

Parallels in Hawaiian Ethnography and Petroglyphs: Utilizing Gesture, Posture and Proxemic Arrangements

This paper is an abbreviated portion of my 2003 dissertation in which I compare anthropomorphic figures from two unrelated cultural areas, Hawai'i and the Laura area of Cape York Peninsula, Australia. I introduce a methodology that examines body language as a universal communication system in a broad context and culturally specific in the historic sense, as it is found displayed in the rock art.

BODY LANGUAGE

The components of human language include spoken, written and non-verbal communication systems. The latter includes gestures, postures, sign language and proxemic behavior. It has been proposed by Corballis (1991, 1999) Armstrong, et al., (1995) and Armstrong (1999) that human language originated with gestured signs. They argue that even in cultures with highly developed spoken languages, people still use gestural signs to augment speech.

The last 30 years have produced a renewed interest in gesture and a more thorough examination of its role in the evolution of language and cognition in humans (McNeill 1995). The human body can be used to transmit messages to an observer by movements or postures that can include the use of limbs as well as facial expressions. Non-movement can also transmit information. "There is no attribute of the human body, whether size, shape, height or color, which does not convey some social meaning to the observer." (Thomas 1991:1). Of the many channels of non-verbal communication, only gesture, posture and proxemic location are considered. The meaning of non-verbal communication is only decipherable to

the extent to which its cultural context is available, but semiotic analysis can help elucidate the underlying structures within a sign system.

MULTI-FACETED APPROACH

In his studies of the Arrernte, an Aboriginal people of Central Australia, language is what David Wilkins calls a "multi-media performance" (Wilkins 2001). In his view, language is composed of three modalities as part of the whole communication process. These are 1) the spoken or verbal narration, 2) the simultaneously gestured aspect, and 3) the visual display drawn in sand or painted on canvas. Each medium (spoken, gestured and drawn) is a component of a larger communication grammar. Neither verbal, gestured nor painted stories are autonomous. Like bound morphs, each needs the other as part of a multi-faceted communication system.

Similarly, with rock images the missing components (verbal narration and gestures) cause major problems for determining what the "story" may have been. The rock images in this study are far less abstract than the sand drawings of Central Australia, and therefore they supply more figurative displays of animals and humans in particular, with their gestures, postures and proxemic arrangement. But the absence of verbal and gestural narration limits the interpretation and revelation of meaning. It is possible, however, to surmise that if gesture is so intimately bound up with verbal narration, that the pictorial art holds traces of the verbal/performance component. The identification of gestural components might offer an effective methodology for interpreting rock

images, especially where the cultural context is known.

PHENOMENON – GESTURE

It is probable that all humans relate to clear pictures of human beings on some level, and may interpret gestures and postures depicted therein according to their own experiences and cultural conditioning. The question posed is whether gestural phenomena depicted in anthropomorphic figures in rock art communicate information to some degree in the way that gestures do among living people, or are they simply random, decorative or idiosyncratic. Perhaps the following example from modern society will illustrate the phenomenon.

The use of pictorial signage in public places in many Western European countries uses anthropomorphic figures to indicate toilets, street crossings and exits. The most widely used “walk” signal is a silhouette human figure, shown side-on, depicting the action of walking. One leg is stationary while the other is lifted, bent at the knee, as if to take a step forward. One arm is swung forward in front and the other one swung back. The signal for “do not walk” is a static full-bodied human figure, face-on, with arms down and legs stationary.

These signs are “read” by pedestrians through an interpretation of gestures and body postures, some of which communicate cross-culturally. Additional color codes of red (stop) and green (go) accompany the signals, but the population of color-blind individuals relies solely on the body posture as a signal. Toilet signage may vary in conventionality from culture to culture, but as a rule, these signs are iconic and display a *static* figure to identify rules of access to the room, rather than an *active* gesture or posture to indicate the room’s purpose.

THE ROCK ART OF HAWAI’I ISLAND

The rock art found on the island of Hawai’i has been extensively documented by Lee and Stasack (1999). I have independently recorded a small percentage of the images but rely heavily upon their published photographs for comparative analysis in this study.

The majority of petroglyph sites occur on the dry sides of the islands in open country near the shore (Cox and Stasack 1970) (Figure 1). Lee and Stasack (1999) have found that the petroglyphs of Hawai’i Island are near or on prehistoric trails leading to villages or habitation sites, but not around occupation sites. Some petroglyph locations fall along boundaries associated with land divisions.

Rock Art Typology

Cox and Stasack (1970) classify the anthropomorphic figures in Hawaiian rock art as: simple linear angular figures; triangular and

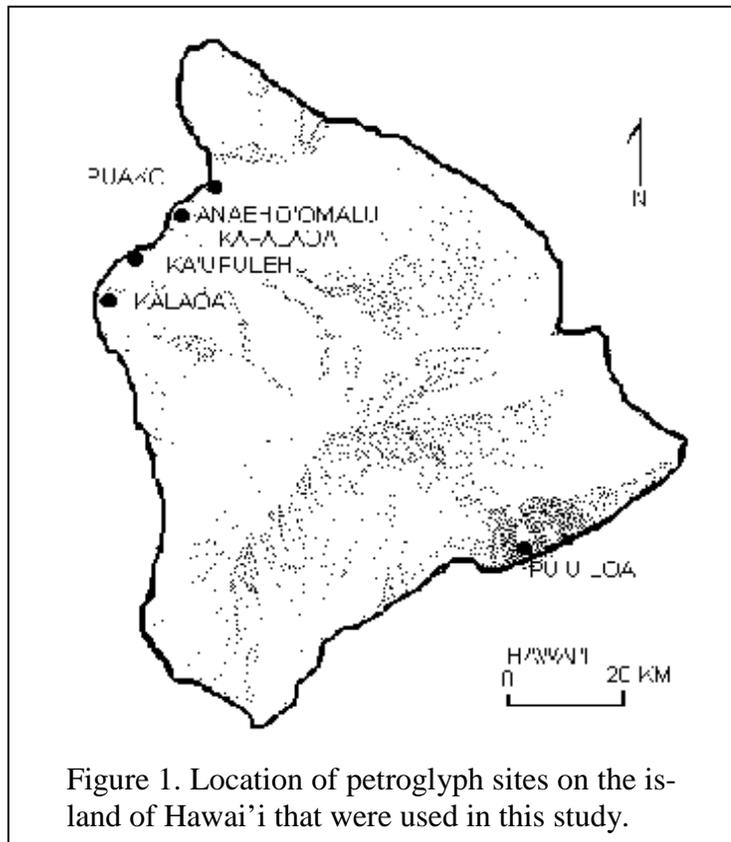


Figure 1. Location of petroglyph sites on the island of Hawai’i that were used in this study.

columnar outline figures; triangle outline with angular muscle additions; pecked-in curved muscle figures; and bas-relief figures. Lee and Stasack (1999) added a digital code to these classifications. I follow their typology but expand upon it as a result of my own observations and the method of analysis. The following classifications are given below and in Figure 2.

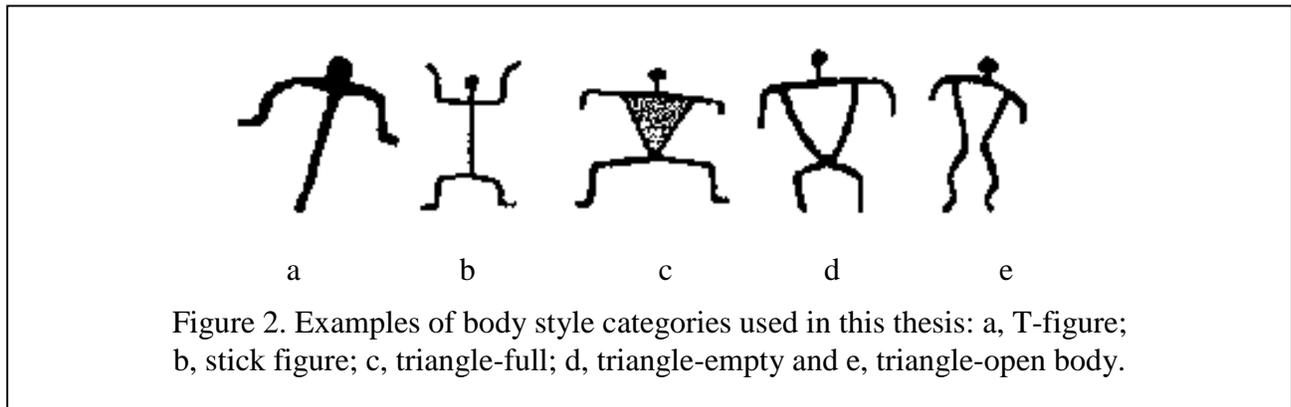
- **T-Figures:** are a line for the torso and a cross line for the arms. They may or may not have a head. The arms are up or down. There are rarely any digits (Figure 2a).
- **Stick Figures:** are a line for the torso, a head, lines for arms and legs. The feet and hands are short lines perpendicular to the arms or legs. They may have an object associated with their hands or held over their head. They may also be connected to other stick figures at the head, arm or leg (Figure 2b).
- **Triangle-bodied Outline and Solid Figures:** these figures have triangle-shaped torso with arms and legs and a head. The gender may be indicated by a penis or breasts (pectoral dots) or a vulva. They may be in outline or fully pecked. Feet and hands are indicated by a short perpendicular line. Many have an object held in the hand or held over their head in both hands (Figure 2c/2d).
- **Triangle-open Bodied Figure:** these figures are open at the base of the torso as

shown in Figure 2e.

For my documentation, I include distinctions for the upper and lower arm and leg positions, for the orientation of the torso, for outline or solid bodied figures and for open bodies. Instead of “connected figures”, I note whether each figure is part of a cluster or stands alone (Table 1).

Petroglyph Age Determinations

Dating of rock art in Hawai’i has been carried out by Dorn (1996) but, as Lee and Stasack (1999) note, the results only provide dates within the time frame for occupation. There seems to be a broad spread of dates for a single “style” that contradicts the hypothesis of age sequencing based on style variations suggested by Cox and Stasack (1970). This confirms the imprecise nature of attempting to use “stylistic analysis” for dating (Rosenfeld and Smith 1997). Moreover, the direct method of dating is problematical, as Dorn himself admits, “there may be problems discriminating between the carbon being dated, and that carbon which comes from prior organic weathering episodes” (Stasack, et al. 1996). The dates listed by Lee and Stasack (1999) are not regarded as determinative. There is controversy and continuing research for new methods and techniques for determining the age of petroglyphs (Watchman and Ho, 2000 personal communication), but it is interesting to note that the age estimates obtained by Dorn (column five of Table 1) support my independent



hypothesis that using stylistic age determinations is problematical.

Stylistic Age Determinations

Cox and Stasack (1970) have proposed a temporal chronology by evolution of petroglyph styles, beginning with simple figures and ending with more complex or naturalistic figures (Figure 3). Lee and Stasack (1999), believe stylistic approaches to dating should not be discarded in favor of scientific dating:

Temporal information also can be obtained by determining evolution of style, changes in subject matter, associations with legendary events, oral histories, archaeological findings, known volcanic eruptions, and written records of the post-contact period. Relative sequences can be suggested by the overlapping of images, patination of units at a particular site, and by the small body of testimony from early informants (Lee & Stasack 1999, 156).

I have observed stick figures, assumed to be an older style, superimposed over triangular bodied figures, assumed to be of a younger style. Many panels contain a variety of body style figures that, in my view, are used simultaneously to depict different kinds of information. Lee and Stasack seem to agree with this in a statement about the Pu'uloa site:

In the light of our present knowledge of the lava flow, the time frame pro-

posed by Cox must be compressed into a shorter (and later) period. Instead of allowing centuries for changes in the type of petroglyph being carved, it is likely that many of the different types of motifs were being carved at the same time (Lee and Stasack 1999, 94).

Considering the evidence of stick figures (so called oldest style) found engraved over the top of triangular full-bodied figures (so called youngest style), I am confident that variations in body styles were used for a purpose and not restricted to certain time periods.

Comparison of Rock Art Typology

Table 1 compares the typology I have developed based on a more detailed analysis of the body gestures and position of the arms, feet and hands, with that of Lee and Stasack (1999) and Cox and Stasack (1970). The first column is the body type, with examples from the data collected. The second column is my typology, with a list of all the arm, leg, torso, head, hands and feet categories. The third column is Lee and Stasack's typology with corresponding numbers and letters used in their system. The fourth column is Cox and Stasack's stylistic evolution from the earliest to the latest. The last column is the ¹⁴C dating by Dorn in Stasack, et al. (1996). The majority of figures that were sampled were stick figures. They have been grouped together in the row for stick figure style. The ages range from AD 983-1632 to AD 1660-1950. Triangle-

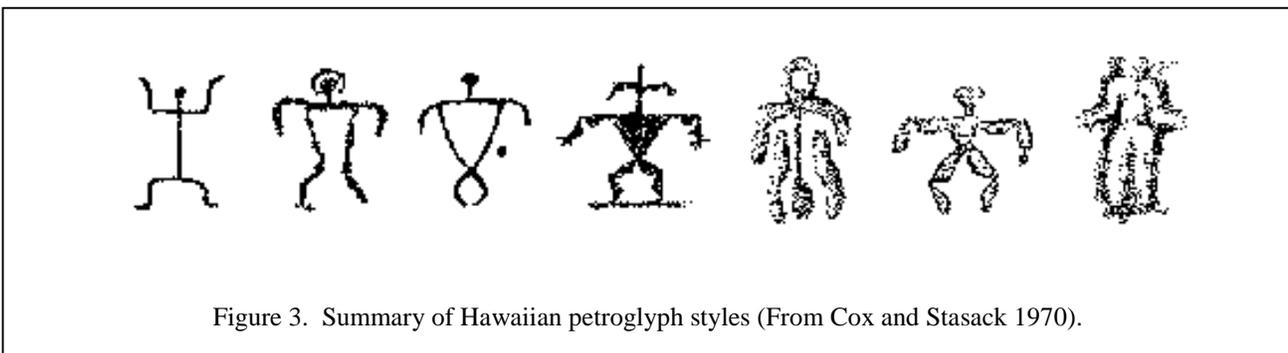


Figure 3. Summary of Hawaiian petroglyph styles (From Cox and Stasack 1970).

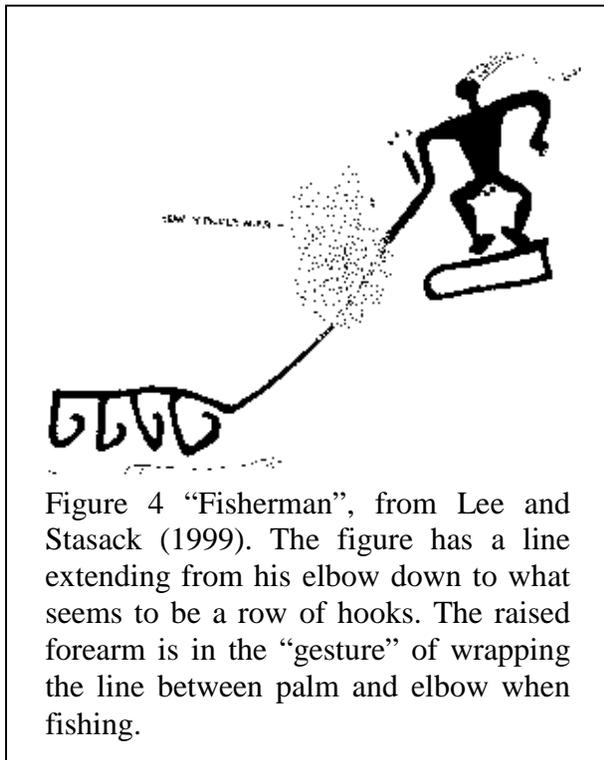
open bodied figures date around AD 1432-1632 and triangle full-bodied figures date from AD 1650-1950. This supports the observation that certain body styles (stick figures) transcend style constraints.

Iconic Gestures and Postures in the Rock Art

There are several examples of simple iconic representation of gesture in the rock art that can be directly associated with an action or activity. Examples selected here are petroglyph panels that include “fishing”, “boxing” and an ambiguous posture associated with supplication.

Fishing

There are several examples of what are interpreted as anthropomorphic figures “fishing”. Figure 4, is from Ka’ūpūlehu. This figure is called a “fisherman” because of the *gesture* involved in fishing. A native guide at Ka’ūpūlehu explained to me simply that the fishermen wound the fishing line around their elbow and palm. The arm is bent upward and

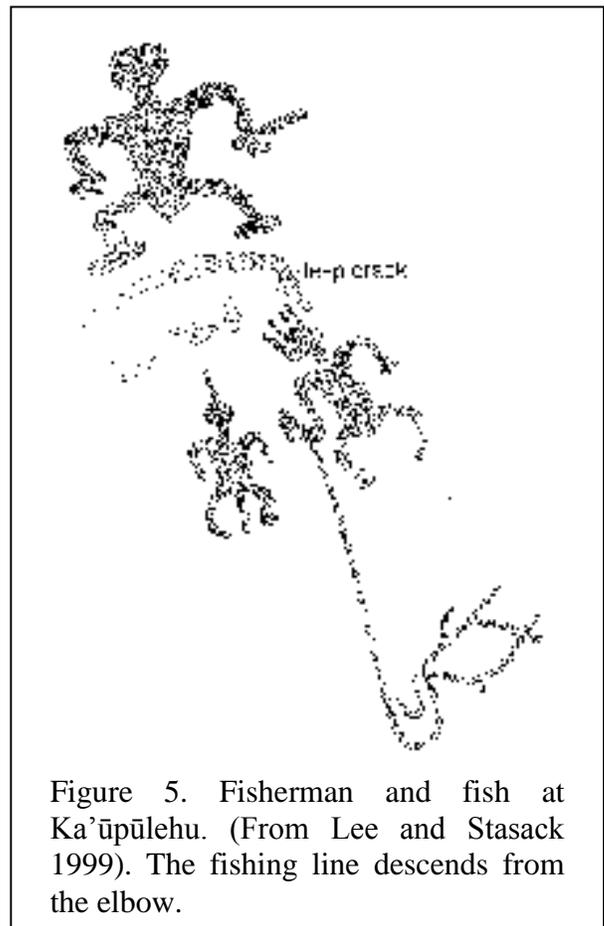


the palm of the hand held open to receive the line as it is pulled in or cast out. One can see from this engraving that only the fingertips of the open hand are depicted, because the palm is horizontal to receive the fishing line. From this gesture, the line appears to extend from the elbow, but in fact it is wound off the elbow and palm as the fisherman rotates his arm.

Another example of the “fishing” gesture appears in the panel at Ka’ūpūlehu. (Figure 5). This panel provides the additional context of a “fish” attached to a “fish hook” and line that descends from the arm of the human figure. These two panels use the gesture of “fishing” to communicate the action of fishing.

Tapu

Tabus, called *kapu* in Hawaiian, accompany certain levels of rank. “They are restrictions and degrees of sacredness applied to the people of highest rank. These restrictions include



the assuming a full prostration position by subordinates below a prescribed rank in the presence of the Source or of any intimate object belonging to him” (Goldman 1970, 216-17). One *kapu* required commoners to fall on their faces and cover their eyes and heads so as not to even see an *ali'i* passing by. If one remained standing, the punishment would be death. Figure 6 illustrates a parallel to the rules of posture regarding the *ali'i* and commoners, based on the juxtaposition of upright figures and one in a prostrate position.

Lee and Stasack (1999) interpret these gestures as “profile anthropomorphs with knees

bent and in squatting position,” and place these figures vertically in their publication. When viewed in context with the other figures in the panel their orientation is horizontal, or perpendicular to the vertical figures surrounding them. This orientation is illustrative of what Hawaiians described to Stokes as one of the postures for prayer:

Old Hawaiians... describe several postures - depending on the nature of prayers - standing on hands and knees, on elbows and knees with forehead resting on the hands, sitting with legs and hands folded, also sitting with legs to one side and hands on the ground. In all these positions, they say that the level of the head should be hung (Stokes 1930:37).

Lee (2001) depicts Figure 6b in a vertical position and draws a comparison with the carved images 6a on the Moanalua Valley petroglyph boulder (now in the Bishop Museum) that she believes depict “crouching” or “praying”(Lee and Stasack 1999, Lee 2001). The two figures in 7a and the petroglyph 7b are not the same. The difference can be observed in the position of the faces of 7a looking upward, and Figure 7b covering the face with the arm (Figure 7, from Lee (2001).

Although they may depict different types of praying, attention to the orientation and details of the posture must be examined. The presence of a prostrate figure in the petroglyphs may indicate the context of another figure as being of superior rank.

There are various parallels to the ethnography concerning posture and proxemic arrangements. This study demonstrates the importance of recording rock art accurately in observance of vertical and horizontal orientation as well as proxemic arrangements with other figures. The ethnography reveals certain aspects of both posture and orientation that are purposeful and symbolic.

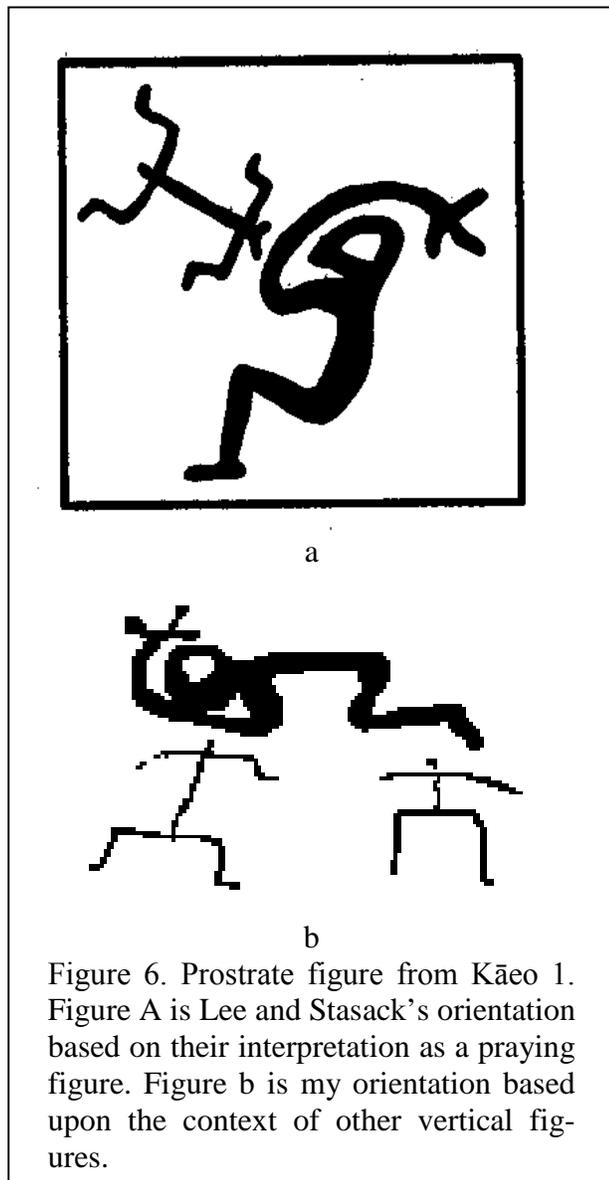


Figure 6. Prostrate figure from Kāeo 1. Figure A is Lee and Stasack’s orientation based on their interpretation as a praying figure. Figure b is my orientation based upon the context of other vertical figures.

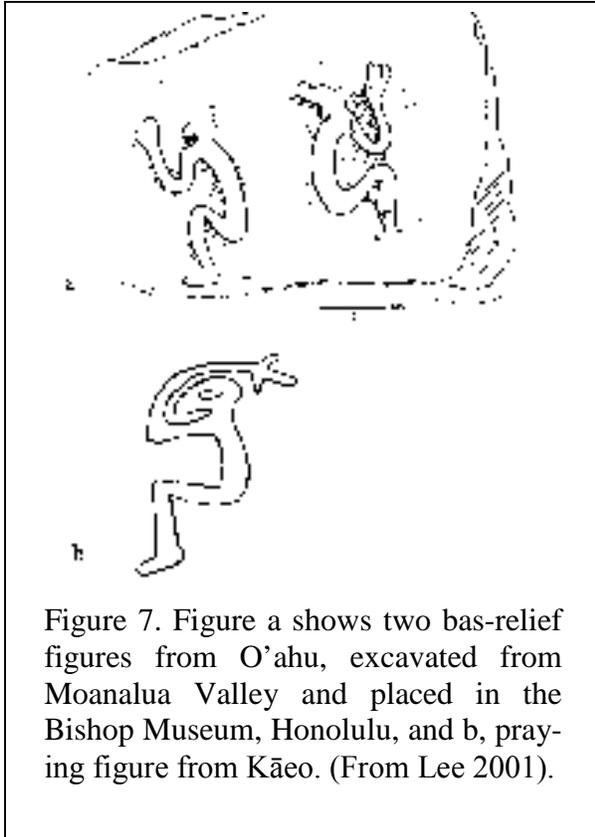


Figure 7. Figure a shows two bas-relief figures from O'ahu, excavated from Moanalua Valley and placed in the Bishop Museum, Honolulu, and b, praying figure from Kāeo. (From Lee 2001).

HAWAIIAN ETHNOGRAPHY

The ethnographic data on Hawaiian culture is extensive. From a general survey of this data, I have extracted material regarding postures and gestures in Hawaiian communication systems. I wish to state how visual communication in Hawaiian society is structured and then look for parallels in the social structure and organization with the gestures and proxemic arrangements displayed in the rock images.

The following is a brief description of some dominant themes in Hawaiian culture, such as genealogies, family relationships, and cosmology. Examples of the gestural displays of anthropomorphic figures in the rock art are given that possibly parallel these aspects of Hawaiian culture.

Social Organization

Most of what we know of the social structure of Hawaiian society is based upon what was recorded during the first contact by Europeans. When Captain James Cook arrived in 1778, Hawaiian culture was a stratified society ruled by chiefs who had divided the islands into their own territories. Cook may have influenced the transition from chiefdoms to an empire that, 17 years later, resulted in the rulership of all the islands by King Kamehameha I. Hawai'i was unique from other Polynesian societies, in that all of the land and resources were controlled by structures of kinship. This society may have evolved in late prehistory. (Kirch 2000). Both collateral and lineal kinship relationships dominate orders of prestige, rank and power. Kinship and descent also influences *mana* (supernatural power), an essential ingredient needed for higher rank and power (Oliver 1989, Kirch 2000).

Hawaiian society was stratified into the categories shown in Table 2 and explained briefly below. At the top of the hierarchy are the *ali'i* who were considered "royalty" in European terms, and were associated with sacredness and supreme *mana* (Oliver 1989). The *ali'i* were formed into eleven grades in ascending order, reaching all the way to the gods. The *ali'i 'ai moku* were the paramount chiefs (kings), descended directly from a deity. They held the titles to land tenure and dictated orders of who worked the land and who carried out public work projects.

Below the paramount chiefs were the specialized priests. Malo (1951) lists several categories of specialized priests, one of which was the *Kahuna*. They were part of the chief's entourage, which also included political advisors, military experts, architects, astrologers, food handlers, priests, and keepers of his images

and paraphernalia, and servants to whisk away flies and stand over the chief as he slept. The specialized priests, *Kalaimolu*, *Kuina*, *Kahuna Nui*, were believed to be in control of the *mana* that was the source of power for the *ali'i*. The *Ali'i ai ahupuna'a* were in charge of the smaller divisions of land. They protected the people and provided for important ceremonies that required food distribution and retribution to the paramount chief.

Among the lower chiefs, at least ten ranking levels were based on genealogical pedigree and *mana*. Below the lower chiefs were the *Konohiki* or land managers. These administrators controlled the land rights at the household level and acted on behalf of the district chief. Land use was designated by payment of taxes each year by individual families and the land farmed by the *maka'ainana* commoners.

This class system was subject to shifts between the ranks. Among the *ali'i 'ai ahupuna'a* dishonour could occur by the outcome of a battle, resulting in lowered rank. Rank could be contested by a person knowledgeable in genealogical records, resulting in either elevating or lowering rank to that of a commoner. Alternatively, a *maka'ainana* could elevate his rank to the status of a lesser chief based upon deeds of honour, or by marriage to a high-ranking woman. Ultimately, supreme power and rank came from inheritance and direct lineage to the major deities (Brodley 2000). Table 2 gives a general description of the stratification of Hawaiian society.

Rank achieved by genealogical ancestry depended heavily upon records committed to the memory of orators skilled at reciting song chants of lineages going back hundreds of years. A child inherited his or her level of rank from both parents, and some children gained their parents' combined rank, which served to elevate the child's rank above that of their parents (Malo 1951). Genealogical ancestry was of prime importance in establishing a person's social position.

GENEALOGIES

The Kamehameha family pedigree can be traced back 99 generations to the original ancestor gods (Malo 1951), but as human ancestors joined the lineage, it lowered the ranking. To combat this effect, the Hawaiian families of paramount chiefs encouraged the union between brother and sister. Children from this union were given the highest possible level of rank and consequently possessed an extreme amount of *mana*. Beckwith (1972) noted, "This is called *niaupi'o* rank. The union of brother and sister is called '*pi'o*' which means, "arching". The union is symbolized by the image of a bow". Malo also records this symbolism calling it a "bow, a loop, a thing bent on itself... so sacred that all who came into his [the rank holder's] presence must prostrate themselves. He was called divine, *akua*" (Malo 1951).

The Hawaiians use fine gradations within this ranking system that are derived from family lineage. As a result, they have very accurate and complex genealogical records. Within chiefdoms and in the rise of the unified state there was a pattern of inheritance that was dependent upon high-ranking individuals, who passed down the ownership of fertile land to successive generations. Though traditional Hawaiian society was patrilineal, women of high rank were sought out for marriage to improve the rank and prestige of the children. At the time Cook landed, women were allowed certain powers that were equivalent to that of male chiefs. Over time, women attained the same, if not more power than men did, and bilateral descent became the norm (Goldman 1970). Linear genealogies are critical to rank, inheritance and land ownership and complex kinship structures are critical also in regulating day-to-day life. Lateral relationships are critical in defining political and family groups.

Linear Structures: Generations

There are other terms in the Hawaiian language that are related to genealogy. A *ku'auhau* is a person skilled in genealogy and traditional history. The word *hanauna* means “birthings” and refers to one generation. Evidence of what appears to be the representation of a single generation can be found in what looks like a birth (Figure 8). The small figure positioned between the legs of the larger figure depicts the head-down body posture of a birth. The shoulders of the “mother” are rounded, while the shoulders of the second figure are square (“birthing” scene from a panel at Kahuluu, Hawai’i [Cox and Stasack 1970]).

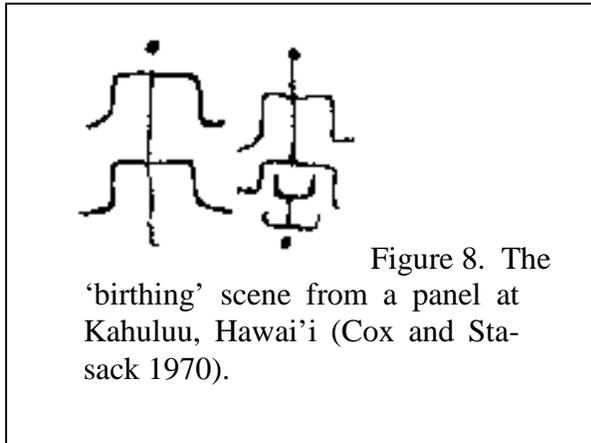


Figure 8. The ‘birthing’ scene from a panel at Kahuluu, Hawai’i (Cox and Stasack 1970).

Genealogical sequences would logically be depicted as a succession of births. It has been suggested that the body posture and spatial position of consecutive figures placed under the open legs of the one above it, illustrate a succession of “birthings” by Martineau (1973) (Figure 9). His interpretation was based only from the body posture and proxemic arrangements. The following sites at Paniau illustrate the use of body gesture that appear to mirror the “succession of births” or very long counts of generations that are of paramount importance in Hawaiian society as shown at the Paniau site, Figure 9.

The Hawaiians use the metaphor of a “spine” to represent a line of ancestry that supports claims to rank and power. “Like spine, your ancestry supports you throughout your life” (Ho personal communication 1999). Similarly, the linear composition of anthropomorphic figures at Paniau are like vertebrae forming a sinuous spine supporting the individual represented at the end.

Lateral Structures

In contrast to vertical arrangements, there are patterns of lateral arrangements in the rock images that also mirror the social structures found in Hawaiian society. Although Cox and Stasack linked the Paniau site (Figure 9) with the Hawaiian legend of warfare depicting “marching men” (Cox and Stasack 1970), their interpretation is problematical because, in my view, the Hawaiians were capable of showing multiples of “men” in a lateral arrangement, that did not incorporate the physical gestures of “birthing”. An example can be found on the west wall of Kalaoa Cave, (Figure 10). Here, the anthropomorphic figures are aligned laterally in horizontal rows. Also present are depictions of clubs or paddles held overhead in an active aggressive posture.

The **vertical** arrangements represent a series of one-to-one relationships (genealogies and recitations of generations). Each figure is directly related to the next, but not to the others in the line, whereas the **horizontal** composition shows several rows in a relationship with the others as a whole. This group formation is representative of a group such as a “team” or “regiment” that is organized to communicate the solidarity of a “group” typical of the military and simultaneously performing the same action. This contrasts with the vertical organization represented in Figure 9, which emphasizes the individual and is associated with one’s rank and ancestry.

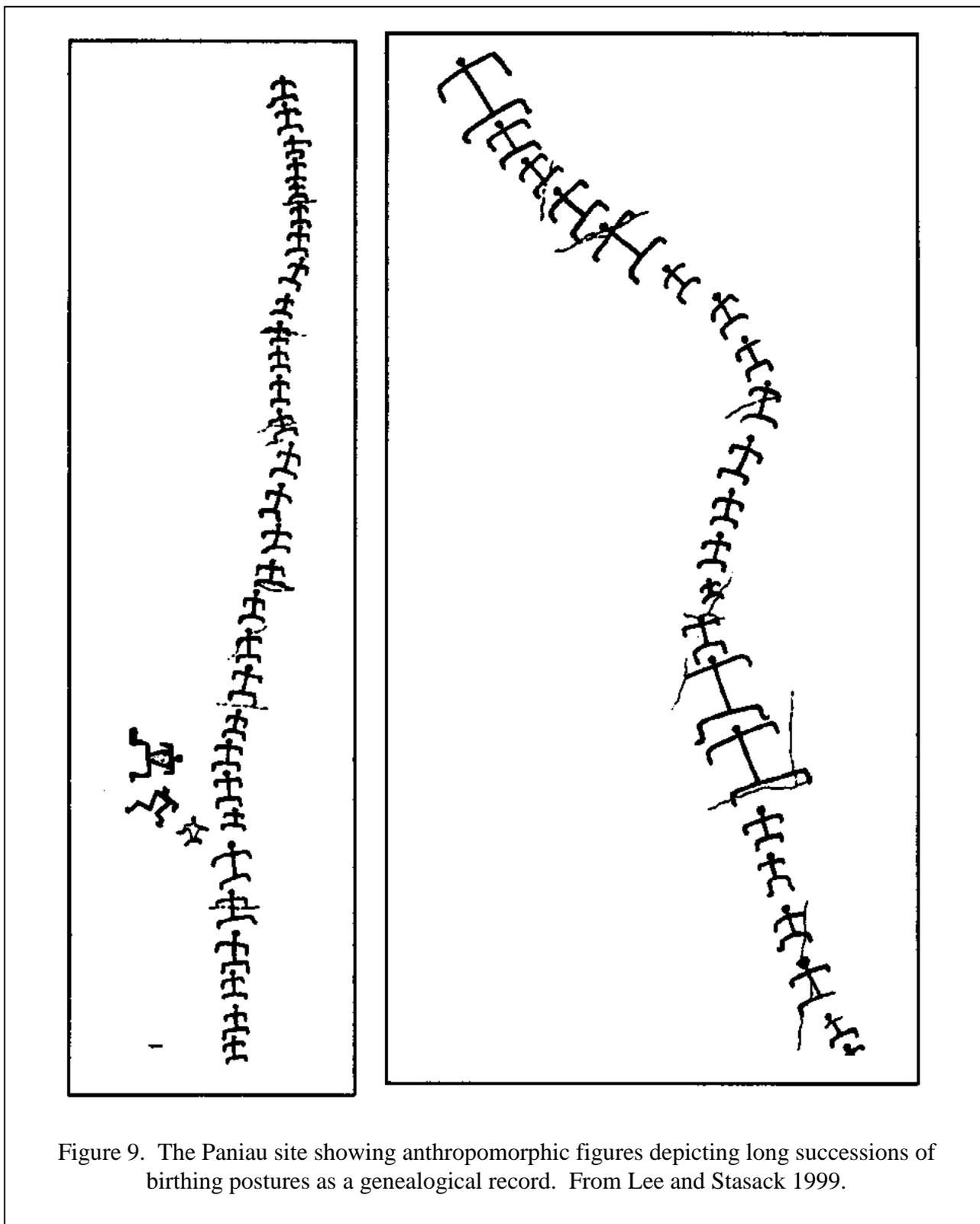


Figure 9. The Paniau site showing anthropomorphic figures depicting long successions of birthing postures as a genealogical record. From Lee and Stasack 1999.

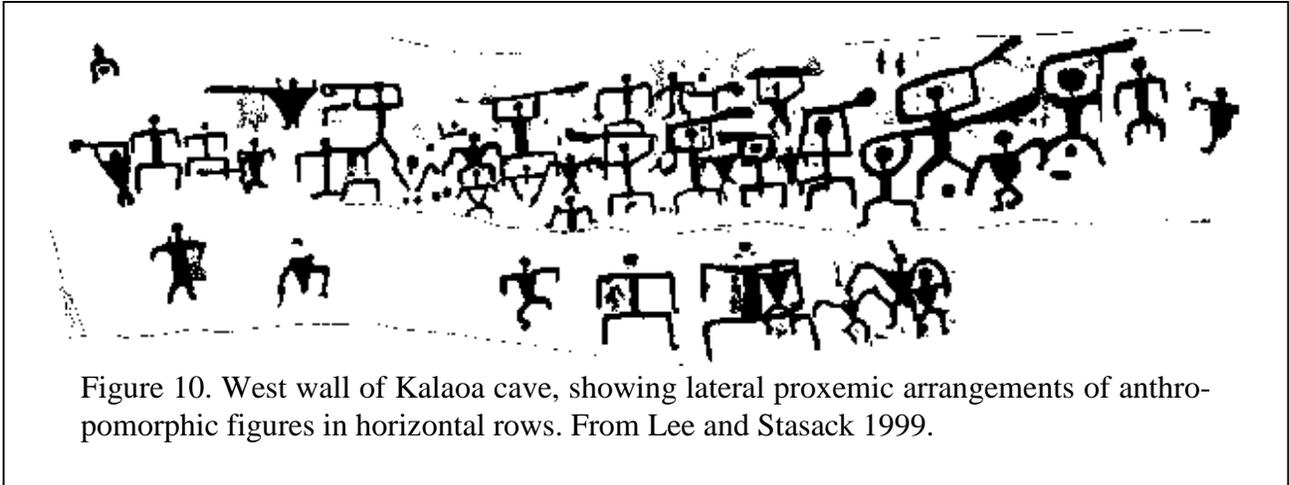


Figure 10. West wall of Kalaoa cave, showing lateral proxemic arrangements of anthropomorphic figures in horizontal rows. From Lee and Stasack 1999.

Family

Family groups are also represented by lateral patterns in the rock images. The importance of family relationships is found in the Hawaiian language with the use of plant-like metaphors such as “rootedness” and “thickness” to describe a well-endowed pedigree (Goldman 1970). This is tied in with the belief that people, like plants are rooted in the earth. Beckwith writes:

By the word *Honua* I understand not the land itself but the people who inhabit it, just as Hawaiian usage makes interchangeable the name of a chief with the piece of land he occupies. The word *Ho’okumu* literally means, “causing to begin” and may better read “founding” or “beginning” than by the word creation... (Beckwith 1972:154).

Handy and Pukui write:

Oha means the shoot growing from the corm of the taro plant: The family as a group was termed ‘*oha-na*, which literally means “all the offshoots.” *Pulapula*, which was applied to human offspring or descendants, literally means offshoots of a plant. *Kupuna*, or ancestor, is probably the substrate,

formed by the suffix *na* affixed to the root *kupu*, to grow. *Laupa’i*, which means specifically the first leaves put forth by the newly planted taro, is used figuratively to describe a family that is growing, producing many children. A person who had no grandchildren of his own and who is in danger of having no descendants was *lala make*, a “dead branch.” One with living descendants was a “living branch” (*lala ola*) (Handy and Pukui 1972,198).

In a similar way, the branching plant metaphor can be seen in what Lee and Stasack refer to as branching or “connected figures” that occur at Kāeo 1 (Figure 11). This branch-like composition may be similar in structure to “family” relationships stated through plant metaphors. The figures at Kāeo 1 (Figure 11a and b) show connected figures. Note that in 11b there are two turtle-like figures with open bodies. In the context of Hawaiian culture, the “turtle” may serve as an *aumakua* (totems, ancestors or spirit helpers) for the families or an individual represented here. The third illustration (Figure 11c) also shows a figure with “root-like” genitalia. This may reflect what Goldman (1970) calls “rootedness” in the way Hawaiians define their families. The Hawaiian language is replete with metaphors that draw upon their natural world. These cultural idioms or metaphors are important to understand

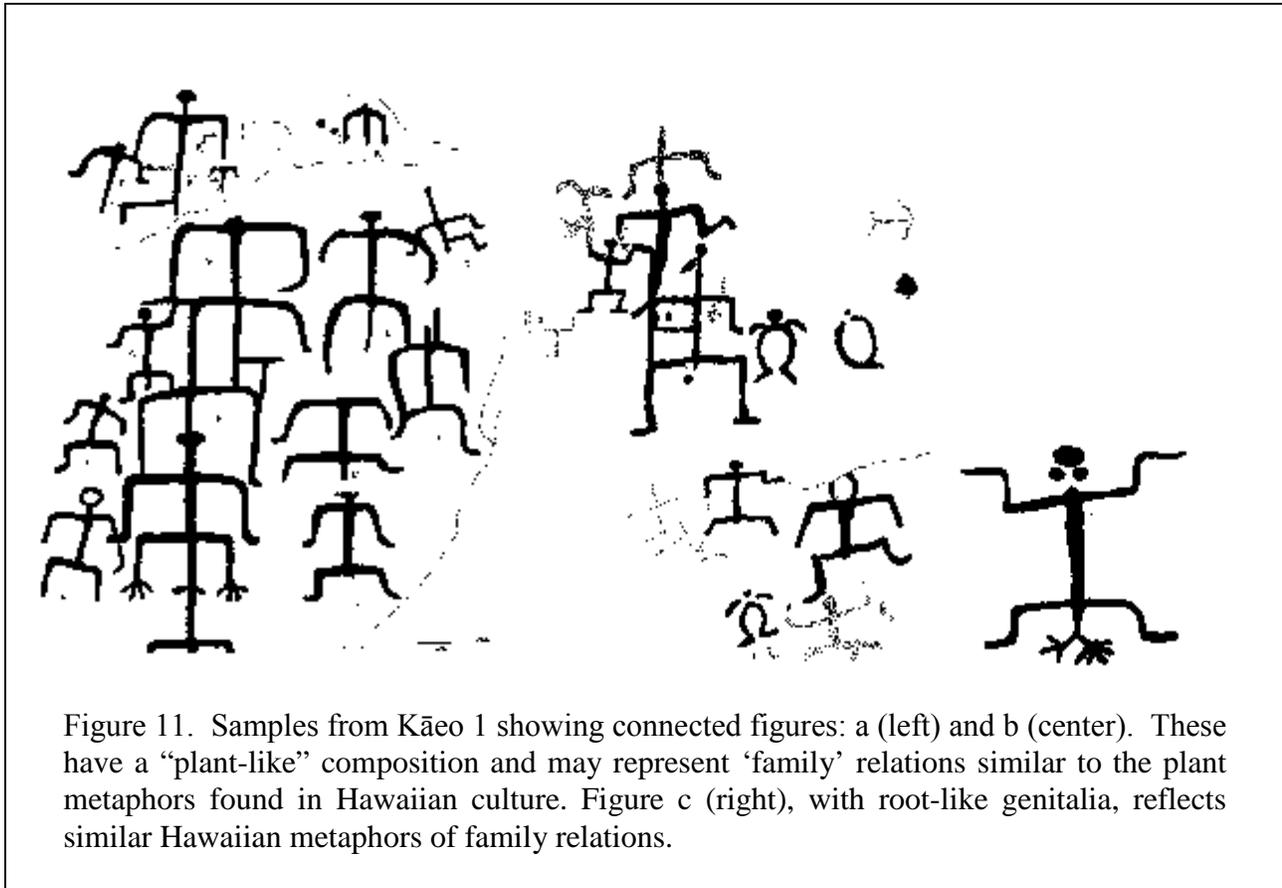


Figure 11. Samples from Kāeo 1 showing connected figures: a (left) and b (center). These have a “plant-like” composition and may represent ‘family’ relations similar to the plant metaphors found in Hawaiian culture. Figure c (right), with root-like genitalia, reflects similar Hawaiian metaphors of family relations.

because they are likely to have been used as a reference in other forms of Hawaiian communication systems such as dance, poetry, song and rock art.

Ancestors

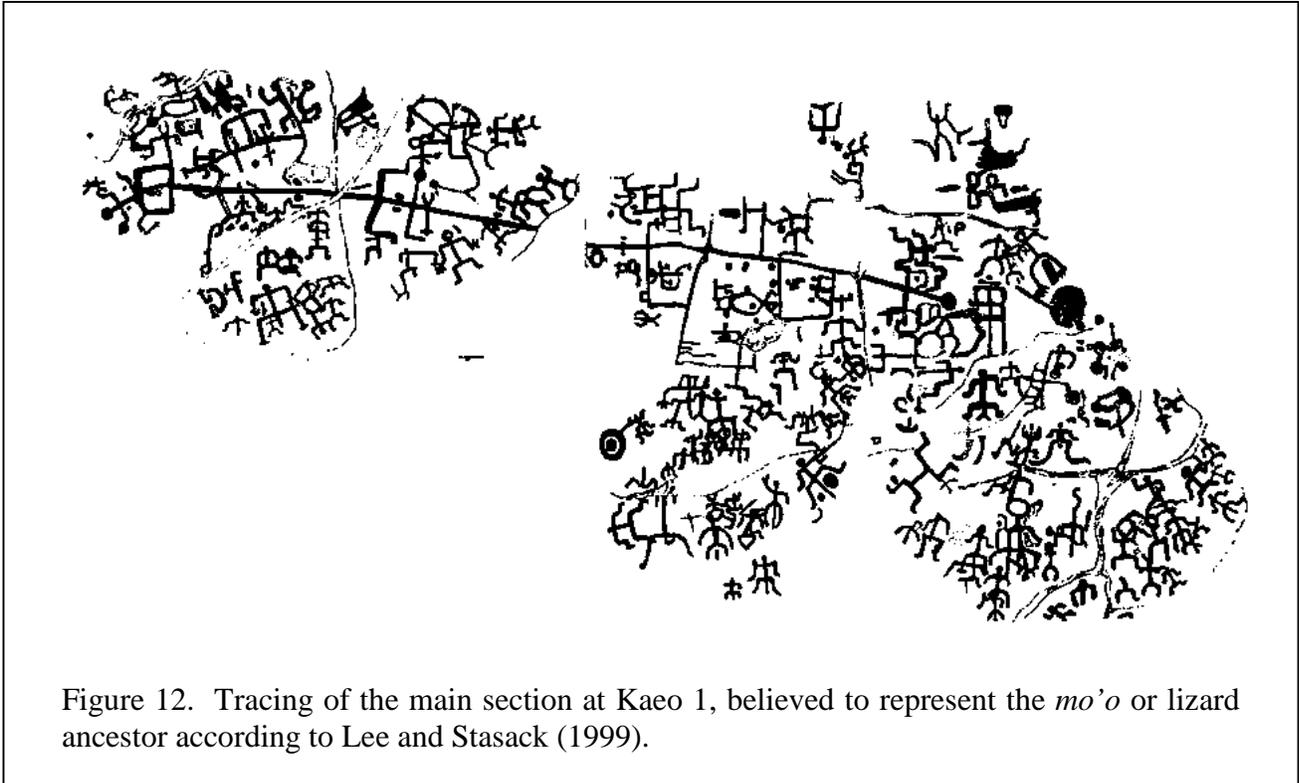
Figure 12 is often referred to as depicting a lizard-like ancestor called a *mo’o*. The word *mo’o* is a general term used in referring to lineage. Handy and Pukui (1972) state, “The *mo’o* or lizard migration came under the leadership of *Mo’o-inanea* (lizard-that-enjoys-itself), who was their chiefess.” These lizard-people were both good and bad. They first settled on Oahu. All of the reptile, lizard or water dwellers were *mo’o*.

The colour associated with *mo’o* is yellow and it can be found in ponds and streams.

Those who were related to the *mo’o* (reptiles), or water spirits, took their dead, wrapped in yellow tapa to a

stream with an offering of a reddish brown or brindled dog. These prayers were chanted till the *mo’o* appeared, large and small, and the body was lowered into the water to become a *mo’o*” (Handy and Pukui 1972:151).

According to Handy and Pukui (1972:197), the word *mo’o* or *kuamo’o* means succession. The word *mo’okupuna* means the succession of ancestors. The word *mo’oku-’auhau* means the story or telling of genealogy. There are strong associations between ancestors and genealogical descent with the lizard figure, but stronger support comes from the ethnographic reports of Handy and Pukui who state that “The imagery of *mo’o* (lizard, with vertebrae visible) and *kua mo’o* (backbone, spine, road, trail) is apt and obvious as a simile for sequence of descendants in contiguous unbroken articulation” (Handy and Pukui 1972, 197).



The Hawaiian culture emphasises genealogy, kinship and the importance of ancestors as determinants of rank and power. The parallels between the linear sequencing of anthropomorphic figures in the petroglyphs with that of Hawaiian social structure in terms of linear and collateral kinship structures, generational long counts, and ancestor worship are very apparent. The descending sequencing of anthropomorphic figures in Figure 9 mirrors Ho's metaphor of a spine-like support system connecting the ancestors to the present generation. The military-like

lateral arrangement of Figure 10 mirrors what appears as an aggressive composition with more affinity to war parties. The collateral "branching" depicted in Figure 11 is consistent with Hawaiian concepts of family and kinship. Figure 12, with its resemblance to the lizard metaphor, is associated with ancestors. The ancestors and their interconnections with the gods is the topic for the next segment of this investigation.

(Continued on the following page)

PART II

HAWAIIAN COSMOLOGY

The Hawaiian cosmological worldview begins with the gods of creation and the creation of the universe. Among the hundreds of Hawaiian gods, there were four very important ones: *Kā* god of war, *Kanaloa*, lord of the ocean and companion to *Kāne*, the leading god among great gods and *Lono*, god of thunder, rain, agriculture and fertility. The creation of the universe has been preserved in what is called the *Kumulipo*, which is a chant or creation story that has been passed down through countless generations. The *Kumulipo* states that in the beginning, there were two periods, that of night (*Pō*) and that of day (*Ao*). The *Pō* period is only for the gods and man does not appear. During the *Pō* time, the first life is formed of opposite sexes. From their union are born the simplest life forms that include corals and molluscs. Each section of the chant continues with creation of the male force and female forces, the fish, winged creatures, insects, and birds. In the fourth section of the chant, the amphibians and animals are created, the fifth section describes the creation of the pig, the sixth section the rat, the seventh section the dog and finally the eighth section describes people. From the appearance of people in the chant, there is a transition from *Pō* to the *Ao* period. Here the genealogical accounts begin (Valeri 1985).

The Pantheon and Multiple Meanings

The concepts associated with *Pō* and *Ao* are found in metaphors for different states of divine power that are also relative to the states of being in Man. Each deity is also metaphoric of certain attributes that are manifest in the physical world. There are three forms

they can take: the natural phenomena and biological species; living human forms; and actinically produced forms like carvings (Valeri 1985). Each deity is associated with a number of different manifestations. The god *Lono* for instance, takes one form associated with the pig. The pig represents human properties such as virility, activity, bellicosity, etc. Table 3 illustrates these different attributes associated with the four major gods.

The major god, *Kā* is associated with war, fishing and other male activities such as canoe building, image carving and temple building. Thus, physical representations of *Kā* can be symbolized by these activities or objects (Valeri 1985). By extension, a dog, hawk or game fish are metaphors of *Kā* “because they evoke the warrior and his different attributes. Birds with precious plumage are the *bodies* of *Kā* because their feathers adorn the images carried onto the battlefield and decorate the helmets and capes of the warriors” (Valeri 1985). Table 3 illustrates the polysemy of Hawaiian iconography.

Cox and Stasack, (1970) and Lee and Stasack (1999) have pointed out the possible representation of the god *Lono* by a certain stick figure in

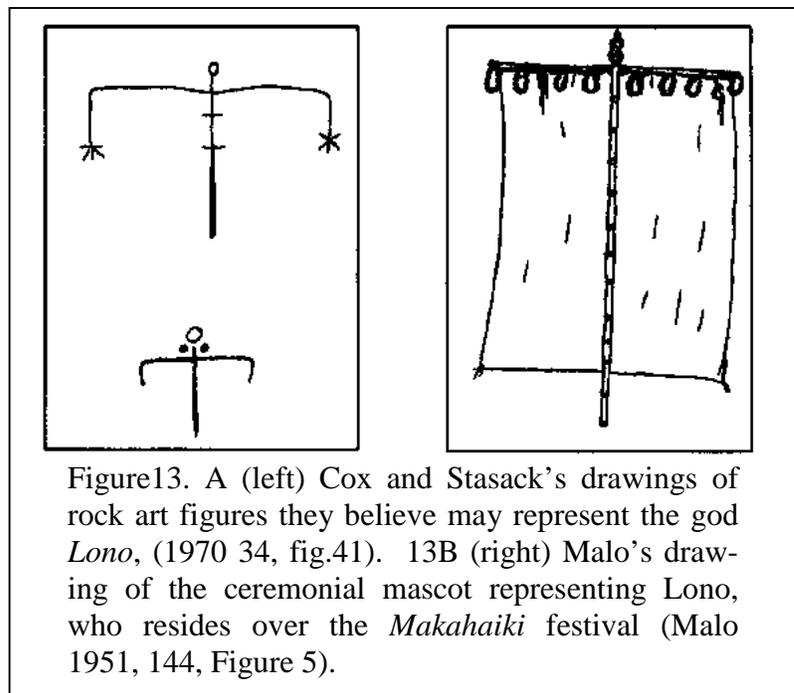


Figure 13. A (left) Cox and Stasack’s drawings of rock art figures they believe may represent the god *Lono*, (1970 34, fig.41). 13B (right) Malo’s drawing of the ceremonial mascot representing *Lono*, who resides over the *Makahaiki* festival (Malo 1951, 144, Figure 5).

the petroglyphs. Figure 13 compares the illustration by Cox with a drawing of the god Lono by David Malo (1951:144).

In Hawaiian cosmology, the balance of the sky, land and sea is important. Malo's sketch of the Lono figure includes the elements of land, sky and sea. The white tapa cloth that is basted to the crosspiece represents the sea. The crosspiece is tied to the "neck" of the figure and has bound pieces of *pala* fern that represent the earth. From each end of the crosspiece are hung feathers that flutter and feather skins of the *kaupu* bird that represent the sky. The combination of these symbols represents the polysemic identity of Lono

Mana and Tapu

The concepts of mana and tapu must be discussed here because they relate to virtually all aspects of Hawaiian culture. No part of life existed in isolation of these concepts. *Mana* is the power and luck bestowed upon certain individuals who have either inherited this power or achieved it through extraordinary good luck and bravery. "Mana can be a benevolent influence that intercedes between divine and human affairs. Mana refers to positive effects created by a vital force, not necessarily the force itself, but the quality of its magnificence as it manifests in the world" (Duffie 2001:17).

Tapu, on the other hand, is a way of controlling *mana*. It is used to contain sacred *potency* that inhabits something, a place or person that is connected to the divine. *Tapu* preserves what is sacred and can also refer to something that contaminates what is essentially pure, such as the blood associated with menstruating and childbirth. These are considered polluted, dangerous, and forbidden. *Tapu* establishes modes of behaviour that ensures divine protection. "Any transgression of the laws of tapu lead to the withdrawal of divine protection. One's life force is then exposed to the influence of malevolent spirits. Illness and non-observable physical

cause was attributed to an attack on the life force by the spirits" (Duffie 2001:17).

The Family

The gods and ancestral spirits communicated with their earthly descendants in what was part of a timeless social structure that stretched back to the primal couple, the first inhabitants of the earth (Copp 1973). They are ever present in the family structure as guardians and spirit helpers. The importance of ancestral spirits and helpers in the family structure is reflected in this passage by Handy, et al. (1934:5), "The family group was regarded as existing not only as a present reality, but as a concrete entity extending into the past and the future, including the dead and yet unborn."

Figure 14 is the petroglyph widely published and said to represent a "family unit" (Huston 1973, Cox and Stasack 1970). It may depict the living

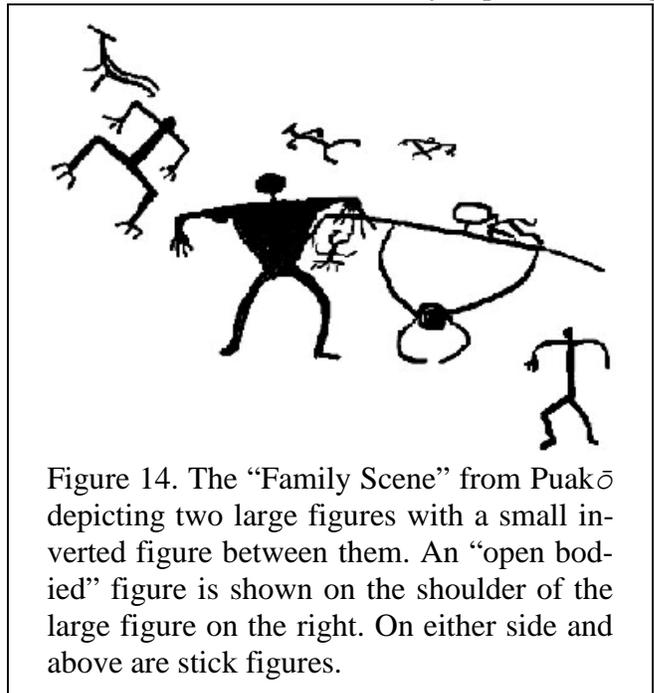


Figure 14. The "Family Scene" from Puakō depicting two large figures with a small inverted figure between them. An "open bodied" figure is shown on the shoulder of the large figure on the right. On either side and above are stick figures.

(father mother and child) as well as ancestor and spirit helpers depicted to the left and bottom of this panel.

This panel includes several styles of anthropomorphic figures that are grouped and even overlapping, which encourages one to consider

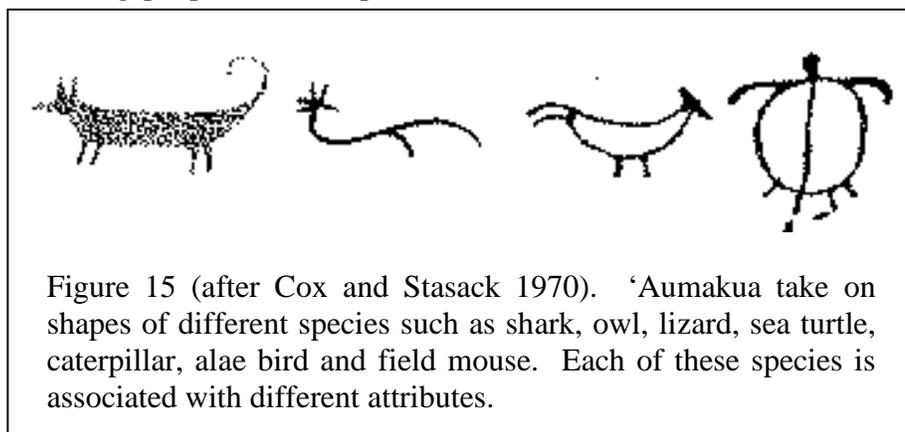
all of the figures as inclusive of the “family unit” in accordance with the statement from Handy, et al. (1934). The following is a discussion about ancestor spirits and spirit helpers within the context of Hawaiian belief systems.

Spirits

For the Hawaiians, there are different types of spirits (*‘uhane*); the gods, *akua*; the ancestral guardians, *‘aumakua*; the disembodied souls endowed with *mana* obtained from worship, (*‘unihipili*), and individual nature-spirits, *kupua* (Handy and Pukui 1972). The *‘aumakua* are associated with kinship groups and can be acquired individually. They can be passed down through families. The *‘aumakua* can also represent personal gods who were once powerful chiefs and became ancestral deities of the family (Valeri 1985). The *‘aumakua* can be ancestors worshipped by kinship groups as well as related to them by kinship bonds. To the Hawaiians, *‘aumakua* may appear in a dream as an animal that manifests itself into a real animal. The *‘aumakua* can take a human form or be entities within humans, such as *haka* “mediums”, or be in anthropomorphic images carved in stone or wood (Valeri 1985). Rock images that have been thought to represent *‘aumakua* animals or birds are shown in Figure 15.

The Haka and Noho.

The Hawaiians describe the relationship between the living people and the spirits in terms of the



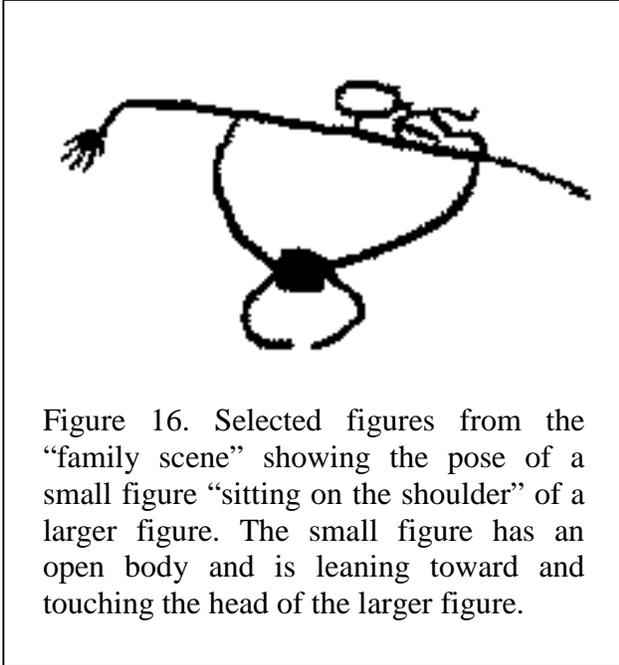
haka and *noho*. The *haka* was a medium, a recipient, oracle or person possessed by a spirit (Pukui and Elbert 1986:48). The *haka* was a person chosen by the spirit, or spirits, to serve as a “speaking-mouth” (Valerie 1985). The spirit, be it *‘uhane*, *‘aumakua*, or *akua*, was always one to whose lineage the *haka* belonged, according to Handy and Pukui (1972). The Hawaiians claim that every family had someone, some relative who served as a medium for a spirit (Handy and Pukui 1972).

The characterization of the person, when the spirit is in possession of the medium’s body and faculties as *haka*, implies the conception that the spirit perches upon the medium rather than entering by way of the mouth into the stomach (as in the Marquesas, for example). The word *haka* means literally a bird’s perch, or a rack to hang things on. The spirit is heard speaking through the mouth of its *haka*. In Hawaiian the *haka* is, in fact referred to as the “speaking-mouth” (*waha-‘olelo*) of the spirit (Handy and Pukui 1972:132).

Figure 16 is a detail of the “Family Scene” that illustrates what might be described by Handy and Pukui in terms of body posture and spatial positioning of the small figure perched on the shoulder of a larger figure with its head overlapping the other’s head.

The Hawaiian word *noho* refers to the possession of a medium by a spirit or god, (Pukui and Elbert 1986:268). It means “to sit” or “to dwell,” and is applied to the temporary dwell-

ing-with or sitting-upon a chosen person who is a medium (*haka*) by that particular spirit. When a person dies, their spirit can often be persuaded, with offerings of food and prayer, not to pass on but to stay with a member of the family. The spirit may “sit” upon a relative who is *haka* for the purpose of explaining the cause of some



trouble that is afflicting the house. Such a spirit (*‘unihipili*) could be beneficial or malevolent, depending upon the good or evil motives of its *haka*, or keeper (the person who has endowed it with *mana*) (Handy and Pukui 1972).

Hawaiian cosmology holds clues that may be helpful in understanding the gestures and spatial positioning of anthropomorphic figures. The implications with this model show the use of different body styles to distinguish real people from spirits, and the use of body posture and spatial positioning to illustrate a relationship between both entities.

THE HAWAIIAN HULA

When considering the gestures of Hawaiian communication systems, it would be impossible to ignore the *hula*. The *hula* is a gestural dance that uses arm and hand gestural movements to illustrate the words of a song or chant. Malo (1951) and Emerson (1909) write of an “ancient” *hula* that at the time of Cook’s arrival was associated with the elite class and child naming ceremonies. The *hula* has been defined by Emerson (1909:13) as “an affair of premeditation, or an organized effort, guarded by the traditions of a somber religion.” E. D. C. Handy (1931: 12)

calls the *hula* “a magical ritual designed to bring rain and fertility.” However, Charlot (1979:18) defines the *hula* as “dance with chant, that is, bodily gesture always connected to language which makes it meaningful rather than abstract.”

In this context, the *hula* plays an important part in understanding Hawaiian communication through gestures. The *hula* chants, accompanied by elaborate gestural signs, relate the histories and knowledge of the gods and ancestors (Klarr 1999:3). Hawaiian cultural knowledge is encoded in the gesture dances that transmit the information from generation to generation.

The *hula mele* (song) described historic events of battles, royal births, environmental events and provided navigational information. The reciting of genealogical records served to establish the ruling classes and trace their lineage back to the gods (Klarr 1999). The record of genealogy was recited in a song or *mele* and gestured in a dance. With an expected birth of a child of rank, the *haku mele* (song composer) was required to compose a *mele inoa* (name chant) for the new chief-to-be. When a *mele* was composed to the satisfaction of the family, the *hula* dancers were summoned to commit the song to memory and to decide upon the proper gestures to accompany the dance to tell the story of the child’s ancestry (Malo 1951). “After that the men and women of the *hula* company danced and recited the *mele inoa* of the unborn chief with great rejoicing, keeping it up until such time as the prince was born; then the *hula* performances ceased” (Malo 1951, 136). The *meles* composed for the birth of an *ali’i* had to be correct and perfected to the point that no evil would come to the unborn child or the chanter. The gestures were so important that it would be reasonable to assume that gestures depicted in rock art are purposeful and carry the same weight in influencing communication.

The creation stories related previously in *Kumu-lipo* are integral to understanding the symbolism choreographed in the dance performances of the *hula*. The traditional *hula* was rooted in the

origin myth of the universe recounted in the *Kumulipo* that describes the union of *Wākea*, the sky father and *Papa*, the earth mother, who in turn created everything else (Klarr 1999). The *hula* played an important role in helping to maintain a balance between the gods and increasing the fertility of the earth. To flourish, there needed to be harmony and cooperation among the gods that could be affected by elaborate rituals and prayers. The *hula* was a major instrument that was used to transmit their desires and adoration.

The process of cosmic creation is a continuing process. Creation was not believed to be one series of events accomplished in a distant past, but it proceeded continuously in all times through fertilization (Handy 1927). *Mana* is the natural energy or power upon which success and efficacy in all human enterprises depends for its original essence and procreative power. *Mana* is associated with nature's superior divine aspect and male procreative energy with light and life. The Polynesians made generation operative through sexual union, a universal principle of their natural philosophy (Listopad 1973, Klarr 1999).

The gods were responsible in an ongoing way for the fertility of the land. They had to be stimulated and aroused to perform their fertilizing function. The use of erotic chanting and dancing in religious ritual as well as for sexual orgies in ritual contexts occurred during the season of abundance surrounding harvest. The erotic dancing was designed to stimulate and bring into action the *mana* of the gods who were believed to be animated by the same emotions as men, and on whose procreative abilities the fecundity of human beings, the earth and the sea depended (Handy 1927).

The chief was the channel of divine *mana* on earth. As the first-born male of the tribe, he stood for land and people as the prime embodiment of generative power in nature (Handy 1927). The generative organs of the divine chief were thought to be particularly potent. Chiefs

were associated with exaggerated sexual activity and prowess in ordinary life. Chiefs were typically polygynous and expected to have more affairs and conquests with women in their community. The chiefly reproduction activity and results were highly ritualized. Their first matings and birth of their first child were surrounded with elaborate rites celebrating the continuation of their lines.

The concepts of *mana* and *tapu* relate to virtually all aspects of Hawaiian culture, and consequently, the *hula* also operated within guidelines defined by *tapu*. Students training in the *hula*, observed *tapu* restrictions including sexual abstinence and food restrictions. Fully trained dancers were held responsible for their gestural actions that could attract *mana* to the person being honoured by the dance, and care was taken to observe *tapus* restricting the unappropriated gestures (Listopad 1973, Klarr 1999:3).

In traditional Hawaiian culture, all aspects of life were integrated in a holistic view of the universe, and the *hula* was a manifestation of the continuous interaction and communication between different entities. One function of the *hula* was to attract the positive aspects of the universe, to increase *mana*, fertility and well being. In the Hawaiian way of thinking, words have both meaning and power and must be regulated; to quote an old Hawaiian saying: "in the word is life, in the word is death" (Elbert 1970:19). Some words bring bad luck, and their usage is considered a bad omen that can affect either the unborn child or the chanter.

Emerson (1909:37) noted that Hawaiians believed in the fate-compelling power of a word of ill omen. If it did not result in the death to a person, then that person could turn the evil influence back on the person who uttered it. The same was true for body movements, as certain gestures could also impart bad luck (Pukui, et al. 1972 (I):58-59). Depictions of gestures in petroglyphs were extremely important in conveying information.

The petroglyph shown in Figure 17 was interpreted by a professional *hula* instructor, Dr. Paisner of Hawaiian History and Ethnic Dance. Paisner identified the following elements:

The circles are the feathered gourds, one in each hand. The leg is lifted and tilted to the side. The big figure is possible a teacher and the two smaller ones are students. They are both doing this kind of hula, with and



Figure 17. Paisner, (2000) identified this figure dancing the hula holding circular gourd shields. This figure is from Kaeo 1.

without the gourd (Paisner, personal communication 2000).

Paisner drew a comparison with the illustrations of the *hula* done by Louis Choris in 1822 (Figure 18). The hands are flexed at the wrists, and the feet are flexed as they are lifted from the ground. The arm gestures are very rigid and each part of the arm is at a sharp angle to the joint. The anthropomorphic figures with wavy

arms and legs have similar characteristics of sharp angles to the joints.

Figure 19 is an illustration of the male *hula* by Webber (date unknown) and shows the flexed wrists and knees that are similar to the petroglyph gestures and postures shown in Figure 17. Examples of anthropomorphic figures with flexed wrists and feet are shown below in Figure 20.

The ancient *hula*, *'āla'apapa*, predates the modern *hula* of the Kalākaura era (Stillman 1998). This class of *hula* has specific structural features that set it apart from modern or Westernized *hulas* called *hula 'auana*. The distinction between what is considered indigenous (pre-contact) *hula* and the Westernised *hula* are apparent in the melody, movements and costuming, as described by Stillman:

For example, *mele* - poetic texts - in the ancient *hula kahiko* stream (class) are said to be chanted, in contrast to the *mele* in the modern *hula 'auana* stream, which are said to be sung; *hula* movements and gestures in the ancient *hula kahiko* are considered to be vigorous in effort expended by dancers as opposed to movements and gestures in the modern *hula 'āuana* stream, often characterised as soft and languid. Thus, *hula 'āla'apapa* are *hula* in the ancient performance stream, in which the *mele* is chanted rather than sung, the movements are vigorous and bombastic rather than soft and languid, and the instrumental accompaniment is provided by the indigenous double-gourd *ipu* rather than the Western guitar or ukulele (Stillman 1998:2).

The ancient *hula* is characteristic of chanting and vigorous movements that are recognizable in early sketches and paintings of the contact period. Arms are rigid with flexed wrists bent at 45-degree angles. In contrast to the ancient *hula*, the contemporary *hula* is characteristic of gentle, soft and languid movements.

The anthropomorphic figure depicted on the ruins of the *hula heiau* has an affinity with the an-



Figure 18. Paisner, (2000) identified this figure dancing the hula holding circular gourd shields. This figure is from Kaeo 1.

cient gesture dance in its angular “wavy arm” motif shown here. Figure 21 is a petroglyph found on the wall in the ruins of a *heiau* formally called the “*Hula heiau*”. It is at *Kama’oali’i*, a site said to be a *hula heiau*. The petroglyph is an anthropomorphic figure with wavy arms and legs.

The *hula* schools, *hālau*, trained dancers in the traditions and the *tapus* of the tradition. They were run by families in different regions throughout the islands. Tradition dictated a set of standards for proper etiquette that observed *tapus*. Emphasis was placed on keeping the *hālau* traditional and to preserve the *mele hula* and keep it in its original form.

MAKAHIKI FESTIVAL

The ritual cycle of the *Makahiki* (New Year’s Festival) begins at the end of the dry season and continues for three months into the wet season (Valeri 1985). This

festival is dedicated to the *akua Lono*, god of fertility. The ceremony starts with the rising of the constellation Pleiades at the beginning of the rainy season. The season marks the anniversary of the creation of the world as recorded in the *Kumulipo*.

The main theme is that of fertility, represented in the procession of the *Makahiki* Gods; one of “feather gods” that are carried in one direction while another set of “wooden gods” are carried in the opposite direction (Valeri 1985).

For four days *hula* dances and boxing matches are performed. During the boxing matches two parties stand face to face insulting and mocking each other. Sometimes fights break out, stones are pitched and people are injured or killed (Valeri 1985). An illustration of the *Makahiki* Festival is

shown in Figure 22.

In the illustration by Webber shown in Figure 23, the god *Lono* is shown surrounded by the

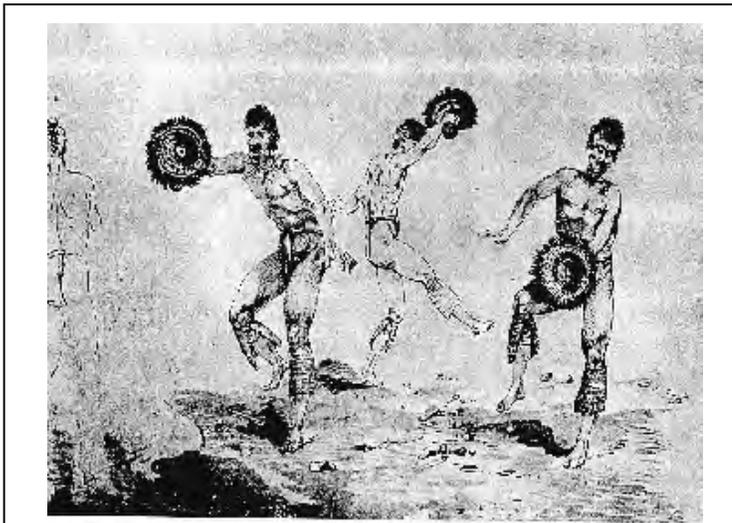
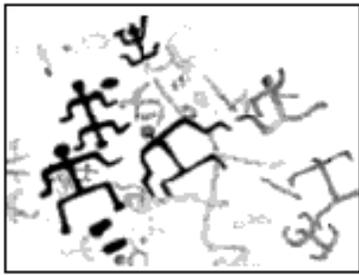


Figure 19. “Hawaiian man dancing, three views,” original sketch by John Webber in Bishop Museum Library, neg. no CPBM399912. (From Barriere, Pukui and Kelly 1980, 16).

boxing matches between men with postures and



Kāeo 1, sec. 17-19



Kāeo 1, sec 2



Kāeo 36

Figure 20. From Puako, Kāeo 1 and Kāeo 36, (from Lee and Stasack 1999) depicting wavy armed anthropomorphic figures with flexed wrists and feet.

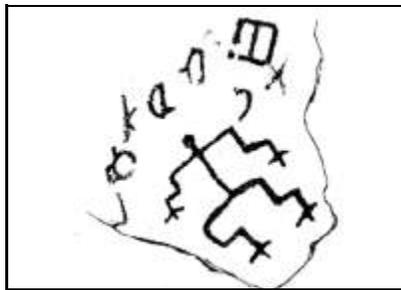


Figure 21. Hula heiau, “Kam’oli’i. This site, according to Lee and Stasack, is said to be a hula heiau. It features an anthropomorphic figure on the wall of the heiau with wavy arms and legs. From Lee and Stasack 1999:7.

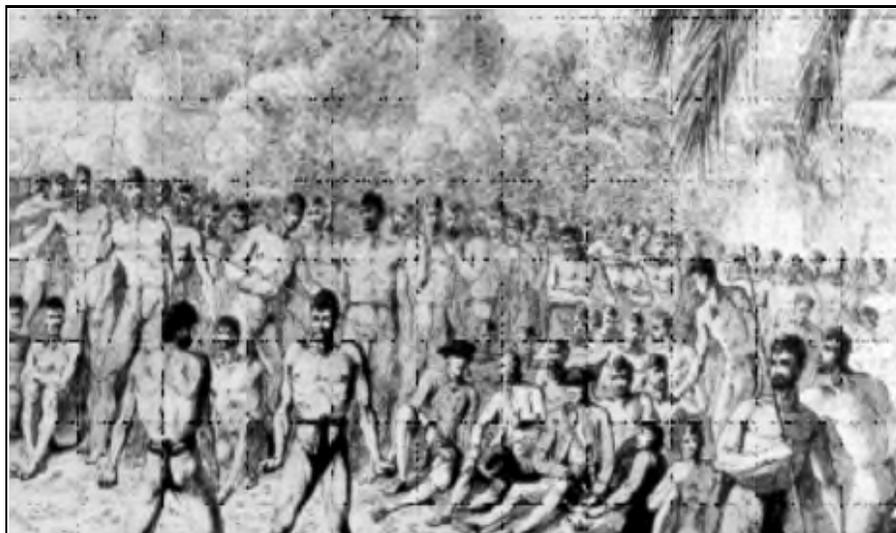


Figure 22. Boxing match before Capt. Cook at Owhyhee, lithograph by John Webber, 1770. “The boxers are probably performing postures of a stylized taunting dance often performed before a contest. The posture is evident in many of the images” Cox and Davenport 1974, 92-93, plate 45.

gestures of flexed wrists and tight fists. The bas-relief figure from Kaeo1 has the flexed fists and muscled arms lowered to the sides that are typical of the boxing gestures (Figure 23c).

The *Makahiki* was a time when the *akua* of rain, *Lono* was manifested in various forms that included the procession of idols, boxing matches and the *hula*. The *hula* augments fertility and

within the political relationships that occur in Hawaiian culture.

In the first example, Vertical Linear Sequence, the repeating identical figures are characteristic of a stratigraphic series count. The body forms are in a linear sequence that appears formal and tightly controlled without observable variation in individual figures. Each figure has a direct rela-

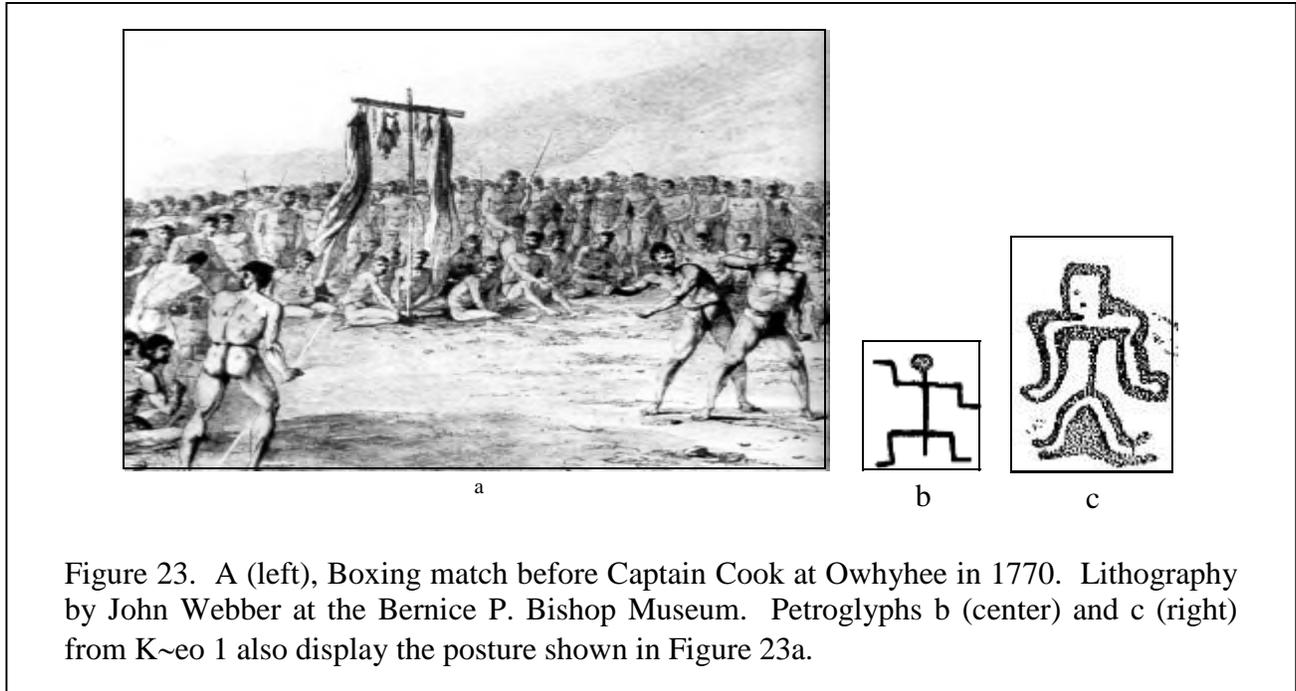


Figure 23. A (left), Boxing match before Captain Cook at Owhyhee in 1770. Lithography by John Webber at the Bernice P. Bishop Museum. Petroglyphs b (center) and c (right) from K~eo 1 also display the posture shown in Figure 23a.

prayer. Through gestures, the prayers are conveyed that bring about the balance between the forces of the universe.

SUMMARY AND CONCLUSION

Table 4 compares the patterns and relationships and summarizes the use of body forms that have parallels in Hawaiian social and political structure. Only four categories appear in this table, but there are likely to be more. The first column illustrates a selected petroglyph panel that typifies each category. The second column provides a description of the observed structure within each panel. The third column identifies the analogous patterns and structures that are found in the social relationships of the Hawaiian culture. The fourth column identifies the structure

relationship with the one above or below, but not with any other figure in the line. This configuration appears to convey low context cultural information that would be relatively easy to access by an outside person. In contrast, the Unoriented Disparate Group appears to contain complex relationships. In Hall's terms, this grouping reflects high cultural context that is not accessible to outsiders (Hall 1986).

The organization of the second group, Vertical and Horizontal Conjoined Sequence also exhibits uniform body forms, gestures and spatial arrangements. The conjoined sequence implies relationships to members both vertically and horizontally. Patterns like this are found in the Hawaiian kinship systems terminology in which the same generation and same sex relatives are called by the same terms. It implies groups

comprised of more than one lineage, like social group or village. In the political realm, it parallels the bifurcation of chiefdoms and the splitting of alliances from one leader to another, forming dual lines of allegiance.

The Horizontal Group depicts anthropomorphic figures with the same orientation, body form and gesture, but with minor variations among some individuals. The figures are not sequential but lateral with the potential for relationships between individual. The implication is a “group” activity that may be identified by the objects held over the head of many of the figures. Parallels in the ethnography concerning “groups” of people engaged in activities include dances and ceremonies, war parties and battles, or fishing and sea faring events.

The final group, Unoriented Disparate Group, contrasts with all of the previous examples. Each one of these anthropomorphic figures is unique. There is no formal structure in the body form, orientation or proxemic arrangement. Each figure has a unique relationship with the next and with all others in the group.

Four different body forms are used to convey different kinds of information. This composition is rated “high context” because the information is impossible to access by an outsider. The proxemic arrangements of each figure show close relationships between individuals that have parallels in the family and spirit relationships in Hawaiian culture. Political relationships are less obvious. Power is managed by subgroups. Land ownership is dependent upon identification of different relationships between individuals. Power is awarded to those who qualify through inheritance rather than prestige (as in other parts of the Pacific) (Kirch 2000).

Form follows function in the sense that the phenomenon of gesture including posture and proxemics, depicted in anthropomorphic figures are not random, but are constrained and organized in similar patterns which have parallels within the culture. The gestures and related attributes operate as a semiotic system within a larger com-

munication system known as human language. This paper demonstrates a new methodology that is useful in understanding anthropomorphic figures in rock art.

I have identified five body types found on Hawai'i Island. They follow rules of convention that are consistent across their own cultural area. Specific body types appear to be utilized for visual narration as part of a multi-faceted communication system. I argue that body form is not the result of an evolution of style through time, but that different forms are used simultaneously in accordance with their ability to encode information. It has been demonstrated through observation and dating statistics that stick bodied figures do not always predate full-bodied figures, and that in many cases stick bodied figures are found superimposed on top of older full-bodied figures. Form depends upon the information that is to be communicated, and it is often reduced to stick form in order to convey that message in terms of action and gesture language.

The consistent frequencies of gestures in each cultural area indicate deliberate preferences by that culture for conveying information. The use of those gestures therefore seems to involve semantic content. Graphically depicted gestures communicate non-verbally in the same manner as gestures used in contemporary societies. They make up a major portion of human communication (85% according to Hall, personal communication 1998), supplementing speech in every human culture. Graphically portrayed gestures become the sign-vehicles for transmitting information in a visual narration. The gestural information is identified and interpreted by people of the community in much the same way as contemporary people of any culture interpret gestures accompanying speech.

Gestures are extremely important to Hawaiian culture in ways that denote social status, power, religious affinities and ancestor relationships. In both societies, they are carefully choreographed and applied to narrative performances that require traditional correctness without misuse or

random display. I argue that visual displays of gestures in the rock art follow strict rules of convention from each culture.

The proxemic analysis demonstrates rules for the spatial arrangements that follow the social and cultural models. Hawai'i has several examples that demonstrate purposeful proxemic arrangements analogous to cultural metaphors.

At Kalaoa Cave, the specific proxemic arrangement with horizontally aligned figures possibly indicates a group activity with some variation in individual figures that convey a sense of strength and militaristic organization. Iconic motifs identified as paddles or clubs held over the figure's heads identify them as warrior-like by the culture. In contrast, the vertical alignments of figures at Paniau are analogous to genealogy and the concern for connecting back in time to the original ancestor.

The use of proxemic arrangements reflects the Hawaiian concern for rank and social structure that is based in part on genealogical records. At this site, the anthropomorphic figures are spatially positioned in vertical succession repeating a

“birthing” gesture that is interpreted as “generations” by the culture. The proxemic arrangement of collateral conjoined figures found at Kāeo 1 are analogous to cultural metaphors that characterize kinship and family relations.

The new methodology that I have developed for analysing anthropomorphic figures in rock art looks specifically at gestures as a semiotic system encoding information that should be considered in any formal analysis of rock art. The “form” of anthropomorphic figures in paintings and engravings follows the ‘function’ in the broad sense that body ‘styles’ are selected in accordance with which form is best suited to convey the information requiring visual expression. Like the relevance analogy by Lewis-Williams using the neurological model, I argue that the human body itself is the model used to communicate information. Form follows function in the most basic sense. Gestural communication is found in every society and imprinted on the brain as an innate key to understanding other people. The structured triangulation approach enables revelation of the function that dictates the form displayed in the rock art.

TABLES

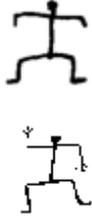
Body Type	Patterson Types (this thesis)	Lee & Stasack (1999) Style	Cox & Stasack (1970) Style	C14 Dating (Stasack, Dorn & Lee 1996)
	T-figure , headless	1100 Simple T no legs	(I) earliest primitive forms	not sampled
	T-figure w/ head	not distinguished		not sampled
	Stick-figure R arm, 14 positions L arm, 14 positions R leg, 11 positions L leg, 11 positions Torso 3 orientation Head, 3 types R/L Hands, 5 types R/L Feet 4, types	1200 Stick figure Arms:** U,D,O,B,I,G, T, M, W Legs, A, M, W, C, R, G, N Head, A, L, H, D, B, T, P, R, F, O	(II) simplistic forms	*K23 983-1168 AD K33 992-1168 AD K12 1230-1290 AD K11 1290-1400 AD K28 1037- 1272AD K16a 1301-1438 AD K15a 1320-1440AD K26 1460-1640 AD K10 1660-1950 AD
	Triangle-bodied outline, empty	1400 Triangular torso	(III) middle 1600 AD (Lee)	K16b 1432-1632AD
	Clusters organized in lateral, collateral and horizontal proxemic arrangements	1101,1301 and 1401 Connected		Not sampled
	Triangle-bodied open	1410 Open base		Not sampled
	Triangle-body solid	1400 same Not distinguished		K19 1650-1950 AD
	Muscled - arms/legs empty or solid	1420 Muscled	(IV) more naturalistic form	Not sampled
	Muscled, just legs or just arms	1420 Muscled (same)		Not sampled
	Not sampled	1500 Naturalistic bas relief	(V) Latest naturalistic, most evolved	Not sampled
	Stick – profile prostrate	1600 Profile		
	Stick, splayed or frog position	1602 Two figures back to back		

Table 1 Style Category Comparisons of Patterson, Lee and Stasack, Cox and Stasack and the Dating Chronologies of Stasack, Dorn and Lee. (*K23 etc. are sample sites; **U=up, D=down, O=opposing, B=object-in-hand, I=wing-like, G=digits, T=out, M=muscled, W=wavy Legs: A=action, M=muscled, W=wavy, C=curved, R=regular, G=digits, N=no. Head: A=absent, L=line over head, H=hook shaped head, D=headdress, B=birdlike, T=dots for head or with head, P=open circle, R=regular, F=face, O=other.)

<i>Lono, Kō, Kōne, Kanaloa</i> (Major Deities)			
Mediation			
<i>Ali'i 'Ai Moku</i> (King, descendant of Deity)			
<i>Kalaimolu, Kuina, Kahuna Nui</i> (Specialized priests)			
<i>Ali'i 'ai ahupuna'a</i> (Chiefs)	<i>Ali'i 'ai ahupuna'a</i> (Chiefs)	<i>Ali'i 'ai ahupuna'a</i> (Chiefs)	<i>Ali'i 'ai ahupuna'a</i> (Chiefs)
<i>Konohiki</i>	<i>Konohiki</i>	<i>Konohiki</i>	<i>Konohiki</i>
(Land managers)			
<i>Maka'ainana</i>	<i>Maka'ainana</i>	<i>Maka'ainana</i>	<i>Maka'ainana</i>
(Commoners)			

Table 2. Stratification of Hawaiian society (after Kirch 2000).

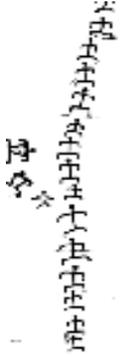
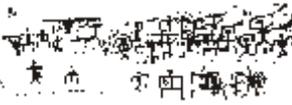
Graphic Description	Observable Patterns and Relationships	Ethnographic Parallels in Personal & Social Relationships	Ethnographic Parallels Constructs Religious/ Political Relationships
 <p>Vertical Linear Sequence</p>	<p>All the same gesture and posture. Stratigraphic sequencing, where A is to B, B to C, C to D, and A has no direct relationship to D. There is no radical change in size, form or orientation.</p>	<p>Linear genealogical systems of groups where single individuals are defined by a genealogical relationship in a chronological sequence of key ancestors.</p>	<p>Political power is derived from claims to direct lineages to ancestors. Patrilineal hierarchical society validated by linear sequences of individuals of rank & status. (eg. chiefly “lines”, priestly “lines” etc.)</p>
 <p>Vertical and Horizontal Conjoined Sequence</p>	<p>Series of vertical sequences of similar posture and gesture. Potential for relationships between vertical groups. Central figure is conjoined to other figures.</p>	<p>Potential ethnographic parallels where groups are comprised of more than one genealogical lineage, like a village or relationships of one lineage to another. Settlement patterns and land is allocated by inheritance and multiple lineages.</p>	<p>Bifurcation of chiefly lines and descent from common figure. Changing political allegiances create new lines and split up others that influence land allocations and settlement patterns.</p>
 <p>Horizontal Group</p>	<p>Different rules of proxemics indicate a ‘group of people’ not sequential. Relationships are lateral, with different individuals of similar purpose. Postures and gestures are similar but vary slightly with individual figures.</p>	<p>Hawaiian society has ‘groups’ of people that bolster cultural identity and a sense of power. Outsider could recognize a “grouping of people” but not identify what kind of group.</p>	<p>Political and religious power is achieved by creating and managing ‘groups’ of people such as a ‘party’ of warriors, or fishermen, or paddlers, etc. Identification of different groups.</p>
 <p>Unoriented Disparate Group</p>	<p>Gesture, posture and proxemic arrangements are complex. Each figure is unique and relationships are potentially very complex.</p>	<p>Complex family relationships that include non-human entities such as spirits and ancestors. Each member has a different relationship with each other.</p>	<p>Religious and political power is variable and can change from the managed by sub-groups and individuals. Complex rules of etiquette and protocols in religious and political relationships.</p>

Table 3 Comparative Summaries of Hawaiian Patterns and Relationships

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