California Ceramic Traditions: An Introduction

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More than ninety years ago, Alfred L. Kroeber, the intellectual forebear of all present-day California archaeologists, summarized what was known about California ceramics:

> The distribution of pottery in California reveals this art is surely due to Southwestern influences. It is practiced by the Yuma, Mojave, and other Colorado River tribes; sporadically by the Chemehueve; by the Diegueño, Luiseño, Cupeño, Serrano, and Cahuilla; probably not by the Gabrielino; with the Juaneño doubtful. A second area, in which cruder pottery is made, lies to the north, apparently disconnected from the southern California one. In this district live the southern and perhaps central Yokuts, the Tübatulabal, and the Western Mono [Monachi]. This ware seems to be pieced with the fingers; it is irregular, undecorated, and the skill to construct vessels of any size was wanting. The southern Californians tempered with crushed rock, employed a clay that baked dullish red, laid it on in thin spiral coils, and smoothed it between a wooden paddle and a pebble. They never corrugated, and no slipped ware has been found in the region; but there was some variety of forms—bowls, jars, pots, oval plates, short-handled spoons, asymmetrical and double-mouthed jars, pipes—executed in a considerable range of sizes. Designs were solely in yellow ochre, and frequently omitted. They consisted chiefly of patterns of angular lines, with or without the corners filled in. Curves, solidly painted areas, and semi-realistic figures were rarely attempted. The ware was light, brittle, and porous [Kroeber 1922:276].

Much more has been learned about California ceramic traditions through four human generations of research subsequent to Kroeber's assessment, yet this subfield of archaeological study is only just leaving its infancy. As guest editors of the *Pacific Coast Archaeological Society Quarterly (PCASQ)*, we are pleased and proud to have assembled 20 papers on ceramics from Native California. Contributing authors include seasoned professionals as well as younger scholars. The present collection of papers pushes the California ceramic envelope chronologically, geographically, and thematically. The current work offers more diverse studies on aspects of California ceramic technology in its varied forms and from more parts of the state than does any previous publication. The present "Introduction" begins with working definitions of terms and concepts that recur in the following papers. We then review some research themes, goals addressed, and methods employed by the contributors to the three *PCASQ* double-issues making up *California Ceramic Traditions.*

Terms and Concepts

California

The geographic coverage of the papers in our three sequent *PCASQ* double-issues runs from the Pacific

littoral to the eastern California deserts and from Baja California in the south to the Cascades in the north. Culturally, there are other "Californias" that have been recognized, some larger than the modern political entity, but some smaller. The state's modern bounding line to the south is of course an abstraction; prehistorically, as well as historically, people very similar to each other lived to the north and south of the modern political boundary. Prehistoric Baja California cannot be distinguished from Alta California by strictly archaeological means any more than can the modern population of both areas can be separated by anything other than nationality.

Similar situations occur at the modern state's northern boundary, where on the west, northwestern California's Native peoples cannot be archaeologically distinguished from those of the southern Northwest Coast culture area in what is now Oregon. To the east, Native cultures of the Cascades in California are very much like those of areas to the north. California's northeastern political boundary is simply an abstract line running through the sagebrush of the western Great Basin, where the desert peoples of adjacent Nevada and eastern Oregon were not so different from the Native Californians to their west and south.

Far to the south at the Colorado River, California confronted the westernmost extent of the greater Southwest culture area. In fact, a feeble foothold of the Southwest culture area was established on the Colorado's western bank. A small satellite of Southwest semi-urban Fremont culture was also established to the north in southern Nevada, and even a Southwest turquoise mining enclave developed far to the west of the Colorado River in the interior of California's San Bernardino County.

For the purpose of better understanding Native California ceramics, we venture beyond the modern political limits of our state. We believe a prehistorian doing research out of Crescent City, Needles, Susanville, or Independence to be no less a California archaeologist than one based in Manteca or Malibu. We also see no contradiction in placing ceramic discoveries from Siskiyou County within the same series of studies as those from coastal Los Angeles County; both fit within our own broader concept of Native California. Indeed, were Alfred L. Kroeber alive today, we think he would probably agree that the California culture area boundaries he proposed nearly a century ago (Kroeber 1925) should be subject to movement, either expansion or contraction, as one goes back in time from the ethnographic present. We would also like to think that he would accept such revisions in light of the increasing body of archaeological evidence, especially that bearing on California ceramic traditions, that was unavailable to him at the time of his writing.

Ceramic

An "artifact" is best defined as any object made, modified, or transported by human agency which cannot be confused with an accident of nature. Naturally baked clay objects resulting from brush or forest fires are not artifacts, simply accidents of nature. Natural clay awaiting removal by a prehistoric potter is not artifactual, yet that same clay once inside a burden basket being carried back to a processing station is. Ceramic artifacts in California can be intentionally modeled, assembled, or simply the by-products of some other manufacture.

For convenience we believe that Native California ceramics are best separated into three conceptual evidence categories: (1) pottery, (2) figurines, and (3) other ceramic artifacts. While all pottery and figurines are, of course, artifactual, the third category incorporates a wide range of ceramic objects (e.g., smoking pipes, net sinkers, slung shot, hand warmers, artificial cooking "stones," etc.) that are neither pots nor figurines. Our three categories exclude other clay objects and features such as architectural daub, clay house floors, and clay linings of fire pits and earth ovens.

Some students, including some of the authors in the following pages, make an interpretive distinction between "baked" and "fired" clay, the dividing line between which may be simply a matter of maximum temperature achieved. There is no consensus or hard-and-fast dividing line between "baking" versus "firing" clay in ancient California, regardless of whatever temperature might be selected today to analytically distinguish one from the other. Any such distinction discovered through modern laboratory analysis was invisible to the ancients, who simply knew that ceramics fired longer and/or hotter tended to be harder than those fired for shorter periods or with less fuel. At this juncture it should also be remembered that many California ceramic objects were never subjected to either hardening method, simply sun-dried. Most, but not all, of these latter are now archaeologically invisible.

Some of the most unusual and compelling of California's ceramic artifacts are the "artificial stones" of baked or fired clay, substituted where lithics were rare or unavailable. While at least some of these ceramic artifacts, such as substitute cooking stones, were habitually used by women and we assume made by them, others, such as substitute projectiles, were exclusively associated with men; the logical assumption is that these were produced by males.

Ceramic figurines, three-dimensional and portable, were all representational, but some are so conventionalized, crude, or damaged as to defy confident interpretation. Despite a long history of scientific interest in California ceramic figurines (Meighan 1953), their meanings to us today are in most cases as elusive as those of two-dimensional rock art. If few California ceramic figurines can be identified as to representation or specific function, all nevertheless retain the same significance as evidence of ancient intellectual culture as does rock art.

In some parts of Native California, pottery was a very common form of ceramic evidence, having great variety of forms and functions. Pottery by its very definition connotes pots, or, perhaps more accurately, ceramic vessels. Pottery can coexist with ceramic figurines, even extending to figurine elements (*adornos,* appliqués, etc.) as component attributes. Therefore, in some California locations both classes of ceramic evidence were made by the same people contemporaneously. Yet, these two kinds of ceramics can and did exist completely independently of each other in other parts of California, sometimes separated by great chronological and geographical distance.

Not all ancient Californians who worked with clay were potters; over space and time, very few of them were. And, within each California archaeological context of discovery, be it of pottery, figurines, or artifacts, we believe that ceramics might have been made by only one or two families from within the entire ancient community. We also are convinced that nowhere in ancient California was ceramic production practiced to the exclusion of all the other standard hunting and gathering activities performed by all families. Only a minority of the archaeological peoples making a wide range of very different kinds of ceramics in Native California, those who made pots, most usually females (Figures 1 and 2), can accurately be termed potters.

Many different kinds of Native California ceramic evidence are evaluated in the assembled papers. Most of the following studies concern only one of the three categories noted, to the exclusion of the other two. This underlines a fact we hope is made abundantly clear in the following pages, that each of our three conceptualized categories of ceramic evidence have different histories, different lifespans, and different, not infrequently multiple, points of origin. These categories are not necessarily linked in any geographical, evolutionary, or functional way.

Traditions

The ceramic evidence discussed in the following papers dates from the Early Archaic period to the

Figure 1. Western Mono woman making pottery. Photograph by Thomas T. Waterman, 1905-1930. Courtesy Hearst Museum of Anthropology, UC Berkeley.

Figure 2. Outdoor portrait of Mariquita Cuero (Quatsch) of the Campo Band of Kumeyaay sitting with a group of ollas that she made. Note wattle and daub wall of house behind. Photograph by Edward H. Davis, 1918. Courtesy of the National Museum of the American Indian, Smithsonian Institution.

present. We speculate that California Paleoindians might have experimented with baked or fired clay for at least some of the same reasons later people did; we believe that archaeological evidence for this potential earliest usage simply has not yet been found or has not been correctly recognized. There may very well be a preceramic horizon in prehistoric California, a time before Native peoples made any ceramic artifacts or ceramic figurines. If so, this is not the same as California's pre-pottery horizon, which ends at different times in different parts of what is now our state. As archaeologists, we are fascinated by prehistoric ceramics, yet as culture historians, we are also drawn to ethnohistoric and ethnographic examples at the other end of the chronological spectrum.

We did not insist that our contributing authors rigidly adhere to a single set of chronological terms, definitions, or even spellings, thus leaving each free to employ those terms with which they were most comfortable. In terms of chronological but not evolutionary sequence, amorphous clay objects, often of unknown function, probably came first. Ceramic figurines most likely came next, while recognizable pottery was de-

veloped last of all. In some parts of California, all three ceramic iterations are found contemporaneously within the same area, while elsewhere they exist separately from each other. All three appear to have been independently invented, and probably numerous times. Within each local iteration, if enough archaeology has been done, a unique life span can usually be discerned, frequently unconnected with other known usages of that same evidence category elsewhere within California.

There was not a single California ceramic tradition, but many. "Artificial stones" substituting ceramics when and where suitable lithics were locally unavailable was a Native Californian invention. Ceramic figurines were likewise invented within ancient California in various places without any obvious external stimulus. In other locations, ceramic figurines can be linked to broader cultural patterns far beyond the limits of California as we have defined it. Finally, at least three "foreign" sources of pottery inspiration are sometimes claimed for different parts of the California culture area; these are the Great Basin, the Southwest, and the Plateau areas, and all three sources of diffusion may in fact be correct for each separate California receiving area. Yet, pottery in Native California cannot be dogmatically considered an exotic import, for it may also have been independently invented here, perhaps even multiple times. For all of these reasons, our plural usage of the term "traditions" is both essential and necessary.

Ceramic Research Goals, Methods, and Themes

Typology

The first step in any kind of ceramic research is to determine what has been found and what it should be called. Both of us learned the type:variety system as applied to Maya and then to Mesoamerican ceramics in general. This typological system became the international standard in the 1950s and was itself derived from earlier application to the ceramics of the American Southwest beginning as early as the 1920s and 1930s. Despite its many flaws, it allows students speaking different languages, living or working in different countries, even active in different decades, to identify the same thing by the same identifying terms, then to easily plot chronologically or geographically distant variants. Unfortunately, the type:variety system depends primarily upon attributes of style, conspicuously so scarce in California pottery as to be nearly absent. The type:variety system of the American Southwest and Maya area, consequently, is unworkable in California.

Without uniform standards of description, different archaeologists may describe identical ceramic evidence differently. Pottery descriptive terminology in the English language was standardized by Anna O. Shepard (1956) nearly 60 years ago, and we believe that her thoughtful review of the subject should be the starting point for all California ceramic students. Another useful source for the beginner is by Owen S. Rye (1981). We also feel that an important skill that all competent ceramic archaeologists must master as a component essential to accurate typological description is scientific illustration (cf. Olin and Dillon 1985; Becker 1985a, 1985b).

A different problem in considerations of ceramic typology is the tendency of ceramic archaeologists to be either lumpers or splitters. The former are accused of excessive conservatism or lack of imagination by the latter, while the latter are sometimes accused by the former of inventing as many different types as potsherds encountered.

Beginning ceramic archaeologists must accept the fact that others who have preceded them may have through trial and error and through extensive comparison already arrived at the best and most neutral ceramic descriptive terms that can be applied to newly discovered evidence. Functional ascriptions for types are best avoided, for embedded within each is the

archaeologist's subjective interpretation. Calling an incurving-sided bowl a "cooking pot" may be in fact correct for one part of that specific vessel's lifetime, but such may obscure its final use as a cremation repository. An incorrect functional term often becomes transmuted to a misleading typological identifier, and once entered into the literature, it becomes very difficult to eject or correct.

At least two of the following papers, one by Griset and one by May, attend to typological definition. For more than 40 years, May worked to enforce the use of correct terminology when describing the prehistoric pottery of southernmost California. His paper revisits this important commitment, demonstrating that surface surveys within parts of California where pottery can be expected must proceed only after a firm grasp of typological distinctions has been gained. Griset's study focuses on intensive research at but a single wonderfully productive archaeological site, where a diversity of ceramic types with very different cultural, chronological, and geographic associations can be identified. Here, no less than in any surface survey context, the archaeologist must be prepared to distinguish different specimens from each other on typological grounds regardless of their stratigraphic proximity.

Distribution Studies

A second step in much of ceramic research is plotting the spatial distribution (intersite and/or intrasite) of the particular category of ceramic specimen, be it pottery, figurine, or other ceramic artifact. The majority of the following papers wholly or partly may be considered ceramic distribution studies. Joanne M. Mack, the acknowledged expert on prehistoric ceramics of the southern Cascades and Modoc Plateau regions, reviews evidence from one of the least-known and least-studied ceramic regions of California. Her paper reminds us that the Pit River country remains one of the most productive areas for future archaeological, ethnohistoric, and ethnographic research within California. Gregory White does an exhaustive job of inventorying ceramic evidence within the Sacramento/San Joaquin River Delta region, the greater Sacramento Valley and adjacent North Coast Ranges, and the northern Sierra Nevada foothills. Of particular interest is White's discussion of "artificial stone" ceramic tools in the stone-poor Delta area.

Michael J. Moratto offers an incisive and comprehensive review of ceramics from the southern Sierra Nevada and adjacent San Joaquin Valley areas. Moratto's inventory shows us just how widespread pottery is throughout this territory. Wendy Pierce then takes us east of the Sierran crest to the Owens Valley. Pierce's distribution study not only demonstrates a potential distinction between the pottery of the northern and the southern parts of the valley but also one between early and late pottery. Melinda Button then considers whether the enigmatic Fremont ceramic tradition of the American Southwest, already famous for having penetrated far to the west beyond the normally accepted boundaries of that culture area, in fact extended into prehistoric California. Gregory Burns and Barry Olson, Jr. attempt one of the very first uses of the computerized California Historical Resources Information System (CHRIS) site record attributes as a means of fine-tuning a ceramic distribution study within San Bernardino County. Very much a pioneering effort, this groundbreaking research reveals both the strengths and the shortcomings of ceramic attribute entry via computers, which has bedeviled archaeologists in laboratory contexts for six decades. We hope and anticipate that this paper will stimulate similar ceramic inventory efforts in other California counties.

Jerry Schaefer brings his extensive ceramic experience in Old and New World research to a distribution study for a part of California that is compelling for two very different reasons. Camp Pendleton is both rich in ceramic sites and resources, and it also has the benefit of being protected from pothunters by no less of a deterrent than the U.S. Marine Corps. Antonio

Porcayo M. then moves us south of the international border, sharing the results of his multi-year site inventory project. All the different ceramic areas he has identified extend northwards into U.S. territory, making his research entirely relevant to Alta California archaeologists. Finally, Hidonee Spoonhunter and Wendy Teeter's ceramic distribution inventory, based entirely upon a single museum source, reveals just how much information may yet lie on museum shelves in California. We hope that their study stimulates other archaeologists to re-evaluate the collections held within all California museums, both large and small, and anticipate that when such future work has been completed, the ceramic distribution map might be considerably expanded.

Ceramic Stratigraphy and Chronology

Recent ceramic archaeology in California calls attention to the fact that what appears on the ground surface of many sites is not necessarily what you get, ceramically, once you excavate. It is unwise to assume that prehistoric sites stratigraphically containing ceramic evidence will automatically feature similar evidence in surface contexts. The Lakeview site, described by Horne and Griset, contained absolutely no surface ceramic indicators, yet upon excavation produced what may be the earliest dated ceramic artifacts in California, if not the western United States. A similar situation applies to the Encino Village site, where, before Desautels-Wiley's involvement, an archaeologist had surveyed the property and stated that, based on surface indications, no prehistoric archaeological site was in existence. Only after excavations had been initiated were deeply-buried ceramics encountered, perhaps the oldest dated ceramic figurines yet known from California. A third and final example in the following papers of deeply buried ceramic deposits lacking surface indications comes from the Long Beach sites we ourselves describe. One of these sites, CA-LAN-2630, with comparatively abundant pottery associated with 55 radiocarbon assays, is now the best-dated, pottery-producing prehistoric site so far excavated in California.

High-Tech Laboratory Analysis

Two of the following papers may best be described as primarily high-tech laboratory analysis efforts. The first, by Jelmer W. Eerkens and Carl P. Lipo, attempts to date a number of archaeological specimens from the arid lands of eastern California through the TL (thermoluminescence) dating technique. The great benefit of this chronometric method is that, unlike radiocarbon dating, here the ceramic specimen itself is being dated, not some organic element completely separate from it that may or may not be associated. The second primarily high-tech laboratory analysis paper, by Gary S. Hurd and George E. Miller, is a painstaking effort focusing on fingerprinting a great many stratigraphic ceramic samples from but a single site on the California coast, revealing that the pottery from this archaeological site was in fact locally produced. Two more papers incorporate high-tech laboratory analysis as one of multiple research avenues bearing upon specific culture-historical questions. The first is by Schaefer who discusses prehistoric ceramics from a variety of sites; the second is by Panich and Wilken-Robertson, and it deals with a single study area spanning prehistoric, early historic, and ethnographic times.

Even the most amorphous ceramic sample can be subjected to high-tech laboratory analysis through characterization of its paste well beyond the visual acuity of the human eye. Paste analysis can be subdivided into that of the clay body itself and of the tempering agents employed. Once the vessel paste has been formally described, or "fingerprinted," it can then be compared to natural clay and temper sources. If the source is near the discovery location of the ceramic sample, the conclusion normally drawn is that the specimen was made locally. If the source is far from the ceramic sample's discovery location, then the usual conclusion is that it was imported. Cultural explanations accounting for

such importation include trade, theft, exchange, gifting, cultural diffusion, migration, warfare, and so on, but they are seldom, if ever, stated in absolute terms.

In light of the large number of archaeologists working in California, the great number of research institutions and research laboratories available to them, and the substantial amounts of money committed to laboratory analysis by the hundreds of cultural resource management projects authorized annually within the state, it is little wonder that high-tech laboratory analysis of ceramics is so highly advanced in California. But herein lies a potential trap; high-tech laboratory analysis is indeed desirable for California ceramic research, but it is neither automatically necessary nor must it be a precondition of initiating ceramic studies. All ceramic analysis must begin by direct visual inspection with the naked eye, regardless of whether or not an electron microscope is later employed. We should never forget that even the most significant chemical or petrographic indicators of today's high-tech laboratory were invisible and unknown to the ancient Native Californians responsible for the ceramic samples being tested.

Prehistoric-Historic Continuity and Discontinuity, Ethnographic and Ethnohistoric Survivals

We believe that it is critical for the study of any prehistoric technology, not just ceramics, to gain familiarity with historic period continuations of that technology. Many archaeologists in coastal California dismissed pottery found on archaeological surveys or even in excavations as simply the result of historic admixture, assuming it had to result from missionization. Yet, with more research at California sites containing both prehistoric and historic ceramic components, the more we realize that this old assumption is often incorrect.

Philip de Barros distinguishes between the prehistoric and historic iterations of a single, common, southern California pottery type at a single, carefully excavated multi-component site. This same type, with both prehistoric and historic variants, has been misidentified as to age in many other contexts, especially surface ones, where associated stratigraphic information was not obtained. Conversely, our own research on the coast reveals that in not every situation did a Late Prehistoric pottery tradition survive European contact into the early historic period. We attempt to account for the disappearance of one such ceramic tradition at LAN-2630 in Long Beach.

South of the international border, where a few small communities of Native California potters survive, Lee Panich and Michael Wilken-Robertson are engaged in ongoing research tracing changes in a prehistoric pottery tradition that has persisted into the present. The community of potters ethnographically studied has shown a wonderful adaptability to changing cultures and changing markets and is in no immediate danger of disappearing. Mexican archaeologist Antonio Porcayo M. is also extending his prehistoric inventory forward in time to incorporate at least some of the living people still producing ceramics within his study area who were possibly descendents from the same ancient cultures he has been recording.

In addition to the two examples just mentioned from Baja California Norte, we incorporate a third from Alta California reported on by David D. Earle and Darcy Wiewall. Their paper notes the final traces of a ceramic tradition among a Native group not normally associated with ceramic production. Important ethnohistoric evidence bearing on these final few potters who survived into the early twentieth century expands the coverage of the Native California pottery map, and presuming that such ceramic technology was a survival from the prehistoric period, this allows for its extension backwards in time.

Ethnoarchaeology and Replicative Experimentation

Ethnoarchaeology and the replication of past technologies are commonly practiced in places where

archaeologists encounter populations surviving from known archaeological antecedents still practicing ancient technologies. Ceramic ethnoarchaeology is usually regarded as exotic in California and much of North America, yet it is standard practice in the American Southwest and throughout Central and South America, where numerous traditional Indian pottery-producing communities still exist. Such opportunities, at least in the context of ceramic manufacture, became extinct in Alta California at least three generations ago, but they persist in a very few places in Baja California Norte. Our colleague Antonio Porcayo M. makes outstanding use of this research technique, commissioning modern Indian potters to make whole vessel reconstructions based on fragmentary archaeological specimens, which has the happy facility of creating three-dimensional "teaching tools" allowing archaeology students to overcome the limitations of sherds or two-dimension reconstruction drawings for initial familiarization.

Conclusions

In closing, we return to what we consider the single most important lesson learned from the varied papers within the following three *PCASQ* double-issues. Many, if not most, of the different ceramic traditions described therein proceeded independently of each other and were not functionally, chronologically, or causally linked. A diversity of ceramic traditions appeared and disappeared in many different parts of California over a very long range of time; many were locally invented or adapted, and many went locally extinct. The appearance of our three *PCASQ* double-issues, if not signaling the maturity of California ceramic research, may at least connote the end of its infancy. We hope that the following contributions stimulate others now and in the future to continue expanding our knowledge of *California Ceramic Traditions* through time and space.

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insights. Senior editor Brian Dervin Dillon's mother, Allester Dillon (1925-2009), was a well-known professional California potter for nearly sixty years; *California Ceramic Traditions* is for her.

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