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The Status of California Archaeology in 1984

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I did not want to submit this book to a publisher until R.M.A., his student, and the Great Synthesizer had read it over and given me their constructive criticism. I got a copy of the manuscript to them in time for the anthropology meetings in Mexico City. We met in the G.S.'s room in the María Isabel. I had not been so nervous since my thesis defense.

The Great Synthesizer put me right at ease. "It's splendid," he said. "I've weighed the manuscript, and it must be a full 7 lb. There are only two or three spelling errors, and they're minor. You know, under different circumstances, it would have made an acceptable library dissertation."

The Skeptical Graduate Student shuffled his feet [Flannery 1976: 369].

The Archaeology of California. Joseph L. Chartkoff and Kerry Kona Chartkoff. Stanford: Stanford University Press, 1984, xix + 431 pp., 3 tables, 48 maps, 107 figures, 7 appendices, bibliography, index, \$32.50 (cloth).

California Archaeology. Michael J. Moratto, with contributions by David A. Fredrickson, Christopher Raven, and Claude N. Warren, with a Foreword by Francis A. Riddell. Orlando: Academic Press, 1984, xxxvii + 757 pp., 26 tables, 173 figures, 2 appendices, glossary, bibliography, 2 indices, \$68.00 (cloth), \$32.50 (paper).

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With the publication of A. L. Kroeber's *Handbook of the Indians of California*, 1925 became a landmark year for California anthropology. This work, the first statewide compilation of California ethnography, was for over half a century the only encyclopedic source on California Indians. The year 1984 assumes similar status for California archaeology with the publication of two books, each of which independently attempts to make sense of the state's prehistoric record. Michael Moratto, with contributors David Fredrickson, Christopher Raven, and Claude Warren, has produced *California Archaeology*, while Joseph and Kerry Kona Chartkoff have written *The Archaeology of California*.

This reviewer's first impression, on reading the authors' statements of purpose, was dismay at a possible redundancy of effort represented in the production at the same time of two major books on the same subject, both of which were apparently directed at an audience composed of general readers and nonspecialists. For, as Moratto writes,

California Archaeology is designed first as an introduction to the topic for students and general readers, and next as a compilation of current knowledge for archaeologists who are not California specialists [p. xxvii].

whereas the Chartkoffs state that *The Archaeology of California* is

... written as a general introduction to the state's archaeological record, especially for non-archaeologists. It is intended to interpret the record from an understandable,

unified perspective that makes sense to the nonspecialist. This framework should also allow scholars who study the archaeology of other parts of the world, particularly other areas of North America, to compare more readily California's archaeological record with that of their own areas of research [p. x].

At first one would wonder why the publishers, Academic Press and Stanford University, would risk direct, head-on competition for the somewhat limited California market. It was needless to have been concerned, since the books are totally different as regards their organization and content. Interestingly, both far exceed their authors' modest statements of intent, and there is much to be gained from each by California specialists.

The Moratto book, with some 2,200 bibliographic entries is truly encyclopedic in scope. It is so densely packed with data on California archaeology that it is, in reality, a handbook. Its great strength is that for the first time, a vast wealth of generally unavailable descriptive data is brought together between two covers. Its weakness is that the result is more of a compilation and a catalog than a true synthesis. Contrary to Moratto's stated intent, I would argue that his volume will become an indispensable sourcebook or reference manual for archaeological specialists and students in California, but that it will be far too detailed to attract the general reader. Conversely, the Chartkoff book sacrifices particularistic detail in favor of delineating broad adaptive and cultural patterns. As an interpretive synthesis of California's archaeological record it thus focuses less on description and more on explanation, and will appeal to an audience including both specialists and general readers. Together, both books are summary statements representing two complementary intellectual traditions in California archaeological studies, one particularistic, the other processual.

MORATTO'S CALIFORNIA ARCHAEOLOGY

Moratto states that "*California Archaeology* is chiefly a study of culture history," normative in focus, dealing primarily "with culture classification and the typical or diagnostic traits of archaeological manifestations" (p. xxiv). He notes that processual interpretation "or the explanation of why cultures developed as they did" is not a primary focus in his book. Moratto does, however, express the hope that his work will function as "a working model to show how the pieces of California's past may fit together."

The book has eleven chapters. The first three, "California's Natural Setting," "The First Californians," and "Early Cultures," deal with California as a whole, while Chapters 4-10 examine California's archaeology, region by region. These chapters are written in similar fashion, with each sequentially describing the Natural History, the Native Cultures, the History of Archaeological Investigations, and the content of both regional and local archaeological sequences for the particular area under examination, and each chapter closes with a summary essay. Moratto's attempt at an overall synthesis of California prehistory is contained in the book's final chapter, "Linguistic Prehistory." Here, relying heavily on data derived from dialect geography and historical linguistics taken with a heavy dose of conventional wisdom, the past 12,000 years are divided into six chronological periods, and the movements of language groups within each are inferred.

The first chapter, "California's Natural Setting," defines eleven geomorphic provinces within the state and describes their landforms, geology, and hydrology. This is followed by a commentary on the five principal lifezones thought to typify California and their characteristic plants and animals. The "Lifezone" concept seems rather out of date. Possibly

Moratto should have focused upon the vegetation associations instead, as these are the ones which have meaning to biologists today. This chapter is presented in a perfunctory manner and seems unrelated to the rest of the book, most of which is organized into very different regions based on cultural criteria. Each of the latter chapters opens with an essay on natural history. Environmental data are thus so scattered throughout the book that the impact is one of a somewhat redundant smattering of bits and pieces. For example, a diagram detailing Pleistocene and Holocene glacial oscillations appears in Chapter 2, while a diagram delineating reconstructed Holocene climates is presented and all but lost in Chapter 11, "Linguistic Prehistory." Perhaps the greatest weakness in Moratto's treatment of the natural setting is that so little attention is given to economic resources important to past peoples. In this regard, he presents a full page map of the rivers of California (Fig. 1.3), but the map is not made relevant by indicating which of those rivers had salmon runs. What the book needs is a chapter-length statewide treatment of the ecological determinants of California populations, perhaps along the lines of a greatly expanded version of Baumhoff's (1978) paper. This chapter also warrants the attention of a specialist author—such as Dwight Simons or James West—trained both in anthropology and ecology to provide an environmental statement that goes beyond reconstructions of plant lists, bestiaries, altitudes, and rainfall measures.

In Chapter 2, "The First Californians," Moratto deals with the state as a whole, describing numerous putative pre-Clovis "early man" sites for which various supporters have argued a Pleistocene context. These include Calico Hills, Santa Rosa Island, Rancho La Brea and Potter Creek Cave, as well as isolated finds, such as Los Angeles Man and the Yuha Burial, and all are given full critical treatment. The chapter provides

archaeologists a major service since it focuses close scrutiny upon these controversial assemblages and presents a full list of bibliographic citations for them.

In Chapter 3, "Early Cultures," Moratto again deals with the state as a whole, describing archaeological assemblages dated from 12,000 to 8,000 years ago. The 12,000 to 9,000 B.P. period is attributed to the Western Pluvial Lakes Tradition (WPLT) to which components from such localities as Buena Vista Lake, San Dieguito River, Lake Mojave, and the Mostin Site are assigned. The WPLT was first proposed by Bedwell (1970) to describe an early post-Pleistocene adaptation to lake, marsh, and grassland environments found in the western Great Basin. This concept has slowly gained acceptance among Great Basin scholars, but Moratto's is the first comprehensive use of this model to organize Californian materials. Moratto also tentatively identifies a Paleo-Coastal Tradition as a subdivision representing economic specializations within a broader cultural continuum of the WPLT. Components such as Rancho Park North in San Diego and the lower levels of Diablo Canyon in San Luis Obispo County are assigned to the Paleo-Coastal Tradition.

In the remainder of the book, California is divided into seven geographic regions with one chapter describing the archaeology of each. Local archaeological terminologies currently used are retained throughout each chapter. These chapters thus refer to "patterns and aspects" in the North Coast Ranges, "phases" in east-central California, "patterns and facies" in the San Francisco Bay area, "complexes" in the northern San Joaquin Valley, and "periods and traditions," subdivided into "phases," for the Santa Barbara Channel. Moratto's two-page concordance of these California sequences (Fig. 4, p. xxxii) stands as a testament to the Balkanization of California's past by generations of "Lone Ranger" archaeologists. In my opinion, it is

unfortunate that Moratto has not proposed a standardized archaeological nomenclature for the state. This might easily have been done in a second concordance chart in the final chapter in which the existing and the proposed schemes could have been compared and discussed. Such a trial formulation would have provided a model against which local scholars could test their archaeological "realities." Moratto's failure to do this is a major reason that his end product currently is a good encyclopedic handbook, rather than a thorough synthesis. With this the case, I encourage him to make the taxonomic "plunge" in the next edition.

Chapter 4, "South Coast Region," incorporates a comprehensive discussion of local archaeological sequences occurring between Morro Bay and San Diego. The major theme here is one of cultural continuity, with Moratto accepting an *in situ* development of the Encinitas (millstone) Tradition out of Paleo-Coastal (WPLT) antecedents. Citing Chester King's (1981) study of stylistic change in the Santa Barbara Channel region, continuity is accepted from the Encinitas to Campbell (formerly Intrusive Hunting) Tradition which ultimately evolved into the Chumash Tradition. Thus, the Encinitas Tradition of the South Coast Region is seen as being produced by speakers of Hokan languages and as part of a 7,000-year cultural continuity characterizing the Santa Barbara Channel sub-region. To the south, however, this continuity was apparently truncated after 1500 B.C. by the nonsynchronous arrival of small groups of people speaking languages subsumed by the Takic subfamily of Uto-Aztecan.

Moratto's Chapter 5, "Central Valley," and Chapter 6, "San Francisco Bay and Central Coast," along with David Fredrickson's Chapter 10, "North Coastal Region," ultimately derive much of their structure from chronologies originally developed from assemblages coming from sites found within a

75-mile radius of San Francisco Bay. Since they all incorporate James Bennyhoff's seriation charts and are so closely interrelated, I see no good reason for the isolation of Fredrickson's chapter toward the end of the book. The major theme running through all three of these chapters is abandonment of the Central California Taxonomic System (CCTS) in favor of Fredrickson's taxonomy based on patterns and aspects. Moratto writes in this regard:

Because the CCTS was composed of discrete, sequential units, it obscured gradual changes through time. Consequently, the process of cultural evolution could not be represented by the static taxonomy. This was reflected in a concern for "diagnostic" traits rather than broad patterns of behavior. That is, the CCTS led to the reconstruction of particulars in ever more detail without much attention to the development of settlement patterns, economic systems, or social organization. It now seems clear that central California prehistory was far too complex and dynamic to have been represented by a monolithic scheme such as the CCTS [p. 199].

What Fredrickson felt was needed in place of the CCTS was an integrative unit without temporal implications. This was achieved with the concept of "patterns," which are defined as archaeological units representing fundamental economic, technologic, and often social continuities occurring over large areas and long intervals of time.

The establishment of a new taxonomic system for Central California stands as a vindication of the concepts originally advanced by Bert Gerow, who has argued that the Early San Francisco Bay Culture (now Berkeley Pattern) is coeval with Heizer's Early Horizon in the Sacramento-San Joaquin Delta (now Windmiller Pattern) with a slow convergence occurring over time. Fredrickson's taxonomy clearly accommodates and incorporates Gerow's views. As Moratto, Fredrick-

son, and James Bennyhoff see it, the Wind-miller Pattern is linked with the arrival of Utian (Miwok-Costanoan) peoples from outside California. The Berkeley Pattern represents an Utian development in the San Francisco Bay region, with subsequent spread of Miwok-speaking groups north to Clear Lake and eastward to the Sierra Nevada. The Augustine Pattern (formerly Late Horizon) is seen as having been stimulated by the southward expansion of people speaking Wintuan languages into the Sacramento Valley. Thus the long-held view that the Early Horizon was an archaeological manifestation of speakers of Hokan languages and the Middle Horizon represented the arrival of Penutian speakers is no longer tenable. In addition, since the Middle Horizon Penutian arrival has been traditionally linked to the introduction of acorn processing in Central California, considerable reevaluation of the data is now required.

South of San Francisco Bay, the Fredrickson taxonomic scheme has been expanded to accommodate archaeological materials found along the Central California coast. Following Breschini and Haversat (1980), the Monterey Pattern is seen as representing Costanoan speakers (Penutian) whereas the Sur Pattern is identified with the ancestors of the Esselen (Hokan). A postulated general replacement of the Sur Pattern by the Monterey Pattern within Costanoan territory fits the old linguistic model of Hokan displacement by Penutians, but needs much more confirmation. As no artifactual assemblages have been published in support of these patterns, their definition seems premature.

Chapter 10, "North Coastal Region," by David A. Fredrickson is a masterful treatment of a land containing many anthropological contradictions. Ethnographically it is the best-known region in California, but very little archaeological work has been done north of Clear Lake. Given the ethnolinguistic com-

plexity present in northwestern California, the prehistoric record may likewise ultimately prove to be the most complex in California. It is fortunate that Fredrickson has been able to establish his taxonomic scheme in this area, before much work has been done, since the last 1,500 years of North Coast Range prehistory will probably eventually prove to be an era in which many coeval peoples repeatedly encroached upon, displaced, and sometimes merged with one another. Fredrickson's scheme was designed to accommodate such complexity and, as noted, there is no more complex region in North America in which to test its validity.

Moratto's Chapter 7, "Sierra Nevada," subdivides this region into northern, central, and southern subregions. For the northern Sierra, he has taken a firm position on the Martis culture, stating that it "is not ancestral to Washo (Kings Beach) but may represent Maiduan prehistory . . ." (p. 303). He describes western slope assemblages from Auburn, Oroville, and Bullards Bar reservoirs in support of this argument. This assertion will likely be a hotly debated issue among Sierran scholars. Makoto Kowta, for instance, strongly argues a Hokan continuity from ethnographic Washo to Kings Beach to Martis, and with less certainty back to a millingstone horizon. Other researchers, including Michael Rondeau, have questioned the legitimacy of the loosely defined Martis concept. As a result, we must determine whether the participants in the debate are looking at the same assemblages before this issue can be clarified. For the Central Sierran subregion, Moratto relies heavily on his own detailed work at Buchanan and New Melones reservoirs. He observes that the southern Sierra subregion, though heavily surveyed, has a poverty of published excavation reports and is consequently less well understood than the other subregions.

Claude Warren's Chapter 8, "Desert Re-

gion," is an excellent description and synthesis of the vast archaeological literature from southeastern California. Warren defines a series of five named temporal periods into which his discussion of the numerous local sequences is subsumed. His Period 1, Lake Mojave, is not discussed since it falls under the purview of Moratto's Chapter 3, "Early Cultures." This prevents Warren from discussing manifestations of the Western Pluvial Lakes Tradition in the context of later developments, an unfortunate situation, for Warren clearly postulates that the Pinto Basin Complex evolved from the hunting complex of the Lake Mojave Period. Warren's Periods 2 through 5 are: Pinto, Gypsum, Saratoga Springs, and Protohistoric. Intrusive Anasazi and Hakataya influences, and finally a Numic intrusion, are recognized as existing in the Saratoga Springs and Protohistoric periods. Warren's treatment of the "Pinto Problem" in which he opts for a long chronology, seeing the "Pinto Assemblages" (including both coarse Lake Mojave Pinto points and the finely worked Pinto Basin specimens) as representing a long and continuous development is notable. Warren does not discuss the linguistic implications of the long cultural continuity that he recognizes as being present in the northwestern Mojave Desert from the Lake Mojave Period through Saratoga Springs Period.

In Chapter 9, "Northeastern California," Christopher Raven's success in making sense of this region is somewhat limited by a narrow and artificial definition of its boundaries. The publisher's decision to limit the scope of the book to archaeological materials recovered within the modern political boundaries of California becomes untenable in the northeast which has long been regarded as a primary entry route for Great Basin and Plateau peoples coming into California. Important issues such as the Penutian intrusion into California cannot be dealt with if the

archaeological universe ends in Surprise Valley, just west of the Nevada state line. For example, Eugene Hattori, in a major monograph (1982) detailing his analysis of central California-related materials excavated from caves at Falcon Hill, Nevada, has argued that the northwestern Great Basin was occupied by Penutians prior to the Numic expansion. Although Falcon Hill is less than 50 kilometers east of the California border its existence is only briefly mentioned in Chapter 11. A critical discussion of the Falcon Hill materials would have provided a broader context for Raven's description of the Karlo-site assemblage from the California side of the state line. A full discussion of the Numic expansion into northeastern California likewise requires a consideration of other Nevada assemblages. This includes my own work in Nevada's High Rock Country, 50 kilometers east of Surprise Valley, which provides a cultural sequence of excavated assemblages dating from the Western Pluvial Lakes Tradition to the historic period complementary to that of O'Connell's from Surprise Valley. In closing, northeastern California scholars currently await the appearance of Jerald J. Johnson's doctoral dissertation which promises to be a major synthesis detailing fifteen years of excavation and survey in California's northeastern region. Thus, by the time Raven rewrites his chapter for the next edition, he will have much more grist for his mill.

Moratto's Chapter 11, "Linguistic Prehistory," advances a working model showing how California's complex linguistic mosaic may have developed. He begins with a general discussion of each of the six major linguistic groupings in California: Hokan, Yukian, Penutian, Algic, Athapaskan, and Uto-Aztecan. He then defines six arbitrary periods of time to structure his discussion of linguistic prehistory (10,000-6000 B.C.; 6000-4000 B.C.; 4000-2000 B.C.; 2000 B.C.-A.D. 1; A.D. 1-1000; A.D. 1000-1850). Within each time

period, he systematically discusses postulated movements and subdivisions of each language grouping and attempts to identify its archaeological correlates. A full-page linguistic map accompanies each of the six periods. These essays grow in length, period by period, in direct proportion to their recency. In many ways this truly creative chapter is the most important in the book, for it constitutes the only integrative synthesis of California's prehistory made as a whole. Moratto correctly begins this discussion by noting that "California was neither an island nor a cul-de-sac, and its linguistic configuration can be understood only with reference to a larger sweep of prehistory" (p. 543). However, as noted above, his volume contributes to a sense of insularity by limiting its archaeological discussion to materials found within the political boundaries of the state. Subsequent editions thus need to deal more with external archaeological connections, especially those found in southern Oregon and northwestern Nevada.

CHARTKOFFS' *THE ARCHAEOLOGY OF CALIFORNIA*

In my opinion, the Chartkoffs have produced the first true synthesis of California archaeology, including both the prehistoric and historic period. Whereas Moratto has admirably described the "what," "when," and "where" of the archaeological record, the Chartkoffs have focused on the "why," providing an analysis and an explanation of California's archaeological record in terms of process rather than local particularisms. To accomplish this, they have de-emphasized detailed local expertise in favor of focusing upon linkages and shared themes between broad adaptive cultural patterns. Change is explained in terms of evolutionary theory and formal cultural ecology.

As a trial formulation of California archaeological data using evolutionary cultural ecology, the book is a pioneering effort. The Chartkoffs did not attempt to write a refer-

ence book, and those seeking one will find their work inadequate. Instead, they have attempted to teach rather than report, showing how archaeological inferences are drawn and how bridging argumentation is employed. In some ways their book represents an introductory course in archaeological anthropology using California as a test case. Their book thus gives one a bold picture of California archaeology which is much more than the sum of its parts. In doing this, however, they have used far more mortar than bricks, and one may justly wonder how much of their interpolation and extrapolation is realistic. Conversely, Moratto's particularism produces a picture that is somewhat less than the sum of its parts, since the numerous bricks came to him in nonstandard sizes from hundreds of suppliers, and thus one must legitimately wonder how many of these bricks are half-baked and crumbly.

Like Moratto, the Chartkoffs limit the scope of their work to the political boundaries of the state. Unlike Moratto, they have written a book that can be profitably read cover to cover by a general reader. Whereas the Moratto book is written in a distant, impersonal, omniscient voice, the Chartkoffs' regular use of "we" brings life to the text.

The Chartkoffs' book is organized in a series of four broad sequential periods, each covering all of California. They argue that "professionals elsewhere treat California as an enigmatic exception to the general course of New World prehistory" (p. 6). Because of this, they have organized the California data in terms familiar to most New World archaeologists: the Paleo-Indian, Archaic, Pacific, and Historical periods. Although the term "Pacific Period" is newly coined, they regard it as being "comparable to periods of the same general age that have been defined in other areas, such as the Pueblo Period in the Southwest or Woodland Period of the Great Lakes. In this way California archaeology may be viewed in more general terms while still

recognizing the traits that make it unique" (p. 6).

The introductory chapter is directed primarily at the interested general reader. It discusses the value of the archaeological record, the traditional subdivisions of anthropology, and the assumptions upon which archaeological interpretations are based. The major pervading message in this chapter is that, "archaeological data need interpretation in order to be given meaning and that interpretation can vary considerably depending on what is assumed and emphasized" (p. 6). As the Chartkoffs further note:

We subscribe to the notion that when archaeologists reconstruct the past, they also explain how and why past cultures looked the way they did by drawing attention, at least implicitly, to those features that they feel influenced the course of cultural history. Though archaeologists may agree about the data of a particular area or period, they frequently disagree about the factors that produced the data. In this study we suggest the elements we feel were most influential not only in shaping the past cultures of California, but also in producing change in them over time. We have tried to make these explanations consistent for the entire archaeological record, from the earliest Paleo-Indian settlement through the Historical Period, by combining environmental features, conscious or unconscious strategies of adaptation to the environment, and changes in technology and the organization of labor. We focus on the kinds of survival and subsistence problems faced by cultures in each period, the varying patterns of adaptation they developed to surmount those problems, and the consequences of the choices that were made [pp. 17-18].

Chapter 2, "The Paleo-Indian Period," as in the case with each of the three subsequent chapters, begins with an extended vignette. We are asked to visualize a scenario consisting of a shallow brackish lake 12,000 years ago in southeastern California, with a hunters' camp situated on a gravel terrace near the shore.

From this, the Chartkoffs develop a synopsis which merges archaeological and ecological data with ethnographic analogy. The vignette is hardly Micheneresque, but it establishes a memorable picture in which numerous details and anthropological concepts are integrated, as the following highly abstracted quotations indicate:

Every five to ten days the camp's meat supply begins to run low The boys' father rises suddenly and in the same motion hurls his spear The spear is harpoon rigged. It is hafted into a foreshaft that has been set into a socket A leather thong ties the two parts together so that the fleeing mare drags the shaft after her The body is too heavy to carry back to the camp whole The hunters skin the body and lay the meat cuts on the hide The wife and daughter collect firewood Eventually the difficulty of finding firewood is one factor among several that will persuade the group to move their camp The children practice stalking lizards, armed with sharpened sticks for spears . . . and pick green plants to use for a pretend meal The wife is still nursing her baby . . and therefore abstaining from sexual relations with her husband . . . They follow the passage of time by noting the points on the horizon, where the sun rises and sets in conjunction with the solstices and equinoxes The fall meeting is also a time for feasting, games, and gambling Marriage agreements are made and weddings held most often at this time Young people rarely meet anyone except their own families. Only when several families meet can parents find eligible partners for their teenagers

In this account one recognizes scenes of children's play from ethnographic films, while the processing of meat from large animals incorporates the zooarchaeological phenomenon known as "schlepp effect." The fall gathering borrows heavily from Great Basin ethnography, while details concerning population control, depletion of firewood, the horizon calendar, and sundry other themes can be found scattered through anthropological liter-

ature. The Chartkoffs are thus committed to the belief that "although the data of archaeology are stones and bones, the goal of the archaeologist is to understand how ancient people behaved and perhaps how they thought and felt, for California's archaeological record was, after all, made by people; not potsherds and projectile points" (p. 18).

At the start of the book, the Chartkoffs introduce a number of themes, whose variations are developed throughout the rest of the book. They term the Paleo-Indians as "pioneers" who brought knowledge, skills, and technology with them. These pioneers selected only a very limited range of already familiar resources for exploitation among the vast number of possibilities available to them in California. Borrowing the concept of "focal economy" from the work of Charles Cleland (1976), the Chartkoffs develop a useful theme that helps to explain the Spanish colonization of California, since the Spanish were also pioneers with a focal economy.

Chapter 3, "The Archaic Period" (9000-4000 B.C.), again following Cleland's ideas, traces the development of a "diffuse" or diversified economy, represented by a carefully scheduled annual round, the development of specialized technologies, and the penetration of new ecological niches. Although the Chartkoffs did not attempt a complete coverage of the state, they illustrate the Archaic with a carefully selected sample of representative traditions. Two traditions are selected to illustrate the Early Archaic Period. These are the Lake Mojave and the San Dieguito traditions. To subsume these traditions, Moratto borrowed the Western Pluvial Lakes Tradition concept and defined his own Paleo-Coastal Tradition. Although the Chartkoffs did not acknowledge the existence of the WPLT concept, their omission seems of little consequence given the nature of their book. To typify the Middle Archaic, the Chartkoffs used the Encinitas, Borax Lake,

and Northeastern California traditions; while the Late Archaic is represented by the Wind-miller and Pinto Basin traditions.

Chapter 4, "The Pacific Period" (2000 B.C.-A.D. 1769), traces the transformations through which small groups of Archaic Period seasonal wanderers became large populations living in sedentary settlements, with cash-like economies and complex political organizations. The Pacific Period is marked by a return to a more focal economy, generally with two or three food crops serving as staples, these oftentimes derived from the penetration of new ecological niches such as riverine fishing, deep-sea fishing, and acorn processing. Pacific Period people could often exceed Archaic carrying capacity by the collection, storage, and redistribution of surpluses. This was facilitated by a greater emphasis on cooperative and specialized labor. The Pacific Period is subdivided into four subperiods with eight local traditions selected for illustrative purposes.

The major differences between Moratto and the Chartkoffs' approach are seen in the Chartkoffs' handling of the Martis Complex. They observe that Pacific Period economies could often support two distinct populations in locations where previously only one existed. Thus Archaic Period peoples following a seasonal-round economy needed to exploit both the Central Valley and the adjacent Sierra Nevada. However, during Pacific times, a system of permanent villages developed in the Central Valley along major streams. Foot-hill peoples, participating in another adaptive system, maintained winter base camps in the lower foothills and summer camps at higher elevations which had been used sparingly, or not at all, during the Archaic. The Chartkoffs identify the Martis Complex with the emergence of this upland adaptive system. In their concern with the transformation of adaptive patterns, they never deal with a primary concern of Moratto's, namely whether the

Martis people were Maiduan or Washo speakers.

The Chartkoffs conclude that Pacific Period cultures were vulnerable and unstable because "more complex systems can go wrong in more places, and a breakdown anywhere in the system will affect the system as a whole" (p. 330). Thus, the European invasion of California led to a breakdown of community infrastructure of native peoples, ending the trend toward the development of focal economies and bringing a shift back to diffuse adaptations by the simplest units of production, the individual and the family.

Themes developed in Chapter 5, "The Historical Period," include the breakdown of Pacific Period focal adaptations, the emergence of new pioneer settlements, the rise of urbanism, and the evolution of a multi-ethnic society. Subperiods during this time include the Hispanic, Mexican, and the Anglo-American. Illustrative examples consist of the Drakes Bay shellmounds, Mission *La Purísima Concepción*, Fort Ross, the Sepulveda and Ide adobes, Old Sacramento, and Somersville. A concluding chapter reviews the patterns and processes characterizing California's past and discusses future directions of archaeological research. Appendices include a history of California archaeology; a glossary of terms incorporated into several short essays; a listing of amateur archaeological groups; California college and university programs in anthropology, sites and museums for visiting; and rental films on California archaeology and ethnography.

THE STATUS OF CALIFORNIA ARCHAEOLOGY

Both Moratto and the Chartkoffs attempt to incorporate the history of California archaeology into their books. The result for Moratto is a chronicle scattered throughout the volume, listing who dug where and contributed to what local sequence. The Chart-

koffs relegate their history of the field to a thin appendix. None of the authors consider their own places in the great saga of paradigm shifts characterizing North American archaeology in general or California studies in particular. This situation is unfortunate, but understandable, for California archaeology is a small field. Thus one cannot say much about the current status of the field without engaging in the somewhat sticky task of tracing the thoughts and actions of individuals and peer groups through time. This task, though, is a necessary step to understanding the current status of the art.

As regards the careers of the authors, although Moratto never attended Berkeley, the course of his career was largely determined by events occurring there. The first modern generation of California archaeologists, including Robert Heizer, Franklin Fenenga, Adán Treganza, Richard Beardsley, William Wallace, and Bert Gerow, among others, began their graduate training at Berkeley just prior to the Second World War. Of these individuals, only Heizer finished his doctorate before World War II. He published 33 generally short reviews, notes, and articles between 1941 and 1945, and by the end of the war was the only established scholar amongst his age-set. In 1946, after a brief period as an instructor at U.C.L.A., Heizer was hired at U.C. Berkeley and remained there until his death in 1979. The rest of his age-mates tried to obtain or completed their degrees after World War II. Adán Treganza completed his doctorate in 1950 and was hired at San Francisco State College.

Michael Moratto grew up in Santa Rosa and attended Santa Rosa Junior College. He completed his B.A. in 1966 at San Francisco State where he was strongly influenced by Treganza, who, like Heizer, was a traditional culture historian. However, unlike Heizer, Treganza was an active participant in contract archaeology during the 1960s. The imprint of

Adán Treganza as a public archaeologist has been preserved in the careers of many of his students such as Thomas King, Rob Edwards, and Michael Moratto, all Charter Members of the Society for California Archaeology. Although Treganza produced numerous outstanding students, none of them was accepted into the graduate program in North American archaeology at U.C. Berkeley. Moratto never applied for admission to Berkeley, but instead did his graduate work at the University of Oregon where he studied under Don Dumond and Luther Cressman. Here, following the Berkeley intellectual tradition, he selected an unknown region in the central Sierran foothills and developed a cultural sequence which formed the basis of his 1972 doctoral dissertation. Thus, Moratto's intellectual genealogy runs from Kroeber through Treganza. Simply put, Moratto's training was as a normative culture historian in the Treganza facies of the Berkeley tradition, and his book bears the stamp of that trajectory.

The Chartkoffs were both trained at U.C.L.A. They, like Moratto, began graduate work in 1966. But U.C.L.A., unlike Berkeley and Oregon, had a young, dynamic faculty many of whom were at the forefront of an archaeological paradigm shift. The Chartkoffs' teachers included Lewis Binford, James N. Hill, and James Sackett. These were the early days of the "New Archaeology" and the Chartkoffs were soon converted to the emphasis on scientific methodology, the quest for explanation, and the elucidation of process characterizing this intellectual tradition. Additionally, they were imbued with idealistic research goals; however, the tools and templates for achieving these goals through field operations had not yet been invented. They thus had the principle, but not the prescription.

The saga of *4-Butte-1*, Donald Miller's well-known 1967 film, and politely forgotten excavation project, is here instructive. Miller,

at that time a U.C.L.A. graduate student, conceived the idea of a film documenting the "New Archaeology." He won an NSF grant to support the work, and in the mid-1960s took a series of U.C.L.A. field classes to excavate a Maidu village near Chico, California. The film, presenting what are now classic vignettes of New Archaeology combined with narration by Binford and Sackett, won major prizes and national acclaim. Excavations were completed in 1966; however the 19,000 artifacts were never formally described, and were ultimately returned to the offended property owner. The Chartkoffs, directing the survey of a nearby reservoir, were closely associated with the 4-Butte-1 project, and their idealism was tempered by cold practicality in the wake of its failure. Joseph Chartkoff went on to write an explicitly processual, yet practical doctoral dissertation entitled *Causes of Adaptive Change and the Origins of Food Production in the Near East* (U.C.L.A. 1974). The same practicality was to mark Donald Miller's subsequent career in developing the archaeological program of the U.S. Forest Service into a research and management organization embracing some of the most rigorous standards in California archaeology today. But the "4-Butte-1 bind," namely the frustrating inability to operationalize our idealistic goals, finds painful analogy in the experience of most of us who were in graduate training during this paradigm shift, and the Chartkoffs' current book strongly bears the stamp of this sobered idealism.

The first postwar generation of California archaeologists, including Martin Baumhoff, James Bennyhoff, Albert Elsasser, David Fredrickson, Clement Meighan, and Francis Riddell among others, received most of their training during the late 1940s and early 1950s from Robert Heizer at U.C. Berkeley. Heizer's establishment of the U.C. Archaeological Survey and *Reports* series in 1948 was the foundation of Berkeley's highly productive

California archaeology has had a far-reaching impact on the field. Specifically, the academic seat of California studies shifted to the California State University system where teaching loads, roughly double that of the U.C. system, left little time for research. Additionally, prior to the 1960s, the University of California had maintained several major, in-house, scholarly monograph series to facilitate rapid and regular publication by its faculty. One can hardly comprehend the research of Kroeber and his students independent of the *University of California Publications in American Archaeology and Ethnology* and the *U.C. Anthropological Records*, nor the research of Heizer, independent of the *U.C. Archaeological Survey Reports*. Although most "outsiders" had only limited access to these publications, mainly through the "old boy" network, the final demise of these publications left few outlets for data-oriented archaeological monographs. Meanwhile, State University archaeologists, lacking release time for research, increasingly engaged in contract archaeology which often reimbursed them for the time lost from teaching. As a consequence, their research has become captive to the vagaries of land development and the management needs of government agencies, and their archaeological writings have often entered a vast "gray literature" of unpublished reports. In Moratto's book, for example, two-thirds of the bibliographic citations for David Fredrickson's writings are found in this "gray literature." Moratto and Fredrickson both deserve special commendation for citing and making good use of so much of this otherwise unavailable literature.

As a related problem, during the past decade a vast amount of data has been collected from thousands of small Cultural Resources Management projects throughout the state. Unfortunately, the potential scientific value of much of this work has been diminished due to the inability of the excava-

tors to adequately place it within the broader context of regional prehistory. This problem is clearly illustrated in Moratto's book. For example, how can one write a meaningful prehistory of the North Coast Ranges without having a cultural chronology for the Russian River Valley. Likewise, what can the local contract archaeologist do with his three test pits at Ukiah without having that chronology? In a similar manner, archaeological survey reports on tens of thousands of acres of state and federal land in the North Coast Ranges would be infinitely more useful if the data resulting from those surveys could have been plugged into an archaeological sequence.

However, we need much more than just archaeological sequences. Moratto's final synthesis of California archaeology, for example, is a chapter on linguistic prehistory in which he attempts to trace California's ethnolinguistic mosaic back to its origins. This objective requires data obtained from the Direct Historical Approach. First, archaeological assemblages from various areas have to be associated with historically known ethnolinguistic groups. This is best accomplished by excavating ethnographically known historic and protohistoric villages. An unbroken evidentiary chain must then be built from the known back into the remote past to allow ethnolinguistic identification of ancient archaeological assemblages. No other strategy can provide the data to test and refine Moratto's chosen mode of synthesis.

Of course, the excavation of unthreatened protohistoric villages raises the issue of Native American feelings. I see the Native American conflict with archaeology during the 1960s and 1970s as a necessary and successful reaffirmation of their existence to archaeologists in particular, and to the public in general. As Native Americans have gained increasing control over their past, many have begun to recognize the value of archaeology. The Mendocino County Archaeological Com-

program of excavation and publication which lasted throughout the 1950s. From this generation of Heizer-trained California specialists, Clement Meighan and Martin Baumhoff were placed in tenure-track positions at U.C.L.A. and U.C. Davis, and the future of California archaeology at the University of California level seemed assured. However, slowly, during the early 1960s, a boredom and dissatisfaction with California archaeology began to occur among the University of California's senior California specialists, and Heizer, Meighan, and Baumhoff all directed their research elsewhere. Specifically, Meighan established field schools in Cedar City, Utah, and his research focus shifted to Mexico; Heizer shifted his interests to the Great Basin and Olmec studies; and Baumhoff focused his work upon the Nubian Upper Paleolithic and the western Great Basin.

Nonetheless, the Californian archaeological tradition persisted, albeit at some distance. As incongruous as it now seems, Meighan's 1964 U.C.L.A. field school in Cedar City had many subsequent Californians present. Donald Miller, Thomas Blackburn, and Margaret Susia (now Lyneis) for example, were site supervisors, while Chester King was in the lab. There, in adjacent pits on a puebloan site in Utah, Kerry Chartkoff (then Kerry Kona) and this reviewer, both college juniors, learned how to do California archaeology. In retrospect this was the ultimate rejection of California archaeology, whose sites were not even deemed worthy for training students.

The retreat of the senior scholars in the field produced a vacuum in California archaeological studies. However, in the mid-1960s things changed. In the fall of 1966, a mixed group including avocationalists, community college instructors, and idealistic graduate students from San Francisco State, U.C. Davis, and U.C.L.A., in an effort to reestablish an archaeologically oriented intellectual community in California, met and organized

the Society for California Archaeology. The Chartkoffs and Moratto were active participants in the Society in its early years during which it showed great promise. Six tenure-track North American archaeologists teaching at campuses in the University of California system were listed in the 1968 membership roster, and Albert Spaulding of U.C. Santa Barbara, served as the first formal president.

But with the 1970s the organization became more political than scholarly in its orientation. Among the causes of this was the development of environmental legislation which promoted the growth and heavy funding of contract archaeology just as the bottom fell out of the academic job market. Thus, the only employment opportunities for archaeologists became either as private contractors or as governmentally based cultural-resource managers. While this was occurring, Native Americans were finally entering the political arena and rightly demanding a voice in the management and disposition of their past. The result was a battle lasting most of the decade involving shifting alliances of archaeologists, Indians, land developers, and government agencies, fought out in the courts and in the halls of the SCA. In the spirit of the times, Robert Heizer and C. William Clewlow were publically censured by those present at a sparsely attended SCA Annual Business Meeting for publishing the locations of rock art sites in a scholarly book. This censure was later retracted under threat of a lawsuit. However, as SCA affairs were increasingly pervaded by internecine conflict, many disenchanted scholars left the Society. As a result, the 1978 membership included only three tenure-track University of California archaeologists.

The current condition of California archaeology derives from, and is best understood in the context of, the foregoing events and trends. The 1960s retreat of the University of California from an active role in

mission is a positive omen in this regard, and in the Santa Clara Valley, the bylaws of the newly formed Ohlone Families Consulting Services incorporate an acceptance of the values of "pure" archaeological research. Additionally, many young Indians currently bypass their acculturated parents, directly seeking a connection to their past by interacting with the old. As the last of the older individuals die, these young individuals will probably increasingly use the anthropological literature. As a result, Goddard's (1903) *Life and Culture of the Hupa* has already become one of the most cherished books in the Hoopa Valley.

Another concern raised by Moratto's heavy emphasis on linguistic prehistory to tie his book together is the current condition of California Indian linguistics. In 1953, with strong encouragement from A. L. Kroeber, Mary Haas established the Survey of California Indian Languages at Berkeley. Certainly this was "salvage linguistics," but it also included emphasis on comparative historical linguistics with special concern for the determination of genetic relationships, imbued with a strong anthropological bias. Mary Haas, who was married to Morris Swadesh, the primary force in the development of glottochronology, and her students generated many of the kinds of base-line data needed by archaeologists to provide independent tests for archaeological models of ethnogenesis.

California archaeologists thus need to establish a dialogue with this senior generation of linguists whose interests are so close to our own. Unfortunately, at the 1984 Hoka-Penutian Conference, I counted only six archaeologists (including Moratto) amongst an intellectually tempting group of linguists, including Jesse Sawyer (Wappo), William Elmendorf (Yukian), Catherine Callaghan (Miwok-Costanoan), Victor Golla (California Athapascan), William Jacobsen (Washo), Shirley Silver (Shastan), Robert Oswalt (Pomo),

and Michael Nichols (Uto-Aztecan). These linguists want, and need, to talk to us. However, we must learn how to ask them the right questions. For archaeologists, the brightest spot in California linguistics is the work of Kenneth Whistler whose knowledge of the archaeological record and strong interest in linguistic prehistory contributed much of substance to Moratto's summary statement. Unfortunately, there are few academic jobs in linguistics, particularly for those having Whistler's interests. We should thus use our combined influence to help him find permanent employment within a department of anthropology.

Looking forward, I see a great deal of promise for California archaeology. We have come through a decade-long "dark age" of conflict, and have survived the excesses of a paradigm shift. It is hoped that U.C. Berkeley will finally select a California specialist to fill the position vacated by Heizer, and U.C. Davis has recently advertised for a California archaeologist to fill the position left vacant by the death of Baumhoff. To my knowledge, at least three new publication series for California archaeological monographs are in an advanced state of planning, and of course, we have the fine books by Moratto and the Chertkoffs against which to test our realities. In closing, as scholars, we must strive to be less insular in our perceptions and to view our archaeological contributions in the context of broad-brush academic trends extending far beyond California, for, like the people whose pasts we study, we archaeologists are also the product of a past which can be, and will be, interpreted from many different perspectives. Thus, we must critically examine and reexamine our own professional past and its meaning if we are to understand the present and adequately plan for the future.

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Brief Notes on Recent Publications

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A History of the Shoshone-Paiute of the Duck Valley Indian Reservation. Whitney McKinney (with contributions by E. Richard Hart and Thomas Zeidler). Salt Lake City: The Institute of the American West and Howe Bros., 1983. 135 pp., maps, photos. \$15.95. The Duck Valley Reservation is located on the northern lip of the Great Basin, straddling the present Nevada-Idaho border. It was established 1875 - 1879, although the Ruby Valley Treaty of 1863 had promised a reservation for the Western Shoshone and was slow to act in implementing it. At first, the reservation's location, in terms of isolation from white settlement and physical dimension (ca. 300,000 acres in high desert) seemed adequate, but subsequent administration of the reservation and attempts by non-Indian settlers to encroach on the land in one way or another cast doubt upon the ultimate survival of that land as a reservation. Whitney McKinney was appointed by the Shoshone-Paiute as tribal historian and, with support from several funds and institutes has produced a remarkably well-documented and illustrated history of the tribal tenure at Duck Valley, which today has an Indian population of more than 1200. Matters concerning treaties, education and medical facilities, water rights, numbers of livestock, are all brought into the story, along with listings or mentions of prominent Indian personalities as well as those of superintendents (sympathetic and otherwise) and various agents.

Even though the Shoshone-Paiute have managed to survive as a working unit throughout all the difficulties they have faced since the 1870s concerning encroachments by non-