

The Serpent: A Shamanistic Motif in the Archaic/Basketmaker Rock Art Imagery of the Palavayu Anthropomorphic Style (PASTYLE), Arizona.



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The world-wide impact of the serpent on human consciousness and imagination over the millennia is apparent from the many snakes encountered in the motif inventories of the various rock art traditions identifiable in the Palavayu of east-central Arizona. The oldest of these stylistic traditions, thought to be the work of ancient hunter-gatherer groups, is termed the Palavayu Anthropomorphic Style (PASTYLE). Estimated to date to an Archaic/Basketmaker culture horizon of approximately 6,000 B.C. to A.D. 250, the zoomorphic component of its motif inventory contains, among others, a diverse assortment of petroglyphic snakes.

In the context of the shamanistic trance paradigm, which can be hypothesized convincingly as the driving force behind much of the PASTYLE imagery, the identified ophidian depictions are seen as important pieces of internal evidence. Among the multiple functions attributable to PASTYLE snakes, two stand out—as graphic metaphors for the shaman-artist and as tutelary spirits aiding him in his quest for supernatural power and guidance from the other-world.

To support this case, the corpus of PASTYLE serpent images is presented and analyzed against the explanatory framework that unites universal aspects of shamanism and neuropsychology.

The serpent is an animal that has impacted human consciousness in an extraordinary way. Evidence that it has influenced the imagination of humankind over the millennia and on a global scale comes from the reptile's multiple and diverse manifestations in religion, mythology, and art. Representations of snakes occur as early as the European Upper Paleolithic (Marshack 1972:169), and the zigzag, a design commonly associated with "serpentine" water, is said to be man's "earliest symbolic motif recorded: Neanderthals used this sign around 40,000 B.C., or earlier" (Gimbutas 1989:19). Bednarik (1998:5) reports that a "meandering line" together with a cup mark, hence a typical serpentine configuration, is believed to be "the oldest known rock art . . . produced in India two or three hundred thousand years ago."

Mundkur (1983:XVI), suggesting that the cult of the serpent is one of man's very earliest and most important spiritual constructs, has advanced the intriguing thesis that the fascination and awe accorded the serpent are rooted in the elementary fear of its venom, a fear which "was fixed in man's psyche during anthropogenesis." Rejecting ophidiophobia, "snake fear," as an

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essentially biological and genetic basis for ophidiolatriy, "snake veneration," Marshack (1985a:140 and 1985b:538) sees serpent imagery as simply a cultural byproduct of human cognition. I personally do not believe that any single theory, either based on biological or cultural aspects alone, can explain the ubiquity of ophidian lore and iconography. Rather, I would propose a combination of biopsychological and socio-cultural factors as being causally more plausible for this phenomenon.

Ken Gary (personal communication 2000) points out that, as a first reaction, one is tempted to side with Marshack, "for the sinuosity of a crawling snake and the sinuosity of flowing water are symbolically and abstractly similar, striking a resonance in the conceptualizing centers of the brain. However, one has to ask why snakes, rather than some other conceptual representation of sinuosity. Although it seems a strange connection to use an animal we fear (snake) as a symbol of something we desperately need (water), perhaps it was this very fear and awe of the mysterious snake that gave the *abstract* sinuosity its *living* power and made it 'stick' in the minds of the human beings who first made the symbolic connection."

Whatever the impetus for the collective attention that has been bestowed on the serpent as a cult object, the antiquity and universal distribution of the snake motif is an impressive phenomenon, finding its local expression in the rock art iconography of the Palavayu in east-central Arizona. With the exception of pronghorn, bighorn sheep, deer, and wapiti images, which seem to rival those of the serpent in quantity, snakes outnumber all other animal depictions in Palavayu rock art imagery and occur in every phase, from the Archaic and early Basketmaker beginnings through the Pueblo V period.

It is the express objective of this paper to present a detailed analysis of the ophidian images of the Palavayu Anthropomorphic Style (PASTYLE), presently the oldest recognized stratum of Palavayu rock art. In conjunction with this analytic investigation, I intend to show that many of the PASTYLE

serpentine motifs fit the shamanistic origin hypothesis posited for much of world-wide hunter-gatherer paleoart. However, before these specific goals can be addressed, a brief sketch of the study area and its rupestrian iconography is warranted.

THE PALAVAYU OF EAST-CENTRAL ARIZONA AND ITS ROCK ART

The rock art theater of the Palavayu constitutes a geographic region of some 6,200 km² skirting the southernmost extension of the Colorado Plateau (Figure 1). Named after the traditional Hopi appellation for the Little Colorado River, literally signifying "Red River" (McCreery and Malotki 1994:184 note 1), the area comprises the central drainage system of the Little Colorado River. It intersects and/or overlaps in part with a culture area that Colton (1939) referred to as the "Winslow Branch" of the Anasazi. More recently, some researchers (Adams 1989) have replaced that name with the somewhat unwieldy designation of "Middle Little Colorado River Valley."

Sandwiched between Petrified Forest National Park and the canyon of Silver Creek

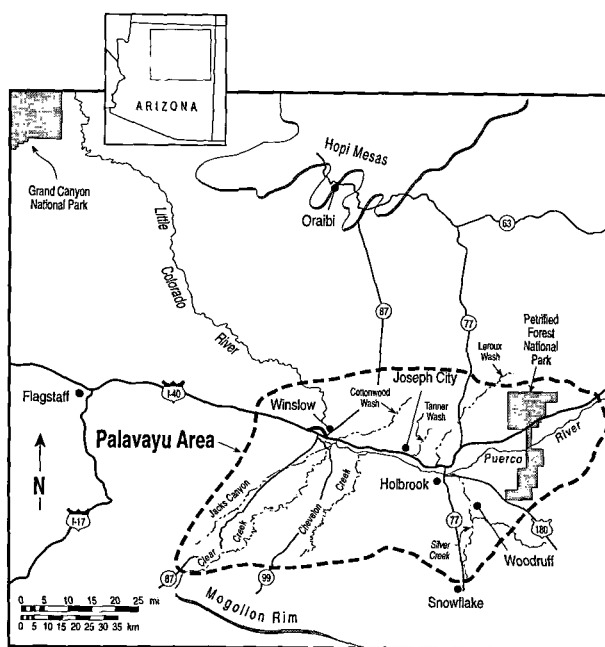


Figure 1. The rock art area of the Palavayu.

on the east and by the dry playas of Tucker Flat and the meandering course of Jacks Canyon on the west, the territory of the Palavayu is characterized by a series of vegetation zones that grade into each other as the land rises from north to south. At its northern border, which more or less coincides with the southern edge of the Navajo Indian Reservation, the desertic shrub-steppe of the Painted Desert prevails. It, in turn, is succeeded by steadily rising belts of grassland, pinyon-juniper woodland and, in the extreme south, by stands of ponderosa pine and Douglas fir where the highest elevations of the Palavayu reach into portions of the Coconino and Apache-Sitgreaves National Forests. All of these zones are interspersed by riparian communities flanking the Little Colorado River and extending south along the narrow corridors of its primary tributaries (Satterthwait 1976).

The Palavayu is home to a host of almost exclusively petroglyphic rock art sites of extraordinary diversity and aesthetic appeal. A representative photographic synopsis of the Palavayu's various rupestrian manifestations and themes has been offered in McCreery and Malotki (1994). Additional insights into their stylistic gradation may be obtained from the chronographic chart in Malotki (1999:104–105). With the exception of hitherto unidentified or unverifiable Paleo-Indian rock art, the Palavayu features a sequence of iconographic complexes that represent every known stage in the taxonomy postulated by archaeologists for the Anasazi culture area: Archaic; Basketmaker II and III; Pueblo I, II, III and IV; and Pueblo V or Historic. However, since Palavayu rock art styles contain numerous elements and motifs of a highly idiosyncratic and diagnostic nature, I have developed a series of Palavayu-specific style names that differentiate a Linear from a Majestic Palavayu Anthropomorphic Style within the Archaic, a Hisat Style analogous to the Basketmaker stages, and a Sinom Style corresponding to Pueblo I through IV (Malotki 1999:104).

Both of these cultural and stylistic systems can be incorporated into a new terminological

framework that encompasses the entire Colorado Plateau and relates strictly to a chronological timeline without considering cultural affiliation. Thus, in analogy to the “-lithic” system established for European archaeology (Paleo-, Meso- and Neolithic), which is predicated on stone tool types, I propose an “-iconic” classification customized exclusively for all petroglyphic and pictographic manifestations of the Colorado Plateau. Commensurate with the etymological content of “icon,” it is based on the notion of “image.” In addition to serving as a quick yardstick for temporal placement of a given rupestrian style, it would also be useful whenever a distinctive regional rock art style is clearly recognized in the course of rupestrian research, but has remained unnamed, as is now frequently the case in the Southwest. Figure 2 presents this “-iconic” approach for the rock art iconography of the Palavayu by juxtaposing it both with my own Palavayu-specific rupestrian styles and the Anasazi culture system.

	Anasazi Culture Stages	Palavayu Rock Art Styles	Colorado Plateau Rock Art Chronology	
2000	Pueblo V	Unnamed Anglo, Navajo, Apache and Hopi Styles	Historioiconic	
1900			1850	
1800			Protoiconic	
1700				
1600			1550	
1500	Pueblo IV	Late Sinom Style	Neoiconic	
1400				
1300	Pueblo III	Middle Sinom Style		
1200				
1100	Pueblo II	950		
1000				
900	Pueblo I	Early Sinom Style	800	
800				
700	Basketmaker III	650	Mesoiconic	
600				
500				
400				
300				
200	Basketmaker II	250		
100				
0	Archaic	Majestic Pastyle	1000	
1000				
2000				
3000				
4000				
5000	Paleo-Indian	Linear Pastyle	6000	
6000				
7000				
8000				
9000				
?				

Figure 2. Summary of Southwestern rock art chronologies.

THE PALAVAYU ANTHROPOMORPHIC STYLE (PASTYLE)

Selective imagery of the two most ancient rock art traditions extant in the Palavayu was first presented, both textually and pictorially, in Chapter 2 of McCreery and Malotki (1994:13–32), even before my coinage of the style label Palavayu Anthropomorphic Style or PASTYLE (Malotki 1997:57). Whereas the style's incipient phase has been assigned to the early to middle Archaic (ca. 6000 B.C.) on the basis of comparison with Turner's Style 5 (Turner 1971), an analysis of diagnostic projectile points depicted in the imagery, and the obvious similarities of numerous quadrupedic renditions to split-twig figurines (Malotki 1999:103–106), the more elaborate Majestic PASTYLE phase is believed to have lasted until the mid-Basketmaker II period (ca. A.D. 250). In accordance with my pan-Southwestern chronology, PASTYLE art would be characterized as predominantly Archeoiconic and Mesoiconic.

The PASTYLE name is derived in part from its eponymous leitmotif, an anthropomorph distinguished by frequent interior body decoration. My own shorthand term for such patterned-body figures is "decobods." With a current head count of close to 2,200 such specimens at over 250 sites, these petroglyphs constitute a distinct entity within the context of Palavayu paleoart.

The prevalence of this anthropomorphic motif is demonstrated by the fact that it forms a clearly demarcated geographic enclave of its own which, when its outlying sites are connected, encloses an area of 4,000 km² or nearly two-thirds of the confines I have proposed for the entire Palavayu. The highly cohesive if not "insular" character of PASTYLE rock art is also evident in other non-anthropomorphic motifs, both in its animate branch of zoomorphs, phytomorphs and phantasmomorphs, and its inanimate branch of geomorphs and reomorphs (Malotki 1998:6–7; 1999:102–103; 2000:15–16). None of the culture areas surrounding the Palavayu (Mogollon, Sinagua, Hopi, and Zuni) possess any distinct

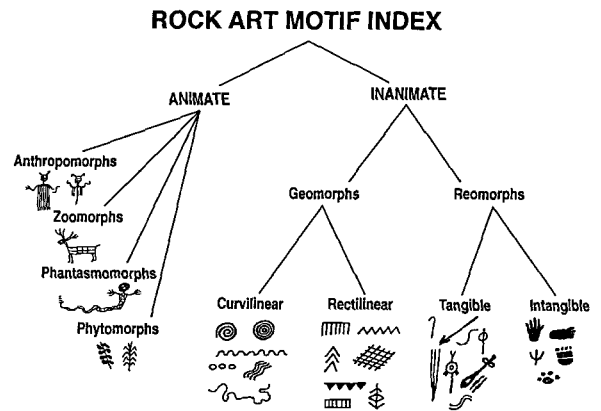


Figure 3. Tree diagram of PASTYLE motif inventory.

PASTYLE-type elements in their rock art corpora. Close stylistic affinity to PASTYLE rock art is not encountered until some 175 km to the northwest of the Palavayu heartland in the region of the Archaic Glen Canyon Linear Style. Figure 3 summarizes my terminological "morph"-ology for the complete PASTYLE motif index.

Based on the findings of comparative ethnology that the beliefs and practices of hunting and foraging people typically have their basis in an ideology of shamanism, an essentially shamanistic orientation or religion can also be postulated for the PASTYLE hunter-gatherer bands (Malotki 1999:107). At the core of the shamanistic system stands a religious specialist or shaman who, on behalf of his group, heals the sick; influences the weather; controls game animals; assures human, animal and vegetal fertility; and restores lost harmony by harvesting supernatural power from the spirit world. In his communication with the other-world, he exploits universally-shared biopsychological phenomena such as dreams, hallucinations, and altered states of consciousness (ASCs). For Lewis-Williams (1996:126), "a range of institutionalized ASCs" forms the defining criterion of hunter-gatherer shamanism. While there is no direct ethnographic evidence whether PASTYLE shamans resorted to psychotropic drugs or not, I have shown that the hallucinogenic *Datura* may have played an important role in their endeavors to interact with the other-world (Malotki 1999:110–115).

Critical in this connection is the contention that rupestrian art may have been produced by shaman-artists in order to preserve their experienced trance visions in the more permanent medium of rock. This would have allowed them to return to their vision-quest locales at a later time and reconnect with the potency-charged engravings or paintings. For example, Whitley (1998:4), in discussing the rock art of the Coso Mountains in eastern California, states that "to forget the visions and lose the power bestowed by the supernatural experience was believed to cause sickness or even death, so that shamans were very concerned with remembering these sacred events."

PASTYLE rock art features many pictorial indicators that strongly indicate ASC genesis: the frequent occurrence of iconics mixed with endogenous entoptics such as dots and circles, spirals, sets of parallel lines, diamond-chains, rakes (Malotki 2000) and other figures; the depiction of "monsters" and chimerical composites; metaphorical illustrations of shamanic flight and transformation; skeletonization of humans and animals; anthropomorphs of distorted and/or attenuated proportions, possibly reflecting somatic hallucinations; the recurrent portrayal of liminal animals such as dragonflies (Malotki 1997) and owls (Malotki 1998); the inclusion of Lilliputian and Brobdingnagian images as a result of trance-experienced micropsia and macropsia; and graphic clues for polymelia, piloerection, and other tactile hallucinations. In my mind, this range of shamanistic themes, which can be tested against the neuropsychological model proposed by Lewis-Williams and Dowson (1988), unequivocally demonstrates that a major part of PASTYLE iconography is of shamanistic provenience. As I will show below, PASTYLE serpent imagery is but one additional piece of evidence corroborating this conclusion.

PASTYLE Serpentine Motif Inventory

Considering the entire zoomorphic component of the PASTYLE rock art complex,

convincing depictions of snakes, typified by winding bodies and headlike appendages, are surprisingly sparse when compared with their prominence in the subsequent Hisat and Sinom Style rock art traditions of the Palavayu. They are far outnumbered by quadrupeds (wapiti, deer, pronghorn antelope, bighorn sheep), birds (overwhelmingly owls and a good number of herons), and dragonflies. However, when "headless" geomorphs of sinuous configuration are included, which are viewed here as slightly less realistic symbolic renditions of snakes, the percentage of ophidian-type imagery increases sharply. To describe this corpus of serpentine motifs, both with and without headlike terminations, I have divided it into three major categories: separate snakes, incorporated snakes, and snakes with phantasmagorical characteristics.

(1) Separate snakes. The class of separate PASTYLE snakes implies that they are free and independent elements, that is, not attached or integrated into the associated iconography. As a headless variant, PASTYLE sinuosities evoking snakes are attested singly or in multiples. Varying considerably in length, single undulations occur in straight form, in spiral shape, or as a combination of both. Multiple undulations can range from randomly bunched squiggles to neatly-ordered arrangements of parallel meanders. While most of the serpentine engravings constitute solidly-pecked single lines, a few consist of double lines to create the sinuous dimensions. They too are included in this rubric of headless snakes.

Of course, the same variety of configurations also applies to the more realistically-conceived "headed" snakes. As a rule, they can be recognized by the fact that one of their ends is marked by a bulbous, solidly-pecked disk, an arrowhead-like tip, or a circular outline element. Figures 4 and 5 summarize these graphic conventions in diagrammatic sketches.

While the majority of separate snakes is rather generic and predictable, especially in their headless variety, a few headed ones warrant more extensive comments and more

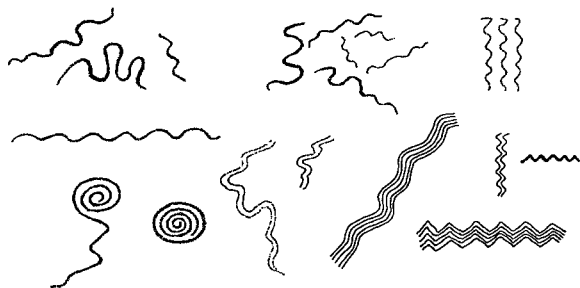


Figure 4. "Headless" PASTYLE snakes.

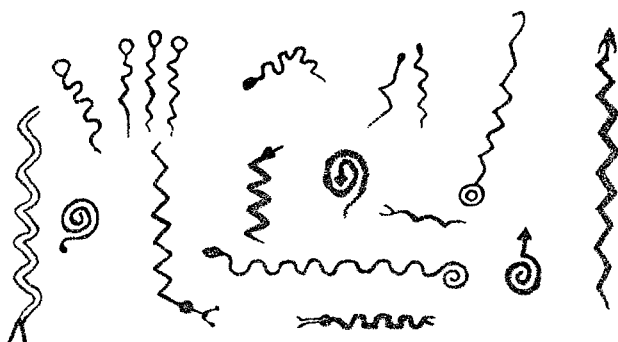


Figure 5. "Headed" PASTYLE snakes.

accurate illustrations. Perhaps the oldest and most striking examples of headed PASTYLE snakes are found on a rock slab at the "Benchmark Mesa" site west of Petrified Forest National Park (Figure 6) (McCreery and Malotki 1994:Figure 2.1). Engraved in the skeletal or X-ray fashion so characteristic of the Linear Palavayu Anthropomorphic Style, the great age of the stylized knob-topped sinuosities is underlined by their total revarnishing to the deeply-black hues of the existing rock veneer. Three headed examples are equipped with curious "whiskerlike" descenders (Figure 7), a feature that is also observed on the two bilaterally-horned snakes shown in Figures 9a and b.

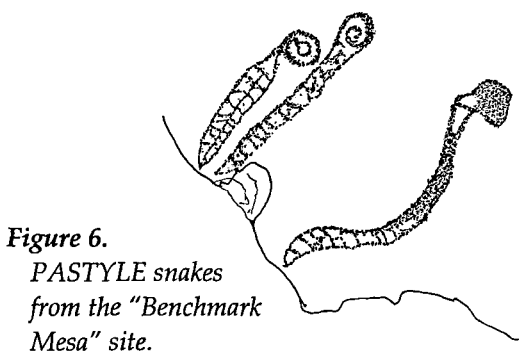


Figure 6.
PASTYLE snakes
from the "Benchmark
Mesa" site.

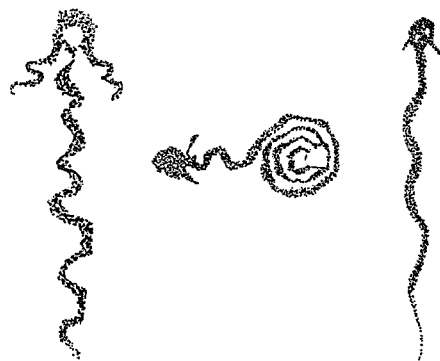


Figure 7. PASTYLE snakes with "whiskerlike" descenders.

Feature incorporation, that is, the integration of natural features of the rock surface into the rupestrian image, is attested only once for PASTYLE snakes. Illustrated in Figure 8, it clearly shows how the prehistoric artist exploited an existing hollow in the rock to emphasize the snake's circular head.

Four of the headed PASTYLE snakes deserve singling out because they are equipped with distinct hornlike protuberances. Two of them, both from the "Biface" site, sport curved horns on either side of the head (Figures 9a and b). The two others (Figures 9c and d), from the "Gemini I" site and the "Foxtrot" site respectively, show V-shaped horns emanating from the top of their heads.

Bilateral, "buffalolike" projections as seen on the "Biface" serpent heads do not typically appear again in Palavayu rock art until late PIII, early PIV times, that is, some two or three thousand years later than the "Biface" examples, if my temporal estimates are correct (Figure 10). This type of horn depiction must not be confused with the Horned Serpent tradition distinguished by forward- or backward-curved profile horns, believed to have been modeled on Quetzal-coatl, the Plumed Serpent of the ancient Mexicans of Teotihuacan (Schaafsma 1992:124). To date, I know



Figure 8. PASTYLE snake with
feature integration.

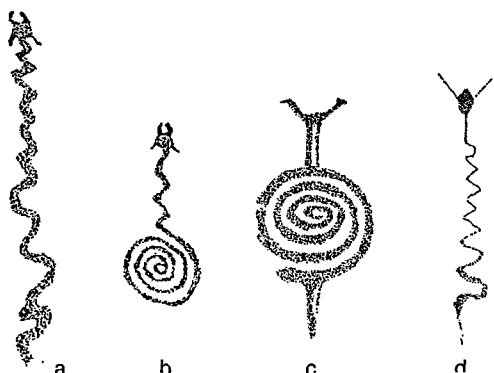


Figure 9. PASTYLE snakes with bilaterally-curved and V-shaped horns.

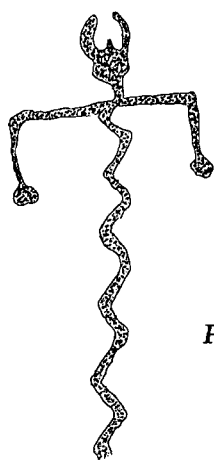


Figure 10. Bilaterally-horned snake from a Pueblo site near Homol'ovi IV.

of only four sites in the entire Palavayu that feature reptiles with horns in profile view. If Christensen's (1992:105) "scratched depiction of a horned water serpent" at a location south-east of Petrified Forest is accepted as a bona fide representation of the animal, this would be the fifth site in the Palavayu. However, the design, measuring only 15 cm in length, is intersected by a number of scratched lines that, in my view, may have produced the "horns" on the circle at the top of the zigzag accidentally.

Probably of late PIII–PIV affiliation, the rare occurrence of the horned serpent motif in profile form seems to demonstrate that it did not originate in the area but was borrowed from another culture. While three of the serpent images are portrayed with two curved horns each, the fourth has only one behind its head. Relatively small in proportion to the

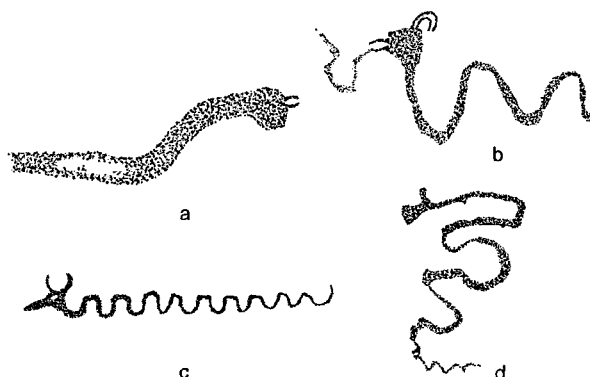


Figure 11. Horned serpents from Pueblo sites in the Palavayu.

overall dimensions of the snakes, the cephalic projections point forward in the image at the "Tanner Wash" site (Figure 11a); at the "Carr Lake Draw" site they curve backward (Figure 11b); and at the "Pumphouse" location one of the horns is slightly bent backward, the other forward (Figure 11c). The single-horned snake at "Second Flume" is endowed with a forward pointing horn (Figure 11d). Although only the latter really matches the Hopi *Paalölöqangw* or "Water Serpent" model, which is never equipped with more than one horn (Malotki 1996:14), the four petroglyphs above are nonetheless reflective of a viable Horned Serpent ideology.

V-tipped serpent heads, reminiscent of the ones encountered at the PASTYLE locations of "Gemini I" and "Foxtrot," reappear quite commonly in the Palavayu during the PII period and are frequently encountered in the PIII and PIV era (Figure 12). They too are separated from their PASTYLE forerunners by a huge temporal hiatus. Whether they continue a V-tipped PASTYLE tradition is impossible to say, however, for it is not certain what morphological aspect of the reptile's head is being depicted.

One assumption, quite naturally, would be that the Vs were inspired by the animal's long and highly protrusile bifurcated tongue. After all, no other trait besides sinuosity is more quintessentially reptilian than its cleft tongue. However, the V may also represent the snake's gaping maw or fangs. With dot-like buttons terminating the bifurcation, as in

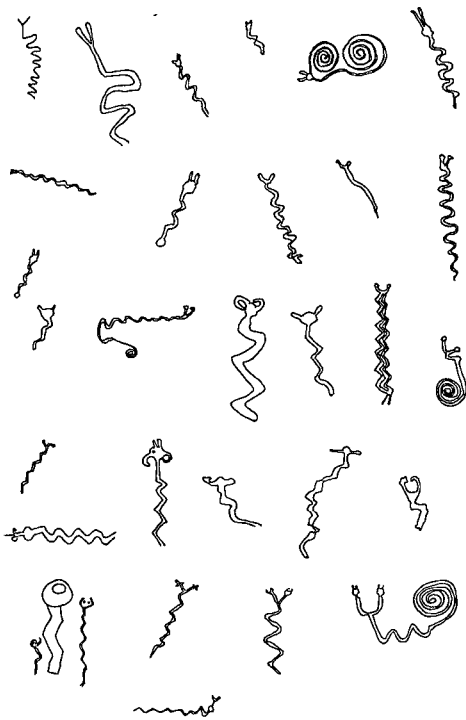


Figure 12. *Sampler of non-PASTYLE snakes in the Palavayu with V-shaped heads.*

some instances, the intrinsic ambiguity of the V is further increased. Resembling the retractile sensory antennae of slugs and snails, the bifid processes could conceivably be graphic models of the raised supraocular "eyebrow" scales of rattlesnakes. Finally, the V-shaped appendages could represent images of double-headed snakes. Herpetologically "very surprisingly common" (Barbour 1926:52), two-headed snakes probably exerted an even greater fascination on the mind of prehistoric man than the normal, one-headed variety, and may therefore have been the motivation for this iconic rendition.

(2) Incorporated snakes. This class of PASTYLE snakes comprises all sinuosities, regardless of whether headed or headless, that attach to other rupestrian elements or are integrated into their design with the exception of geomorphs (Figure 13). Sinuous attachments of the latter case are best analyzed in the context of the rake motif, which is believed to be symbolic of rain (Malotki 2000). Only a couple

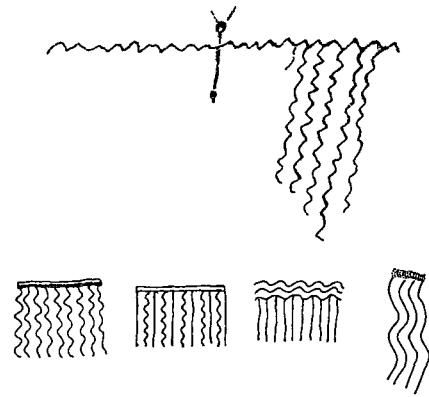


Figure 13. *PASTYLE sinuosities incorporated into rakelike configurations.*

have been recorded to date in connection with zoomorphs, as may be gathered from Figure 14.

The most interesting cases, in my view, are the ones attested for anthropic figures. A first subclass deals with snakes, both headless and headed, that either connect to certain body parts such as hands, feet, shoulders, and the head, or actually seem to replace them (Figure 15). Notable among those showing replacement is the apparent substitution of a snake for the male genitals, as may be observed in Figure 16. For a color photograph of the latter depiction see McCreery and Malotki 1994: Figure 5.39.

Next I differentiate a subcategory in which the entire anthropomorphic torso consists of serpentine lines. It includes anthropomorphized rakes and figures with sinuate, that is, wavy or indented (scalloped) body contours, as is evident from Figure 17.

The third subclass contains all those instances that display snakelike configurations inside the human torso. With most of

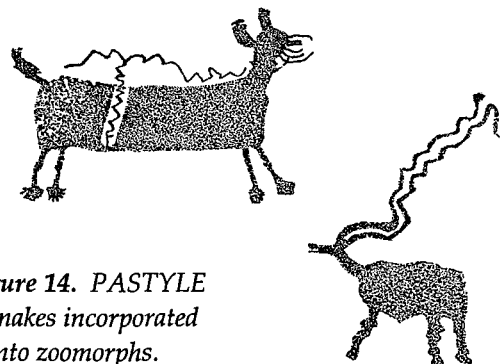


Figure 14. *PASTYLE snakes incorporated into zoomorphs.*

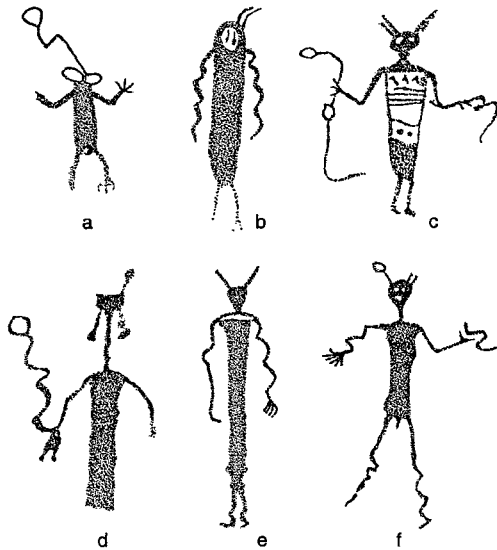


Figure 15. PASTYLE snakes attached to anthropomorphs.

them employing a negative manufacturing technique by having the rock varnish carved away around the snakes, one example uses regularly incised bi-lines to delineate the reptilian patterns (Figure 18).

(3) Phantasmagorical snakes. Of all the snakelike elements that are part of the PASTYLE rupestrian database, the assortment of serpentine creatures belonging to the phantasmomorph segment of the PASTYLE motif index is particularly exciting. Consisting of therianthrope images and other chimerical or hybrid beasts, they are lumped together here as phantasmagorical snakes. I am aware, of course, that I am again applying the concept of "snake" rather broadly. Nevertheless, all representatives of this class are distinguished by an essentially sinuous body type.

Most prominent among the therianthrope

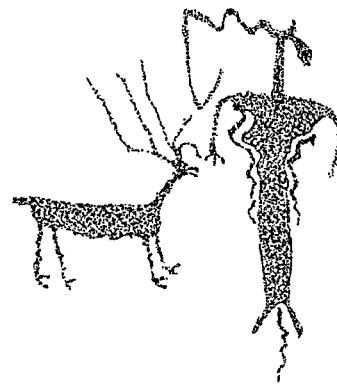


Figure 16. PASTYLE anthropomorph with snake penis.

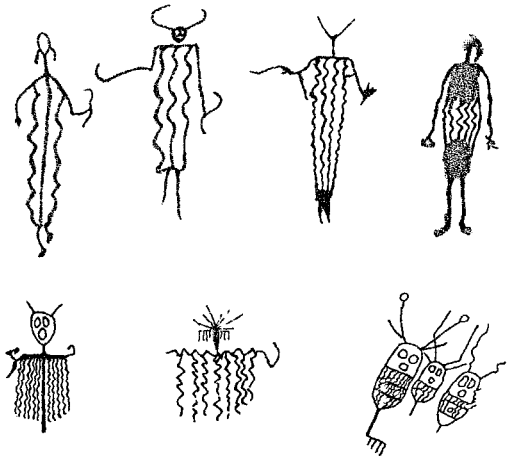


Figure 17. PASTYLE anthropomorphs with torsos featuring snakelike elements.

composites blending reptilian and human features are the two images that are clearly conceptualized as humanized rattlesnakes. This is obvious from the distinct rattles that can be seen to terminate their bodies. Note that the snake from "Dekadraw" (Figure 19a) mimics early patterned-body PASTYLE anthropomorphs, whereas the other one from the "Transformer" location (Figure 19b) (McCreery and Malotki 1994:Figure 2.7) is

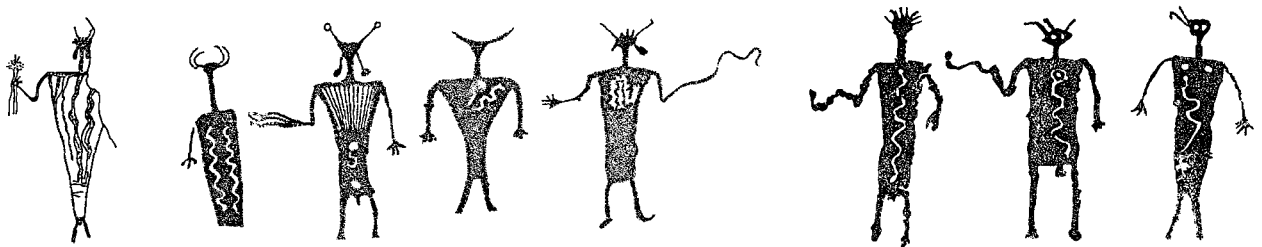


Figure 18. PASTYLE anthropomorphs with snake-decorated torsos.

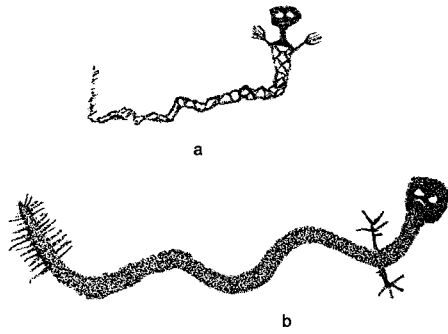


Figure 19. Anthropomorphized PASTYLE rattlesnakes.

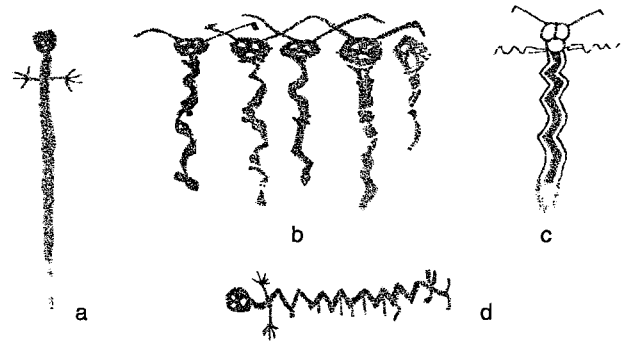


Figure 20. PASTYLE snakes with humanizing features.

solidly pecked.

A second grouping of snakes qualifying as therianthropes, primarily due to their attributes of handlike extremities and/or facial features, are depicted in upright posture. Note that the battery of five snakes from the "Gemini II" panel (Figure 20b) and the insectile-looking specimen from the "Turnpike" site (Figure 20c) (McCreery and Malotki 1994:Figure 2.9) are antennae. Only one specimen featuring human hands occurs in horizontal position (Figure 20d).

Five hybrid snake specimens, though legged, lack other human features and are predominantly horizontally oriented. They are variously equipped with tiny horns, centipede-like pincers, and stingers (Figure 21) (McCreery and Malotki 1994:VI). A stinger is also evident on the fantastic creature from the "Hairy-Scary Monster" site. Resting on only one pair of feet, its articulated length of 290 cm (Figure 22) is unsurpassed in all of PASTYLE iconography, though perhaps rivaled in complexity by the ophidian convolutions of the phantasmomorph from the "Daredevil" site (Figure 23).

INTERPRETATION OF PASTYLE SERPENTINE MOTIFS

As I have shown elsewhere (Malotki 1997, 1998, 1999, 2000), the vast majority of PASTYLE rock art bears all the hallmarks of shamanistic visionary imagery produced by the human nervous system in altered states of consciousness (ASCs). I believe that this is especially

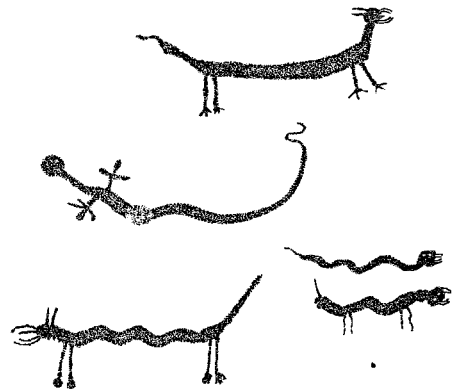


Figure 21. Hybrid PASTYLE snakes.

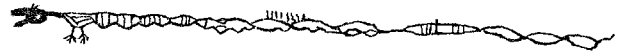


Figure 22. Serpentine PASTYLE phantasmomorph from the "Hairy-Scary Monster" site.

true for the range of ophidian images.

Evidence for my claim comes from the three-tiered neuropsychological model developed by Lewis-Williams and Dowson (1988). Within the parameters of this hypothetical framework, which operates with a mix of basic hardwired phosphenes and highly personal and culturally-determined iconic hallucinations that, in turn, are subject to various principles of perception (Lewis-Williams and Dowson 1988:202–204), PASTYLE snakes and snakelike elements can be seen as mental products from all three progressive stages of the shamanistic trance experience. Thus, dur-

ing stage I the hallucinatory mind generates a series of endogenous entoptics. Those resembling zigzags or sinuous lines constitute the many "headless" snakes within the serpentine component of PASTYLE art.

Attempting to make sense of this basic entoptic shape, the shaman-artist, by equating it with an object familiar to him from his normal state of consciousness, then construes actual headed serpents in stage II. Anthropomorphized snakes and other ophidian monsters, finally, would be hallucinated by the trancing subject in stage III, the deepest stage of the ASC. Frequently, but not always, this stage is reached after the subject passes through a tunnel or vortex and begins to identify with the visionary images. Figure 24 illustrates this postulated genesis of PASTYLE serpent images in the context of the shamanistic trance theory.

Multivocal like all central or key symbols, the powerful emblem of the serpent is commonly held to symbolically embrace such diverse themes as water, regeneration and renewal, vitality and energy, human fecundity, and sexual potency. Embodying the life force par excellence, the reptile's most fundamental associations seem to pertain to water and such weather-related phenomena as rain and lightning. Characterized by Gimbutas (1989:121) as "something primordial and mysterious, coming from the depths of the waters where life begins," the snake's primary linkage to water is clearly borne out by the PASTYLE rock art iconography of east-central Arizona.

Obviously, a hunting magic hypothesis provides no answer, for the snake could not have been considered a menu item. However, when contemplating the pervasive moisture symbolism that is encountered throughout

HUMAN NERVOUS SYSTEM

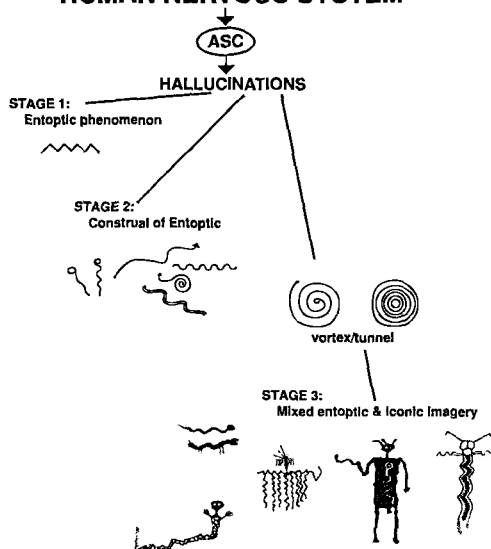


Figure 24. PASTYLE snake images in the context of the neuropsychological trance model.

PASTYLE iconography, the serpent images make a lot of sense.

To be sure, initially one might argue that the many headless serpentine or meandering elements in the art simply reflect the zigzag, one of the six entoptic categories posited by Lewis-Williams and Dowson (1988) for stage I of their neuropsychological paradigm. Representing merely automatic reflexes of the universal human nervous system, they could simply be dismissed as irrelevant to the overall exegesis of PASTYLE iconography or, if considered worthy of interpretation, be regarded as symbolic of flowing water and water-related lightning. However, several of the same undulating lines were clearly fashioned with heads, that is, overtly rendered as snakes. One can assume therefore that headless sinuosities too are integral to the overall ophidian imagery observable in PASTYLE art and that they were drawn for reasons of deeply ingrained cultural conventions or conditioning.

The apparent prominence of the aquatic theme and water-related symbolism associable with many PASTYLE petroglyphs was already pointed out in my discussion of the polysemic rake motif (Malotki 2000). I argued there that the rake's sets of vertical tines, conceptualized as straightforward geomorphs, were construed



Figure 23. Serpentine PASTYLE phantasmorph from the "Daredevil" site.

by PASTYLE shaman-artists as rain, with the horizontal crossbar possibly symbolizing the moisture-releasing cloud. Topped by human heads, anthropomorphized versions of the motif, in turn, were interpreted as symbolic of the shaman's premier role as rain-maker. With rain and water being of paramount concern to people inhabiting desert environments such as that found in the Palavayu, shamans must have perceived weather control as one of their most important challenges and tasks. This may explain the existence of over two thousand anthropic figures in the identified PASTYLE iconography. If my assumption is valid that these figures depict first and foremost rain gods or rain shamans, the snakes and sinuities that are directly or indirectly linked with them are perhaps best understood as their animal familiars. They allowed the shaman to harness their supernatural powers, both to achieve trance and influence the weather, to mention but two of their many objectives. This argument is particularly convincing in regard to the anthropomorphs whose torsos are decorated with the reptile, suggesting an intimate bond with them.

In addition to conceiving of snakes as helping spirits or "rain animals," the reptile can also be thought of as a visual metaphor of the shaman-artist. Roving back and forth between an under-ground and above-ground world, the snake, then, can be regarded as a liminal creature. As such it mimics the shaman's journey from the profane world to the sacred world.

This analogy between the snake and the shaman in trance state becomes even more plausible when the placement of PASTYLE rock art sites is taken into account. With the exception of perhaps a dozen sites, nearly all of the 250 PASTYLE petroglyph sites I have inventoried to date are riverine. They are frequently located adjacent to natural depressions or sinkholes that are filled with water on an almost perennial basis. These pools, during the summer months, are home to a garter snake indigenous to Arizona. Known as the Narrow-headed garter snake (*Thamnophis rufipunctatus*), it makes its abode on solid

land, but is often seen traversing the water, where it typically feeds on tadpoles and tiny fish. Commuting between a terrestrial and aquatic domain, the snake therefore becomes an excellent metaphor for the shaman, since he too must cross the threshold from the secular to the supernatural realm on a regular basis.

In light of this conceptual relationship between shaman and snake, the two bilaterally horned serpent renditions at the "Biface" site (Figures 9a and b) are perhaps artistic attempts to capture the initial phase of a shaman's transformation to the horned "rain gods" depicted nearby (McCreery and Malotki 1994:21). As it turns out, hundreds of PASTYLE decobods are adorned with these idiosyncratically curved horns. Universally regarded as symbols of supernatural power, horns are found to replace the more prevalent antennae figures of the earlier Linear Palavayu Anthropomorphic Style. Deified rain serpents, conceivably alter egos of the anthropomorphic gods, were then, by way of analogy, endowed with the same insignia of supernatural potency. It is interesting to note in this context that the horned serpent heads at "Biface" also feature lateral "descenders," identical to the ones in the adjacent figures. These descenders represent perhaps hair side-bobs, another frequent hallmark of PASTYLE anthropomorphs.

While I view the above-mentioned functions as primary for PASTYLE snakes, Hopi ethnography and oral traditions may suggest some additional roles for the snake. Granted, I do not believe that Hopi serpent lore is directly pertinent to the understanding of the ancient PASTYLE ophidian imagery despite the fact that the Hopis are thought in part to be distant descendants of the Anasazi Basketmakers. Still, I do wish to mention this lore here, as it may help to shed light on some of the serpent images occurring in PASTYLE rock art.

Thus, the two serpent-handling scenes (Figures 15c and d) as well as the depiction of a snake crossing an anthropomorph's head or mouth (Figure 16), are reminiscent of the Snake dance of the Hopi, rain ritual extraordinaire in the American Southwest and for that mat-

ter perhaps in the indigenous Americas. The Hopi term *yoynawakna*, "to pray for rain", is characteristically used, among other situations, whenever the reptile is manipulated ritually as in the above-mentioned public ceremony. A bilingual quotation from my field recordings leaves no doubt as to the validity of this practice. *Itam lölöqangwtuy enang akw piw yoynanawaknangwunniqe oovi pumuy akw tiivangwu*. "We include the snakes also when we pray for rain, and for this reason we dance with them." However, it also applies to chance encounters with snakes. Hopi oldtimers, for instance, used to throw a pinch of cornmeal towards any snake that crossed their path, accompanying this gesture with a plea for rain.

While the snake/rain connection manifested in the Hopi Snake dance, to some extent, corroborates my interpretation of PASTYLE serpent motifs, the ethnographic fact that one of the Hopi clans considers the rattlesnake as its *wu'ya* or "mythological ancestor," is probably not pertinent. As I pointed out above, only two definitely identifiable rattlesnake glyphs have to date been discovered in the entire PASTYLE complex. Both are therianthrope hybrids, blends of reptilian and human features (Figures 19a and 19b). This fact, as well as the virtual non-existence of rattlesnake depictions in the whole of the Palavayu region, make it highly unlikely that the PASTYLE serpents designate a totemic clan animal.

In Hopi stories or myths of underlying shamanic content, formidable, fantastic-looking snakes occasionally assume the role of protectors or guardians of special places. As a rule, they bar the hero's progress and test him to determine whether he is worthy of reaching his desired destination (Malotki 1994). Conceivably, snakes could have been added to the mix of rock art images to protect the numinous spot against transgressors. In this way, the snake could be understood as a visual reminder that the rock art site was off limits to anybody not privileged to visit it. Violators of this taboo might have been threatened by the expectation of being bitten by a snake.

PASTYLE serpentine images of a phantasmagorical nature were possibly conceived for such an "avenging" role.

Conversely, snakes may have been carved on rock surfaces as apotropaic emblems, that is, to ward off the danger of snake bite. However, since only two PASTYLE rattlesnakes (those equipped with obvious rattles) have been recorded to date (Figure 19), the likelihood of snake images being used to either threaten being bitten, or to protect against such a danger, would appear remote. On the other hand, since only a dangerous snake could logically serve either function, it may be that even rather generic snake depictions, without rattles, were intended by their makers to represent the poisonous rattlesnake.

In many cultures the snake was recognized as a symbol of regeneration and renewal, and ultimately of healing. Based on the reptile's habit of sloughing off its skin at regular intervals, the notion of healing was already deeply anchored in Greek mythology, where the snake was part of the healing wand of Asclepius, son of Apollo and god of medicine. I am aware of only one episode in the entire corpus of Hopi oral literature in which a snake acts in the function of a curer. In that story, a Hopi man, who has been buried alive with his deceased wife, kills a snake by cutting it up into several pieces when the latter takes an interest in her. Shortly thereafter a second snake enters the grave with several herbs in its mouth. By placing them on the severed snake, the dead snake is brought back to life. The man then uses the same leaves to revive his wife and later, as a medicine man, to heal other villagers. We will never know, of course, whether the snakes were depicted in PASTYLE rock art for curing purposes, but the fact that Hopi and other Puebloan ethnographies basically disregard the healing power of snakes, it is highly unlikely that this was the case.

Nor is there much evidence in Hopi ethnography or PASTYLE rock art to suggest that the serpent was considered a symbol of genital energy, a notion embraced primarily by psychoanalytically oriented anthropologists. To date, I know of only one panel that

seems to illustrate this point. As is evident from Figure 16, the PASTYLE anthropomorph in question is surrounded by several snakes, one of which clearly takes the place of his phallus. In its visual likeness to the male organ, the snake here indeed seems to allude to masculine sexual potency.

Also noteworthy in this context is the observation that the Hopi pantheon of supernaturals contains several kachina gods that represent snakes. Most prominent is *Lölöqangwkatsina*, drawing on the word *lölöqangw*, "bullsnake" or "gopher snake," for its name. Though not resembling a snake in appearance, the kachina features a yellow serpentine zigzag across its bilaterally-horned mask (Wright 1977:119) and is said to represent *taaho*, the "striped whipsnake" or "racer." Due to its ceremonial role as guardian during the Powamuy or "Bean dance" procession, the kachina is also called *Lölöqangwhu'katsina*, "Bullsnake Hu' Kachina." *Saaviki*, a second snake kachina, supposedly the totem animal of the Bow clan (Wright 1973:96) and one of the *wu'ya* or "clan ancestors" of the Snake clan (Wright 1977:120), carries a snake in his mouth. Finally, *Siitulili*, whose appellation is based on the Zuni word for rattlesnake (Hill et al. 1998:498), is identifiable by the reptile decorating the forehead area of his mask.

These three deifications of snakes in Hopi culture at least raise the question whether certain snake species might also have been revered as serpent gods or goddesses during PASTYLE times. The two anthropomorphized rattlesnakes in Figures 19a and 19b certainly seem to qualify. Also the fact that several PASTYLE anthropomorphs, similar to the snake kachinas, have their torsos adorned with snakes or serpentine elements (Figure 18), makes it tempting to answer the question in the affirmative. However, due to the complete absence of paleo-ethnographic data for PASTYLE hunters and gatherers as well as the great uncertainties inherent in an extrapolation of present-day Hopi ethnographic information into the distant past, the existence of snake deities in PASTYLE religion must remain speculative.

Finally, the Hopi kachina pantheon also includes *Paalölöqangw*, a deified version of the feared Water Serpent, modeled after Quetzalcoatl, the famous Plumed Serpent from Mexico's Teotihuacan. Endowed with cervid horn, avian feathers, and reptilian body, the hybrid creature, in its linkage with water, represents one of the most powerful embodiments of fertility in Hopi religion and mythology (Malotki 1996:14). As powerful controller of springs, pools, and other bodies of water, the earth-dwelling beast is believed to be responsible for earthquakes and floods. As can be gathered from Hopi oral traditions, placating the Water Serpent's destructive fury requires human sacrifice (Malotki 1993:1-23). Since the cult of the Water Serpent was introduced into the American Southwest from Mexico after PASTYLE artists had ceased producing rock art, PASTYLE serpentine figures cannot be regarded as reminiscent of the Water Serpent icon.

CONCLUSION

The presence of the serpent in religious ideology and iconography in many other parts of the world, resulting perhaps from a combination of innate fear and fascination that humans show towards snakes, also extends into the predominantly Archaic rock art tradition of the Palavayu Anthropomorphic Style in east-central Arizona. My descriptive and interpretive analysis of the corpus of PASTYLE serpentine imagery yielded the following findings:

Statistically, when compared with other zoomorphs in the animate branch of the PASTYLE motif index, the percentage of actual snake depictions featuring distinctly bulbous or triangularly-shaped heads, is quite low. This relative paucity of the serpent motif in the PASTYLE complex is even more perplexing when one considers the multitude of snakes that populates the rupestrian imagery of subsequent Basketmaker and Puebloan periods in the Palavayu.

The serpentine portion of the total PASTYLE iconography increases substantially, however, when simple zigzags, wavy

lines, and other serpentiform geometrics are added to the count. Classifying these geometrics as "headless" snakes or snakelike designs, differentiates them from real, "headed" forms featuring distinct bulbous, triangular, or ring-shaped terminations. Both headed and headless sinuities occur separately or attached to and incorporated into other images such as anthropomorphs and rakes.

Furthermore, the overall body of PASTYLE snakes includes a small number of ophidian elements that represent therianthropic or chimerical confluents. Terminologically classified as phantasmomorphs within my PASTYLE motif inventory, they are lumped together as phantasmagorical snakes.

Considering the sparsity of actual snake figures in PASTYLE art, hypothesizing the existence of an established serpent cult among its hunter-gatherer creators is probably unwarranted. Based on illustrative materials in the literature and observations gleaned from personal visitation of numerous sites, the same can be said for two other Archaic rock art traditions, the Glen Canyon Linear Style and the Grand Canyon Polychrome Style. On the other hand, the notion of a serpent cult appears appropriate for the Barrier Canyon Style whose Archaic imagery is replete with snakes.

While the hunting-magic hypothesis and an art-for-art's-sake theory are not deemed relevant to the discussion of PASTYLE serpents, it seems equally unrealistic to assume that the herpetomorphic motifs could have had any economic significance in the form of dependable or desirable food. Since the undulatory locomotion of the reptile perfectly symbolizes the sinuosity of flowing water or mimics the path of lightning, it is much more likely that hunter-forager bands in a desert environment symbolically link snakes and serpentine elements to the realms of water and rain. This aquatic and pluvial association strikes me as especially plausible for "headless" PASTYLE serpentine elements occurring in isolation or attached to rake configurations.

The actual integration of snakes or snake-like figures into the bodies of PASTYLE

anthropomorphs, however, justifies a different interpretation. In my opinion, sophisticated images of this type are the work of vision-questing shaman-artists and provide strong proof for my contention that much of PASTYLE rupestrian imagery is of a shamanic origin. As is evident from Figure 21, snake images very nicely fit the heuristic potential of the neuropsychological model.

Reasoning on the basis of the zigzag, one of the elemental entoptic phenomena that the human brain-mind projects during the incipient stage of an ASC, I argue that the PASTYLE shaman, always concerned about the availability of life-essential water, construes the shimmering entoptic as a coiling or winding snake in the second stage of trance. Constituting a creature that is at home both above ground and under ground, the snake then becomes a liminal symbol for the shaman who journeys between the various levels of his layered universe.

In deep trance, finally, where iconic and entoptic elements merge in hallucinatory fashion, the shaman begins to identify with the snake to such a degree that he transforms into the animal. Perceived as his supernatural alter ego, the snake now serves as his spirit helper, empowering him to heal, control the weather, and carry out his spiritual journeys. His visionary experience at this stage not only explains the snake-covered anthropic torsos (Figure 18), but also the humanized snakes with facial features and hands (Figures 19 and 20), and the fantastic monster reptiles (Figures 21, 22, and 23) encountered in PASTYLE art. Serpentine imagery from this third stage of trance is thus seen as convincing internal evidence for my claim that the majority of PASTYLE rock art is the product of shamanistic vision quests.

This strand of evidence from the realm of human psychobiology is further reinforced by ethnographic information, in particular from Hopi culture, which testifies to the many symbolic functions of the serpent. While many of these roles can only be suggested speculatively for PASTYLE snake imagery, the powerful pluvial connection with the snake motif clearly survives in the famous

Snake dance still practiced in the Hopi villages of Mishongnovi and Shungopavi.

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