo. Once attacked Elem. Close contacts with Long v. Patwin over ridge at their rear. I have published a census of this community.⁷

Southeastern Pomo of (Lower) Clear Lake

E'lem (El), on Sulphur Bank or Rattlesnake id. in "East lake" arm. Fighting with Shi'gom and, over acorn lands, with Cache cr. Patwin.

Koi (Ko), on Lower Lake id. A few miles S was first Lake Miwok community.

INFORMANTS

River Patwin (EP).—Inft, William Benjamin, born at a native village near Grimes, Colusa co. Small boy when Bole Religion introduced about 1870. Data refer to Saka district (Kroeber, Patwin, 259, and map).

Hill Patwin (HP).—Inft, George Bill, about 50 years of age. Data refer to northern Hill Patwin of Lodoga region on Little Stony cr. (Patwin, 263, nos. 28-30).

Lake Miwok (LM).—Inft, Salvador Chapo, aged man of Ole-yome, in Coyote v., middle one of the three Lake Miwok communities. Father from same village, mother, also Lake Miwok, of Sitsa-yume (obsidian place). (This is evidently Tsitsa-pukut, nr. lake outlet, and

⁴ This division of terrain between dialect groups is analogous to that on the Russian r., along whose approximately 100 miles there were N, C, S, and SW Pomo, the S in two divisions separated by a block of non-Pomo Wappo. Kroeber's conjectural map in the Handbook allows ca. 30 communities to the river and its tributaries; the actual number may have been nearer 20.

⁵ Gifford, Pomo Lands, 78.

⁶ Map of territory in Gifford, Pomo Lands, 79.

⁷ Clear Lake Pomo Society.

according to Kroeber, Patwin, 367, neither ancient Lake Miwok territory nor a tribelet community, but a post-Caucasian settlement of Miwok.) Inft's f's f was taken to Mission of San Francisco (de Asis or Solano †). Most of questioning by Kroeber.

Northern Pomo of Kabledile (Kb).—Inft, Tom Jimerson, born at Kayanbidax on coast while his parents, both from Kabledile, were camping there. Twelve or thirteen years old when Ft. Bragg established in 1857; has lived the past 30 years in Redwood v. near Ukiah. Kabledile call whites palachai, Russian r. Pomo call them masan.

Northern Pomo of Kalekau, Sherwood valley (Kl).—Jim Cooper, aged, born at Kalekau (Kulakai) of parents of same village. Lived when adult at Outlet, Basabida, ca. 4 mi. from Sherwood. His wife, Lucy, was also Sherwood. Cooper, and earlier his parents, made frequent trips to coast over trails on ridges. Called maru religion malu.

Northern Pomo of Buldam (BW).—Charlie Snow, born at Buldam, after Mendocino reservation established at Ft. Bragg, in 1856, when some whites were already living at Mendocino City. Both parents from Willits v., whence driven out by whites.

Northern Pomo of Kacha-bida, Redwood valley ("Walker v.") (Kc).—Charlie Bowen, born at Kacha-bida about 1850. Father, of Kacha-bida; mother from Shanel in Potter v. Inft taken to Round v. 1864–79. Has lived at Shanel a great deal; however, data said to refer specifically to Kacha unless otherwise noted.

Northern Pomo of Shanel, Potter valley (SN).—(1) Mrs. Sis Williams, prob. 80–90; born at Shanel; mother Shanel; father of Sedam. Data refer to Shanel. Inft worked only half day. (2) Mary Anderson, of about same age, and also former resident of Shanel, both parents Shanel.

Central Coast Pomo of Icheche, Garcia river near Point Arena (Io).—(1) Annie Shoemaker, aged. Born at Icheche; both parents of Icheche. Her daughter, Jennie Pike, interpreted. (2) James Harvey, age 43 years. Both parents of Icheche.

Central Pomo of Yokaia (Yo).—Rosa Boston, prob. more than 60. Born at Yokaia, as were both parents.

Central Pomo of Shanel, near Hopland (SS).—Jeff Joaquin, said to be 88, and his wife Cecilia. David, their son, acted as interpreter. Jeff born at Yorkville, head of Navarro r., where dialect different from Shanel; moved to Hopland at 13 or 14. Cecilia born and raised at Shanel. All data said to refer to Shanel.

Southwestern Pomo of Meteni, Fort Ross (Me).—(1) Celestina Scott, 60–70. Mother born at Meteni, father 3 mi. up ridge from present Stewart's Point reservation; both Southwestern Pomo territory only ca. 15 mi. apart. (2) Mrs. Marie James, prob. 90 or more; both parents from Meteni. Her mother was 10 years old when Russians established Ft. Ross (1812). Inft knew a few words of Russian and preferred Russians to Americans.

Southern Pomo of Mukanno, Rincon valley (Mu).—Henry Maximilian, 76, half-breed. Born at Mukanno (prob. Wilok of Barrett and Kroeber), N. fork Santa Rosa cr.

Southern Pomo of Makahmo, Cloverdale (Ma).—Pedro Mariano Musalakon, 84, baptized a Christian at Asti. Both parents of Makahmo. Brought up by white man until 7, then returned to parents; became a sucking shaman.

Habenapo Eastern Pomo of Big Valley (Ha).—William Carter, 62, half-breed, born at Nonapoti.

Eastern Pomo of Shigom (Ci).—Charles Gunter, half-breed. Born at Shigom in 1862.

Southeastern Pomo of Koi (Ko).—Tom Johnson, about 74; ca. 8 or 9 when maru Ghost Dance introduced. Born at Koi, mother from Elem. Wokox, an earlier inft,⁸ was his m's half-br.

Southeastern Pomo of Elem (El).—Rebecca Patch, prob. about 80. Born at Elem, as were both parents. Her husband, George Patch, a Koi, participated in discussion. Clifford Salvador, half Koi Pomo and half Lake Miwok, served as interpreter.

Northeastern Pomo (NE).—Inft, Santiago McDaniel, kept as boy by white family named McDaniel, then returned to own parents while yet a youth. A rather reluctant inft, especially at first.

⁸ Gifford, Pomo Lands, *op. cit.*; and Clear Lake Pomo Society, UC-PAAE 18:287–390, 1926.

Hill Wintun of Paskenta region, Thomas creek (HW).—(1) Billy Freeman, gave age as 76; ca. 12 years old when Bole Religion came. Born at Paskenta. (2) Nancy Jordan, age 75 or 76; young girl when Bole came.

Two infts were less than 50, three from 60 to 65, nineteen from 70 to 90. The average age of this last group was around 80; of the entire body, between 70 and 75. Although many of the individual ages as given are likely to be somewhat inaccurate, the averages are probably not far wrong.

I append my impression-ratings of Pomo informants for comparison with the internal-evidence ratings given below by Kroeber on the basis of comparative analysis.

	Knowl- edge	Initia- tive	Accu- racy		Knowl- edge	Initia- tive	Accu- racy
Kabedile.....	B+	B+	A-	Shanel S.....	A	A	A-
Kalekau.....	B	B-	A-	Meteni { (1).....	B	D	B
Buldam-Willits.....	C	C	B	{ (2).....	B	C	A
Kacha.....	A	A	A	Mukanno.....	B-	B	B
Shanel N { (1).....	B	C	B	Makahmo.....	B	C	B
{ (2).....	A-	B	A-	Habenapo.....	B	A	C
Icheche { (1).....	B	C	B	Koi.....	B	B	B
{ (2).....	B	A-	B	Elem.....	B	C	B
Yokaia.....	A-	A-	A-	Northeast.....	B	D	D

ELEMENT OCCURRENCE LIST

ELEMENT OCCURRENCE LIST

The groups represented by abbreviations at the heads of columns are:

<i>RP</i>	River Patwin of Grimes	
<i>HP</i>	Hill Patwin of Lodoga	
<i>LM</i>	Lake Miwok of Middletown	
<i>Kb</i>	Kabedile	Northern Pomo
<i>Kl</i>	Kalekau, Sherwood valley	Northern Pomo
<i>BW</i>	Buldam and Willits	Northern Pomo
<i>Kc</i>	Kacha or Kacha-bida, Walker valley	Northern Pomo
<i>SN</i>	Shanel (North), Potter valley	Northern Pomo
<i>Ic</i>	Icheche, Point Arena	Central Pomo
<i>Yo</i>	Yokaia, Ukiah	Central Pomo
<i>SS</i>	Shanel (South), Hopland	Central Pomo
<i>Me</i>	Meteni, Fort Ross	Southwestern Pomo
<i>Mu</i>	Mukanno, near Santa Rosa	Southern Pomo
<i>Ma</i>	Makahmo, Cloverdale	Southern Pomo
<i>Ha</i>	Habenapo, Big valley	Eastern Pomo
<i>Ci</i>	Shigom, Lucerne	Eastern Pomo
<i>Ko</i>	Koi, Lower lake	Southeastern Pomo
<i>El</i>	Elem, Sulphur Bank	Southeastern Pomo
<i>NE</i>	Northeast or Salt Pomo, Stonyford	Northeastern Pomo
<i>HW</i>	Hill Wintun (Nomlaki) of Paskenta	

SYMBOLS USED

- × Stated to occur among the group; that is, present.
- Stated not to occur among the group; that is, absent.
- (×), (-) Present and absent, respectively, but statement was made with more or less reservation or seemed not wholly certain to recorder.
- Informant uncertain or did not understand.
- ×·, -· Not inquired into, supplied from literature (Kroeber, Patwin; Loeb, E. Kuksu). Patwin only.

Blank Question not asked.

An asterisk (*) before an element title denotes a selection of 600 traits for which coefficients were separately computed. Discussed in Part II.

California elements inquired into but not found to occur among any Pomo group (universal negatives) have been omitted from the tabular list. They are presented after it, in solid array. They are of course indispensable to any comparison between the Pomo and peoples of other areas, in or out of California.

	RP	HP	LM	Ko	Kl	BW	Kc	SN	Ic	Yo	SS	Me	Mu	Ma	Ha	Ci	Ko	El	NE	HW
*844. Scapls taken.	-	X	-	X	X	X	-	-	-	-	-	-	.	-	-	(-)	-	-	-	X
844a. Heads taken.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*846. Enemy slayer disinfected.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
847. "Special keeper for scalp"	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*848. Enemy slayer used scratching stick.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*849. Victory dance.	-	X	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*850. Scalp on pole.	-	X	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
851. Women and children killed.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*852. Women captives enslaved.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*853. Women captives married.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
854. Not violated.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
855. Shamans go to war.	-	X	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
SHAMANS																				
856. "Mostly women" (as in NW Calif.)	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*857. Bathing for supernatural power.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
858. Novices trained by older shamans.	-	X	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*859. Novices dance to acquire control.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
860. Disease object kept in shaman's body.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
861. Spirit pains are supernatural objects.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
862. Spirit pains are arrowheads.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*863. Pains are living objects.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*864. Pains are concrete objects.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*865. Shaman declining case blamed if patient dies.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*866. Animal guardian spirits.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*867. Acquired in trance or faint.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*868. Acquired in dreams.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*869. Singing and sucking shamans distinguished.	-	X	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
870. Sucking doctor drinks through bark tube.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
*871. Fetish sacks for shamans.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-
872. Sack shamans in secret society.	-	-	-	X	X	X	-	X	-	-	-	-	.	-	-	-	-	-	-	-

ELEMENTS LACKING AMONG THE POMO

The following 260 culture elements occurring elsewhere in native California were not found among the 16 Pomo groups investigated. Each of these elements was inquired about: sometimes only among one or two Pomo groups, practically never among all, usually among several. It seems highly probable that none of these elements is characteristic of Pomo culture, though a few of them possibly occurred sporadically or marginally.

Clothing.—Rabbit-fur-strip robe, woven in and out; coiled-without-foundation; painted buckskin cape, single skin; two skins; buckskin gown; woman's back apron (skirt), of braids or cords; of slit buckskin; woman's basketry cap; flexible, of tule; overlay twined, low; diagonally twined; coiled; 2-piece deerskin skirt, sewn both sides; buckskin leggings, man's, full length; tule leggings; snowshoe; moccasin, hard soled, high; 2-piece, soft; 3-piece, soft; tule; sandal of leather; of fiber.

Adornment.—Men's hair in pencils; soul of untattooed enters rat hole, etc.; trodden under foot; red-spruce fungus for pigment; face painting by roller printing.

Ceremonial dress.—Feather cape tied around waist; headdress of human hair; flat wand worn on forehead; eagle-down rope skirt; tarat woodpecker-scalp visor (Patwin type); head hoop with woodpecker scalps; triple-rod woodpecker-scalp headdress; open head net, flowing down back; crocheted ditto; sea-lion tooth headband; wolf-hair headbands; hair pins of bone; palut eagle-feather skirt (S. Calif. type).

Cradles and burdens.—Cradles: board; sitting, toe type; sitting, shallow type; Y-frame (Hdbk., pl. 40m); kite frame (Hdbk., pl. 40n); Y-kite-frame (Hdbk., pl. 40o); hooked ladder frame; soft tule; flat, of basketry, vertical warps; horizontal warps; U-ladder; oval ladder; cradle hood; of wicker; hood pendants; hood design indicating sex; braided belt with sex pattern; cradle carried on head; on hip.—Pack strap of buckskin; rolled carrying case of twined stems; folded carrying case of skin.

Basketry.—*Xerophyllum* decoration; *Adiantum*, *Woodwardia*, *Evernia* decoration; alder dye; circular sifter of close twining, bone tapper; cylindrical dance basket; twining of 2-ply tule; porcupine-quill overlay; basketry spoon for scooping boiling food; water basket, flat or pointed bottom, asphalted or pitched; triangular winnowing tray (Hdbk., pl. 50e); sacks of whole-stem tule; flat-bottomed coiled carrying basket; round or sharp shouldered "bottle neck" or small mouthed basket, with or without feather fringe at shoulder; all-splint coiling (no rods); coiling on bundle of *Epicampes* grass.

Fishing.—Weir with falling doors, string trigger; large scoop, twined of sticks; trapezoidal bag net, with A-frame of poles; holed sinker; circular fishhook of *Haliotis*; of mussel; artificial fly, of wood-duck feathers; of mouse hair; "hook" of hair for jerking out trout; large leaf as bait carrier; quills in harpoon toggle head; toggle wrapped with grass to extract; fish spear with multiple prongs spread by ring.

Hunting.—Bird-snaring booth; decoys, living or artificial; ring-pointed arrow for skipping over water.

Food.—Pine-bark winnower for meal; spruce-fungus to dye acorn bread red; 3-fork-stick babricot for cooking or drying; wooden knife for cutting off seed heads.

Agriculture. Pottery.

Utensils.—Pestle ringed at base; near top; wooden pestle; bedrock mortars; shade built over them; square-edged mortar; wooden mortar; mortar hopper, coiled; twined; hopper asphalted on mortar; circular or squared metate; oval, looped, squared, or 2-horned muller (mano); steatite cooking vessels shaped, including small-mouthed pot, and holed trapezoidal pan; cane knife for butchering; pine-burr or porcupine-tail hairbrush; jointed fire drill; ornamented acorn-gruel paddle stirrer; looped stick food stirrer; 3-stick food stirrer; box for feathers; rectangular, grooved, arrow straightener; 2-piece arrow polisher of grooved sandstone; elkhorn spoon; wooden stool, cylinder or mushroom shape; wooden meat platter; low granary on ground; curved stone adz with mussel blade; wooden wedge; pear-shaped maul.

Weapons.—Bow wood taken only from one side of tree; untipped 1-piece war arrow; cane arrow; secondary, tertiary, Mediterranean, or Mongolian arrow release; quiver of tule; round hide shield; curtain shield; spear thrower; sea-lion harpoon, with foreshaft, double-barbed head, line; "slave killer" edged stone club.

Houses.—Northern plank house and sweat house, with all parts and appurtenances; holed ladder in earth-covered house; houses joined or in series; mat-covered house; named places in sweat house; sweat-house fuel-gathering ritual; wooden pillow in sweat house.

Navigation.—Dugout canoe (except recent among Pomo); plank boat; grooved anchor; double-bladed paddle; narrow poling-paddle.

Ornamental and ceremonial shell and stone objects.—*Haliotis* inlay, or rings, etc.; clam-shell-asphalt mosaic; curved blades of obsidian; carved steatite; bear-paw stones.

Musical instruments.—Rattle of multiple sticks, gourd, tortoise shell; notched scraper; basket scraped or pounded; flute played through nose; flageolet.

Money and beads.—Dentalia, and cylindrical or triangular money box of horn; loans at interest; square *Olivella*-shell beads; clamshell-disk beads measured around hand.

Pipes and tobacco.—Pipe of cane; of wood with stone bowl; of stone; with bone mouth-piece; with inlay; straight, concave, or convex tubular; obtuse angled, L-shaped, or disk pipe; tobacco planted; special tobacco basket; tobacco eating with lime; pipe used by shamans for sucking.

Games.—Hoop and pole game with block for hoop; ring and pin game with single tule ball; ball race with stone ball; double-ball by men with wrestling; or by women only; degenerate double ball of cord only; women's lacrosse with hair ball and seed beater; guessing game, hiding under mat or blanket; finger loops on bones; beaver-teeth or split-acorn or walnut dice; stone markers for dice count.

Calendar, counting, directions.—Counting by fives only; quaternary numeral system; octonary count on twigs; five cardinal directions; color direction symbolism.

Marriage.—Negotiated marriage price; repayment on divorce; head covering as parent-in-law avoidance.

Birth.—Navel string tied on cradle; child names itself; first tooth lost thrown in certain direction.

Puberty.—Girl's puberty rite: girl runs, works, or carries; looks into *Haliotis*, eats tobacco; pit roasting, sand painting, fire ring, trench, crescentic stone, or chastity ordeal. Boy's puberty vision seeking, whipping with bowstring, fasting, running, ear piercing, tattooing, or specific fortitude ordeal. Ear piercing stops storms. Brother-sister avoidance.

Death.—Body burned in house; grave planks or masts; corpse taken through wall of house; string projecting from grave; berdache undertakers; mourning ceremony or anniversary, with all its traits.

Social and political status.—Definite social rating by wealth; damage compensation according to social rank; debt or capture slavery; berdache-making ritual; reincarnation of dead twin; personal appellation from house or marital status; ostracism for illegitimacy; large or named tribes; unilinear exogamic clans or moieties; totemic features.

Chiefs.—Chiefs with distinctive titles; assistant cult chief.

War.—Special scalp house; esteem of bravery; wish expressed to die young; public confiscates brave warrior's property.

Shamans.—Bear-shamans actually transformed (werebears); shamans' feather kaku-fetish; wound-cross charm; initiation into shamans' obsidian association.

Ritual.—Ritual numbers 3, 5, 7, 10; ritual-grunting expiration; "enemy songs"; wands swallowed; public rattlesnake ceremony; shade-roof cult structure; feather ropes; colors associated with directions; seed offerings, to regalia or otherwise; new fire rite; attachment of ceremonies to particular spots; altars or shrines; Hesi, Aki, and various other Kuku ceremonies.

SUPPLEMENTARY NOTES: POMO

Abbreviations as at heads of column in list; viz.:

N, Outlet cr.: *Kb*, Kabledile; *Kl*, Kalekau; *BW*, Buldam-Willits

N, Russian r.: *Kc*, Kacha-bida; *SN*, Shanel of Potter v.

C, coast: *Ic*, Icheche

C, Russian r.: *Yo*, Yokaia; *SS*, Shanel at Hopland

SW, on coast: *Me*, Meteni

S: *Mu*, Mukanno; *Ma*, Makahmo

E, Clear lake: *Ha*, Habenapo; *Ci*, Shigom

SE, Lower lake: *Ko*, Koi; *El*, Elem

NE, Stony cr.: *NE*, at Stonyford

CLOTHING

1. *Ha*.—Of goose skin.
2. *Kc*.—For rich people.
3. *Ic*.—Without quail topknots. *NE*.—Buckskin cape from shoulder to knee; worn by both sexes.
4. *Kl*.—Jackrabbit, shakodi; cottontail rabbit, mikyū. *BW*.—Imported from interior. *SS*.—Rabbit-fur strips twisted with string made of fiber of masha plant which grows in mountains near springs. *Ci*.—Used as cape as well as blanket; stick of wood to fasten edges together.
5. *Kc*.—For twisting rabbitskin over string (same element?).
7. *SS*.—Frame of two upright sticks, top and bottom horizontal sticks. *Ci*.—Woven on frame with crossbar at top. *Ko*.—Same as *SS*.
9. *Mu*.—Made of root fibers of a'maslen.
12. *Yo*.—Puma-skin robe for both sexes. *SS*.—Rich wore wildcat (yomot) kilt or skirt around middle. Several skins sewn together with sinew or vegetable fiber. *Mu*.—Of gopher, brush-rabbit, bear, or wildcat skins. *NE*.—Cape of wildcat skins sewn together by men, using bone awl and fiber string.
14. *Kc*.—1-piece kilt for women. *Ha*.—Worn by men. Right leg slightly exposed where ends came together.
16. *Kb*.—Also elk-hide "overcoat" (blanket) reaching nearly to ankles.
18. *Ko*.—Young men went naked.
19. *NE*.—Body coated with mud to cool on hot day.
20. *Kl*.—Of deerskin with hair on. *Yo*.—Of fine grass or deerskin. *SS*.—Deerskin breech-clout worn either hair side out or in. *Ha*.—Of fox skin. *Ci*.—Fastened to deer-hide girdle.
21. *SS*.—Of tule, hanging below knees, 1-piece; similar to women's garment (34).
22. *Kb*.—1-piece.
25. *Kb*.—Bark apron called *katala*, for male dancers. *Kc*.—Of tule. *Ko*.—Of grass (not tule), hung halfway to the knees.
26. *BW*.—Of shredded tule. *Ma*.—Front and back pieces of same length; fastened to rope girdle. Of tule shredded with stick.
29. *Ko*.—Of flat tule, shredded with bone awl. At belt a row or two of twining. Hung to about knees.
33. *Ha*.—Of buckskin or deerskin. *Ko*.—See note 29.
34. *BW*.—Of shredded tule. *SS*.—Hung to below knees; both sexes wore. *Ma*.—Tule shredded; reached to knees. No 2-piece dress. *Ci*.—Of shredded tule. Hung to below knees. *NE*.—Of willow bark, reaching nearly to ankles. Brush burned to dry willow trees; then bark peeled off.
35. *Ma*.—Of buckskin; reached to knees.
36. *Ma*.—Men's hair worn long. *Ko*.—Worn for hunting, dancing. Made of Indian hemp fiber. See note 88.

37. *Ma.*—For dancing. Men made all hair nets. *Ha.*—For dancing only.
 38. *Ha.*—Buckskin leggings to protect shins from brush when hunting. Men only used.
 40. *Ha.*—To protect head from brush when hunting.
 40a. *Ha.*—Of animal fur or shredded tule, worn in dry cold weather. Two hung from cord around neck. Called bihedomkale (put the hands in).
 42. *Ci.*—Shredded tule folded over cord which tied around neck. Covered body, sometimes to knee. Tied around with cord to hold tightly against body. Used by fisherman kneeling on balsa; made by women. Tule shredded with bone awl.
 43. *Kl.*—Women wore. *Ci.*—Both sexes wore.
 44. *Kb.*—Of whole shells with tip of spire knocked off before stringing.

HAIR

48. *Ma.*—Hair laid on wood and cut with obsidian flake. *Ko.*—Held taut and sawed with obsidian flake. *NE.*—Hair banded: laid over stick and cut with sharp stone.
 49. *Ha.*—Soaproot rubbed on hair after singeing; washed off next day.
 50. *Kl.*—Hair burned off with firebrand to "bob" length. *ic.*—Men singed hair at any time merely to shorten. *Ci.*—Singed only, not cut, when in mourning. Both sexes did this.
 51. *Ha.*—Held with small bit of tule matting.
 52. *Ko.*—Sometimes; also men's. One braid only.
 54. *Mu.*—See note 334.
 55. *Kc.*—Moistened pepperwood-nut charcoal, or oak-gall-nut charcoal rubbed into hair. Both used as salve for chapped face. *Yo.*—Hair dye made by boiling elder leaves and charred pepperwood nuts.
 56. *Kl.*—Lamprey blood to redden hair for dress occasions.
 57. *Ma.*—Musalakon, chief of Makahmo and inf't's father's father, wore long beard. *Ci.*—Beards worn before whites came. Not Spanish influence.
 58. *Kb.*—Pubic hair extracted.
 60. *BW.*—White flint flake, not retouched after striking off from matrix. *SS.*—Eyebrows trimmed by shaving with obsidian flake. *Me.*—Flakes of red, blue, or black flint for shaving. *Ko.*—Obsidian.

ADORNMENT

61. *SS.*—*Haliotis* shell called wil. *Ma.*—Necklace of *Haliotis* pendants, but no *Haliotis* ear ornaments.
 63. *Kl.*—Both sexes. Poison-oak stick put in new-punched holes to keep open. Meat tabooed. *BW.*—Only girls. *SN.*—Children's ears bored if not obedient to parents. *ic.*—At any time. Anne Shoemaker already had 3 children when hers was done. James Harvey gave age for ear piercing as 4 or 5 years. In spring, flowers worn in ear-lobe hole to make person healthy. *SS.*—Ear piercing of boys and girls at any age, an individual ceremony. Only rich people could afford to hire professional piercer, whose fee was about 700 clamshell beads. Instrument used resembled basket awl, made from deer's radius. Ear piercing a man's trade, called shmaba shanitkale (ear cutting); piercer not a shaman. When operating he abstained from meat, etc., and drank water only after dark; he might not make fire on day of operation. *Me.*—Girl's ear lobes bored at 6 or 7 years. *Ma.*—Both sexes had ears bored with bone "needle" when babies. *Ci.*—Both sexes about 3 years of age. No taboo against meat or salt. *Ko.*—Both sexes at age 6 months to 5 years. *NE.*—Girls had ear lobes bored at first menses; men never.
 64. *Kb.*—Worn only by women for dances. *Ko.*—Woman's ear stick of elderwood with feathers at ends. About 1½ in. long.
 65. *Kb.*—Both sexes. *Kl.*—Both sexes. Meat tabooed. *SN.*—Men only. *Mu.*—Women only; wore bone stick. Inf't's w's gr m wore when wild oats ripened; also worn when spring flowers bloomed. *Ma.*—Males had nose septum bored at one year of age.
 67. *SN.*—Worn by only 2 or 3 people in a hundred. *Mu.*—Of deer bone, with feathers at ends. *Ma.*—Rabbit bone. Incised wildcat bone also worn by men.

68. *Kb.*—Crab-shell ear pendants, also. *Kl.*—With feathers on end and one bead in middle of stick. *Ik.*—Of bird bone with black quail tops and scarlet woodpecker feathers affixed to ends. *Me.*—Tree-squirrel bone. *Ma.*—Wildcat bone, incised. Worn by men and women. *Ha.*—Bird-bone tube with scarlet woodpecker feathers and black topknots of Valley Quail, worn by women. Men wore over ear like a pencil a worked bone stick from shoulder-blade edge of deer, decorated with red and green feathers and quail topknots; held in place between ear and head with pitch. *Ci.*—Worn by both men and women. Inft thought deer bone used.

69. *Ko.*—Swan-bone earsticks with design incised with obsidian, and black pigment rubbed in.

70. *Kl.*—Usually after maturity; Mrs. Lucy Cooper had 2 or 3 children before tattooed. *SN.*—Tattooing showed one was glad and "felt good." *Ik.*—As "tribal" mark. *SS.*—Poison-oak charcoal. *Me.*—Design of men's chest tattoo was horizontal zigzag. *Mu.*—Arm tattoo, both sexes. Done by young man on girl, sometimes on her breast. If she did not like him would not let him do it. *Ma.*—Women only, on chin; bone "needle" and burned fir gum. *Ci.*—Sporadic, "playing." *El.*—Usually after marriage.

71. *Kb.*—On chin and cheek. *SN.*—Mrs. William's face tattooed: vertical line down chin center from edge of lower lip; two diverging lines from each mouth corner, running obliquely on to cheek. *Ik.*—Women tattooed after marriage.

72. *Kb.*—Rare; consisted of design across upper lip below nose. *Kl.*—Men tattooed on upper lip and chest. *Kc.*—A horizontal line on upper lip, under nose. *Ik.*—Some men tattooed on cheek. *Ha.*—Horizontal line on upper lip under nose; one vertical line on chin. Man consorting with woman often tattooed by her, to show love. *Ko.*—Men not tattooed at all.

73. *nw* element, probably misunderstood by Elem inft.

74. *Ik.*—Anne Shoemaker's tattoo: Three vertical lines on chin; 2 horizontal lines $\frac{1}{2}$ -in. apart running from upper lip back to ear on each cheek. Horizontal line parallel to these and about $1\frac{1}{2}$ in. below. Tattooing done at any time. *Ko.*—In three groups. Done at age of about 15 or 16 years.

76. *Kl.*—Shamans used red rock for paint; ground on rock or boulder, water added. *Mu.*—Red oxide of iron from spring for pigment; dried, and applied with fingers. 3 places for this pigment along Mill cr. *Ko.*—For war and dance, applied to face.

78. *Kc.*—*Haliotis* shells for paint containers after pigment pulverized in small mortar. *Ha.*—Face painting to stop bad dreams. *Ko.*—No daily face paint worn; inft never had face painted.

CEREMONIAL DRESS

79. *Ma.*—Made of imported condor (*istun*) feathers; attached to neck, worn at back and tied around waist. More commonly of hawk feathers on netting; worn down back and tied under arms over chest.

80. *Ci.*—Called *xeshigi*. Nowadays turkey feathers also; turkey-vulture and hawk feathers used before whites came. Tied "around waist," hanging behind.

81. *Kl.*—Eagle down. *Ik.*—Gull down. *Me.*—Turkey-vulture down. *Ko.*—Duck down most used; but some use of down from eagle, hawk, turkey vulture. *El.*—Down from white pelican (*kochkoch*) and from "squirrel hawk."

82. *Ko.*—Magpie headdress ready made imported from Sacramento v.

83. *Kl.*—Of eagle and turkey vulture. *SS.*—Of crow feathers; worn behind head by men, on top head by women. *Mu.*—Headdress like *Hdbk.*, fig. 44, but made of condor (*ihsun*) feathers. Worn by *Kusu* impersonator. *Ma.*—Of crow feathers, shaped like magpie-feather headdress. *Ha.*—Worn by women. *Ci.*—Feather bunch called *bitek* worn at back of head, fastened on with hardwood hair pins (*kano*). Worn in various dances, including *kilak*. *Ko.*—Sparrow-hawk feathers.

84. *SS.*—Also worn by men down partly over eyes.

86. *Kc.*—On woven base. Worth \$150 in shell beads.

87. *Mu.*—Woven, not deerskin. California woodpecker-scalp feathers and clamshell beads included in it. Woven by men. Worn by chief when making address from assembly-house top.
88. *SS.*—Whole woodpecker's scalp never used for anything. *Ko.*—Hair net with California Woodpecker scalps sewed on; worn by chief.
89. *Kl.*—Flicker called *bachia*. *Ci.*—Called *cholopa*; flicker, *kiyel*.
90. *Ma.*—Called *hodjema*. *Ko.*—Sticks ornamented with white axillary feathers of mallard.
91. *SS.*—Whole condor (*sul*) skin worn by male dancer.
93. *SS.*—Of milk-weed sticks with quail topknot trimming on end. One in each ear lobe. Project backward to back of neck; hair wound or tied on these. Women also wore ear sticks called *ilbuchekish*, made of basket willow; 3 or 4 in. long. It had quail topknots at each end, held in place by clamshell bead which fitted on stick; diam. about that of little finger. *Ma.*—Women wore 5-in. wooden ear stick with scarlet woodpecker's scalp and black California quail topknots at end.
94. *Kl.*—Of chamiso wood (*kano*), hazel, or *manzanita*. *SS.*—Of *manzanita*, about 8 in. long. No bone hair pins. *Ci.*—Men wore 2 sticks shoved horizontally through hair and hair net. Sometimes worn alone, sometimes to hold feathers in place, as for dance and war.
96. *SS.*—Face paint applied with stick.
97. *Ko.*—Rope of down feathers made.
99. *SS.*—At chest level, when dancing. *Mu.*—Held in both hands at chest level, elbows against sides. Each hand alternately raised and lowered a few inches; as one raised, other lowered.

CRADLES AND BURDENS

101. *Kl.*—Of hazelwood. No shade. Sometimes covered with wildeat skin. *SS.*—No shade on cradle. *Ci.*—Cradle of dogwood stems. *Ko.*—Feather ornaments or acorns sometimes hung on cradle hoop. *NE.*—Made of willow sticks. Buckskin pack strap. *Inft's* description indicated a lying cradle instead of a sitting cradle. All the surrounding peoples use the latter.
102. *Ha.*—Either husband or woman relative of wife made cradle.
104. *Ha.*—“Woven in string on cradle warps; U-design on left side if girl next desired; V-design on right if boy. Cradle made after baby's birth.”
105. *Ci.*—Tule mat laced to young baby's back to hold baby rigid and make handling easier. Swaddling clothes of loose shredded tule, for warmth. Tule pillow. Baby should never be laid on belly, lest die.
106. *Kl.*—“Also hazelwood split thin, an inch or two wide, for forehead portion of pack-strap.” *SS.*—Beads of clamshell woven into pack strap. *Me.*—Some with clamshell beads inserted. *Mu.*—Wood carried with woven pack strap. *Ma.*—With clamshell beads inserted, for cradle; without beads, for burden basket. Not of buckskin. Woven tump line (*liya*) used for carrying wood without basket. *Ci.*—Pack strap of flat band of buckskin or of 3 strips. Part resting on head broader. Grass put on head to protect from chafing. No basket cap worn, lest a member of family die. If man put basket on head, his wife would die, and vice versa. (*Sic:* there is no Pomo cap.) *Ko.*—Pack strap woven of Indian hemp fiber string. Clamshell beads in part resting on top of head; this part spread wide to distribute load somewhat.
107. *Ic.*—Of woven string bands, 8 radiating from center. Used to carry cradle. Radiating part at bottom to support cradle; single strap over head.—This is really a net to hold the load. *LM* “spreading” refers to spread of strap over head in order to ease load, like 106 *Kl, Ci.*
108. *SS.*—Carrying basket strap over shoulders of man.
109. *SS.*—Carrying basket strap over head of woman.
110. *SS.*—Called *yét*. Hunters use to carry kill. Women use sometimes. *Ha.*—Called *kibu*. *Ci.*—Of milk-weed fiber string. *Ko.*—Made by men, but used by women to carry baskets, etc.
111. *Ko.*—Pack strap of carrying net shortened by pinning up with bone pins.

112. *SS.*—Sometimes 2 deerskins sewed together. Dance feathers kept in such bag. *Ma.*—Feather regalia kept rolled up in a deer hide. *NE.*—Deer-hide sack for dried salmon.

113. *Kl.*—Of wildcat skin.

114. *Kb.*—With hair on. *Kl.*—For holding bead money. *Yo.*—No fawn skin, as bad luck to kill fawn. *SS.*—For tobacco pouch.

115. *Kc.*—Wood carrier of two parallel sticks with ropes attached; different from Mo-have type "carrying frame of sticks and cords."

117. *Kc.*—Also for women; beads on it for decoration. *SS.*—For carrying small game. *Ma.*—No net sack, but fawn-skin bag for men to carry small articles. *Ci.*—Called chulu. Small mesh. Made of strings. Woven or braided pack strap. Sack about 1 ft. wide, 1½ ft. long. Apparently no drawstring. Carried food, etc., in it. *Ko.*—Small mesh.

119. *SS.*—Women use for acorns. *Ko.*—Deerskin pack strap, 2 to 2½ in. wide, to carry openwork burden basket, which woven by men.

121. *SS.*—Called pchi. *Ma.*—Called mohoi; used for seeds.

123. *SS.*—About 4 ft. high, openwork; for carrying wood, fish, etc. *Ma.*—Made by men; openwork. Men carried wood, food, acorns, buckeye nuts, etc., therein.

124. *SS.*—Litter called hai'shata, made of 2 poles with crosspieces.

126. *Ha.*—Special net called wayak used to carry disabled persons. Suspended from pole carried by 2 men. *Ko.*—Sick person carried in carrying net.

BASKETRY

131. *SS.*—For carrying basket, passing over 2 warps.

135. *Kl.*—Water containers and baskets for boiling were lattice-twined. Small baskets (plain-twined?) used for dippers; *Haliotis* shell used as drinking cup sometimes. *SS.*—Called hainedu (hai, stick).

137. *SS.*—Men made all fish traps, some cradles, some carrying baskets.

138. *SS.*—Tapped with hand, not with bone or wood. *El.*—With center projection below for handle.

141. *Kl.*—Afraid of tule because grows in swamps, believed frequented by water monsters. *Yo.*—No tule growing in Yokaia territory; objects made of imported tule. *Ma.*—Women made. Used for table for food; not sat on. *Ci.*—Twined of half-dry tule, as less likely to break. *Ko.*—Tule matting to sit on and for bedding.

142. *Yo.*—Baby's swaddlings of tule skin, shredded with awl, woven. *Ha.*—Also deerskin as mat to sit on. *Ci.*—"Rug" made of tule skin from part of stem below water, with design sometimes by varying the weave. Placed on top of floor mat for seat, or hung on wall. *NE.*—Twined willow-bark fabric made by men. Feather regalia rolled up in this when not in use; no other purpose.—This is of course a case or container, not a mat.

144. *Ma.*—1-rod, but not 3-rod.

145. *NE.*—No ovoid shaman's basket (Barrett, Pomo Basketry, pl. 20).

147. *SS.*—Called haisibo (hai, stick; sibo, 3).

148. *Kl.*—Feathered basket called tsapu' pika' (shining basket). Neck feathers of mallard drake used. *Me.*—Scarlet feathers from California Woodpecker's scalp used; other birds, too. *Ma.*—Feather insertions on both 1-rod and 3-rod baskets.

149. *Kb.*—Imported from "valley" (inland) peoples. *Kl.*—Redbud imported from Clear lake region. *BW.*—*Cercis* bark purchased from inland groups. *Ic.*—Redbud basketry material bartered from inland peoples at Cloverdale, Hopland, Ukiah, in exchange for dry seaweed. Pt. Arena people went inland. *Me.*—Redbud bark from interior; does not grow near coast.

151. *SS.*—Redbud (kala'ya) as sewing material.

152. *Ma.*—Called baktu. *Ci.*—Seed beater called batu.

154. *Ic.*—No wicker basketry other than seed beater. *NE.*—Men made.

157. *Kl.*—Fern roots soaked in mud to blacken. *Kc.*—A Lake co. Pomo woman who made baskets in new style punished "by creator" who caused her death. Makers of baskets must adhere to old styles.

Ic.—Fern root mud-dyed for black basketry materials. *Ma.*—No alder dye used. *Ci.*—Basket material placed in wet ashes for day or two to dye gray or black.

159. *Ci.*—Flint or obsidian flake used.

160. *Ic, Me.*—*Mytilus californianus*.

CORDAGE

163. *SN.*—Fiber plants not identified; one called masha.

164. *Kb.*—Did not grow at Kabledile; purchased from interior groups. *SS.*—Fiber plants for string: masha and matka, both growing at mountain springs. *Ha.*—String fiber from bark of shoots of brush resembling dogwood, collected in spring.

165. *Mu.*—Another string fiber was from plant called hamali, which grows along Russian r.

166. *Kc.*—Leaves split with sharp stick, then fibers pulled out with fingers. *Iris* (?). *Me.*—String also from root fibers of blue-flowered plant which grows in clumps. *Mu.*—*Iris*-fiber rope for deer snare.

171, 173. *Kb, BW, Ic, Ma.*—Rope made by doubling and redoubling 2-ply cord.

175. *Kb.*—Hazel stems twisted for withes. *Kl.*—Of hazel; none of grapevine. *Me.*—Of hazel, not grapevine. *Ko.*—Grapevine withes for carrying wood, binding house parts, lashing tule balsas. Also split "white" pine branches used, a species growing near Lower lake; seeds beaten.

177. *Ic.*—Introduced by "Mexicans." *Ma.*—Of Spanish origin. *Ha.*—From "Spaniards."

178. *Ha.*—From "Spaniards."

FISHING

179. *Kb.*—Stakes driven with cobble. Brush put against upstream side. *Bu.*—Built far upstream where narrow. Long fish trap (Hdbk., pl. 33a) used with it. *Kc.*—Must use clean brush from near river; wood damaged by woodrats or birds would cause bad luck in fishing. *SS.*—Fishing places not taboo to females; weir used by whole community; not private property. *Ma.*—Stakes driven in river bottom; brush added to make fence. Platform over water for fishermen. Constructed in April with salmon running downstream. *Ci.*—Stakes of any kind of wood, driven with block of stone or wood. Weir built only halfway across Upper Lake cr. (This is outside *Ci* territory.) Danoha people once killed a *Ci* man who came in early morning to inspect weir. *Ci* people pursued slayers. *Ko.*—Fish dam at Cache cr. outlet of Clear lake. See note 196. *El.*—Fish weir not made (no stream), but Koi people allow Elem people to use theirs on Cache cr. *NE.*—Two fires on bank to spear salmon at weir.

180. *Ma.*—With openwork floor through which fish speared. Brush screen on front of scaffold so fish could not see fishermen.

182. *SN.*—Dragged in water to impound small fish, which scooped out with openwork baskets. Done at low water after salmon gone. *Ha.*—Grapevine withes with pendent brush; used in creek or pond; dragged by many men; fish that jumped over caught by men with nets.

185. *Kl.*—Over hole in stream. *El.*—Fishing booths for cold weather. Fish taken with circular-mouthed dip net; no spear used. *NE.*—Booth in which fishermen sat to spear salmon was on bank, not over water.

187. *Kc.*—Spear of mountain mahogany or buckeye wood. Point by sharpening wood; no bone or stone point. *Ic.*—Double trap (Hdbk., pl. 33b) for trout. Long traps (pl. 33a) for salmon; set in opening in weir of stakes and brush. Two men at each side drag brush in water to frighten fish into traps. *Ma.*—Point of bone; no barb. From front leg of deer. *Ci.*—Point of bone; no barb. *Ko.*—With deer-bone point, "like a bone awl," no barb. Handle 10 or 12 ft. long. *NE.*—Point not detachable.

188. *Ha.*—Bone points without barb; nondetachable.

189. *Kl.*—Long type (Hdbk., pl. 33a) called hakoi. *Bu.*—Hdbk., pl. 33. Types *a* and *c* only; *a* used in weirs, *c* carried in hand. *SS.*—Funnel type (Hdbk., pl. 33c) placed over nest of lamprey eels; sole purpose. Caught lampreys pierced with sharp stick and carried like fish on string. *Ci.*—See Kroeber, 1925, pl. 33. Long fish trap laid in tules. Fish crowd in.

Fig. *c* used in creek. All used in either lake or creek. Type with funnel inner chamber (fig. *b*) attached to opening in weir. *Ko.*—Longest fish trap (Hdbk., pl. 33) placed in tule clump at high water. Second longest figured used for coots and ducks, which frighten into it at night. Type with funnel inner chamber (fig. *b*) used in creek. Flat-basket scoop with handle used to dip out small fish from funnel-shaped enclosure of willow in creek.

191. *Ic.*—Lampreys caught with bare hands.

193. *Ko.*—Net floats of tule attached every 4 or 5 ft. to upper edge of gill net, 40 or 50 ft. long.

196. *Kl.*—No handle. *SS.*—4 or 5 ft. wide, 5 or 6 ft. long. Placed in fish-dam opening like a basket trap, facing upstream. Platform built out over net where man watched. When fish entered he pulled net out by means of vertical pole attached to lower edge of net. Upper edge of net formed by bent wooden pole. *Mu.*—2 or 3 string "feelers" in net in night fishing for salmon and wide-mouthed fish. *Ma.*—Bag net (*wayaka*) held open with 5 ft. stick. Vertical stick to raise and lower net from platform. Used at night by 2 or 3 men who relieved one another. Fire on bank for warmth. *Ci.*—Used by boatman who had long pole of net resting on his head as he slowly paddled. *Ko.*—Net 12 to 16 ft. long. Mouth about 12 ft. wide; slightly curved pole along upper edge. Fastened vertically to bottom edge was end of 12-ft. pole projecting above water. By shoving this down, opened mouth of net to let fish into net bag. When fish felt inside, mouth of net closed by pulling pole upward. Fish ran to lower end of bag. This device operated from tule balsa at end of dam described in note 179. Also small dip net, operated on same principle, used in creeks. *El.*—For use from tule balsa. Net called *walak*. Semicircular pole sometimes 25 ft. long, handle sometimes 20 ft. If of such unusual size, pole spliced. In operation, handle rested on fisherman's head, while balsa moving.

197. *Ic.*—Basket, not net, to catch surf fish in olden times. No handles on basket; edges held in hands. James Harvey asserted no nets until Spaniards came.

198. *Ic.*—Nowadays caught on advancing waves.

199. *Ci.*—Unworked cobble tied on with string.

202. *Ci.*—Dried tule float about 6 in. long.

203. *Kb.*—Baited with mussel worm, or *Haliotis* intestines, for ocean fish. *Ma.*—Of manzanita wood; grasshopper bait. Bait carried in man's fawn-skin bag (note 117). *Ko.*—Of mountain mahogany. Baited with sunfish. *El.*—Of hardwood.

205. *Kc.*—Pulled through water without bait.

206. *Kb.*—*Haliotis* intestines for bait, on gorget. Inft doubted Pt. Arena statement of catching bullheads without hook; said bullhead would vomit bait if no hook. *BW.*—Verified for Pt. Arena, but not used at Buldam. *Ic.*—To catch bullheads, an ocean fish. *Yo.*—Kelp not handled, lest rain ensue.

207. *Kl.*—Or bare-handed. *Yo.*—Lampreys not eaten; looked too much like snakes. *Ma.*—Grass in hand so lampreys would not slip out when caught in riffle. Tossed on bank. *NE.*—Lampreys taken with single-pointed fish spear; roasted in hot ashes and coals. (Can this "spear" be a gaff? Lampreys would be hard to pierce or hold on a straight point.)

209. *SS.*—Deer-bone point with 2 manzanita barbs; lashed together with string and pine pitch, no feathers bound in, but cord bound in by which toggle retrieved when detached. *Me.*—For salmon. Bone toggle with retrieving cord tied to harpoon shaft. *Ma.*—Toggle extracted from salmon by untying cord from harpoon handle and pulling cord through the fish.

210. *Kc.*—Inft stated toggle harpoon introduced to *Kc.* Anciently only 187 spear used.

211. *Kl.*—Point of deer antler, barbed with elkhorn. Pitch melted into cord wrapping with hot stones. Invention of detachable toggle attributed to "a god." *Ic.*—Deer-bone toggle with sinew and pitch fastening. *SS.*—See note 209. *Ma.*—Single toggle head of salmon harpoon made of bone from front leg of deer and manzanita wood; fir gum for adhesive. *NE.*—Of deer-leg bone; no feathers used in making toggle.

212. *Ma.*—Large fish caught in net clubbed.

213. *Ic.*—In diving for salmon, caught fish with bare hands; killed by tearing gills open. *NE.*—With hands.

214. *Ma.*—Head of small fish bitten to kill.

215. *Mu.*—In Dry cr.

216. *Kb.*—To carry fish, 2 hazel sticks folded into U-shape; fish laid in folded sticks with heads alternately right and left. End of sticks lashed tightly at top to hold fish in place. Carried on back with pepperwood or redwood leaves to protect back. Sometimes carried in fish nets, if not too many. *Kc.*—Fish carried on grapevine run through gills. *SS.*—Fish carried by men in large openwork baskets (no. 123).

217. *SS.*—Bonfire to illuminate salmon spearing from bank of stream. *Mu.*—Fire on bank when water muddy attracted salmon, so fishermen lying on bank could readily spear it. *Ma.*—Flare for salmon fishing at night.

218. *Ma.*—In September (when streams low). *El.*—Soaproot, turkey mullein, wild tobacco pounded together for fish poison.

221. *Ma.*—Leaves of *Eremocarpus setigerus*. *Ci.*—Leaves of small plant used.

222. *BW.*—For octopus only. *IC.*—Manroot used in creeks; also in tidal pools for octopus.

223. *Kl.*—Unidentified plant called kaditsime. *Kc.*—A "grass" which was macerated. *SS.*—Angelica.

HUNTING

224. *IC.*—Surrounded by large number of shouting men, 4 or 5 archers at strategic points. *SS.*—No elk hunting. *Ci.*—Chief divides meat from communal hunt.

225. *Kc.*—Of rope tied to bushes.

227. *Yo.*—Hunter must not sleep with wife for 4 nights preceding hunt. In distributing venison, hunter gave away no bone or head part, lest pregnant or menstruating woman might touch it and spoil his luck. *SS.*—Continent for 4 nights before deer hunt. *Ma.*—Remained away from wife 4 days before deer hunting. See note 939. *Ci.*—For 5 or 6 nights before deer hunting or gambling refrain from sexual intercourse. Cf. also 230.

228. *Yo.*—*Ca.* 1 mi. out hunter smoked tobacco and prayed various powers for success. *SS.*—Hunter could smoke on night before hunt if he wished. *Ha.*—Angelica root.

229. *Kb.*—Face and arms rubbed with angelica or other herb for deer hunting. *Kl.*—Angelica rubbed over bows and arrows before hunting; chewed and rubbed on body in illness; decoction drunk for colds. *Kc.*—Angelica root or pepperwood leaves rubbed on hands, fish harpoon, toggles, etc., for good luck. *Yo.*—Washed with pepperwood or angelica before hunting. Sang in dwelling (not assembly or sweat house) night before hunt. "Shaman" rubbed chewed angelica on hunter. Angelica rubbed on body or tied to ankle kept rattlesnake away. *Ha.*—Root chewed and rubbed on fish nets, etc., for luck in fishing. *Ko.*—Also chewed for gambling success.

230. *Kc.*—Pepperwood leaves attached to mouth of deer mask. Hunter sang as approached deer, naming coyote (duwi'), puma, and wildcat, all great hunters; coyote greatest hunter of all. *IC.*—Hunter stayed from wife 4 nights before using deer mask; otherwise bad luck. *SS.*—Hunter sang on way to mts., asking predatory animals like mountain lion, etc., to help him. Picked leaves from shrubs on which deer had scraped horns and rubbed them on bow. Abstained from water and food.

231. *Kb.*—To prevent flyblowing. *El.*—In getting carcass ready to carry.

234. *Kc.*—With long converging funnel fences. Quail driven slowly. *SS.*—Converging brush fences led to trap mouth. Brush over trap to keep other birds away. Quail driven. *Mu.*—Basket trap for quail placed in trees where roosted. (This must be a different type trap.) *Ma.*—With 2 converging brush fences forming funnel leading into trap. Trap about 5 ft. long. Quail driven on rainy day. *Ci.*—Quail trap had converging brush fences about 2 ft. high and 60 ft. long leading to it.

235. *Kl.*—Blind at spring, from which game shot. *Yo.*—Said to be lacking, but sat under or in tree at spring. *SS.*—Brush blind for concealment for hunting all game. Shot from it with bow. *Mu.*—For quail and woodpeckers. *Ma.*—Brush booth near spring, from which hunter shot squirrels, etc. *Ci.*—In summer when water scarce, brush booth built at spring from which hunter shot deer. Sometimes hid in tree at spring. *El.*—Elk shot from tree overhanging its trail.

236. *SS.*—Of willow. Various kinds of birds and cottontail rabbits kept for year or so at time. *El.*—Of willow sticks. See note 810.

237. *Kb.*—Deer, elk, and bear (*sic*) caught in net laid on ground, but attached to bent sapling, which lifted animal slightly when released. Hunter shot animal in net. *Kc.*—Net over spring with opening for small game to enter.

238. *Yo.*—Deer net with fence in front, over which deer jump, thus landing in net. *Angelica*, not charm stone, put at deer net for charm.

239. *SS.*—Each net about 50 yd. long. 2 or 3 nets set up with sticks, then rabbits driven into them. When rabbit struck net it fell at that spot. *Mu.*—Brush beaten to drive rabbits into net; no fire used. *Ci.*—About 2½ ft. high, 150 ft. long; set in curve; rabbits driven into it by 15 or 20 men. Rabbit killed with straight stick. *Ko.*—3 sections each 200 ft. long, 2 ft. wide. 2 men in charge of each section. Nets fastened upright with chamisso sticks; also pegs to hold bottom down. Boys (not women) participated in driving rabbits, which entangled as net fell. Rabbits killed with stone; net set up again. *NE.*—Long rabbit net. 4 or 5 men drive. No brush burned.

240. *Kc, Me, Mu, Ko, NE.*—Two converging brush fences lead to bag net. *Kc.*—Long bag net. *Mu.*—Men wearing pepperwood leaves on head and other leaf disguise drove quail. *NE.*—Bag net propped up.

241. *Ha.*—Stretched over slough at night. Ducks flew into it, breaking neck. *Ci.*—Net lying slack across stream or slough hauled up suddenly by watcher as birds approach; for ducks and coots. *Ko.*—Net for ducks raised by watchers as duck approached (*flying*). *El.*—Net for coots set upright over slough, supported by forked post at each end. Watchers held ropes passing from loose bottom corners of net over forks, raised lower edge when birds struck, thus enclosing them in bag.

242. *Kb.*—Snare also used for big game (see note 237). Cordage for big-game snares and nets made of iris fibers. *Kc.*—Fence around spring, with opening holding snare for deer; animals frightened while drinking. Special small net called *sule* set in deer snare to engage antlers. *SS.*—Noose for deer placed in opening of brush fence built across deer trail. Sapling bent over in front of noose, so deer would jump over sapling into the noose. No impalement of deer on concealed sharpened stakes. *Mu.*—Deer snare of iris-fiber rope. *Ha.*—Called *sulem*. Attached to bent-over sapling as spring, so deer jumped over brush fence into snare, releasing sapling. No elk in Big v. *Ci.*—Deer driven into snare. *Ko.*—Deer snare with small net set across it to catch deer's head and pull noose tight. A drag of brush on end of rope. *NE.*—Deer snare of 3-strand braid.

244. *Bu.*—Quail and Band-tailed pigeons caught therewith. *IC.*—For quail and rabbits. *SS.*—(1) For noosing rabbit. Set behind small barrier in front of hole in brush fence. (2) Net snare also operated by bent branch as spring. Snare held in place by 4 small stakes forming square. (3) Forked branch with crosspiece attached to bent branch, to catch ground-squirrel. *Mu.*—Used for swimming ducks; cross stick to hold noose open. *Ha.*—For quail, rabbits. See also no. 242. *Ci.*—For quail, rabbits, etc. *Ko.*—For quail. Also Indian hemp fiber snare, operated with figure 4 trap trigger.

246. *NE.*—Converging brush fences with long basketry quail trap at apex.

249. *NE.*—Some posts driven into ground; for rest brush piled up. Openings left in fence, in which snares hung.

251. *Yo.*—Woodpeckers taken by climbing tree, putting pepperwood leaves over opening to "smother" birds, then pulling birds out with hooked stick. *Ha.*—Bag net with grapevine with ring at mouth to hold open; fastened over woodpecker hole.

252. *Kl.*—Woodpeckers caught in tree hole with hands. *SS.*—Placed over woodpeckers' hole in tree at night. In morning tree scraped or hammered and woodpeckers ran out into basket.

256. *Ha.*—With exit openings in which snare hung.

257. *IC.*—Elk driven over cliffs; also driven into water and stabbed with whalebone dagger by swimmer.° *SS.*—Deer driven over cliff at Pieta, 5 mi. downstream from Hopland. No elk in region.

(For footnote ° see bottom of page 176)

258. *SS.*—Certain men trailed a deer continuously for day or so and killed it with club of wild lilac. "Deer song" gave this power. *Ci.*—Hunter sings continually to make deer tired.

259. *Kl.*—Deer lured by hunter's call made with leaf in mouth. *SS.*—Sound like fawn made with leaf or grass-blade in mouth, attracted doe. No imitation of rabbit squealing. *Ma.*—Madroña leaf in mouth to imitate cry of fawn to lure doe. *Ha.*—Poison-oak leaf in mouth for calling deer. *Ci.*—Rabbit lured by making squealing sound with leaf in mouth; not done for deer. *Ko.*—Doe lured by hunter's call in imitation of fawn; done with poison-oak or redbud leaf in mouth. *NE.*—Does and rabbits lured by whistling.

262. *Ma.*—Band-tailed pigeon shot with bow. *Ko.*—With flint (obsidian) point. *El.*—For coots also.

263. *SN.*—Deer spirit has existed since creation. *Ha.*—Escaped wounded deer believed to be cured at "deer's den" in deep canyon.

264. *SN.*—"Prayed" when deer hunting. See note 938. *Ko.*—Prayer for success in deer hunt.

265. *Kl.*—Deer skinned and cut up where killed. *Ko.*—Deer hide staked out hair down. When slightly dried, scraped with obsidian flake to rid of meat and fat. After drying rubbed with slightly rough round stone. *NE.*—Deer skinned lying on ground.

267. *Kl.*—To flesh hides.

268. *Me.*—Shoulder blade. *Ma.*—Shoulder blade of deer for dehairing its hide, which rubbed with stone to soften.

272. *IC.*—Hides soaked in mud. Scraped with split "greasewood" stick to dehair. Soaproot lather instead of brains to soften hide. *Ha.*—Rare. *El.*—Dehaired without scraping, by soaking in water. *NE.*—Buckskin prepared by rubbing hide with rough stone.

273. *Kl.*—Used after cooking (boiling?). For eating, brains were cooked on hot flat stone.

275. *Kl.*—Coyotes caught young and kept as pets. No dog. *BW.*—Dogs from north. *SN.*—Dogs imported from north. Price 40 to 100 beads. *SS.*—No dogs at all. *Ma.*—Dog with pricked ears used for rabbit hunting: "caught" them. *Ko.*—No dogs before whites came. *NE.*—No dogs before white people came.

276. *SS.*—Emerging woodrat shot with arrow. *Ma.*—Shot with bow when it emerged. *Ci.*—Woodrat shot as emerged from nest.

277. *NE.*—Woodrat nests burned to drive animals out.

278. *SS.*—Smoke blown with breath into yellowjacket or ground squirrel hole. *Ma.*—Ground squirrel (amakulo) not smoked from hole. Yellowjacket and a yellow and black bee, both nesting in hole in ground, were smoked: blown into hole. Black bee, djehe, smoked for honey. *Ci.*—Piece of hide on stick used to fan smoke into ground squirrel's hole; or smoke blown in with breath. Fan not used for embers of campfire or to cool oneself. *El.*—No fan for cooling.—See also 323, *Me.*

278a. *Ha.*—To smoke ground squirrels in burrow in summer; also blown in. Only blowing for yellowjackets; after sundown. In winter ground squirrels drowned out by digging ditch from pool to holes.

279. *Yo.*—Coot-winged fan.

280. *Kb.*—Pepperwood leaves for blowing smoke into burrow. *Kl.*—For fanning smoke into ground squirrels' and yellowjackets' burrows. *BW.*—To force smoke into yellowjackets' burrow they blew or fanned with pepperwood leaves. *Ko.*—Usually smoke blown in with breath.

FOOD

282. *SN.*—Also roasted whole in ashes after singeing off hair. *Ma.*—Gutted rabbit cooked in coals; hot stones in belly. *Ci.*—Cooked on coals or on hot stones. *Ko.*—Natural pebble pounder.

* Mr. Frank Essene has since ascertained that a herd of elk formerly frequented an area around the headwaters of Alder and Elk crs. (next streams N of Garcia r.) throughout the year except in fall when they moved toward the coast and could then be driven over a cliff on Pt. Arena. Cf. note 414.

284. *Kc.*—Wrapped in grape leaves and cooked in ashes. *SS.*—Roasted in slabs on coals, or in earth oven. Not pulverized. *Ma.*—Salmon split, dried, not pulverized. It and dried venison stored in baskets in dwelling. *Ko.*—No salmon, but other dried fish pulverized.

285. *Yo.*—Marrow and brains taboo to young people, lest turn prematurely gray. *SS.*—Both sexes ate.

286. *Kc.*—Also lamprey grease for hair oil. *Ik.*—Marrow rubbed on hair to make it "look nice." *Yo.*—Elder shoots crushed and used as hair tonic. *SS.*—Used by women. *Ha.*—Fish oil for hair, from fat on black fish intestines.

287. *Kl.*—Afraid to eat beef when cattle first brought by whites, because of bellowing of animals.

288. *Kb.*—No seals or sea lions eaten. *Kl.*—Grizzly bear not eaten; brown bear eaten. *Kc.*—Inft ate quail, but no ground squirrels, gray squirrels, or woodpeckers of any species. *Yo.*—No dogs anciently.

289. *SS.*—Fish, acorn bread cooked in earth oven. Dried fish soaked first. *Mu.*—Lampreys cooked in earth oven. Covered with ash tree leaves, as were other foods. *NE.*—When large numbers of fish stranded through creek drying, these cooked in earth oven. Bulbs and grasshoppers were not cooked in earth oven, but in hot ashes.

295. *Yo.*—For buckeye nuts only.

296. *Kb.*—Made by (1) roasting whole in ashes, (2) hulling, (3) storing in pit lined with redwood leaves for month, when become moldy, (4) washing in river water, which leaves them bleached, (5) cooking and eating. *Kc.*—White-oak and tan-oak acorns used. *Yo.*—Valley-oak acorns for "moldy" acorns. Shell removed, meats soaked in basket for month or more. Boiled without pulverizing and eaten like beans. No flavoring added. (Information obtained by Mr. C. S. Myszka from Mrs. Boston in 1935.) *SS.*—Whole hulled acorns in large carrying basket soaked in stream for about a month. Boiled whole, eaten like beans. *Ma.*—All kinds of acorns were prepared as "moldy" acorns. *El.*—Black-oak acorns.

297. *Kl.*—Made of bull-pine root, twined; used like modern sifter. Also tightly woven winnowing plaque tapped with hand for same purpose.

298. *Kl.*—Leached meal removed from basin by adhesion to palm of hand. Tan-oak acorn was principal kind used. *BW.*—Hot water sometimes to hasten leaching. *Yo.*—Tan-oak acorns (*Pasania* or *Lithocarpus densiflora*) shelled, put in mud; when turned bluish, pulverized and used for food. Acorns of *Quercus garryana* and tan oak said to be sweet and edible without leaching. (Information obtained by C. S. Myszka from Mrs. Boston in 1935.) *Ko.*—Sand basin smoothed and packed by laying deerskin in it and pressing thereon. *NE.*—Buckeye nut steamed in earth oven, peeled, mashed in basket, placed in pit, and water poured on to leach out the poisonous qualities.

299. *Ik.*—About 20 applications of cold water. *SS.*—Wet meal removed from leaching basin by pressing palm of hand on it, so it adhered; sand scraped off bottom while held in hand.

303. *Kb.*—Also leached in sand basin. *Kl.*—Cooked in steam-type earth oven, mashed, and soaked in openwork basket in stream. Acorns also leached in basket in stream at times. *SN.*—Buckeye nuts first roasted in ashes. Mashed with hands. *Ik.*—Boiled preliminary to leaching in creek. Manzanita berries ground for pinole; no drink made therefrom. *SS.*—Boiled first, then mashed. Fine meal leached in sand basin like acorns. Lumps soaked in stream several days. *Ma.*—Buckeye nuts cooked in earth oven before leaching in basket placed in creek. Toyon berries not eaten, but manzanita berries used for pinole. *Ci.*—Pepperwood nuts eaten raw, or else cooked and seeds eaten with clover. *Ko.*—Buckeye nuts not prepared, but saw visitors do it. Manzanita berries pulverized as pinole; no manzanita drink.—But cf. note 306.

304. *Yo.*—Red earth sifted and fine dust collected. Said to slake somewhat on exposure to the air, which rendered it more suitable. Mixed with all species of acorns (black oak preferred) for bread only. Earth made into paste and mixed with acorn meal, 1 or 2 quarts of earth to 5 gallons of meal. Added to meal just before baking. Acorn meal leached 2 to 4 hours before making bread. Meal of acorns of *Quercus garryana* made into bread without

leaching, in a few instances. (Information obtained by C. S. Myszka from Mrs. Boston in 1935.) *Ma.*—Red earth called *amata*. One source on east side of Russian River v. below Cloverdale. *Ko.*—Red earth mixed with acorn meal from valley oak only; not with meal made from black- and white-oak acorns.

305. *Kc.*—Black-oak acorns preferred for bread and soup. This species most preferred acorn. *Ci.*—Also manzanita "bread" cooked therein.

306. *Ci.*—Manzanita "soup" from pulverized berries. See note 303.

308. *Kc.*—Youth might eat of first kill, but must not skin it or break any bones, lest bad luck. *SS.*—Might not even skin first deer. Given to anyone.

309. *Kl.*—Children ate cooked ears of deer. *Yo.*—Children might remain, but could have none to eat lest become prematurely gray. *Ha.*—Otherwise spoiled hunter's luck; also children would sicken if smelled it. Only old ate. *Ci.*—Deer brains eaten after cooking in earth oven.

310. *lc.*—Quail not eaten by young people either, for same reason. *SS.*—Caused blindness in young people; old people ate.

312. *SS.*—Only old people might eat; taboo to young.

315. *Ha, Ci, Ko, El.*—From surface deposit below Stonyford in NE Pomo territory. *El.*—From Wilbur springs also, but merely salty earth, not pure salt as from Stonyford.

316. *SS.*—Obtained by trade from SW Pomo at Stewart's point.

319. *lc.*—Octopus eaten fresh, boiled; never dried for preservation. Taken by poisoning with manroot or killing with stick.

320. *Kl.*—Killed with sharpened stick, usually the *Haliotis* chisel.

321. *Kl.*—Grass burned to kill grasshoppers. *SS.*—Taken by burning grass. *Ma.*—Not pulverized. *Ci.*—Grasshoppers taken by burning grass. Eaten without further cooking.

322. *Kl.*—Worms driven to surface of ground by inserting and churning a stick.

323. *Me.*—Yellowjackets killed in burrow by fanning smoke. Nest then dug out. See 278-280. *Ma.*—Yellowjacket called *go'o*.

324. *Kl.*—Smooth caterpillar (li), brown colored, found on maple trees; eaten. Hairy species (*tsimeli*) not eaten. *Ma.*—Caterpillars from "ash trees" (prob. *Fraxinus oregona*, possibly *dipetala*) eaten whole, raw or boiled. Went to Ukiah region for them as no ash trees near Cloverdale. *Ci.*—Black and green caterpillars taken when came down from "ash trees." Available for 4 days only. Cooked in earth oven.

325. *SN.*—When clouds turned red at sundown, ocean mussels were poisonous. *lc.*—Believed to be poisonous only when exposed to sun; those from lower, shaded position or below water level thought to be nonpoisonous.

326. *Kl.*—Sugary secretion from sugar pine "sucked." Pine nuts, hazelnuts, and chestnuts (prob. chinquapin, *Castanopsis chrysophylla*) were eaten without grinding. *El.*—For medicine by shamans.

327. *El.*—Bull (digger) pine (*P. sabiniana*) pitch for chewing gum.

328. *El.*—From white-oak leaves; made into ball and eaten.

329. *Kl.*—Excess dried. Sea anemones cooked in hot ashes, washed before eating. *Haliotis* cooked under ashes. Fish roasted on coals, dried fish being softened by moistening with water. *Yo.*—Went to ocean at Navarro r. mouth and Salmon cr. mouth (between Elk and Albion) for sea foods. Only sea food dried was seaweed; no mollusks dried. *SS.*—Pt. Arena C. Pomo (*lc*) allowed access to coast for sea foods. Seaweed gathered at Pt. Arena. *Ma.*—Went to Stewart's point (*Me*) for *Haliotis*, mussel, sea grass (*ohono*), and salt.

330. *SS.*—With frame on top to smoke fish, fire beneath; 4 brush walls or screens to make smoke rise through drying frame.

332. *Kl.*—Birds' eggs, bulbs, corms cooked by basket parching: shaken with coals. *lc.*—Pinole was only food parched. *SS.*—Manzanita berries were among the seeds parched for "pinole"; this mixed with water and drunk without further cooking. Another cooking method was "frying" (without grease) on heated flat stone. *Ma.*—Madroña berries parched. *NE.*—Parching basket a coiled circular plaque.

334. *Mu.*—As hair wash to kill lice. *Ko.*—For baskets and hair.

335. *Kl.*—Soaproot called am.

336. *SN.*—Pith of stem eaten uncooked before plant went to seed. *Ci.*—Tule stems below water line peeled and eaten raw.

337. *SS.*—Baskets coated inside with soaproot juice, for cooking and water carrying. No pitch used for this purpose. *Ma.*—Macerated sticky soaproot smeared on exterior of basket (not burden basket) to make more durable. *El.*—Only parching basket coated inside with soaproot juice to prevent burning.

UTENSILS

339. *NE.*—Perhaps slightly shaped.

340. *Ci.*—Made by men. Stone from Blue lakes.

341. *Ic.*—Two pestles seen.

343. *Kl.*—When suitable stone not available; stone pestle used, however.

345. *Kb.*—When used, the basket hopper was held in position by woman's legs, over rim, not merely alongside. *Kl.*—Called *miche'*. *Kc.*—Legs on top of mortar basket, not alongside, when in use. *Yo.*—When used, legs over it, not beside it. *SS.*—Hole cut after basket made.

346. *SS.*—For scrubbing.

347. *SS.*—For scrubbing. *Ci.*—Brushes to clean meal from basket; also as hair brush.

348. *SN.*—Found but not used. *Mu.*—For meat pounding. *Ma.*—Small portable mortar for macerating meat. Inft saw one made by an old man. Bulb-end pestle used therewith. *Ha.*—Made by shamans; used to pound roots or "poison." *Ci.*—Only shaman handled. Might cripple anyone else who touched it. *El.*—For pounding meat; believed to be of natural origin.

350. *Ic.*—Bowl mortars believed made by "poisoners" for preparing "poison" to kill enemies. *El.*—Poisoner's mortar smaller than meat mortar.

351. *Kc.*—For pulverizing pigment for paint.

352. *Ma.*—Steatite outcrop on trail from Makahmo to Lake co. a bad place supernaturally. *Ha.*—See note 537.

353. *Ha.*—Talcum powder made by grinding steatite. Put on baby's umbilicus to prevent soreness.

357. *Kc.*—Of flint. Used to cut down trees with aid of fire. Apparently end of "knife" was cutting part, thus used like chisel. *El.*—With wooden handle, string wrapped, no pitch adhesive.

360. *Ma.*—Made from "arm" bone of deer below "elbow." *Ci.*—From deer-leg bone. *Ko.*—Bone from hind leg, rather than front leg, of deer best for bone awl.

361. *Ci.*—With deer fur. *Ko.*—Sometimes string wrapped.

362. *Ko.*—Not for splitting fish, but used for shredding tule as well as making coiled baskets.

363. *Ha.*—Of split deer rib, 12 to 14 in. long. Inft's mother's father was using notched needle first, but string slipped out; so he made eyed needle. Inft thought he might have been "original inventor" among Habenapo.

364. *Ic.*—Knife of sea-lion shoulder blade for deer butchering. Sharpened on rock by rubbing. *Yo.*—From ribs, leg bones, etc. *SS.*—Elkhorn knife, not hafted; for flaying. Horn imported from north. Similar knife of obsidian, no hafting; similar use, also hacking (!) wood. Obsidian knife said to have been ground (!) after chipping into shape; took a week to make. Both had part worked for handle.

365. *El.*—Hair brushed or combed only with wet fingers.

366. *Ic.*—Of bear grass. *Ma.*—Of anise.

369. *Ic.*—When inviting people of other village to ceremony, messengers presented beads and baskets. Invited ones brought food. Four long yells given before entering village of inviters. *SS.*—One stick broken each day to time arrival on appointed day, when last broken. *Ci.*—Four sticks given by messenger to chief of invited people, to mark days to elapse before ceremony began. One thrown away each day.

370. *Kl.*—Small stick mat with two rows of twining to hold twigs in position. Mat tied to end of stick several feet long. Messenger held before him as traveled. *Ma.*—Of wormwood. Given by messenger to chief of invited village. One broken off each day. *Ko.*—Message stick mat of 3 or 4 sticks with clamshell bead on each. Messenger entered assembly house of invited village and there awaited chief to whom he gave stick mat. One stick broken off for each day elapsed. On last day started to inviting village, taking broken sticks back. Each man contributed shell beads worth \$1 to \$1.50, given to host chief.

371. *Kc.*—Several sticks with feathers attached sent to chief of another village to inform him to bring his people for acorns in fall. These sent in response to request for acorns. Prospective visitors prepare shell-bead money with which to pay for acorns. No foodstuff given as pay. *SS.*—One stick for each article to be traded. Tied in bundle.

372. *Ha.*—“Plough” of elder, base of buckeye. Tinder placed so ploughed into it.—This infit once saw fire plough demonstrated at University of California Museum of Anthropology in San Francisco. The buckeye is typical fire-drill material.

373. *SS.*—Buckeye drill, ash-wood hearth, grass tinder. Either sex drilled fire. No new fire ceremony. *Ma.*—Drill and hearth both of buckeye. *Ci.*—Drill of elder, hearth of buckeye, tinder of punk wood. *Ko.*—Hearth of buckeye wood, drill of wood from lake shore. Maru Religion brought revival of fire drill and native tobacco, since matches and white man’s tobacco forbidden.

374. *BW.*—Two pieces of white rock struck together for sparks, not rubbed. *Kc.*—Inft. had heard of fire struck from white quartz with another type of stone. Never saw done. *Ha.*—White quartz and a black stone used. *Ma.*—From “Spaniards.” *Ci.*—From “Mexicans” (*viz.*, flint and steel).

376. *BW.*—Of tan bark. *Yo.*—Sang when carrying slow match of pine bark, so fire would not go out. *SS.*—Of black-oak bark. *Ma.*—Of live-oak bark. *Ci.*—Smouldering stick; also coals carried in thick bark.

377. *Ha.*—Post oak-wood coals (which are pretty solid) carried in small stone bowl (!) with pebble for lid. Such bowls made by men for this purpose (*sic.*).

378. *NE.*—Acorn-soup stirrer was any stick, not necessarily a paddle.

379. *Ma.*—Of white oak. *Ko.*—Of valley-oak wood.

380. *SS.*—Hazel withe with cross-stick grid or lattice on looped distal end for lifting hot stones from cooking basket.

381. *SS.*—Hot stones picked up with moss to be dropped in soup or water in boiling basket.

382. *Ci.*—Flattened at distal end.

383. *SS.*—Two sizes; small for corn, for roots for basketry; large for house-post holes. Both of wild lilac wood. *Ko.*—Of mountain mahogany.

386. *SS.*—Of chamiso wood.

388. *Kl.*—Sticks either held loose or tied in position. *SS.*—Arrow smoothed between two loose sticks held in hand. *Ma.*—Arrow polisher of two sticks tied side by side; tying at both ends. Arrow rubbed between. *Ko.*—Arrow polisher of two sticks tied together, so arrow could be rubbed between them.

393. *Ci.*—Dried near fire. Some sling shots were of stone. *Ko.*—Formed by rolling clay in hands; dried near fire.

394. *Kl.*—Acorn mush eaten with two or three fingers; pinole taken in pinches. *SS.*—Perforated for suspension from neck. *Ma.*—Edges ground down, so lips not cut when using. Both sexes ate with. *Ko.*—Of river mussel. Flesh of this bivalve eaten.

396. *El.*—Of manzanita.

397. *Io.*—String wound on straight stick like kite string. Net made by setting up in ground two similarly notched vertical sticks, then fastening horizontal strings in notches. Net then woven with vertical strings which tied to each horizontal string.—This would not be a true netting (single-element) technique.

399. Two parallel sticks lashed together in middle.

400. *Kl.*—Redwood.

402. *Ci.*—Acorn granaries in hills, roofed with bark. Visited from time to time for load of acorns. *Ko.*—Granary on ground, built of small willow sticks on vertical sides, with bottom of scrub oak; posts around which built of arm size. Tule covering to exclude rain. Side opening to extract acorns.

403. *El.*—Tule-mat cover. Outdoors. Acorns with hulls on.

404. *Kl.*—Acorns stored with shells on, in round twined baskets, 2 to 3 ft. in height and diam. *BW.*—Granary a real basket; acorns either hulled or not. *Ic.*—Granary of tight twining of hazel twigs. Acorns stored in it, either whole or hulled and dried. Flat basket cover. Left in hut at acorn harvest time. *SS.*—Hulled acorns stored in real baskets about 4 ft. high, 4 ft. diam.; dry grass beneath basket, also as cover. *Me.*—Acorns stored hulled, in basket. *Ma.*—Of willow, twined, 2 ft. diam., 4 ft. high. For hulled acorns. *Ko.*—Storage basket for hulled acorns or dried fish figured in Barrett, Pomo Basketry, pl. 26, fig. 3.

405. *Kb.*—Bark cover. Acorns stored with hulls on.

406. *Kc.*—Wild "plums" stored in grass-lined pit indoors. *Ic.*—Grass-lined storage pit, indoors.

TOOLS

407. *Kb.*—Sometimes drilled hole reamed larger with flint held in bare fingers. *Ha.*—For starting or finishing drill hole.

408. *Yo.*—To smooth edges of clamshell beads after drilling, they were strung on stem of rush which grows at springs, then rolled on stone slab. *Ma.*—Drill point of red, yellow, or brown flint; not obsidian. *Ci.*—Point of reddish flint, "harder" than obsidian, obtained in hills west of Lakeport. *Ko.*—Flint point, not obsidian. Both *Haliotis* and clamshell drilled. No bone drill.

409. *Ic.*—Bone drill, rolled between hands like fire drill, of deer, whale, or other hard bone. For drilling shell beads. Did not press hard, so no vise necessary. *NE.*—Deer-bone point for drill for shell, etc.

410. *Kl.*—Shell fragment rested on deer skin during drilling period. *BW.*—For drilling magnesite only; not for clamshells. *SS.*—For holding shell or magnesite cylinders while drilling. *Ma.*—Round hole in stick to hold shell for drilling, but wooden vise used in drilling shell cylinder ("stick"), which made of shell from Bodega bay.

411. *SS.*—For holding shell or magnesite cylinders while drilling. *Ci.*—Magnesite held between toes to drill.

412. *Kb.*—Tree felling with elkhorn blade, driven with cobble. *Kl.*—Elkhorn wedge driven with stone maul (dako', any pounding stone). For felling and splitting timber. *BW.*—Driven with another piece of elkhorn. *Ic.*—No elkhorn wedge or ax. Wood working by fire; young redwoods burned off to length for assembly-house posts. *Yo.*—Trees felled with elkhorn "ax" driven with cobblestone, or with sharp "flint"; wood chipped off. Fire as aid also. *Me.*—Used as hand ax. *Mu.*—To cut trees, as for assembly house. Driven with cobblestone, cutting groove around tree trunk.

414. *Yo.*—No elk around Yokaia, but at Rancheria cr., near Boonville. Elk not hunted by Yokaia Pomo.—See note 257. *Ma.*—Long (15 in. or less) elkhorn "ax" to cut down trees; used in bare hands, no hafting; not pounded in with stone or used as wedge. Sharpened on a rock.

416. *El.*—Of polished "ironstone." Split with handle lashed in place in groove. Specimen 70973, Field Museum of Natural History, is a hafted grooved stone ax from Ukiah; the handle is of oak.

417. *Kl.*—Rarer than elkhorn.

418. *Ic.*—No stone maul; wooden maul to drive fish-weir stakes. *Ko.*—Elongate unworked pebble as hammerstone for cracking acorns. Cobblestone for driving fish-weir stakes.

421. *Ha.*—Suitable stone slightly shaped; used horizontally like modern hammer, not vertically like nw Californian maul.

422. *Ha.*—Or of mt. mahogany. Maul called shinadatok. In splitting log, pebbles dropped in to keep open. Maul used to drive "ax" made from elk shoulder blade (*sic*).

423. *Ic.*—Arrow points bought ready-made from inland groups. *NE.*—Of deer bone.
 426. *Kl.*—White flint tool for removing flakes from red "flint" used for arrowheads.
 427. *SN.*—Digging stick used as *Haliotis* chisel. *Ic.*—Of whalebone or of wood. *SS.*—Of wild-lilac wood.
 429. *Kc.*—Dead branches pulled down for fire for cooking. Also hooked over sound limb to aid climbing difficult tree. *Ma.*—Pole with piece of wood lashed on at angle with string. *Ko.*—Crook for gathering acorns and dead branches. Made by lashing stick at angle on long pole, grapevine with lashing.

WEAPONS

431. *BW.*—Of hazelwood. Sinew-backed bows either made or imported. *Kc.*—Self bow of hazel- or dogwood, made locally; about 3½ ft. long, 2 fingers wide, one finger thick. *Ic.*—Self as well as sinew-backed bows. "No difference in efficiency." Hazelwood or young tan oak used. Length of both types of bows about 4 ft., but varying with user's stature. *SS.*—Made locally, of hazel or wild lilac. 4 ft. long, 1½ in. wide, ½ in. thick in middle, ends tapered. *El.*—Only bow made locally; used for birds.
 433. *Ma.*—Bow of manzanita wood; hard to pull. *NE.*—Bow of juniper wood. (Two species occur locally or sparsely in this part of the Coast ranges.)
 434. *Kl.*—Used in war. Bow of yew (?), mashu, kano, or chamiso wood. Pitch to glue sinews on back. *SN.*—Of dogwood or hazel. *Yo.*—Of hazelwood.
 435. *Kc.*—From north; \$8 to \$10 in shell beads for one bow. *SS.*—From north. *El.*—From N. fork of Cache cr. Patwin, who got from some other people.
 437. *Ic.*—2-ply sinew bowstring. *Ko.*—2-ply bowstring.
 440. *Ha.*—For distance shooting. *Ci.*—For hunting.
 441. *SS.*—About 45 degrees.
 442. *Ha.*—For close-up shooting. *Ci.*—For war.
 443. *NE.*—Bird arrow without stone point.
 445. *Kc.*—One cross stick on bird-arrow point. *Ko.*—One cross stick. *El.*—One cross stick.
 446. *BW.*—Hazelwood arrow without foreshaft. *Ma.*—Hazelwood arrow with hardwood foreshaft. No cane used. Obsidian point lashed on with sinew; soaproot used as adhesive. *Ko.*—War arrow with shaft of elderwood, foreshaft of mt. mahogany or chamiso, stone point. *El.*—Fitted into elderwood shaft. *NE.*—Arrows of willow.
 447. *Kl.*—Arrows of chamiso and mashu wood. *Ic.*—Double radial. *Ma.*—Hawk or pigeon feathers halved. Trimmed by singeing. *NE.*—Quadruple.
 448. *Kc.*—For boys' arrows; for killing quail, woodrats, etc.
 449. *Ha.*—Three whole feathers.
 450. *Kl.*—Both notched and stemmed bases. Barbs called k'a (legs). *SS.*—For large animals; did not detach from shaft.
 451. *SS.*—Drill-shaped: for rabbits; detached from shaft when imbedded in quarry.
 452. *SS.*—Pasty material of animal origin. *Ha.*—For war: liver, rattlesnake venom, scorpions, etc., rotted.
 453. *Kl.*—Arrow guided between index and middle fingers of left hand holding bow.
 454. *Kb.*—"Middle finger rested on string; arrow butt between thumb and outer joints of forefinger." This seems to be Morse's secondary release.
 455. *Kl.*—Whole fawn skin. Angelica root kept in bottom of quiver. *Kc.*—Of coyote, wildcat, bear cub. *Ic.*—Deer hide. *SS.*—Of half a bearskin, or deerskin, cut to appropriate size. Carried about 50 arrows. *Ma.*—Bear, coyote, fox, etc. *Ci.*—Of wildcat, raccoon, or fawn hide. *Ko.*—Of skin of wildcat or bear cub. *NE.*—Of fawn or adult deer hide.
 457. *Kl.*—Right side, strap over shoulder, under right arm. *Ma.*—Also held between arm and body. *Ko.*—Also under arm at times; likewise spare arrows already pulled from quiver.
 458. *Ic.*—Sling use learned from "Spaniards."
 459. *Kb.*—Gray squirrels killed with sling stone or arrow. *BW.*—For squirrels. *Kc.*—For small game: gray squirrel, rabbit, quail. *Ci.*—For ducks; ricocheted over water into flock of ducks. Deerskin center for sling; milk-weed fiber cords.

463. *Kl.*—To knees. Horizontal sticks under hide. Covered only front of body: "never ran from enemy."

465. *SS.*—Probably twined from fibers; 1½ in. thick. Tied in back, shoulder straps.

467. *Ci.*—Used by "bandit" disguised in bear skin (i.e., bear shaman).

468. *SS.*—Not hafted.

470. *SS.*—Of wild-lilac wood; about 6 ft. long. *Ci.*—Spear for thrusting.

471. *Kl.*—Called shaka. Flint pointed; used in war; thrust or thrown. *Ko.*—Obsidian.

473. *Kl.*—Called dika. Commonest war weapon. *Ic.*—Sea lions clubbed, not speared. *Ma.*—Of hazel or manzanita wood.

474. *SS.*—See note 258. *El.*—Hand-hurled cobblestone for killing wounded game.

476. *SS.*—Also for squirrels, etc. Might be used for striking as well as throwing. Made from wild-lilac branch. *Ci.*—Gray squirrels in pepperwood tree killed with thrown stick.

477. *Ic.*—Covered with redwood bark slabs. *Mu.*—Rectangular; roof and end walls thatched with grass, or with redwood bark slabs from Mill cr. *Ci.*—Lean-to of bark slabs when in hills gathering acorns.

ASSEMBLY OR DANCE HOUSE

478. *Kl.*—Called shene. Diam. 30 ft. or more. Center post (lo) of tan oak, forked. Timbers cut for construction (see note 412). Rafters radiate, ends resting on edge of pit; no side posts. *Kc.*—When assembly house planned, fire tender (laimosh) got timbers over period of year or so. Small pines for rafters; madroña, black oak, white oak for posts. Flint "knife" and elkhorn "ax" driven by cobblestone were cutting tools (nos. 357, 412, 414, 415, 418). *Yo.*—Called haikilau shane.

479. *Ic.*—Rope ladder with wooden rungs; hung at center post for entry and exit to assembly house. Smoke hole about 8 ft. from center post opening in roof. *SS.*—Late innovation. Jeff went down first ladder when 19 years old.

481. *NE.*—For several families, and belonged to families, not to chief.

482. *Kl.*—Nominal owner. He directed construction. *NE.*—After Bole Religion established.

484. *Ko.*—Fire in line between center post and doorway, 10 ft. from center post, 5 or 6 ft. from doorway. Smoke hole directly above fire.

485. *Kc.*—Pepperwood-leaf drapes screened opening. These to prevent sickness afflicting anyone at time of ceremonies. *SS.*—Earlier than roof door and ladder.

488. *Kc.*—Emergency exit in event of fire.

489. *Kc.*—Inft had seen only 2: at Pomo in Potter v. and at Danoxa near Upper lake in E Pomo territory. He was initiated in both; this before Indians moved to Round v. Before his birth one at Chomchadila (Calpella), in his infancy one at Kacha'vida. Erected solely for ghost impersonations; never used for anything else. Large number of small cradles hung inside, each with baby figurine of magnesite. These placed in house for "luck"; thrown away afterward; all made by old men. "Ladders" of wild grapevine attached horizontally for acrobat (matutsi) to use; these "ladders" not in regular assembly or dance house. Four doors opening in 4 cardinal directions; pepperwood drapes hanging in them to prevent illness of participants and novices. Drum as in assembly house, but bigger; could accommodate 5 or 6 men at time. Two grapevine ladders on center post. Head matutsi (not acrobat) showed others how to construct house and performed ceremonies ("doctored") to make house "lucky" and prevent any evil. Ghost ceremony never performed in regular assembly house.

DWELLING HOUSE

490. *Ic.*—Double lean-to; 3 fires (3 families). *Yo.*—Called yasecha. *SS.*—Several fires, several doors; no special orientation of doors. Earth piled about 1 ft. high outside to exclude water; floor level slightly below ground level. *Ma.*—Two or 3 doors. Each family had own fire. No partitions. *Ko.*—Two married brothers plus the sisters of their wives might live in one house. Mat lining for walls. *NE.*—Of Lake Pomo type lacking. Earth-covered lodge (478) inhabited by several families in winter.

491. *SS*.—Bent pole frame. *Ma*.—Men built framework. Both sexes gathered thatch. *Ko*.—Round (circular ground plan) for 2 families only. If more families, house elongate, with rounded ends.

492. *Yo*.—Grass house burned when inmates moved, to destroy fleas. *SS*.—Grass thatch. *Ma*.—Of grass, not tule. No tule in house construction.

493. *Kl*.—Frame about 3 ft. high; always inside house.

494. *Kl*.—House called cha. Conical, 15 ft. diam.; 1 fire, 1 door; slightly dug-out floor; bark slabs from dead trees (sometimes a few split planks). Forked center post. One or more families occupied. No grass-thatched house. Grass and deerskin bedding; slept with feet to fire. *IC*.—If only 1 family, house made conical in form, not lean-to. *Ci*.—Conical hut of bark slabs when in hills gathering acorns.

495. *IC*.—Hazel withes for frame of double lean-to, redwood-bark covering. *Mu*.—Of hazel (chama).

497. *Yo*.—No fish dried except suckers, which sun-dried on ground. Fish bought from other villages. Venison was staple food, rather than fish. *Ma*.—Fish dried on ground.

498. *Ha*.—Fish split and salted (*sic*), then smoked flesh-side down on top of small domed brush huts built at fishing place. *Ci*.—Openwork brush hut or platform to dry fish, which placed on top. Fire inside to smoke fish. In wet weather dried on poles in dwelling. Stored in baskets. Acorns sun-dried on platform of brush close to dwelling. *Ko*.—Brush platform, or round-topped brush hut; fire beneath to smoke fish.

499. *SN*.—Brush roof, square; danced under in summer. Sides added when windy.

SWEAT HOUSE

501. *Kc*.—Said to be ancient. Not used daily, but occasionally morning or evening. No women allowed. This type sweat house built preliminary to erected assembly house which used to sweat in also. Thereafter small mat-covered sweat house abandoned. Anyone, not necessarily chief, could build small steam (see no. 503) mat-covered sweat house.

503. *SN*.—Modern, intrusive. Mrs. Anderson's son has used. Employed especially for sick. Mrs. Anderson first saw it used in Round v. reservation, where it was probably introduced by Indians from northeastern California. *Mu*.—Sick person (male, female) steamed in sweat house by pouring water on stones heated in fire within house. "Ancient" practice (Mexican introduced ?).

504. *Ha*.—Wet tule sponge. Also nose plugged, lest heat blister nostrils.

505. *Yo*.—Called shane (same as assembly dance house). *Ci*.—Daily sweating, morning and evening. *Ko*.—Got sweat-house firewood in early morning. Man setting out might shout and arouse others. Daily sweating, morning and night. *NE*.—Yellow-pine bark for sweat-house cover, earth over it.

506. *Ci*.—Dead manzanita wood for sweat-house fire (cf. no. 510).

508. *Ma*.—Must sweat before hunting deer. *Ci*.—Sometimes. Not necessary for success.

510. *Kl*.—Fire tender cared for fire both for dances and sweating. Manzanita (bakaikale) dead wood for sweat-house fire (cf. no. 506). *Ko*.—"Too big" for sweating.

511. *Kl, SS, Ma*.—Deerskin on stick. *SS*.—By fire tender.

512. *Ma*.—Songs for good luck in deer hunting sung by men in assembly house used as sweat house.

513. *Kl*.—Men sweated about twice a week. *Ko*.—Talking, singing, smoking after sweating and bathing.

514. *Kl, Kc*.—Women sometimes sweated with men. *IC*.—Girls sweated, then took cold bath. Not puberty rite; girls not "put in" sweat house at puberty. *Ha*.—Women never sweated, but might enter assembly sweat house on other occasions.

515. *SS*.—Women past menopause might sweat with men.

516. *Kb*.—Summer feast and dance in brush house to put "outside people" (fairies, wood spirits, etc.) in good humor, so they will hurt no one. *Kl*.—Called chase'e. Roofless enclosure, entrance facing east. *Yo*.—Called se'shane. *Ma*.—Owned by chief. *Ha*.—Called semadûk;

roofless. *NE*.—Before Maru Religion was only structure used for dancing. Thereafter earth-covered house also used.

518. *Kl*.—Individuals did not change sides. *SS*.—First person to leave beaten by others. *Ha*.—Inft belonged to west-side sweat group. Membership hereditary. *Ci*.—Contest to determine which of 2 groups could stand most heat. Those who left sweat house first were jeered.

NAVIGATION

521. *Yo*.—Of cottonwood. Dr. J. W. Hudson, of Ukiah, long a student of Pomo culture, in response to my query about dugouts in Ukiah valley writes under date of June 4, 1935: "Two Yo'Keya villages quarreled so fiercely that one of them migrated to Scott valley, Lake co., but on reaching Russian river they found but one cu-na' [dugout canoe], the others being taken out by the enemy and hidden on top of a hill. This happened about a century ago." See Barrett, *Ethnogeography*, 138. *Ma*.—Cottonwood dugout hollowed with elkhorn "ax." *Ha*.—I saw a dugout some years ago which had been made by a SE Pomo of Elem under instructions from an army captain. Corroborative of this is Dr. Hudson's statement in above-mentioned letter with respect to dugouts on Clear lake: "When a punitive military expedition reached Clear lake, in 1850, they found the native boats [balsas] so tricky and wet that two whale boats were imported and many dugouts made. The latter were afterward appropriated by Indians." Inft Augustine said whites showed Indians how to make dugouts.

526. *Yo*.—Blade square. *Ko*.—Oak blade attached to elder handle by 2 side splints and grapevine lashing.

528. *Kb*.—To cross Pudding cr. lagoon and to visit mussel-bearing rocks at low tide. Poled, not paddled. *Ma*.—Lashed together with grapevine withes.

530. *Kb*.—For collecting mussels from outlying rock, basket fastened on log; swimmer pushed log along. *Ic*.—Baby ferried in basket; man swam and towed by means of rope around his neck. *Ma*.—Hazelwood hoop for child to hold while swimmer towed across.

CEREMONIAL STONES

531. *Ic*.—Worn as necklace, but not as ear ornament. Eight-pointed star of *Haliotis* shell represented sun; worn anciently at dances; buried with dead, as "it shone after soul gone."

532. *Kc*.—Made by singing shaman for curing; 6 in. long. *Ma*.—Foot-long obsidian blade found by Charles Ramon (an earlier inft) was kept as charm. U. C. Museum of Anthropology has plaster cast of larger one found near Melitta, Sonoma co., by white man. *Ha*.—16 to 18 in. long, made and used by singing shamans. Patient pressed with points and edges. *El*.—Used by shaman: spirit connected with blade aided cure when patient touched therewith. *Ko*.—White flint blade caused illness.

533. *Yo*.—Used by singing shaman.

534. *Kc*.—One-color stone lucky; mottled stone unlucky. Perforated charmstones used for treating sick; not used for fishing. *SN*.—Found, not made. Red charmstone unlucky. Gray one lucky; picked up and taken home. *SS*.—Paralysis resulted from touching charmstone. Wound cross charm (Hdbk., fig. 16) modern; used in Maru Religion. *Mu*.—Round-stone ball for good luck in hunt; made by Coyote Chief (creator). *Ma*.—Red, white, black charmstones for luck in deer hunt. Lizard with crossed tail, seen on log, also gave good luck. See note 885. *Ha*.—Before picking up unusual stone, finder struck it first 4 times with stick, saying: "I find you now. Now I kill you. I hit you 4 times so you will not injure me. I take you to be my luck." *Ci*.—Only shaman handled. Might cripple anyone else who touched. However, shaman might have one in outfit and touch patient with it to cure illness. *El*.—Used by shaman in curing. Some perforated.

535. *Kb*.—Found, not made. Plummet-shaped charmstone with perforation lucky. Charmstone of reddish stone unlucky; not picked up. *Kc*.—Stones found, not made. *Ic*.—No charmstones like sample (UCMA 1-14100). Most unusual stones were unlucky to finder, unless sung over by a person who understood them (shaman or "poison" man). *Yo*.—Used by singing shaman. To my surprise, inft took in her hand a sample charmstone I brought. She

swung it to right, to left, to right, to left (4 movements in all), blowing on it constantly. (This contrasted with SW Pomo blind woman who begged me to put no stone of any kind in her hand.)

536a. *Kc.*—Plummet-shaped charmstones tied with grapevine over openings in deer fence by singing shamans. *Ha.*—Plummet-shaped charmstone hung on deer fence where snare set. Perforated spindle-shaped charmstones not used.

537. *Kc.*—Eel river petroglyphs made by Coyote. *Ic.*—No sterility-removing rock, but certain spring water was drunk to aid conception and pregnancy. *Yo.*—Two “baby shaped” rocks on hill top on Leslie Crawford’s ranch visited by couple wanting offspring. Both ran uphill; then woman scratched straight line on one of rocks. They copulated there. This done secretly. Also a sterility rock reported for Bachelor valley in N Pomo territory. *Ma.*—Inft’s paternal grandmother told him that petroglyphs on rock upstream from Cloverdale on Russian r. were made by boys and girls and had no meaning. *Ha.*—On flat rock south of Soda bay. Husband and wife wanting baby took chief with them to rock. They marked it with steatite used like chalk: V for male infant, X for female. They lay on the design. Then chief came to them and they got up. Chief pecked design they had “chalked” on rock. A digger pine standing alone in field near present Upper Lake Indian village is thought to aid conception. Women chewed gum from it. *Ci.*—Made diagrams on ground to show trail, but no sand painting. *Ko.*—On top of Lower Lake id. (Koi) was smooth rock several feet in diameter. Young boys (10 to 12 years old) of “each generation” went there and made lines with obsidian pick.

MUSICAL INSTRUMENTS

538. *Kl.*—Called kayoya. Used by singing shaman only. *Yo.*—Called kaiyoi. *SS.*—Used by shamans only. *Ma.*—Used by singing shaman, not by sucking shaman. *Ko.*—Cocoons found on manzanita bushes. Cleaned and gravel put inside. Used by shamans and in coyote dance (kliwinexe).

539. *Ko.*—Of elderwood.

540. *Kc.*—Deer dewclaws on 6-ft. stick, used in kalimatauta dance.

541. *Kl.*—Called kol. *SN.*—Pounded with vertical stick. *SS.*—Of hollow white-oak log over pit. *Ko.*—Hollow tree burned to length.

542. *Kb.*—For tuya dance. *Ha.*—With hands, in lolo dance. *El.*—For dimming fire at ceremony.

543. *Kb.*—Called maamati. Women and children not allowed to see. Swung in assembly (dance) house. *Kl.*—Made noise like thunder. Whirled by shaman in assembly house. Old women might see, but not younger women and children. *BW.*—Swung in assembly (dance) house, even when women and children present. Spectators lie down to avoid being hit. *Ic.*—Man only used; women not allowed to see it. Swung in treating child made sick by hearing thunder. *SS.*—Used only by singing shaman, though sucking shaman might be present. *Ma.*—Of manzanita wood. *NE.*—Anybody, even women, might play with bull-roarer.

545. *Kl.*—Whistle of bone or wood called libu'. *SS.*—Of bird bone. *NE.*—Rabbit bone whistle, single.

546. *Kc.*—Used by both Guksu (no. 986) and Dasan (no. 992). *Mu.*—Used by Guksu impersonator.

548. *Ma.*—Of Great Blue Heron bones.

550. *Kl.*—Called ditim. *SS.*—Used to call ducks. *Ma.*—Of elderwood.

551. *Ci.*—Of elder. Played by men at home or when courting.

552. *NE.*—Not played in spring lest rattlesnake enter house.

MONEY AND BEADS

554. *Yo.*—For children. *SS.*—*Olivella biplicata* called pshi. Not used for beads. *Ma.*—Worth less than clamshell disks.

556. *Kl.*—Flat stone slab for smoothing beads, which made locally from clamshells obtained from coast or by trade. *SS.*—Clamshells from Bodega bay; beads made locally. *Me.*—Used for necklaces. Imported ready-made from south. Not manufactured locally.

Mu.—Continually made. Traded to Indians in Lake co. for baskets, magnesite cylinders. *Ci.*—Clamshell and magnesite beads worn as necklace. Necklace called hebinal composed of 10 or 12 strings of beads with magnesite cylinders and quail topknots on bottom. Worn by women as show; hung around neck. Woodpecker-scalp belt (no. 1050) worn at same time. *NE.*—Thin clamshell disks, \$1.50 a dozen; thick ones, \$4 a dozen. Shells obtained from Lake Pomo.

557. *Kl.*—Counted by fives. One stick laid down for 20 beads. Counted on fingers, beginning with little finger, each finger standing for 5. *Kc.*—800 beads worth \$5; 1600 worth \$10. *Ic.*—Clamshell disk money counted in eights, also in fives, 20 fives making 100. Headbands with 160 small clamshell beads or 40 large ones. *SS.*—Counted by fives; one stick laid down for each 100, 400. *El.*—Counted by eights.

558. *Kc.*—Magnesite called kokabe. *Ic.*—Bought ready-made. *SS.*—Made locally from raw material obtained near Cache cr. or Clear lake. *Me.*—Imported ready-made from east. Called "gold" money. *Mu.*—Imported ready-made; value, \$10. *Ma.*—Bought ready-made. *Ci.*—Shigom people mined magnesite for themselves on Cache cr. Deposit not owned by any one group. Various peoples went there for the stone. *Ko.*—Made at Koi. *NE.*—Magnesite cylinders not made, but imported from Lake Pomo.

559. *Kc, Ha.*—Worn in bored ear lobe by women. These cylinders were drilled, but no feather worn in hole, except when woman had menses, when flicker feather inserted.

PIPES AND TOBACCO

560. *Kb.*—No planting of tobacco at Kabledile. *Kl.*—Pipe of ash wood, 2 ft. long. *BW.*—Tobacco imported from interior. *Kc.*—Of ash wood. *Ic.*—No smoking until "rounded up at Fort Bragg by Spaniards." Knew other tribes smoked, however. *Yo.*—Tobacco pipe called by term meaning "tobacco stone." *SS.*—Of ash wood; sometimes 2 ft. long. *Ha, Ci, Ko.*—Of ash wood.

562. *Kl.*—Tobacco crushed and put in basket. *Yo.*—With Spanish-moss plug.

563. *SS.*—Of cased fawn skin. However, pipe never carried around, e.g., as when hunting. *Ma.*—Tobacco pouch of buckskin held pipe also. *Ha.*—With buckskin drawstring. Beads carried in such bags also. Both men and women used for valuables. *Ko.*—Of skunk skin, dressed by rubbing with a stone. *Ci, El, NE.*—Of fawn skin.

564. *Kl.*—Pipe kept any place. Never smoked in dwelling; smoked in assembly house and outdoors. Some old women smoked as well as men. *SS.*—Old women, as well as old men, smoked. Young men rarely smoked. *Ci.*—When smoking, prayed to Marumda: "Give me good luck, father. Help me."

565. *Kb.*—Singing shaman smoked tobacco. *Ic.*—Nowadays shamans think smoking tobacco gives power; but not so formerly. *SS.*—No smoking by shaman while curing; all right afterwards. *Ha.*—When calling for spirit's aid. *El.*—Singing shaman smoked pipe before treating patient.

566. *Yo.*—Singing shamans offered tobacco and shell beads by throwing in six cardinal directions. *Mu.*—See note 568. Tobacco and food offering in fire when commenced ceremonial dances. *Ma.*—At least threw tobacco and pinole in assembly-house fire 4 times. Done for first-fruits ceremonies, e.g., for new acorns, buckeye nuts, clover, tobacco. If not done, sickness ensued from eating and smoking. Not done for salmon. *Ha.*—By man in sweat-house fire for dead male relative. After that forgot about deceased and dreams about him ceased. Burned tobacco or pinole as offering in assembly-house fire if hawk or eagle flew close over it. Prayed that people might be happy and live long without sickness or trouble. *Ci.*—Tobacco offering to Marumda burned in fire. *Ko.*—See notes 879 and 1063. *El.*—Burned by shamans at patient's house. See note 904.

567. *Yo.*—Angelica never burned; bad luck to do so. *El.*—Burned by both types of shamans at patient's house.

568. *Yo.*—Tobacco given shaman when treating sick. He gave to his friends. *SS.*—Tobacco burned by shaman in curing. See note 904. *Mu.*—Shaman burned tobacco offering in fire after curing.

GAMES

569. *Ic.*—Dart thrown along smoothed ground. Dart thimbleberry, 3 ft. long; no feathers or stone point. Man's game, played for distance. *Ci.*—Target-shooting contest at tule bundle; also distance shooting.

570. *Kb.*—Counts 5 points if leans against stake.

571. *Me.*—Played by children only.

574. *Kl.*—Called tekun. Both males and females played. *Kc.*—Called iche'ka, meaning "catch on stick."

579. *Ha.*—Grass-filled buckskin ball.

583. *Kl.*—Learned from SW Pomo of Stewart's point. *SN.*—Usually played between different villages. No east and west sides as in sweating competitions. *Mu, Ma.*—Curved shinny stick. *Ci.*—10 or 12 played shinny.

584. *Ha.*—Shinny-ball thrower made 3 feints before throwing, either on ground or in air.

585. *Kc.*—Ball held in air and struck. Opponent tried to knock stick aside so miss. If ball fell, each tried to seize; then raced after it. *El.*—Game started by striking ball in air. After that on ground.

586. *Kb.*—Pepperwood ball. *Mu.*—Made of knot of wood. *Ma.*—Tanbark oak. *Ci.*—Of knob from pepperwood trunk. *Ko.*—Ball of pine-cone center. Curved stick used. Played a day or two after dance ceremony.

588. *SS.*—Men and women mixed played shinny. Betting.

589. *Kb.*—4 sticks with acorn on each end passed from hand to hand, opponent guessing how many in one hand or other. 4 men played, 2 on each side. Game called kayoyi.—This is of course wholly different from the standard marked-unmarked guessing. *Ci.*—Gamblers drank water at dawn and dusk only, ate no meat, and used scratching stick because of good-luck "medicine" on hands. Did not touch eyes lest they should become blind. *NE.*—12 stick counters for tally.

590. *Kc.*—Called haimasol. *Ko.*—4 bones with 2 players on each side.

592. *Kc.*—One with string wrappings called man, smooth one woman. *Ic, Ha.*—Wrapped bone was "man." *Ma.*—Marked bone, man; unmarked, woman.

595. *SS.*—6 counters for 2 players; 12 for 2 pairs of players.

596. *Ic.*—One stick poked around under sand. Opponent guessed where left. Another sand game (not guessing): Made spiral mark on sand; then held breath while tapped finger rapidly along spiral to determine who could hold breath longest.

599. *Ha.*—Held in hands. Opponent attempted to match with 3 sticks divided similarly in his hands. No counters.

600. *Ic.*—30 sticks; opponent guessed how many in one hand when bundle divided. *SS.*—Opponent must guess exact number. *Ci.*—Called yocho. About 20 sticks separated into 2 lots, guessed number.

602. *Mu.*—With 40 sticks; 2 play, using 10 counters. *Ma.*—20 to 30 sticks used. Bundle divided, guess odd or even, then lay out and count.

603. *Kl.*—Called hai'misol (but cf. no. 590 for different game). Played with elderwood and wormwood sticks, counted out by fours.

604. *Kc.*—Deer's knee cap; must stand on edge to count. Game called yaaka (bone game). *Ha.*—24 stick counters, evenly divided between 2 sides at start. Each side laid out counters in 2 groups of 6 laid side by side. *Ci.*—Played by men, any number. Thrown. If stood on edge it counted most. 12 stick counters. *El.*—Not foot bone, as described by Loeb (UC-PAAE 19:215).

605. *BW.*—Played on piece of buckskin at times. *Kc.*—Of elderwood, flat sides blackened. 12 stick counters. *Ic.*—Women's game with 12 peeled and split elder sticks; 6 blackened; 24 counters used. Counting for round side up only: 3 blacks and 2 whites counted 5; 4 and 3, or 6 and 1, counted 7. One of these combinations entitled to another throw. *SS.*—12 counters used. *Me, Ma.*—Of elderwood; 12 counters. *El.*—Thrown on deer hide. Dice of elder or willow.

607. *Mu.*—10 stick counters for women's dice game. *Ma.*—All alike counted 2; three flat up, three round up, counted 1.

608. *Ha, Ci, Ko, El.*—12 counters. All round (or marked) side up counted 3, all flat (plain) up 2, half and half 1; except *Ci* "all flat 3, all round 2." *Ci.*—12 counters in center at start; when gone, from player to player.

610. *Ha.*—Wooden dice or staves with pyrographic geometric design made by reserving certain parts with wrapping of 2 layers of willow bark. Then held over fire, so unwrapped parts burned. This is "batik" method applied to wood. *El.*—Round side burned brown; flat side white. Burned before stick split.

611. "Pea and shell" game with walnut shells and pebble, probably modern.

612. *Yo.*—Also with oak balls.

613. *Kb.*—Madroña bark cup with stick through center.

615. *Ic.*—Made of nut other than acorn. *Ma.*—Used so as to strike teeth and make clicking sound. *Ci.*—Men, women, children played.

616. *SS.*—On 2 hands, or on 1 hand and 1 foot. *Me.*—Not over toes; fingers only. *Ma.*—Some figures made: stars, make daylight come, house, deer. Made over toes as well as fingers. *Ko.*—Not made on toes. Some figures made: daylight, dark, rat's nest, animals, etc.

CALENDAR, ASTRONOMY, COUNTING

617. *Ic.*—Year began when "everything" ripe (May). Each new moon marked beginning of month. Old men kept count with buckeye sticks, tying on new one as each month began; kept in bundle. No names for months; only stick count. *Ko.*—Inft did not know month names. He mentioned *matatadta* (summer moon) and *hetsolda* (winter moon), which probably are not month names. *El.*—Summer, *bitalal*; autumn, *stakkalda* (leaves falling) or *budumich* (*budu*, acorn); winter, *kexchil*; spring, *kolchati*. New year commenced in spring when flowers began blooming.

618. *Yo.*—Year began in December at new moon nearest winter solstice. New moon marked beginning of each month (*da*); *mahum* (December) means "end"; *gasida* (January), "cold month"; *sichjoda* (February), "flower month"; *chekamakiolida* (March), "trees budding month"; *sochidomda* (April), "clover (so) bloom month"; *kalkatoda* (May), "white willow bark ripe for basketry month"; *alasisda* (June), "seed ripe (*sis*) month"; *machaloda* (July), "everything drying month"; *dusisda* (August), "acorns ripe month"; *ka'da* (September), "winter begins month"; *cheda* (October), "rain month"; *hemada* (November), "frost month." *SS.*—Six names remembered: *ktsaidjo*, winter (November–December); *dabodal* (February–March); *marshken*, spring ("getting out of bad climate"); *chdomet* (first flower); *mtaonal*, summer; *ma'amaodal*, fall ("food falling month"). Month, *dal*. *Me.*—Names said to be similar to those of S Pomo. *Mu.*—Year began in November. Only 6 month names remembered: *matetwilasha* (bad month for babies); *thukubada* (frost month), December–January; *tisilasha* (brush month), February; *yoshikelasha* (black-oak month), March; *chelhelasha* (white-oak month), April; *kabakelasha* (? oak month), summer. *Ma.*—Twelve months in year, which began in April. Months remembered were (1) *hostomet*, clover-eating time, "April"; (2) *yuhumit*, pinole (the time of our visit, June 3, fell in this month); (3) *melamit*, hot; (4) *hamalaika djewi*, new moon; (5) *bidumet*, acorns fall, "September"; (6) *haliphalaihia*, leaves falling, "November"; (7) *achichi*, winter; (8) *baschamet*, buckeye ripe (Christmas falls in this month). *Ci.*—Names remembered by inft: *sola* (clover), April; *mukala* (crops), May; *budula* (acorns), September; *atpubela* (leaves fall), November.

620. *Kb.*—Twelve months, counted on fingers. *Kl.*—Year commenced about November. Finger names for months repeated once, making only 10 named months in year. Each month began with new moon. Order of naming: *tenabosa* (thumb), *bada'o* (index finger), *tenakol* (middle finger), *basheshiche*, *tenakowi* (little finger). *Kc.*—Ten months, in order counted on fingers: Left thumb (*kanabusa*); index (*mishensheshe*); middle (*kanakol*); 4th digit (*badaho*); left little finger (*kanakawi*); then right little finger (July 14, 1934, fell in this month), and to right thumb. *Ha.*—12 months.

621. *Kl.*—Morning star, kaatotil; Milky Way, che'ebu. *Kc.*—Morning star (ka'a sotol) "has in July another star in front of it, called "hungry star." They are in middle of sky at dawn in July." *SN.*—Morning star called ka'atotol (morning star). *SS.*—Morning star, k'a'toltol; Big Dipper, dôt (long pole like acorn pole). *Ma.*—Morning star, khamumke.

622. *Yo.*—Man and woman in moon. *SS.*—Woman's face in moon.

624–627. There seems to be one Pomo root, da, for sun and moon. When necessary, "day" and "night" are prefixed. Thus: *Kb, BW, machi-da, duwe-da; Kl, da, da; SN, da, duwe-da; Yo, da', iwe'da'; SS, madji-da, iwe-da; Ha, la, due-la; El, wichil-da, kuwe-da.*

624. *Kb.*—Both sun and moon human: 2 men, or man and woman. *lc.*—Sun a woman.

626. *Kl.*—New moon, da-shuwe'; full, da-kashe'mato, moon-belly-big. In mythology, moon is a mean old man who ate all food.

628–630. Pomo numeral systems have been analyzed by Dixon and Kroeber in AA 9:663–690, 1907. They are in general quinary-vigesimal; with 8 formed by multiplication (root of 4), 9 by subtraction (from 10), an unanalyzable unit for 15, and the unit for 20 meaning "stick." Departures from this general rule are: SE (*El, Ko*) and a subdialect of S (*Mu*) count on a base of 10 (instead of 10 and 15) between 10 and 20; SE and all S are decimal from 50 to 90 (but 30 is 6X, hence 6 × 5, and 40 is 1–Y). The NE system is incomplete and not clear; several of its numerals below 10 are borrowed from Wintun, several of those of SE from Patwin. The data are those of Barrett in his *Ethnogeography*.—In connection with the present element work, numeral lists were obtained from all Pomo communities visited except NE. These conform with minor variations to the Dixon-Kroeber scheme, except for occasional local invasions of the vigesimal by a decimal count between 30 and 90, doubtless owing to Americanization during the past 30 years. The lists do not seem to demand printing; they are available as needed.

632. *Kc.*—South bottom "because everything goes that way: wind, ocean water, etc."

MARRIAGE

633. *Kl.*—Obligatory.

634. *Kl.*—Post-mortem sororate optional.

635. *SS.*—Bad luck to marry deceased wife's sister.

637. *SS.*—Wife usually beaten for adultery; sometimes killed or nose bitten off by husband. Divorce frequent. *Ma.*—Wife's paramour killed. Adulterous person's nose cut off by spouse; sometimes an eye gouged out of woman.

638. *Ma.*—Might do so after wife's death.

640. *SS.*—"Marrying relatives brought shame."

642. *Kb.*—Inft married his m's half ss.

643. *Kl.*—Three wives most known. *lc.*—Sometimes 4 wives.

645. *Kl.*—Beads, deerskins, meat, etc. *SN.*—Sn-in-l brought wood and water for m-in-l if she lived in same house or village. *SS.*—Sn-in-l made gifts to pts-in-l. *Ma.*—Man's family gave money to woman's family. *Ko.*—Bridegroom's relatives furnished shell-bead money to pay for his bride. This put around bride's neck. Her parents removed and counted the money, then made equivalent return gift of baskets. Then bridegroom's relatives made gift of shell money to girl's father. This was not reciprocated with gift of equal value.

646. *Kl.*—Baskets, pinole, etc. *lc.*—Of bangled and beaded baskets to bridegroom's parents. *Mu.*—Return gift of goods by bride's parents to bridegroom's parents made 2 or 3 months after marriage. *Ma.*—Woman's family gave baskets to man's family.

649. *SS.*—Mostly married within village.

652. *lc.*—No strict rule of patrilocal residence. *Ma.*—Inft's case exceptional: at marriage he went to bride's home at Yorkville. Later he took her to his home at Makahmo.

657. *Kc.*—Weak. Speech allowed if necessary. *SN.*—No taboo between man and f's ss.

659. *Kl.*—Ashamed when first married. Conversed only if necessary, then "slowly" (in low voice). *SN.*—Also sn-in-l and m-in-l's sister.

660. *Kl.*—Same as m-in-l, sn-in-l regulations. Also feeble observance of m-in-l-dtr-in-l and f-in-l-sn-in-l observances. *Kc.*—Stronger than m-in-l-sn-in-l taboo.

661. *SN.*—"Ashamed." Did not talk much; then only "business." But ss-in-l and br-in-l joke one another. Man and wife's sister might talk obscenely, but no sexual intercourse.

662. *Kl.*—Never looked up when met on trail. *Kc.*—Stepped aside.

664. *SS.*—If husband guilty of adultery, wife scratched him. *Ma.*—Finger nails left long, but not so long as Chinese. *Ha.*—Bride scratched groom on hand or nose, "to show love."

665. *Kl.*—Lover entered house with firebrand to find girl, then slept with her. *Ma.*—Man would not marry unchaste girl. *Ko.*—Parents of pregnant seduced girl tried to get guilty man's parents to make him marry her. Trial "marriage" sometimes, if girl's parents away. Illegitimate child referred to as "no father."

666. *Kl.*—Sometimes at age of 9 or 10. *BW.*—Parents of betrothed children exchanged presents. *SS.*—Common with rich families. *Ko.*—Betrothal presents exchanged by parents contracting to marry their children when they became old enough.

BIRTH

667. *lc.*—Six weeks' confinement for new mother in special hut. *Yo.*—For first childbirth only. *Ma.*—Brush hut for childbirth and menstruation.

668. *Kl.*—Pressed belly at parturition.

669. *lc.*—Mother lay at childbirth. *El.*—Some gave birth lying.

670. *Kb.*—Moss on ground to catch afterbirth. *SS.*—Afterbirth put in gopher's burrow.

672. *Kl.*—Dried, wrapped, kept in basket in house. *BW.*—Wet and squeezed on any cut for quick healing.

674. *Ko.*—Engaged good-natured boy, 10 to 12 years old, to fillip navel cord from straight wild-rose stick. This would cause baby to grow fast and be good natured.

675. *SS.*—Cut with flint. Disposed of by filliping from bent sapling, with prayer. *Me.*—Put in little basket and placed on tree.

676. *lc.*—Navel cord buried, nothing with it. If, however, previous child died, then cord on top of wind-swept pine; this believed to make new child live. *Yo.*—Chewed wormwood only on baby's navel.

677. *Yo.*—Hot water. No one else used her basket cup; reserved for next birth. *El.*—Hot water. *NE.*—Warm water.

678. *Kl.*—Hot stones and ashes under bedding. Baby with mother. *Yo.*—Baby laid in basket of warm ashes. Baby not held in upright position for about 5 months, lest soft spot on top of head "cave in." *SS.*—Fire built in pit. Layer of leaves and grass after pit heated and fire out. On these new mother sat and lay. Reheated daily. Woman used for about 2 months. *Mu.*—Lay on pepperwood leaves in heated pit. *Ma.*—Hot stones in pit, covered with earth. *El.*—Warm ashes under baby.

679. *lc.*—Heated stones on top of ground, with grass over them, for new mother to lie on. *Ko.*—New mother lies on bed of grass over coals, until she feels well enough to be up.

680. *NE.*—No objection to twins.

681. *Kl.*—If on back, embryo might split, making twins.

682. *lc.*—For 6 weeks, but man not confined with wife in childbirth hut. *Ma.*—Until umbilical cord came off baby, usually from 4 to 8 days. Both parents confined in special childbirth hut. *NE.*—In special childbirth hut, not regular dwelling, for 14 days.

683. *Kb.*—Fifteen days. *Kl.*—One month, during which time does housework for wife. *Kc.*—Four days. *SN.*—Father stayed in house 10 days. *Yo.*—Four days. Then husband spat on small round stone and threw it into childbirth hut as his proxy. If he left immediately after birth, baby would die. Woman must not touch her husband during his four days' confinement, lest he have bad luck rest of his life. *SS.*—Until navel cord drops off. *Ma.*—Four to eight. *Ha.*—Four days. *Ci.*—Four or 5 days. *El.*—Until navel cord comes off; usually 4 days.

684. *Kb.*—Ten days. *Kl.*—One month. Must do no work whatever. *BW.*—One month. *Kc.*—One month. *SN.*—Mother stayed in bed 3 months. *lc.*—See note 667. *Yo.*—Twenty days. *SS.*—Two months. *Ma.*—Four to eight days. *Ha.*—One month. *El.*—Indefinite; according to how she felt.

685. *Ci.*—For every child.

686. *Ic.*—Attendant scratched new parent. Neither parent might scratch self lest baby get itch. *Ma.*—Baldness penalty for failure to use. Only new mother used, not father. *El.*—Not used by man.

687. *Kc.*—Meat and fish taboo to woman, not man. *SS.*—For new mother only; duration of meat taboo about 2 months. New father might eat meat. *Ha.*—Husband might eat meat, scratch self, but must not work or travel. If traveled, might see hawk catch bird and baby would sicken. *Ko.*—Neither parent eats meat for some time. *El.*—Meat and fish taboo to woman; salt not taboo. *NE.*—No meat or salt for new mother.

688. *Ic.*—Even operating fire drill tabooed. *SS.*—No hunting, no bead manufacture, no gambling, no dancing by new father. Penalty: baby's nose stop up. *Ma.*—Could not go in river or undertake any activity until umbilical cord came off baby. *Ha.*—No cooking. Parents washed her face, combed her hair. *Ko.*—New father careful for "one year," during which might not hunt.

689. *Yo.*—If husband traveled before 4 days elapsed and eagle or chicken hawk flew over him, baby would die. *SS.*—Might travel after navel cord dropped off. Remained inside until cord off. *Ko.*—New mother did not go to spring, creek, or lake for 6 months, lest see water monster and sicken. See note 939.

691. *SS.*—Ears pierced usually in first year, often by mother; some children at puberty.

692. *Kl.*—By pressure. *Ha.*—To prevent conception too soon after childbirth, shaman gave woman decoction to drink and steamed her with herbs over hot stones. *Ci.*—By drinking herb decoction. *El.*—Medicine drunk.

693. *Kl.*—By choking. *Ma.*—Modern occurrence of infanticide by maternal grandmother of infant.

694. *SS.*—Even when child's parents living.

695. *SS.*—Sample names: Kalkanuih, male, not translatable; Ch'ekabut, humpback. *Ma.*—Name feast after both parents left confinement.

698. *Kc.*—Inft named Kiyetana (quail topknot hand) after his m's m's br during latter's lifetime. Name now also bestowed on inft's br's dtr's sn. *SN.*—Father's side of family named baby. Mrs. Anderson's sn's dtr (1934) named after Mr. Anderson's great gr m. Sample names: Galma'ata (beach woman), Ka'aisowo (crow down-feathers). *SS.*—Not named for crippled or maimed person or one dying of disease. *Mu.*—No preference; either matrilineal or patrilineal. *Ma.*—Baby might be named for dead relative immediately after death. *Ha.*—Inft Augustine named Budubakal (acorn pole) after deceased mother's father. *Ci.*—Child named for "good" dead person, so others cannot take the name. *Ko.*—Baby named for relative of father preferably; otherwise of mother. Clifford Salvador, whose father was Koi, mother Lake Miwok, named Lume (bull pine, *Pinus sabiniana*) in Miwok by his m's m.

699. *Ko.*—Nicknames, but these not real name.

700. *Mu.*—First tooth lost put with clamshell-bead money. Placing in gopher burrow alleged to be Spanish custom. Inft was in Spanish family when he lost his. Spanish woman instructed him to put it in gopher burrow. *Ko.*—Nothing done with first deciduous tooth.

701. *Ha.*—See note 947. At sunrise by father or other relative, who prayed that child would grow up in good health; or thrown to moon. In either case preceded by running around house 4 times to right, 4 to left.

702. *SS.*—In child's own excrement. This made teething normal and child healthy.

PUBERTY

703. *Kl.*—Also nose; preceded instruction to girls with respect to duties, such as cooking, etc. *SS.*—See note 691.

704. *Kl.*—Moss or shredded redwood bark. *SS.*—Shredded tule; also for baby's "diaper." *Ma.*—Of buckskin. *Ci.*—Inft thought shredded tule, but not sure if any worn.

705. *Kl.*—Girl lies in own bed in dwelling. Sometimes two or more related girls. *Ic.*—Girl confined alone. Only visited to feed. *SS.*—Confined in own bed in dwelling house. No separate room or screen. Basket used for faeces. *Ko.*—Confined in dwelling.

706. *SS*.—Family, not community, affair. No special name for first menses.

707. *Kl*.—First menses, takmichi; subsequent, tsika'. *Kc*.—Menstruating woman might continue basket weaving providing she wove in flicker quill. See note 559. *Ik*.—See note 720. *Yo*.—Menstruating basket weaver wove flicker quill into basket to keep from going blind. Menstruating woman did not go near spring lest see mermaid or monster in snake form. *Ha*.—See note 559.

708. *Ik*.—Face covered with buckskin when left menstrual hut. *Ha*.—Face veiled; accompanied by woman. *Ko*.—Must not go near spring, creek, or lake during first menses, lest get rheumatism. Later menses not so dangerous. Went out at night for natural functions. Drank no water after sundown. Not sung for. *El*.—Buckskin over head.

709. *Kl*.—Girl might die if she "saw anything."

710. *Kc*.—Mother scratched girl's head with stick. *Yo*.—Did not wash face with hands lest prematurely wrinkled.

712. *Ha*.—Parents gave girl 3-in. stick. If flat, signified their wish that her first-born be girl; if round, boy.—Cf. 104, 537 for this inf't's preoccupation with sex prediction and determination. *Ko*.—If scratched with fingers, hair would fall out.

714. "Meat, fish, salt" were asked about. Meat seems universally forbidden. *Kl* and *El* also mentioned fish, but *Ha* and *Ik* gave fish as permitted, except (*Ik*) bones "must not be touched," lest spoil fishing for family. *Kl* specified shellfish as allowed. Six inf'ts (*Kc*, *SN*, *SS*, *Ha*, *Ci*, *El*) explicitly exempted salt, none specifically included it as tabooed.

715. *BW*.—Abreast. *Me*.—Basket laid on girl and beaten for music at first menstruation only. Inf't saw Ibadjamet, daughter of Palaseko, beat the basket.

716. *NE*.—No dancing, no work for girl at first menses.

718. *Kl*.—"Week or two." *BW*, *Kc*, *SS*, *Mu*, *Ha*.—4 days. *Yo*.—4 days. On fifth day washed with pepperwood leaves; might then go where she liked. *Ma*.—4 to 8 days. Once a girl during first menstruation went seed gathering with others; was caught up by a great whirlwind and dropped to ground dead. *El*.—4 days to month.

719. *BW*, *Kc*, *Ha*.—4 days. *SN*.—9 to 12. *Yo*.—Fasted 7 days. *El*.—4 days to month.

720. *SN*.—Mrs. Anderson stayed in bed for year or more at puberty. After first menses girl given 2- or 3-hour lecture in assembly house. *Ik*.—Six weeks for first menses; 4 weeks (*sic*) for subsequent until married; thereafter only 4 days each. *Me*.—Month. *Ko*.—Confined for month in dwelling behind tule-matting screen. Mother attended her and after one month bathed her in basket of water.

725. *Kl*.—Every night laughed, talked, sang. Girl told how to cook, etc.

726. *SS*.—Parents tattooed girl's chin "when clothes put on," i.e., at puberty (age ca. 15). Done so they may recognize her in other world.

DEATH

727. *Kl*.—Corpse washed by mother, wife, or daughter soon after death; wrapped in deer hide. Grave dug; corpse carried outdoors. Two pallbearers. Grave lined with grass and corpse covered therewith. Old baskets, beads, etc., thrown in grave pit, then earth filled in.

728. *Ma*.—Corpse tied on litter. *Ci*.—Man killed by bear brought home on litter for cremation.

729. *Yo*.—Bones of person cremated far from home brought home in basket with shell-bead money; reburned. See note 739. *Ko*.—Burned on own (private) tract of land. For instance, if died while camped on such tract on mainland, corpse burned there. If later another of family died on Koi island, corpse was brought to mainland tract and burned in same place as preceding. *El*.—Whether cremation or burial decided by relatives of deceased.

730. *Ko*.—Body on pyre; then more wood arranged like conical hut over body, but not touching it. No pit under pyre. Shell beads on body and around pyre. Fire lighted all around. Sometimes relatives stayed all night at pyre. Earth, gravel, sand thrown over ashes. One woman burned in old sweat-house hole in Kamdot island.

734. *SN*.—Mother who ate of dead daughter's flesh before cremation. Hardly a ceremony, but rather extreme exhibition of grief.

735. *Kl.*—Burden basket. Beads, gifts, etc., put in with calcined bones. *Ic.*—Ashes of dead covered with earth; no pit dug for them. *Ma.*—Bones gathered after cremation and buried by old (not young) person.

736. *Kl.*—600 to 700 yards from village.

737. *NE.*—Corpse carried to cemetery in large burden basket with pack strap over carrier's head. Extended burial (*sic*, cf. 727) with corpse swathed in deer hides. Eagle down buried with men. Mention of old man buried in dance costume. Mourning conducted in assembly (dance) house, with each mourner carrying bag of ashes on shoulders. As mourning dance proceeded ashes were scattered all over assembly-house interior.

738.—House burning affirmed by *Ic*, *Ma*, *NE*; denied by *BW*, *Ci*, *Ko*; *Kl*, "sometimes." *SS.*—Deer-mask decoy burned with deceased owner. Relatives got shell-bead money of deceased and decided how much was to be burned. If relative not able to attend funeral because living at distance, might come month or so later and burn offerings on site of funeral pyre. *Ma.*—Dwelling (even if multifamily house) burned at same time as personal property of deceased. Domestic animals might be killed if manifested grief for master, as horse whinnying or dog jumping on funeral pyre. Dog strangled. *Ci.*—House not burned, only personal property: if children, must have place to live. When chief died, assembly house not burned; but his personal property burned. *Ko.*—Only personal property burned with deceased. Meal offerings scattered at funeral pyre site 4 days after cremation. *NE.*—Dead man's house deserted at his death. Burned after 2 months. At same time his personal property burned at cemetery together with sprinkling of acorn and seed meal.

739. *Kb.*—Duration 1 year: no meat, used scratching stick, did not wash face with hands lest become blind. At end of year a feast marking end of taboos. Undertaker, a relative of deceased. *Kl.*—No meat, no scratching with fingers (scratching stick used). *Kc.*—No meat for year; used scratching stick. *Yo.*—Bone handler (as in 729) could not eat meat or fish for 2 months: always woman, never man. At regular funeral, woman mourner who wished to fast long, rubbed calcined bones to dust with her hands and mixed dust with earth. Brush laid over spot. *SS.*—Eats no meat, etc., for 4 days; acorn soup eaten. *Ma.*—No purification for undertaker or bone handler (!).

742. *Kb.*—After sweating and bathing, rubbed off body with stick as strigil; must not rub with hands. Woman undertaker, however, did not enter sweat house. *Kc.*—Sweated frequently.

743. *Kl.*—Sweating, swimming, rubbing body with angelica. *Kc.*—Washed with pepperwood, wormwood, angelica. *Yo.*—Wormwood, pepperwood, or angelica used in washing. *Ha.*—Must bathe apart from others. *El.*—And rubbing angelica on body.

744. *Kb.*—Sang: "Not get sick, not die; going to live long, etc."

746. *Kb.*—Pepperwood leaves. *Kl.*—Same as 743. *BW.*—In warm water with pepperwood, wormwood, or angelica. Angelica in water "like Catholic holy water."

747. *Ko.*—For one year.

748–750. *Kb.*—Widow or bereaved mother might put her shorn hair on breast of corpse. *Kl.*—Either cut with flint or singed. *Kc.*—Cut-off hair of mourner thrown away or placed in river weighted down. *Ic.*—Men did not cut hair in mourning. *Me.*—Widow's hair cut off with flint. Wrapped around a stone and submerged in deep hole in Gualala r. Widow's hair put in Garcia r. *Ci.*—Widower did not cut or singe off his hair. Singed-off hair of widow usually buried in mud. To burn it would prevent hair growing again. *Ko.*—Men as well as women burned cut-off hair. *NE.*—Old women in mourning sometimes singed off hair.

751. *SN.*—Also belt made of hair of deceased female and worn by male relative. *Yo.*—Mourner's (man or woman) hair woven into belt with beads. *SS.*—Widow's shorn locks made into string and woven into beaded belt, beads being slipped over loop. Ends of hair strings tied together. Widow might give her hair to someone else to make belt, or give away or sell belt she made herself. Worn when dressing up to go somewhere. Worn by men also. *Ma.*—Rope of human hair (cut off in mourning) made by twisting 2 or 3 dozen hairs together to form each ply. These twisted into rope, beads being inserted. This beaded rope worn as belt on ceremonial occasions.

752. *Ha.*—To be burned with her at her death.

753. *SS.*—Mourning widow wore lumps of bluish-gray clay on stubble for as long as year. *Ma.*—White clay on stubble allowed to remain till worn off. Both men and women in mourning applied it after cutting hair short. Widow, widower, bereaved parent did this. Nowadays, cross of *Haliotis* shell worn. *Ci.*—Both sexes put mud on hair stubble after singeing off for dead relative. Replenished as it fell off, sometimes for a year. More frequently by women than men.

754. *Ko.*—Women in mourning wore white paint on hair and eyebrows.

755. *Io.*—Widow scratched face, pulled hair. *Yo.*—Because of recent death of son, inf't's face furrowed with fingernail marks when interviewed. *Mu.*—Widow and daughters of deceased scratched faces so bled.

756. *Io.*—Beat breast with fists, not stones. *Mu.*—With stones.

761. *Kl.*—Pitch and charcoal on forehead and nose. *Ma.*—No pitch on widow's face. *NE.*—Widow wears face pitch one year.

763. *SS.*—Remained indoors for year because felt badly. Might make baskets, cook for men, etc. *Ha.*—For 4 days after funeral, relatives remained with widow lest ghost of husband harm her. *NE.*—In special hut with female attendant.

764. *SS.*—Mourner's face washed by someone else.

765. *NE.*—Widowed person must wait year before remarrying.

766. *NE.*—Intermittent crying before death of sick person.

767. *Kc.*—If bereaved relative dreamed about dead, gave feast; if could not afford feast, threw shell-bead money around outdoors. *Yo.*—If dead demanded food in dream by bereaved relative, it was supplied in one of 3 ways: (1) burned at cremation place; (2) given to needy person; (3) public feast given by dreamer. Also it was custom to scatter seed meal, acorn meal, and shell-bead money where deceased had habitually walked. *SS.*—Burned offering requested in dream by dead relative. *Mu.*—Food offerings thrown in fire if dreamed about deceased. *Ha.*—See note 566. If dreamed dead wanted food, feast planned and people invited. This was the food which the deceased wanted: although eaten, he received it. None burned or thrown away as offering to deceased. (This may be modern Maru.) *Ci.*—Food offerings burned or thrown outside of house if dreamed dead wanted food. *El.*—Burned at grave whatever dreamed dead wanted.

768. *Kl.*—Villagers made gifts to bereaved. Later reciprocated. *SS.*—Mourners compensated before dance; accepted money offered without haggling. *Ci.*—Bead money paid bereaved people if ceremonies to come within a few months after a death. No bargaining with respect to amount. Chief might take initiative in collecting the money for purpose. *Ko.*—Payment to bereaved before dance if dance held soon after death. Sometimes such payments made years after death. *El.*—Chief paid bereaved with his own shell-bead money.

770. *Mu.*—For year or 2 after death of child his siblings did not say "mother" or "father" but used circumlocutions, as did parents to them.

771. *SN.*—To keep ghost away.

772. *BW.*—Some persons rubbed angelica on body daily as medicine.

773. *Kl.*—Also put around face and head.

774. *SN.*—To keep ghost away. *Io.*—Singing by shaman to stop dreaming about dead.

775. *Ma.*—Food, baskets, beads, etc., burned at grave of deceased one year after death. No enclosure for purpose. Everyone participated and wailed for deceased. Said to be ancient custom. Nowadays offerings for dead young person put on grave.

775a. *Kc.*—See note 976.

SOCIAL AND POLITICAL STATUS

776. *SS.*—Poor people "helped" the rich [no doubt receiving gifts in return]. Chief was only person who had regular staff of volunteer servants, who hunted, fished, and worked around his house. To entertain invited guests all villagers contributed, but chief gave most.

777. *Kl.*—Heard of them among Yuki. Denied for Sherwood Pomo. *BW.*—Helped women wail in mourning. *El.*—Called chum.

779. *Kc.*—One at Kacha. Not married; lived with her family. Hunted. Called das, like male berdache.

780. *Ma.*—Big feast for twins.

783. *Ha.*—Man got water while his wife menstruating, lest she see water monster.

784. *Ci.*—Women helped sometimes. Deadwood collected. Broken by striking on rock.

786. *SS.*—Wappo called Ni'sewal. *Ha.*—Habenapo and Kuhlanapo of Big v. spoke single subdialect though autonomous groups. Shigom had different subdialect.

788. *SS.*—Implied by multiple chiefs and village endogamy. Entries in the list represent answers to questions. *El.*—See note 803.

789. *Ik.*—Icheche village had 24 families "in olden days."

CHIEFS

791. *Kc.*—Poor men worked for rich; got sweat-house wood, hunted, etc. Paid with beads, food, etc. Allowed to sweat like others. Such poor not excluded from ceremonies. They danced, became ghost dancers, etc. *SN.*—Rich man "looked up to." *Yo.*—Rich men give shell-bead money to their relatives when latter dancing. *SS.*—See no. 776.

792. *Kb.*—Tedibu was last Kabledile chief (chakale). *Kl.*—Called chakale. Chief's relatives supplied him with shell beads, various foods such as acorns, pinole, fish, mussels, kelp, seaweed. Lucy Cooper's father, Haimadal, was Sherwood chief; succeeded by Likayam (Steve Sherwood), his son. Mashuke, Lucy's m's br, was next chief. *BW.*—Kayadaka or Captain George, inft's m's br, was last Buldam chief. Inherited position from father. Chief called kalte. These chiefs were Willits men; no native Buldam chiefs. *SN.*—Called chakale. Konchi was head chief of Shanel. *Ik.*—Called djayadu. *Yo.*—Called djayadul. *Mu.*—Chief called achapche. *Ma.*—Chief, achaimiyeme. Bead money given new chief at installation. *Ha.*—Term for chief ghaxalik. Lakuna, inft's m's br, was chief of Habenapo. He inherited office from his m's br, Yoliwe. Still another chief was Hoho, who was unique in being buried instead of cremated. In his final illness he lay in open grave 2 or 3 days till dead. *El.*—Called balakui. When inft little girl one chief was Pusash. 3 contemporary chiefs followed him; not all his heirs. "Civil war" once at Elem perhaps had to do with this.

793. *SN.*—Inheritance of chieftainship preferably to eldest son; if none then to chief's brother. *Ik.*—Even if worthless, oldest son succeeded to chieftainship. *Ma.*—If oldest son of deceased chief unsatisfactory, selected someone else, preferably another son rather than sister's son of decedent.

796. *Yo.*—At 18 or 19 years of age heir to chieftainship shut in assembly house 4 days for instruction in singing, chief's duties, etc. Grandfather or father instructed. Dick Redick (Danoptil), Yokaia chief in 1934, succeeded his m's br Yontok, who had succeeded his m's br Djanobashai. Djanobashai's predecessor was Kalanoi (Kroeber, *Hdbk.*, 232). *El.*—To ss's sn or br's sn in case no own sn.

797. *Kb, Kl, Kc, SN, Yo,* mata-kale; *BW,* mata-kalte; *SS,* mada-xalech; *Ma,* baaimiyeme; *Ha,* da-xalix; the first element throughout being the common word for woman; *El,* balak-ta (cf. no. 799, *Ko*). *Kl.*—Daughter of chief. *Kc.*—Not necessarily relative of chief. *SN.*—One, named Pôôtatoima'n, was mother of assistant chief Sakaya'k (see note 801). Chieftainess did not harangue like chief; managed feasts. *SS.*—Wife or sister of chief. Might give orders to common men, but chief ranked her. *El.*—Only during minority of male heir to office.

798. *BW.*—Chief's wife. Her duty to feed visitors. *SN.*—Might be niece of chief. Chief's ss's dtr rated as female chief. *Yo.*—Selected by chief; never his wife.

799. *Kc.*—Chief called chakale. Inft's father, Anchowe, was chief at Kacha. *SN.*—Installation of new chief on occasions of ceremonial gathering ("big time"). Heir might decline chieftainship without losing caste. *Ik.*—No meeting required to approve new chief; no shell beads bestowed on him. *Yo.*—See note 1004. *SS.*—Women had equal voice with men in selecting chief. Chief called chayedul. *Ci.*—Some women had voice in confirming chief's successor. All people gave him bead money. If oldest son unsatisfactory, they might install younger son; or sister's son in lieu of son. Tenure for life. *Ko.*—Chief, balak-ui.

800. *SN*.—Son (heir) of chief not called *chakale* until old chief died.

801. *Kb*.—Called *kalte*; assistant chief and orator: directed people on ceremonial occasions, lectured children. *SN*.—John Kabikim (rock leg) was assistant chief (*chakale*). Pogo and Sakayak were temporary assistant chiefs, but also called *chakale*. Neither related to head chief Konchi, who appointed them "to help him." Sakayak's mother was a chief-tainess. These subchiefs did not have part of village only, but had authority over whole. *SS*.—Same as orator (?). *Ko*.—Chief and assistants discussed plans for ceremonies in sweat house. Assistant chief or "captain" also called *balakui*.

802. *Kl*.—Called *chuma-kalte*. Sometimes was also village chief. *Kc*.—Called *cha'eba*. *SS*.—No special term for war leader.

803. *SS*.—More than one chief in village, apparently of equal status. Coöperated in affairs of community interest. *El*.—Three contemporary chiefs of equal rank at Elem; each with own constituents, not all relatives of each. *NE*.—Several chiefs in village; one head chief.

804. *Kb*, *golmedu*, *Kc*, *lc*, *Yo*, *laimosh*, *SN*, *mitsea*, *Ha*, *El*, *meche*. *Kl*.—"Hired" by chief. *Kc*.—Entitled to all bead money, etc., scattered in dance house. Unanimity required for his appointment at assembly. He designated men to gather wood, dead *manzanita* preferred. For further duties see note 478. *SN*.—He kept shell money cast on floor or in fire by audience. Sometimes had assistants. For additional duties see nos. 1004, 1071. *Yo*.—Tended both assembly-house and sweat-house fires; had many helpers to get wood. His office hereditary in female line. *Ha*.—Officiated at both dancing and sweating.

805. *Kl*.—By chief, any time of day. *Kc*.—By chief (*chakale*). *SS*.—Chief announced ceremonial plans from top of assembly house. *Mu*.—See note 87. *Ma*.—Chief, when orating, had horizontal lines of charred pepperwood nut charcoal on cheeks. *Ci*.—Chief harangued people morning and evening about hunting and daily duties. *El*.—Morning and evening during ceremonial times.

806. *Kc*.—Called *cha'yak*. *SN*.—Called *chanokolpin*. Any subchief might act as envoy. *Yo*.—Fire tender acted as messenger. *SS*.—Common men served as messengers.

807. *Kl*.—Fire tender, apparently, also harangued adults; sometimes he lectured children. *lc*.—Assistant chief was orator. *Yo*.—Called *mookuma*, "preacher to children." Might be a common man, not of chiefly blood. *SS*.—However, chiefs did most public talking. *Ma*.—When visitors came for ceremonial dances, orator of village directed each group where to camp.

808. *BW*, *El*.—By parents, not chief.

809. *BW*.—Chief called "eagle."

810. *Yo*.—Hawk called *liklik* kept as pet. Beads around neck. Fed rabbit meat, but allowed to fly and forage for itself. Sat on owner's shoulder. I saw two such (apparently species of *Falco*) at house on Middletown reservation (LM) in July, 1934. *El*.—Sparrow hawk kept as pet in willow cage; not for feathers. I saw one so caged in July, 1934.

811. *Yo*.—Aerie near Boonville owned by Yokaia chief; transmitted like office to ss's sn. Eaglets killed for feathers. *Ma*.—Eagle down purchased from other groups. *NE*.—Owned by chief. Eaglets killed for feathers.

LAND OWNERSHIP

813. *Kc*.—By ridges, trees, rocks. *Ha*.—Adobe cr. was boundary between Habenapo land on east and Kuhlanapo land on west. Both communities fished the creek.

817. *Ci*.—Pepperwood trees privately owned, but not oaks or grass-seed places. *Ko*.—Had heard of private ownership of seed tracts.

820. *Yo*.—Pt. Arena people were friends of Yokaia people. *Ci*.—Some Shigom people, usually several together for protection, went to Sacramento v. to purchase things with shell money and sell at home.

WAR

822. *Mu*.—Spaniards destroyed bows and arrows to prevent warfare. *Ko*.—Singing to help relative whom enemy seek to slay.

823. *Kl.*—See note 329. *Kc.*—Inft's f's f (Kalmadim), a Willits man who lived at Kacha, "made war" on Willits Pomo for stealing his deer snares. He and warriors wore bearskins and killed many Willits people. This was only "war" involving Kacha. *Ha.*—See note 893. *Ko.*—When father of Elem inft was baby, coalition of Rumsey Patwin, Berryessa v., and Yountville Wappo attacked Koi people during ceremony on Lower Lake id. (Koi). Some men swam over, stole Koi balsas, and returned with main force. Attackers driven off with heavy loss. *El.*—Fought Cache cr. Patwin over acorns. Later Patwin killed Elem old woman when Elem people gathering seeds. "War" apparently limited to feuds between small groups; no special interest in war.

826. *lc.*—An *lc* chief visited SW Danaga (Stewart's point), was stripped, sent home naked. His people in revenge made a surprise attack. (Cf. Loeb, Folkways, 200).—This however is robbery as well as insult. "Slight" as a cause of war has been reported only from S. Cal.

827. *Ma.*—Dance at battle. Inft volunteered statement that Yuki warrior, on warpath for first time, used scratching stick.

830. *Kl.*—Anyone might have dream of war.

832. *Kl.*—See note 904. *SN.*—Night-hawk warned of enemy or trouble. See 901. *Ci.*—Water and food only in early morning when on warpath. If partook any other time would be shot by enemy.

834. *Kl.*—Angelica charcoal streaked with fingers across face and chest. *SS.*—Charcoal paint on cheek to ear; hair net worn. *Ma.*—Feathers worn in hair also. *Ci.*—Charcoal only for pigment. Chicken hawk feathers worn in hair when on warpath.

837. *SN.*—War not organized; only individual enmities and feuds. No knowledge of pitched battles.

839. *Kl.*—Camp of enemy often fired.

842. *Kl.*—Unless too old, chief fought in war. *SS.*—Chief did not participate in war.

843. *Kl.*—Compensated relatives of slain enemies with shell beads, deerskins, baskets, etc. *SS.*—Side that started war paid most shell-bead money in mutual payments at peace making.

844. *Kb.*—Scalp included eyebrows and ears. *BW.*—Buldam attacked by Pt. Arena C Pomo. Buldam people shot Pt. Arena man while he was swimming Big r. at Buldam. Took his head; scalped it; danced over scalp. Other Pt. Arena men escaped. *SS.*—No part of slain enemy's body taken.

846. *Ha.*—Scalper fumigated with smoke of burning brush and angelica root.

849. *Kl.*—Called chuma ke. Performed inside brush dance house. Men and women held hands and danced in circle. Mimic warfare. Scalp, apparently whole skin of head, on pole; danced over four days. Slayer watched proceedings. He remained outdoors, abstained from meat, etc., used scratching stick, for 4 to 7 days. He ate acorns and pinole. After dance, scalp might be passed on to another village for a like celebration. *lc.*—Danced and feasted if won war; brave men who killed most enemies pointed out.

851. *lc.*—Not tortured or killed; some taken captive; might be married later.

852. *SS.*—No prisoners taken in war.

853. *Kl.*—Sometimes. *Yo.*—Inft mentioned also an instance of Buldam woman taken prisoner by C Pomo of Bokeya (Yorkville) and married by force.

SHAMANS

857. *Ci.*—Shamans bathed in lake morning and evening while treating patient to increase power.

858. *Kl.*—But no shamans' school. *SN.*—Sucking shaman not trained; received power in dream. Singing shaman "trained" (taught ?) by older relative who was shaman. *Ko.*—Novice shaman refrained from water and meat for a time while under "training" (teaching) of older shaman.

859. *Kb.*—Young shaman went around from house to house singing. People gave him shell money to help him acquire control. *Kl.*—Shaman's nose bled when acquiring power; also had dreams; often acquired fear at this time.

863. *Ic.*—Shaman sucked out whatever victim had been "poisoned" with; stone, worm, feather, etc. *Ko.*—Frog, snake, two-tailed or two-headed snake caused rheumatism if one crossed its trail; treated by sucking shaman, who extracted white wormlike object. Picking up a rabbit dropped by an eagle would make one very sick; also passing a hawk with a coot or duck in its talons.

864. *Kl.*—Looked like nail, usually; sometimes arrowhead extracted. Sucking shaman did not let people see extracted "pain," lest illness follow. Shaman cut skin with "flint," sucked out "pains" and blood. Sucking shaman buried patient's sputum. *BW.*—Sucking shaman extracted stick. *SN.*—Pain, kootookan, a physical object. *SS.*—Sucking shaman extracted many sorts of objects: arrow point, feather, etc. Interpreter had watermelon rind "sucked" from throat.

865. *Kb, BW.*—Shaman's liability not formulated as definite sum, but shaman supposed to come when called. *Ic.*—Shaman must go when called; otherwise bad luck for him. *Ma.*—Strings of bead money hung up in advance as shaman's fee for curing. *Ci.*—Shaman might dream that patient should give feast upon recovery.

867. *BW.*—In acquiring power, sucking shaman vomited black blood; perhaps because he had seen a "ghost," inft thought. *Kc.*—Seeing house turn around, tree move, log roll of own volition, etc., was sign person to become shaman. Became ill and other shaman treated. Then novice became a shaman. *Ci.*—Shaman did not go into trance. (This probably refers to "outfit doctor," viz., "singing shamans" of 869.)

868. *Kl.*—Sucking shaman acquired power in dream, which made her (or him) sick; nose bled. Shaman fasted a few days. Dream came at almost any age. *SN.*—Sucking shaman acquired power in dreams. Spoke different tongues when acquiring power. Had both "poison" and good-luck stones. *SS.*—Sucking shaman dreamed about curing.

869–872. The "singing" and "sucking" shamans are respectively the "outfit doctors," who were taught by an older man and possessed a fetish sack, and the "dream doctors," with a vision, distinguished by Freeland, Pomo Doctors and Poisoners, UC-PAAE 20:57–73, 1923. The second class has been reënforced by the recent Maru cults.

869. *Kb.*—Some women became sucking shamans, some became singing shamans. Sucking shaman was diagnostician. After he sucked, singing shaman completed treatment. *Kl.*—Singing or "outfit" shaman (*michay-in*), sucking shaman (*koodun*). Former always men, latter often women. *BW.*—Inft a singing (fetish) shaman. Began about age 30. *SN.*—Sucking shaman, *ha-matu*, man or woman. Singing shaman, *ba-michai*, man only. *Ic.*—Three kinds of curing shamans: singing, sucking, herbalist. *Yo.*—No sucking shamans formerly; modern innovation. Sucking shaman "only a dream doctor." First appeared in inft's girlhood. They dreamed, whereas singing shaman did not. Sucking shaman called *matu*; had spirit helper. *SS.*—Most sucking shamans were women; they had no fetish sacks. Singing shamans mostly men. For their cooperation see note 939. *Me.*—Alleged to be identical. *Ma.*—Inft classified shamans as sucking, singing, dreaming, hand. Hand shaman cured by rubbing. Dreaming shaman, as well as sucking shaman, sucked patient. Inft, a sucking shaman, learned his songs in dream when 15 years old; dreamed frequently thereafter. The more he treated sick people, the more he dreamed. *Ko.*—Singing shaman had fetish sack; referred to as "outfit doctor." Outfit burned at death or passed to successor. *Wokox* obtained his from an older shaman. *El.*—Both ancient. Both not required for patient, i.e., one as diagnostician, one as curer. Either would do. If pain localized, sucking shaman, *sukal kowi*, called, otherwise singing shaman, *kowi*, with fetish sack. Associated with modern Maru Religion are "spiritual doctors," who go into trance so spirit will advise where seat of trouble is; also suck out disease.

870. *Kb.*—Sucking shaman drank a little water before sucking. *Kl.*—When acquiring power, when treating sick, used by sucking shaman.

871. *Kb.*—Singing shaman had sack of bear hide or other skin. *BW.*—Inft kept his fetishes in modern suitcase. He showed me contents; feather headdresses, down feathers, flint and obsidian spear blades (found, not made by him). Sprinkled water on patient with feathers; touched with blades. All acts performed 4 times. While singing over patient, spirits

came to him. *Kc.*—Singing shaman may give his fetish sack to relative. See note 532 re part of contents. *Yo.*—Singing shaman used bull-roarer. Taught by older shaman whose fetishes he inherited. Singing shaman called kaobadon chacha; also called kaiyoi shaman because used cocoon rattle. Singing shaman prayed to Medit (Christian God) calling him father; also prayed to sun, moon, stars, wind, whirlwind, thunder, lightning, ocean. Sang of all these things. While treating sick, meat taboo for 8 days; might be "poisoned" by enemy putting meat in his house. *SS.*—Singing shamans had fetish sacks containing charmstones, turtle-shaped stones, perforated and other stones. When curing, wore feather headdress made from any albino bird. Got outfit from older shaman, or by himself; no dream necessary. One curative act of singing ("outfit") doctor was to put basket on patient and shoot it with bow and arrow of poison-oak wood: songs prevented injury.—Cf. no. 1032 *Ic*, similar act as "initiation." *Ha.*—See note 532. *Ko.*—Sack contents comprised eagle feathers, feathers from small hawk, dance ornaments such as little squares of flicker feathers, stones, quartz crystal, small mortar, charmstone, and obsidian blade about 8 in. long. These objects laid out and used to touch sick person. Shaman sang 4 nights and 4 days; blew 4 times on patient.

877. *SS.*—No society or organization of shamans.

874. *Kc.*—Sucking shaman carried. See note 964.

875. *Ha.*—"Not in connection with shamanism so far as I know, but in Kuksu cult." (See note 1074.)

876. *Ha.*—Singing shamans only; outdoors.

877. *Kl.*—Home remedy for toothache was hot stone against tooth, gum prodded with bone awl. *SS.*—Temple cut with flint or obsidian flake for headache; might be done by anyone. If severe, shaman sucked. *Ma.*—Shaman could tell what kind of blood by cutting patient. 3 kinds: "good blood, bad blood, rheumatic blood." *NE.*—Person suffering pain may cut self with flint or obsidian flake to relieve pain; scrapes off blood with a stick.

878. *Kb.*—Sometimes singing shaman pressed burning angelica root against seat of pain. *BW.*—Sucking shaman sucked and diagnosed; singing shaman cured. *Ma.*—Shaman sucked out "poison blood." *Ci.*—Herb in mouth for toothache, a home remedy. No shaman required. *El.*—Blood clot containing bone or feather sucked out.

879. *Kb.*—Sucking shaman (and less often singing shaman) saw "outside people" (spirits). See note 938. *BW.*—Inft hears, does not see, spirits. They are spirits of dead (*guya*); not people he knew in life, but other dead. *Ha.*—All shamans placed patients with head to north, feet to south. *Ko.*—Singing sack-shaman called on "spirit" to aid and laid offering of tobacco around edge of fire.

880. *BW.*—Inft danced before touching patient; had one helper to sing for him while he danced. *Kc.*—Man who had suffered bad luck or bad dreams was danced over in assembly house by shaman wearing feathers; dance called *matuke* ("doctor" dance).—Sounds like Maru cult. *Ic.*—Dance (of *kuksu* series) with feather regalia for curing; might dance for 8 nights. If person sick from seeing water monster was caused to faint by song, shaman knew cause of illness.

881. *Kb.*—"Hand doctor," sometimes in olden days. *Kl.*—Singing shaman rubbed hot ashes on seat of pain, also massaged. Also cured by sweating patient over warm ashes outdoors; hot stones also used. Mrs. Lucy Cooper's m's f was Sherwood singing shaman, her father sucking shaman. *Ci.*—Shaman might have people dance to aid in curing patient. *Kilak* (1006) or some other dance performed.

882. *BW.*—Inft, after dancing, took feathers off his head and brushed patient 4 times with them. *SS.*—A modern practice.

883. *Ha.*—Owl and Red-tailed Hawk feathers; used by singing shaman, not by dancers.

884. *SS.*—Angelica chewed and water sprayed from mouth.

885. *Ma.*—Inft, a shaman, had quartz crystal as charm for deer hunt. He was about to shoot deer, heard sound at his feet, looked down and perceived quartz crystal. This is also charm for fishing and curing; heated and applied to pain by sucking shaman. *Ha.*—Angelica rubbed on; crystal hung at deer snare for luck.

888. *BW.*—Inft acquired power to cure fright cases by learning songs in dream; not

taught by older shaman. If sickness caused by seeing water monster, he made a rope effigy of snake, painting it black and white. Patient shook violently when he saw it, then got better. *Kc.*—Only after sucking shaman had diagnosed case as requiring such treatment. *SN.*—Fright sickness diagnosed by mentioning snakes, monsters, etc., in song. After observing patient, shaman made image of creature with which to re-frighten patient. *IC.*—See notes 543, 880. *SS.*—See note 939. *Ma.*—Sight of water monster caused illness, which cured by singing. No image of monster made for curing. Sight of tura or other spirit or deity caused illness, which cured by suction. *Ha.*—By singing shaman for fright sickness. Thus, in treating woman sickened by sight of "water woman" (see note 939), shaman wore black dress of dyed tule and imitation hair of shredded tule dyed black. *Ci.*—Continuous dreaming about water monster (*durigha*) caused illness curable only by shaman making image of monster, which he displayed to patient who fainted at sight thereof. *Durigha* might be seen on land too.—The underlying idea of these practices appears also in the *Kuksu* cult: cf. UC-PAAE 29:372, 1932 (Yuki).

889. *SS.*—Shaman paid for treatment even if patient died.

890. *Kl.*—"Poison" shaman (wizard or witch) called *ko'ocha*. Might make victim sick by touching him with back of hand. *BW.*—Illness caused by "poison" man (wizard) or "outside person" (spirit). In diagnosing, sucking doctor must reveal this or other cause. *SN.*—"Poison man" or wizard called *koocha*. Might be sucking or singing shaman. *SS.*—By singing shaman, not sucking shaman. Might be hired to "poison" (bewitch) someone. Hair, nail parings, part of clothing, or other possession of victim thrown in certain springs where monster in snake form. "Poisoner" sang certain song, calling on various animals (not screech owl) to aid nefarious undertaking. *Ci.*—Shaman caused illness by touching victim with something; not shot at victim as "in north." Also effective if thrown over victim's house. "Poison" made when certain trees flowering. Shaman abstained from food and drink while making "poison."

891. *Kb.*—Rain or snowstorm stopped by burning pepperwood leaves. To be efficacious it must be done by lucky person. *Kc.*—Inft's father was taught by his (f's) m's br to stop rain by song. *SN.*—Called *maamichain*. Sometimes related to, or same as, singing shaman. Sang to stop or cause rain. Must be a person born when raining hard. In rain making he sprinkled and blew water through tube of kelp in any and all directions. Any sea food likely to bring rain. *IC.*—Weather shaman talked out-of-doors by himself. *SS.*—Ashes thrown in air stopped rain. *Me.*—Sang to make weather good. *Ma.*—Weather shaman put feathers of a "mountain bird" on a cross, then sang in "sweat house" to produce rain. *Ci.*—In winter some specialist sang for rain or to stop rain; or sang for acorns so as to have a bountiful crop the following year. *El.*—At Clear Lake Oaks was rocking stone which when operated caused rain.

892. *Kl.*—Male. *IC.*—Bear shaman could travel from Pt. Arena to Cloverdale in one night. One Cloverdale woman would do this, getting *Haliotis*. *Yo.*—Inft and mother, getting firewood near *Yokaia*, once saw male and female bear shaman going N: smelled angelica from the human bears before they saw them, shamans not walking on all fours but merely stooped over. Later convinced they were bear shamans from Cloverdale, because some people there told them they had seen inft and m gathering wood. *SS.*—Called *kui*. Could overcome real bear. "Power of rapid transit." Alleged to be none at *Hopland*. At *Yorkville*, however, inft's gr f was *kui*. Wearing bearskin, he took inft into hills; gone about 1 hour. When returned held inft over fire outdoors and scorched him: inft has mark on side today. This done when ceremonial dances being held, to make him strong and healthy: inft attributed his 90 years to the treatment. Female as well as male bear shamans; females more dangerous; both killed lone hunters with elkhorn dagger. Inft's gr f killed "lots of people up north." *Ha.*—Meat taboo to bear shaman. *Ci.*—Slain bear shaman cut to pieces at joints to prevent return to life. Cremated. Big whirlwind took ghost away.

893. *Kb.*—Enticed victim by holding out red feathers which looked like meat. *Kl.*—Bone "arrow" as weapon. *Kc.*—See note 823. *Ma.*—Bear-bone armor in front, beneath the bearskin. *Ha.*—Warrior (inft's m's br) attacked C Pomo poacher. After wearing him out, dis-

closed his identity and told poacher not to steal again. Inft's m's ss, who always remained virgin, would bathe, don bearskin, and go out and kill real bear, playing with it, then stabbing it with bone dagger. She killed many bears, also male bear shamans. *Ci.*—Sometimes 2 bear shamans in one skin. Sometimes a woman. A Long v. Patwin woman traveled in this guise to Potter v. for manzanita berries.

894. *Kc.*—Inft claimed to cure rattlesnake bite by song and without aid from sun; not snake charmer. *SN.*—Called ko'obaanta. Special shaman. *Ha.*—To rattlesnake or bear encountered the following was addressed: "Grandfather, I am not going to bother you. Let me go by safely."

895. *SN.*—Sang and charmed snakes. Threw away shell beads and asked snake spirit to be good. *Yo.*—Charmed snakes collected and danced with. "Swallowed," then allowed to emerge from dancer's mouth. *SS.*—Certain persons controlled snakes by songs; even rattlesnake. *Ci.*—Snake charmer carried down feathers and clamshell beads into hills. Seeing snake, he sang to it. Finally it came into his hand where down and beads were. Then he took it to assembly house to display.

897. *Kl.*—A singing (outfit) shaman, Mrs. Lucy Cooper's m's f, could sometimes cure rattlesnake bite. He used white feathers and shell beads, sang over patient, asked sun for help; no sucking. *SN.*—No way to cure rattlesnake bite. *SS.*—By singing. If rattlesnake struck at one's shadow dizziness ensued. *El.*—Sucking shaman treated snakebite, sucking out blood and poison.

898. *SN.*—Sun revived "half-killed" snake.

900. *Ha.*—Sucking shamans sometimes foretold events through dreams. *El.*—Only modern Maru dreamers can foretell future; old-time shamans could not.

901. *Kb.*—See note 1080. *SN.*—A bad dream on eve of journey or hunting trip caused dreamer to abandon trip. *SS.*—See note 917. Sucking shaman might dream of bad event; such dream an omen.

902. *Yo.*—"Mud cake" clouds over sky indicated someone had died.

903. *SN.*—See note 832. Hawk might cause baby's death by flying over it or killing a bird close by. Reason: hawk a predatory bird. *ic.*—Male child put between arms of slain bear to make him brave.

904. *Kl.*—Screech owl, shadodi, was "dangerous." Crow calling around one was death omen; same in regard to turkey vulture. Chicken hawk flying and calling over a village or camp warned of approaching enemy. *BW.*—Concow Maidu of Round V. reservation believed owl calling at house presaged misfortune; told it to go away. *Kc.*—Flicker calling in winter presaged storm; in summer, hot weather. *ic.*—Screech owl calling at house ominous of death or other misfortune. *Yo.*—One evening while inft picking fruit for whites at Sebastopol, screech owl called over camp. In day or so inft had word of gr f's death at Ukiah. *SS.*—Tobacco burned to drive away ominous screech owl. Death was penalty for killing screech owl. In 1933 Joe Pinole shot 2 and died fortnight after. No harm in shooting large species of owls. Obsidian points, shell beads, down feathers thrown into pond or stream as offering to screech owl, or for good luck, or as offering to Yakame'e (Our Father, a modern concept). *Mu.*—Owl calling at house presaged either good or bad luck; had to wait to find out. *Ha.*—Screech owl calling over house presaged sickness; over war party defeat. Jay screeched warning of enemy approach. *El.*—Tobacco was burned in fire when owl called over house. Both screech owl and horned owl evil.

905. *Kb.*—Stuffed jay, flicker, crow, woodpecker, etc. (called matutsi), put in dwelling house as protector. One bird for entire family. Believed to warn family by making a sound, or to frighten away anything bad. *Kc.*—Burrowing owl (cha'dodo) used for this purpose. Interference with this household "god" or with living owl would cause illness. Term matutsi also applied to ghost ceremony leader and acrobat, to clever shaman, and to anything used by shaman in curing. Inft equated matutsi to E Pomo yomta.

906. *BW.*—Albino bull snake lucky for man to see, unlucky for woman. Salamander (water dog) with forked tail lucky. *El.*—Gambler wrapped bull snake around arm for good luck.

907. *Kb.*—Albino bull snake, salamander, mouse, turtle, or deer gave good luck in hunt-

ing, etc. Even dream of white deer lucky. *Yo.*—Some albino animals lucky, but sight of some caused blindness. White lamprey and white hummingbird caused deafness (shwabako). *SS.*—See note 871. *Ha.*—Albino dove gave good luck; albino deer bad luck (death in family). *El.*—Some lucky, some unlucky.

SOULS AND GHOSTS

908. *SS.*—To ocean via Tomales bay, then across ocean on "string" to land of dead. *Mu.*—Via Tomales bay.

909. *Ma.*—Coyote said soul went to sky. Souls' roads are tails of comets and meteors. *Ko.*—Skyland called klinhuat.

914. *Yo.*—In mts. far E at sunrise place.

915. *Ci.*—Soul remains in vicinity after death. Manifested by singing or by light seen on mountains.

917. *Ic.*—Fog whirlwind near ground, but not dust whirlwind, was ghost. Person who saw became ill and had to be sung over by shaman. *SS.*—Whirlwind an omen of evil; bigger the whirlwind more serious the evil; sometimes presaged war. *Mu.*—Whirlwind at funeral pyre indicated departure of ghost. No ghost in other whirlwinds. *Ci.*—Whirlwind of funeral ashes was ghost departing. Dust whirlwind seen later was ghost visiting vicinity.

918. *Kl.*—With Malu Religion came concept that Christ in whirlwind.

920. *Ha.*—Threw shell-bead money at whirlwind and asked it to take disease away. Virgin man might pick up beads and keep.

921. *Kl.*—Snakes feared; inft's wife did not want to talk about. *BW.*—Whirlwind striking might "poison" one, i.e., make him ill. *Kc.*—Bull snake in whirlwind; bad luck if touched person. *SN.*—Bull snake. When whirlwind came, one held arm out and said: "Give me good luck." Also, when actual bull snake seen it was asked to bestow good luck. *Yo.*—Afraid of whirlwind; stooped, closed mouth lest dust enter. Before struck by one, person asked it to stay away.

922. *Kl.*—Ghost called cha'duwel. When ghost left body at death it never returned. *Kc.*—Guya, ghost or "devil." *SN.*—Ghost of good person not seen or heard. Ghost called cha'akala (person dead). *Yo.*—Ghost called guya. *SS.*—Ghost or soul, guya. Sight of one caused illness. Inft saw ghost of old woman pounding acorns, about 2 A.M. He fainted, regaining consciousness 2 hours later. He was treated by singing shaman who used pepperwood leaves. *Ha.*—Ghost called xahluigak; equated to soul. Ghost appeared as black dim thing at night. *Ci.*—Ghost appearing like living person sometimes seen walking. *Ko.*—Ghost called tinamfo or tsinaufo.—Whatever these "ghosts" are, they are the spirits impersonated in the ghost initiation of the Kuku cult. Cf. no. 969.

923. *BW.*—Ghosts or spirits of dead called guya. See note 879. *Ha.*—Faint voice.

924. *Kl.*—Soul stayed in grave 2 days, then wanted to return to house. Wild pigeon somehow prevented return. *Kc.*—Duwel, ghost or soul. *Ma.*—"Soul" not differentiated from "ghost." On his deathbed, inft's f told inft to come to grave four nights after his death to hear what he had to say. Inft went, but heard nothing.

MYTHOLOGY

930. *Ic.*—First Indians made of mud; first white men of straw.

931. *Yo.*—Man made of duck's legs, woman of ribs. Water dog (salamander) won argument with Coyote re form of man's hand. *Mu.*—Condor feathers.

932. *Kl.*—Coyote created world and sun. He told people to help one another. He killed his br-in-l, then cried. *BW.*—Coyote. *Ic.*—Coyote. Made ocean by pulling up tussock grass and letting salt water come out. *SN.*—Mole was creator. He made world and dug up earth to make hills. Coyote was next being to come into existence. He tried to help Mole, but did things wrongly, so Mole stopped him. *SS.*—Coyote. Called Wi-maadumda. *Mu.*—Dowichapche (Coyote Chief). *Ma.*—Coyote was creator. As waters rose flooding world, Coyote spoke from three mts.: St. Helena, Kanaktai, and mt. near Redwood v. (north of Ukiah). *Ha.*—Coyote, creator; Lizard, assistant. Argued about form of human hand; Lizard won

and hand with 5 digits like his. *Ko.*—Coyote. *El.*—Coyote. He argued with Lizard about form of man's hand. Lizard won.

933. *Kc.*—Wolf started to make men; Coyote helped and brought death into world.

934. *Kc.*—Called Madumnada. See note 1078. To alter a song or myth brought punishment from creator.

935. *Ha.*—Rock dam (evidently a natural formation) in creek near Kelseyville made by Coyote in anger, because fish nipped his ankles there. He asked them what was their hurry. Now fish never run there.

937. *SS.*—Birds were "First People." They lived in village and were human in form. When all left village for woods they changed into various animals.

938. *Kb.*—"Dwarf" or "outside person" called *guya*. See notes 516, 879. At ceremony or at treatment of sick, pole with beaded string and feathers pendent from top was erected in village and left for about week to make "outside people" stay away. Pole called *madu-hai* (shaman pole); much smaller than *ma'a-hai* (food pole). *Kl.*—Monkey-like dwarfs called *guya*, 2 or 3 ft. in stature; seen in hollow trees and swinging in branches in woods. Feared. *Kc.*—"Outside people" called in general *goke'*. Included are: (1) *shinereko*, no-head people, dreaming about whom caused illness; (2) *k'chacha*, lightning people, who lived in this world but were seen only during lightning flashes. *SN.*—Dwarfs (*situkawi*, wrinkled baby), who were friends of the deer, lived in woods. They were propitiated by deer hunter. *Mu.*—Besides water monster described in note 939 there were (1) *a'akomotke* (water snake's mother), in form of huge silver-colored snake; inft once saw in hollow tree while visiting traps; went home, told mother, fainted; shaman *Ventura* sang over him. (2) *makmak*, monster like rooster, with bare red head; if sticklike feather of monster found when hunting, hunter will have good luck. *Ma.*—See note 953 re cloud people. *Ha.*—*Kayakui*, headless people; *kutyami*, naked babies in hollow trees.

939. *Kl.*—Called *mat'ko'*. In water, mud, or swamp. Sight might cause death. Lucy had bad leg she "got from water." Monster pricked one like needle; then swelling began. No sure cure. White, red, and black varieties of monster. *SS.*—Menstruating woman avoided swamps lest see water monster in form of snake and become ill. Sucking shaman extracted small snake. Then singing (fetish) shaman brought another and completed cure. *Mu.*—Called *tonokulle*; like duck, but with deer's feet. Shaman sang to cure people who had seen. *Ma.*—Water "panther," *akayamhot*, seized spear of man who attempted to take salmon before his wife had completed her menstrual period. *Ha.*—If menstruating woman fetched water, might see "water woman"; would sicken if saw this monster, who had black dress and long black hair which floated up through the water. *Ci.*—Called *durigha*. *Ko.*—Water monster (*oubutsilim*) gave birth to 3 children in spring. These went into lake. There, on rocky point in lake, she sang and told them she was going away. They remained. They have eyes like the morning star. If seen they cause heart failure and fainting, which some shamans could cure by singing.

940. *Yo.*—Four beads thrown as offering to water monster by menstruating woman if near spring or stream. *SS.*—See note 890. *Mu.*—Clamshell beads thrown in water.

941. *Kc.*—Milky Way called *maasis*, viz., brown skin on acorn kernels. *SS.*—Milky Way, *pôt* (fog ?), feared. One might see ghost there and faint or die. *Mu.*—*Hamukso*. *Ci.*—*Bashatasho*. *Ko.*—*Tsehaikuikui*. *El.*—Called "smoke."

943. *Kb.*—Grizzly bear's road.

RITUAL, VARIOUS

944. *Kb.*—Spat on hands at new moon, rubbed arms and face, saying: "I've never been sick; I'll always be well," etc. *Kl.*—Old people addressed moon, saying: "Sickness go away." *Kc.*—Parents prayed to new moon for children's health. *Io.*—Addressing spanked child: "You will be good-natured, happy, healthy, and grow fast." Waning moon "dying"; new born "reborn." *Yo.*—Prayer for child, see note 952. For selves, old people prayed for health and rubbed arms, legs, body. *SS.*—Old people talked to screech owl at new moon. *Mu.*—Parents asked for long life for their children. *Ma.*—New moon addressed: "Good moon. No bad

luck." No other observance. *Ha.*—After running (note 947), adult lifted baby 4 times toward moon, holding it and making a sucking or clucking sound; then prayed to moon for long, healthful life for infant. *Ci.*—Adults prayed for health for children, good luck for selves. *El.*—As parents threw children in air, they said: "Grow quickly. Don't get sick."

946. *SS.*—Rubbed arms.

947. *Kl.*—Children ran around house for health. *Kc.*—Children ran 4 times to right around house. *SN.*—Children ran 4 times around house; to grow fast and be healthy. *Yo.*—Children ran 4 times to right around house. *Ha.*—At first new moon after birth, healthy person ran around house 8 times 4 times to right, 4 to left) with baby. Inft had done this several times for other people's babies. Larger children ran 4 times around house in either direction. *Ci.*—Children directed to run around house 4 times in one direction, then 4 times in reverse direction.

949. *Kl.*—No rain prediction from position of tips of crescent. *Kc.*—Vertical meant "scatters the clouds"; horizontal presaged hot month. *Io.*—Vertical new moon presaged wet month, horizontal dry. *Yo.*—Vertical new moon presaged rain; horizontal dry weather. *SS.*—Vertical or tilted position presaged rain; "water spilling out"; horizontal position presaged fair weather. *Ha.*—New moon with horns up held water; hence, no rain coming; vertical or slanting position presaged rain. *El.*—Vertical position presaged poor acorn crop, horizontal plentiful crop.—Are these old Pomo or Caucasian beliefs?

950. *El.*—Any number of times.

952. *Kc.*—Father or mother struck child gently on back 4 times. *SN.*—Struck 4 times on back. *Io.*—Four blows with palm of hand. *Yo.*—After child ran, taken in parent's lap and struck 4 times. Parent prayed to moon at each blow, asking for health for child. *SS.*—Growing boys "spanked" 4 times on buttocks at each new moon. *Me.*—Children patted on back at each new moon, except one (probably in January) which considered bad. *Mu.*—Children slapped on back at new moon. *Ha.*—Children struck on back 4 times by parents.

953. *Kb.*—Prayed to Coyote. *Kc.*—See notes 944, 967, 1055, 1078. *SN.*—See note 895. If anyone saw bull snake or rattlesnake, he asked it for luck or help. No snake of any kind killed. *Io.*—Prayed to Sky Father, Uyuyakamaeye, morning and evening. (Father, meme.) When thunder (bakela) sounded, people asked it to stop. *Yo.*—See notes 228, 871, 952. *SS.*—See note 675. *Ma.*—To whirlwind with ghost within, supplicant said: "Do not do that." To thunder, supplicant said: "Do not fall." This was a request for the people on the clouds not to fall. A man once saw three or four little people come out of clouds. *Ha.*—See notes 534, 701, 894, 944. Chief prayed to directional gods for aid in guiding his people; shaman for aid in curing. *Ci.*—See note 564. Prayed morning and evening to Marumda. *El.*—Adults prayed at night for health; men did so after bedtime smoke. No deity addressed.

954. *Kl.*—For good luck, to stop thunder (Kalimitautau does not like smell of it). *Kc.*—Angelica, pepperwood leaves, and old hide things burned to drive away illness. Angelica chewed and rubbed on body for health. *SN.*—See notes 771, 774. *Ha.*—In deer hunting. *El.*—See note 566.

955. *Kb.*—Burned angelica in fire if frightened by noise of unknown origin.

956. *Kb.*—Eclipse caused by another world in sky obscuring sun. *Kl.*—Old people shouted. *SN.*—Sun eclipse (bitayadakonin) feared. *Ci.*—Cause: sun ate too much clover. People shouted, clapped hands to make sun come to life again.

957. *Mu.*—Eclipse called "sun fall down." *Ma.*—Eclipse caused by Crow shooting sun. Crow people restored it. Another cause: moon marrying sun.

958. *Io.*—People danced to make bear stop eating sun. *El.*—Red streaks from eclipsed sun said to be blood.

960. *Io.*—Sacred number, 8.

963. *Io.*—Ordinary men did not take eagle feathers; afraid. *SS.*—See note 904. *Mu.*—Down feathers never put in fire. *NE.*—Buried with corpse of man; never burned.

964. *Kc.*—Singing shaman put feather wands in ground in front of patient's house for 4 days, to keep more sickness from entering house. Sucking shaman "prescribed" this procedure for singing shaman (! modern ?). *Ha.*—Gambler might set up near his opponents a

hidden feather wand, with his blood on it in 4 places. Same thing done by man who wished sick person to die. In case shaman's efforts unavailing, he might tell family to search behind house and see if wand there. Wand invoked "spirit" help.

967. *Kc.*—Two known to inft were places where Coyote buried 2 children. One on hill near Potter v., other on trail to Lake co. Traveler rested, whipped legs with twigs, and prayed that fatigue be taken from him. Apparently prayed to Coyote or other deity (inft pointed skyward but could name no specific god). *Ha.*—Shell-bead money as offerings at trail rest places. Subsequent traveler, although making own offerings, might appropriate earlier offerings without harm to himself. *El.*—On ridge tops at resting places. Sticks as offerings. Wished for luck.

GHOST SOCIETY

968. *Kc.*—Leader of ghost society called *matutsi*. There might be several at one time; they were ones who understood best, could eat fire, etc. Acrobat also *matutsi* (see note 489). *Ma.*—No payment of bead money required at Ghost society performances.

969. Cf. nos. 922–924. *Kb.*—Called *djaduwel* (ghost). Wore basket on head; brush screen over face, painted with white clay and charcoal paint. Came from and returned to wooded hills, in summer. Old man with cocoon rattle sat in day or evening on assembly-house top to summon them by song. On arrival "ghosts" jumped in smoke hole. Swung bull-roarer in assembly house. Leader called *chakale* (chief), but was not village chief. *Kc.*—In spring when flowers blooming. *SN.*—Called *cha'atawel*; were "ghosts" and clowns. Leader called *cha'atawel chandin* (ghost talker). *lc.*—Called *kuya-ke* (clown dance). Shouted 4 times before coming in from woods. *Yo.*—Ghost impersonators who tossed boys always came in spring when flowers blooming. *SS.*—Called *guya*. *Ma.*—Called *mabusta* (ghost) or *honis*, which equated to E Pomo term *xahluigak*. *Ha.*—"Ghosts" invited into assembly house by fire tender, who gave long drawn-out cry from top of house. "Ghosts" showered with shell beads as they entered assembly house. Some jumped into fire. *Ci.*—Might bring child to impersonate recently deceased child. Also other dead impersonated. Spectators threw bead money to performers. *Ko.*—Ghost impersonator called *tsinamfo* (dead person). Came from woods, entered dance house. Wore brush on head. *El.*—Called *shinamfo*. Painted black; brush screen over face. Entered assembly house through doorway.

971. *SN.*—Bull-roarer swung after dancing. *Ci.*—Called *xahluigak xe*. Held in brush-dance house in summer.

972. *Kc.*—Flaming pitch in basket on head. *Ko.*—Foliage veils.

973. *Ko.*—Black and white.

974. *Kb.*—Boys, held by wrists and ankles, swung over fire; to punish bad boys. *BW.*—See note 1037. *SN.*—Boys tossed over fire for health. *Ha.*—Also done to sick person (male or female) as cure. Thrown 4 times. See notes 1031, 1032. *Ko.*—See Lake Miwok note 974 for procedure.

975. *Kc.*—Novices called *kashu* (nothing). Inft saw only 2 initiations, in both of which he was a novice: at Pomo, at Danoxa. He was residing at Shanel, his mother's home, at time. He was confined 1 month each time, but only at night, as novices were released each morning. This was in spring when flowers bloomed. Each night ghost dancers came. Boys from many places initiated; they learned dances by watching. Three or 4 years intervened between these 2 initiations in which inft was novice. Each boy tossed 4 times on first night; boys lay on bellies around fire. On subsequent nights sat up and watched performers. After 4 nights novices tried dance themselves every night. Calpella Pete, born at Chomchadila (modern Calpella) where chief named Calpella, told inft he had seen 2 initiations in special ghost houses (no. 489) besides the 2 mentioned above: one was at Kacha when Charlie was infant, one at Chomchadila before Charlie's birth. *Ma.*—*Honis ko'o* was initiation of boys in dance (assembly) house. Thrown from one to another by *honis* performers, who came from woods after whirling of bull-roarer. Women thought bull-roarer was voice of spirit. *Honis* performers also "stabbed" initiate by a trick. Youth was about 20 years old before initiated into ghost society. *Ko.*—Boys in dance house kept covered with deerskins while ghost im-

personators in house, except while being tossed. Tossing of boys after "ghosts" had sweated themselves. After being tossed, boys became "ghosts." Impersonators left by side door of assembly house, as they had entered. Different individuals from guksu impersonators. *El.*—"Mean" boys tossed.

976. *Kc.*—Women in ghost-society dance house only on occasion of seance in which dead f, br, or h was represented by man who resembled him and who dressed not like "ghost" but as deceased dressed in life. Impersonator lay on ground and said nothing. Chief did talking and fire tender managed affair, telling relatives when to stop crying. This done 2 or 3 years after death and for 1 day (or night). Several dead might be represented at 1 time. Children not allowed to witness. Relatives paid impersonator with shell beads. Women thought it was dead returned. No meal sprinkled. Inft saw at Pomo and Danoxa, where took place during month-long ghost performances. *SN.*—No woman might see. *Yo.*—Women witnessed boy tossing. *SS.*—Also children. *Ci.*—Women might not witness.

978. *SS.*—Inft's wife thrown across fire when girl. *Ha.*—Children covered by blankets until tossed.

979. *BW.*—Inft called "ash devils"; did not know if represented ghosts. *Kc.*—Clowns lay in ashes, ate coals, etc. Inft lay in ashes, but never learned to eat coals. Clowns wore no feathers, but carried Great Blue Heron head wands. *Yo.*—Ash ghosts different from "ghosts" who tossed boys. Ashes from cremation place painted on them in horizontal stripes. Ash-ghost performance in which came from graveyard called djak alau djaldjan, "dead men coming home." Women stayed at home and cried during this performance. *Ma.*—Honis performers were white like clowns. *El.*—Called mutomuto. Came with chinamfo (no. 969). Women not allowed to see.

981. *Kc.*—See note 968. *Yo.*—Yet another kind of guya (ghost) "ate" coals in ghost dance (guya xe), in assembly house. Women witnessed. Impersonator who "ate" coals said to have chewed stems of shalam plant (looks like sunflower, seeds used for pinole); and to have mud in mouth. Leader guya was one who "ate" coals.

983. *Kc.*—See note 489.

984. *Ha.*—In spring.

KUKSU SOCIETY

986. *Kl.*—Name "Kuksu" not known. *Kc.*—Big-head costume and all-over cloak. *SN.*—Guksu, name of group of persons; different from ghost impersonators. No women might see them. Came at night. No connection of Guksu with sun or moon. *lc.*—Guksu came from woods. Eagle, chicken hawk, etc., feathers for Guksu headdress. (Modern) Big-head costume came from Lake co. *Yo.*—Guksu or shnabate (big head) seen only once by inft. Ran around assembly (dance) house 4 times before entering. Women forced to remain outside; might not witness proceedings within. *SS.*—Had bone whistle, no wooden one. All males could "do" Kuksu. Women could witness. Kuksu had curing powers; touched patient with headdress feathers; children not allowed to see this performance. Kuksu dancer called yomta. (Yomta not head of all dancers or of any cult society.) *Mu.*—See note 82 re headdress, note 546 re whistle. Sam Kalalu, inft's m's br, was Guksu dancer. *Ma.*—Guksu: all black; big head, long nose; small apron over privates; long staff. *Ko.*—Guksu wore feathered net from neck to waist, feather veil over face; elderwood whistle in mouth. Guksu seen at distance of 100 to 200 yards, by people who sat in brush dance house. Bead money paid him: one man collected from people, tied strings pendent on a stick, and carried out to Guksu. Guksu not identified with moon. *El.*—Called Skoikyo. Carried foot-long elderwood whistle.

987. *Ha.*—Guksu pressed sick person, lying belly down, with his staff. He might be called to treat one person, but all sick were present and treated.

988. *lc.*—Guksu spirit "comes from" east. *Ko.*—From east. *El.*—In myth about Coyote flying with black birds and falling, Skoikyo (Kuksu) came from east.

989. *Yo.*—Black and white horizontal stripes on body; grass skirt; foot-long elderwood whistle.

991. *SN.*—Leader of Guksu impersonators called Ku-shalnis. *Ko.*—Called Shalis. "Comes

from east." Stabbed boys with spear; each with separate spear; done out of doors; women might witness. Shalis always "lame." Seen by inft at Elem. *El.*—Called Salis; had no long nose.

992. *Kb.*—Called Dasan; came when food pole (ma'a-hai) set up. Men went to meet Dasan as he approached from woods. Sometimes he poked them gently with his staff. No women allowed to see him. *Kl.*—Dasan, helper of creator Coyote, represented by "big head" impersonation. *BW.*—Dasan equated to Lake co. Guksu. Dasan mato, "big head." Guksu not Buldam word, yet Guksu performances there; probably introduced or by visiting dancers. *Kc.*—See note 1026. Dasan carried staff like Guksu, but did not prod children with it. *SN.*—Dasan (big head), like Guksu. Females not allowed to witness. *Io.*—Shnawati, "big head," old time dancer, before Maru. *Ha.*—Masan also means "white man."

994. *Kc.*—All-over cloak. *Yo.*—Called shnabate (big head); worn by Guksu. *Mu.*—"Big head" was new type dance introduced with Maru. *Ma.*—"Big head" (shinabake ko'o) was Maru. Inft danced it.

996. *Ha.*—Called buraga-kau. *Ko.*—Called bechehal-xe (bear dance). In this boys were shot in navel with arrow. *El.*—Called sister of Salis (no. 991); impersonation outdoors, not in dance (assembly) house.

999. *Ha.*—No woman might see grizzly-bear impersonations. But see note 893.

1001. *Kb.*—Did not know word "moki." *Kc.*—Inft did not know word "moki." All-over cloak worn by Guksu and Dasan. *Io.*—Worn by Guksu. *Ha.*—Worn by Masan-batin; completely covered with feathers. Inft's m's br who did this impersonation was buried in his cloak. Word "moki" unknown. *El.*—Moki called Smiko and equated to Masan-batin of C Pomo. Smiko had feathers over face but no big-head headdress. Smiko also in Maru cult (confusion: shinamfo are the ghosts—cf. no. 969). Hesi, called Shinamfo-khai, was ancient Elem performance, but now appears in Maru in altered form.

1002. *Io.*—Guksu used elderwood whistle. Wore white feather topknot made of gull feathers; net cloak, covered with feathers from various birds, reached from neck to ground. *Me.*—Turkey-vulture feathers for guksu headdress. *Mu.*—Dances with feathers sometimes performed for curing; inft could not specify which ones. *Ma.*—Guksu impersonator had no "companions" representing other spirits or deities. Guksu ran outside dance house as well as in it. *Ci.*—Guksu was spirit or deity with no special abode; "like the wind." Ceremony held in brush dance house in summer. *Ko.*—In summer, not winter.

1003. *Kl.*—Thunder called Kalimitautau, a personification. *Kc.*—Kalimatata (meaning?) in brush dance house in summer or assembly house in winter. Feathers worn, deer-hoof rattles (see note 540) wielded by several men. No split-stick rattle used. *SS.*—Called idama (Shanel S name for kalimatata). Acrobatic performance by guksu impersonator without feathers, but blackened with charcoal. Climbed dance-house post (cf. nos. 1005, 1014). *Ha.*—Two men swung bull-roarers for kalimatoto xe (thunder dance). *El.*—Called Kulko (Thunder). See note 1060.

1004. *Kb.*—Men bringing in pole ran with it to see who long-winded; some fell down. String with feathers hung from top of pole, which was peeled fir trunk. Climbers put soaproot juice on hands and feet for better grip. See note 992. *BW.*—In summer at Buldam. Pole about 30 ft. high. Climber's feet smeared with soaproot juice for better grip. Inft saw pole climbing at Potter v. also. Pole climb at Willits; rattlesnake at foot of pole. Pole called maa-ha'i (digging stick). *Kc.*—Man climbing food pole was pelted with balls of seed meal; both men and women threw; each person carried basket of meal balls. *SN.*—Pole, about 30 ft. long, carried around; held by several. Climbed for fun. Performed in autumn as first-acorn rite. Ma'ahai pole in care of fire tender when not in use. *Yo.*—Only at installation of new chief or chieftainess; not annual. Man climbed to accompaniment of another man's singing. Soaproot on feet and hands of climber. 4 women danced around pole, each with a stick in hand. *Ha.*—Called ghara-hai. Outdoors. When pole set up in spring chief talked about wanting plenty of acorns and other foods. Seed-meal balls thrown at climber. *Ci.*—Introduced with Maru. *El.*—See note 1064. *NE.*—At time of ceremonial dances with feathers.

1005. Cf. nos. 1003 *SS*, 1014. *Mu.*—Called *dowi kapi hetbi* (coyote rock come up). Women and children not allowed to see. *Ha.*—Called *dam xe* (white feather dance). Impersonator talked to sky spirit. Cf. N Pomo (Kacha) note 1060 *re sky god Dammatu* (White Feathers).

1006. *BW.*—See note 1063. *Kilak* from "north"; cannibal spirit who ate people. *Kc.*—Danced outdoors in summer. *Kilak* was cannibal, human in form, who was killed. *SN.*—A blanket dance; not supernaturally dangerous. Children watched it. *SS.*—*Kilak*, evil, could fly through air, killed people. Before *kilak* dance, shell beads thrown on floor, became fire tender's property. Head *kilak* dancer might give stick to chief, who asked people for anything the *kilak* impersonators wanted. *Mu.*—Down-filled hair net worn. About 20 wooden hair pins thrust through hair net, projecting on both sides of head. Long flicker feather bands hanging from head down the back. "Indians from Tulare co. brought *kilak* dance before informant born." *Ma.*—Shell-bead money paid to witness *kilak* and other dances of *Kuksu* cult. Money went to men who swept dance-house floor. *Ha.*—Performed in assembly house. *Ci.*—Down-filled hair net worn. See note 82. Dance held in brush dance house in summer.

1007. *Kb.*—Flowers in hair. *Kl.*—Women's dance. *SN.*—With flowers in hair. *Io.*—Women, wearing chaplets of flowers; hair hanging loose, over face. One man wearing flowers participated. All carried flowers in hands. Pole with flowers on top was center around which danced. *Yo.*—Dancers with flowers in hair; leaves in hands for waving back and forth; hair falling over faces. No tule used. *SS.*—Hair hung over face; flowers in hair. Apparently similar dance was *chdo*: flowers held in hands, placed in hair, and worn in woven string band around head. Another dance was *mata-ke* in which 2 men and any number of women participated. *Me.*—Some men, but mostly women. Flowers in hair, which hung over face. Another dance mentioned was *tooto*. *Mu.*—Women's dance; wore flowers, no feathers. Danced in assembly house. *Ma.*—Danced by both men and women. *Ha.*—Women knelt, shook heads. Drank no water till after sundown. See note 542.

1008. *Yo.*—Modern introduction.

1009. *Kb.*—Called *hayu ke* (coyote, or dog, dance). *Yo.*—Called *iwi xe*. *SS.*—*Iwi ke* (coyote dance). "Clowns" in this dance disguised with brush over head and body. Feathers on top of head. Audience in dance (assembly) house struck clown with sticks. He scarcely felt it; never hurt. *Ma.*—Called *dowi ko'o*. Another dance was *oho ko'o*, around fire outdoors; also *tura ko'o*. *Ko.*—Called *kliwine-xe*; not a pay dance. *El.*—Called *kliwin xe* (coyote dance). One side face black, one side white. *NE.*—From *Chico Maidu*; not native NE Pomo. Of three dances listed by Kroeber (*Patwin*, p. 365), infrequently recognized *moki* and *gakum-saltu-ka*, but not *diwitil*.

1010. *Yo.*—A common (non-sacred) dance; feathers worn.

1011. *Kb.*—Infrequently had seen live condors (*suul*). *Yo.*—Called *sul xe*. *Ma.*—Condor called *istun*; the only bird "impersonated." Danced both indoors and outdoors. *Ko.*—Dancer wore whole condor skin. Spectators paid bead money to condor dancer through his "manager," or master of ceremonies.

1013. *Kb.*—Made motion with 2 fingers of each hand, imitating deer. Women and men danced. Dance called *meshe ke* ("meat" dance). *Ha.*—Imitated deer hoofs with fingers, deer call with mouth.

1014. *Yo.*—Equated to *kalimatautau* of N Pomo; *idam* means "white feathers"; performance acrobatic; performers wore beads including bead belt. Cf. no. 1005.

1015. *Me.*—*Yukash* performer a clown. *Mu.*—*Yukash* dancer had one side of face red, other side black. See note 1031. *Yukash* was clown.

1016. *Kl.*—Called *sho-ke*. All women danced it. *SS.*—Same costume as *yo-ke*, but faster movements. Men and women performed.

1017. *Kb.*—Other dances: *uya ke*, *tuya ke* (basket drummed), *yomta ke*. *Kc.*—Other dances: *ho ke* (fire dance), sweated and danced without feathers, men only; *oho ke*, in winter in assembly house, as was *yo-ke*. *SS.*—Men and women performed. Turkey-vulture-feather cloak, crow-feather cap, 2 horns on head, double whistle. Another dance: *kakomaa kë*, men in assembly house to accompaniment of 1 woman's singing. *Tuwe* was singing only, in dance

house, by about 7 men in turn. A Maru dance, xachaa-ke, was called lehuya by the Wappo and Lake co. Pomo. (This is the "whiskey dance.") *Ko.*—Umtile, another dance performed in dance house by women and children. All wore feathers. No payment required of spectators.

1018. *Kb.*—Somersault called biloti. Acrobatics belonged with ghost impersonations. *Kc.*—Acrobat (matutsi) in ghost-society performances. See note 489. *Ha.*—In Kuksu cult, not in Ghost cult.

1022. *SS.*—No permanent sitting places; some seemed to have special or customary ones.

1025. *Mu.*—Inft never learned dances because "afraid of feathers" in regalia. *Ma.*—No initiation; just got up and danced. Young people learned to dance by watching older dancers. Women witnessed all Kuksu cult performances, but not Ghost society performances.

1026. *Kc.*—By Dasan (no. 992) on summer night, outdoors, with clamshell fragment; to make healthy and rich, for Dasan was rich man. *SS.*—With flint (obsidian?) flake. 20 or so novices about puberty age marked at a time. Must abstain all lives from eating flicker, quail, rabbit, gray squirrel. They made feather outfits and became Guksu "doctors." These initiates, both male and female, called masan-te. Operation of scarifying called ixnemnem. The initiates constituted a society, "like a club or lodge." *Ha.*—By Guksu.

1027. *SN.*—Guksu impersonators brought boys at night to place outdoors. Ku-shalnis scratched them with stick.

1030. *ic.*—Purpose of scarifying and poking with stick was "to make children dance." *Mu.*—Guksu impersonator pried up each boy and girl, saying "Get up." *Ci.*—Guksu touched children with staff. Also treated person with backache therewith.

1031. *Mu.*—In stabbing and shooting initiations, iron-rust pigment from springs used in some sort of container, so, when novice "wounded," it ran out like blood. 3 feints were made in stabbing; 4th time blow struck. Stabber, who was yukash dancer, called "yi, yi, yi, yi." *Ma.*—No mock stabbing in Kuksu cult; this done only in initiation into Ghost society. *Ha.*—In Ghost, not in Kuksu cult. *Ko.*—See note 991. Boys also stabbed in Ghost ceremony.

1032. *ic.*—Baskets put over abdomens of small children. Then healthy man shot arrow against basket. This done to make children healthy and strong, and to cause them to cease crying.—Cf. no. 871 *SS.*, as "shamanistic" practice. *Ha.*—In ghost, not in Kuksu cult; "stabbing" and "shooting" of novice drew no blood; immediately followed by tossing 4 times. *Ko.*—See note 996.

1033. *El.*—Ghost-society (no. 968) initiates acted as though crazy; picked up and swallowed live coals, etc. "Nowadays" Maru shinamfo act as if crazy, scatter coals, toss bad boys, toss sick person (who lies down by center post to be tossed): this helps cure. This Maru cult came from Patwin of N. Fork Cache cr. Skoikyo also comes in Maru nowadays.

1035. *SS.*—See note 1026.

1036. *Kc.*—"Women took part in assembly (dance) house ceremonies." *SS.*—But uninitiated females must not look at Kuksu.

1037. *BW.*—Inft with 5 other boys shut in assembly house at Buldam for 4 days. Ten or 20 old men with them, who talked to one another about wives and other women. No myths related. Boys listened. Inft about 16 years old. Boys lay together covered with grass. No food to eat. Offered them by old men, but snatched away. No one wore feather ornaments. Hot fire. The boys were lowered in through smoke hole. Men inside seized them by feet and swung them over fire 4 times. *SN.*—Boys' school called chanotuulmiyin ("Tell them the old story").

1038. *Kb.*—Inft confined in assembly (dance) house 4 days. This period usually repeated during summer. Too much rain in winter for school. *Kl.*—Confined in assembly house. Only one "school"; no second confinement. Inft confined about 2 months when 15 years old. No meat or fish eaten while confined. Boys lay quietly, but sometimes went out to get wood. No female, not even boy's mother, might see him. No mark or badge of initiation. *SN.*—For 2 or 3 days.

1039. *Kl.*—Learned creation stories and other myths, and instructed in all sorts of things. Four or 5 instructors. Girls received private instruction at home.

1041. *Kl.*—All boys. Unruly boys "locked up" in assembly house.

1042. *Kb.*—Some boys' noses pierced at puberty.

1044. *Mu.*—Principal dance season. *Ha.*—Commenced in spring, but dances also when someone got sick or something went wrong. *Ko.*—Dancers without water.

1045. *Kb.*—Too much rain in winter for dances.

1046. *Kl.*—At "big time" (ceremonial gathering) people danced part of night and in daytime. Principal meal about noon. *SS.*—Public ceremonies might be privately initiated, but with consent of chief.

1048. *Yo.*—Called *guya*. *Ha.*—Called *gunula* (coyote). Distorted face. Carried cocoon rattle and cane. Collected money from anyone who laughed or smiled. If person did not pay him at once, clown cried, ran as if crippled, and hit center post with hand. He moved his cane as though listening toward his 6 helpers behind drum. They arose. All 7 went to person who declined payment. If he still refused, the helpers tossed him in air. Clown might lay his cocoon rattle in front of someone, who must get up and sing with it. If not, must pay. This done until 4 singers had been found for dances.

1049. *Yo.*—Real Great Blue Heron's head on cane; not merely carving. *Ha.*—With handle carved to represent Great Blue Heron's head.

1050. *SS.*—Woven belt of bright-colored feathers (Mallard drake and California Woodpecker scalps probably). Individual feathers inserted in woven base; whole scalp of feathers not used. For wear at ceremonies. Man made, abstaining from meat and fish until completed, drinking water only after dark. Must not scratch head with fingers. Consumption and death followed taboo breach. *Ci.*—Made of scalps of California Woodpecker. Worn along with necklace called *hebinal* (note 556).

1053. *El.*—In ancient *Kuksu* cult; by both men and women in modern *Maru*.

1055. *Kb.*—North *chuhuya*, w boo, s mihela, e choo, up minau, down yoo. *Kl.*—North *chohula*, s mahila, w bo, e sho, up kalimainau, down mayo. *BW.*—South mihila, n tuhula, w boo, e shoo, down yoo, up uyir. *Kc.*—South yoo, e sho, n tuhula, w boo, down djo, up uyu, in ceremonial order. *SN.*—North *chuhula*, s yo, e sho, w bo, up uyi, down yo. *lc.*—N turak, e cho', s yo, w bo, up uyu, down yo. *Yo.*—South yoo, e shoo, n chula, w boo, up uyu, down yo. *SS.*—North *chulxach*, s yoxach, e shoxach, w boxach, up uyulxach, down yowilxach; *xach* means direction. *Me.*—South *asho*, n *chuhula*, e *wishali*, w mihila, up kali, down *amaio*. *Ma.*—North *chuhula*; e *ashsho*, w mihila or *hachelohaada* (sun go down), s *togo*, up talli, down *ammaio*. *Ha.*—South yoo, e shoo, n *guhula*, w boo, up *gayu*, down *yowal*. *Ci.*—North *kuhula*, s yoo, e shoo, w boo, down *yoal*, up *kaiu*. *Ko.*—North *tsadua*, s *konagona*, e *hamal*, w *ana*, down *toua*, up *hui* or *klinhuat* (from *klin*, sky). *El.*—North *tadawa*; w *hana*; s *kanokana*; e *kamal*; up *kuyii* (lower sky), *mlawa* (higher sky); down, *yowa* or *noyo*.—The sequence N-s-e-w-u-d probably represents the usual white American order of naming. Seven lists depart from this to follow a circuit no doubt native. Five of these *Kb*, *Kc*, *Yo*, *Ha*, *El*, run antisunwise, s-e-n-w, except that the first and last of the 5 begin with n instead of s (cf. 1056 *El*). s-e-n-w is also Barrett's order, as cited in note 1060. Two lists, *lc* and *Ma*, the most southerly, run sunwise: n-e-s-w. Six of the 7 end with u-d (the usual American phrase order), but *Kc* specifies d-u as the ceremonial sequence, after s-e-n-w.

1056. *El.*—No special order for naming; different shamans begin differently.

1060, 1061. *Kc.*—Six cardinal direction deities: s *Dasan* (sun "doctor"); n *Sumatu*; w *Kamatu* (water "doctor"); down *Duwelmatu* ("devil doctor"); up *Dammatu* (white feathers). The term *matu* meant "god," infit stated; no sex distinctions. No color symbolism. Singing shamans in curing prayed to the 6 above-named gods for health. *Yo.*—s, *Guksu*; e, *Shodashaitaumi* (sunrise man); n, *Chulagasichach* (chach, god); w, *Makelachach* (thunder god); zenith, *Kalimal* (sky above). *Ha.*—God of s, *Yoo Matutsi* (South God) or *Guksu*; of e, *Shoo Da* (East Woman); of zenith, *Gayu Matutsi* (Zenith God). *Matutsi* means "god," "possessor of supernatural power." In latter sense it is applied to some shamans and ghost impersonators. *El.*—Male Thunder (*Kulko*) god of n; female, of s.—Cf. Barrett, *Pomo Myths*, PMM-B 15:14, 1933: s *Guksu*; e *Calnis*; n *Suupadax*, whirlwind; w *Xa-matutsi*, water; u *Kali-matutsi*, sky (or thunder?); d *Kai-matutsi*, earth.

1063. *BW.*—"For kilak only." *SS.*—Before ceremonial, pinole thrown in fire as offering to Coyote. *Mu.*—Food offering in fire at end of 4-day ceremony sent to "Coyote Chief." *Ma.*—See note 566. *Ha.*—See note 965. *Ko.*—Four ceremonial circuits to right, 4 to left, before casting seed-meal or tobacco offering into fire. This done for each ceremonial gathering ("big time"), also at times by shaman. No meat or fish eaten during "big time," that is, during 4 days and 4 nights of dancing. After that, chief summoned all to assembly (dance) house and told people to hunt the following day. Next morning hunted, getting deer, rabbits, squirrels, which brought to dance house; feast held. *NE.*—Acorn and seed-meal burned with property of deceased.

1064. *Kc.*—See note 1004. *Yo.*—See note 767. *SS.*—Or in stream. *Ha.*—See note 1004. Meal offerings thrown to north for spirits; done outside dance house between dances. Anyone could do this. Also scattered by chief at close of 4-day ceremonies; he prayed that all would be well with the audience and none get sick. *EL.*—Seed meal thrown only during pole-climbing ceremony.

1065. *Kb.*—Leader in ceremonial matters called kalte (see note 801). *Kc.*—Kuksu society head, yomta; ghost-society heads, matutsi. *SN.*—Term yomta applied to good dancer, man who liked to dance and who "knew about days." Term employed before Maru came. *Yo.*—Term matutsi applied to anyone owning many dance regalia. *EL.*—Elem term was kowi ("doctor"), which was applied to leader or conductor of ceremonial dances. Kowi was also given as equivalent of term matutsi of N Pomo, but only with meaning "doctor," i.e., shaman. Dance leader could not eat meat during 4-day ceremony. He and all dancers drank no water between sunrise and sunset.

1066. *KL.*—"Dance captain" was village chief (chakale). *SN.*—Regular chief conducted ceremonies.

1069. *BW.*—In his dwelling. *Mu.*—In his house.

1072. *Yo.*—Dance feathers tied in tule bundle (not mat) and hung up. Must be well covered if menstruating woman in house. *SS.*—Yomta man (see note 986) kept his feather regalia away from people, especially children, lest harm them. Common dance regalia not taboo. Feather regalia dipped or sprinkled with water at spring. Seed meal eaten at this time, but not sprinkled on feathers. *Ha.*—In donning regalia 3 feints made; donned on 4th movement. *Ci.*—Kept in dwelling. *Ko.*—Dance regalia wrapped in hair net with pepper-wood leaves to keep moths out. Each dancer kept his regalia in his dwelling. *EL.*—In dwelling house; must be guarded against moths and mice, lest dancer die if regalia injured. Nowadays, Maru regalia kept by "priest" in dance house.

1074. *Ha.*—As interlude between dances of Kuksu cult dried skin of California Woodpecker placed on center post. A man talked to bird, which replied. Skin then made to jump, flutter, and call like live woodpecker.

1075. *Kc.*—During ceremonies. Tube of Burrowing Owl (cha'dodo) leg bone. Feared to use basket on account women using. Singers chewed mt.-mahogany leaves and swallowed juice to prevent sore throat.

1076. *Kb.*—Principally by women, but men, women, children all present. *Yo.*—In assembly house in darkness. *Mu.*—Women sang first 4 nights, then men sang next 4 nights. Songs to Coyote Chief (Dowichapche), the creator. *Ha.*—By men only, in assembly house, in darkness. Each man sang alone. For buckeye, manzanita, etc., as well as acorns. *Ko.*—By men in sweat house.

1077. *KL.*—In autumn. *SN.*—First salmon caught partaken of by all villagers.

1078. *KL.*—For clover, manzanita, etc. If omitted people would starve. (A famine one winter before whites came. Sometimes acorn crop failed.) *Kc.*—For new tobacco, which only men smoked, and for other first fruits. Prayed at time to Madumnada to preserve health. *IC.*—Acorns, clover, corms, manzanita, wild strawberries, other berries. Special feast for each. *Yo.*—Chief blew in 6 cardinal directions, "blessed" village, and prayed people would have good luck through year till next first-fruits ceremony. Prayed to "whole world, sun, stars, wind, etc." *SS.*—Dancing, feasting, etc. *Me.*—First-fruits ceremony for wild strawberries in May, 1934. *Mu.*—Smoking in assembly house by men, women, children for first of

new tobacco crop in May. Also smoked for new manzanita, acorn, and other crops. See note 65. *Ma.*—See note 566. *Ko.*—For new wild crops: acorns, corms, buckeye, etc. Everyone smoked: men, women, children; chief supervised ceremony. If anyone ate alone before this it would "be bad." After ceremony anyone could gather and eat. *El.*—Wild tobacco smoked at feast for eating first of corm (Indian potato) crop.

1078a. *SS.*—Shaman pressed each person to give him luck. *Ha.*—Pressing by healthy man or woman.

1079. *Kc.*—For new acorn bread only. A matutsi sang proper song for people in assembly house, so would not become ill. *SN.*—See note 1004.

VARIA

1080. *Kb.*—Rainbow indicated baby born somewhere. *SN.*—To point at rainbow with hand or mouth or any other way might be fatal to pointer. *Yo.*—Eyes would be dimmed if looked at rainbow. Children warned. *SS.*—Lip pointing, also index finger at some things. Index finger not pointed at oak because acorns would not ripen. Closed fist pointed at oak. *El.*—Boil would come on finger tip; all right to point with mouth.

1082. *Ma.*—Sample names: Dusa (fox), Lowa (Span. *lobo*, wolf).

1083. *Ik.*—Dogs not talked to, lest reply and thereby cause death of speaker.

1084. *Ko, El.*—Thought to be modern.

1086. *Ci.*—Underwater swimming contest. Diving head first.

1090. *Kb.*—Intercourse in many ways: on top; from back, side; anal. Last not necessarily at marriage, but because woman liked it. At marriage anal sometimes because woman virgin and normal way hurt too much. Fellatio by both sexes.

1091. *Kb.*—Moss. *Kl.*—Leaves and sticks. For baby in cradle shredded redwood bark and Spanish moss as sanitary measures. *BW.*—Moss. *Kc.*—Moss, leaves. *Ma.*—Grass used. *Ci.*—Wood or stone.

1092. *SS.*—No squatting by either sex. Cross-legged sitting called kusheyich; for women only.

1093. *SS.*—Called sawetkadjoch; for both sexes, as when eating.

1094. *SS.*—Called snoyumdjoch; for both sexes, as when eating. Peculiar to women was sitting with legs over basket hopper when pounding acorns. Peculiar to men: iichum, knees clasped, feet together in front; betak, legs straight out in front. Practiced by both sexes was shakumdichich, legs straight out in front but ankles crossed.

SUPPLEMENTARY NOTES: WINTUN, PATWIN, MIWOK

RP, River Patwin; *HP*, Hill Patwin; *LM*, Lake Miwok; *HW*, Hill Wintun

CLOTHING, HAIR, ADORNMENT, CEREMONIAL DRESS

3. *HW*.—Quail-feathered buckskin cape for women, painted for men.
 4. *LM*.—Rabbit-skin warps horizontal, string wefts vertical.
 20. *LM*.—Breechclout called tapalapu; of buckskin.
 30, 33. *HW*.—Back apron of cottonwood bark. Front of slit buckskin or string.
 34. *RP*.—Did not reach quite to knees.
 36. *RP*.—Head net for dancing only.
 40. *HW*.—Fur cap of civet cat or fisher (?).
 48. *HW*.—Hair laid on block of stone and hacked off with sharp stone flake.
 60. *LM*.—Razor of obsidian flake, not retouched.
 62. *HW*.—See note 1046.
 63. *RP*.—Ears of boys bored at age 5 or 6. *HW*.—Pierced in childhood, not infancy.
 66. *HW*.—Men wore white "stone" nose stick.
 70. *RP*.—Both sexes. *HW*.—Same; probably bone needle used.
 72. *HW*.—Men tattooed on chest, horizontal and vertical.
 79. *LM*.—Called ushe.
 84. *HW*.—Called bishi.—This is probably element 89 worn differently by women.
 89. *LM*.—Called siak.
 90. *LM*.—Called kulenalok.
 94. *HW*.—Hair rolled on 2 sticks which crossed at back of head; used by both men and women.

CRADLES, BURDENS, BASKETRY, CORDAGE

106. *HW*.—Pack strap also of buckskin.
 110. *LM*.—Carrying net called lukke.
 117. *LM*.—Net sack, shimal.
 119. *LM*.—Called tsikil; made by man.
 132. *LM*.—Basket weaving called aieolat, probably twining. Basketry hopper called k'auwi.
 142. *RP*.—Tule-mat folder for feather regalia. Not ascertained if whole tule or only skin, or if twined.
 143. *RP*.—Coiled tule baskets made. *LM*.—Coiling of any kind called tewe.
 145, 147. *LM*.—1-rod coiled baskets for meal, 3-rod for liquids.
 149. *LM*.—Redbud, elep.
 152. *LM*.—Seed beater, temani.
 157. *LM*.—Black root, mulla, for some basketry designs; from grass resembling tule (perhaps *Carex*).
 159. *LM*.—Obsidian scraper.
 166. *LM*.—A string material other than milkweed, called bok. (*Apocynum* ? *Iris* ?)
 170. *RP*.—River-mussel-shell knife to cut off seed heads of certain plants; also for meat and fish.
 175. *LM*.—Grapevine, wiwuwa.
 178. *RP*.—Spindle whorl of Spanish origin.

FISHING AND HUNTING

179. *LM*.—See note 189.
 183. *RP*.—Enclosure, large enough for a man to dive into, built on up-stream side of fish weir. Enclosure had a door set up with a trigger with string attached. Salmon entering touched string, door fell. Fish netted by diver with scoop net described in note 196.
 187. *LM*.—Called hottsa; nondetachable point of bone. Cf. note 460. *HW*.—Point of "flint."

189. *LM.*—Type open top and bottom (Hdbk., pl. 33*c*) called mulupani; used by hand at night. Type in pl. 33*b* called tukni. Long fish trap (pl. 33*a*) called shikili; placed in tules or in opening of fish weir.

196. *RP.*—Scoop net with two straight sticks on either side of opening. Man dived with this and bagged salmon caught in enclosure described in note 183.

201. *RP.*—Charmstones also used as net sinkers.

221. *LM.*—Fish poison plant called shanani; leaves pulverized; may be turkey mullein. Not yet out, June 10, 1934. *HW.*—Called pomtame.

224. *HW.*—For antelope and rabbits.

227. *LM.*—Deer hunter remained away from wife 2 or 3 nights before hunting.

228. *HW.*—Mud smeared on face for luck in hunting, after dream.

230. *LM.*—Called shuki molok (molok means "spirit").

239. *LM.*—Called pini.

240. *RP.*—Funnel form. *LM.*—Converging quail fences with net in funnel apex, called yawwak.

242. *LM.*—Deer snare called lawik.

246. *HW.*—Quail fence in funnel shape, with net beyond apex of funnel.

263. *HW.*—Hole in mountain where deer "live." Deer turn into various shapes when pursued, even human.

265. *RP.*—Deer skinned on ground. *HW.*—Deer skinned lying on ground.

272. *RP.*—Men made buckskin.

275. *HW.*—No dogs before whites came.

FOOD

298. *LM.*—Buckeye poison boiled out in basket, water poured off.

299. *LM.*—Women who ate no deer marrow could sweeten acorn meal quicker.

315. *LM.*—Salt from "Sakell," on Putah creek, about 12 mi. from Middletown and upstream from Knoxville.

322. *LM.*—No angleworms eaten.

329. *RP.*—River mussels cooked by laying on ground and placing live coals over them.

334. *HW.*—For hair.

UTENSILS AND TOOLS

341. *LM.*—Cylindrical pestle called toai.

342. *LM.*—Slab with small depression called tammi.

343. *RP.*—Wood slab used to crack acorns on; stone used as hammer.—This is of course distinct from the mortar to pound in.

345. *LM.*—Called kenni.

347. *LM.*—From roots of plant called lawuni; leaves of plant eaten.

348. *LM.*—Called tukulli; found, not made. *HW.*—Found, not made.

367. *HW.*—Deer tail for sipping manzanita cider; also basket cup.

369. *RP.*—Bundle of sticks as day count for ceremony invitation. *LM.*—For ulum (ghost) ceremony 4 sticks sent with attached feathers.

370. *LM.*—For ceremonies other than ulum (ghost), 4-stick mat without feathers; one stick broken off each day. Intervillage invitations always accepted; visitors brought shell-bead money.

373. *LM.*—Drill of willow, hearth of buckeye.

379. *LM.*—Acorn paddle (ollak) of hardwood; stones lifted out with it.

383. *LM.*—Called humuya.

387. *RP.*—Wormwood arrow straightened with teeth after heating.

390. *HW.*—Powdered blue rock to polish arrows.

393. *RP.*—Baked in fire to harden. Used for ducks and geese.

394. *HP.*—Turtles shell spoon or dish. *LM.*—Of ocean mussel. Number of fingers used when no spoon, indeterminate.

396. *LM.*—Called keuli; about 8 in. long.
 402. *LM.*—Called tulenak; grass-covered small "house" for storing acorns; had grass on bottom.
 405. *RP.*—Kroeber (Patwin, p. 275) says roofed with tules. *HW.*—On ground.
 408. *LM.*—About 2 ft. long; stone for drill point called tsili, sharpened on flat rock. Clam-shell bead boring on hide; magnesite cylinder held with feet.
 409. *RP.*—Deer bone awl for drilling *Haliotis* shell.
 416. *LM.*—Called yuki lupu (ax of stone). Stone obtained only near Lower lake, somewhat resembled obsidian, but not that. Hafted in handle with grapevine withes.
 418. *LM.*—Acorn cracking stone, slender, long, was called pinnani.
 422. *RP.*—Wooden maul to drive long elkhorn wedge.
 423. *LM.*—Obsidian worked on deerskin pad in palm of hand.
 425. *HW.*—Arrow points made by specialist, who, while working, was fed by wife of man for whom points were being made.
 426. *RP.*—Only.
 428. *RP.*—Rope for tree climbing.
 429. *RP.*—Crook indicated, because of shape of constellation Ursa major, which is called by term meaning "stick for knocking off acorns" (Kroeber, Patwin, p. 285). *HP.*—Same.

WEAPONS

433. *RP.*—Local bow of ash. Imported bows from north.
 434. *HW.*—Salmon skin glue for fastening sinew on bow back.
 435. *LM.*—All bows imported from north; none made
 446. *LM.*—Sinew (latik) used in making arrow. Foreshaft (tatsipa) of "any wood." Elder, willow, etc., for arrows. *HW.*—1-piece arrow for small game; war arrow with stone point.
 447. *RP.*—Arrow feathering radial, but double (not triple).
 455. *LM.*—Quiver (tulim) of wildcat, bear cub, etc. *HW.*—Of wildcat, of otter.
 459. *LM.*—Sling (lauki) for duck hunting; creek pebbles for sling shot. *HW.*—Sling for geese.
 460. *LM.*—Spear for fighting called hottsi; cf. note 187. *HW.*—Thrust not hurled.

DANCE, DWELLING, AND SWEAT HOUSES

478. *LM.*—Center post of assembly (dance) house called hoibutia; ditto sweat-house center post. Assembly house called laki-lamma or lamma. *HW.*—Called Lut.
 482. *LM.*—Two or 3 chiefs fed people while they built lamma, which took 15 to 30 days.
 484. *LM.*—Smoke hole in front of center post, in center line toward door; not used as door.
 485. *LM.*—One doorway only.
 486. *LM.*—Faced east.
 491. *LM.*—Round, with smoke hole; sometimes 2, 4 doors. Called kolle-wi (grass house). If large had a center post.
 492. *LM.*—Of tall grass (kolle), Spanish *sacate*.
 494. *RP.*—Conical hut with tule and earth covering; tule mat on floor.
 496. *LM.*—Bed (weya) slightly dug out; earth pillow. Grass, tule mat, rabbitskin blanket for bedding.
 498. *LM.*—Shatti, small fish, dried on frame in sun; called holli when dried. Drying frame, called tsutsul, consisted of horizontal pole supported by 2 uprights.
 503. *RP.*—Steam sweat house modern.
 505. *RP.*—Sweating daily, morning and evening. *LM.*—Men sweated daily in morning. See note 478.
 511. *LM.*—Called wilai; deerskin on stick; "to tease friends."
 515. *LM.*—Women sweated only for rheumatism, etc. Boys could enter sweat house even before puberty (dollash) age. No song with use.

NAVIGATION

524. *LM.*—Called nu. Lake Miwok had none because no body of water in which to use. (This confirms Gifford's and Kroeber's correction of Barrett, viz., Lake Miwok did not own to Clear lake or Cache cr.)

CEREMONIAL STONES

534. *EP.*—Found, not made; feared; used for net sinkers. *LM.*—Called shukin towai. When found, charmstone must be sung over before picked up. Not brought into house because bad for children. Charmstones believed to move about noiselessly at will. See note 864. *HW.*—Good-luck stone from deer's head or stomach. Artifact charmstones found, not made; kept for good luck.

536a. *LM.*—Not used by shaman, but used as good-luck fetish by deer hunter.

537. *LM.*—Two sterility rocks; low one female, high one male. Man and wife used either according as wished to have girl or boy baby.

MUSICAL INSTRUMENTS

538. *LM.*—Called shok'osho.

539. *LM.*—Called ts'akaka (cf. tsokoko, quail). Made of elderwood. *HW.*—Its use antedates Bola cult.

540. *LM.*—Used in 4-day dance before deer hunt.

541. *LM.*—Called dillen; stamped on; in assembly house.

542. *EP.*—Basket drummed on winter nights in sweat house to accompany men's singing for acorns. Musical rasp on cradle edge; rubbed stick over grapevine wrapping of edge to make baby sleep.

543. *LM.*—Called ladijadi; swung by yomta on top of assembly house; if broke, flew far off, this bad luck, and fasted 4 days to avert evil. Used in choimalati dance, and once in we'ashi dance, which was final dance or march around lamma (assembly house).

545. *LM.*—Rabbit or raccoon bone.

546. *HP.*—Cane whistle. *LM.*—If dancers had no bone whistles, used elder instead. *HW.*—Cane whistle.

550. *LM.*—Called lulla; of elderwood. *HW.*—Of elder.

MONEY AND BEADS

554. *LM.*—Called hlohlok. No value. Children wore.

555. *LM.*—Square *Olivella* beads unknown.

556. *HW.*—Clam shells from south.

557. *EP.*—Beads counted by fours, eights, and ten eights (80). 80 worth 50 cents. *LM.*—Counted by fours; 4 beads called "1 four." 20 fours worth \$1.00. Large thick bead worth 10 cents.

558. *EP.*—Magnesite beads imported, not made. Small ones, \$1.00 each; large, \$4.00. *LM.*—Magnesite, awahwiya. Cylinders made by LM who claimed ownership of quarry in little hill on N side of Cache cr. (*sic*; N side certainly Koi Pomo, not LM). SE Pomo paid clamshell beads for privilege of quarrying.

559. *LM.*—Called lupukai. Made of clamshell by Lake Miwok.

PIPES AND TOBACCO

560. *LM.*—Of ash wood, not stone; like Hdbk., pl. 30a, b, f.

563. *LM.*—Of fawn skin, nawit'uku. Tobacco not planted.

564. *HW.*—Smoking at night; pipe passed around.

566. *LM.*—Burned as offering if "bad dreaming" indicated bad luck, such as impending death; Lilewaliukel prayed to in such event.

GAMES

571. *LM.*—Called tulila; hoop wrapped with grapevine at joint. *HW.*—By children.
 579. *LM.*—Foot race without ball. Double ball now, from "Spaniards."
 583. *LM.*—Called tekkel.
 586. *LM.*—Oak bolls, not galls.
 592. *RP.*—Bone with encircling band is "woman wearing belt." *LM.*—Wrapped bone called man.
 595. *LM.*—Game called ko'shi.
 603. *LM.*—Called yoto; ancient game. In guessing, remainder is called: to (4), ship (3), pon (2), kene (1).—The last is *LM.*; the others are *Maidu*: tsöye, sapu, pene; or *Yokuts* (ho)-t(o)-ponoi, shopin, ponoi!
 605. *RP.*—Of elderwood; 12 counters; woman's game. *HP.*—Of elderwood. *LM.*—Called mulli. Round sides marked, flat sides unmarked. *HW.*—Called tellahe. Woman's game. Split elder sticks 1 ft. long. In playing, sticks shoved forward. 3 flat sides up and 3 round sides up counted 1 point. All six alike counted 2. Six stone counters for tally.
 608. *LM.*—Six marked sides up counted 3, six unmarked 2, half and half 1.
 614. *LM.*—Called shopodok.
 615. *LM.*—Called k'op'odo.
 616. *LM.*—Called shutsa'ela, "string play." Sometimes included toes.

CALENDAR, ASTRONOMY, COUNTING

617. *LM.*—Year, walli; world nio. Remembered only 2 month names: shallabe (perhaps May), wo'koyi (perhaps February, "shortest month").
 618. *RP.*—Twelve sticks in bundle in sweat house. One thrown away at end of each month.
 623. *LM.*—Oak (Spanish *roble*), alwa, with all kinds of acorns.
 628. *LM.*—1 ke'nne, 2 o'tta, 3 telé'ka, 4 oto'tta, 5 kede'kku, 6 pa'ttsatak, 7 shemlä'wi', 8 o'ttaya, 9 ke'nnehellak, 10 ugü'gwatsi, 11 kenne-wa'llik, 12 o'tta-wallik, etc., 20 ottatum-ai, 30 telé'ka tumai.

MARRIAGE

641. *HW.*—Cousins more distant than second could marry.
 645. *LM.*—Bridegroom's family gave shell-bead money for bride.
 646. *LM.*—Bride's family reciprocated with optional gift of baskets worth around \$100.
 653. *HW.*—Matrilocal for 2 or 3 months, then to husband's village.
 655. *HW.*—In polygynous marriages, cowives in different villages.
 663. *HW.*—M-in-l, sn-in-l taboo for life.
 655. *LM.*—Forced marriage in case of seduction and pregnancy before marriage.

BIRTH

667. *LM.*—Small grass hut.
 674. *LM.*—Filliped toward north from top of bent-over white-oak sapling. Not looked at as flew through air. Father did this if baby male, mother if female.
 676. *HW.*—Or put in spring.
 677. *HW.*—Special drink and acorn soup.
 678. *LM.*—Hot stones in bottom, covered with grass.
 680. *RP.*—First twin born was killed. *HW.*—Twins disliked.
 682. *LM.*—Both confined in special childbirth hut until child's umbilical cord fell off.
 687. *HW.*—No meat for new mother.
 698. *LM.*—Child named for person on either side of family. *HW.*—Named for relatives 4 or 5 years dead.
 700. *LM.*—"Grandmother, give me your bad teeth. Here are my good ones."

PUBERTY

706. *LM.*—Girl at first menses called aye; boy at puberty, dollash; no rites for him.
708. *HW.*—Veiled with piece of hide when she went out of house. Face painted red or black.
713. *LM.*—Father or mother of girl sang snake song to prevent her blood paralyzing anyone.
714. *HW.*—Could eat salt, but not meat; fed on acorn gruel for month of confinement. Feast at end.
715. *HW.*—Danced for in daytime.
720. *RP.*—One month.

DEATH

729. *LM.*—Some dead cremated, others buried, according to sickness.
734. *LM.*—Had heard of eating flesh of corpse, but not by *LM.*
735. *LM.*—After cremation ashes not buried.
737. *HW.*—Body doubled and wrapped with rope like a ball. Flat stone on top of round heap of earth above grave. Dead buried close together—"on top one another."
738. *LM.*—Clamshell beads, baskets, etc., thrown in fire. *HW.*—Property buried with dead, so dead will not return for it (inft Freeman). A day or so after burial, house and clothes burned, seed and acorn meal sprinkled on fire. Mourners threw offerings into fire (inft Jordan).
739. *LM.*—Undertaker ate no meat or fish for 4 days after funeral. Then he put offering of meat and acorns in fire.
743. *HW.*—Undertaker steamed self, washed with acorn soup; otherwise got sick.
745. *LM.*—For 4 days after funeral bereaved men refrained from sweating.
748. *RP.*—Men, as well as women, cut hair in mourning. *LM.*—Long hair of men cut off with obsidian when mourning.
749. *HW.*—Women only.
753. *LM.*—Widow put mixture of white clay and pitch on hair, not on face.
757. *LM.*—Cease wearing any sort of necklace at death in family.

CHIEFS AND LAND OWNERSHIP

791. *RP.*—Chief wealthy and good-hearted. Selected for wealth and willingness to help people. Might or might not select his own son as successor.
792. *HW.*—Called sektu.
799. *LM.*—New chief given beads and shut in assembly house for 8 days. Bathed daily. At end of confinement he feasted people.
800. *LM.*—Wife of chief called mayin. No title for chief's ss or dtr. Chief, hoipu.
801. *LM.*—Assistant chief, welle, helped chief in haranguing villagers, which done inside assembly house.
803. *LM.*—Tuleyome village held principal chief for all *LM.* Wok'oi was his personal name.
804. *LM.*—Called koimero.
805. *LM.*—When guests assembled from other villages.
807. *HW.*—Called chewe.
811. *HW.*—Eaglets killed, not kept captive. Hair net with eagle down burned when eaglets taken from nest.
817. *HP.*—Private ownership of seed tracts. *HW.*—Family ownership of seed tracts, but not oaks.

WAR

822. *LM.*—Also poisoned (bewitched), instead of killing by violence, to avenge poisoned relative.

823. *LM.*—In time of inft's f's f, LM of Oleyome fought Mishewal (Wappo) of Lokonoma over possession of ettse-grass seed place ca. 1 mi w of present Middletown, chasing them over hill to sw. Lokonoma, on former knoll eroded away by creek, is Lakayomi in Miwok.

830. *HW.*—One man in war party smokes, goes into trance, predicts outcome. May advise return lest all be killed.

843. *LM.*—Chiefs did not like war; when people started war without chief's permission, he had to pay his own people shell-bead money to make them stop fighting.

853. *HW.*—Inft Freeman said young girls captured in war were kept until adult; then either married or returned to kinsfolk; inft Jordan said only latter.

SHAMANS

857. *HW.*—Shaman novice bathes in spring. Spirit helper may be there. Novice bleeds from mouth and lies down when he sees spirit helper.

864. *LM.*—Sucking shaman extracted feathers, stones, small charmstones, etc., from patient: charmstone extracted if patient ill from having passed near one.

869. *LM.*—Shaman, yomta; sucking shaman, tubak yomta; nonsucking, singing, koya yomta. No "fire-eating" shamans.

871. *LM.*—In singing shaman's fetish sack were tobacco, obsidian, etc. He smoked before singing. Used cocoon rattle. Inft's f's f taught him his yomta songs, but inft was afraid to take his gr f's sack, so cures only by singing.

877. *HW.*—Cutting also to let "bad" blood out.

878. *RP.*—In curing, shaman rubs wormwood on hands, sings during night, but does not suck. *LM.*—Face sucked for toothache. Pepperwood (shaula) leaf poultice put against tooth.

888. *LM.*—See note 939.

890. *HW.*—"Poison" of lizards, etc., filliped from finger by poisoner, put in victim's food, or victims touched with it. When Bole came, many people died from "poison" put in sticks which were handled.

892. *LM.*—Called molok-kule. Not among LM, but in Napa v.

898. *HW.*—Rattlesnake shaman looks at sun to get help in curing snakebite. "White," phlegmlike substance comes from patient's mouth. Payment large; goods piled in front of shaman before curing. If no cure, goods returned to dead person's relatives.

904. *LM.*—Owl to house, or coyote howling near person, presaged bad luck for family. Shaman ordered patient sick from above-named cause to give feast.

SOULS AND GHOSTS

909. *HW.*—Climbs pole in south; goes to Milky Way. Only souls of good people go to sky; bad people become ghosts.

913. *RP.*—Ghosts to Marysville buttes. When person climbed the buttes he threw a bead in each of four cardinal directions, shouting at same time; done to appease ghosts and prevent illness. Inft once went with white men, was ashamed to make offerings, and in consequence was ill after returning home.

917. *LM.*—Some whirlwinds contained ghosts. *HW.*—Ghost in roaring wind (inft Freeman), in whirlwind (Jordan).

923. *LM.*—Shaman (yomta) sometimes conjured ghost in assembly house for bereaved relatives, who did not pay. Audience, however, brought shell-bead money, which paid to chief.

924. *LM.*—Called molok, not to be confused with mōlok, condor.

MYTHOLOGY

929. *LM.*—Milk-weed (witum) sticks.

932. *RP.*—Coyote. *LM.*—Coyote. Wekwek, grandson of Coyote, was chief (hoipu) in world beginning. He told Coyote he wanted someone to talk with, so Coyote created man. Other animals were also Coyote's grandchildren.

939. *LM.*—Called wau; in bird or snake form. If properly addressed when seen, sickness could be avoided; otherwise bad luck to the one who saw it and services of shaman required. Shaman sang, smoked, ate no meat, drank no water. Sometimes image of monster made in curing. *HW.*—3 types of water monsters: (1) Shaman's guardian spirit in spring. (2) Man diving for fish in deep pool, crushed by monster "fish." (3) White man fishing, saw mermaid, went crazy. According to inft Jordan one water monster had encircling or transverse stripes; was called pompudit.

941. *LM.*—Called utel'muk, "spirit road"; in middle is kilak, at n end is chaima, at s alolli, three powerful spirits. The 2 end ones are like kilak.—Pleiades are mutsuyuk; big evening star, uyuhayat; Orion's three, yotopugel, middle star being fire tender feeding wood. See note 1006.

RITUAL, VARIOUS

944. *LM.*—Adults addressed new moon, wishing for themselves: "Good luck, health." Same said to thunder.

949. *EP.*—Vertical new moon presages dry month; horizontal ("horns" up), wet month.

950-951. *LM.*—Babies held up toward first new moon in winter, small children made to jump toward it, to make grow fast. Observance called shubutshubut.

953. *EP.*—Pray for health, luck, etc., but no one addressed. *LM.*—See note 944.

When first thunder in year is heard, they called to him asking for deer, acorns, and what needed.

958. *HW.*—Arrows discharged toward sun.

963. *EP.*—Coiled tule basket container for down feathers, which from goose (not eagle). *HW.*—Eagle down burned after burying corpse; also tobacco and meal burned.

GHOST SOCIETY

968. *LM.*—Called ulum. Performed only at Tuleyome village. Inft saw at SE Pomo village of Koi. Wilbak, Koi chief and inft's m's half br, wanted him initiated, but his gr m objected.

972. *LM.*—Foliage veils.

973. *LM.*—Black and white.

974. *LM.*—Eight or 10 halaukosa (men who shout) threw boys over fire, and struck them with hands. This made them initiates (yompui). Boys received no new names. Boys' faces screened so could not see what was done. Each boy had been brought in by a male relative. Each boy had about \$30 worth of shell beads, which afterwards turned over to his father or mother.

KUKSU SOCIETY

1003. *LM.*—Called talewai ilaki. Inft's f's f saw at Tuleyome. Climbed pole "as big as tree." Most could not do it, but inft's f's gr m succeeded. Pole called lumma, not for the dead. No pole mourning-ceremony for dead (as described by Loeb, UC-PAAE, 33:120) until after whites came; mourning described by Bill Smith, Coast Miwok half-breed, from Hukuyumi on coast; perhaps on coast rather than among LM.

1006. *LM.*—In kilak dance, flicker-feather headband worn pendently back over head. Not a pay dance. Spirit impersonated was human in form, a celestial being represented by a star or constellation (note 941). Another dance, called sota, was similar to kilak. Another was "partner" of sota; known by Coast Miwok name of sonuero. Yet another was chaima, a spirit, see no. 941. Still other dances for which Pomo equivalents were not learned were: (1) o'o, in which 10 women and 4 to 10 men participated; men and some women had whistles. (2) Hilmu. (3) Wayiko, with cocoon rattle. (4) Shuya, characterized by inft as "borracho" (drunken, crazy); persons in this caught any snake, sang till out of mind, and not knowing where went, traveled about at night, returned to dance house; done in spring, and flowers worn; for 2 years after first participation ate no meat or fish; for subsequent performances meat and fish taboo for only four days. Fire tender on duty all night during shuya. (5) Yukash (1015), described as "loco," performed by "clown"; wore feather cape (ushe), painted

white and black, carried deer-bone whistle; acted up to collect clamshell bead money from audience if they laughed. (6) Molok, performed by Coast Miwok, not LM. See note 543 for 2 additional dance names.

1011. *EP*.—Condor representation in hesi.

1015. *LM*.—See note 1006 for yukash.

1016. *LM*.—Called shukin laki. Feather cape or back apron worn, also flicker-feather headband. At performance at Oleyome, inft's m's br laid dance feathers at door and called them across dance house to him. Each performer carried long "cane" with feathers on end. Audience must pay if laughed.

1023. *LM*.—Visitors paid at dances, home people did not. N side of assembly house floor for visitors, who slept there; S side for home people.

1024. *LM*.—Dancers rested at rear near drum. Chief's station in front of drum toward center post.

1025. *EP*.—Kuksu initiates cannot eat meat for three days after dancing. Small game entirely taboo.

1046. *HW*.—"Shake head" dance (chele seno). Men and women danced, wearing flicker-feather and other ornaments. Out-of-doors the round dance (baslastiono) was performed by women only. Flower wreaths worn; danced in spring; men sang songs about food and wanting the acorns to grow. Children witnessed both dances. Neither in Kuksu cult, which lacking. Saltu was given as name of a dance derived from the Patwin. Spectators paid.

1055. *EP*.—Six cardinal directions in ceremonies; nadir is "home." Four cardinal directions in ordinary affairs. *LM*.—South olomwalli, E ela, N kanin, W tamal, up lile, down weya. This is the prevalent Pomo order and circuit.

1056. *LM*.—Down last. No directional color symbolism.

1063. *LM*.—See note 739. Such food offerings called shulesipo, for good luck for living people; not for dead. *HW*.—At funeral only.

1065. *EP*.—Secret-society head kept regalia. Periodic offerings to regalia.

1067. *HW*.—Orator was master of ceremonies for "shake head" dance.

1076. *EP*.—In sweat house; accompanied by drumming basket.

1078. *LM*.—On one day in April everyone (women, children included) smoked wild tobacco.—Cf. Pomo references to tobacco first fruits.

1079. *EP*.—First acorns of season eaten by males in sweat house, by females in dwelling.

VARIA

1080. *LM*.—Lest finger swell; might point with mouth only.

PART II: ANALYSIS

By A. L. KROEBER

BECAUSE THIS STUDY is the first attempt in a program of collecting data from natives by means of a trait question list for comparative purposes, several analyses seem in order.

First is the problem of the reliability of the data obtained. This can be tested by inquiry into the degree of internal consistency, especially with regard to comparison of one list with another.

Next is the method of statistical analysis. Not that statistics must be applied to reach interpretations; but with 15,000 factual items that are comparable, statistical treatment is indicated. The question is, What treatment is best? Several methods have therefore been tried out in order to ascertain how much and what difference of result they lead to.

Finally there are the cultural conclusions themselves. These comprise a classification of the sixteen Pomo and four neighboring local cultures investigated; and certain findings with respect to cultural originality and change.

RELIABILITY

Reliability of the 20 lists is presumably not equal: informants will vary in degree of knowledge, precision, coöperation, suggestibility. Their respective reliability may be objectively tested in two ways: by the nature and appearance of each list as such; and, after a classification has been made, by the degree of fit of each list to what is expectable on the basis of geographical proximity, linguistic relation, and, above all, concordance with the totality of the results obtained. The latter test is best deferred until after the results of the statistical analysis have been discussed in the next section. Examination of the lists themselves will be made now.

There is an obvious presumption that any list which differs markedly in its gross sum of pluses and minuses from most of the others, in so small an area as this, may differ by reason of some incident or feature of its collecting rather than because the local culture which it purports to represent is actually very distinctive. In the gross, there are two ways in which such "collection divergence" may be expected to manifest itself: in some unusual preponderance of pluses and minuses, and in the total size of the list.

Table 1 shows in its first column of figures that six of the groups dealt with account for 119 of the unique plus answers obtained, the other fourteen for only 56; or an average of 20 per list among the six as against 4 among the rest. Outstanding is the Habenapo list, with 44 such alleged occurrences of elements which no other informant in the area admitted; next follow Kabledile and Kacha with 23 and 22. A cursory examination suggests certain causes for the unique pluses (table 2).

"Vague" means that the element questioned about was so phrased that one informant out of every so many might be expected to misunderstand it. "For-

TABLE 1
UNIQUE ELEMENTS

	Unique		Shared with one other only		Total excess	
	+	-*	+	-	+	-
Habenapo.....	44	1	39	3	244	
Kabedile.....	23	1	25	4	224	
Kacha.....	22		18	3	195	
Yokaia.....	11	1	20	3	27	
Elem.....	10	5	21	4		89
Shanel S.....	9	2	15	3	101	
Icheche.....	4	9	5	8	19	
NE Pomo.....	4	9	7	7		202
Total 8.....	127	28	150	35	800	291
12 others.....	48	23	54	44	608	59
Total.....	175	51	204	79	1408	350

* With occurrence of at least 9 pluses.

eign" means that the element evidently does not occur in or near the Pomo area, yet was included in the questions put because it occurred in Klimek's original list for California as a whole and seemed worth inquiring into, but unfortunately stimulated an occasional suggestible informant into admitting the existence of something that he had never before heard of. "Extravagant" or exaggerated speaks for itself: practically all answers of this type come from the Habenapo informant. "Northern element" refers to a small group of traits reported only by one or the other of the informants on the northern border. They may be, in part, genuine traits characteristic of the Yuki and Athabascans to the north and sporadically filtered over to some of the most northerly Pomo. "Others" consists of unique plus answers given for reasons that are not apparent: some are no doubt correct; others, of the type

TABLE 2
CAUSES OF UNIQUE ELEMENTS

	Vague	Foreign	Extrav.	N. elem. ?	Others
Habenapo.....	3	17	16	..	8
Kabedile.....	8	1	..	6	8
Kacha.....	4	3	..	3	12
Yokaia.....	5	..	..	..	6
Elem.....	4	..	..	..	4
Shanel S.....	4	2	..	..	5
14 others.....	14	9	1	3	29
Total.....	42	32	17	12	72

of mistake which is bound to be made every so often when 15,000 questions are asked.

In general, the first three columns of table 2 represent almost certain errors, 91 in all, attributable either to the way the list was constructed or to the way interrogation was conducted in the field. The 84 unique pluses in the two last columns are doubtless partly erroneous and partly authentic. Assuming

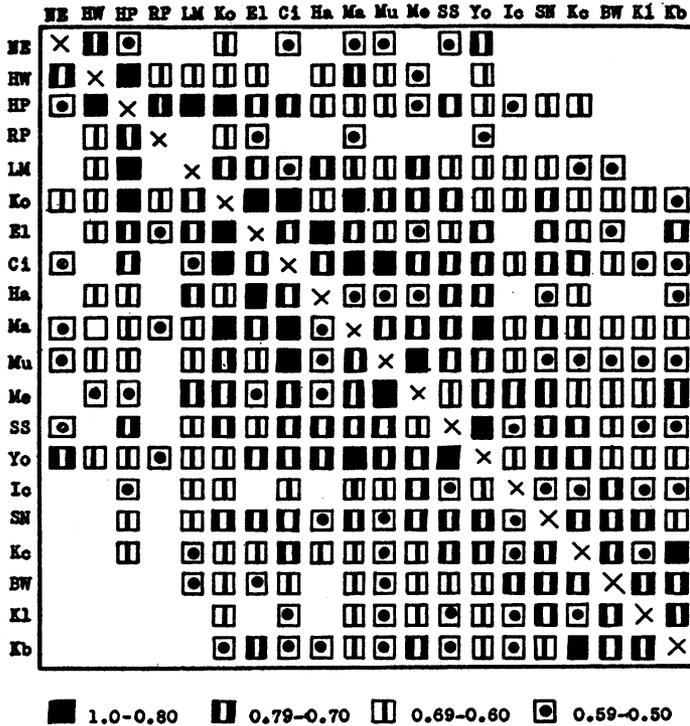


Fig. 1. Q₂ higher positive coefficients, 675 elements.

half or more of them to be authentic, we can conclude that the average tribelet or "village" in this part of California possessed 2 or 3 out of perhaps 700 traits in its cultural inventory which might also have occurred among its neighbors but did not so occur; in other words, were exclusive specializations.

The second column of table 1 gives a reverse picture for unique denials, which evidently come, for the most part, from resistive or negativistic informants. Icheche and the NE Pomo contribute 18 out of 51 of these, or 9 each as against an average of 2 among all other groups.

The third and fourth columns reënforce the first and second, respectively, by listing the number of instances of pluses (or minuses) recorded among two groups only. With the occurrence of a second plus, the chances of error are of course decreased as against a unique plus, and the probability of a true occurrence correspondingly increased. Nevertheless, the same six groups as before are again well in the lead, with an average of 23 participations in

double pluses, as against fewer than 5 for the other fourteen groups; and once more Habenapo far overtops all others. In column four, however, Icheche and NE Pomo again stand out with 7 to 8 double pluses as against an average elsewhere of 3 to 4.

It is clear that traits of responsiveness which produce unique answers tend to carry their influence over into shared exceptions, and even into the list as a whole. This last is evidenced in columns five and six, showing total excess of plus over minus answers, or the reverse. The same Habenapo, Kabledile, and Kacha informants not only again head the positive series, but account for 663

TABLE 3
EXCESS OF POSITIVE ELEMENTS

	Per cent excess + over -	N=600		Per cent excess + over -	N=600
Habenapo (914 answers).....	27	30	Koi (600).....	7	9
Kabledile (870).....	26	30	Kalekau (773).....	6	4
Kacha (923).....	21	26	Hill Wintun (556).....	4	8
Meteni (398).....	20	11	Hill Patwin (404).....	3	(30)
Shigom (765).....	14	6	Yokaia (975).....	3	12
Shanel S (771).....	13	20	Icheche (807).....	2	2
Shanel N (792).....	13	22	Buldam-Willits (825)....	- 3	+ 2
Mukanno (571).....	13	16	River Patwin (492).....	- 8	(+17)
Makahmo (654).....	12	19	Elem (995).....	- 9	0
Lake Miwok (545).....	8	9	NE Pomo (644).....	-31	-24

out of a total 1408 excess pluses among sixteen groups. Similarly, the NE Pomo informant's excess of 202 negative answers contrasts with 148 accumulated by three other groups on the negative side.

It is clear that certain informants tend to answer "yes" to the leading questions through which list information tends largely to be obtained, and others to answer "no" with equal consistency, to a far greater degree than the cultures themselves may be assumed to vary in actual richness. Informants of the first class are evidently suggestible, the latter counter-suggestible—these words being used in a broad sense to cover a presumable variety of related psychological attitudes. Between them lie a greater number of informants who are more accurate, stable, and conscientious. Table 3 seriates the twenty informants. Since the lists obtained vary in total fullness, the longest being two and one-half times as long as the shortest, it has seemed best to express the plus or minus excess of each in percentages.

It is at once apparent that Habenapo, Kabledile, and Kacha stand at one end of the series, and NE Pomo at the other. The last group is geographically peripheral, and lives outside the normal Pomo Coast range area in the Sacramento valley, so that its excess of negative answers might be construed as being a result of a less proper applicability of the list to it. But the adjacent Wintun and Hill Patwin show a positive excess of 4 and 3 per cent, and were

obtained at the same early period of the field study; so that the NE Pomo 31 per cent negative excess must be attributed to a mental attitude of the one informant available. Correspondingly for the heavy plus excesses. Habenapo, 27, contrasts with Shigom, 14, Koi, 7, Elem, -9; all being situated on the same lake. Similarly, there are five Northern Pomo lists: Kabledile, 26, Kacha, 21, Shanel N, 13, Kalekau, 6, Buldam, -3. The high figure of 20 per cent for

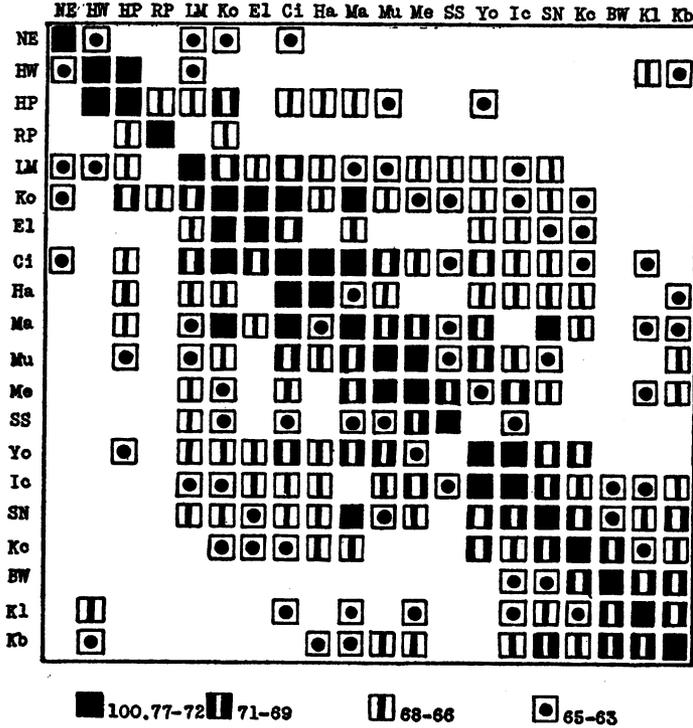


Fig. 2. "W" higher coefficients, 600 elements.

Meteni I am inclined to ascribe to the brevity of its total: it is the shortest list obtained. Quite curious is Elem. It ranks high in unique and near-unique pluses, but has the second-highest total excess of minuses. This was evidently an inconsistent and unstable or random informant. The 8 per cent negative excess of the River Patwin is probably somewhat sounder. These people bordered directly on the Maidu and have always been reckoned as rather different culturally from the Pomo.

In general, it may be inferred that with the list used, and as it was used with informants, an excess of from 5 to 15 per cent of positive over negative answers indicates reasonably sound and reliable information; and that if the excess rises above 20 or sinks below 0, a definite strain of unreliability is indicated, especially if it occurs among the Pomo, with whom the work was principally concerned.

The last column of table 3 gives the corresponding percentage excess of + over - when the total list is reduced from 1094 to 600 entries, as was done by Kroeber for his computations (below, p. 231). The 494 elements eliminated incline in general toward minus answers. The excess of pluses therefore tends to rise in this column as compared with the preceding one. However, the ranking is much the same. Only Meteni and Shigom drop, from 20 to 11, and 14 to 6. The two Patwin figures in this column are not comparable, because of the inclusion of starred elements from Kroeber's published Patwin monograph before the count was made among the 600 selected elements; and, as always when standard ethnographic literature is used, more pluses than minuses were introduced in the process.

This column adds little to the preceding one, but is inserted as a check.

The question next arises whether the total size of list filled has any significance. This is answered by table 4, which is seriated. It is quite evident that

TABLE 4
SIZE OF LISTS OBTAINED

		Total answers	Excess of plus			Total answers	Excess of plus
SE	Elem	995	-89	E	Shigom	765	109
C	Yokaia	975	27	S	Makahmo	654	80
N	Kacha	923	195	NE	NE Pomo (Salt)	644	-202
E	Habenapo	914	244	SE	Koi	600	44
N	Kabedile	870	224	S	Mukanno	571	73
N(Co)	Buldam-Willits	825	-21	C	Wintun (Nomlaki)	556	22
CCo	Icheche	807	19	Lake	Miwok	545	45
N	Shanel N	792	102	River	Patwin (Grimes)	492	-38
N	Kalekau(Sherwood)	773	43	Hill	Patwin (Lodoga)	404	12
C	Shanel S (Hopland)	771	101	SW	Meteni (Ft. Ross)	398	78

long lists tend to be correlated with poor reliability, as ascertained by the criteria already examined, and medium and short lists with high reliability. The turning point, in the present field study, came at about 800 answers. Seven lists are longer than this. Of these, Yokaia and Buldam are fair, according to previous findings. The other five are definitely inferior in reliability. Below 800, all 13 lists are at least fair, and most of them good, with the sole exception of NE Pomo. Here evidently an unwilling or incompetent informant was pushed into tending to react negativistically.¹⁰

The reason for this greater unreliability of the long lists of answers is not wholly clear. It may be attributable to an altered attitude in the collector, resulting in increased pressure upon informants in the desire to accumulate information. It may be the consequence of variation in informants' temperaments—some being less sober, exact, and conscientious, or more garrulous and suggestible. It is clear that the best informant is he who, whether feeling under pressure or not, knows when to say that he does not know.

It cannot be asserted that 800 answers to 1094 questions, or a similar pro-

¹⁰ Whether his answers were also random remains to be ascertained by analysis. Inspection of his list suggests that his 221 positive answers are fairly reliable. But a full half of his 423 negative ones ought undoubtedly be thrown out, if only we knew which to throw out.

portion of about 70 per cent, is the best that is compatible with reliability in general. Everything depends first of all on how competently the list is constructed beforehand, or modified according to experience encountered in the field; and after that on how informants are judged and handled. But it is clear that too strong a striving after quantity of data can easily result in loss of their quality. How real this danger is, the present experimental survey of the Pomo has shown, and we hope to profit by it hereafter. Fortunately the data

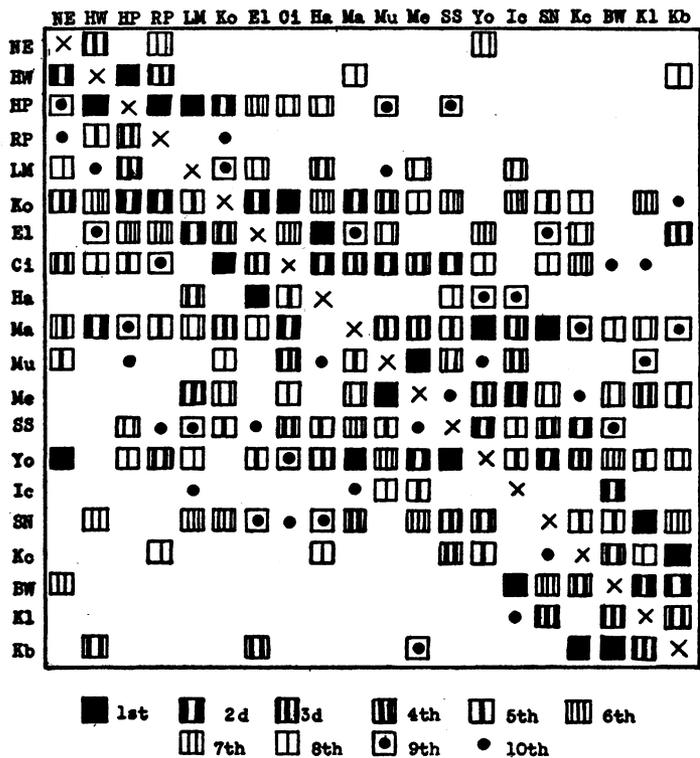


Fig. 3. Q_2 coefficients ranked vertically; 675 elements.

are of a kind which allows fairly intensive objective checking of their reliability, and their discounting or omission where indicated.

Still other checks on reliability will be considered in the second following section, after discussion of the method of analysis employed.

METHOD OF ANALYSIS

The Czekanowski-Klimek method calculates three things: the interrelations of populational groups, tribes, or territorial entities; the interrelations, or degree of "adhesion," of elements, leading to definition of cultural strata or complexes; and third, the interrelation of the two preceding, which defines the participation of the tribes in the several strata, or, put differently, the composition of each tribal culture in terms of the various strata or complexes of which it is built up.

On the present material only the first of these sets of interrelations has been statistically determined. The area is small; and four-fifths of the data refer to minute tribelets—villages, they are ordinarily called—of the single Pomo nation. Further, the four non-Pomo lists are randomly selected, so far as they relate to the Sacramento valley culture, and are too few to do it justice. They are included mainly in order that the Pomo material may not be left entirely unattached.

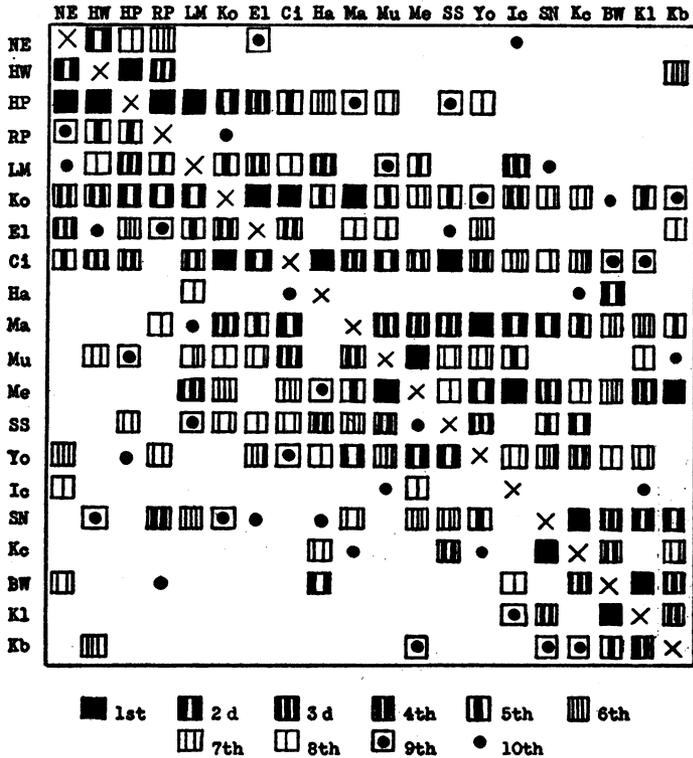


Fig. 4. "W" coefficients ranked vertically; 1094 elements.

In view of the known high uniformity of Pomo culture, and the smallness of its geographic extent, the determination of the various Californian cultural blocks or strata entering into it is obviously impossible until many more comparable data shall have been obtained from the remainder of California. All that can satisfactorily be attempted now is a classification of sixteen small local Pomo groups, in terms of the Pomo as a whole and a few of their eastern neighbors. This means that the positive conclusions reached can have only a narrow provincial significance. Their real import is as a sample or test of a method which can be corrected or carried further.

We have made three separate analyses of the entire material, and several other partial ones, in order to determine the best analytical method.

1. Klimek applied the Yule formula Q_2^{11} to all elements which were repre-

¹¹ $(ad - bc)/(ad + bc)$, where $a = ++$, $b = +-$, $c = -+$, $d = --$.

sented by entries in the majority of columns of the lists. In other words, he omitted all elements represented by only one to ten entries for the twenty groups. This left him 675 elements of the 1094 to deal with.

2. Gifford applied another formula, which we will call W, to all the data. W starts with the same four cells as Q_{22} , but is simply $(a + d)/(a + d + b + c)$; that is, the sum of positive and negative agreements shown by two groups, di-

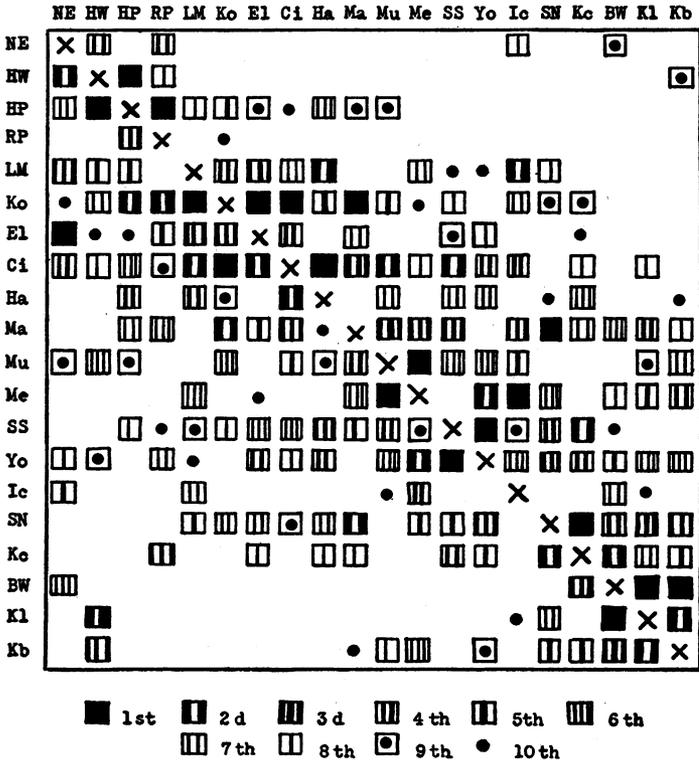


Fig. 5. "W" coefficients ranked vertically; 600 elements.

vided by the sum of agreements and disagreements; in other words, by the total number of elements on which there are data for both groups.

3. Kroeber applied the same formula W to a selected list of 600 elements. The basis of selection was subjective. The 494 elements omitted were partly those with scant or scattering representation in the lists and partly those the authenticity of which seemed inferior, either because of indefiniteness of concept in the element or possible ambiguity of understanding by informants, or because the random occurrence of pluses and minuses suggested that informants had been unable to understand or answer with certainty. Of the 600 elements used, 468 had also been used by Klimek after his purely statistical elimination.¹²

¹² For Kroeber's calculations only, the dotted pluses and minuses (x, -) in the River and Hill Patwin lists were counted in. These are data taken from Kroeber's and Loeb's previous publications, to fill blanks left in Gifford's and Klimek's field-collected list.

In short, on the one hand, Klimek and Kroeber used materials selected on different bases but consisting in large part of the same residuum, whereas Gifford used unselected material. On the other hand, Gifford and Kroeber used the same formula, whereas Klimek's was distinct.

Klimek's Q_2 formula possesses the practical advantage that its coefficients have the greater spread: in this instance from .90 to .22. Gifford's ranged only from .82 to .60; Kroeber's from .77 to .44. For diagrammatic representation, however, this narrowness of spread matters little. A narrower range of coefficients for each symbol yields closely similar results. Compare figures 1 and 2, the first being Klimek's (Q_2 , $n = 675$), the second Kroeber's (W , $n = 600$).

Another set of diagrams is based on ordinal ranking, irrespective of absolute value of coefficients: figures 3, 4, and 5. In these diagrams, with the rank seriation entered vertically, the horizontals do not show rank, but show, instead, how often a rank of a certain order is attained by each group in its interrelations with all other groups. Such a diagram has therefore to be read two ways, whereas figures 1 and 2 (pp. 225 and 227) read alike vertically and horizontally. The two sets of diagrams nevertheless are similar, because rank is after all expressed in both and because tribes are arranged in the same order.²³

The formulas Q_2 and W are not the only ones that can be used. W can be modified by omitting the agreements from the divisor: $W_1 = (a + d)/(b + c)$, instead of $W = (a + d)/(b + c + a + d)$. In short, W_1 is simply agreements divided by disagreements, instead of agreements divided by total. This does not materially change the order of coefficients obtained, but much increases their spread as well as their values.

It also seems worth while to compare the Q_2 , W , and W_1 results with results obtained without reference to common absences, as has been necessary with most previous material, in which absences are usually not specifically recorded. I have therefore resurrected the Driver-Kroeber formula T , which, in terms of the 4-cell element arrangement underlying Q_2 , W , and W_1 , is $a/(a + b + c)$; that is, it is the percentage which common elements form of the total number of elements present among the two tribes being compared. I have also tried the variant T_1 , namely $a/(b + c)$, which, like W_1 in relation to W , gives higher values and more spread without very seriously changing the rank order.

To save the reader's time as well as my own, I have computed W_1 , T , and T_1 only for the relationships of one group, the C Pomo Shanel S; and T_1 also for SE Pomo Koi and the River Patwin. The results, compared with the Q_2 and W results, are given in tables 5 and 6.

²³ The most effective diagram is one first constructed by Klimek, like figure 1 but with the tribes in the order: RP, HW, HP, LM, Ha, El, Ko, Ci, Ma, Mu, Me, Yo, SS, SN, Kl, Kc, Kb, BW, Ic, NE. It was effective because it put at the ends of the series the refractory RP, Ic, and NE; and near the ends of the Pomo block certain more or less troublesome SE, E, and N Pomo tribelets, namely, Ha, El, Kl, Kc, BW. All these, except perhaps the first and Kc, are troublesome because their lists contain inferior material. The result is that the good diagrammatic fit was obtained at the expense of good ethnic and geographic fit. Thus, one diagrammatic group consisted of an E and a SE Pomo tribelet (Ha, El); the next, of another SE and E pair (Ko, Ci); similarly, the 5 N Pomo tribelets were geographically helterskelter; and Ic was torn away from its C Pomo kinsmen to be put between N and NE Pomo. This arrangement was indicated by the coefficients; but it was precisely its violations of speech and geography which threw added suspicion upon certain lists.

The RP put in first place make a more coherent diagram than in fourth, but were finally put in the fourth position (figs. 1-5) because of their geography and speech. The difficulty with them is not because their data are inferior, but because their culture stands apart from all the others dealt with.

It is easily clear from tables 5 and 6 that the calculations which take no account of common absences (T, T_1) stand apart from the others, the average or consensus of which is given in the column "Probable True Rank." This order may be accepted as probably near the truth because it accords well with geographical distance and speech connections. The T and T_1 rankings violate distance and speech definitely more. They also give a higher rank to obviously and notoriously poor lists, like Habenapo, which, just in proportion as they contain randomly untrue material, ought not to rank high. For both these reasons, then, the

TABLE 5
SHANEL SOUTH RANKINGS

Form.: n:	Q ₂ 675	W 1094	W 600	W ₁ 600	T 600	T ₁ 600	Prob. true rank
Rank							
1	Yo 82	Ci 77	Yo 74	Yo 280	Yo 63	Yo 172	Yo
2	Ci 79	Yo 76	Ci 71	Ci 246	Kc 61	Kc 157	Ci
3	Kc 76	Ma 75	Ma 71	Ma 240	Ha 60	Ha 148	{ Ma Kc
4	SN 76	Kc 75	Kc 70	Kc 234	SN 59	SN 144	
5	Ma 75	Ko 75	SN 69	SN 226	Ma 59	Ma 144	SN
6	Ko 74	SN 74	Mu 69	Mu 222	Ci 58	Ci 139	Ko
7	Mu 71	Mu 74	Ha 68	Ha 211	Mu 57	Mu 135	Mu
8	HP 70	Me 74	Ko 67	Ko 200	HP 56	HP 124	(Ha)
9	Ha 70	HP 73	El 66	El 196	El 55	Me 120	{ Me HP
10	Me 69	El 72	LM 66	LM 195	Me 54	Ko 119	
11	El 67	LM 71	Me 65	HP 186	Ko 54	El 119	(El)
12	LM 65	Ha 71	HP 65	Me 185	LM 53	LM 115	LM
13	BW 61	Kb 69	Kb 62	Kb 163	Kb 53	Kb 113	Kb
14	Kb 58	HW 68	Ic 62	Ic 162	BW 47	BW 90	(Ic)
15	Ic 56	Ic 68	BW 61	BW 153	Ic 46	Ic 86	BW
16	HW 54	Kl 67	NE 59	NE 143	HW 44	HW 80	HW
17	Kl 53	NE 66	HW 58	HW 138	RP 43	Kl 75	(Kl)
18	RP 40	RP 64	Kl 57	Kl 134	Kl 43	RP 74	NE
19	NE 31	BW 64	RP 56	RP 125	NE 39	NE 63	RP

formulae omitting common absences can be judged by the results of these samples to yield somewhat less reliable results. This is theoretically expectable, but it seemed worth making the actual trial.

The reason the differences are not greater is probably because all the groups in question possess a very similar culture.

As between the several computations making use of common absences, there is not very much to choose. In general the results from Klimek's computations with formula Q_2 seem to come a shade nearer to the average, and to a good fit with expectable fact, than do Kroeber's with W ; and Gifford's with W seem to stand a little more apart. In other words, Klimek and Kroeber, using different formulae on material selected for statistical or intrinsic quality, and identical three times out of four, obtained closer correspondence in results than did Gifford and Kroeber using the same formula respectively on total material and on a selection of little more than half the total. In short, quality of material counts for more than formula.

The total series of coefficients obtained by the complete computations is given in tables 7, 8, and 9.

TABLE 6
KOI AND RIVER PATWIN RANKINGS

Rank	Koi					River Patwin				
	Q ₂ 675	W 1094	W 600	T ₁ 600	Prob. true rank	Q ₂ 675	W 1094	W 600	T ₁ 600	Prob. true rank
1	Ci	Ci	Ci	Ci	Ci	HP	HP	HP	HP	HP
2	HP	HP	Ma	El	Ma	Ko	Ko	Ko	Ko	Ko
3	Ma	Ma	El	Ma	HP	HW	HW	Kc	Kc	HW
4	El	El	LM	HP	El	Yo	SN	NE	Ma	NE
5	SS	LM	HP	LM	LM	Ma	LM	El	Ha	Yo
6	SN	Me	Mu	Mu	SS	El	NE	Ma	Kb	Ma
7	Me	SS	SN	Ha	SN	Kc	Yo	Yo	El	El
8	Mu	Mu	SS	SN	Mu	NE	Ma	HW	Yo	Kc
9	LM	SN	Ha	Kc	Me	Ci	Ci	Ci	Mu	Ci
10	RP	RP	RP	SS	RP	SN	El	SS	SS	SN
11	Ha	Yo	Me	Me	Ha	SS	BW	Kb	Me	SS
12	Yo	NE	NE	RP	Yo	BW	SS	Mu	SN	BW
13	Kc	HW	Kc	Kb	NE	Kb	Kc	Ha	Ci	LM
14	NE	Kc	Ic	Yo	Kc	Mu	Me	BW	BW	Mu
15	HW	Kl	Yo	HW	HW	Ha	Mu	SN	HW	Kb
16	Ic	Ha	Kb	Kl	Ic	LM	Kl	LM	LM	Ha
17	Kl	Ic	Kl	Ic	Kl	Me	Ic	Me	NE	Me
18	BW	BW	HW	BW	Kb	Kl	Kb	Kl	Kl	Kl
19	Kb	Kb	BW	NE	BW	Ic	Ha	Ic	Ic	Ic

TABLE 7
Q₂ COEFFICIENTS ON 675 ELEMENTS
(Decimal points omitted)

	NE	HW	HP	RP	LM	Ko	El	Ci	Ha	Ma	Mu	Me	Ic	SS	Yo	SN	Kc	BW	Kl	Kb
NE		70	50	48	51	65	47	59	43	54	59	42	48	31	73	32	37	53	45	42
HW	70		89	66	60	65	60	64	47	75	60	52	45	54	60	64	48	49	48	68
HP	50	89		79	80	84	74	77	65	67	65	52	55	70	69	62	61	40	32	44
RP	48	66	79		30	69	51	47	32	52	32	30	22	40	55	40	48	38	29	34
LM	51	60	80	30		70	72	58	71	67	62	72	64	65	65	69	50	51	38	44
Ko	65	65	84	69	70		81	87	69	83	71	72	64	74	68	73	66	60	61	59
El	47	60	74	51	72	81		77	67	72	66	55	41	67	76	72	67	56	42	77
Ci	59	64	77	47	58	87	77		78	81	80	74	61	79	73	72	70	60	56	52
Ha	43	47	65	32	71	69	67	78		55	58	54	56	70	73	58	61	49	43	50
Ma	54	75	67	52	67	83	72	81	55		76	76	69	75	90	78	66	63	60	62
Mu	59	60	65	32	62	71	66	80	58	76		87	65	71	70	58	53	59	57	55
Me	42	52	52	30	72	72	55	74	54	76	87		74	69	79	72	63	63	65	70
Ic	48	45	55	22	64	64	41	61	56	69	65	74		56	65	58	53	78	56	54
SS	31	54	70	40	65	74	67	79	70	75	71	69	56		82	76	76	61	53	58
Yo	73	60	69	55	65	68	76	73	73	90	70	79	65	82		78	76	67	65	68
SN	32	64	62	40	69	73	72	58	78	58	72	58	76	78		74	73	76	69	
Kc	37	48	61	48	50	66	67	70	61	66	53	63	53	76	76		74	59	59	
BW	53	49	40	38	51	60	56	60	49	63	59	63	78	61	67	73	74	75	78	
Kl	45	48	32	29	38	61	42	56	43	60	57	65	56	53	65	76	59	75	71	
Kb	42	68	44	34	44	59	77	52	50	62	55	70	54	58	68	69	59	78	71	

TABLE 8

W PERCENTAGE COEFFICIENTS ON 1094 ELEMENTS

	NE	HW	HP	RP	LM	Ko	El	Ci	Ha	Ma	Mu	Me	Ic	SS	Yo	SN	Kc	BW	Kl	Kb
NE		73	73	68	68	71	72	70	60	67	67	66	69	66	69	64	60	69	66	61
HW	73		82	71	70	71	70	72	64	67	70	69	66	68	70	70	65	67	66	71
HP	73	82		76	77	80	75	76	70	72	73	69	68	73	72	71	69	65	63	65
RP	68	71	76		68	74	65	67	60	67	63	63	61	64	68	70	64	65	61	61
LM	68	70	77	68		76	74	75	72	71	72	75	71	73	71	73	67	67	64	64
Ko	71	71	80	74	76		78	81	71	79	74	75	70	75	72	74	71	70	71	69
El	72	70	75	65	74	78		75	66	74	72	69	64	72	73	71	68	66	63	70
Ci	70	72	76	67	75	81	75		73	77	77	76	70	77	74	73	71	70	69	66
Ha	60	64	70	60	72	71	66	73		68	69	69	65	71	70	69	70	73	63	66
Ma	67	67	72	67	71	79	74	77	68		77	76	71	75	78	75	72	70	70	71
Mu	67	70	73	63	72	74	72	77	69	77		82	70	74	73	70	68	70	69	69
Me	66	69	69	63	75	75	69	76	69	76	82		75	74	77	75	71	72	72	74
Ic	69	66	68	61	71	70	64	70	65	71	70	75		68	70	68	64	69	69	64
SS	66	68	73	64	73	75	72	77	71	75	74	74	68		76	74	75	64	67	69
Yo	69	70	72	68	71	72	73	74	70	78	73	77	70	76		74	72	70	70	68
SN	64	70	71	70	73	74	71	73	69	75	70	75	68	74	74		76	73	75	73
Kc	60	65	69	64	67	71	68	71	70	72	68	71	64	75	72	76		72	68	71
BW	69	67	65	65	67	70	66	70	73	70	70	72	69	64	70	73	72		75	72
Kl	66	66	63	61	64	71	63	69	63	70	69	72	69	67	70	75	68	75		72
Kb	61	71	65	61	64	69	70	66	66	71	69	74	64	69	68	73	71	72	72	

TABLE 9

W PERCENTAGE COEFFICIENTS ON 600 ELEMENTS

	NE	HW	HP	RP	LM	Ko	El	Ci	Ha	Ma	Mu	Me	Ic	SS	Yo	SN	Kc	BW	Kl	Kb
NE		63	61	59	63	65	60	63	53	58	60	59	62	60	60	62	53	61	55	54
HW	63		73	56	63	61	59	61	56	56	62	58	55	58	59	59	57	57	68	64
HP	61	73		68	67	69	62	67	68	66	65	60	57	65	62	61	62	56	54	59
RP	59	56	68		52	66	60	56	54	58	55	51	48	55	57	53	60	54	48	55
LM	63	63	67	52		71	68	70	68	65	64	67	67	66	65	67	59	60	44	58
Ko	65	61	69	66	71		73	77	67	73	68	65	64	67	63	67	64	59	61	62
El	60	59	62	60	68	73		71	57	67	50	61	56	66	67	65	64	56	54	58
Ci	63	61	67	56	70	77	71		72	72	71	67	65	71	68	67	65	59	63	60
Ha	53	56	68	54	68	67	57	72		65	66	62	60	68	68	67	68	57	49	63
Ma	58	56	66	58	65	73	67	72	65		71	70	65	71	61	72	67	62	64	65
Mu	60	62	65	55	64	68	50	71	66	71		77	64	69	68	63	61	59	62	66
Me	59	58	60	51	67	65	61	67	62	70	77		69	65	70	68	62	61	64	68
Ic	62	55	57	48	67	64	56	65	60	65	64	69		62	63	53	60	61	62	58
SS	60	58	65	55	66	67	66	71	68	71	69	55	62		74	69	70	61	57	62
Yo	60	59	62	57	65	63	67	68	68	61	68	70	63	74		70	68	64	63	67
SN	62	57	61	53	67	67	65	67	67	72	63	68	53	69	70		71	65	68	69
Kc	53	57	62	60	59	64	64	65	68	67	61	62	60	70	68	71		69	63	68
BW	61	57	56	54	60	59	56	59	57	62	59	61	61	61	64	65	69		70	69
Kl	55	68	54	48	44	61	54	63	49	64	62	64	62	57	63	68	63	70		69
Kb	54	64	59	55	58	62	58	60	63	65	66	68	58	62	67	69	68	69	69	

RELIABILITY AGAIN

Kroeber's W-600 coefficients, ranked, show each of the twenty groups appearing the following number of times with rank respectively of first to fourth and of sixteenth to nineteenth, that is, in the four highest and the four lowest positions of similarity to one of the other nineteen groups.

TABLE 10
HIGH AND LOW RANKS

	Number of occurrences in			Number of occurrences in	
	Rank 1-4	Rank 16-19		Rank 1-4	Rank 16-19
^m NE NE.....	2	9	^m Mu S.....	2*	1
^m HW	2*	10	^m Me S-Co.....	4**	1
^m HP	2**	2	^m Ic C-Co.....	1	7
^m RP	1	13	SS C.....	5*	0
^m LM	5	4	Yo C.....	4*	0
Ko SE.....	7*****	0	^m SN N.....	6*	1
El SE.....	3	4	Kc N.....	4	2
Ci E.....	10**	0	^m BW N-(Co).....	3**	5
Ha E.....	1	4	^m Kl N.....	3*	8
Ma S.....	8*	2	^m Kb N-(Co).....	3	5

^m=marginal to the area.

*=number of times in first rank.

Because of the limited area dealt with, this list cannot be used offhand for conclusions with respect to the most typical groups with greatest number of high relationships: every marginal tribe, designated by ^m, is obviously at a disadvantage in obtaining many high rankings, and is so situated as to rate many low ones, if we assume that the local cultures tend to change progressively with distance from one another and proximity to alien groups not dealt with.

The little tabulation is, however, a valuable index of reliability of the several lists. Within any one Pomo speech division, especially, with the several tribelets in virtually the same geographic situation, marked differences appearing between such communities are likely to occur when one list is authentic in content and therefore ties up closely with other authentic lists from near-by tribelets; whereas a list containing many haphazard, inexact, or erroneous entries is more likely to have its relationships fall randomly, and none of them are therefore likely to run high enough to earn it many high ranks.

It is evident that the same lists differentiate out, as respectively good and poor in quality, as were so indicated before by other, more immediate, criteria. For instance:

Within the SE speech division, on an arm of Clear lake, Koi has 7 high ranks, 0 low; Elem, 3 high, 4 low.

In the E division, on main Clear lake, the figures are even more striking: Shigom, 10-0, Habenapo, 1-4. The E Pomo are geographically nearer the S, C, and N Pomo than are the

SE, and about equally near the Patwin. They ought therefore to show somewhat more high rankings. The inference is that Shigom and Koi are satisfactory lists, Elem mediocre, and Habenapo definitely unreliable.

Among the S Pomo, Makahmo is farthest north, close to the E and C Pomo, and therefore shows more high ranks than do Mukanno and Meteni, which lie on the edge of Pomo territory and the area investigated.

For the C Pomo, Shanel South has the edge over Yokaia, and Icheche stands much lower than either. Icheche is a definitely poor list. Being C, it should rank higher than S Meteni, which adjoins it on the coast, whereas the figures are 1-7, 4-1. The Meteni material is remarkably good when one considers that this tribelet experienced a generation of immediate Russian contacts at Fort Ross before Spanish-Mexican influences spread over the Pomo.

Among the N Pomo, Shanel North and Kacha outrank Buldam-Willits, Kalekau, and Kabledile with 6-1, 4-2 against 3-5, 3-8, 3-5. This is partly owing to geography. The first two are in Russian river drainage with close contiguity to C and E Pomo; the latter on Eel river affluents, with Yükan and Athabascan neighbors. However, Shanel North surpasses Kacha, although marginal; and this again accords with previous reliability ratings.

For the non-Pomo, all of whom are marginal, the number of low ranks is probably more significant than the number of high ones, both with respect to reliability and to actual cultural status.

The Lake Miwok list, 5-4, is evidently an excellent one.

The River Patwin stand lowest of all, 1-13; but with respect to reliability this means little, one way or the other, because of their known intimate foreign (Maidu) contacts, and the specialization of life along the marsh-bordered Sacramento river.

The Hill Patwin, 2-2, have obviously supplied an excellent list, considering their situation and speech. The Central Wintun, more remote, show 2-10, which seems about expectable.

In contrast, the NE Pomo, geographically between the last two, are too dissimilar from the norm with 2-9. As they not only are Pomo in origin, but live only a few miles farther away from the main Pomo area than does the Hill Patwin tribelet examined, they should show, if anything, more high ranks, or fewer very low ones, than this; whereas, the reverse is true. Here again the ranking approach yields the same interpretation as was reached previously: the NE Pomo list is a very poor one.

The ultimate test of reliability of any list of course is its degree of fit into the totality of the picture. If it fits in "normally" or expectably, its data are presumably of good quality. If it does not so fit, one of two things has happened. There may have been factors like environment, migrations, or ethnic history (as reflected in speech) which have caused the people to possess a culture different from that which would be predicted from its geographical position among neighboring cultures. If so, the disturbing factor or factors will readily enough appear as soon as they are looked for. If they cannot be found, the presumption is that the data are more or less unauthentic, and that it is their very unreliability which has given the tribe its peculiar and ill-fitting status in the totality of relationships being dealt with.¹⁴ Here, then, is the court of final judgment; and the greater the totality considered, the higher will be the probability that the judgments within its limits are true ones.

To review the totality of 190 relationships is a cumbersome proceeding, except by a technical statistical procedure; the less of this the better at the present stage, when we are still groping in an endeavor to attain more refine-

¹⁴ There is of course also the theoretical possibility of a highly localized and highly specialized growth purely within one culture, without patent geographical, historic, or ethnic concomitants. But this will always be a remote possibility; certainly much more remote than the possibility of a list's being of poor quality.

ment in data collecting. I shall therefore confine detailed analysis to one example only.

We have lists from four Clear lake Pomo communities. Shigom and Habenapo speak E Pomo and are situated on shore valleys on opposite sides of main Clear lake. Elem and Koi speak SE Pomo and are situated on islands in the smaller southeastern arms of the lake. Koi, near the outlet, is at the SE corner of the lake. Habenapo lies W of it, Elem and Shigom roughly in line to the NW of Koi, with the lake between them and Habenapo. Obviously, the closest relationship ought to be between Koi and Elem on the one hand, and Shigom and Habenapo on the other; with Elem, because of its position, a link between Koi and Shigom. Koi is the nearest to the Lake Miwok. Habenapo is across the lake from the Hill Patwin; the three other communities have Hill Patwin as immediate neighbors on their rear as they face the lake. Yet, Habenapo is definitely nearest to the C and S Pomo. As for the N Pomo, Koi and Elem are most remote; Shigom and Habenapo about equally distant, but Shigom, on the N side of the lake, has a somewhat easier route of connection. The N Pomo primarily to be considered are the 2 nearer Russian r. communities of Shanel N and Kacha.

That is the setting; now for the working-out of the relationships. Klimek's Q_2-675 coefficients will be used.

Koi. Ci 87, El 81, Ha 69. Either Ci is too high, or the 2 others too low; since they are surpassed by HP 84, S Ma 83, it is more likely that they are too low. Other Pomo relationships of Koi are: C SS 74, N SN 73, S (Co) Me 72, S Mu 71, C Yo 68, N Kc 66, C (Co) Ic 64, N Kl 61, N BW 60, N Kb 59. These are about in expectable order: S, C, nearer N, farther N.

Elem. Ko 81, Ci 77, Ha 67. The rankings are as they ought to be: Koi highest, Ci next, Ha lowest. The remaining Pomo sequence is: N Kb 77 (this ought to be definitely lower than SN and Kc, let alone Ci and Ha), C Yo 76, N SN 72, S Ma 72, N Kc 67, C SS 67 (ought to be higher instead of lower than Yo), S Mu 66, N BW 56, S Me 55 (seems too low in comparison with S Ma 72), N Kl 42 (in violent clash with adjacent N Kb 77 !), C Ic 41. S, C, and near and remote N communities rank in confused sequence.

Shigom. Ko 87, Ha 78, El 77. Koi ought to be lowest of the three. Either it is too high or both the others are too low.—S Ma 81, S Mu 80, C SS 79, S (Co) Me 74, C Yo 73, N SN 72, N Kc 70, C (Co) Ic 61, N BW 60, N Kl 56, N Kb 52. These more distant relationships fall in a consistent order: S, C, nearer N, farther N, with the more distant S and C coast communities lower than the inland S and C.

Habenapo. Ci 78, Ko 69, El 67. This order is according to expectability. But the two SE groups, Ko and El, stand lower than two C groups: Yo 73, SS 70. Then follow N Kc 61, N SN 58, S Mu 58, C (Co) Ic 56, S Ma 55 (ought to be higher than Mu), S (Co) Me 54, N Kb 50, N BW 49, N Kl 43. The order is internally consistent: C, nearer N, S, farther N. It differs, however, from the equally consistent order of Koi and Shigom, C and near N having risen ahead of S in rank. Habenapo is so situated that it might easily have had close relations with the C Pomo. However, these could hardly have been closer than with Koi and Elem, of the same speech and on the same lake, with the same boats, fishing devices, bird hunting, house types, and so on, in use; especially since the other E group, Ci, ranks Koi (as well as S Ma and Mu) ahead of C. The inference is rather compelling that the Habenapo informant was not portraying the true old Habenapo lake culture, but a hybrid Habenapo-Central Pomo one. The hybridization actually may have taken place through last-generation intermingling of the Pomo of Ukiah and Big valleys, or have occurred in his mind through indifference or inability to make discriminations. He is a half-breed and not very old.

In short, Shigom and Koi yield consistent relationships, Elem inconsistent and confused ones, Habenapo fairly consistent ones depictive however of a culture which could not well have existed in native times on the spot to which it is attributed. There can be little choice: the last two lists must be rated low in reliability compared with Shigom and Koi.

This sample gives us a touchstone. When Shigom and Koi fall approximately into their expectable place in their calculated rankings in relation to

another tribelet, they tend to confirm the data on this as reasonably reliable; and if Elem and Habenapo fail to fit, it does not much matter, because, knowing them to be poor, we can presume that they are the cause of the misfit. If, on the contrary, in the relationship rankings of such another community, reliable Shigom and Koi fall out of their natural places, the list for this community begins to be discredited; and good fits for Elem and Habenapo cannot be used to restore its credit: their own character is already too much under suspicion for them to serve as reassuring character witnesses.

In this way, when all the Pomo relationships have been analyzed, the better and worse sets of data sift themselves out with some certainty, and in large measure the quality of the more distant non-Pomo lists can be inferred. It would take unnecessary space to follow the process through in detail. The results agree closely with the findings already made from unique elements, marked excess of positive or negative elements, over-abundance of answers given, etc.

In summary, the following quality or reliability rating may be given to the twenty lists:

D	NE Pomo	A	Makahmo
(B ?)	Hill Wintun	A	Meteni
(A ?)	Hill Patwin	A	Shanel S
(B ?)	River Patwin	B	Yokaia
A	Lake Miwok	C-	Icheche
A	Koi	A	Shanel N
C	Elem	A-B	Kacha
A	Shigom	C+	Buldam-Willits
D	Habenapo	B+	Kalekau
A	Mukanno	C+	Kabedile

These ratings check fairly, but not exactly, with the impression-ratings of informants by Gifford in Part I.

TABLE 11
HIGHEST RANKS OF "RELIABLE" COMMUNITIES OF 11 DIVISIONS

	HW	HP	LM	Ko	Ci	Mu	Me	SS	Ic	SN	Kb	Total
HW.....	×	1									4	2
HP.....	1	×		3								2
LM.....	3	3	×	2	4				2	4		6
SE Ko.....		2	1	×	1	4		4				5
E Ci.....		4	2	1	×	2		1	3			6
S Mu.....	4			4	2	×	1	3	4		3	7
S-Co Me.....			4			1	×		1	3	2	5
C SS.....					3	3		×		1		3
C-Co Ic.....							2		×			1
N SN.....			3				3	2		×	1	4
N(Co) Kb.....	2						4			2	×	3

We can now construct a rank table of relationships on the basis of the best lists alone. These will be fewer but more reliable; they should check and may correct the rankings obtained from the full twenty lists. Such a series is shown in table 11. It is based on Kroeber's W-600 calculations. The best list from each Pomo speech division has been selected: SE, E, S, C, N, plus an additional one from the coastal subdivisions of the three last, making eight in all. The central coast list from Icheche is poor, but there is no other. The northern coast list from Kabledile is only fair and not strictly coastal, but will serve as an approximation of Northern coast culture, and for the rest is typical

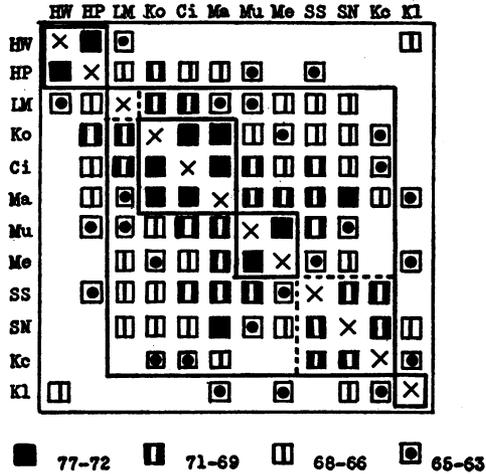


Fig. 6. "W" coefficients, 600 elements, 11 communities selected for reliability.

of the Eel river subdivision of North Pomo as against the Russian river subdivision as represented by Shanel North. Northeast Pomo has been omitted: its list is too poor. Hill Wintun, however, which seems fair, and Hill Patwin and Lake Miwok, which are good, have been included for comparison; but River Patwin has been omitted as lying both culturally and geographically in a rather distinct environment. To make the table more graphic, only the first four ranks have been given in each column. A horizontal reading gives the number of times each of the eleven communities occurs in first, second, third, or fourth rank in the ten relationships into which it enters.

This table may be accepted as a pretty accurate picture of the ethnographic verities involved. Even Icheche comes out better in this good company than in mixed. And it looks as if most of the high rankings away from the main, well-filled diagonal could be accepted as meaning something actual—including the Wintun-Kabledile appearances in the extreme off-corners.

I add also a diagram, figure 6. This differs slightly from table 11 in a more rigorous standard of quality of material, regardless of whether or not all divisions are represented. Makahmo has therefore been substituted for Icheche, and Kacha and Kalekau for Kabledile. The symbol scale is that of figure 2, from which figure 6 is merely an extract of the more reliable coefficients.

ETHNOGRAPHIC INTERPRETATION

The following conclusions emerge respecting the cultural relationship of the tribes discussed in this study just before they met Caucasian civilization.

1. A main line of division is formed by the eastern or main Coast range. In the ethnographic province to the east of this, in other words in the Sacramento valley, belong the Patwin-Wintun and probably the NE or Salt Pomo. In the province to the west, the inter-Coast range district of Clear lake, Russian river, affluents of Eel river, and the coast itself, there belong all the Pomo except the NE ones; plus the Lake Miwok.

Notes. (a) The NE Pomo data from the one available informant are so poor that the cultural position of this group is not certain. This is unfortunate because these Salt Pomo constitute the only Pomo group which has become territorially detached and settled in another topographic area among ethnically alien neighbors. If we could be sure of the preponderance of their affiliations either toward the Patwin-Wintun among whom they live, or toward the Pomo from whom they sprang, the relative historical antiquity or recency of their departure from their Pomo homeland would be indicated.

(b) The Lake Miwok definitely belong with the Clear lake Pomo rather than with the Patwin whom they equally adjoin and who live in the Great Valley in which the Plains and Sierra Miwok also live, somewhat farther southeast. This has been inferred before.¹⁵ However, it must be remembered that the Hill Patwin data relate to a spot as far distant from the Lake Miwok as could be found in Patwin territory. Consequently, if we had comparable information from nearer Hill Patwin localities, like Long valley, Morgan valley, or upper Cache creek, the preponderance of Pomo affiliations of the Lake Miwok would expectably be very much less.

(c) The cultural cleavage follows topography, not drainage. The entire Clear lake basin drains into the Sacramento, its outlet, Cache creek, breaking through the main Coast range. Nevertheless this basin forms an inter-Coast range valley; and correspondingly the Clear lake Pomo go culturally with the other Pomo, not with the Patwin down Cache creek in the Sacramento valley. This after all is rather expectable.

2. Within the Sacramento valley province the figures indicate a less close relationship of the Hill Patwin to the River Patwin than to the Hill Wintun. So far as this finding can be accepted it obviously reflects environmental influences. The two hill groups live at the same level above the valley, in a tract of similar vegetation and equally small streams. The finding must not however be accepted as characteristic for the Hill Patwin as a whole: our single sample comes from their extreme northwest corner. Then too, the Sacramento valley data here dealt with are of a different order from the Pomo data. They represent a single arbitrary point in each of three areas, whose combined extent is as large as that of the entire Pomo territory, from whom we have data on sixteen local groups. Were our data from Rumsey or Cortina instead of Lodega, they might possibly show the Hill Patwin as more similar to their river kinsmen than to the Wintun; as was Kroeber's conclusion after a conventional ethnographic survey.¹⁶ If the data had been taken on Long Valley creek or Bartlett creek, they might show the Patwin there as more similar to the Clear lake Pomo than to either Wintun or River Patwin.

¹⁵ UC-PAAE 29:369, 1932.

¹⁶ *Ibid.*, 253, 420.

However, the locality of our sampled Hill Patwin is as far from the Nomlaki Wintun one at Paskenta as from Patwin Grimes on the river; and the result obtained from the lists must accordingly be accepted as indicative of the greater effect of environment on culture in this part of California, rather than of original ethnic unity as represented today by speech.

3. Within the Coast range or Pomo province the indicated order of cultural relationships is: Lake Miwok, Southeast, East, South, Central, North Pomo.

The Southeast and East Pomo are very similar, as might be expected from their living on the same lake.¹⁷ They stand slightly but perceptibly¹⁸ nearer the South than the Central Pomo. This is rather surprising; first, because they are nearer the latter; and second, because the linguistic classification by Barrett¹⁹ indicates two primary groups of Pomo languages, a Southern-Southwestern and a North-Central-East-Southeastern. But since the classification rests only on a superficial comparison of vocabularies, the speech situation should now be reëxamined.

I include the Southwestern Pomo in the Southern. The Meteni list from near Fort Ross on the coast has its nearest resemblances in the two inland Southern lists from Mukanno and Makahmo. The "Southwestern" Pomo thus are essentially a coastal variant of the South Pomo. The two dialects differ only slightly. I have long had a suspicion that the separation of the Southwestern dialect was arbitrary, and could probably be matched, or nearly matched, by a minor differentiation of coast Central (Icheche) from inland Central Pomo speech.²⁰

Ignoring for the moment this consistent minor cultural difference between coast and interior, we find a steady progression up the Russian river from South to Central to North Pomo, and then to the North Pomo of Outlet creek in north-flowing Eel river drainage.

The Central affiliations are sufficiently defined by their place in this series.

The North Pomo are really two units: those of the upper Russian river branches, and those of Eel river affluents. The first of course resemble the Central group much more. If we had a list from the North Pomo village of Komli, which shared Ukiah valley with the Central community of Yokaia,²¹ the resemblance would almost certainly be greater yet. There is also a fairly strong relationship of these North Pomo of the Russian river to the Clear lake Pomo, doubtless because of a water-grade line of communication from the lake past Blue lakes to the East fork of Russian river.

With the Eel river North Pomo, we are not only farther from contacts with all other Pomo, but also are on the periphery of the area investigated. A number of the elements peculiar to them among the Pomo are evidently attributable to contacts with the non-Pomo adjoining them: Coast Yuki, Athabascan Kato, and Yukian Huchnom. This fact also makes it difficult to evaluate the lists from these three groups, which seem mediocre in quality: their departures and inconsistencies may result from unreliable information, or again from stronger Yuki-Athabascan influences than we have been accustomed to accept as probable.

¹⁷ The two dialects, however, appear to be quite different. It would be interesting to know if the North Pomo on Clear lake, those of Mayi and Noboral—the latter having moved there in part within legendary memory—had become similarly assimilated in culture.

¹⁸ This holds for the good lists from Koi and Shigom; the inferior Elem and Habenapo lists reverse the relationship.

¹⁹ UC-PAAE 6:1-322, 1908.

²⁰ The same would be theoretically expectable for the Northern Pomo, but Gifford's information is contrary, the Eel river drainage Pomo claiming to have owned to the ocean. New field studies by Omer Stewart in 1935 confirm Gifford.

²¹ Really a double village, Shokadjal and Tatem, according to Barrett, UC-PAAE 6:168, 175-176, 1908.

That there must be such an influence we can say without having a single Yukian or Athabaskan list, because of specific Wintun resemblances. Among the Hill Wintun ranked affiliations, Kalekau and Kabledile stand high, second and third indeed, just after Hill Patwin.²² This fact can only mean that a stream of cultural connection flowed between the Eel river North Pomo, Coast Yuki, Kato, Huchnom, Wailaki, Yuki, and Wintun.

However, this was not a main current, because to Kalekau and Kabledile the Wintun ranked only twelfth and ninth.²³ The Wintun are so different from all the Pomo that their minor resemblances to the Eel river Pomo suffice to make these Eel river groups become foremost of all the Pomo in closeness of relation. But the Eel river Pomo are after all Pomo first of all, so that their special, partial connections with the Wintun still leave the Wintun differing from them more than do most of the Pomo.

4. There is probably a minor line of differentiation between coast and interior for most of the length of Pomo territory. This is of course a result of environment, as expressed in subsistence devices and technology. It remained a minor differentiation for several reasons. In general, the coast people lived only seasonally on the shore, the rest of the time in the hills some miles back. They had no boats. Relations were generally amicable, and there was considerable visiting back and forth between coast and inland, for food and money-shell gathering, and festivities and ceremonies. Mussels might therefore be a seasonally standard diet element on the Russian river, and acorns of interior species on the coast, although the inlanders might not possess any ownership or rights on the ocean, or the coast people on inland territory. The cultures were therefore less distinctive than they would have been if each tribelet had jealously preserved its own territory. The South coast Pomo were first of all South Pomo, only secondarily coast Pomo; and so for the Central division. This accords exactly with the linguistic lines. North and Central Pomo speech run through to the coast,²⁴ and "Southwest" is only a variant of Southern, as has already been stated.

This basic situation is expressed by all our rankings and groupings. Meteni on the coast has its highest relations in the South group, Icheche in the Central, Buldam and Kabledile in the North.

The precise strength of the minor similarities that presumably united the coast communities among themselves is hard to define because of qualitative inequalities in the material. The Meteni list is brief but excellent. That from Icheche, obtained from semiwilling informants in the one notoriously hostile Pomo settlement, is long but poor. The Buldam and Kabledile lists seem only partly to represent a culture characteristic of the coast.

Not too much can be expected from material of this sort. But here are the rankings on Klimek's computations, with Kroeber's in parentheses. The coast or semicoast groups are italicized.

Rank among Meteni relationships:

C: Yo 2, *Ic 4*, SS 10 (2, 4, 9)

N: SN 7, *Kb 9*, Kl 11, *BW 12*, Kc 13 (5, 6, 11, 14, 13)

Icheche relationships:

S: *Me 2*, Ma 3, Mu 5 (1, 3, 5)

N: *BW 1*, SN 9, Kl 10, *Kb 14*, Kc 15 (11, 18, 10, 14, 13)

²² Ranking by Kroeber's selection of data and formula W. By Klimek's they are sixteenth and fourth.

²³ Thirteenth and eighth by Klimek's computations.

²⁴ Hdbk., map pl. 36; p. 230.

Kabedile relationships:

S: *Me 5*, *Ma 9*, *Mu 12* (4, 8, 7)C: *Yo 7*, *SS 11*, *Ic 13* (6, 11, 16)

Buldam-Willits relationships:

S: *Me 7*, *Ma 8*, *Mu 12* (8, 6, 14)C: *Ic 2*, *Yo 6*, *SS 9* (17, 5, 10)

Whatever these figures show may be interpreted as the modificatory effect of environment on the generic Pomo culture and on three ethnically rooted or speech-defined subvarieties of this culture.

5. Another line of connections, or stream of influence, is one which Klimek was first to recognize (see Appendix I) in the data: between Lake Miwok and South coast Pomo, undoubtedly by way of the now extinct Coast Miwok. The probability is very high that this was Miwok influence on the Pomo. If it had been the reverse, the Lake Miwok, well inland, would not have been reached and would therefore show no special resemblances to Meteni, unless they were a wholly recent offshoot from their Coast kinsmen. There is nothing else to indicate this; and their geographical situation, between the Coast and the Plains-Sierra Miwok, suggests that rather they are a remnant left halfway at some time in the past.

Rank among Lake Miwok relationships (Klimek's; Kroeber's in parentheses):

Me 2, *Ma 7*, *Mu 11* (6, 11, 12)*Yo 8*, *SS 9*, *Ic 10* (10, 9, 7)

It looks as if a little of this Miwok influence might have extended up the coast as far as Central Icheche.

Why Central Pomo Icheche on the coast shows this Miwok affect more strongly than does inland South Pomo Mukanno is at first sight not apparent, because the Coast Miwok are coterminous with both groups. However, the Coast Miwok territory is a peninsula between ocean and bay, with the wooded Tamalpais ridge as its backbone. Consequently the Coast Miwok all or nearly all lived close either to the ocean or to still tidewater, and their culture was of necessity a coastal one. Because the specific features of their culture were a blend of coastal and Miwok, they evidently could impart this blend more completely to the coast Pomo than to the interior Pomo.

Summary.—The last two examples illustrate the degree of fineness to which the element survey method can carry analysis of cultural data. Equally evident is the fact that in proportion as the data are good—and their accuracy is far more important than their abundance—there normally appears to be a nearly equal step-by-step progression from community to community, so that the fifth from a given starting point can be predicted with certainty, and the fourth with high probability, to be more different than the third. Where this is not so, the “irregularity” almost invariably coincides with either an environmental or an ethnic break. Were all our lists of as good intrinsic quality as the best, the conformity with distance, modified by environment or speech, would almost certainly be even more in evidence. Where there are apparent irregularities of relationship, other than inconsiderable ones, which cannot be explained in these terms, almost invariably there is involved at least one community for which there is reason to believe the data to be unsatisfactory. It is evident that up to now the method of analytic comparison is more reliable

than the method of collecting data for it. It is on the latter side that further improvement remains to be achieved.

CULTURAL CHANGE AND ORIGINALITY

We have seen that the presence of more than about one per cent of unique positive elements arouses grounded suspicion of unreliability in a local community list. In other words, within a native area like that of the Pomo, 99 per cent of the culture of any one basic ethnic unit or independent community was shared with other communities. Normally, only about 1 per cent of its culture was distinctive, that is, presumably created or modified by itself. This may seem a low proportion; but we are dealing with minimal units, comprising from a hundred to at most three hundred souls each, and distant one from the next perhaps ten miles, or probably less, on the average.

Of course this does not mean that the culture of every pair of adjacent communities was 99 per cent identical. Each shared certain traits only with its neighbors to the north, others only to the east, and so on, plus perhaps a few scattering ones with communities two or three steps distant, besides possessing its 1 per cent of uniqueness. The question arises, What percentage of traits did actually adjacent communities of the same speech subdivision normally share? Are our figures, which rise only to 77,²⁵ to be taken at face value?

Hardly; for at least two reasons. First, we probably have not a single example of first-quality lists from two actually adjacent communities. Koi and Elem were contiguous, but the Elem list is unsatisfactory. We have 16 Pomo lists, 15 without the Northeasterners. Kroeber estimated 75 Pomo communities.²⁶ Even if the actual number was only 50, less than a third have given us data. The majority are extinct, blended, or unrepresented by lists. This means that, on the average, communities which now seem adjacent were in native times about two steps beyond actual contiguity. If Eastern Shigom and Southeastern Koi shared 77 per cent, with Kamdot and Elem between them, Elem and Kamdot may well have shared 90 per cent or more.

Second, there is what may be called the factor of wear and tear in recording, of a certain inevitable proportion of errors of interpretation and memory two to three generations after these little cultures ceased to function as living wholes. These errors, being random, would tend to bring the highest relationships down most, proportionally. Suppose communities X and Y actually shared 90 per cent of their cultural inventory. Every error in one list, a substitution of a + for a - or a - for a +, would therefore nine times out of ten turn an agreement into a disagreement; whereas if X and Z shared only 50 per cent actually, random errors would not seriously alter this proportion, even though the internal composition of the lists might become confused and meaningless. The net result of the element of error, in short, is to diminish differentiation between high and low relationships.

²⁵ On Kroeber's 600 selected elements; up to 82 on Gifford's unselected 1094. Common absences of elements occurring in the area are included in agreements.

²⁶ Hdbk., 229.

We have no present means of ascertaining the degree of influence of this factor; but it might be approximately allowed for by raising our already corrected figure of 90 per cent identity between adjacent groups somewhat higher, say to about 95 per cent. This would mean that of two such communities each might normally possess as high as about 1 per cent of wholly local specializations in its culture, and three or four times as many which it shared with other neighbors.

Of the differences, the majority would be accounted for by adaptations to environment. When the neighboring community lived removed over a range on the Russian river instead of the lake, in a narrow valley instead of a large one, or on the coast instead of inland, the differentiation would be somewhat greater than, for instance, that among lake communities. But even these rarely possessed absolutely identical environment. One would own a stream large enough to dam with a weir, or to run salmon and permit the use of the harpoon; the other not.

Other local differences were of the sort which Dr. Aginsky found in his 1934 studies of Pomo kinship and marriage uses, and which occurred also in cults. One community made a dance, or performed an act in a ceremony; another did not. But who can tell when one man's change of residence following an intermarriage, or a mere individual initiative, might induce the second community to perform the dance?—perhaps to drop it again after one enactment; perhaps to repeat it regularly. There were no rules against such adoptions, nor would there be a serious wrench: the dance would long have been seen by the second community at assemblies given by the first. The point is that if such novelties were easily introduced, they were also easily propagated still further; so that they tended back again toward relative uniformity over a series of communities.

Something of the same leveling fluidity would also characterize technological devices apparently limited by land and environment. Most adjacent communities are known to have been friendly. There was much visiting, and a fair amount of special food-gathering in one another's territory, provided consent were asked or a gift made. A group not possessing a stream or site allowing the use of a weir or harpoon might nevertheless construct and use these devices recurrently in their neighbors' waters, and even come to own the requisite implements permanently. We hear constantly of food and shell-getting visits to the coast; and this was certainly not the only extraterritorial area visited. All this interplay would tend toward uniformity. Incidentally, it must also tend toward "error" in localized data, or at least inconsistencies. One informant can truthfully say that his community built no weirs—in its own territory; another equally truthfully, that it did—when among its neighbors.

The net result is that there existed a high level of uniformity between adjacent minimal territorial entities. The generic picture of Pomo culture, the impression we have of it, accords well with our numerical finding of around 95 per cent of cultural inventory ordinarily shared by strictly neighboring communities.

All this presupposes a population at once narrowly localized and highly sessile, as well as ordinarily peaceful—as we know it to have been. The sum total of Pomo community movements of which we have knowledge, historical, legendary, or inferable, is only four or five;²⁷ and none of these involved more than a few miles.

²⁷ UC-PAAE 29:270, 1932.

APPENDIX I: ETHNOGRAPHIC INTERPRETATION

By S. KLIMEK

THIS SECTION was written before any calculations had been made by Gifford and Kroeber; also before Kroeber's examination into relative reliability of the several lists collected. The analysis is by the 1911 Czekanowski method; using Yule's coefficient Q_2 , applied to 675 elements selected on the basis of recognizing only those for which there are 11 or more entries in the 20 lists. Table 7 and figures 1 and 3 present the statistical facts.

1. All the compared groups are culturally very similar. This similarity is expressed by the fact that all coefficients are positive. The smallest coefficient (RP:Ic) is +.22. This corresponds to the fact that all groups with which we are dealing belong to the western subdivision of the Central California cultural area.

2. Considering the gradation of the coefficients between particular groups (table 7), with application of graphical procedure (fig. 1), we realize:

(a) The isolation of the River Patwin on the one hand, and the isolation of the NE Pomo on the other. The reasons for the isolation of the River Patwin are quite obvious. The culture of the peoples of the lower and middle Sacramento valley is relatively rich and specialized (Hesi stratum D in Klimek's previous California treatment).²⁸ The River Patwin are connected by higher coefficients only with Hill Patwin, Hill Wintun, and SE Pomo of Koi. These connections are probably a result of a number of elements characteristic of the Wintun-Patwin speaking peoples.

The isolation of the NE Pomo, although geographically understandable, is culturally less clear. It is possible that we have here to do with the result of Yuki influence. The NE Pomo are connected by higher coefficients with the Nomlaki (*HW*), which is entirely clear and was to be expected (see Kroeber's *Hdbk.*), and with the C Pomo of Yokaia.²⁹ The question is whether this second connection, assuming that the data underlying this particular coefficient are sufficiently accurate, eventually indicates ancient relations between the NE and C Pomo. This question should be answered by the linguists.

(b) Considering the relationship of the other groups, we realize that they form two main assemblages. The first assemblage comprehends the Hill Wintun and Hill Patwin; the second, all Pomo groups. Between these two larger groups are the Lake Miwok, who take an intermediate position. The two Wintun groups are separated from the rest by the same factor which separated the River Patwin. The culture of the Hill Patwin and Hill Wintun is of course less specialized than that of the River Patwin, and is probably more influenced by that of the Pomo. The same is true for the Lake Miwok. Besides, it is noteworthy that the Lake Miwok show a somewhat special relationship with the SW Pomo of Meteni, who are territorially isolated from them. The possible explanation is that in the cultural structure of the SW Pomo and Lake Miwok we can expect a number of elements which are characteristic of the Miwok. The SW Pomo are neighbors of the Coast Miwok.

(c) Proceeding to the analysis of the large Pomo assemblage, we notice in the first line that the N Pomo tribelets, with only one exception (Shanel N), are relatively isolated from all other Pomo groups. Even Shanel takes a marginal position in the group comprehending the E, SE, S, and C Pomo tribelets.

In this large group we notice a high degree of similarity between the E Pomo of Big Valley (*Ha*) and the SE Pomo of Elem. These are probably the most specialized Lake groups, thus owing their similarity and separation to environmental conditions.³⁰

²⁸ No. 1 of this volume.

²⁹ Of course this may also be a result of the poor quality of the lists: Kroeber rates NE, D and Yokaia, B.—See above.

³⁰ This is made somewhat dubious by Kroeber's subsequent rating of *Ha* and *El* as poor lists, the two other Lake data (*Ci* and *Ko*) being of good quality.

Another block of highly correlated tribes comprises the SE Pomo of Koi, the E Pomo of Shigom, and the S Pomo of Makahmo. The first two communities of this group are also localized on the lake. Their separation from the other E Pomo (Habenapo) and SE Pomo (Elem) is probably attributable to the Wintun-Patwin influence which is clearly indicated by their high coefficients with Hill Wintun and Hill Patwin.²¹

Next we have two southern tribelets: the S Pomo of Mukanno and the SW Pomo of Meteni at Fort Ross. The separation of these two communities is evidently a result of Coast Miwok influence.

Next we have two C Pomo tribelets, Yokaia and Shanel South and one of N Pomo, Shanel North. It is difficult to explain the character of this assemblage. It seems that this is the most typical Pomo group. We can only remark that the tribelets of this group show some connections with the Wintun-Patwin. However, these connections are not so strong as the Wintun-Patwin connections of the E and SE Pomo.

The grouping of the N Pomo tribelets is very interesting. Besides the Shanel North tribelet, which goes with the C Pomo, we have to do here with a group composed of Kacha, Kabedile, and Buldam-Willits. The separateness of this group is probably a result of Yukian (probably Coast Yuki) influence.

A quite different position is taken by the N Pomo community of Kalekau at Sherwood. The connections of this tribelet are very faint. Shall we suggest here a Kato or a Yuki-Huchnom influence?

Finally we have the C Pomo community of Icheche at Point Arena. Its isolation is caused by the environmental factor:²² This is a true Coast people. It is interesting to notice that Icheche is well connected only with two other Coast tribelets, Buldam-Willits and Meteni at Fort Ross.

General considerations.—It goes without saying that the recent aspect of Pomo culture is a result of the differentiation of a formerly single culture. This process of differentiation is chiefly brought about by foreign influences on particular Pomo groups. We notice the Wintun-Patwin influence, the Miwok affiliations, and probably also Yuki ones. In comparison with the effects of these cultural factors, the environmental influence is hardly noticeable. We realize it clearly only among one group—the Point Arena Coast dwellers.

An analysis of elements which, let us hope, will be made in future, will permit us to define more exactly the character and the importance of the strata which form the cultural structure of the particular Pomo groups.

²¹ Or again to differences in reliability of the material.

²² Plus perhaps the fact that the data are not of best character.

APPENDIX II: HABENAPO CORRECTIONS

AFTER ANALYSIS had revealed differences of intrinsic quality between the lists, we decided that it would be of value to obtain a second list from some group for which the list in hand was evidently inferior. We selected the Habenapo because the old list was poor in its rankings and fits, and the unusually high number of pluses in it suggested that the informant was extravagant, hasty, or oversuggestible. In the last days of June, 1935, Gifford therefore returned to the Pomo, but failed to find a satisfactory second Habenapo informant, except in answer to a mere dozen questions. The season, just before the Fourth of July, had unsettled the Indians. Dr. B. Aginsky, who happened to be among the Pomo, kindly arranged to obtain afresh from the Habenapo informant, Carter, that part of his 1934 list which had proved to consist of affirmative statements procured from no other, or only one other, Pomo informant. On these eighty items Aginsky questioned him without reference to his 1934 element work with Gifford. This is obviously far short of the complete list retaking hoped for from a new informant; but we are grateful to Aginsky for obtaining even this partial revision under difficult circumstances; especially as it allows of certain conclusions.

Of the items to which Carter had been the only informant to answer plus in 1934, he reaffirmed 29 but now denied 13. On a few others no certain opinion could be got from him. Of those to which he had answered plus along with only one other informant, he reaffirmed 32 and denied only 2. It is evident that any plus obtained uniquely in a region is under prima facie suspicion of error, and in need of careful checking; but that even a single independent corroboration among another group greatly decreases the probability of error.

In the interest of accurate ethnographic record as well as reliability significance, it is perhaps worth while to review the checked part of the list, with comments.

1934 Unique Habenapo Pluses Reaffirmed in 1935

51. Hair singed with hot-edged flint.—“Done in autumn.”
104. Cradle design indicating sex of next baby desired.—Valid element in Sierra and S for sex of child already in cradle. Seems imagination for Pomo: the account of the designs under Notes is unconvincing.
129. Twined basketry of whole tule.—Prob. confused with coiled tule baskets, or with 140.
140. Twined bags of cord warps (Hdbk., pl. 63). “Of tule.” Seems possible, but they would be very different from Hdbk., pl. 63.
158. Sewn rush mat.—“Of tule, not rush. Still made.”
363. Eyed bone needle for mat sewing.—“With eye or with notch.”—See note: 158 and 363 seem validated, but the technique is admittedly recent; cf. the bone in place of expectable wood.
167. String of third layer of tule skin.—“From the part of tule that is eaten.
178. Spindle whorl.—Spanish, as informant states in Notes.
253. Deadfall for large game.—Confusion respecting size ?
- 278a. Wincwing basket as fan for smoke.—Unsatisfactory item: perhaps occasional makeshift, not standard.
300. Leaching on conifer boughs.—Element occurs outside Pomo area: informant evidently suggestible.
421. Shaped stone maul to drive stakes.—Stone doubtless used, shaped only in NW Calif. See Notes: the NW resemblance is verbal, not factual.
462. Deer-hide armor.—Probably heard of elsewhere; elk, if any.
480. Notched ladder in assembly house.—“Notched older, sacred; rung ladder later. Tied with grapevine.”
517. Tule dance house.—“Roofed.” Confirmed by second informant.
661. Plural address of in-laws.—This is confirmed by text examples: this series, 9:329, 1911. But expectably the habit should appear in other Pomo languages, at any rate in other Eastern dialects. At least for Shigom the denial there is almost certainly in error. Obviously

items of this sort can be obtained reliably only through analyzed speech examples, not by questioning about grammatical categories.

711. Head-scratcher of bone.—“Of bone or wood.”

757. Necklace on bereaved woman.—“If she is childless.” Evidently another misunderstanding of a characteristic NW Calif. trait.

977. Women members of ghost society.—Probable confusion with Kuksu organization.

1000. Bear impersonation in Kuksu made by bear shaman.—Prob. another confusion.

1012. Eagle dance.—For condor—another inaccuracy of a hasty mind.

Also nos. 200, 309, 353, 422, 469, 569, 673, and 920.

1934 Unique Pluses Denied in 1935

54. Hair dye in mud plaster.—“No dye; mud coating to make hair grow.” A Yuman element, misunderstood.

188. Double-pointed fish spear.—“One point only on spear.” Obvious confusion with harpoon.

349. Bowl mortars made by coyote, not humans. “?” A Sierra trait.

372. Fire plough.—“Only by boring.”

377. Stone bowl to carry coals.—“Bark.”

384. Stone blade on digging stick.—“All wood.” Confusion with spear.

395. Mesh spacer of horn.—A NW Calif. element. Practically nothing Pomo is made of bone, horn, or stone for which wood will serve.

449. Triple tangential arrow-feathering.—Illustration of “tangential” obviously misunderstood; *inf't's* meaning evidently referred to trimming of the feathers with a hafted flint knife.

527. Sculling.—Would be mechanically difficult with a paddle and almost impossible on a balsa. Reference may have been to steersman's paddling; or to post-Caucasian boats.

580. Woman's lacrosse with oak gall.

723. “Wands” in girls' puberty. “?” Hupa element, obviously misunderstood.

876. Shamans' public competition. “?” Yokuts trait; ditto.

942. Milky Way thunder's road.

1934 Pluses Shared with One Other Group Only, Altered in 1935

38. Knee-length buckskin leggings.—“Yes, halfway up calf,” viz., above-ankle moccasin, inaccurately described; not a legging at all. But cf. Notes. May be correct for Kb.

120. Leather reinforcement of bottom of burden basket.—(Extra) “weaving strands, not leather.” LM also gave, perhaps thinking of an occasional repair.

601. Many-stick guessing game.—NW Calif. type. Misunderstood; prob. by Kb also.

1934 Shared Pluses Reaffirmed

Probably correct:

41, 42. Shredded tule cape, cloak (also Yo, Ci).—Affirmed also by second Ha *inf't* of 1935. Perhaps a single garment of variable length. Difficult to see why denied by El and other groups.

352. Steatite for marking (also SN).

437. 3-ply bowstring (HW).—No reason why not occasional.

533. Doughnut stone (Yo).—“For luck.”—No ring stones seem to have been found in the area. *Inf't* perhaps referred to a sporadic occurrence. Any ancient worked stone was feared by laymen in this area, but prized as lucky by shamans. See Note 533: “Used by singing shaman.”

599. 3-stick game, matching odd or even in hands (Yo).—A new type, prob. more widespread; denied only by El.

713. Parents scratch girl at puberty (SN).

831. War dreams by shaman (Ic).

875, 900. Shamans' ventriloquism, prophecy (HW, SS).—Rather expectable occasionally; why so many denials elsewhere, especially for predictions? Ventriloquism in Kuksu, not shamanistic: see notes 875, 1074.

978. Girls also tossed (SS).—Likely enough locally, but probably not in Ghost society.

1035. Women also initiated (SN; RP; HP).—Prob. one element with 1036.

1049. Heron-head staff of clowns (Yo. No denial exc. by El).—Hdbk., 264: Ash ghosts have staff representing crane head. "Clowns" are the ash ghosts; not in Kuksu ceremony.

Probably incorrect:

53. Mud plaster against head lice (also Ic).—Denied by second Ha infit, 1935. Possible; but it is a river Yuman trait not yet reported farther n.

232. Game pits (Kb).—Less improbable for Kb.

256. Game driven into enclosure (HW).

398. Net shuttle of horn (Kl).—Cf. 395 above. Somewhat less improb. for Kl.

522. Dugout canoe hollowed by burning (Yo, Ma).—Post-Caucasian.

597, 598. 4-stick guessing game (Kc).—Misunderstanding. The game is NE Calif., and the relative positions of 2 large and 2 small covered sticks is guessed at. Confounded with nos. 590 or 603, which also operate with 4 sticks.

829. Dancers abreast in inciting war dance (Kb, Kl).—NW Calif. trait, possible for Kb and Kl on Athabascan border; Ha prob. does not refer to incitement, perhaps not to war.

847. Special keeper for scalp (Kl).—Possible for Kl. Ha "keeper" perhaps means one person handled or took charge of scalp during dance.

1013. Deer dance (Kb; RP, HP).

Uncertain:

161. Bone scraper for basket material (Kc).

251. Woodpecker net trap (LM).—Evidently a net put over the bird's nest hole: see Notes.

359. Bone knife for bark stripping (Kb).

529. Log-raft bridge (Kc).

632. n above, s below (Kc).—Concept typical of Yuki-Kato area.

752. Widow's hair kept in house (Yo).—Denied only by El. See Notes.

964. Offerings of feather wands (Kc).—Might be: Maidu had ("Feather river"); but 8 other Pomo groups deny. A difficult element to describe unequivocally to a Calif. Indian. Note 964 suggests hidden magic and poisoning, not a ritual offering.

It has seemed worth while to go into this retaking of information in such detail not only in the interest of accuracy but also as a sample analysis of the element of unreliability in work of this nature. A certain smaller percentage of error or misunderstanding of the same type has doubtless crept into every list: the Habenapo informant merely is much easier to detect *in flagrante*. It seems fairly clear that he was nowhere deliberately untruthful, at least not in positive statements. On the recheck he also appears less extravagant and fantastic than before. Conversely, he convicts himself time and again of a hasty and inexact mind. Many questions he only half listened to, then gave an answer apparently to the whole but really to a part only. A moccasin covering the ankle is made into a knee-high "legging" because it is stretched part-way up the calf. Even the moccasin may be N Pomo only, not Habenapo E Pomo. Many of his specialties come out shared with Northern Kacha, Kalekau, or Kabledile. Shown a picture of a Yurok *shaped* stone maul for driving *wedges*, he says "Yes" because the Habenapo drove *stakes* with essentially *unshaped* stones held differently.

An informant of this sort, who is both suggestible and naturally slovenly-minded, is of course particularly liable to give wholly erroneous answers when elements foreign to his culture are inquired into. Hence his unique affirmations for nos. 104, 140, 300, 421, 462, 757, 54, 349, 395, 723, 876, and his shared ones for 601, 53, 232, 398, 597, 829, 632, all of which are valid elements elsewhere in California. The consistency with which other Pomo denied these shows that such elements can be used in questioning; his half-cocked answers show that they must be used with double care.

Confusions caused by the informant's listening to only part of the question seem to be nos. 129, 253, 977, 1000, 54, 188, 384, 449, 527, 533, 798, 847.

On the other hand, he supplied some positive elements, apparently valid, which were misunderstood and denied elsewhere, or which, after him, were confirmed by Yokaia and denied by Elem, to the prejudice of the latter's record of authenticity. Such are: nos. 158-363, 480, 661, 41-42, 352, 599, 875, 900, 1049, 752. Some of these are new to Californian ethnography.

In short, we learn by mistakes. No one realizes better than the authors the imperfections of this initial undertaking. The main faults must always be the ethnographer's, not the informant's. Now that we have had the experience of field work and analysis, we are confident that we could construct a far more representative Pomo list and get it answered a great deal more reliably than the present one. This exceptionally accentuated Habenapo individual helps to reveal the kind of questions that should not be asked, or how they should not be formulated, and the kind of answer or informant that one needs to beware of or to check by cross-examination.

We have also recomputed the Q_2 coefficients of Habenapo, as corrected by the partial data of 1935, using the same 675 traits as before. The results are not very markedly changed from those in the text. With only some 80 suspicious plus traits inquired into, and only 15 of these changed to minus, the correction is bound to be only a fraction of that which would have resulted from a whole new list from a good informant.

Rank		Cor- rected by 1935	1934 Uncor- rected	Rank		Cor- rected by 1935	1934 Uncor- rected
1	Shigom.....	78	78	6	Lake Miwok.....	69	71
2	Yokaia.....	73	73	7	Elem.....	67	67
3	Koi.....	71	69	8	Kacha.....	63	61
4	Shanel South.....	71	70	9	Shanel North.....	59	58
5	Hill Patwin.....	70	65	10	Mukanno.....	56	58

BIBLIOGRAPHICAL ABBREVIATIONS USED

BAE-B Bureau of American Ethnology, Bulletin.

PMM-B Public Museum (of the City) of Milwaukee, Bulletin.

UC-PAAE University of California Publications in American Archaeology and Ethnology.