the connection of a majority of the art with the Trincheras peoples and the later art with Amargosa-Papago peoples appears justifiable. Carrico presents a number of possible interpretations of rock art in his preliminary study ranging from hunting magic to use as territorial markers.

The final paper, by Reneé Opperman, is titled "Design Analysis of Some Rock Art in Chihuahua, Mexico." This paper deals with five sites featuring both petroglyphs and pictographs. The author has plenty to say regarding interpreting the art but very little attention is devoted to accurately describing site contents. Thus, right or wrong, the author's inferences that the art "may embody socioeconomic symbolism dealing with food resources," may represent celestial symbolism, could have served to implement social cohesiveness, and so forth, cannot be rightly evaluated without proper analyses, or at least a fuller presentation. Similarly, the ethnic affinity (e.g., Tarahumara) and age (late prehistoric) ascribed to the art need to be better documented.

The volume has an uneven quality. It is nicely printed and well-illustrated with 63 black-and-white photographs and 48 line drawings. However, only five maps and two tables are present. Typographic errors are few and inconsequential.

Generally, the treatment of the various sites has not been rigid; data necessary for evaluation and comparison are often lacking. It is evident the volume is geared toward both the rock art scholar as well as the general public and, considering the economics of printing reams of data, the lack of fuller data presentations is understandable.

Shortcomings aside, the volume is a meaningful contribution to both anthropology and the humanities. The rock art scholar and interested non-professional alike will want to examine the works. The volume is a welcome avenue for disseminating rock art information and both the editor and San Diego Museum of Man deserve credit for initiating what will hopefully become a continuing series.

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Payen, Louis A.
1966 Prehistoric Rock Art in the Northern Sierra Nevada, California. M. A. thesis, California State University, Sacramento.

Messages from the Past: Studies in California Rock Art. *Clement W. Meighan,* editor. Los Angeles: University of California Institute of Archaeology Monograph No. 20, 1981, 185 pp., includes 63 pp. of black-and-white and color illustrations and photographs, $9.50 (paper).

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In this volume of rock art studies not only are six individual site or site complexes analyzed and interpreted, but there is also an exposé on current theory and practice in the study of rock art. In *Messages from the Past,* the editor has pulled together an assorted array of papers completed under his tutelage concerning petroglyph and pictograph sites scattered throughout California. The differences in site content and environment have yielded a range of approaches, and considerable independence in thought is expressed despite some obvious influences from the editor.

The lead article by Meighan, "Theory and Practice in the Study of Rock Art," is, by his account, directed at developing new statements on methods and procedures in rock art studies. This is an important and revealing article. The paper presents useful narratives

concerning the rationale for studying rock art, the description of figures, chronological problems, and interpretation.

Key points in Meighan's discussion include pleas for archaeologists to: (1) not ignore rock art; (2) use ethnographic analogy and careful content analysis; (3) record completely the elements present at sites as a basis for interpretation; (4) use multiple interpretations (i.e., multiple working hypotheses) for analyzing and discussing rock art meaning and function; and (5) recognize and solve problems in element classification and style area definition. While obviously not new pleas, the advice is certainly well worth heeding. As reflected in the various articles, Meighan's contention that rock art perhaps originated from three kinds of mental states: sensory deprivation, sensory enrichment, and real world observations – while not all-encompassing – will no doubt generate worthwhile discussion.

Meighan's approach tends toward a blend of humanistic and scientific concerns, a bias about which he is quite aware. I would have preferred more discussion on various theoretical approaches as they are currently applied in investigations of other aspects of the archaeological record.

Linda King's article on "The Incised Petroglyph Sites at Agua Dulce, Los Angeles County, California," is highlighted by her definition of a new, possibly localized, rock art style labeled Vasquez Incised. The style is characterized by fine, almost imperceptible incisings in diverse rectilinear and curvilinear designs. Her support for defining this style is certainly adequate, although her comparisons with other western incised art is weak and somewhat dated at the time of this review.

King's presentation also includes a discussion of pictographs in the Agua Dulce locality. Overall, the article covers all the bases, chronological (e.g., the art is probably late prehistoric in age), functional (e.g., the art may be ritual-astronomical in origin), linguistic (e.g., incised art may reflect Shoshonean peoples, the paintings Ventureño), and others. King obviously put a great deal of thought and energy into this article, and while speculation is of necessity in much of rock art studies–and archaeology–the reader is made well aware of the limitations and deficiencies in the various interpretations and suggestions.

Gregory Reinhardt's article is titled "Pictographs with a Historic Component: LAN-717, a Los Angeles County Rock Art Site." This is a relatively small site of Chumash affinity (81 discernable elements; 69% representational) to which the author has devoted considerable attention. Such detail is a prerequisite for almost any rock art site analysis by contemporary standards. The site is discussed in terms of panel, scene, and individual element content and meaning. I found the definition of some scenes arbitrary, and I believe some identifications are tenuous. A good deal of narrative–perhaps too much attention–is focused on four horse-and-rider portrayals. The author believes there are two episodes or time periods represented in the art and he makes a strong case for its ritual or ceremonial connotations. This article stands as an important contribution to a rapidly growing corpus of Chumash rock art studies.

The next article, by Joan Seaver, "Indian Caves–Analysis of Rock Art at Site SBA-509," is much like that of Reinhardt's, not too surprising since it deals as well with Chumash rock art and follows certain leads from Meighan. The site is situated in the Santa Ynez Mountains at a location undergoing heavy human impact, a plight of all too many rock art sites, especially those near urban centers. The Santa Barbara Painted Style pictographs are concentrated in four nearby caves. Through individual cave, panel, scene, and motif analyses, the author offers a case for a functional distinction between one shelter and the other. The emphasis placed on

scenes and, to some extent, motifs and their distinction is fairly arbitrary and, at least in the case of the scenes, the utility of such an approach at this site is not borne out by the results presented. Perhaps the approach has not been applied in as rigorous a manner as might prove more informative.

Because of various factors (e.g., "reinforcement painting" and content), Seaver hypothesizes that the paintings were executed by shaman-priests within the purview of ritual and mythology, and that the later paintings may have been the result of a culture crisis brought about by missionization. This work, too, adds to the many Chumash rock art studies. I can only conclude with the author that, while some questions are being answered, "some can never be completely eliminated."

By far the most provocative paper in this monograph is Werner Wilbert's "Two Rock Art Sites in Calaveras County, California," an article sure to stir controversy and discourse. The hypothesis central to Wilbert's study is that geometric elements of petroglyphs (and pictographs), such as those at the Calaveras County sites, "can best be understood as the reproductions of phosphenes." Phosphenes are endogenously perceived light patterns or luminous impressions experienced by most people. These two Calaveras County sites merely serve as examples for Wilbert's sweeping interpretation. Wilbert cautions that because of the universal phosphene phenomena and possible associations with rock art depictions, using design element analysis alone to arrive at cultural-historical relationships may be misleading. There is merit in Wilbert's observations about phosphene/rock art connections and site interpretations. Whether his hypothesis is valid at the Calaveras County sites, however, has not been demonstrated in this instance and may never be demonstrated at many or all sites with geometric elements. Other logical explanations must be examined at all sites. Wilbert's analysis of these sites is flawed by failure to consider the various alternative perspectives on Sierra Nevada rock art and these sites in particular (cf. Payen 1966). The author's use of local Miwok ethnography for purposes of analogy is not very convincing since one cannot assume contemporaneity or association between the rock art and local indigenous groups in historic times. Phosphenes as an interpretive measure are already gaining popularity among some rock art students and this concept may become a fixture in the field.

Even well-studied rock art sites, through reexamination and rethinking, can yield significant information. Such is the case with W. Joseph Mundy, Jr.'s "An Analysis of the Chalfant Canyon Rock Art Site, Mono County, California." This petroglyph site contains 415 elements (68% non-representational). Just to underscore my caution above, many of the geometric figures (variations of ovals) are not interpreted as phosphenes, but rather as female vulva forms associated with girls' puberty ceremonies. An important point in the author's discussion is the dismissal of the hunting magic hypothesis owing to the absence of game portrayals, game trails, etc. Reference to Thomas' (1976) paper regarding similar sites and site content in the central Great Basin would have been appropriate. Overall the author's site analysis is thorough and sensible.

The only study of the volume from northern California is Helen K. Crotty's "Petroglyph Point Revisited: A Modoc County Site." Here, too, a restudy has proven rewarding. The petroglyphs at this site number 1300, a mixture of curvilinear, rectilinear, and mixed elements with a spattering of representational figures. Scraping and drilling are the principal methods.

The author clarifies a number of mistakes by previous workers and lays to rest much of the interpretive speculation which has sur-

rounded this site. Her conclusion regarding "the effect of classifying the Tule Lake rock art in the Great Basin style is to disassociate the rock art from its proper cultural context" is well taken. Her restudy points out the difficulties in defining elements and the need for standardization, at least in an areal perspective. Much is discussed in the article. Her hypothesis that Modoc rock art is associated with mythology, the quest for personal power, and related to ceremonial activities centered on food (not big game animals) acquisition seems reasonable.

In looking at the volume as a whole it is well-illustrated with 26 pages of photographs and 41 pages of line drawings, two of the latter in color. There are seven tables. The volume itself is attractive and well-printed, and the text is easy to follow. There are only a dozen or so typographic errors. One of the biggest faults I found is in the bibliography. Over a dozen references are missing and some are given incorrectly.

In many respects the papers reflect student work. I believe some of the authors should have better covered the literature, and I found certain discussions a bit extraneous or certain interpretations too far-reaching. But overall this is a very worthwhile compendium of studies with implications for rock art work far beyond the borders of California.

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Cuchama and Sacred Mountains. *W. Y. Evans-Wentz. Frank Waters* and *Charles L. Adams,* editors, Chicago: University of Ohio Swallow Press, 1981, 196 pp., $22.95 (cloth).

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In the eyes of all "true believers," followers of "gurus," "the Children of the Great Mystery," and *all* psychical extrasensory phenomena, I shall be the evil reviewer of this book which mimics comparative anthropological methods but uses superficial, inaccurate data in regard to American Indian, especially southern California, religious beliefs and linguistic data. In his discussion (p. 7) of Kumeyaay (Diegueño) creation myths and sand paintings, Evans-Wentz identifies Cuchama (*Kuuchamaa*), also known as Mt. Tecate, with "the mountain of creation." Unfortunately the literature (Waterman 1909: 52, 1910: 302, 303, 338-340; Dubois 1905:627, 1908) identifies *Wikami,* or *Wikamee* or *Avikwama* in Mohave territory as the Kumeyaay mountain of creation. Nowhere does this literature identify a mountain in the Mt. Tecate location. Nowhere does the literature describe Kumeyaay myth as stating that *Kuuchamaa* was an original peak above water during the creation of the earth. Kumeyaay religious elders have denied that any flood myths were associated with *Kuuchamaa.*

Another example, in searching for a linguistic derivation of the name *Kuuchamaa,* Evans-Wentz does not examine the language of the people in whose territory the mountain was centrally located, and to whom it was most sacred, but looks at the language of their neighbors, the Quechan, who speak a related Hokan language. Then he goes further afield to totally unrelated languages such as the Mexican, Uto-Aztecan Aztec, and to the South American Incan. Dr. Margaret Langdon